NOTICE OF OFFICE OF MANAGEMENT AND BUDGET ACTION

Date 01/03/2016

Department of Commerce
National Oceanic and Atmospheric Administration

FOR CERTIFYING OFFICIAL: Jennifer Jessup
FOR CLEARANCE OFFICER: Jennifer Jessup

In accordance with the Paperwork Reduction Act, OMB has taken action on your request received 10/28/2015

ACTION REQUESTED: Revision of a currently approved collection
TYPE OF REVIEW REQUESTED: Regular
ICR REFERENCE NUMBER: 201510-0648-014
AGENCY ICR TRACKING NUMBER:
TITLE: NOAA Bay Watershed Education and Training (B-WET) Program National Evaluation System
LIST OF INFORMATION COLLECTIONS: See next page

OMB ACTION: Approved without change
OMB CONTROL NUMBER: 0648-0658
The agency is required to display the OMB Control Number and inform respondents of its legal significance in accordance with 5 CFR 1320.5(b).

EXPIRATION DATE: 01/31/2019 DISCONTINUE DATE:

BURDEN:	RESPONSES	HOURS	COSTS
Previous	6,919	3,519	0
New	4,237	1,773	0
Difference			
Change due to New Statute	0	0	0
Change due to Agency Discretion	0	0	0
Change due to Agency Adjustment	-2,682	-1,746	0
Change due to PRA Violation	0	0	0

TERMS OF CLEARANCE:

OMB Authorizing Official: Dominic J. Mancini
Acting Deputy Administrator,
Office Of Information And Regulatory Affairs

List of ICs			
IC Title	Form No.	Form Name	CFR Citation
Grantee questionnare	NA	Grantee questionnaire	
Teacher PD questionnaire	NA, NA, NA, na	Teacher PD questionnaire, Professional Development Teacher Non-response Survey, NOAA-B-Wet teacher PD survey - clean, Teacher PD survey nonresponse - clean	
Teacher MWEE Questionnaire	na, NA, NA, NA	MWEE survey revised - clean , MWEE survey nonresponse - clean, Teacher MWEE nonresponse survey, Teacher MWEE questionnaire	

PAPERWORK REDUCTION ACT SUBMISSION

Please read the instructions before completing this form. For additional forms or assistance in completing this form, contact your agency's Paperwork Clearance Officer. Send two copies of this form, the collection instrument to be reviewed, the supporting statement, and any additional documentation to: Office of Information and Regulatory Affairs, Office of Management and Budget, Docket Library, Room 10102, 725 17th Street NW, Washington, DC 20503.

1. Agency/Subagency originating request
NOAA/Office of Education

2. OMB control number
a. 0648 - 0658
b. [ ] None

3. Type of information collection (*check one*)
a. [ ] New Collection
b. [✔] Revision of a currently approved collection
c. [✔] Extension of a currently approved collection
d. [ ] Reinstatement, without change, of a previously approved collection for which approval has expired
e. [ ] Reinstatement, with change, of a previously approved collection for which approval has expired
f. [ ] Existing collection in use without an OMB control number
For b-f, note Item A2 of Supporting Statement instructions

4. Type of review requested (*check one*)
a. [✔] Regular submission
b. [ ] Emergency - Approval requested by ____/____/____
c. [ ] Delegated

5. Small entities
Will this information collection have a significant economic impact on a substantial number of small entities? [ ] Yes [✔] No

6. Requested expiration date
a. [✔] Three years from approval date b. [ ] Other Specify:____

7. Title
NOAA's Bay Watershed Education and Training (B-WET) Program National Evaluation System

8. Agency form number(s) (*if applicable*)

9. Keywords
from the "Federal Register Thesaurus of Indexing Terms"

10. Abstract

The NOAA Office of Education's Bay Watershed Education and Training (B-WET) program seeks to contribute to NOAA's mission by supporting education efforts to create an environmentally literate citizenry with the knowledge, attitudes, and skills needed to protect watersheds and related ocean, coastal, and Great Lakes ecosystems. B-WET currently funds projects in seven regions (California, Chesapeake Bay, Great Lakes, Gulf of Mexico, Hawaii, New England, and the Pacific Northwest). B-WET has created an across-region, internal evaluation system to provide ongoing feedback on program implementation and outcomes to ensure maximum quality and efficiency of the B-WET program. The evaluation system is sustained by B-WET staff with occasional assistance from an outside contractor. B-WET awardees and the awardees' professional development teacher-participants are asked to voluntarily complete online survey forms to provide evaluation data. One individual from each awardee organization is asked to complete a form once per year of the award, and the teacher participants are asked to complete one form at the end of their professional development program and another form at the end of the following school year.

11. Affected public (*Mark primary with "P" and all others that apply with "x"*)
a. P Individuals or households
b. X Business or other for-profit
c. X Not-for-profit institutions
d. ___ Farms
e. ___ Federal Government
f. X State, Local or Tribal Government

12. Obligation to respond (*check one*)
a. [✔] Voluntary
b. [ ] Required to obtain or retain benefits
c. [ ] Mandatory

13. Annual recordkeeping and reporting burden
a. Number of respondents: 8,086
b. Total annual responses: 4,237
1. Percentage of these responses collected electronically: 100 %
c. Total annual hours requested: 1,773
d. Current OMB inventory: 3,519
e. Difference: -1,746
f. Explanation of difference
1. Program change: ____
2. Adjustment: -1,746

14. Annual reporting and recordkeeping cost burden (*in thousands of dollars*)
a. Total annualized capital/startup costs: 0
b. Total annual costs (O&M): 0
c. Total annualized cost requested: 0
d. Current OMB inventory: 0
e. Difference: ____
f. Explanation of difference
1. Program change: ____
2. Adjustment: ____

15. Purpose of information collection (*Mark primary with "P" and all others that apply with "X"*)
a. ___ Application for benefits
b. P Program evaluation
c. ___ General purpose statistics
d. ___ Audit
e. X Program planning or management
f. ___ Research
g. ___ Regulatory or compliance

16. Frequency of recordkeeping or reporting (*check all that apply*)
a. [ ] Recordkeeping
b. [ ] Third party disclosure
c. [✔] Reporting
1. [ ] On occasion 2. [ ] Weekly 3. [ ] Monthly
4. [ ] Quarterly 5. [ ] Semi-annually 6. [✔] Annually
7. [ ] Biennially 8. [ ] Other (describe) ____

17. Statistical methods
Does this information collection employ statistical methods
[✔] Yes [ ] No

18. Agency Contact (person who can best answer questions regarding the content of this submission)
Name: Bronwen Rice, B-WET National Coordinator
Phone: 202-482-6797

19. Certification for Paperwork Reduction Act Submissions

On behalf of this Federal Agency, I certify that the collection of information encompassed by this request complies with 5 CFR 1320.9

NOTE: The text of 5 CFR 1320.9, and the related provisions of 5 CFR 1320.8(b)(3), appear at the end of the instructions. *The certification is to be made with reference to those regulatory provisions as set forth in the instructions.*

The following is a summary of the topics, regarding the proposed collection of information, that the certification covers:

(a) It is necessary for the proper performance of agency functions;

(b) It avoids unnecessary duplication;

(c) It reduces burden on small entities;

(d) It used plain, coherent, and unambiguous terminology that is understandable to respondents;

(e) Its implementation will be consistent and compatible with current reporting and recordkeeping practices;

(f) It indicates the retention period for recordkeeping requirements;

(g) It informs respondents of the information called for under 5 CFR 1320.8(b)(3):

- (i) Why the information is being collected;
- (ii) Use of information;
- (iii) Burden estimate;
- (iv) Nature of response (voluntary, required for a benefit, mandatory);
- (v) Nature and extent of confidentiality; and
- (vi) Need to display currently valid OMB control number;

(h) It was developed by an office that has planned and allocated resources for the efficient and effective management and use of the information to be collected (see note in Item 19 of instructions);

(i) It uses effective and efficient statistical survey methodology; and

(j) It makes appropriate use of information technology.

If you are unable to certify compliance with any of the provisions, identify the item below and explain the reason in Item 18 of the Supporting Statement.

Signature of Senior Official or designee	Date

Agency Certification (signature of Assistant Administrator, Deputy Assistant Administrator, Line Office Chief Information Officer, head of MB staff for L.O.s, or of the Director of a Program or StaffOffice)	
Signature signed by Louisa Koch	Date 10/26/2015
Signature of NOAA Clearance Officer	
Signature BRABSON.SARAH.1365710488 Digitally signed by BRABSON.SARAH.1365710488 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=OTHER, cn=BRABSON.SARAH.1365710488 Date: 2016.01.14 14:19:30 -05'00'	Date 10/28/2015

SUPPORTING STATEMENT
NOAA BAY WATERSHED EDUCATION AND TRAINING (B-WET) PROGRAM
NATIONAL EVALUATION SYSTEM
OMB CONTROL NO. 0648-0658

A. JUSTIFICATION

1. Explain the circumstances that make the collection of information necessary.

This request is for revision and extension of a currently approved information collection. The survey instruments have been revised in several ways to reflect respondent suggestions (see A8 and A15).

The NOAA Office of Education's Bay Watershed Education and Training (B-WET) program seeks to contribute to NOAA's mission by immersing participants in Meaningful Watershed Education Experiences (MWEEs) to create an environmentally literate citizenry with the knowledge, attitudes, and skills needed to protect watersheds and related ocean, coastal, and Great Lakes ecosystems (http://www.oesd.noaa.gov/grants/bwet.html). B-WET currently funds projects in seven regions: California, Chesapeake Bay, Great Lakes, Gulf of Mexico, Hawaii, New England, and the Pacific Northwest.

In keeping with Executive Order 12862, Setting Customer Service Standards, B-WET created a cross-region, internal evaluation system to monitor program implementation and outcomes on an ongoing basis. Based on a review of annual evaluation system results, B-WET has made adjustments to its Federal Funding Opportunities (FFOs) and proposal review activities, such as requesting a plan for participation in the national evaluation. On-going data collection enables assessment of the benefits of continuous improvements and, thus, supports adaptive management of the program. This effort is consistent with the goals and plans outlined in the NOAA Education Strategic Plan 2015-2035[1]. See in particular Objective 5.4 on page 31 as a part of "Organizational Excellence."

To meet evaluation needs, B-WET's evaluation system was designed to answer the following questions:

1. To what extent do regional B-WET programs support grantees in implementing Meaningful Watershed Educational Experiences (MWEEs)?
2. How are MWEEs implemented by grantees and teachers?
3. To what extent do B-WET-funded projects increase teachers' knowledge of watershed science concepts, their confidence in their ability to integrate MWEEs into their teaching practices, and the likelihood that they will implement high quality MWEEs?
4. To what extent do B-WET-funded projects increase students' knowledge of watershed concepts, attitudes toward watersheds, inquiry and stewardship skills, and aspirations towards protecting watersheds?

B-WET grantees and teacher-participants in the grantees' professional development are asked to

[1] http://www.oesd.noaa.gov/leadership/edcouncil/docs/2015-Strategic-Plan-FullText.pdf

voluntarily complete online questionnaires to provide evaluation data. One individual from each grantee organization is asked to complete a questionnaire once per year of the award, and the teacher-participants are asked to complete one questionnaire at the close of their professional development (PD) and one after implementing MWEEs with their students (before the end of the following school year). An online survey platform is used to collect and store these data, as well as to automatically generate results in the form of aggregate descriptive statistics.

The proposed evaluation system is maintained by B-WET staff with occasional assistance from an external professional evaluation contractor.

2. Explain how, by whom, how frequently, and for what purpose the information will be used. If the information collected will be disseminated to the public or used to support information that will be disseminated to the public, then explain how the collection complies with all applicable Information Quality Guidelines.

Program Improvement

The evaluation system, influenced by the principles underlying utilization-focused evaluation (Patton, 2008), was specifically designed by a team of researchers from the University of Michigan (UM) and the Institute of Learning Innovation (ILI) to meet users' information and decisions needs. The primary users of the proposed evaluation system are the B-WET staff members who administer the B-WET grant program, and its national coordinator. These individuals review the evaluation system's results annually to determine what changes may be necessary to the grant program to maximize benefits for K-12 teachers and students. The system automatically generates results in the form of aggregate descriptive statistics (at the national and regional level) to inform decisions about the program at both of these tiers.

B-WET staff members will share findings with secondary users, including staff members in the NOAA Office of Education and other parts of the agency who may choose to use information to improve other NOAA education programs. Evaluation findings will also be used at the national level to report on agency performance measures and respond to other Administration data collection activities, as appropriate. Tertiary users are grant recipients who are provided with access to a synthesis of findings so that they may identify ways to improve their respective environmental science and education programs.

Public Dissemination

Aggregated results from the teacher surveys are continuously available to grantees via the evaluation system's on-line platform. In the future, once sufficient national-level data is available, results associated with each of the evaluation system's questions will be shared through professional conferences, reports, and peer-reviewed journal articles.

The data collection's design ensures that the Information Quality Guidelines of utility, objectivity, and integrity are met.

Utility:

The evaluation system is designed to answer the questions described earlier in Question 1, primarily to meet B-WET's decision needs. To answer these evaluation questions, the ILI-UM team of researchers first identified relevant constructs (based on B-WET's logic model and MWEE characteristics). Next, they adapted and adopted items to measure these constructs from

existing valid and reliable indices and scales or developed new ones (when existing ones were not available). As a result, only data which has a necessary purpose for answering the system's evaluation questions and, thus, meeting B-WET's information needs, are being collected. Please refer to the updated evaluation system metrics matrix illustrating the connections between evaluation questions, constructs, and items included in the instruments (Attachment 1).

Objectivity:
Presentation: The descriptive statistics (e.g., frequencies) that are automatically generated based on the online data collected from respondents is accurate, clear, complete, and unbiased. In addition, only aggregate statistics at the national, regional, and organizational level are reported. Thus, individual sources of data are not disclosed and study participants remain anonymous.

Substance: The items included in the questionnaire, as well as the questionnaires themselves, were developed by the ILI-UM team based on best social science research practices. The majority of items included in the questionnaire, for example, were adopted or adapted (with respective researchers' permission) from existing studies, including an evaluation of NOAA's Chesapeake Bay Watershed Education and Training Program (Kraemer et al., 2007, Zint et al., 2014) (data gathered under OMB Control Number: 0648-0530), an exploratory study of the benefits of Meaningful Watershed Education Experiences (Zint, 2012), and a range of other relevant science and environmental education studies published in peer-reviewed journals (Zint, 2011). New items were developed only when existing measures for a construct were not available. The face and content validity of all of the items in the proposed questionnaires were established through reviews by nine internal NOAA B-WET Advisory Group (BWAG) members, three B-WET grantees, three evaluation specialists, and two watershed science researchers. Face validity is established by showing the questionnaire to a group of experts (e.g., researchers, practitioners) and asking them for feedback on whether the measures look like they will measure the constructs. We established face validity with review by B-WET, evaluators, grantees, and teachers. For content validity, we consulted with these experts and also did an extensive literature review (Zint, 2011).

Exploratory factor analyses conducted with SPSS and M+ of data collected through a pilot study revealed that the evaluation system's scales (Zint, 2012) had good to excellent reliability (i.e., Cronbach Alpha range: .70 to .90) (Nunally & Bernstein 1994; Carmines & Zeller, 1979). The respective factors also explained a substantial amount of variance (i.e., range: 40% to 90%)) (Zint, 2012), thus providing additional support for the validity of the evaluation system's measures.

Integrity:
The Qualtrics online platform is designed to meet Federal Information Security Management Act (FISMA) security guidelines to ensure all data provided by respondents is secure.[2]

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[2] "The Federal Information Processing Standards (FIPS) Publication Series of the National Institute of Standards and Technology (NIST) is the official series of publications relating to standards and guidelines adopted and promulgated under the provisions of the Federal Information Security Management Act (FISMA) of 2002. Publication 202, 'Minimum Security Requirements for Federal Information and Information Systems,' states the basis for sound security practices in any organization. Qualtrics meets all requirements listed in section 3, such as awareness and training, incident response, media protection, and risk assessment." (Qualtrics, 2013, page 11)

Once data are downloaded from Qualtrics, NOAA's Office of Education retains control over the information and safeguards it from improper access, modification, and destruction, consistent with NOAA standards for confidentiality, privacy, and electronic information. See response to Question 10 of this Supporting Statement for more information on confidentiality and privacy. The information collection is designed to yield data that meet all applicable information quality guidelines. Prior to dissemination, the information will be subjected to quality control measures and a pre-dissemination review pursuant to Section 515 of Public Law 106-554.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological techniques or other forms of information technology.

The evaluation system data collection is electronic. Study participants (i.e., B-WET grantees and teachers who participate in their professional development) receive email prompts to complete the online instruments accessed through Qualtrics, an online survey platform. The Qualtrics surveys have built-in "logic" prompts so respondents complete only items relevant to their experience. Data is stored on Qualtrics' server that automatically generates descriptive statistics. The proposed data collection process minimizes costs, while also being sensitive to issues of respondent burden, accuracy, and efficiency. It is assumed that most respondents (i.e., grantees, K-12 teachers) have access to the Internet at work, home, on a smartphone, or at a public institution such as a local library.

4. Describe efforts to identify duplication.

In some cases B-WET-funded projects that have additional funding or partnerships with other parts of NOAA may also be asked to report in to other NOAA data collections; however the B-WET system is the only NOAA data collection taking place that is focused on Meaningful Watershed Educational Experiences and specific characteristics of B-WET awards. NOAA education programs and evaluation efforts are coordinated through the NOAA Office of Education and the NOAA Education Council, and data collection is coordinated to ensure that individual survey items are not duplicative.

5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden.

The evaluation system asks individuals working for non-profit organizations and some businesses, state and local government employees, and teachers in K-12 schools to participate by completing online questionnaires. The study minimizes burden on respondents because completion of the proposed questionnaires is voluntary. In addition, an iterative item review process was used to eliminate any non-essential questions, thus keeping the questionnaires as streamlined as possible while ensuring that sufficient data is collected to answer the evaluation questions. Should they choose to complete the proposed questionnaires, grantees will be able to complete their questionnaire within 30-60 minutes (depending on the nature of their program) and teachers, within 30 minutes. These estimates are based on completion times by respondents since January 2014 (Table 1).

Table 1: Minutes for Questionnaire Completion

Respondent	Time period	N[a]	Mean	Std dev
Grantee	January 2014 - June 2015	59[b]	62	46.5
Teacher Post-PD	April 2014 - July 2015	110[c]	27	22.9
Teacher Post-PD Nonresponse	July 2014 - July 2015	27[d]	3	2.1
Teacher Post-MWEE	March 2014 - June 2015	108[e]	18	17.4
Teacher Post-MWEE Nonresponse	June - July 2015	28[f]	5	7.4

[a]Number of respondents who completed the full questionnaire minus those who left the questionnaire open for an excessive amount of time before submitting data.
[b]25 grantees had the questionnaire open for 18-722 hours before submitting their responses are excluded from this analysis, it is assumed that they accidentally neglected to close the questionnaire.
[c]15 Post-PD teachers had the questionnaire open for more than 7 hours before submitting their responses and are excluded from this analysis, again it is assumed that they accidentally neglected to close the questionnaire.
[d]17 Post-PD nonrespondent teachers indicated that they had not completed the PD and are excluded from the analysis. 6 teachers did not fully complete the survey and are excluded from this calculation.
[e]13 Post-MWEE teachers had the questionnaire open for 4 or more hours before submitting their responses and are excluded from this analysis, again it is assumed that they accidentally neglected to close the questionnaire.
[f]21 Post-MWEE nonrespondent teachers had not completed a MWEE and were excluded from the analysis. 1 Post-MWEE teacher had the nonresponse questionnaire open for almost 5 hours before submitting responses and is excluded from this analysis.

6. Describe the consequences to the Federal program or policy activities if the collection is not conducted or is conducted less frequently.

The evaluation system contributes to ensuring that federal funding is used in an effective and efficient manner to educate teachers and students about watershed science and environmental issues. The evaluation system provides B-WET with scientific data to assess the effectiveness of its grant funded programs (i.e., B-WET-funded teacher professional development and student MWEEs). The results of the evaluation system also provide insights into how to improve watershed education programs.

If the evaluation system were not conducted, B-WET would not have the needed data to scientifically assess the effectiveness of its program/MWEEs and/or to scientifically determine how best to improve its program/MWEEs. The continuous data collection of the evaluation system allows on-going monitoring of outcome results and, thus, on-going program/MWEE improvements.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.

The collection is being conducted in a manner consistent with OMB guidelines.

8. Provide information on the PRA Federal Register Notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received in response to that notice and describe the actions taken by the agency in response to those comments. Describe the efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

A Federal Register Notice published on August 19, 2015 (80 FR 50268) solicited public comments. No comments were received.

During the development of the B-WET evaluation system, the ILI-UM team solicited input from a range of individuals including B-WET grantees, evaluation experts, watershed scientists, and statisticians on all aspects of the proposed evaluation system. Their suggestions informed the design of the proposed study (e.g., type of data collection, frequency and timing of data collection, reporting formats, etc.). Their feedback was also used to improve the questionnaire items and led to confirmation of their face and content validity.

In addition, the grantee and teacher questionnaires include several measures at the end of the respective instruments to allow respondents to comment on the data collection process and content. This on-going feedback will continue to be used to improve both the data collection process and instruments over time.

For the 18 months between March 2014 and August 2015, 95 grantees, 201 post-PD teachers, and 118 post-MWEE teachers provided feedback on the questionnaires. They were asked three closed-ended questions about questionnaire quality and length (Table 2) and one open-ended question, "How can this questionnaire be improved?" (Table 3, Table 4, and Table 5). In general, grantees were satisfied with the quality of the questionnaire, but had recommendations for improving the wording and many teachers felt the post-PD questionnaire was long.

Based in part on this feedback, NOAA B-WET staff members reviewed each item in the three questionnaires, made wording changes where needed, and deleted measures considered to be less important or redundant.

Table 2: Closed-ended Feedback on Questionnaires

This questionnaire was ...	Grantees (n=95)	Post-PD Teachers (n=201)	Post-MWEE Teachers (n=118)
Difficult=1, Easy=7	mean=5.6, SD=1.5	mean=5.4, SD=1.9	mean=6.0, SD=1.3
Not informative=1, Informative=7	mean=5.3, SD=1.5	mean=5.0, SD=1.8	mean=5.4, SD=1.4
Long=1, Short=7	mean=3.3, SD=1.3	mean=2.9, SD=1.7	mean=3.9, SD=1.6

Table 3: Open-ended Feedback on Grantee Questionnaire (N=43)

Type of Comment	n	Example	NOAA B-WET Response
Satisfied with questionnaire as is	20	*I actually enjoyed completing it. I don't have any suggestions for improvement. It was neither too long nor too short, and the questions were thought-provoking.*	None
Questionnaire was too long	7	*Shorter, took a long time to complete*	Reviewed to eliminate unnecessary questions
Reduce redundancy	5	*Where questions are repeated, combine them. For example, the same questions were asked as to the MWEEs for the PD participants as were asked about our organization. It would have been easier to*	Reviewed to reduce redundancy, but unable to ask questions in parallel because not all respondents complete all sections

		answer these questions in parallel.	
Clarify definition of terms	3	*Our interpretation of watersheds extends to the estuary and coastal wetlands. Estuaries were not included in questions, although this may be implied*	Clarified terms and definitions, including the definition of "watershed"
Questionnaire was informative	2	*I thought the questionnaire was informative and gave me ideas of ways to improve our education program for the coming year.*	None
Allow printing copy of responses	2	*A printable copy for our records would be nice.*	When the questionnaire closes, the respondent has the opportunity to download a PDF of their responses
Allow for more open-ended responses	2	*Provide some open-ended response questions for responders to discuss the three things they did well and three things they wish they know now that they wish they had known at the start*	Although open-ended questions are informative, they are also time-consuming to complete. In an effort not to lengthen the questionnaire, we only added one open-ended question
Allow multiple respondents	1	*Allow multiple computers to access the questionnaire from a single organization*	For the same questionnaire to be closed and reopened requires a cookie to be saved on a computer, thus completing the questionnaire using multiple computers is not possible
Provide preview	1	*Let me know what statistics are needed ahead of time so I don't need to stop and pull documents to fill in % or numbers, etc.*	A link to access a Word copy of the questionnaire is emailed to the grantees along with the survey link so that they can research their responses before they complete the survey online

Table 4: Open-ended Feedback on Teacher Post-PD Questionnaire (N=90)

Type of Comment	**n**	**Example**	**NOAA B-WET Response**
Too long	35	*Fewer categories so it only takes 15 minutes to complete. It was fine during the summer when I am off, but during the school year this would have put me over the edge.*	Questions deemed not essential have been deleted, however the questionnaire remains designed to take 30 minutes to complete to allow answering the evaluation system's questions
Problems with formatting on computer screen	14	*I could not access the future questions on the right hand side when answering before, after, future...*	The matrix was split into two questions to eliminate the need to scroll back and forth.
Timing of survey not appropriate	9	*Provide it sooner after course completion so the impact of the course is fresher in my memory.*	The national coordinator sends monthly reminders to grantees so they have an opportunity to adjust the PD end date if it has changed
Satisfied with questionnaire as	8	*It did a reasonable job gathering info. for quantitative and qualitative assessment. It also*	None

is		*provided opportunities for our thoughts.*	
Too general	7	*[Make it] more specific to the project being evaluated.*	The national evaluation is designed to be “one size fits all”; project-specific evaluation is a responsibility of the grantee
Clarify terms	4	*Delineate better between the actual professional development and the student field experience, as I did specific professional development and my students had a day of curricular field experiences in which I accompanied them.*	B-WET staff reviewed each question and clarified terms, such as the definition of professional development
Provide smartphone version	3	*Make it smart phone friendly.*	Although Qualtrics offers smartphone-friendly questionnaires, this survey is not suited for a small screen
Reduce redundancy	3	*So repetitive with questions that differed little from others.*	B-WET staff reviewed each question and eliminated any deemed unnecessary
Allow for more open-ended responses	2	*Give room for comments on each page in case there is a specific point that needs to be addressed.*	Comment boxes were not added to keep the questionnaire as streamlined as possible
Address baseline on outcomes	2	*When I was asked if I am better able to define a watershed, I would be tempted to say strongly disagree because I was already confident in what a watershed was. However, this may give the false impression the workshop did not address the definition of a watershed, so I put strongly agree instead. A "before" and "after" format would more accurately assess how the workshop improved my knowledge of the questions being asked.*	The watershed literacy questions have been changed to a retrospective-pre/post format
Change response choices	2	*Add drop down menus for the NOAA resources.*	Examples of NOAA resources have been added
Add background music	1	*Play watershed themed songs in the background while it is running and then offer a download of the music at the end for use in the classroom.*	Not currently a feature offered by Qualtrics

Table 5: Open-ended Feedback on Teacher Post-MWEE Questionnaire (N=34)

Type of Comment	**n**	**Example**	**NOAA B-WET Response**
Satisfied with questionnaire as is	10	*It was okay the way it is.*	None
Too long	9	*Shorter is always better.*	Questions deemed not essential have been deleted, however the questionnaire remains designed to take 30 minutes to complete to answer the evaluation system’s

			questions
Reformat or clarify questions	7	*Have examples such as pictures and other forms of examples such as forestry, plants, animals.*	Each item was reviewed and edited to improve clarity
Need to know more about the purpose	3	*It depends what your overall and side purposes are.*	Introductory text explains the general purpose of the evaluation
Reduce redundancy	3	*It seems like some of the questions were repeated.*	Questions were examined and those deemed nonessential were eliminated
Share results with grantee	1	*The one suggestion that I would make would be incorporating the [project staff] into the questions that you had asked throughout the questionnaire. After all, they are the ones in the end overseeing the entire program and holding the participants accountable*	Aggregate results are shared with the grantees
Timing issue	1	*Much of this work was completed by December. I'm taking this survey at the end of March. I think it would have been more helpful to have this available closer to when the curriculum was instructed.*	The survey is distributed at the end of the school year to capture all teachers' work

9. <u>Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees</u>.

Incentives, in the form of financial compensation or material gifts, are known to increase response rates (Dillman et al., 2009; James & Bolstein, 1990). Because NOAA is a federal agency, however, it cannot offer such an incentive to grantees. Therefore, NOAA B-WET encourages grantees to ask teachers to complete the surveys as part of their professional development responsibilities. For example, if the grantees provide stipends to their professional development teachers, they could include a requirement that teachers complete the questionnaire to receive the payment.

10. <u>Describe any assurance of confidentiality provided to respondents and the basis for assurance in statute, regulation, or agency policy</u>.

An assurance of confidentiality is not provided to respondents. B-WET grantees and teachers who respond to the questionnaires, however, remain anonymous to B-WET and NOAA.

Anonymity is guaranteed in the following ways:

- Neither B-WET grantees nor teacher respondents are asked to provide information that can identify them as individuals as part of the questionnaire.
- Information that is needed to link data, that is (1) award numbers to link data provided by grantees with teachers participating in their professional development and (2) teacher-generated codes to link responses to their initial and subsequent questionnaires, are not associated with any of the other data they provide.
- Email addresses, used to (1) invite prospective participants to participate in the study with a link to the questionnaire and (2) track response rates and prompt non-respondents, are

not associated with any of the data provided by respondents.

- Results are only presented in aggregate form (across all grantees or teacher respondents), not by individual.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.

No questions of a sensitive nature are asked.

12. Provide an estimate in hours of the burden of the collection of information.

Table 6 provides estimates of the time and cost burden for the proposed information collection. The numbers of possible respondents indicated in the table are estimated from the highest number of participants in B-WET's 2012-2014 fiscal years. Future numbers of respondents will vary based on annual program funding and the resources grantees are able to leverage. Teachers who do not respond to the initial Post-PD and Post-MWEE questionnaires ("nonrespondents") are asked to complete significantly-abbreviated questionnaires. Response rates used in the burden calculations are projected from actual response rates obtained January 2014 to July 2015 (Table 7).

Table 6: Estimate of Annual Burden Hours for Information Collection

Informant	Number of possible respondents annually[a]	Response frequency	Expected number of responses	Average time per response (hours)	Total respondent time (hours)	Estimated hourly wage (dollars)	Estimated labor cost burden to respondents (dollars)
Grantees	86	1	77[b]	1.0[b]	77	43.23[h]	3,329
Post-PD teachers	4,000	1	1,600[c]	0.5[c]	800	29.04[i]	23,232
Post-PD teachers nonresponse		1	480[d]	0.1[d]	48	29.04[i]	1,394
Post-MWEE teachers[e]	4,000	1	1,600[f]	0.5[f]	800	29.04[i]	23,232
Post-MWEE teachers nonresponse		1	480[g]	0.1[g]	48	29.04[i]	1,394
TOTALS	**8,086**		**4,237**		**1,773**		**$52,581**

[a]FY12=79 grants, 4,000 teachers; FY13=81 grants, 1,900 teachers; FY14=86 grants, 2,600 teachers

[b] Assumes maximum of 90% response rate and 1 hour completion time (actual pilot response rate = 88%, actual pilot average completion time = 62 minutes).

[c] Assumes maximum of 40% response rate and ½ hour completion time (actual pilot response rate = 32%, actual pilot average completion time = 27 minutes).

[d] Assumes a maximum of 20% response rate for Post-PD nonrespondents to calculate maximum possible burden hours (actual pilot response rate = 16%, actual pilot average completion time = 3 minutes).

[e] The same teachers are surveyed after their PD (Post-PD Teachers) and again at the end of the following school year (Post-MWEE Teachers).

[f] Assumes 40% response rate and ½ hour completion time (actual pilot response rate = 33%, actual pilot average

completion time = 18 minutes).
[g] Assumes 20% response rate for Post-MWEE nonrespondents to calculate maximum possible burden hours (actual pilot response rate = 15%, actual pilot average completion time = 5 minutes).
[h] U. S. Department of Labor, Bureau of Labor Statistics. May 2014. *National Occupational Employment and Wage Estimates, United States:* Education administrators (mean hourly age $43.23) *http://www.bls.gov/oes/current/oes_nat.htm#25-0000*
[i] Calculated from U. S. Department of Labor, Bureau of Labor Statistics. May 2014. *National Occupational Employment and Wage Estimates, United States:* Secondary School Teachers (mean hourly wage not available; mean annual salary $59,180) *http://www.bls.gov/oes/current/oes_nat.htm#25-0000* and Krantz-Kent, Rachel. 2008. *Teachers' work patterns: when, where, and how much do U.S. teachers work?* U. S. Department of Labor, Bureau of Labor, http://www.bls.gov/opub/mlr/2008/03/art4full.pdf ("On average for all days of the week, full-time teachers worked 5.6 hours per day" = 39.2 hours per week = 2,038 hours per year @ 52 weeks/year = $29.04 per hour)

13. Provide an estimate of the total annual cost burden to the respondents or record-keepers resulting from the collection (excluding the value of the burden hours in Question 12 above).

There are no direct costs to participants. The only costs are the opportunity costs of respondents' time required to provide information as explained in Question12 above. No capital equipment, start-up, or record maintenance requirements are placed on respondents.

14. Provide estimates of annualized cost to the Federal government.

The estimated cost to the federal government of implementing the NOAA B-WET National Evaluation System is based on the government's contracted cost for yearly maintenance of the data collection, periodic study and analysis activities, and personnel cost of government employees involved in oversight and/or analysis. For the data collection activities for which OMB approval is currently being requested, the overall cost to the government is $250,000 over a three year period. This includes:

- $40,000 total (annualized to $13,333) for contracted activities including preparing and conducting up to two analyses of data with results reports
- $10,000 annually ($30,000 over three years) for online survey management platform license and support
- $60,000 annually ($180,000 over three years) for government personnel costs in overseeing the evaluation activity

Total annualized cost: $83,333.

It is anticipated that basic maintenance and operation of the system will be $70,000 annually (survey management license and government personnel oversight, as described above). It is expected that these costs would need to be sustained over the duration of the use of the evaluation system, with periodic contracted work to analyze data and produce evaluation reports. These estimates are based on the evaluation contractor's previous experience managing other research and data collection activities of this type and costs observed during the initial 2014-2015 period of data collection on this project.

15. Explain the reasons for any program changes or adjustments.Program Changes

Based on a review of initial results collected from the three questionnaires, feedback from respondents via open- and closed-ended items, and a multi-month, detailed review of all of the

questionnaire items by B-WET staff members, a number of changes are proposed to the measures included in the questionnaires. These changes are identified using "track changes" in the questionnaires included in Attachments 2a-e and include:

- *Shortened questions to improve ease of response.* For example, the closed-ended grantee question, "If offered, how likely is it that you will make use of each of the following to help you implement your B-WET-funded programs projects? (Extremely unlikely=1 to Extremely likely=7)" with 16 items was changed to a more simple, open-ended question, "How could regional B-WET programs better support your implementation of MWEEs?"

- *Adjusted the format of measures to ensure accurate responses.* For example, on the teacher post-PD questionnaire, teachers are asked, "For each statement, select one response for BEFORE, one response for AFTER, and one response for FUTURE (scroll to the right)," but not all teachers saw the future questions (they were off their screens) or complained about having to scroll back and forth. Therefore, the future responses were moved to a separate question, just below the before/after questions.

- *Clarified terms to ensure consistency in how respondents interpret the questions.* For example, the term "watershed" now includes bubble text to explain that the term includes ocean, coastal, riverine, estuarine, and Great Lakes watersheds.

- *Eliminated nonessential or redundant questions to reduce the length of the questionnaires.* For example, "The health of our local watershed(s) has improved as a result of my organization's B-WET-funded MWEEs (agreement scale)" was eliminated from the grantee questionnaire because grantees are likely to provide this information as part of their project progress reports.

These changes did not cause us to revise our estimated response times.

Adjustments
Although there is an increase in respondents of 761, there has been a decrease in estimated responses and thus in hours (2,682 and 1,746). Based on teacher response rates in the last 3 years, we have lowered our estimated response rates.

16. <u>For collections whose results will be published, outline the plans for tabulation and publication</u>.

For the primary stakeholders and users of the proposed evaluation system, i.e., the internal NOAA B-WET staff members who administer the B-WET grant program, the data collection system automatically shares results as aggregate descriptive statistics (at the national and regional levels). For each question, the system indicates how many individuals responded, and the frequency with which a particular response option was selected. In the future, as long as funding is available, a contractor will be hired to complete more sophisticated analyses of the data (i.e., inferential statistics) and to produce a traditional research report and/or article for publication in a peer reviewed journal consisting of introduction, methods, results, and discussion/recommendation sections.

Depending on the availability of the necessary funding, regular syntheses of the main findings as

related to the questions the evaluation system was designed to answer (see #1 above) will be prepared to meet the needs of different stakeholder groups. These stakeholders include the NOAA Office of Education which seeks information to improve its education grant programs, and external stakeholders such as B-WET grantees and teacher participants seeking ways to improve their MWEE practices, as well as tertiary members of the public. B-WET (potentially with the help of a contractor) will prepare these syntheses, ensuring that they meet respective stakeholders' needs both in terms of content and presentation. These syntheses will be made available online.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.

NA.

18. Explain each exception to the certification statement.

NA.

SUPPORTING STATEMENT
NOAA BAY WATERSHED EDUCATION AND TRAINING (B-WET) PROGRAM
NATIONAL EVALUATION SYSTEM
OMB CONTROL NO. 0648-0658

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g., establishments, State and local governmental units, households, or persons) in the universe and the corresponding sample are to be provided in tabular form. The tabulation must also include expected response rates for the collection as a whole. If the collection has been conducted before, provide the actual response rate achieved.

Censuses will be conducted in light of the relatively small sample sizes (Table 6) and the sophisticated analyses planned to be conducted by an external evaluator. More specifically, Stata data analysis and statistical software will be used to conduct confirmatory factor analysis, multilevel analysis (i.e., to account for teachers nested in professional development programs and repeated measures from the same individuals), and structural equation modeling (SEM) to explore the direct and indirect relationships between teachers' practices and perceived student outcomes based on their MWEE professional development experiences and background. Benefits of SEM include that it allows for exploring direct and indirect causal relationships between variables while also taking into account measurement error (Bollen, 1989). SEM permits the combination of factor and path analysis into a single model. SEM models require large sample sizes because they estimate: 1) regression coefficients, 2) variances and covariances of unobserved variables, and 3) variances and covariances of errors. Because of the number of direct and indirect paths that the models will estimate, they will have few degrees of freedom (df). These more sophisticated analysis will be conducted once the sample size is approximately 1,280, Based on an expected df=4 and the proposed sample size, a power of 80% will be achieved for testing model fit (see Table 4 in MacCallum, et al. 1996).

The expected response rates reported in Table 7 are informed by the response rates obtained since the initial implementation of the evaluation system in January 2014.

Table 1: Past and Expected Response Rates

Questionnaire	**Time Period**	**N** (number of emails sent)	**N[a]** (adjusted number of emails sent)	**n** (number who responded)	**R** (adjusted response rate)	**Future expected R**
Grantee	January 2014-June 2015	106	95	84	88%	90%
Teacher Post-PD	April 2014-July 2015	436[b]	392	125	32%	40%

Teacher Post-PD Nonresponse	July 2014 - July 2015		267[c]	44	16%	20%
Teacher Post-MWEE	March 2014-June 2015	546	491	163	33%	40%
Teacher Post-MWEE Nonresponse	June - July 2015		328[c]	50	15%	20%

[a]During the pilot-testing process in 2014, we discovered that about 20% of email invitations were not received by grantees, despite accurate contact information. Emails were likely rejected by respondents' servers. We tested the system again in 2014 with greater success. Qualtrics' email delivery success is measured by SenderReport.org. On 9/18/15, Qualtrics' average score was 87 out of a maximum score of 100 based on a review of the last 100 high volume emails sent out from the qemailserver.com server (a score of 70 or above is considered good). Although Qualtrics cannot provide a percent of emails that are rejected by servers, we believe 10% is an informed estimate. Thus, the estimated adjusted response rates (R) take into account the 10% of respondents who are potentially not receiving requests to complete the questionnaire.
[b]Qualtrics sent 493 emails to teachers, however 35 responded that they did not participate in B-WET PD, and 22 said they are not teachers; those 57 were subtracted from the N for teacher post-PD emails.
[c]Adjusted N minus respondents (i.e., 392-125=267 Post-PD Teachers; 491-163=328 Post-MWEE Teachers)

2. Describe the procedures for the collection, including: the statistical methodology for stratification and sample selection; the estimation procedure; the degree of accuracy needed for the purpose described in the justification; any unusual problems requiring specialized sampling procedures; and any use of periodic (less frequent than annual) data collection cycles to reduce burden.

Censuses of the respective populations will be conducted to attain the sample sizes needed for the proposed sophisticated analyses, which will allow for more in-depth answers to the evaluation system's questions.

3. Describe the methods used to maximize response rates and to deal with nonresponse. The accuracy and reliability of the information collected must be shown to be adequate for the intended uses. For collections based on sampling, a special justification must be provided if they will not yield "reliable" data that can be generalized to the universe studied.

Methods to Maximize Response Rates

Grantee Questionnaire

Since grantee data collection was initiated in January 2014, an 88% response rate has been achieved. This grantee response rate occurred as a result of (1) including information about the national evaluation in the B-WET federal funding opportunity (FFO), (2) providing preview copies of the evaluation system questionnaire on the B-WET website, (3) sending a pre-notification to all grantees at the beginning of their grant year (Dillman et al., 2009), and (4) sending two reminder invitations, two and four weeks following the initial invitation (Dillman et al., 2009), to complete the questionnaire at the end of their grant year. Because B-WET grantees receive funds from NOAA to conduct their MWEE projects, they are highly invested in the B-WET program. In light of these practices and circumstances, as well as the 88% grantee response rate achieved by the evaluation system to date (Table 7), a 90% grantee response rate is therefore expected in the future.

Teacher Post-PD Questionnaire

Since teacher post-PD data collection was initiated in April 2014, a 32% response rate has been achieved. This is in contrast to the initially proposed 80% response rate which would have been achievable if this questionnaire could have been administered as a final activity of the teacher professional development (Zint, 2010, 2009, 2008). Based on what has been learned from developing and pilot-testing the evaluation system, however, it is not possible to administer this questionnaire as part of the professional development using the on-line evaluation system. For one, teachers need to respond to individualized links with embedded data (matched with respective grantee information to support planned analyses) and second, it would also not be possible to send targeted reminders to complete the questionnaire to non-respondents (Dillman et al., 2009; Yu and Cooper, 1983).

In light of the experience so far, a 40% response rate is expected in the future. This response rate will be achieved (1) by following Dillman et al.'s (2009) recommendations for survey design and administration (e.g., advance notice about questionnaire; multiple, personal requests to complete questionnaire; use of closed-ended, clear, easy to understand questions; etc.), (2) as a result of grantees' greater familiarity with the data collection process, as well as (3) by continuing and improving current activities to raise teacher response rates by the national coordinator, regional coordinators, and grantees. For example, the national coordinator will continue and enhance national evaluation system webinars for grantees, raise awareness of the evaluation resources available through the B-WET evaluation website, send monthly reminders to grantees to add teacher emails to the evaluation system, and participate in meetings with grantees to discuss ways to increase teacher participation in the national evaluation. The regional coordinators will further refine content about the national evaluation as part of their FFOs (e.g., by asking grantees to describe how they will participate in the national evaluation system) and play a much greater role than they have so far in encouraging grantees to encourage their teachers' participation in the evaluation (e.g., meetings about the national evaluation with the grantees that may include the national coordinator). In addition, a question has been added to the grantee questionnaire to learn how they are encouraging teachers to participate in the national evaluation so that this information can be used to further improve the process for maximizing teacher response rates.

Teacher Post-MWEE Questionnaire

Since teacher post-MWEE data collection was initiated in March 2014, a 33% response rate has been achieved, lower than the 40% initial expected response rate. This 40% response rate was expected based on: (1) similar evaluations (i.e., ones including Internet-based questionnaires administered within same time frames after teacher professional development by the providers of these programs) offered by environmental educators that have resulted in 35-80% response rates (Zint, 2010, 2009, 2008) and (2) following Dillman et al.'s (2009) recommendations to maximize response rates. These recommendations include (a) asking grantees to inform their teachers in advance that they will be asked to complete this questionnaire as part of their professional development responsibilities, (b) use of multiple, personalized completion requests by grantees with whom teachers are familiar, (c) the use of questions that are closed-ended, worded in a clear, easy to understand manner, (d) the use of skip logic, and (e) asking for little personal or sensitive information (Dillman et al., 2009; Dillman, Sinclair, and Clark, 1993). The future expected response rate is once again 40% and will be achieved based on further refinements to the above process as well as based on grantees' greater familiarity with the data collection process.

Nonresponse Analysis
The evaluation system is designed to include a post-PD and post-MWEE nonresponse questionnaire, to ensure that comparisons can be made between initial and non-respondent teachers, when response rates are below 80%. In this instance, B-WET has, and will in the future, engage an external contractor to conduct analyses of these results.

All non-respondents receive an email invitation with a Web link to an abbreviated version of the questionnaires (automatic reminders are sent once). Results from these questionnaires have been, and will in the future be compared with those from earlier respondents to determine if there are statistically and substantively significant differences.

If earlier respondent and non-respondent populations are determined not to be significantly and substantively different, no further analysis will occur. If it is determined that the non-respondent population is significantly and substantively different from the earlier respondent population, analysis with weighted adjustments for nonresponse, using a method such as those described in Part IV of *Survey Nonresponse* (Groves et. al. 2002), will be conducted.

Teacher Post-PD Nonresponse Questionnaire
Although the response rate for this questionnaire has been lower than initially expected (r=32% vs. r=80%), based on the shorter nonresponse post-PD questionnaire, there is evidence to suggest that the data collected to date can be generalized to the population of NOAA B-WET participating teachers. Only 2 of 30 statistical significant tests indicated that there were statistically significant differences between initial and non-respondent teachers. Importantly, there were no statistically significant differences in the programs teachers experienced nor in outcomes. The only differences occurred in the subjects teachers taught (e.g., nonresponse teachers were more likely to be science and math teachers whereas initial respondents were more likely to teach multiple disciplines including science) and that non-respondents were slightly more confident in their ability to implement MWEEs before their professional development than initial respondents (Attachment 3). At the same time, it is acknowledged that the two sample sizes (initial questionnaire n=133, non-respondent questionnaire=23) were not large enough to have sufficient power (Cohen, 1988) to detect statistically significant differences between the two groups (Attachment 4). Nonetheless, the effect sizes corresponding to the differences ranged from .032 to .362 (mean=.17) for continuous variables (where means were compared) and from 0.00 to .08 (mean=.04) for binary variables (where proportions were compared), meaning that the effect sizes were “small” per Cohen (1988). This suggests that the differences between initial and non-respondents were in fact small and our inability to detect the differences as significant were not just due to our sample sizes. In addition, a qualitative inspection of the two groups’ responses to the questionnaire’s common measures shows no substantively meaningful differences between the two groups’ means and frequency responses (Attachment 3).

Teacher Post-MWEE Nonresponse Questionnaire
Based on the 33% response rate achieved for the post-MWEE questionnaire so far, an analysis was conducted comparing results from the initial post-MWEE questionnaire with the much shorter nonresponse questionnaire. Findings suggest that data collected through the post-MWEE questionnaire to date can be generalized to the population of NOAA B-WET participating teachers. Only 5 of 22 statistical significant tests indicated that there were statistically significant differences between initial and non-respondent teachers (Attachment 5). Two of the differences

were in the implementation of MWEEs with non-respondent teachers reporting that they conducted slightly shorter MWEEs and that their students spent slightly less time outdoors than initial respondents. Three of the differences occurred in the perceived student outcomes of MWEEs (12 in total), with non-respondent teachers reporting slightly less confidence that their students achieved the respective outcomes. At the same time, it is acknowledged that the two sample sizes (initial questionnaire n=113, non-respondent questionnaire=23) were not large enough to have sufficient power (Cohen, 1988) to detect statistically significant differences between the two groups (Attachment 4). Nonetheless, the effect sizes corresponding to the differences ranged from .01 to .41 (mean=.17) for continuous variables (where means were compared) and were .11 for each of the two binary variables (where proportions were compared), meaning that the effect sizes were "small" per Cohen (1988). This suggests that the differences between initial and non-respondents were in fact small and our inability to detect the differences as significant were not just due to our sample sizes. In addition, a qualitative inspection of the two groups' responses to the questionnaire's common measures shows no substantively meaningful differences between the two groups' and means and frequency responses (Attachment 5).

4. Describe any tests of procedures or methods to be undertaken. Tests are encouraged as effective means to refine collections, but if ten or more test respondents are involved OMB must give prior approval.

The majority of measures and procedures used as part of the B-WET evaluation system have been tested and successfully implemented by previous studies (e.g., "Evaluation of National Oceanic and Atmospheric Administration Chesapeake Bay Watershed Education and Training Program," Kraemer et al., 2007; Zint et al., 2014). In addition, an exploratory study of the benefits of MWEEs found that the scales used as part of the proposed B-WET evaluation system (examined using exploratory factor analysis in SPSS and M+) are reliable and valid (Zint, 2012). Reliabilities, for example, ranged between good and excellent (i.e., Cronbach Alpha range: .70 to .90) and the amount of variance explained by the factors were substantial (i.e., range: 40% to 90). The measures used as part of the evaluation system have also been examined for face and content validity by stakeholders consisting of the nine members of NOAA's internal B-WET Advisory group, three evaluation experts with knowledge of B-WET, three B-WET grantees, and two watershed scientists.

As part of this application, some revisions to the three questionnaires are being requested, based on a review of descriptive statistics of initial data as well as respondents' feedback.

No additional testing is planned.

5. Provide the name and telephone number of individuals consulted on the statistical aspects of the design, and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.

<u>Individuals Consulted on Statistical Design:</u>
Dr. Michaela Zint, Professor, School of Natural Resources & Environment, School of Education, and College of Literature, Science & the Arts at the University of Michigan developed the statistical design for the proposed evaluation system. She, in turn, consulted with:

- Dr. Heeringa & Statistical Design Group members, Institute for Social Research, University of Michigan
- Dr. Lee & Dr. Rowan, School of Education, University of Michigan
- Dr. Rutherford & Dr. West, Center for Statistical Consultation and Research, University of Michigan

If you have any questions about the statistics design of the study, please contact Dr. Michaela Zint: zintmich@umich.edu, 734.763.6961.

Individual Who Will Conduct Data Collection and Analysis:
The evaluation system is designed to collect data through Qualtrics, an online survey platform that automatically generates descriptive statistics. Data may also be downloaded from Qualtrics for more sophisticated analysis by an external contractor.

Bronwen Rice, B-WET National Coordinator, NOAA Office of Education (Bronwen.Rice@noaa.gov, 202.482.6797) will be responsible for managing the data collection process and for ensuring the functioning and maintenance of the evaluation system.

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ATTACHMENTS (posted as supplementary documents)

1. Evaluation System Metrics Matrix
2a-e. Revised Questionnaires: Grantee, Teacher Post-PD, Teacher Post-PD Nonresponse, Teacher Post-MWEE, Teacher Post-MWEE Nonresponse
3. Comparison of Teacher Post-PD Initial vs. Nonresponse Questionnaire Results
4. Teacher Post-PD and Post-MWEE Power and Effect Size Analysis Results
5. Comparison of Teacher Post-MWEE Initial vs. Nonresponse Questionnaire Results

NOAA B-WET National Evaluation System Metrics Matrix

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Respondent Descriptives

	Grantee	**Teacher Post-PD**	**Teacher Post-PD Nonresponse**	**Teacher Post-MWEE**	**Teacher Post-MWEE Nonresponse**
Grantee Descriptive: Confirm Participation	GQ3 Did you or your organization operate a NOAA B-WET funded project this past grant year? No (0) (Skip to end of Survey) Yes (1)	PDQ6 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)? I did not complete a MWEE PD. (55) Less than 1 week ago (1) 1-2 weeks ago (2) 3-4 weeks ago (3)	X	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)? I did not complete a MWEE PD. (55)	X

		5-8 weeks ago (4) 9-12 weeks ago (5) More than 12 weeks ago (6)		Less than 1 week ago (1) 1-2 weeks ago (2) 3-4 weeks ago (3) 5-8 weeks ago (4) 9-12 weeks ago (5) More than 12 weeks ago (6) MQ9 In the past 12 months, did you implement a Meaningful Watershed Educational Experience (MWEE) with your students? No (0) Yes (1)	
Grantee Descriptive: Award Number	AWARD Please enter your NOAA B-WET award number. Your NOAA B-WET award number has 14 letters and numbers, such as NA12NMF4638049. The award number will be used ONLY to 1) identify your B-WET region, not your organization, and 2) allow us to link information you provide with that of data that may be provided by your project's teachers.				
Grantee Descriptive: Respondent Involvement	GQ6 To what extent were you (personally) involved in: (Not at all=1 to To a great extent=5) Developing your organization's most recent funded B-WET grant proposal (on your own or through collaborating with an external grant writer) (1) Implementing your organization's most recent B-WET-funded grant (2) Evaluating your organization's most recent B-WET-funded grant (on your own or through collaborating with an external evaluation consultant) (3)				
All Descriptive: Region	GPDQ1 In which region were your organization's MWEEs offered this past grant year? (check one) California (1)	PDGMQ1 In which region did you teach this past year? (check one) California (1) Chesapeake Bay (2)	X	MPDGQ1 In which region did you teach this past year? (check one) California (1)	

	Chesapeake Bay (2) Great Lakes (3) Gulf of Mexico (4) Hawaii (5) New England (6) Pacific Northwest (7) Other (please describe) (88)	Great Lakes (3) Gulf of Mexico (4) Hawaii (5) New England (6) Pacific Northwest (7) Other (please describe) (88) _____		Chesapeake Bay (2) Great Lakes (3) Gulf of Mexico (4) Hawaii (5) New England (6) Pacific Northwest (7) Other (please describe) (88)	
Grantee Descriptive: Total B-WET Funding	GQ9 What is the total amount of funding you received this past grant year from NOAA for your B-WET project? ❍ $1-20,000 (1) ❍ $20,001-$50,000 (2) ❍ $50,001-$100,000 (3) ❍ $100,001-$200,000 (4) ❍ $200,001-$300,000 (5) ❍ $300,001 or greater (6) ❍ N/A (7)				
Grantee Descriptive: Total Funding	GQ10 What is the total amount of funding for this project, from all sources, this past grant year? ❍ $1-20,000 (1) ❍ $20,001-$50,000 (2) ❍ $50,001-$100,000 (3) ❍ $100,001-$200,000 (4) ❍ $200,001-$300,000 (5) ❍ $300,001 or greater (6) ❍ N/A (7)				
Grantee Descriptive: Years of B-WET Funding	GQ11 Including this past grant year, for how many years has your organization received funding from NOAA B-WET for the currently-funded project? ❍ Less than a year (1) ❍ 1 year (2) ❍ 2 years (3) ❍ 3 years (4) ❍ 4 or more years (5)				
Grantee Descriptive:	GQ12 For how many years total has this B-WET project been in existence, including				

Age of Project	years not funded by NOAA B-WET? ❍ Less than a year (1) ❍ 1 year (2) ❍ 2 years (3) ❍ 3 years (4) ❍ 4 or more years (5)				
Grantee Descriptive: Type of Organization	GQ13 For what type of organization do you work? (choose one) ❍ Academic institution (community college, college, university) (1) ❍ Business/Corporation (2) ❍ Local government (3) ❍ State education agency (4) ❍ State natural resource agency (5) ❍ Non-profit organization (including informal education institutions) (6) ❍ School/school district (7) ❍ Other (please describe) (88)				
Grantee Descriptive: Project Type	GQ17 Which of the following B-WET-funded projects did your organization directly provide? (select one response) B-WET-funded MWEEs for students/youth who are between the ages of 4-18 (or grades PreK-12) (1) B-WET-funded MWEE professional development or support for teachers (2) Both B-WET-funded MWEEs for students and MWEE professional development for teachers (aka “Exemplary” project)				
Teacher Descriptive: Numbers	GQ20 For about how many teachers, schools, and school districts did your organization provide professional development or support (e.g., trained in workshops, coached at schools or in the field) this past grant year as a result of your B-WET grant? (Please provide one number, NOT a range.) About ____ teachers served (1) About ____ K-12 schools served (2)				

	About ____ school districts served (3)				
Teacher Descriptive: Grade Levels	GQ21 What percent of the participating teachers taught the following grade levels? (total should equal 100%) PreK (1) Elementary (2) Middle (3) High (4) I don't know (99)	PDQ10 In which grade level do you primarily teach? (select one) PreK (1) Elementary (2) Middle (3) High (4) Other (88)	X	In which grade level do you primarily teach? (select one) PreK (1) Elementary (2) Middle (3) High (4) Other (88)	
Teacher Descriptive: Subject	GPDQ2 Did the majority of participating teachers teach science? Don't know (99) No (0) Yes (1)	PDGQ2 What subject(s) do you primarily teach? (select one) Science (1) Technology Engineering Math (2) English language Arts (3) Social studies (4) Fine arts (5) Music Multiple disciplines, including science (6) Multiple disciplines, not including science (7) Other, please describe (88)	X		
Teacher Descriptive: PreK-12 Teacher		PDMQ3 Are you currently an in-service or pre-service PreK-12 teacher or educator? No (0) Yes (1)	X	MPDQ3 Are you currently a PreK-12 teacher or educator? No (0) Yes (1)	X
Teacher Descriptive: Setting		PDMQ5 In what setting do you primarily teach? (select one) Public school (1) Private school (2) Non-formal education (e.g., environmental centers, zoos, museums, interpretive programs at local or state level parks, youth organizations, summer camps, after school programs) (3) Home-school (4) Other (88)	X	MPDQ5 In what setting do you primarily teach? (select one) Public school (1) Private school (2) Non-formal education (e.g., environmental centers, zoos, museums, interpretive programs at local or state level parks, youth organizations, summer camps, after school programs) (3) Home-school (4) Other (88)	X
Teacher		UniqueID To allow us to compare your		UniqueID To allow us to compare	

Descriptive: Unique ID		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 your most often used phone number. For example, if you were born on March 9 and your home phone is 410.719.1234, your ID number would be 03091234.		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.	
Teacher Descriptive: Zip Code		PDMQ8 In what 5-digit zip code is your school located?			
Teacher Descriptive: Years		How many years have you been an educator? (select one) 1 to 5 years 6 to 10 years 11 to 20 years More than 20 years	X	How many years have you been an educator? (select one) 1 to 5 years 6 to 10 years 11 to 20 years More than 20 years	
Teacher Descriptive: MWEE Experience		PDQ18 Did you conduct Meaningful Watershed Educational Experiences (MWEEs) with your students before participating in the MWEE professional development? (For an expanded definition of a MWEE, view this file: MWEE defined) No (0) Yes (1)			
Teacher Descriptive: Reason for taking PD		PDQ19 What was your PRIMARY reason for participating in the MWEE professional development? (check one) To obtain information and resources for teaching (1) Personal interest in the topic of the professional development (2) To obtain continuing education, recertification, or graduate credit (3) I was required to attend (4) I was asked to attend (5) Other, please describe: (88) _____	X		

Student Descriptive: Numbers	GQ37 About how many students, schools, and school districts were served directly by your organization this past grant year as a result of your B-WET grant? (Please provide one number, NOT a range.) About ___ students served (1) About ___ K-12 schools served (2) About ___ school districts served (3)	About how many of your students will participate in a MWEE during the next school year? (Please provide your best estimate, NOT a range) About ___ students (1)		MGQ37_1 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 (1)	X
Student Descriptive: Grade Levels	GQ38 What percent of the students/youth directly served by your organization were in each of the following grade levels? (total must equal 100%) _____ PreK (1) _____ Elementary (2) _____ Middle (3) _____ High (4) _____ Other (88) _____ I don't know (99)				
Student Descriptive: Title I	GQ39 What percent of the participating students' schools are Title 1? Don't know (99) Less than 20% (1) 21-40% (2) 41-60% (3) 61-80% (4) 81-100% (5)			Is the school where you teach a Title 1 school? No (0) Yes (1) NA (55)	
Student Descriptive: Geographic Area				Which of these categories best describes your school's community (during the school year)? Rural (population of less than 10,000) (1) Town/Suburban (population 10,000-99,999) (2) Small urban (population 100,000-250,000) (3) Urban (population greater than 250,000) (4)	
Student Descriptive: Race				About what percent of your students are (percent should equal 100):	

				American Indian or Alaska Native (1) Asian (2) Black or African American (3) Hispanic or Latino (4) Native Hawaiian or Other Pacific Islander (5) White (6) Multi-racial Don't know (99)	

Evaluation System Question 1: To what extent do regional B-WET programs support grantees in implementing Meaningful Watershed Educational Experiences (MWEEs)?

	Grantee	**Teacher Post-PD**	**Teacher Post-PD Nonresponse**	**Teacher Post-MWEE**	**Teacher Post-MWEE Nonresponse**
B-WET Grant Management Support Satisfaction	GQ14 What grade would you give the grant management support you received from your region's NOAA B-WET staff over the past grant year? (slide the scale between F and A+) ❍ 1 (1) = F ❍ 2 (2) ❍ 3 (3) ❍ 4 (4) ❍ 5 (5) ❍ 6 (6) ❍ 7 (7) ❍ 8 (8) ❍ 9 (9) ❍ 10 (10) ❍ 11 (11) ❍ 12 (12) ❍ 13 (13) = A+ GQ14_Txt Briefly describe why you selected this grade.				
B-WET Grant Management Support Needs	How could regional B-WET programs better support your B-WET grant management? (essay box)				

B-WET MWEE Implementation Support Satisfaction	What grade would you give the MWEE implementation support you received from your region's NOAA B-WET staff over the past grant year? (slide the scale between F and A+) ❍ 1 (1) = F ❍ 2 (2) ❍ 3 (3) ❍ 4 (4) ❍ 5 (5) ❍ 6 (6) ❍ 7 (7) ❍ 8 (8) ❍ 9 (9) ❍ 10 (10) ❍ 11 (11) ❍ 12 (12) ❍ 13 (13) = A+ Briefly describe why you selected this grade:				
B-WET MWEE Implementation Support Needs	How could regional B-WET programs better support your implementation of MWEEs? (essay box)				

Evaluation System Question 2: How are MWEEs implemented by grantees (teacher professional development)?

	Grantee	Teacher Post-PD	Teacher Post-PD Nonresponse	Teacher Post-MWEE	Teacher Post-MWEE Nonresponse
PD Type	GPDQ4 Which of the following types of B-WET-funded MWEE professional development did you typically provide over the past grant year? (select No or Yes for each type) One day workshops (usually less than 8 hours) (1) Teacher institute (usually on consecutive days that cumulatively consist of 40 hours or more (2) Multi-day workshops (events that last at least 6 hours, but are less than 40 hours, e.g., a three-day workshop on a specific topic or a series of five Saturday sessions) (3) A college-level course (4) Professional development provider training (training for individuals who provide teacher professional development) (5) Individual teacher coaching and support (e.g., curriculum planning, shared teaching, demonstrations and/or other forms of in-school or in-field support) (6) On-line professional development support (e.g., courses, webinars, discussion forums) (7)	PDGQ4 Which type(s) of MWEE professional development did you participate in or receive: (please select No or Yes for each type) One day workshops (usually less than 8 hours) (1) Teacher institute (usually on consecutive days that cumulatively consist of 40 hours of more) (2) Multi-day workshops (events that last at least 6 hours, but are less than 40 hours, e.g., a three-day workshop on a specific topic or a series of five Saturday sessions) (3) A college-level course (4) Professional development provider training (training for individuals who provide teacher professional development) (5) Individual teacher coaching and support (e.g., curriculum planning, shared teaching, demonstrations and/or other forms of in-school or in-field support) (6) On-line professional development support (e.g., courses, webinars, discussion forums) (7)	X		
PD Implementation: Duration	What was the overall duration of your typical B-WET-funded MWEE professional development (including group and individual training and support)? Less than a week One week up to a month 1 to 4 months 5 to 8 months 9 to 12 months More than a year More than 2 years	PDQ22 What was the overall duration of the NOAA B-WET-funded MWEE professional development (including group and individual training and support)? Less than a week (1) One week up to a month (2) 1 to 4 months (3) 5 to 8 months (4) 9 to 12 months (5) More than a year (6) More than 2 years (7)			
PD Implementation: Hours	GPDQ23 About how many hours of MWEE professional development and/or support did your organization typically provide for any one teacher	PDGQ23 About how many hours of MWEE professional development and/or support did you receive over the past 12 months?	X		

	this past grant year? 1-10 hours (1) 11-20 hours (4) 21-40 hours (5) 41-60 hours (6) More than 60 hours (8)	1-10 hours (1) 11-20 hours (4) 21-40 hours (5) 41-60 hours (6) More than 60 hours (8)			
PD Implementation: Hours Outdoors	GPDQ24 About how many hours did a typical teacher participate in outdoor activities as part of your organization's MWEE professional development this past grant year? None (0) 1-10 hours (1) 11-20 hours (4) 21-40 hours (5) 41-60 hours (6) More than 60 hours (8)	PDGQ24 About how many of those MWEE professional development hours did you spend outdoors? None (0) 1-10 hours (1) 11-20 hours (4) 21-40 hours (5) 41-60 hours (6) More than 60 hours (8)			
PD Implementation: Standards	GQ25 To what extent was your organization's MWEE professional development content designed to align with: (NA=55, Don't know=99, To no extent=1 to To a great extent=5) State education standards (2) Next Generation Science Standards (3) Common Core Standards - Mathematics Common Core Standards - English Language Arts Regional environmental/natural resources management priorities (4)				

PD Implementation: NOAA Resources	GPDQ77 Which NOAA resources were incorporated into your organization's typical B-WET-funded MWEE professional development? (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)
	  o 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)
		PDGQ77 Which NOAA resources were used as part of your MWEE professional development? (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)
		  o 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)			

	o IF YES, Name the NOAA data sets: _____ • NOAA experts (e.g., scientist, educator, Sea Grant staff member, policy expert) o IF YES, Name the NOAA experts: • NOAA curricula and education programs (e.g., Data in the Classroom, Estuaries 101 curriculum, Ocean Exploration) o 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) o IF YES, Name the labs or facilities:_____ • NOAA National Marine Sanctuary, http://sanctuaries.noaa.gov/about/welcome.html o IF YES, Name the sanctuary: • NOAA National Estuarine Research Reserve, http://www.nerrs.noaa.gov o IF YES, Name the reserve:	o IF YES, Name the NOAA data sets: _____ • NOAA experts (e.g., scientist, educator, Sea Grant staff member, policy expert) o IF YES, Name the NOAA experts: • NOAA curricula and education programs (e.g., Data in the Classroom, Estuaries 101 curriculum, Ocean Exploration) o 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) o IF YES, Name the labs or facilities:_____ • NOAA National Marine Sanctuary, http://sanctuaries.noaa.gov/about/welcome.html o IF YES, Name the sanctuary: • NOAA National Estuarine Research Reserve, http://www.nerrs.noaa.gov o IF YES, Name the reserve:			
PD Implementation: Education Methods	GPDQ78 What education methods were used during your MWEE professional development? (select No or Yes for each method) 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) (1) 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	PDGQ78 What education methods were used during your MWEE professional development? (select No or Yes for each method) 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) (7) 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) (3) 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) (4) 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) (5) 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) (6)	teaching and learning) (9) 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) (10) 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) (11) 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) (12)			
PD Implementation: Scientific Inquiry	IF scientific inquiry based learning: GPDQ79 Which of the following science inquiry steps did you include? Engaged teachers in: Formulating scientific questions they can answer using data (1) Making predictions or hypotheses (2) Collecting data or using existing data (3) Analyzing and interpreting data (4) Making conclusions and adjusting predictions/hypotheses (5) Giving presentations of their findings (6)	IF scientific inquiry based learning: PDGQ79 As part of your MWEE professional development, were you involved in ... Formulating scientific questions that can be answered using data (1) Making predictions or hypotheses (2) Collecting data or using existing data (3) Analyzing and interpreting data (4) Making conclusions and adjusting predictions/hypotheses (5) Giving presentations of findings (6)			
PD Implementation: Best Practices 1	GPDQ80 As part of your B-WET professional development workshops or institutes this past grant year, did your organization typically include the following: (select No or Yes for each statement) Presented information and examples illustrating how other teachers have integrated MWEEs into their curriculum (1) Discussed how teachers may be able to integrate MWEEs into their own curriculum or classroom activities (2) Discussed alignment of MWEEs with state, regional, or national standards (3) Provided examples of how MWEEs align with standards (4)	PDGQ80 Did the workshops, institutes, or classes you participated in include the following professional development practices? (Please indicate No or Yes for each statement) Sharing of information and examples illustrating how other teachers have integrated MWEEs (1) Discussion of how teachers may be able to integrate MWEEs into their own curriculum or classroom activities (2) Discussion of alignment of MWEEs with state, regional, or national standards (3) Provision of examples of how MWEEs align with standards (4) Engaging you and other participating teachers in			

	Engaged teachers in aligning MWEEs with their school or school district standards (5) Allowed teachers time to plan how they will implement MWEEs (6) Engaged teachers in the same activities/practices they can use with their students (7) Included more than one teacher from individual schools (8) Presented how NOAA data can be used to support student scientific inquiry (9) Discussed how to use NOAA data to obtain knowledge about local issues (10) Shared examples of how other teachers have used NOAA data with their students (11) Allowed teachers time to plan how they will integrate the use of NOAA data (12)	aligning MWEEs with your school or school district standards (5) Participating along with other teachers from my school, at the same time (6) Allowing you and other participating teachers time to plan how to implement MWEEs (7) Engaging you and other participating teachers in activities/practices that can be used with your students (8) Presentation of how NOAA data can be used to support student scientific inquiry (9) Discussion of how NOAA data can be used to obtain knowledge about local issues (10) Examples of how other teachers have used NOAA data with their students (11) Allow you and other participating teachers time to plan how to integrate the use of NOAA data with your students (12) PDQ30 Please indicate which 3 practices were most valuable in helping you implement MWEEs. Type a 1 for most valuable, 2 for less valuable, and 3 for least valuable of the three.			
PD Implementation: Best Practices 2	GPDQ31 What types of support did your organization typically provide to teachers participating in MWEE professional development this past grant year? (select No or Yes for each statement) Assisted teachers with conducting field trips or field work (1) Assisted teachers with stewardship projects, e.g., restoration projects, building schoolyard habitats, etc. (2) Co-teaching in teachers' classrooms or in field (4) Provided coaching in participating teachers' classrooms (5) Provided demonstrations in teachers' classrooms (6) Assisted with the use of equipment or technologies (7) Communicated with teachers one-on-one through phone calls or email (8)	PDGQ31 What types of support did you receive from your MWEE professional development provider? (Please indicate No or Yes for each statement) Assistance with conducting field trips or field work (1) Assistance with stewardship projects, e.g., restoration projects, building schoolyard habitats, etc. (2) Co-teaching in my classrooms or in field (4) Coaching in my classroom (5) Demonstrations in my classroom (6) Assistance with the use of equipment or technologies (7) Communicating one-on-one with provider through phone calls or email (8) Communication with other teachers through a provider-supported online environment (9)			

	Supported an online environment for teachers to communicate with each other (9)	PDQ32 Please indicate which 3 support practices were most valuable in helping you implement MWEEs. Type a 1 for most valuable, 2 for less valuable, and 3 for least valuable of the three.			
PD Implementation: Best Practices 3	GPDQ81 Which characteristics describe your organization's typical MWEE professional development this past grant year? (select No or Yes for each statement) Helped make connections to local community organizations and resources (1) Facilitated interactions with natural resource professionals (3) Provided teacher stipends (4) Offered continuing education credits (5) Offered graduate credits (6) Provided equipment (7) Provided instructional/educational/curriculum materials (8) Provided information on how to obtain grants or funding for MWEEs (9)	PDGQ81 Which additional resources did your MWEE professional development and/or the support you received include? (Please indicate No or Yes for each statement) Connections were made to local community organizations and resources (1) Interactions were facilitated with NOAA scientists/staff (2) Interactions were facilitated with natural resource professionals (3) I was provided with a stipend (4) I was offered continuing education credits (5) I was offered graduate credits (6) I was provided with equipment (7) I was provided with instructional/educational/curriculum materials (8) I was provided with information on how to obtain grants or funding for MWEEs (9) PDQ34 Please indicate which 3 practices were most valuable in helping you implement MWEEs. Type a 1 for most valuable, 2 for less valuable, and 3 for least valuable of the three.			
PD Implementation: Stewardship Actions	Did teachers participate in any of these actions to protect or restore watersheds (ocean, coastal, riverine, estuarine, Great Lakes) as part of their MWEE professional development? (Select all categories that apply) • The teachers did NOT participate in watershed protection or restoration actions as part of their MWEE PD. • 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	PDGQ82 During your MWEE professional development, did you participate in any of these actions that protect or restore watersheds (ocean, coastal, riverine, estuarine, Great Lakes)? (select all categories that apply) • I did NOT participate in watershed protection or restoration actions as part of the MWEE PD. • 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			

	management (e.g., rain garden, paint storm drains] o Briefly describe the actions (text box) • Everyday Choices [e.g., reduce/reuse/recycle/upcycle, transportation (e.g., carpooling, bike riding, mass transit, walking), composting, energy conservation, water conservation] o Briefly describe the actions (text box) • Community Engagement [e.g., outreach, presentations, social media, messaging at community events/fairs/festivals, event-organizing, mentoring, PSAs, flyers, posters] o Briefly describe the actions (text box) • Civic Action [e.g., town meetings, voting, writing elected officials/decision makers, advocating for policy change] o Briefly describe the actions (text box) • Other o Briefly describe the actions (text box)	drains] o Briefly describe the actions (text box) • Everyday Choices [e.g., reduce/reuse/recycle/upcycle, transportation (e.g., carpooling, bike riding, mass transit, walking), composting, energy conservation, water conservation] o Briefly describe the actions (text box) • Community Engagement [e.g., outreach, presentations, social media, messaging at community events/fairs/festivals, event-organizing, mentoring, PSAs, flyers, posters] o Briefly describe the actions (text box) • Civic Action [e.g., town meetings, voting, writing elected officials/decision makers, advocating for policy change] o Briefly describe the actions (text box) • Other o Briefly describe the actions (text box)			
PD Implementation: B-WET funding		PDQ36 Did your B-WET professional development provider indicate that it was funded (in part) with funding from the National Oceanic and Atmospheric Administration (NOAA)? No (0) Yes (1)			
PD Implementation: Teacher Satisfaction		PDQ37 Overall, what grade would you give your MWEE professional development experience? (slide the scale between F and A+) 1 (1) = F 2 (2) 3 (3) 4 (4) 5 (5) 6 (6) 7 (7) 8 (8) 9 (9) 10 (10) 11 (11) 12 (12)	X		

		13 (13) = A+ Grade_Txt Briefly describe why you selected this grade.			
PD Implementation: Best		Best_Txt What component(s) of the MWEE professional development best prepared you to teach your students about local watersheds (ocean, coastal, riverine, estuarine, Great Lakes)?			
PD Implementation: Improve		Improv_Txt How could the MWEE professional development be improved to better prepare teachers to teach about the watershed (ocean, coastal, riverine, estuarine, Great Lakes)?		Help_Txt What could be done by your PD provider to help you develop and implement improved MWEEs?	
PD Implementation: Comments		Cmmts_Txt Do you have any other comments about the MWEE professional development?			

Evaluation System Question 2: How are (student) MWEEs implemented by grantees and teachers?

	Grantee	Teacher Post-PD	Teacher Post-PD Nonresponse	Teacher Post-MWEE	Teacher Post-MWEE Nonresponse
MWEE Implementation: Standards	GQ41 To what extent were your organization's MWEEs designed to align with: (NA=55, Don't know=99, To no extent=1 to To a great extent=5) State education standards (2) Next Generation Science Standards (3) Common Core Standards - Mathematics Common Core Standards - English Language Arts Regional environmental/natural resources management priorities (4)			MGQ41 To what extent was the content of your students' MWEEs aligned with:(NA=55, To no extent=1 to To a great extent=5) State education standards (2) Next Generation Science Standards Common Core Standards - Mathematics Common Core Standards - English Language Arts Regional environmental/natural resources management priorities (4)	
MWEE Implementation: Program Type	GQ42 Which of the following did your B-WET-funded programs provide for students during this past grant year? (select No or Yes for each program type) Off-site field programs during the school day (1) Schoolyard-based programs during the school day (2) Classroom-based programs during the school day, including distance learning experiences (3) After-school or weekend programs (e.g., science clubs) (4) Summer programs (5) Events for youth with their families (6)				
MWEE Implementation: Duration	GQ45 On average, a typical student participated in your organization's B-WET-funded MWEEs over the course of: Less than a week A week (3) Multiple weeks (4) Multiple months (6) A full school year (8) Multiple years (10)			MGQ45 On average, did students participate in a MWEE over the course of: Less than a week A week (3) Multiple weeks (4) Multiple months (6) A full school year (8) Multiple years (10)	X
MWEE Implementation: Hours	GQ43 On average during the past grant year, a typical student spent ____ hours being taught by your organization's staff during a B-WET-funded MWEE. None (0) 1-5 hours (1) 6-9 hours (3) 10-24 hours (4)			MGQ43 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 (1) 6-9 hours (3) 10-24 hours (4) 25-40 hours (6)	X

	25-40 hours (6) More than 40 hours (7)			More than 40 hours (7)	
MWEE Implementation: Hours Outdoors	GQ44 On average during the past grant year, a typical student spent ____ hours outdoors being taught by your organization's staff during a B-WET-funded MWEE. None (0) 1-5 hours (1) 6-9 hours (3) 10-24 hours (4) 25-40 hours (6) More than 40 hours (7)			MGQ44 On average during the last school year, about how many hours did a typical student spend outdoors during MWEE activities? (check one) None (0) 1-5 hours (1) 6-9 hours (3) 10-24 hours (4) 25-40 hours (6) More than 40 hours (7)	X
MWEE Implementation: Outdoor Location	[If chose a response other than "none" for hours outside] 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			MQ29 Where did the outdoor component of your students' MWEEs occur? On school grounds (1) Off school grounds, within walking distance Off school grounds, requiring transportation	
MWEE Implementation: Outdoor Experiences Number	[If chose a response other than "none" for hours outside] About how many separate outdoor learning experiences did students have during their MWEE? (check one for each row) (I don't know, None, 1, 2, 3 or more) Led by your organization Led by a teacher Led by another provider			About how many separate outdoor learning experiences did students have during their MWEE? (check one for each row) (I don't know, None, 1, 2, 3 or more) Led by your organization Led by a teacher Led by another provider	
MWEE Implementation: Subject Area	In what subject(s) were your organization's typical MWEEs implemented? (select all that apply): Science Technology Engineering Math Social studies English language arts Fine arts Music Other (please describe)			In what subject(s) were your organization's typical MWEEs implemented? (select all that apply): Science Technology Engineering Math Social studies English language arts Fine arts Music Other (please describe)	
	GQ48 Which NOAA resources were used as part of			MGQ48 Which NOAA resources were used as part of	

	MWEEs for students? (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)
	  o 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)
	  o IF YES, Name the NOAA data sets: _____
	• NOAA experts (e.g., scientist, educator, Sea Grant staff member, policy expert)
	  o IF YES, Name the NOAA experts:
	• NOAA curricula and education programs (e.g., Data in the Classroom, Estuaries 101 curriculum, Ocean Exploration)
	  o 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)
	  o IF YES, Name the labs or facilities:_____
	• NOAA National Marine Sanctuary, http://sanctuaries.noaa.gov/about/welcome.html
	  o IF YES, Name the sanctuary:
	• NOAA National Estuarine Research Reserve, http://www.nerrs.noaa.gov
	  o IF YES, Name the reserve:
				your student MWEE? (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)
				  o 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)
				  o IF YES, Name the NOAA data sets: _____
				• NOAA experts (e.g., scientist, educator, Sea Grant staff member, policy expert)
				  o IF YES, Name the NOAA experts:
				• NOAA curricula and education programs (e.g., Data in the Classroom, Estuaries 101 curriculum, Ocean Exploration)
				  o 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)
				  o IF YES, Name the labs or facilities:_____
				• NOAA National Marine Sanctuary, http://sanctuaries.noaa.gov/about/welcome.html
				  o IF YES, Name the sanctuary:
				• NOAA National Estuarine Research Reserve, http://www.nerrs.noaa.gov
				  o IF YES, Name the reserve:	

MWEE Implementation: Education Methods	GQ49 What education methods were used by your organization's staff with students during your organization's typical B-WET-funded MWEEs? (select a response for each method) Outdoor field trip or field work (i.e., excursion to learn about natural history and ecology in the outdoors,			MGQ49 What education methods were used during your students' MWEEs? (select No or Yes for each method) 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) (1)	

	may or may not include data collection) (1) 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) (3) 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) (4) 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) (5) 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) (6)			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) (3) 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) (4) 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) (5) 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) (6)	
MWEE Implementation: Science Inquiry	If scientific inquiry based learning: GQ50 Which of the following science inquiry steps did you include? Engaged students in: Formulating scientific questions they can answer using data (1) Making predictions or hypotheses (2) Collecting data or using existing data (3) Analyzing and interpreting data (4) Making conclusions and adjusting predictions/hypotheses (5) Giving presentations of their findings (6)			If scientific inquiry based learning: MGQ50 Which of the following steps did you engage students in... Formulating scientific questions they can answer using data (1) Making predictions or hypotheses (2) Collecting data or using existing data (3) Analyzing and interpreting data (4) Making conclusions and adjusting predictions/hypotheses (5) Giving presentations of their findings (6)	
MWEE Implementation: Stewardship Actions	Did students participate in any of these actions to protect or restore watersheds during your organization's B-WET-funded MWEEs? (select all categories that apply) • The students did NOT participate in any			Did students participate in any of these actions to protect or restore watersheds during your organization's B-WET-funded 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]
	  o Briefly describe the actions (text box)
	• Everyday Choices [e.g., reduce/reuse/recycle/upcycle, transportation (e.g., carpooling, bike riding, mass transit, walking), composting, energy conservation, water conservation]
	  o Briefly describe the actions (text box)
	• Community Engagement [e.g., outreach, presentations, social media, messaging at community events/fairs/festivals, event-organizing, mentoring, PSAs, flyers, posters]
	  o Briefly describe the actions (text box)
	• Civic Action [e.g., town meetings, voting, writing elected officials/decision makers, advocating for policy change]
	  o Briefly describe the actions (text box)
	• Other
	  o Briefly describe the actions (text box)
				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]
				  o Briefly describe the actions (text box)
				• Everyday Choices [e.g., reduce/reuse/recycle/upcycle, transportation (e.g., carpooling, bike riding, mass transit, walking), composting, energy conservation, water conservation]
				  o Briefly describe the actions (text box)
				• Community Engagement [e.g., outreach, presentations, social media, messaging at community events/fairs/festivals, event-organizing, mentoring, PSAs, flyers, posters]
				  o Briefly describe the actions (text box)
				• Civic Action [e.g., town meetings, voting, writing elected officials/decision makers, advocating for policy change]
				  o Briefly describe the actions (text box)
				• Other
				  o Briefly describe the actions (text box)	

MWEE Implementation: Integration with Classroom				MQ30 To what extent do you agree or disagree with the following: (NA=55, Strongly disagree=1 to Strongly agree=7) Overall, what I taught my students about watersheds in the classroom was closely integrated with students' outdoor learning experience(s). (1) My students' outdoor learning experiences were designed to help them understand what they had been introduced to during regular class (2) My students' outdoor learning experiences were designed to reinforce what students learned during regular class (3)	
MWEE Implementation: Preparation				MQ31 BEFORE students participated in their outdoor learning experience: (NA=55, Strongly disagree=1 to Strongly agree=7)	

				I provided them with detailed information about what they were going to do (1) I let students know what activities they were going to do (2) I spent a lot of time preparing students for what to expect (3)	
MWEE Implementation: Data collection				During the MWEE (outdoors or in classroom), my students: (choose No or Yes for each statement) 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	
MWEE Implementation: Reflection				MQ33 Back in the classroom AFTER students participated in the outdoor learning experience(s): (NA=55, Strongly disagree=1 to Strongly agree=7) They discussed results based on their observations (1) They offered explanations for what they observed (2) They were expected to draw on what had been learned (3)	

Evaluation System Question 3: To what extent do B-WET funded projects increase teachers' knowledge of watershed concepts, their confidence in their ability to integrate MWEEs into their teaching practices, and the likelihood that they implement high quality MWEEs?

	Grantee	Teacher Post-PD	Teacher Post-PD Nonresponse	Teacher Post-MWEE	Teacher Post-MWEE Nonresponse
Teacher Outcome: Watershed Literacy	GPDQ83 It was a goal of my organization's B-WET-funded professional development that teachers would be able to: Define the term "watershed" (1) Identify their local watershed(s) (ocean, coastal, riverine, estuarine, Great Lakes) (2) Identify how watersheds are connected to the ocean via streams, rivers, and human-made structures (3) Identify the functions that occur in a watershed (transport, store, and cycle water) (4) Recognize that both natural processes and human activities affect water flow and water quality in watersheds. (5) Identify connections between human welfare and water flow and quality (6) Identify possible point and non-point sources of water pollution (7) Identify actions individuals can take to protect or restore watersheds (8)				
Teacher Outcome: MWEE Preparation	GPDQ84 It was a goal of my organization's B-WET-funded MWEE professional development that teachers would: Teach more about watersheds (ocean, coastal, riverine, estuarine, Great Lakes) (1) Be more likely to implement MWEEs (2) Be more likely to implement MWEEs after they are no longer supported by our organization (3) Be more likely to use NOAA resources to				

	enhance their students' MWEE experiences (4) Be more likely to guide students through taking action to protect or restore watersheds (5) Be more likely to use science inquiry instruction (6) Be more likely to use the outdoors for instruction (7) Be more likely to use local community resources as part of instruction (8) Be more likely to use interdisciplinary approaches to instruction (9) Be more enthusiastic about teaching science (10) Be more likely to act to protect or restore watersheds (11)				
Teacher Outcome: NOAA Familiarity		PDQ36 Did your B-WET professional development provider indicate that it was funded (in part) with funding from the National Oceanic and Atmospheric Administration (NOAA)? No (0) Yes (1)			
Teacher Outcome: Change in Watershed Literacy		For each statement, select one response for BEFORE and one response for AFTER the MWEE professional development. (Strongly disagree=1 to Strongly agree=7) BEFORE the MWEE professional development, I was able to: AFTER the MWEE professional development, I am able to: Define the term "watershed" (1) Identify my local watershed(s) (ocean, coastal, riverine, estuarine, Great Lakes) (2) Identify how watersheds are connected to the ocean via streams, rivers, and human-made structures			

		(3) Identify the functions that occur in a watershed (transport, store, and cycle water) (4) Recognize that both natural processes and human activities affect water flow and water quality in watersheds (5) Identify connections between human welfare and water flow and quality (6) Identify possible point and non-point sources of water pollution (7) Identify actions individuals can take to protect or restore watersheds (8)			
Teacher Outcome: NOAA Familiarity		PDQ40 Did participating in the B-WET professional development increase your knowledge of what NOAA does? (1) scientific data accessible through NOAA? (2) educational resources available through NOAA? (3)			
Teacher Outcome: Change in MWEE Implementation		PDGQ84 For each statement, select one response for BEFORE and one response for AFTER the MWEE professional development. BEFORE the MWEE professional development, how confident were you in your ability to: AFTER the MWEE professional development, how confident are you in your ability to: (Not at all confident=1 to Extremely confident=7) Teach my students about local watersheds (ocean, coastal, riverine, estuarine, Great Lakes) (1) Incorporate MWEEs into my curriculum (2) Implement MWEEs without support from a professional development provider (3)	X (statements 1 and 2)		

		Use NOAA resources to enhance my students' MWEE experiences (4) Guide students through taking action to protect or restore watersheds (5) PDGQ84a Research environmental issues affecting watersheds with students (1) Use scientific inquiry instruction (2) Use the outdoors for instruction (3) Act to protect or restore watersheds (4)			
Teacher Outcome: Intention to do MWEEs		PDGQ84 Select one response for each statement. During the next school year, I intend to ... (Strongly disagree=1 to Strongly agree=7) Teach my students about local watersheds (ocean, coastal, riverine, estuarine, Great Lakes) (1) Incorporate MWEEs into my curriculum (2) Implement MWEEs without support from a professional development provider (3) Use NOAA resources to enhance my students' MWEE experiences (4) Guide students through taking action to protect or restore watersheds (5) PDGQ84a Research environmental issues affecting watersheds with students (1) Use scientific inquiry instruction (2) Use the outdoors for instruction (3) Act to protect or restore watersheds (4)	X (statements 1 and 2)		

Evaluation System Question 4: To what extent do B-WET funded projects increase students' knowledge of watershed concepts, attitudes toward watersheds, inquiry and stewardship skills, and aspirations towards protecting watersheds?

	Grantee	Teacher Post-PD	Teacher Post-PD Nonresponse	Teacher Post-MWEE	Teacher Post-MWEE Nonresponse
Student Outcome: Environmental Literacy Goal	GQ52 It was a goal of my organization's B-WET-funded MWEEs that students would: (NA=55, Don't know=99, No=0, Yes=1) Know more about the ocean (1) Know more about climate change (2) Know more about watersheds Express greater caring and concern for watersheds (ocean, coastal, riverine, estuarine, Great Lakes) (4) Be more confident in their ability to protect or restore watersheds (5) Be more likely to act to protect or restore watersheds (6) Be better able to make informed decisions about how to protect or restore watersheds (7) Be better able to conduct scientific investigations (8) Be better able to understand the nature of scientific research Be more likely to express an interest in pursuing science careers (9) Perform better in science (10) Perform better on state standardized tests (11) Be more engaged in their learning (12)				
Student Outcome: Watershed Goal	GQ53 It was a goal of my organization's B-WET-funded MWEEs that students would be able to: (NA=55, Don't know=99, No=0, Yes=1) Define the term "watershed" (1) Identify their local watershed(s) (ocean, coastal, riverine, estuarine, Great Lakes) (2) Identify how watersheds are connected to the ocean via streams, rivers, and human-made structures (3) Identify the functions that occur in a watershed (transport, store, and cycle water) (4)				

	Recognize that both natural processes and human activities affect water flow and water quality in watersheds. (5) Identify connections between human welfare and water flow and quality (6) Identify possible point and non-point sources of water pollution (7) Identify actions individuals can take to protect or restore watersheds (8)				
Student Outcome: Change in EE Literacy				MGQ52 As a result of participating in MWEEs, students: (NA=55, Strongly disagree=1 to Strongly agree=7) Know more about the ocean Know more about climate change Know more about watersheds (1) Express greater caring and concern for their local watershed (ocean, coastal, riverine, estuarine, Great Lakes) (2) Are more confident in their ability to protect or restore watersheds (3) Are more likely to act to protect or restore watersheds (4) Are better able to make informed decisions about how to protect or restore watersheds (5) Are better able to conduct scientific investigations (6) Are better able to understand the nature of scientific research (7) Are more likely to express an interest in pursuing science careers (8) Perform better in science (9) Perform better on state standardized tests (11) Are more engaged in their learning (12)	X
Student Outcome: Change in Watershed Literacy				MGQ53 As a result of participating in MWEEs, students are better able to: (NA=55, Strongly disagree=1 to Strongly agree=7) Define the term "watershed" (1) Identify their local watershed(s) (ocean, coastal, riverine, estuarine, Great Lakes) (2) Identify how watersheds are connected to the ocean via streams, rivers, and human-made	

				structures (3) Identify the functions that occur in a watershed (transport, store, and cycle water) (4) Recognize that both natural processes and human activities affect water flow and water quality in watersheds (5) Identify connections between human welfare and water flow and quality (6) Identify possible point and non-point sources of water pollution (7) Identify actions individuals can take to protect or restore in watersheds (8)	
Student Outcome: Change in Stewardship Actions				MQ24 As a result of participating MWEEs, students are more likely to take these types of actions to protect or restore watersheds (ocean, coastal, riverine, estuarine, Great Lakes). (NA=55, Strongly disagree=1 to 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) (10)	
Student Outcome: General				Beneft_Txt What is the most important benefit of MWEEs for your students?	

Exploratory Question: What evaluation of B-WET projects has been conducted?

	Grantee	Teacher Post-PD	Teacher Post-PD Nonresponse	Teacher Post-MWEE	Teacher Post-MWEE Nonresponse
Evaluation Incentive	Did your organization include an incentive (of any kind) to encourage teachers to complete the post-PD online questionnaire from NOAA B-WET? No Yes If yes, please describe the incentive.				
Evaluation Completion	GQ55 Which of the following best describes the situation with regard to evaluation(s) of your organization's B-WET-funded projects? Don't know (99) No evaluation has been conducted and there are no plans to complete one (1) No evaluation has been conducted, but there are plans to complete one (2) An evaluation is being conducted, but it is not yet finished (3) One evaluation has been completed (4) Two evaluations have been completed Three or more evaluations have been completed Other (please describe) (88)				
Evaluation Types	GQ56 What type of evaluation has been completed? (Not conducted=1, Completed but no report is available=2, Completed and report is available=3) Needs assessment Process/Implementation Outcome Impact				
Evaluation Results Use	How have you or your organization used your project evaluation results?				
Evaluation Leader	Please answer the following questions with regard to the outcome or impact evaluation your organization completed. GQ58 Which of the following best describes who led the evaluation? Don't know (99) Internal staff member (someone who is an employee of your organization) (1) External consultant (someone who is not an employee of your organization) If selected, please provide consultant/firm name: (2) Other (please describe) (88)				
Evaluation Outcomes	GQ59 Do the evaluation results include evidence of: (Don't know=99, Not measured=44, No=0, Yes=1) Increases in knowledge about watersheds (participants learned new information) (1) Changes in attitudes toward watersheds (participants' changed their beliefs, opinions, feelings, or perspectives) (2)				

	Increases in the skills needed to act in ways to protect or restore watersheds (ocean, coastal, riverine, estuarine, Great Lakes) (3) Increases in intentions to act to protect or restore on behalf of watersheds (4) Participants engaging in actions that protect or restore watersheds (5) Improved water quality (positive changes in physical watershed that can be attributed to participants' actions) (6) Improved academic performance (7) Other (please describe)				

Exploratory Question: What additional impacts does the B-WET program have?

	Grantee	Teacher Post-PD	Teacher Post-PD Nonresponse	Teacher Post-MWEE	Teacher Post-MWEE Nonresponse
Impact: NOAA Visibility	GQ61 As a result of NOAA B-WET, our audiences are more familiar with NOAA, such as NOAA science, resources, and experts. Not an expected impact I don't know Strongly Disagree 1 (1) 2 (2) 3 (3) 4 (4) 5 (5) 6 (6) Strongly Agree 7 (7) GQ61_Txt Please explain why you selected the response you did.				
Impact: Organization's EE	GQ63 The B-WET grant has improved the overall quality of environmental education provided by my organization (e.g., through use of best practices or other increase in institutional capacity). Not an expected impact I don't know Strongly Disagree 1 (1) 2 (2) 3 (3) 4 (4) 5 (5) 6 (6) Strongly Agree 7 (7) GQ63_Txt Please explain why you selected the response you did.				
Impact: Formal Education Systems	GQ65 The B-WET grant has helped integrate environmental education into the formal education system(s) with which we work. Not an expected impact I don't know Strongly Disagree 1 (1) 2 (2) 3 (3) 4 (4) 5 (5) 6 (6) Strongly Agree 7 (7) GQ65_Txt Please explain why you selected the response you did.				

Questionnaire Feedback

	Grantee	Teacher Post-PD	Teacher Post-PD Nonresponse	Teacher Post-MWEE	Teacher Post-MWEE Nonresponse
Feedback: General	GQ74 This questionnaire was .... (choose one for each) Difficult to complete=1:Easy to complete=7(1) Not informative=1:Informative=7 (2) Long=1:Short=7 (3)	PDGMQ74 This questionnaire was .... (choose one for each line) Difficult to complete=1:Easy to complete=7(1) Long=1:Short=7 (3)		MGPDQ74 The questionnaire was ... (select one for each line) Difficult to complete=1:Easy to complete=7(1) Long=1:Short=7 (3)	
Feedback: Improvements	Imprv_Txt How can this questionnaire be improved?	ImprvQ_Txt How can this questionnaire be improved?		ImprvQ_Txt How can this questionnaire be improved?	
Feedback: Comments	Cmmts_Txt What final comments would you like to share?	What final comments would you like to share?		Cmmts_Txt What final comments would you like to share about MWEEs?	

NOAA B-WET Grantee Survey
Revised 2015

INTRODUCTION

This is a voluntary survey.

Please answer the following questions in reference to the most recently-completed grant year of your current NOAA B-WET grant. You will be asked about a range of practices and outcomes that represent the diversity of Meaningful Watershed Educational Experiences (MWEEs) offered by B-WET-funded projects, some of which may not apply directly to your project. It is acceptable to answer "not applicable" (N/A) in those instances.

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, student 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. MWEEs for teachers provide K-12 teachers opportunities for professional development to build their confidence and capacity to implement MWEE activities with their students, and should increase teachers' knowledge and awareness of environmental issues, model environmental education pedagogy, allow for adequate instructional time, provide ongoing teacher support and appropriate incentives, and meet jurisdictional guidelines for effective teacher professional development. For more information about the NOAA Meaningful Watershed Educational Experience, click here: MWEE Definition. [link to the new MWEE definition: http://www.oesd.noaa.gov/grants/docs/MWEE_Definition-final2015-7-29v3.pdf]

For the purposes of this survey, please respond in reference to NOAA B-WET-funded MWEEs and professional development. Also, we realize that not all MWEEs are designed in the same way and that your organization does not necessarily only offer one type. Because we are attempting to generalize, we often ask you to consider a "typical" MWEE offered by your organization. Please consider your most frequently offered B-WET-funded MWEE as "typical."

All responses will be kept anonymous, that is they will not be associated with you and your organization. THANK YOU in advance for your candor and thoughtfulness in answering the questions that follow.

It will take between 30-60 minutes to complete this survey, depending on the nature of your project.

Notes:

- The term “organization” is used generically to mean the B-WET funds “awardee.” The awardee may be one nonprofit organization or an academic institution completing the work, or the awardee may be an institution that is serving as the leader of a partnership of organizations that are completing the work. If you are the latter type of awardee, please respond on behalf of your collective group of partners.
- We apologize for redundancy in information you have previously provided to NOAA B-WET as part of your award. At this time, we are not able to link this national evaluation system database with NOAA B-WET’s other databases.
- You can 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 (some work and public computers do not save and/or retain cookies).

If you have technical issues or questions about this survey, please contact either your regional B-WET manager or Bronwen Rice, B-WET National Coordinator (Bronwen.Rice@noaa.gov).

Thank you.

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Paperwork Reduction Act Statement

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GQ3 Did you or your organization operate a NOAA B-WET funded project this past grant year?
- ❍ No (0) (Skip to end of Survey)
- ❍ Yes (1)

AWARD Please enter your NOAA B-WET award number. Your NOAA B-WET award number has 14 letters and numbers, such as NA12NMF4638049. The award number will be used ONLY to 1) identify your B-WET region, not your organization, and 2) allow us to link information you provide with that of data that may be provided by your project's teachers.

GQ6 To what extent were you (personally) involved in:

	To no extent1 (1)	2 (2)	3 (3)	4 (4)	To a great extent 5 (5)
Developing your organization's most recent funded B-WET grant proposal (on your own or through collaborating with an external grant writer) (1)	❍	❍	❍	❍	❍
Implementing your organization's most recent B-WET-funded grant (2)	❍	❍	❍	❍	❍
Evaluating your organization's most recent B-WET-funded grant (on your own or through collaborating with an external evaluation consultant) (3)	❍	❍	❍	❍	❍

GPDQ1 In which region were your organization's MWEEs offered this past grant year? (check one)
- ❍ California (1)
- ❍ Chesapeake Bay (2)
- ❍ Great Lakes (3)
- ❍ Gulf of Mexico (4)
- ❍ Hawaii (5)
- ❍ New England (6)
- ❍ Pacific Northwest (7)
- ❍ Other (please describe) (88) _____

GQ9 What is the total amount of funding you received this past grant year from NOAA for your B-WET project?

- ❍ $1-20,000 (1)
- ❍ $20,001-$50,000 (2)
- ❍ $50,001-$100,000 (3)
- ❍ $100,001-$200,000 (4)
- ❍ $200,001-$300,000 (5)
- ❍ $300,001 or greater (6)
- ❍ N/A (7)

GQ10 What is the total amount of funding for this project, from all sources, this past grant year?

- ❍ $1-20,000 (1)
- ❍ $20,001-$50,000 (2)
- ❍ $50,001-$100,000 (3)
- ❍ $100,001-$200,000 (4)
- ❍ $200,001-$300,000 (5)
- ❍ $300,001 or greater (6)
- ❍ N/A (7)

GQ11 Including this past grant year, for how many years has your organization received funding from NOAA B-WET for the currently-funded project?

- ❍ Less than a year (1)
- ❍ 1 year (2)
- ❍ 2 years (3)
- ❍ 3 years (4)
- ❍ 4 or more years (5)

GQ12 For how many years total has this B-WET project been in existence, including years not funded by NOAA B-WET?

- ❍ Less than a year (1)
- ❍ 1 year (2)
- ❍ 2 years (3)
- ❍ 3 years (4)
- ❍ 4 or more years (5)

GQ13 For what type of organization do you work? (choose one)
- ❍ Academic institution (community college, college, university) (1)
- ❍ Business/Corporation (2)
- ❍ Local government (3)
- ❍ State education agency (4)
- ❍ State natural resource agency (5)
- ❍ Non-profit organization (including informal education institutions) (6)
- ❍ School/school district (7)
- ❍ Other (please describe) (88) _____

GQ14 What grade would you give the grant management support you received from your region's NOAA B-WET staff over the past grant year? (slide the scale between F and A+)
- ❍ 1 (1)
- ❍ 2 (2)
- ❍ 3 (3)
- ❍ 4 (4)
- ❍ 5 (5)
- ❍ 6 (6)
- ❍ 7 (7)
- ❍ 8 (8)
- ❍ 9 (9)
- ❍ 10 (10)
- ❍ 11 (11)
- ❍ 12 (12)
- ❍ 13 (13)

GQ14_Txt Briefly describe why you selected this grade.

How could regional B-WET programs better support your B-WET grant management? (essay box)

What grade would you give the MWEE implementation support you received from your region's NOAA B-WET staff over the past grant year?
- ❍ A
- ❍ B
- ❍ C
- ❍ D
- ❍ F

Briefly describe why you selected this grade:

How could regional B-WET programs better support your implementation of MWEEs? (essay box)

GQ17 BRANCHING QUESTION Which of the following B-WET-funded projects did your organization directly provide? (select one response)

B-WET-funded MWEEs for students/youth who are between the ages of 4-18 (or grades PreK-12) (1)	❍
B-WET-funded MWEE professional development or support for teachers (2)	❍
Both B-WET-funded MWEEs for students and MWEE professional development for teachers (aka "Exemplary" project)	❍

PD TEACHER PROFESSIONAL DEVELOPMENT

GPDQ4 Which of the following types of B-WET-funded MWEE professional development did you typically provide over the past grant year? (select No or Yes for each type)

	No (0)	Yes (1)
One day workshops (usually less than 8 hours) (1)	❍	❍
Teacher institute (usually on consecutive days that cumulatively consist of 40 hours or more (2)	❍	❍
Multi-day workshops (events that last at least 6 hours, but are less than 40 hours, e.g., a three-day workshop on a specific topic or a series of five Saturday sessions) (3)	❍	❍
A college-level course (4)	❍	❍
Professional development provider training (training for individuals who provide teacher professional development) (5)	❍	❍
Individual teacher coaching and support (e.g., curriculum planning, shared teaching, demonstrations and/or other forms of in-school or in-field support) (6)	❍	❍
On-line professional development support (e.g., courses, webinars, discussion forums) (7)	❍	❍

GQ20 For about how many teachers, schools, and school districts did your organization provide professional development or support (e.g., trained in workshops, coached at schools or in the field) this past grant year as a result of your B-WET grant? (Please provide one number, NOT a range.)

About ____ teachers served (1)
About ____ K-12 schools served (2)
About ____ school districts served (3)

GQ21 What percent of the participating teachers taught the following grade levels? (total should equal 100%)
_____ PreK (1)
_____ Elementary (2)
_____ Middle (3)
_____ High (4)
_____ I don't know (99)

GPDQ2 Did the majority of participating teachers teach science?
❍ Don't know (99)
❍ No (0)
❍ Yes (1)

Please consider your most frequently offered B-WET-funded MWEE PD as “typical.”

What was the overall duration of your typical B-WET-funded MWEE professional development (including group and individual training and support)?
- Less than a week
- One week up to a month
- 1 to 4 months
- 5 to 8 months
- 9 to 12 months
- More than a year
- More than 2 years

GPDQ23 About how many hours of MWEE professional development and/or support did your organization typically provide for any one teacher this past grant year?
❍ 1-10 hours (1)
❍ 11-20 hours (4)
❍ 21-40 hours (5)
❍ 41-60 hours (6)
❍ More than 60 hours (8)

GPDQ24 About how many hours did a typical teacher participate in outdoor activities as part of your organization’s MWEE professional development this past grant year?
❍ None (0)
❍ 1-10 hours (1)
❍ 11-20 hours (4)
❍ 21-40 hours (5)
❍ 41-60 hours (6)
❍ More than 60 hours (8)

Did your organization include an incentive (of any kind) to encourage teachers to complete the post-PD online questionnaire from NOAA B-WET?
No
Yes

If yes, please describe the incentive.

GQ25 To what extent was your organization's MWEE professional development content designed to align with:

	NA (55)	Don't know (99)	To no extent1 (1)	2 (2)	3 (3)	4 (4)	To a great extent 5 (5)
State education standards (1)	❍	❍	❍	❍	❍	❍	❍
Next Generation Science Standards (2)	❍	❍	❍	❍	❍	❍	❍
Common Core Standards – Mathematics (3)	❍	❍	❍	❍	❍	❍	❍
Common Core Standards - English Language Arts (4)	❍	❍	❍	❍	❍	❍	❍
Regional environmental/natural resources management priorities (5)	❍	❍	❍	❍	❍	❍	❍

GPDQ77 Which NOAA resources were incorporated into your organization's typical B-WET-funded MWEE professional development? (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:

GPDQ78 What education methods were used during your MWEE professional development? (select No or Yes for each method)

	Not sure (77)	No (0)	Yes (1)
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) (1)	❍	❍	❍
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) (2)	❍	❍	❍
Place-based education (i.e., an interdisciplinary instructional strategy that uses the local environment and community as the context for teaching and learning) (3)	❍	❍	❍
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) (4)	❍	❍	❍
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) (5)	❍	❍	❍
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) (6)	❍	❍	❍

Answer If What education methods were used during your MWEE profes... Scientific-inquiry-based learning Yes Is Selected

GPDQ79 Which of the following science inquiry steps did you include? Engaged teachers in:

	No (0)	Yes (1)
Formulating scientific questions they can answer using data (1)	❍	❍
Making predictions or hypotheses (2)	❍	❍
Collecting data or using existing data (3)	❍	❍
Analyzing and interpreting data (4)	❍	❍
Making conclusions and adjusting predictions/hypotheses (5)	❍	❍
Giving presentations of their findings (6)	❍	❍

GPDQ80 As part of your B-WET professional development workshops or institutes this past grant year, did your organization typically include the following: (select No or Yes for each statement)

	No (0)	Yes (1)
Presented information and examples illustrating how other teachers have integrated MWEEs into their curriculum (1)	❍	❍
Discussed how teachers may be able to integrate MWEEs into their own curriculum or classroom activities (2)	❍	❍
Discussed alignment of MWEEs with state, regional, or national standards (3)	❍	❍
Provided examples of how MWEEs align with standards (4)	❍	❍
Engaged teachers in aligning MWEEs with their school or school district standards (5)	❍	❍
Allowed teachers time to plan how they will implement MWEEs (6)	❍	❍
Engaged teachers in the same activities/practices they can use with their students (7)	❍	❍
Included more than one teacher from individual schools (8)	❍	❍
Presented how NOAA data can be used to support student scientific inquiry (9)	❍	❍
Discussed how to use NOAA data to obtain knowledge about local issues (10)	❍	❍
Shared examples of how other teachers have used NOAA data with their students (11)	❍	❍
Allowed teachers time to plan how they will integrate the use of NOAA data (12)	❍	❍

GPDQ31 What types of support did your organization typically provide to teachers participating in MWEE professional development this past grant year? (select No or Yes for each statement)

	No (0)	Yes (1)
Assisted teachers with conducting field trips or field work (1)	❍	❍
Assisted teachers with stewardship projects, e.g., restoration projects, building schoolyard habitats, etc. (2)	❍	❍
Co-teaching in teachers' classrooms or in field (4)	❍	❍
Provided coaching in participating teachers' classrooms (5)	❍	❍
Provided demonstrations in teachers' classrooms (6)	❍	❍
Assisted with the use of equipment or technologies (7)	❍	❍
Communicated with teachers one-on-one through phone calls or email (8)	❍	❍
Supported an online environment for teachers to communicate with each other (9)	❍	❍

GPDQ81 Which characteristics describe your organization's typical MWEE professional development this past grant year? (select No or Yes for each statement)

	No (0)	Yes (1)
Helped make connections to local community organizations and resources (1)	❍	❍
Facilitated interactions with natural resource professionals (3)	❍	❍
Provided teacher stipends (4)	❍	❍
Offered continuing education credits (5)	❍	❍
Offered graduate credits (6)	❍	❍
Provided equipment (7)	❍	❍
Provided instructional/educational/curriculum materials (8)	❍	❍
Provided information on how to obtain grants or funding for MWEEs (9)	❍	❍

Did teachers participate in any of these actions to protect or restore watersheds (ocean, coastal, riverine, estuarine, Great Lakes) as part of their MWEE professional development? (Select all categories that apply)

- The teachers did NOT participate in watershed protection or restoration actions as part of their MWEE PD.
- 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 (text box)
- 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 (text box)
- Community Engagement [e.g., outreach, presentations, social media, messaging at community events/fairs/festivals, event-organizing, mentoring, PSAs, flyers, posters]
    - Briefly describe the actions (text box)
- Civic Action [e.g., town meetings, voting, writing elected officials/decision makers, advocating for policy change]
    - Briefly describe the actions (text box)
- Other
    - Briefly describe the actions (text box)

GPDQ83 It was a goal of my organization's B-WET-funded professional development that teachers would be able to:

	NA (55)	Don't know (99)	No (0)	Yes (1)
Define the term "watershed" (1)	❍	❍	❍	❍
Identify their local watershed(s) (ocean, coastal, riverine, estuarine, Great Lakes) (2)	❍	❍	❍	❍
Identify how watersheds are connected to the ocean via streams, rivers, and human-made structures (3)	❍	❍	❍	❍
Identify the functions that occur in a watershed (transport, store, and cycle water) (4)	❍	❍	❍	❍
Recognize that both natural processes and human activities affect water flow and water quality in watersheds. (5)	❍	❍	❍	❍
Identify connections between human welfare and water flow and quality (6)	❍	❍	❍	❍
Identify possible point and non-point sources of water pollution (7)	❍	❍	❍	❍
Identify actions individuals can take to protect or restore watersheds (8)	❍	❍	❍	❍

GPDQ84 It was a goal of my organization's B-WET-funded MWEE professional development that teachers would:

	NA (55)	Don't know (99)	No (0)	Yes (1)
Teach more about watersheds (ocean, coastal, riverine, estuarine, Great Lakes) (1)	❍	❍	❍	❍
Be more likely to implement MWEEs (2)	❍	❍	❍	❍
Be more likely to implement MWEEs after they are no longer supported by our organization (3)	❍	❍	❍	❍
Be more likely to use NOAA resources to enhance their students' MWEE experiences (4)	❍	❍	❍	❍
Be more likely to guide students through taking action to protect or restore watersheds (5)	❍	❍	❍	❍
Be more likely to use science inquiry instruction (6)	❍	❍	❍	❍
Be more likely to use the outdoors for instruction (7)	❍	❍	❍	❍
Be more likely to use local community resources as part of instruction (8)	❍	❍	❍	❍
Be more likely to use interdisciplinary approaches to instruction (9)	❍	❍	❍	❍
Be more enthusiastic about teaching science (10)	❍	❍	❍	❍
Be more likely to act to protect or restore watersheds (11)	❍	❍	❍	❍

STUDENT MWEEs

MWEE Please answer the following questions with regard to the instruction your organization provides directly to students (not the instruction provided by teachers).

GQ37 About how many students, schools, and school districts were served directly by your organization this past grant year as a result of your B-WET grant? (Please provide one number, NOT a range.)

About ___ students served (1)
About ___ K-12 schools served (2)
About ___ school districts served (3)

GQ38 What percent of the students/youth directly served by your organization were in each of the following grade levels? (total must equal 100%)

_____ PreK (1)
_____ Elementary (2)
_____ Middle (3)
_____ High (4)
_____ Other (88)
_____ I don't know (99)

GQ39 What percent of the participating students' schools are Title 1?

- ❍ Don't know (99)
- ❍ Less than 20% (1)
- ❍ 21-40% (2)
- ❍ 41-60% (3)
- ❍ 61-80% (4)
- ❍ 81-100% (5)

GQ41 To what extent were your organization's MWEEs designed to align with:

	NA (55)	Don't know (99)	To no extent 1 (1)	2 (2)	3 (3)	4 (4)	To a great extent 5 (5)
State education standards (1)	❍	❍	❍	❍	❍	❍	❍
Next Generation Science Standards (2)	❍	❍	❍	❍	❍	❍	❍
Common Core Standards – Mathematics (3)	❍	❍	❍	❍	❍	❍	❍
Common Core Standards - English Language Arts (4)	❍	❍	❍	❍	❍	❍	❍
Regional environmental/natural resources management priorities (5)	❍	❍	❍	❍	❍	❍	❍

GQ42 Which of the following did your B-WET-funded programs provide for students during this past grant year? (select No or Yes for each program type)

	No (0)	Yes (1)
Off-site field programs during the school day (1)	❍	❍
Schoolyard-based programs during the school day (2)	❍	❍
Classroom-based programs during the school day, including distance learning experiences (3)	❍	❍
After-school or weekend programs (e.g., science clubs) (4)	❍	❍
Summer programs (5)	❍	❍
Events for youth with their families (6)	❍	❍

Please consider your most frequently offered B-WET-funded MWEE as “typical.”

GQ45 On average, a typical student participated in your organization’s B-WET-funded MWEEs over the course of:
- ❍ Less than a week
- ❍ A week (3)
- ❍ Multiple weeks (4)
- ❍ Multiple months (6)
- ❍ A full school year (8)
- ❍ Multiple years (10)

GQ43 On average during the past grant year, a typical student spent ____ hours being taught by your organization’s staff during a B-WET-funded MWEE.
- ❍ None (0)
- ❍ 1-5 hours (1)
- ❍ 6-9 hours (3)
- ❍ 10-24 hours (4)
- ❍ 25-40 hours (6)
- ❍ More than 40 hours (7)

GQ44 On average during the past grant year, a typical student spent ____ hours outdoors being taught by your organization’s staff during a B-WET-funded MWEE.
- ❍ None (0)
- ❍ 1-5 hours (1)
- ❍ 6-9 hours (3)
- ❍ 10-24 hours (4)
- ❍ 25-40 hours (6)
- ❍ More than 40 hours (7)

[If chose a response other than “none” for hours outside]
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

[If chose a response other than “none” for hours outside]

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					

In what subject(s) were your organization's typical MWEEs implemented? (select all that apply):

- Science
- Technology
- Engineering
- Math
- Social studies
- English language arts
- Fine arts
- Music
- Other (please describe)

GQ48 Which NOAA resources were used as part of MWEEs for students? (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:

GQ49 What education methods were used by your organization's staff with students during your organization's typical B-WET-funded MWEEs? (select a response for each method)

	Not sure (77)	No (0)	Yes (1)
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) (1)	❍	❍	❍
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) (2)	❍	❍	❍
Place-based education (i.e., an interdisciplinary instructional strategy that uses the local environment and community as the context for teaching and learning) (3)	❍	❍	❍
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) (4)	❍	❍	❍
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) (5)	❍	❍	❍
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) (6)	❍	❍	❍

Answer If What education methods were used by your organization's s... Scientific-inquiry-based learning Yes Is Selected

GQ50 Which of the following science inquiry steps did you include? Engaged students in:

	No (0)	Yes (1)
Formulating scientific questions they can answer using data (1)	❍	❍
Making predictions or hypotheses (2)	❍	❍
Collecting data or using existing data (3)	❍	❍
Analyzing and interpreting data (4)	❍	❍
Making conclusions and adjusting predictions/hypotheses (5)	❍	❍
Giving presentations of their findings (6)	❍	❍

Did students participate in any of these actions to protect or restore watersheds during your organization's B-WET-funded 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 (text box)
- 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 (text box)
- Community Engagement [e.g., outreach, presentations, social media, messaging at community events/fairs/festivals, event-organizing, mentoring, PSAs, flyers, posters]
    - Briefly describe the actions (text box)
- Civic Action [e.g., town meetings, voting, writing elected officials/decision makers, advocating for policy change]
    - Briefly describe the actions (text box)
- Other
    - Briefly describe the actions (text box)

GQ52 It was a goal of my organization's B-WET-funded MWEEs that students would:

	NA (55)	Don't know (99)	No (0)	Yes (1)
Know more about the ocean (1)	❍	❍	❍	❍
Know more about climate change (2)	❍	❍	❍	❍
Know more about watersheds (3)	❍	❍	❍	❍
Express greater caring and concern for watersheds (ocean, coastal, riverine, estuarine, Great Lakes) (4)	❍	❍	❍	❍
Be more confident in their ability to protect or restore watersheds (5)	❍	❍	❍	❍
Be more likely to act to protect or restore watersheds (6)	❍	❍	❍	❍
Be better able to make informed decisions about how to protect or restore watersheds (7)	❍	❍	❍	❍
Be better able to conduct scientific investigations (8)	❍	❍	❍	❍
Be better able to understand the nature of scientific research (9)	❍	❍	❍	❍
Be more likely to express an interest in pursuing science careers (10)	❍	❍	❍	❍
Perform better in science (11)	❍	❍	❍	❍
Perform better on state standardized tests (12)	❍	❍	❍	❍
Be more engaged in their learning (13)	❍	❍	❍	❍

GQ53 It was a goal of my organization's B-WET-funded MWEEs that students would be able to:

	NA (55)	Don't know (99)	No (0)	Yes (1)
Define the term "watershed" (1)	❍	❍	❍	❍
Identify their local watershed(s) (ocean, coastal, riverine, estuarine, Great Lakes) (2)	❍	❍	❍	❍
Identify how watersheds are connected to the ocean via streams, rivers, and human-made structures (3)	❍	❍	❍	❍
Identify the functions that occur in a watershed (transport, store, and cycle water) (4)	❍	❍	❍	❍
Recognize that both natural processes and human activities affect water flow and water quality in watersheds. (5)	❍	❍	❍	❍
Identify connections between human welfare and water flow and quality (6)	❍	❍	❍	❍
Identify possible point and non-point sources of water pollution (7)	❍	❍	❍	❍
Identify actions individuals can take to protect or restore watersheds (8)	❍	❍	❍	❍

Eval **PROGRAM EVALUATION**

GQ55 Which of the following best describes the situation with regard to evaluation(s) of your organization's B-WET-funded projects?

❍ Don't know (99)
❍ No evaluation has been conducted and there are no plans to complete one (1)
❍ No evaluation has been conducted, but there are plans to complete one (2)
❍ An evaluation is being conducted, but it is not yet finished (3)
❍ One evaluation has been completed (4)
❍ Two evaluations have been completed
❍ Three or more evaluations have been completed
❍ Other (please describe) (88) _____

Answer If Which of the following best describes the situation wit... One or more evaluations has/have been completed Is Selected

GQ56 What type of evaluation has been completed?

	Not conducted (1)	Completed but no report is available (2)	Completed and report is available (3)
Needs assessment (determines the need for a project by considering aspects such as available resources, extent of the problem and need to address it, participant interest and knowledge, etc. This is also known as front-end evaluation.) (1)	❍	❍	❍
Process/implementation (examines the implementation of a project, focusing on the effort invested in the project and its direct outputs. For example, an implementation evaluation might measure how the project is being delivered, who participated, and whether they were satisfied with it). Note that this type of evaluation is NOT the same as a program report! (2)	❍	❍	❍
Outcome (shows the programs' direct effects on target outcomes and provides direction for program improvement. For example, outcome evaluation may show that a program was (or was not) successful in changing participants' knowledge, attitudes, skills, intentions, or behaviors) (3)	❍	❍	❍
Impact (seeks to assess the broader, longer-term changes that occurred as a result of a project such as in improved environmental quality) (4)	❍	❍	❍

How have you or your organization used your project evaluation results?

Answer If What type of evaluation has been completed? If Outcome or Impact Is Selected

Eval2 Please answer the following questions with regard to the outcome or impact evaluation your organization completed. If your organization completed more than one outcome or impact evaluation, please answer the following questions based on the evaluation with the most rigorous research (e.g., valid/reliable instruments, appropriate sampling, use of control/comparison groups, content analysis of qualitative data, etc.) methods:

Answer If What type of evaluation has been completed? If Outcome or Impact Is Selected

GQ58 Which of the following best describes who led the evaluation?

- ❍ Don't know (99)
- ❍ Internal staff member (someone who is an employee of your organization) (1)
- ❍ External consultant (someone who is not an employee of your organization) If selected, please provide consultant/firm name: (2) _____
- ❍ Other (please describe) (88) _____

Answer If What type of evaluation has been completed? If Outcome or Impact Is Selected

GQ59 Do the evaluation results include evidence of:

	Don't know (99)	Not measured (44)	No (0)	Yes (1)
Increases in knowledge about watersheds (participants learned new information) (1)	❍	❍	❍	❍
Changes in attitudes toward watersheds (participants' changed their beliefs, opinions, feelings, or perspectives) (2)	❍	❍	❍	❍
Increases in the skills needed to act in ways to protect or restore watersheds (ocean, coastal, riverine, estuarine, Great Lakes) (3)	❍	❍	❍	❍
Increases in intentions to act to protect or restore on behalf of watersheds (4)	❍	❍	❍	❍
Participants engaging in actions that protect or restore watersheds (5)	❍	❍	❍	❍
Improved water quality (positive changes in physical watershed that can be attributed to participants' actions) (6)	❍	❍	❍	❍
Improved academic performance (7)	❍	❍	❍	❍
Other (please describe)	❍	❍	❍	❍

Impact **NOAA B-WET IMPACT** Please indicate to what extent you agree or disagree with the next 6 statements.

GQ61 As a result of NOAA B-WET, our audiences are more familiar with NOAA, such as NOAA science, resources, and experts.

- ❍ Not an expected impact
- ❍ I don't know
- ❍ Strongly Disagree 1 (1)
- ❍ 2 (2)
- ❍ 3 (3)
- ❍ 4 (4)
- ❍ 5 (5)
- ❍ 6 (6)
- ❍ Strongly Agree 7 (7)

GQ61_Txt Please explain why you selected the response you did.

GQ63 The B-WET grant has improved the overall quality of environmental education provided by my organization (e.g., through use of best practices or other increase in institutional capacity).

- ❍ Not an expected impact
- ❍ I don't know
- ❍ Strongly Disagree 1 (1)
- ❍ 2 (2)
- ❍ 3 (3)
- ❍ 4 (4)
- ❍ 5 (5)
- ❍ 6 (6)
- ❍ Strongly Agree 7 (7)

GQ63_Txt Please explain why you selected the response you did.

GQ65 The B-WET grant has helped integrate environmental education into the formal education system(s) with which we work.

- ❍ Not an expected impact
- ❍ I don't know
- ❍ Strongly Disagree 1 (1)
- ❍ 2 (2)
- ❍ 3 (3)
- ❍ 4 (4)
- ❍ 5 (5)
- ❍ 6 (6)
- ❍ Strongly Agree 7 (7)

GQ65_Txt Please explain why you selected the response you did.

Feedback **FEEDBACK**

GQ74 This questionnaire was .... (choose one for each)

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)
Difficult to complete:Easy to complete (1)	❍	❍	❍	❍	❍	❍	❍
Not informative:Informative (2)	❍	❍	❍	❍	❍	❍	❍
Long:Short (3)	❍	❍	❍	❍	❍	❍	❍

Imprv_Txt How can this questionnaire be improved?

Cmmts_Txt What final comments would you like to share?

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

NOAA B-WET PD Teacher Survey
Revised 2015

This is a voluntary survey.

Please answer the following questions in reference to your recently-completed Meaningful Watershed Educational Experience (MWEE) professional development.

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. MWEE professional development (PD) provides K-12 teachers opportunities for professional development to build their confidence and capacity to implement MWEE activities with their students. 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. Click here to see a detailed MWEE definition.

You will be asked about a range of practices and outcomes that represent the diversity of MWEE PD funded by the National Oceanic and Atmospheric Administration's Bay Watershed Education and Training program (NOAA B-WET), some of which may not apply directly to your experience. It is acceptable to answer "not applicable" (N/A) 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 future professional development programs.

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

Note: You can 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 (some work and public computers do not save and/or retain cookies). We recommend that you complete the survey in one sitting, if possible, to avoid issues with 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

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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.

PDQ6 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)?

- ❍ I did not complete a MWEE PD. (55)
- ❍ Less than 1 week ago (1)
- ❍ 1-2 weeks ago (2)
- ❍ 3-4 weeks ago (3)
- ❍ 5-8 weeks ago (4)
- ❍ 9-12 weeks ago (5)
- ❍ More than 12 weeks ago (6)

PDMQ3 Are you currently an in-service or pre-service PreK-12 teacher or educator?

- ❍ No (0)
- ❍ Yes (1)

Logic: Must select Yes to continue the survey

PDMQ5 In what setting do you primarily teach? (select one)

- ❑ Public school (1)
- ❑ Private school (2)
- ❑ Non-formal education (e.g., environmental centers, zoos, museums, interpretive programs at local or state level parks, youth organizations, summer camps, after school programs) (3)
- ❑ Home-school (4)
- ❑ Other (88)

Logic: Must select 1 or 2 to continue the survey

UniqueID CREATE A UNIQUE ID: To allow us to compare your 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 your most often used phone number. For example, if you were born on March 9 and your home phone is 410.719.1234, your ID number would be 03091234.

PDMQ8 In what 5-digit zip code is your school located?

PDGMQ1 In which region did you teach this past year? (check one)

- ❍ California (1)
- ❍ Chesapeake Bay (2)
- ❍ Great Lakes (3)
- ❍ Gulf of Mexico (4)
- ❍ Hawaii (5)
- ❍ New England (6)
- ❍ Pacific Northwest (7)
- ❍ Other (please describe) (88) _____

PDQ10 In which grade level do you primarily teach? (select one)

- ❑ PreK (1)
- ❑ Elementary (2)
- ❑ Middle (3)
- ❑ High (4)
- ❑ Other (88)

PDGQ2 What subject(s) do you primarily teach? (select one)

- ❍ Science (1)
- ❍ Technology (2)
- ❍ Engineering (3)
- ❍ Math (4)
- ❍ English language Arts (5)
- ❍ Social studies (6)
- ❍ Fine arts (7)
- ❍ Music (8)
- ❍ Multiple disciplines, including science (9)
- ❍ Multiple disciplines, not including science (10)
- ❍ Other, please describe (88)

How many years have you been an educator? (select one)

- 1 to 5 years
- 6 to 10 years
- 11 to 20 years
- More than 20 years

PDQ18 Did you conduct Meaningful Watershed Educational Experiences (MWEEs) with your students before participating in the MWEE professional development? (For an expanded definition of a MWEE, view this file: MWEE defined)

- ❍ No (0)
- ❍ Yes (1)

PDQ19 What was your PRIMARY reason for participating in the MWEE professional development? (check one)

- ❍ To obtain information and resources for teaching (1)
- ❍ Personal interest in the topic of the professional development (2)
- ❍ To obtain continuing education, recertification, or graduate credit (3)
- ❍ I was required to attend (4)
- ❍ I was asked to attend (5)
- ❍ Other, please describe: (88) _____

About PD Please answer all of the following survey questions based on the last NOAA B-WET-funded MWEE (watershed education) professional development you participated in.

PDGQ4 Which type(s) of MWEE professional development did you participate in or receive: (please select No or Yes for each type)

	No (0)	Yes (1)
One day workshops (usually less than 8 hours) (1)	❍	❍
Teacher institute (usually on consecutive days that cumulatively consist of 40 hours of more) (2)	❍	❍
Multi-day workshops (events that last at least 6 hours, but are less than 40 hours, e.g., a three-day workshop on a specific topic or a series of five Saturday sessions) (3)	❍	❍
A college-level course (4)	❍	❍
Professional development provider training (training for individuals who provide teacher professional development) (5)	❍	❍
Individual teacher coaching and support (e.g., curriculum planning, shared teaching, demonstrations and/or other forms of in-school or in-field support) (6)	❍	❍
On-line professional development support (e.g., courses, webinars, discussion forums) (7)	❍	❍

PDQ22 What was the overall duration of the NOAA B-WET-funded MWEE professional development (including group and individual training and support)?

❍ Less than a week (1)
❍ One week up to a month (2)
❍ 1 to 4 months (3)
❍ 5 to 8 months (4)
❍ 9 to 12 months (5)
❍ More than a year (6)
❍ More than 2 years (7)

PDGQ23 About how many hours of MWEE professional development and/or support did you receive over the past 12 months?

❍ 1-10 hours (1)
❍ 11-20 hours (4)
❍ 21-40 hours (5)
❍ 41-60 hours (6)
❍ More than 60 hours (8)

PDGQ24 About how many of those MWEE professional development hours did you spend outdoors?

- ❍ None (0)
- ❍ 1-10 hours (1)
- ❍ 11-20 hours (4)
- ❍ 21-40 hours (5)
- ❍ 41-60 hours (6)
- ❍ More than 60 hours (8)

PDGQ77 Which NOAA resources were used as part of your MWEE professional development? (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:

PDGQ78 What education methods were used during your MWEE professional development? (select No or Yes for each method)

	No (0)	Yes (1)
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) (1)	❍	❍
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) (2)	❍	❍
Place-based education (i.e., an interdisciplinary instructional strategy that uses the local environment and community as the context for teaching and learning) (3)	❍	❍
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) (4)	❍	❍
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) (5)	❍	❍
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) (6)	❍	❍

Answer If What education methods were used during your MWEE profess... Scientific-inquiry-based learning- Yes Is Selected

PDGQ79 As part of your MWEE professional development, were you involved in ...

	Not sure (77)	No (0)	Yes (1)
Formulating scientific questions that can be answered using data (1)	❍	❍	❍
Making predictions or hypotheses (2)	❍	❍	❍
Collecting data or using existing data (3)	❍	❍	❍
Analyzing and interpreting data (4)	❍	❍	❍
Making conclusions and adjusting predictions/hypotheses (5)	❍	❍	❍
Giving presentations of findings (6)	❍	❍	❍

Answer If Which type(s) of MWEE professional development did you ... One day workshops (usually less than 8 hours) - Yes Is Selected Or Which type(s) of MWEE professional development did you ... Teacher institute (usually on consecutive days that cumulatively consist of 40 hours of more) - Yes Is Selected Or Which type(s) of MWEE professional development did you ... Multi-day workshops (events that last at least 6 hours, but are less than 40 hours, e.g., a three-day workshop on a specific topic or a series of five Saturday sessions) - Yes Is Selected Or Which type(s) of MWEE professional development did you ... A college-level course - Yes Is Selected

PDGQ80 Did the workshops, institutes, or classes you participated in include the following professional development practices? (Please indicate No or Yes for each statement)

	No (0)	Yes (1)
Sharing of information and examples illustrating how other teachers have integrated MWEEs (1)	❍	❍
Discussion of how teachers may be able to integrate MWEEs into their own curriculum or classroom activities (2)	❍	❍
Discussion of alignment of MWEEs with state, regional, or national standards (3)	❍	❍
Provision of examples of how MWEEs align with standards (4)	❍	❍
Engaging you and other participating teachers in aligning MWEEs with your school or school district standards (5)	❍	❍
Participating along with other teachers from my school, at the same time (6)	❍	❍
Allowing you and other participating teachers time to plan how to implement MWEEs (7)	❍	❍
Engaging you and other participating teachers in activities/practices that can be used with your students (8)	❍	❍
Presentation of how NOAA data can be used to support student scientific inquiry (9)	❍	❍
Discussion of how NOAA data can be used to obtain knowledge about local issues (10)	❍	❍
Examples of how other teachers have used NOAA data with their students (11)	❍	❍
Allow you and other participating teachers time to plan how to integrate the use of NOAA data with your students (12)	❍	❍

Answer If Did the workshops, institutes, or classes you participa... - Yes Is Selected

PDQ30 Please indicate which 3 practices were most valuable in helping you implement MWEEs. Type a 1 for most valuable, 2 for less valuable, and 3 for least valuable of the three.

PDGQ31 What types of support did you receive from your MWEE professional development provider? (Please indicate No or Yes for each statement)

	No (0)	Yes (1)
Assistance with conducting field trips or field work (1)	❍	❍
Assistance with stewardship projects, e.g., restoration projects, building schoolyard habitats, etc. (2)	❍	❍
Co-teaching in my classrooms or in field (3)	❍	❍
Coaching in my classroom (4)	❍	❍
Demonstrations in my classroom (5)	❍	❍
Assistance with the use of equipment or technologies (6)	❍	❍
Communicating one-on-one with provider through phone calls or email (7)	❍	❍
Communication with other teachers through a provider-supported online environment (8)	❍	❍

PDQ32 Please indicate which 3 support practices were most valuable in helping you implement MWEEs. Type a 1 for most valuable, 2 for less valuable, and 3 for least valuable of the three.

PDGQ81 Which additional resources did your MWEE professional development and/or the support you received include? (Please indicate No or Yes for each statement)

	No (0)	Yes (1)
Connections were made to local community organizations and resources (1)	❍	❍
Interactions were facilitated with NOAA scientists/staff (2)	❍	❍
Interactions were facilitated with natural resource professionals (3)	❍	❍
I was provided with a stipend (4)	❍	❍
I was offered continuing education credits (5)	❍	❍
I was offered graduate credits (6)	❍	❍
I was provided with equipment (7)	❍	❍
I was provided with instructional/educational/curriculum materials (8)	❍	❍
I was provided with information on how to obtain grants or funding for MWEEs (9)	❍	❍

PDQ34 Please indicate which 3 practices were most valuable in helping you implement MWEEs. Type a 1 for most valuable, 2 for less valuable, and 3 for least valuable of the three.

PDGQ82 During your MWEE professional development, did you participate in any of these actions that protect or restore watersheds (ocean, coastal, riverine, estuarine, Great Lakes)? (select all categories that apply)

- I did NOT participate in watershed protection or restoration actions as part of the MWEE PD.
- 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 (text box)
- 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 (text box)
- Community Engagement [e.g., outreach, presentations, social media, messaging at community events/fairs/festivals, event-organizing, mentoring, PSAs, flyers, posters]
    - Briefly describe the actions (text box)
- Civic Action [e.g., town meetings, voting, writing elected officials/decision makers, advocating for policy change]
    - Briefly describe the actions (text box)
- Other
    - Briefly describe the actions (text box)

PDQ36 Did your B-WET professional development provider indicate that it was funded (in part) with funding from the National Oceanic and Atmospheric Administration (NOAA)?

❍ No (0)
❍ Yes (1)

PDQ37 Overall, what grade would you give your MWEE professional development experience? (slide the scale between F and A+)

❍ 1 (1)
❍ 2 (2)
❍ 3 (3)
❍ 4 (4)
❍ 5 (5)
❍ 6 (6)
❍ 7 (7)
❍ 8 (8)
❍ 9 (9)
❍ 10 (10)
❍ 11 (11)
❍ 12 (12)
❍ 13 (13)

Grade_Txt Briefly describe why you selected this grade.

For each statement, select one response for BEFORE and one response for AFTER the MWEE professional development.

	BEFORE the MWEE professional development, I was able to:						AFTER the MWEE professional development, I am able to:							
	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
Define the term "watershed" (1)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Identify my local watershed(s) (ocean, coastal, riverine, estuarine, Great Lakes) (2)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Identify how watersheds are connected to the ocean via streams, rivers, and human-made structures (3)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Identify the functions that occur in a watershed (transport, store, and cycle water) (4)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Recognize that both natural processes and human activities affect water flow and water quality in watersheds (5)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Identify connections between human welfare and water flow and quality (6)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Identify possible point and non-point sources of water pollution (7)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Identify actions individuals can take to protect or restore watersheds (8)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

PDQ40 Did participating in the B-WET professional development increase your knowledge of …

	No (0)	Yes (1)
what NOAA does? (1)	❍	❍
scientific data accessible through NOAA? (2)	❍	❍
educational resources available through NOAA? (3)	❍	❍

PDGQ84 For each statement, select one response for BEFORE and one response for AFTER the MWEE professional development.

	BEFORE the MWEE professional development, how confident were you in your ability to:							AFTER the MWEE professional development, how confident are you in your ability to:						
	Not at all confident 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely confident 7 (7)	Not at all confident 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely confident 7 (7)
Teach my students about local watersheds (ocean, coastal, riverine, estuarine, Great Lakes) (1)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Incorporate MWEEs into my curriculum (2)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Implement MWEEs without support from a professional development provider (3)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Use NOAA resources to enhance my students' MWEE experiences (4)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Guide students through taking action to protect or restore watersheds (5)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
PDGQ84a														

Research environmental issues affecting watersheds with students (1)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Use scientific inquiry instruction (2)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Use the outdoors for instruction (3)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Act to protect or restore watersheds (4)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

PDGQ84 Select one response for each statement.

	During the next school year, I intend to ...						
	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
Teach my students about local watersheds (ocean, coastal, riverine, estuarine, Great Lakes) (1)	❍	❍	❍	❍	❍	❍	❍
Incorporate MWEEs into my curriculum (2)	❍	❍	❍	❍	❍	❍	❍
Implement MWEEs without support from a professional development provider (3)	❍	❍	❍	❍	❍	❍	❍
Use NOAA resources to enhance my students' MWEE experiences (4)	❍	❍	❍	❍	❍	❍	❍
Guide students through taking action to protect or restore watersheds (5)	❍	❍	❍	❍	❍	❍	❍
PDGQ84a							
Research environmental issues affecting watersheds with students (1)	❍	❍	❍	❍	❍	❍	❍
Use scientific inquiry instruction (2)	❍	❍	❍	❍	❍	❍	❍
Use the outdoors for instruction (3)	❍	❍	❍	❍	❍	❍	❍
Act to protect or restore watersheds (4)	❍	❍	❍	❍	❍	❍	❍

About how many of your students will participate in a MWEE during the next school year?
(Please provide your best estimate, NOT a range)
About ___ students (1)

Best_Txt What component(s) of the MWEE professional development best prepared you to teach your students about local watersheds (ocean, coastal, riverine, estuarine, Great Lakes)?

Improv_Txt How could the MWEE professional development be improved to better prepare teachers to teach about the watershed (ocean, coastal, riverine, estuarine, Great Lakes)?

Cmmts_Txt Do you have any other comments about the MWEE professional development?

PDGMQ74 This questionnaire was .... (choose one for each line)

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

ImprvQ_Txt How can this questionnaire be improved?

What final comments would you like to share?

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

NOAA B-WET PD Teacher Survey - Nonresponse
Revised 2015

Introduction

This is a voluntary survey.

Please answer the following questions in reference to your recently-completed Meaningful Watershed Educational Experience (MWEE) professional development (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. MWEE professional development (PD) provides K-12 teachers opportunities for professional development to build their confidence and capacity to implement MWEE activities with their students.

It will take about 5 minutes to complete this survey.

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 future professional development programs.
Thank you.

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

OMB Control Number: 0648-0658 Expires: 02/29/2016

Paperwork Reduction Act Statement

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PDQ6 How long ago did you complete a NOAA B-WET-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)?

- ❍ I did not complete a MWEE PD (55)
- ❍ Less than 1 week ago (1)
- ❍ 1-2 weeks ago (2)
- ❍ 3-4 weeks ago (3)
- ❍ 5-8 weeks ago (4)
- ❍ 9-12 weeks ago (5)
- ❍ More than 12 weeks ago (6)

PDMQ3 Are you currently a PreK-12 teacher or educator?

- ❍ No (0)
- ❍ Yes (1)
- ❍ Logic: Must select Yes to continue the survey

PDMQ5 In what setting do you primarily teach? (select one)

- ❑ Public school (1)
- ❑ Private school (2)
- ❑ Non-formal education (e.g., environmental centers, zoos, museums, interpretive programs at local or state level parks, youth organizations, summer camps, after school programs) (3)
- ❑ Home-school (4)
- ❑ Other (88)
- ❑ Logic: Must select 1 or 2 to continue the survey

PDGMQ1 In which region did you teach this past year? (check one)

- ❍ California (1)
- ❍ Chesapeake Bay (2)
- ❍ Great Lakes (3)
- ❍ Gulf of Mexico (4)
- ❍ Hawaii (5)
- ❍ New England (6)
- ❍ Pacific Northwest (7)
- ❍ Other (please describe) (88) _____

PDQ10 In which grade level do you primarily teach? (select one)

- ❑ PreK (1)
- ❑ Elementary (2)
- ❑ Middle (3)
- ❑ High (4)
- ❑ Other (88)

PDGQ2 What subject(s) do you primarily teach? (select one)

- ❍ Science (1)
- ❍ Technology
- ❍ Engineering
- ❍ Math (2)
- ❍ English language Arts (3)
- ❍ Social studies (4)
- ❍ Fine arts (5)
- ❍ Music
- ❍ Multiple disciplines, including science (6)
- ❍ Multiple disciplines, not including science (7)
- ❍ Other, please describe (88)

How many years have you been an educator? (select one)

- 1 to 5 years
- 6 to 10 years
- 11 to 20 years
- More than 20 years

About PD Please answer all of the following questions based on the last MWEE (watershed education) professional development you participated in.

PDQ19 What was your PRIMARY reason for participating in the MWEE professional development? (check one)

- ❍ To obtain information and resources for teaching (1)
- ❍ Personal interest in the topic of the professional development (2)
- ❍ To obtain continuing education, recertification, or graduate credit (3)
- ❍ I was required to attend (4)
- ❍ I was asked to attend (5)
- ❍ Other, please describe: (88) _____

PDGQ4 Which type(s) of MWEE professional development did you participate in or receive? (please select yes or no for each type)

	No (0)	Yes (1)
One day workshops (usually less than 8 hours) (1)	❍	❍
Teacher institute (usually on consecutive days that cumulatively consist of 40 hours of more) (2)	❍	❍
Multi-day workshops (events that last at least 6 hours, but are less than 40 hours, e.g., a three-day workshop on a specific topic or a series of five Saturday sessions) (3)	❍	❍
A college-level course (4)	❍	❍
Professional development provider training (training for individuals who provide teacher professional development) (5)	❍	❍
Individual teacher coaching and support (e.g., curriculum planning, shared teaching, demonstrations and/or other forms of in-school or in-field support (6)	❍	❍
On-line professional development support (e.g., courses, webinars, discussion forums) (7)	❍	❍

PDGQ23 About how many hours of MWEE professional development and/or support did you receive over the past 12 months?

❍ 1-10 hours (1)
❍ 11-20 hours (4)
❍ 21-40 hours (5)
❍ 41-60 hours (6)
❍ More than 60 hours (8)

PDQ37 Overall, what grade would you give your MWEE professional development experience? (slide the scale between F and A+)

❍ 1 (1)
❍ 2 (2)
❍ 3 (3)
❍ 4 (4)
❍ 5 (5)
❍ 6 (6)
❍ 7 (7)
❍ 8 (8)
❍ 9 (9)
❍ 10 (10)
❍ 11 (11)
❍ 12 (12)
❍ 13 (13)

PDGQ84 For each statement, select one response for BEFORE and one response for AFTER the MWEE professional development.

	BEFORE the MWEE professional development, how confident were you in your ability to:							AFTER the MWEE professional development, how confident are you in your ability to:						
	Not at all confident 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely confident 7 (7)	Not at all confident 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely confident 7 (7)
Teach my students about local watersheds (ocean, coastal, riverine, estuarine, Great Lakes) (1)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Incorporate MWEEs into my curriculum (2)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

	During the next school year, I intend to ...						
	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
Teach my students about local watersheds (ocean, coastal, riverine, estuarine, Great Lakes) (1)	❍	❍	❍	❍	❍	❍	❍
Incorporate MWEEs into my curriculum (2)	❍	❍	❍	❍	❍	❍	❍

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

NOAA B-WET Teacher MWEE Survey
Revised 2015

Introduction

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. Click here to see a detailed MWEE definition.

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: You can 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 (some work and public computers do not save and/or retain cookies). We recommend that you complete the survey in one sitting, if possible, to avoid issues with 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

NOAA B-WET PD Teacher Survey - Nonresponse
Revised 2015

Introduction

This is a voluntary survey.

Please answer the following questions in reference to your recently-completed Meaningful Watershed Educational Experience (MWEE) professional development (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. MWEE professional development (PD) provides K-12 teachers opportunities for professional development to build their confidence and capacity to implement MWEE activities with their students.

It will take about 5 minutes to complete this survey.

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 future professional development programs.
Thank you.

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PDQ6 How long ago did you complete a NOAA B-WET-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)?

- ❍ I did not complete a MWEE PD (55)
- ❍ Less than 1 week ago (1)
- ❍ 1-2 weeks ago (2)
- ❍ 3-4 weeks ago (3)
- ❍ 5-8 weeks ago (4)
- ❍ 9-12 weeks ago (5)
- ❍ More than 12 weeks ago (6)

PDMQ3 Are you currently a PreK-12 teacher or educator?

- ❍ No (0)
- ❍ Yes (1)
- ❍ Logic: Must select Yes to continue the survey

PDMQ5 In what setting do you primarily teach? (select one)

- ❑ Public school (1)
- ❑ Private school (2)
- ❑ Non-formal education (e.g., environmental centers, zoos, museums, interpretive programs at local or state level parks, youth organizations, summer camps, after school programs) (3)
- ❑ Home-school (4)
- ❑ Other (88)
- ❑ Logic: Must select 1 or 2 to continue the survey

PDGMQ1 In which region did you teach this past year? (check one)

- ❍ California (1)
- ❍ Chesapeake Bay (2)
- ❍ Great Lakes (3)
- ❍ Gulf of Mexico (4)
- ❍ Hawaii (5)
- ❍ New England (6)
- ❍ Pacific Northwest (7)
- ❍ Other (please describe) (88) _____

PDQ10 In which grade level do you primarily teach? (select one)

- ❑ PreK (1)
- ❑ Elementary (2)
- ❑ Middle (3)
- ❑ High (4)
- ❑ Other (88)

PDGQ2 What subject(s) do you primarily teach? (select one)

- ❍ Science (1)
- ❍ Technology
- ❍ Engineering
- ❍ Math (2)
- ❍ English language Arts (3)
- ❍ Social studies (4)
- ❍ Fine arts (5)
- ❍ Music
- ❍ Multiple disciplines, including science (6)
- ❍ Multiple disciplines, not including science (7)
- ❍ Other, please describe (88)

How many years have you been an educator? (select one)

- 1 to 5 years
- 6 to 10 years
- 11 to 20 years
- More than 20 years

About PD Please answer all of the following questions based on the last MWEE (watershed education) professional development you participated in.

PDQ19 What was your PRIMARY reason for participating in the MWEE professional development? (check one)

- ❍ To obtain information and resources for teaching (1)
- ❍ Personal interest in the topic of the professional development (2)
- ❍ To obtain continuing education, recertification, or graduate credit (3)
- ❍ I was required to attend (4)
- ❍ I was asked to attend (5)
- ❍ Other, please describe: (88) _____

PDGQ4 Which type(s) of MWEE professional development did you participate in or receive? (please select yes or no for each type)

	No (0)	Yes (1)
One day workshops (usually less than 8 hours) (1)	❍	❍
Teacher institute (usually on consecutive days that cumulatively consist of 40 hours of more) (2)	❍	❍
Multi-day workshops (events that last at least 6 hours, but are less than 40 hours, e.g., a three-day workshop on a specific topic or a series of five Saturday sessions) (3)	❍	❍
A college-level course (4)	❍	❍
Professional development provider training (training for individuals who provide teacher professional development) (5)	❍	❍
Individual teacher coaching and support (e.g., curriculum planning, shared teaching, demonstrations and/or other forms of in-school or in-field support (6)	❍	❍
On-line professional development support (e.g., courses, webinars, discussion forums) (7)	❍	❍

PDGQ23 About how many hours of MWEE professional development and/or support did you receive over the past 12 months?

❍ 1-10 hours (1)
❍ 11-20 hours (4)
❍ 21-40 hours (5)
❍ 41-60 hours (6)
❍ More than 60 hours (8)

PDQ37 Overall, what grade would you give your MWEE professional development experience? (slide the scale between F and A+)

❍ 1 (1)
❍ 2 (2)
❍ 3 (3)
❍ 4 (4)
❍ 5 (5)
❍ 6 (6)
❍ 7 (7)
❍ 8 (8)
❍ 9 (9)
❍ 10 (10)
❍ 11 (11)
❍ 12 (12)
❍ 13 (13)

PDGQ84 For each statement, select one response for BEFORE and one response for AFTER the MWEE professional development.

	BEFORE the MWEE professional development, how confident were you in your ability to:							AFTER the MWEE professional development, how confident are you in your ability to:						
	Not at all confident 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely confident 7 (7)	Not at all confident 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely confident 7 (7)
Teach my students about local watersheds (ocean, coastal, riverine, estuarine, Great Lakes) (1)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Incorporate MWEEs into my curriculum (2)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

	During the next school year, I intend to ...						
	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
Teach my students about local watersheds (ocean, coastal, riverine, estuarine, Great Lakes) (1)	❍	❍	❍	❍	❍	❍	❍
Incorporate MWEEs into my curriculum (2)	❍	❍	❍	❍	❍	❍	❍

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

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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)?

- ❍ I did not complete a MWEE PD. (55)
- ❍ Less than 1 week ago (1)
- ❍ 1-2 weeks ago (2)
- ❍ 3-4 weeks ago (3)
- ❍ 5-8 weeks ago (4)
- ❍ 9-12 weeks ago (5)
- ❍ More than 12 weeks ago (6)

MPDQ3 Are you currently a PreK-12 teacher or educator?

- ❍ No (0)
- ❍ Yes (1)
- ❍ Logic: Must select Yes to continue the survey

MPDQ5 In what setting do you primarily teach? (select one)
- ❑ Public school (1)
- ❑ Private school (2)
- ❑ Non-formal education (e.g., environmental centers, zoos, museums, interpretive programs at local or state level parks, youth organizations, summer camps, after school programs) (3)
- ❑ Home-school (4)
- ❑ Other (88)

Logic: Must select 1 or 2 to continue the survey

UniqueID 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.

MPDGQ1 In which region did you teach this past year? (check one)
- ❍ California (1)
- ❍ Chesapeake Bay (2)
- ❍ Great Lakes (3)
- ❍ Gulf of Mexico (4)
- ❍ Hawaii (5)
- ❍ New England (6)
- ❍ Pacific Northwest (7)
- ❍ Other (please describe) (88) _____

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

In which grade level do you primarily teach? (select one)
- ❑ PreK (1)
- ❑ Elementary (2)
- ❑ Middle (3)
- ❑ High (4)
- ❑ Other (88)

Which of these categories best describes your school's community (during the school year)?
- ☐ Rural (population of less than 10,000) (1)
- ☐ Town/Suburban (population 10,000-99,999) (2)
- ☐ Small urban (population 100,000-250,000) (3)
- ☐ Urban (population greater than 250,000) (4)

About what percent of your students are (percent should equal 100):
American Indian or Alaska Native (1)
Asian (2)
Black or African American (3)
Hispanic or Latino (4)
Native Hawaiian or Other Pacific Islander (5)
White (6)
Multi-racial
Don't know (99)

Is the school where you teach a Title 1 school?
No (0)
Yes (1)
NA (55)

MQ9 In the past 12 months, did you implement a Meaningful Watershed Educational Experience (MWEE) with your students?
- ❍ No (0)
- ❍ Yes (1)

If no: Why were you not able to implement a MWEE with your students? (text box)
Logic: If no, end of questionnaire.

MGQ37_1 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 (1)

MGQ45 On average, did students participate in a MWEE over the course of:
- ❍ Less than a week
- ❍ A week (3)
- ❍ Multiple weeks (4)
- ❍ Multiple months (6)
- ❍ A full school year (8)
- ❍ Multiple years (10)

MGQ43 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 (1)
- ❍ 6-9 hours (3)
- ❍ 10-24 hours (4)
- ❍ 25-40 hours (6)
- ❍ More than 40 hours (7)

MGQ44 On average during the last school year, about how many hours did a typical student spend outdoors during MWEE activities? (check one)

- ❍ None (0)
- ❍ 1-5 hours (1)
- ❍ 6-9 hours (3)
- ❍ 10-24 hours (4)
- ❍ 25-40 hours (6)
- ❍ More than 40 hours (7)

Logic: If answer to MGQ44 On average during the last school year, about how many hours did a typical student spend outdoors during MWEE activities? Is not None

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					

MQ29 Where did the outdoor component of your students' MWEEs occur?

	No (0)	Yes (1)
On school grounds (1)	❍	❍
Off school grounds, within walking distance	❍	❍
Off school grounds, requiring transportation	❍	❍

MQ30 To what extent do you agree or disagree with the following:

	NA (55)	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
Overall, what I taught my students about watersheds in the classroom was closely integrated with students' outdoor learning experience(s). (1)	❍	❍	❍	❍	❍	❍	❍	❍
My students' outdoor learning experiences were designed to help them understand what they had been introduced to during regular class (2)	❍	❍	❍	❍	❍	❍	❍	❍
My students' outdoor learning experiences were designed to reinforce what students learned during regular class (3)	❍	❍	❍	❍	❍	❍	❍	❍

MQ31 BEFORE students participated in their outdoor learning experience:

	NA (55)	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
I provided them with detailed information about what they were going to do (1)	❍	❍	❍	❍	❍	❍	❍	❍
I let students know what activities they were going to do (2)	❍	❍	❍	❍	❍	❍	❍	❍
I spent a lot of time preparing students for what to expect (3)	❍	❍	❍	❍	❍	❍	❍	❍

During the MWEE (outdoors or in classroom), my students: (choose No or Yes for each statement)

	No	Yes
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		

MQ33 Back in the classroom AFTER students participated in the outdoor learning experience(s):

	NA (55)	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
They discussed results based on their observations (1)	❍	❍	❍	❍	❍	❍	❍	❍
They offered explanations for what they observed (2)	❍	❍	❍	❍	❍	❍	❍	❍
They were expected to draw on what had been learned (3)	❍	❍	❍	❍	❍	❍	❍	❍

Logic: All MWEEs

In what subject(s) were your organization's typical MWEEs implemented? (select all that apply):

- Science
- Technology
- Engineering
- Math
- Social studies
- English language arts
- Fine arts
- Music
- Other (please describe)

MGQ41 To what extent was the content of your students' MWEEs aligned with:

	NA (55)	To no extent 1 (1)	2 (2)	3 (3)	4 (4)	To a great extent 5 (5)
State education standards (1)	❍	❍	❍	❍	❍	❍
Next Generation Science Standards (2)	❍	❍	❍	❍	❍	❍
Common Core Standards – Mathematics (3)	❍	❍	❍	❍	❍	❍
Common Core Standards - English Language Arts (4)	❍	❍	❍	❍	❍	❍
Regional environmental/natural resources management priorities (5)	❍	❍	❍	❍	❍	❍

Did students participate in any of these actions to protect or restore watersheds during your organization's B-WET-funded 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 (text box)
- 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 (text box)

- Community Engagement [e.g., outreach, presentations, social media, messaging at community events/fairs/festivals, event-organizing, mentoring, PSAs, flyers, posters]
    - Briefly describe the actions (text box)
- Civic Action [e.g., town meetings, voting, writing elected officials/decision makers, advocating for policy change]
    - Briefly describe the actions (text box)
- Other
    - Briefly describe the actions (text box)

MGQ48 Which NOAA resources were used as part of your student MWEE? (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:

MGQ49 What education methods were used during your students' MWEEs? (select No or Yes for each method)

	No (0)	Yes (1)
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) (1)	❍	❍
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) (2)	❍	❍
Place-based education (i.e., an interdisciplinary instructional strategy that uses the local environment and community as the context for teaching and learning) (3)	❍	❍
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) (4)	❍	❍
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) (5)	❍	❍
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) (6)	❍	❍

Answer If What education methods were used during your students' MW... Scientific-inquiry-based learning) - Yes Is Selected

MGQ50 Which of the following steps did you engage students in...

	No (0)	Yes (1)
Formulating scientific questions they can answer using data (1)	❍	❍
Making predictions or hypotheses (2)	❍	❍
Collecting data or using existing data (3)	❍	❍
Analyzing and interpreting data (4)	❍	❍
Making conclusions and adjusting predictions/hypotheses (5)	❍	❍
Giving presentations of their findings (6)	❍	❍

MGQ53 As a result of participating in MWEEs, students are better able to:

	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
Define the term "watershed" (1)	❍	❍	❍	❍	❍	❍	❍
Identify their local watershed(s) (ocean, coastal, riverine, estuarine, Great Lakes) (2)	❍	❍	❍	❍	❍	❍	❍
Identify how watersheds are connected to the ocean via streams, rivers, and human-made structures (3)	❍	❍	❍	❍	❍	❍	❍
Identify the functions that occur in a watershed (transport, store, and cycle water) (4)	❍	❍	❍	❍	❍	❍	❍
Recognize that both natural processes and human activities affect water flow and water quality in watersheds (5)	❍	❍	❍	❍	❍	❍	❍
Identify connections between human welfare and water flow and quality (6)	❍	❍	❍	❍	❍	❍	❍
Identify possible point and non-point sources of water pollution (7)	❍	❍	❍	❍	❍	❍	❍
Identify actions individuals can take to protect or restore in watersheds (8)	❍	❍	❍	❍	❍	❍	❍

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

MGQ52 As a result of participating in MWEEs, students:

	NA (55)	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
Know more about the ocean	❍	❍	❍	❍	❍	❍	❍	❍
Know more about climate change	❍	❍	❍	❍	❍	❍	❍	❍
Know more about watersheds (1)	❍	❍	❍	❍	❍	❍	❍	❍
Express greater caring and concern for their local watershed (ocean, coastal, riverine, estuarine, Great Lakes) (2)	❍	❍	❍	❍	❍	❍	❍	❍
Are more confident in their ability to protect or restore watersheds (3)	❍	❍	❍	❍	❍	❍	❍	❍
Are more likely to act to protect or restore watersheds (4)	❍	❍	❍	❍	❍	❍	❍	❍
Are better able to make informed decisions about how to protect or restore watersheds (5)	❍	❍	❍	❍	❍	❍	❍	❍
Are better able to conduct scientific investigations (6)	❍	❍	❍	❍	❍	❍	❍	❍
Are better able to understand the nature of scientific research (7)	❍	❍	❍	❍	❍	❍	❍	❍
Are more likely to express an interest in pursuing science careers (8)	❍	❍	❍	❍	❍	❍	❍	❍
Perform better in science (9)	❍	❍	❍	❍	❍	❍	❍	❍
Perform better on state standardized tests (11)	❍	❍	❍	❍	❍	❍	❍	❍
Are more engaged in their learning (12)	❍	❍	❍	❍	❍	❍	❍	❍

MQ24 As a result of participating MWEEs, students are more likely to take these types of actions to protect or restore watersheds (ocean, coastal, riverine, estuarine, Great Lakes).

	NA (55)	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (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) (10)	❍	❍	❍	❍	❍	❍	❍	❍

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

MGPDQ74 The questionnaire was ... (select one for each line)

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

ImprvQ_Txt How can this questionnaire be improved?

Cmmts_Txt What final comments would you like to share about MWEEs?

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

NOAA B-WET Teacher MWEE Survey
Revised 2015

Introduction

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. Click here to see a detailed MWEE definition.

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: You can 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 (some work and public computers do not save and/or retain cookies). We recommend that you complete the survey in one sitting, if possible, to avoid issues with 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: 02/29/2016

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)?

- ❍ I did not complete a MWEE PD. (55)
- ❍ Less than 1 week ago (1)
- ❍ 1-2 weeks ago (2)
- ❍ 3-4 weeks ago (3)
- ❍ 5-8 weeks ago (4)
- ❍ 9-12 weeks ago (5)
- ❍ More than 12 weeks ago (6)

MPDQ3 Are you currently a PreK-12 teacher or educator?

- ❍ No (0)
- ❍ Yes (1)
- ❍ Logic: Must select Yes to continue the survey

MPDQ5 In what setting do you primarily teach? (select one)
- ❑ Public school (1)
- ❑ Private school (2)
- ❑ Non-formal education (e.g., environmental centers, zoos, museums, interpretive programs at local or state level parks, youth organizations, summer camps, after school programs) (3)
- ❑ Home-school (4)
- ❑ Other (88)

Logic: Must select 1 or 2 to continue the survey

UniqueID 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.

MPDGQ1 In which region did you teach this past year? (check one)
- ❍ California (1)
- ❍ Chesapeake Bay (2)
- ❍ Great Lakes (3)
- ❍ Gulf of Mexico (4)
- ❍ Hawaii (5)
- ❍ New England (6)
- ❍ Pacific Northwest (7)
- ❍ Other (please describe) (88) _____

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

In which grade level do you primarily teach? (select one)
- ❑ PreK (1)
- ❑ Elementary (2)
- ❑ Middle (3)
- ❑ High (4)
- ❑ Other (88)

Which of these categories best describes your school's community (during the school year)?
- ☐ Rural (population of less than 10,000) (1)
- ☐ Town/Suburban (population 10,000-99,999) (2)
- ☐ Small urban (population 100,000-250,000) (3)
- ☐ Urban (population greater than 250,000) (4)

About what percent of your students are (percent should equal 100):
American Indian or Alaska Native (1)
Asian (2)
Black or African American (3)
Hispanic or Latino (4)
Native Hawaiian or Other Pacific Islander (5)
White (6)
Multi-racial
Don't know (99)

Is the school where you teach a Title 1 school?
No (0)
Yes (1)
NA (55)

MQ9 In the past 12 months, did you implement a Meaningful Watershed Educational Experience (MWEE) with your students?
- ❍ No (0)
- ❍ Yes (1)

If no: Why were you not able to implement a MWEE with your students? (text box)
Logic: If no, end of questionnaire.

MGQ37_1 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 (1)

MGQ45 On average, did students participate in a MWEE over the course of:
- ❍ Less than a week
- ❍ A week (3)
- ❍ Multiple weeks (4)
- ❍ Multiple months (6)
- ❍ A full school year (8)
- ❍ Multiple years (10)

MGQ43 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 (1)
- ❍ 6-9 hours (3)
- ❍ 10-24 hours (4)
- ❍ 25-40 hours (6)
- ❍ More than 40 hours (7)

MGQ44 On average during the last school year, about how many hours did a typical student spend outdoors during MWEE activities? (check one)

- ❍ None (0)
- ❍ 1-5 hours (1)
- ❍ 6-9 hours (3)
- ❍ 10-24 hours (4)
- ❍ 25-40 hours (6)
- ❍ More than 40 hours (7)

Logic: If answer to MGQ44 On average during the last school year, about how many hours did a typical student spend outdoors during MWEE activities? Is not None

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					

MQ29 Where did the outdoor component of your students' MWEEs occur?

	No (0)	Yes (1)
On school grounds (1)	❍	❍
Off school grounds, within walking distance	❍	❍
Off school grounds, requiring transportation	❍	❍

MQ30 To what extent do you agree or disagree with the following:

	NA (55)	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
Overall, what I taught my students about watersheds in the classroom was closely integrated with students' outdoor learning experience(s). (1)	❍	❍	❍	❍	❍	❍	❍	❍
My students' outdoor learning experiences were designed to help them understand what they had been introduced to during regular class (2)	❍	❍	❍	❍	❍	❍	❍	❍
My students' outdoor learning experiences were designed to reinforce what students learned during regular class (3)	❍	❍	❍	❍	❍	❍	❍	❍

MQ31 BEFORE students participated in their outdoor learning experience:

	NA (55)	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
I provided them with detailed information about what they were going to do (1)	❍	❍	❍	❍	❍	❍	❍	❍
I let students know what activities they were going to do (2)	❍	❍	❍	❍	❍	❍	❍	❍
I spent a lot of time preparing students for what to expect (3)	❍	❍	❍	❍	❍	❍	❍	❍

During the MWEE (outdoors or in classroom), my students: (choose No or Yes for each statement)

	No	Yes
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		

MQ33 Back in the classroom AFTER students participated in the outdoor learning experience(s):

	NA (55)	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
They discussed results based on their observations (1)	❍	❍	❍	❍	❍	❍	❍	❍
They offered explanations for what they observed (2)	❍	❍	❍	❍	❍	❍	❍	❍
They were expected to draw on what had been learned (3)	❍	❍	❍	❍	❍	❍	❍	❍

Logic: All MWEEs

In what subject(s) were your organization's typical MWEEs implemented? (select all that apply):

- Science
- Technology
- Engineering
- Math
- Social studies
- English language arts
- Fine arts
- Music
- Other (please describe)

MGQ41 To what extent was the content of your students' MWEEs aligned with:

	NA (55)	To no extent 1 (1)	2 (2)	3 (3)	4 (4)	To a great extent 5 (5)
State education standards (1)	❍	❍	❍	❍	❍	❍
Next Generation Science Standards (2)	❍	❍	❍	❍	❍	❍
Common Core Standards – Mathematics (3)	❍	❍	❍	❍	❍	❍
Common Core Standards - English Language Arts (4)	❍	❍	❍	❍	❍	❍
Regional environmental/natural resources management priorities (5)	❍	❍	❍	❍	❍	❍

Did students participate in any of these actions to protect or restore watersheds during your organization's B-WET-funded 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 (text box)
- 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 (text box)

- Community Engagement [e.g., outreach, presentations, social media, messaging at community events/fairs/festivals, event-organizing, mentoring, PSAs, flyers, posters]
    - Briefly describe the actions (text box)
- Civic Action [e.g., town meetings, voting, writing elected officials/decision makers, advocating for policy change]
    - Briefly describe the actions (text box)
- Other
    - Briefly describe the actions (text box)

MGQ48 Which NOAA resources were used as part of your student MWEE? (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:

MGQ49 What education methods were used during your students' MWEEs? (select No or Yes for each method)

	No (0)	Yes (1)
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) (1)	❍	❍
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) (2)	❍	❍
Place-based education (i.e., an interdisciplinary instructional strategy that uses the local environment and community as the context for teaching and learning) (3)	❍	❍
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) (4)	❍	❍
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) (5)	❍	❍
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) (6)	❍	❍

Answer If What education methods were used during your students' MW... Scientific-inquiry-based learning) - Yes Is Selected

MGQ50 Which of the following steps did you engage students in...

	No (0)	Yes (1)
Formulating scientific questions they can answer using data (1)	❍	❍
Making predictions or hypotheses (2)	❍	❍
Collecting data or using existing data (3)	❍	❍
Analyzing and interpreting data (4)	❍	❍
Making conclusions and adjusting predictions/hypotheses (5)	❍	❍
Giving presentations of their findings (6)	❍	❍

MGQ53 As a result of participating in MWEEs, students are better able to:

	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
Define the term "watershed" (1)	❍	❍	❍	❍	❍	❍	❍
Identify their local watershed(s) (ocean, coastal, riverine, estuarine, Great Lakes) (2)	❍	❍	❍	❍	❍	❍	❍
Identify how watersheds are connected to the ocean via streams, rivers, and human-made structures (3)	❍	❍	❍	❍	❍	❍	❍
Identify the functions that occur in a watershed (transport, store, and cycle water) (4)	❍	❍	❍	❍	❍	❍	❍
Recognize that both natural processes and human activities affect water flow and water quality in watersheds (5)	❍	❍	❍	❍	❍	❍	❍
Identify connections between human welfare and water flow and quality (6)	❍	❍	❍	❍	❍	❍	❍
Identify possible point and non-point sources of water pollution (7)	❍	❍	❍	❍	❍	❍	❍
Identify actions individuals can take to protect or restore in watersheds (8)	❍	❍	❍	❍	❍	❍	❍

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

MGQ52 As a result of participating in MWEEs, students:

	NA (55)	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
Know more about the ocean	❍	❍	❍	❍	❍	❍	❍	❍
Know more about climate change	❍	❍	❍	❍	❍	❍	❍	❍
Know more about watersheds (1)	❍	❍	❍	❍	❍	❍	❍	❍
Express greater caring and concern for their local watershed (ocean, coastal, riverine, estuarine, Great Lakes) (2)	❍	❍	❍	❍	❍	❍	❍	❍
Are more confident in their ability to protect or restore watersheds (3)	❍	❍	❍	❍	❍	❍	❍	❍
Are more likely to act to protect or restore watersheds (4)	❍	❍	❍	❍	❍	❍	❍	❍
Are better able to make informed decisions about how to protect or restore watersheds (5)	❍	❍	❍	❍	❍	❍	❍	❍
Are better able to conduct scientific investigations (6)	❍	❍	❍	❍	❍	❍	❍	❍
Are better able to understand the nature of scientific research (7)	❍	❍	❍	❍	❍	❍	❍	❍
Are more likely to express an interest in pursuing science careers (8)	❍	❍	❍	❍	❍	❍	❍	❍
Perform better in science (9)	❍	❍	❍	❍	❍	❍	❍	❍
Perform better on state standardized tests (11)	❍	❍	❍	❍	❍	❍	❍	❍
Are more engaged in their learning (12)	❍	❍	❍	❍	❍	❍	❍	❍

MQ24 As a result of participating MWEEs, students are more likely to take these types of actions to protect or restore watersheds (ocean, coastal, riverine, estuarine, Great Lakes).

	NA (55)	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (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) (10)	❍	❍	❍	❍	❍	❍	❍	❍

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

MGPDQ74 The questionnaire was ... (select one for each line)

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

ImprvQ_Txt How can this questionnaire be improved?

Cmmts_Txt What final comments would you like to share about MWEEs?

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

NOAA B-WET Teacher MWEE Survey – Nonresponse
Revised 2015

Introduction

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 answers to a few questions about implementing MWEEs with your students, if you did so since the PD.

It will take about 5 minutes to complete this survey.

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. Click here to see a detailed MWEE definition.

Your responses will be entered anonymously, will not be associated with you as an individual, and will be aggregated with other teachers' responses. NOAA B-WET and B-WET-funded organizations will use the data you and other teachers provide to improve MWEE PD and student programs.

Thank you.

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

OMB Control Number: 0648-0658 Expires: 02/29/2016

Paperwork Reduction Act Statement

Public reporting burden for this collection of information is estimated to average 5 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.

Q12 How long ago did you complete a NOAA B-WET-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)?

- ❍ Less than a year ago (1)
- ❍ A year or more ago (2)
- ❍ I did not complete a MWEE PD. (0)

MPDQ3 Are you currently a PreK-12 teacher or educator?

- ❍ No (0)
- ❍ Yes (1)

MPDQ5 In what setting do you primarily teach? (select one)

- ❑ Public school (1)
- ❑ Private school (2)
- ❑ Non-formal education (e.g., environmental centers, zoos, museums, interpretive programs at local or state level parks, youth organizations, summer camps, after school programs) (3)
- ❑ Home-school (4)
- ❑ Other (88)

MQ9 In the past 12 months, did you implement a Meaningful Watershed Educational Experience (MWEE) with your students?

- ❍ No (0)
- ❍ Yes (1)

Logic: If no, end of questionnaire.

MGQ37_1 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 (1)

MGQ45 On average, did students participate in a MWEE over the course of:

- ❍ Less than a week
- ❍ A week (3)
- ❍ Multiple weeks (4)
- ❍ Multiple months (6)
- ❍ A full school year (8)
- ❍ Multiple years (10)

MGQ43 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 (1)
- ❍ 6-9 hours (3)
- ❍ 10-24 hours (4)
- ❍ 25-40 hours (6)
- ❍ more than 40 hours (7)

MGQ44 On average during the last school year, about how many hours did a typical student spend outdoors during MWEE activities? (check one)

- ❍ None (0)
- ❍ 1-5 hours (1)
- ❍ 6-9 hours (3)
- ❍ 10-24 hours (4)
- ❍ 25-40 hours (6)
- ❍ more than 40 hours (7)

MGQ52 As a result of participating in MWEEs, students:

	NA (55)	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
Know more about the ocean	❍	❍	❍	❍	❍	❍	❍	❍
Know more about climate change	❍	❍	❍	❍	❍	❍	❍	❍
Know more about watersheds (1)	❍	❍	❍	❍	❍	❍	❍	❍
Express greater caring and concern for their local watershed (ocean, coastal, riverine, estuarine, Great Lakes) (2)	❍	❍	❍	❍	❍	❍	❍	❍
Are more confident in their ability to protect or restore watersheds (3)	❍	❍	❍	❍	❍	❍	❍	❍
Are more likely to act to protect or restore watersheds (4)	❍	❍	❍	❍	❍	❍	❍	❍
Are better able to make informed decisions about how to protect or restore watersheds (5)	❍	❍	❍	❍	❍	❍	❍	❍
Are better able to conduct scientific investigations (6)	❍	❍	❍	❍	❍	❍	❍	❍
Are better able to understand the nature of scientific research (7)	❍	❍	❍	❍	❍	❍	❍	❍
Are more likely to express an interest in pursuing science careers (8)	❍	❍	❍	❍	❍	❍	❍	❍
Perform better in science (9)	❍	❍	❍	❍	❍	❍	❍	❍
Perform better on state standardized tests (10)	❍	❍	❍	❍	❍	❍	❍	❍
Are more engaged in their learning (11)	❍	❍	❍	❍	❍	❍	❍	❍

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

Attachment 3: Comparison of Teacher Post-PD Initial vs. Nonresponse Questionnaire Results

This document compares responses from teachers who responded to the initial post-PD questionnaire with the responses from teachers who responded to a follow up non-response post-PD questionnaire. For each question, the number of teachers who responded to the respective questionnaires (n), descriptive statistics (frequencies, means/standard deviations), and significant difference test results are reported. Chi square tests were conducted when the response choices were nominal (e.g., yes/no) and independent t-tests were conducted when response choices were ordinal (e.g., 1-5 point Likert-type). P values are reported to indicate if initial and non-respondent teachers' responses are statistically significantly different ($p<.05$).

Note: The numbers in parentheses immediately following the response choices, such as (55), (1), (0), are the values assigned to each response.

PDQ6 How long ago did you complete professional development focused on watersheds or water quality issues (also known as a Meaningful Watershed Education Experience professional development or MWEE PD)?

- ❍ I did not complete a MWEE PD (55)
- ❍ Less than 1 week ago (1)
- ❍ 1-2 weeks ago (2)
- ❍ 3-4 weeks ago (3)
- ❍ 5-8 weeks ago (4)
- ❍ 9-12 weeks ago (5)
- ❍ More than 12 weeks ago (6)

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	133	4.40	1.44	-1.06	0.29
Non-response questionnaire	22	4.73	0.55		

PDMQ3 Are you currently a PreK-12 teacher or educator?

- ❍ No (0)
- ❍ Yes (1)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	100%	0%	N/A	1	N/A
Non-response questionnaire	23	100%	0%			

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

PDMQ5 In what setting do you teach?

❑ Public school (1)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	94%	6%	1.46	1	0.61
Non-response questionnaire	23	100%	0%			

❑ Private school (2)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	6%	94%	1.46	1	0.61
Non-response questionnaire	23	0%	100%			

❑ Non-formal education (e.g., environmental centers, zoos, museums, interpretive programs at local or state level parks, youth organizations) (3)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	3%	97%	0.71	1	1.00
Non-response questionnaire	23	0%	100%			

❑ Home-school (4)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	1%	99%	0.17	1	1.00
Non-response questionnaire	23	0%	100%			

❑ Other (88)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	1%	99%	0.17	1	1.00
Non-response questionnaire	23	0%	100%			

PDGMQ1 In which region did you teach this past year? (check one)

- ❍ California (1) (Initial questionnaire – 17% / Non-response questionnaire – 0%)
- ❍ Chesapeake Bay (2) (12% / 17%)
- ❍ Great Lakes (3) (17% / 17%)
- ❍ Gulf of Mexico (4) (15% / 26%)
- ❍ Hawaii (5) (1% / 4%)
- ❍ New England (6) (14% / 13%)
- ❍ Pacific Northwest (7) (18% / 13%)
- ❍ Other (please describe) (88) _____ (7% / 9%)

	n	Chi Square statistic	df	p value
Initial questionnaire	133	8.23	7	0.17
Non-response questionnaire	23			

PDQ10 In which grade level(s) do you primarily teach? (select all that apply)

- ❑ PreK (1)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	1%	99%	0.17	1	1.00
Non-response questionnaire	23	0%	100%			

- ❑ Elementary (2)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	46%	54%	0.98	1	0.37
Non-response questionnaire	23	35%	65%			

- ❑ Middle (3)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	68%	32%	0.05	1	0.82
Non-response questionnaire	23	65%	35%			

- ❑ High (4)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	27%	73%	0.58	1	0.46
Non-response questionnaire	23	65%	35%			

- ❑ Other (88)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	0%	100%	N/A	1	N/A
Non-response questionnaire	23	0%	100%			

PDGQ2 What subject(s) do you primarily teach? (select one)

- ❍ Science (1) (Initial questionnaire – 45% / Non-response questionnaire – 61%)
- ❍ Math (2) (6% / 13%)
- ❍ Language Arts (3) (5% / 0%)
- ❍ Social studies (4) (1% / 0%)
- ❍ Fine arts (5) (0% / 0%)
- ❍ Multiple disciplines, including science (6) (41% / 17%)
- ❍ Multiple disciplines, not including science (7) (2% / 0%)
- ❍ Other (88) (1% / 9%)

	n	Chi Square statistic	df	p value
Initial questionnaire	133	13.41	7	0.04
Non-response questionnaire	23			

About PD Please answer all of the following questions based on the last MWEE (watershed education) professional development you participated in.

PDQ19 What was your PRIMARY reason for participating in the MWEE professional development? (check one)

- ❍ To obtain information and resources for teaching (1) (Initial questionnaire – 70% / Non-response questionnaire – 65%)
- ❍ Personal interest in the topic of the professional development (2) (14% / 9%)
- ❍ To obtain continuing education, recertification, or graduate credit (3) (6% / 0%)
- ❍ I was required to attend (4) (2% / 9%)
- ❍ I was asked to attend (5)) (6% / 13%)
- ❍ Other, please describe: (88) _____ (2% / 4%)

	n	Chi Square statistic	df	p value
Initial questionnaire	133	6.05	5	0.22
Non-response questionnaire	23			

PDGQ4 Which type(s) of MWEE professional development did you participate in or receive? (please select yes or no for each type)

	No (0)	Yes (1)
One day workshops (usually less than 8 hours) (1)	❍	❍

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	50%	50%	0.05	1	0.82
Non-response questionnaire	23	48%	52%			

Teacher institute (usually on consecutive days that cumulatively consist of 40 hours of more) (2)	❍	❍

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	34%	66%	0.24	1	0.62
Non-response questionnaire	23	39%	61%			

Multi-day workshops (events that last at least 6 hours, but are less than 40 hours, e.g., a three-day workshop on a specific topic or a series of five Saturday sessions) (3)		❍			❍	
	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	47%	53%	0.54	1	0.46
Non-response questionnaire	23	39%	61%			
A college-level course (4)		❍			❍	
	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	14%	86%	0.03	1	0.59
Non-response questionnaire	23	13%	87%			
Professional development provider training (training for individuals who provide teacher professional development) (5)		❍			❍	
	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	21%	79%	0.16	1	0.79
Non-response questionnaire	23	17%	83%			
Individual teacher coaching and support (e.g., curriculum planning, shared teaching, demonstrations and/or other forms of in-school or in-field support (6)		❍			❍	
	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	133	32%	68%	1.03	1	0.46
Non-response	23	78%	22%			

questionnaire						

On-line professional development support (e.g., courses, webinars, discussion forums) (7)	❍	❍

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	97	10%	90%	0.05	1	1.00
Non-response questionnaire	23	9%	91%			

PDGQ23 About how many hours of MWEE professional development and/or support did you receive over the past 12 months?

- ❍ 1-2 hours (1)
- ❍ 3-5 hours (2)
- ❍ 6-10 hours (3)
- ❍ 11-20 hours (4)
- ❍ 21-40 hours (5)
- ❍ 41-60 hours (6)
- ❍ 61-80 hours (7)
- ❍ More than 80 hours (8)

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	133	4.34	1.54	-0.78	0.44
Non-response questionnaire	22	4.61	1.27		

PDQ37 Overall, what grade would you give your MWEE professional development experience? (slide the scale between F and A+)

- ❍ 1 (1)
- ❍ 2 (2)
- ❍ 3 (3)
- ❍ 4 (4)
- ❍ 5 (5)
- ❍ 6 (6)
- ❍ 7 (7)
- ❍ 8 (8)
- ❍ 9 (9)
- ❍ 10 (10)
- ❍ 11 (11)
- ❍ 12 (12)
- ❍ 13 (13)

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	90	11.7	1.52	0.77	0.45
Non-response questionnaire	10	11.3	1.95		

PDGQ84 For each statement, select one response for BEFORE, one response for AFTER, and one response for FUTURE. (scroll to the right)

	BEFORE the MWEE professional development, how confident were you in your ability to:							AFTER the MWEE professional development, how confident are you in your ability to:							In the FUTURE, I intend to ...						
	Not at all confident 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely confident 7 (7)	Not at all confident 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Extremely confident 7 (7)	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
Teach my students about local watersheds (1)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍
Incorporate MWEEs into my curriculum (2)	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍	❍

PDGQ84_1_1 BEFORE the MWEE professional development, how confident were you in your ability to: Teach my students about local watersheds

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	127	3.28	1.90	-1.26	0.21
Non-response questionnaire	23	3.83	2.10		

PDGQ84_2_1 BEFORE the MWEE professional development, how confident were you in your ability to: Incorporate MWEEs into my curriculum

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	127	2.59	1.70	-2.79	0.01
Non-response questionnaire	23	3.70	2.00		

PDGQ84_1_2 AFTER the MWEE professional development, how confident were you in your ability to: Teach my students about local watersheds

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	124	6.04	1.05	-0.41	0.68
Non-response questionnaire	22	6.14	0.83		

PDGQ84_2_2 AFTER the MWEE professional development, how confident were you in your ability to: Incorporate MWEEs into my curriculum

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	123	5.70	1.27	-1.07	0.29
Non-response questionnaire	22	6	0.87		

PDGQ84_1_3 In the FUTURE, I intend to… Teach my students about local watersheds

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	75	6.28	1.13	-0.15	0.88
Non-response questionnaire	22	6.32	0.89		

PDGQ84_2_3 In the FUTURE, I intend to… Incorporate MWEEs into my curriculum

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	74	5.91	1.20	-1.16	0.25
Non-response questionnaire	22	6.23	0.92		

Attachment 4 : Teacher Post-PD and Post-MWEE Power and Effect Size Analysis Results

Note: The question text indicated by the codes in these tables can be found in Attachments 3 and 5.

PD Chi-Square

	PDMQ5_1	**PDMQ5_2**	**PDMQ5_3**	**PDMQ5_4**	**PDMQ5_5**	**PDGMQ1**
Nquery Column	**1**	**2**	**3**	**4**	**5**	**6**
Test Significance level, α	0.05	0.05	0.05	0.05	0.05	0.05
Number of groups, G	2	2	2	2	2	8
Average proportion, π_0	0.078	0.078	0.076	0.074	0.074	0.19
Variance of proportions, $V=\Sigma\ r_i(\pi_i-\pi_0)^2 / \Sigma\ r_i$	0.006038	0.006038	0.005724	0.005505	0.005505	0.008447
Effect size, $\Delta^2 = V / [\pi_0(1-\pi_0)]$	0.084249	0.084249	0.081851	0.080139	0.080139	0.054878
Power (%)	95	95	94	94	94	53
N as multiple of n_1, $\Sigma\ r_i = \Sigma\ n_i/n_1$						
Total sample size, N	156	156	156	156	156	156

PDQ10_1	**PDQ10_2**	**PDQ10_3**	**PDQ10_4**	**PDGQ2**	**PDQ19**	**PDGQ4_1**	**PDGQ4_2**	**PDGQ4_3**
7	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
2	2	2	2	7	6	2	2	2
0.074	0.144	0.15	0.158	0.171	0.194	0.147	0.152	0.143
0.005505	0.000797	0.000049	0.000573	0.01136	0.007006	0.000041	0.000216	0.000434
0.080139	0.006461	0.000385	0.004313	0.080109	0.044877	0.000327	0.001678	0.003546
94	17	5	12	75	50	5	8	11
156	156	156	156	156	156	156	156	156

PDGQ4_4	PDGQ4_5	PDGQ4_6	PDGQ4_7
16	**17**	**18**	**19**
0.05	0.05	0.05	0.05
2	2	2	2
0.139	0.135	0.181	0.181
0.00002	0.000199	0.000977	0.000193
0.000168	0.001701	0.0066	0.001304
5	8	17	6
156	156	156	120

	Lowest Value	Highest Value
Range of Power	5	95
Range of Effect Sizes	0.00	0.08
Mean Power	44	
Mean Effect Size	0.04	

PD T-Test

	PDQ6	PDGQ23	PDQ37	PDGQ84_1_1	PDGQ84_2_1
NQuery Column	**1**	**2**	**3**	**4**	**5**
Test Significance level, α	0.05	0.05	0.05	0.05	0.05
1 or 2 sided test?	2	2	2	2	2
Group 1 mean, μ_1	4.398496151	4.343511581	11.69999981	3.275590658	2.590551138
Group 2 mean, μ_2	4.727272511	4.608695507	11.30000019	3.826086998	3.695652246
Difference in means, $\mu_1 - \mu_2$	-0.329	-0.265	0.400	-0.550	-1.105
Common standard deviation, σ	1.831655839	2.283027825	2.459183545	3.734180383	3.051204118
Effect size, $\delta = \lvert \mu_1 - \mu_2 \rvert / \sigma$	0.179	0.116	0.163	0.147	0.362
Power (%)	12	8	7	9	35
n_1	133	131	90	127	127
n_2	22	23	10	23	23
Ratio, n_2 / n_1	0.165	0.176	0.111	0.181	0.181
$N = n_1 + n_2$	155	154	100	150	150

PDGQ84_1_2	PDGQ84_2_2	PDGQ84_1_3	PDGQ84_2_3
6	**7**	**8**	**9**
0.05	0.05	0.05	0.05
2	2	2	2
6.040322781	5.699186802	6.28000021	5.905405521
6.136363506	6	6.318181992	6.227272511
-0.096	-0.301	-0.038	-0.322
1.03742563	1.481607705	1.177818227	1.300015769
0.093	0.203	0.032	0.248
6	14	5	17
124	123	75	74
22	22	22	22
0.177	0.179	0.293	0.297
146	145	97	96

	Lowest Value	Highest Value
Range of Power	5	35
Range of Effect Sizes	0.03	0.36
Mean Power	13	
Mean Effect Size	0.17	

MWEE Chi-Square

	MPDQ5_1	MPDQ5_2
Nquery Column	**1**	**2**
Test Significance level, α	0.05	0.05
Number of groups, G	2	2
Average proportion, π_0	0.101	0.101
Variance of proportions, $V=\Sigma\ r_i(\pi_i-\pi_0)^2\ /\ \Sigma\ r_i$	0.010	0.010
Effect size, $\Delta^2 = V\ /\ [\pi_0(1-\pi_0)]$	0.112	0.112
Power (%)	97	97
N as multiple of n_1, $\Sigma\ r_i = \Sigma\ n_i/n_1$		
Total sample size, N	140	140
	Lowest Value	**Highest Value**
Range of Power	97	97
Range of Effect Sizes	0.11	0.11
Mean Power	97	
Mean Effect Size	0.11	

MWEE T-Test

	MGQ45	MGQ43	MGQ44	MGQ52_1A	MGQ52_2A
NQuery Column	**1**	**2**	**3**	**4**	**5**
Test Significance level, α	0.5	0.5	0.5	0.5	0.5
1 or 2 sided test?	2	2	2	2	2
Group 1 mean, μ_1	5.434	4.080	3.097	6.126	5.827
Group 2 mean, μ_2	4.259	4.000	2.481	5.852	5.667
Difference in means, $\mu_1 - \mu_2$	1.174	0.080	0.616	0.274	0.161
Common standard deviation, σ	6.442	2.886	2.121	1.571	1.539
Effect size, $\delta = \lvert \mu_1 - \mu_2 \rvert / \sigma$	0.182	0.028	0.290	0.175	0.104
Power (%)	13	5	27	12	7
n_1	113	113	113	111	110
n_2	27	27	27	27	27
Ratio, n_2 / n_1	0.239	0.239	0.239	0.243	0.245
$N = n_1 + n_2$	140	140	140	138	137

MGQ52_3A	MGQ52_4A	MGQ52_5A	MGQ52_6A	MGQ52_7A	MGQ52_8A	MGQ52_9A
6	**7**	**8**	**9**	**10**	**11**	**12**
0.5	0.5	0.5	0.5	0.5	0.5	0.5
2	2	2	2	2	2	2
5.486	5.655	5.685	5.768	5.768	5.550	5.658
5.407	5.296	5.556	5.778	5.852	4.852	5.556
0.079	0.358	0.130	-0.010	-0.084	0.699	0.102
1.708	1.485	1.413	1.172	1.265	1.689	1.483
0.046	0.241	0.092	0.010	0.066	0.414	0.069
5	20	7	5	6	48	6
111	110	108	112	112	109	111
27	27	27	27	27	27	27
0.243	0.245	0.250	0.241	0.241	0.248	0.243
138	137	135	139	139	136	138

MGQ52_10A	MGQ52_11A	MGQ52_12A
13	**14**	**15**
0.5	0.5	0.5
2	2	2
5.349	4.923	6.000
4.667	4.037	6.037
0.682	0.886	-0.037
1.827	2.313	1.478
0.373	0.383	0.025
40	42	5
109	104	111
27	27	27
0.248	0.260	0.243
136	131	138

	Lowest Value	Highest Value
Range of Power	5	48
Range of Effect Sizes	0.01	0.41
Mean Power	17	
Mean Effect Size	0.17	

Attachment 5: Comparison of Teacher Post-MWEE Initial vs. Nonresponse Questionnaire Results

This document compares responses from teachers who responded to the initial post-MWEE questionnaire with the responses from teachers who responded to a follow up non-response post-MWEE questionnaire. For each question, the number of teachers who responded to the respective questionnaires (n), descriptive statistics (frequencies, means/standard deviations), and significant difference test results are reported. Chi square tests were conducted when the response choices were nominal (e.g., yes/no) and independent t-tests were conducted when response choices were ordinal (e.g., 1-5 point Likert-type). P values are reported to indicate if initial and non-respondent teachers' responses are statistically significantly different ($p<.05$).

Note: The numbers in parentheses immediately following the response choices, such as (55), (1), (0), are the values assigned to each response

MPDQ3 Are you currently a PreK-12 teacher or educator?

- ❍ No (0)
- ❍ Yes (1)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	113	100%	0%	N/A	1	N/A
Non-response questionnaire	27	100%	0%			

MPDQ5 In what setting do you teach?

- ❑ Public school (1)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	113	95%	5%	1.50	1	0.60
Non-response questionnaire	27	100%	0%			

- ❑ Private school (2)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	113	5%	95%	1.50	1	0.60
Non-response questionnaire	27	0%	100%			

- ❑ Non-formal education (e.g., environmental centers, zoos, museums, interpretive programs at local or state level parks, youth organizations) (3)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	113	0%	100%	N/A	1	N/A
Non-response questionnaire	27	0%	100%			

- ❑ Home-school (4)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	113	0%	100%	N/A	1	N/A
Non-response questionnaire	27	0%	100%			

- ❑ Other (88)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	113	0%	100%	N/A	1	N/A
Non-response questionnaire	27	0%	100%			

MQ9 In the past 12 months, did you implement a Meaningful Watershed Educational Experience (MWEE) with your students? MWEEs are investigative, project-oriented, sustained activities that include one or more outdoor experiences, consider the watershed as a system, and are an integral part of a school instructional program.

- ❍ No (0)
- ❍ Yes (1)

	n	% yes	% no	Chi Square statistic	df	p value
Initial questionnaire	113	100%	0%	N/A	1	N/A
Non-response questionnaire	27	100%	0%			

MGQ37_1 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 (1)

MGQ45 On average, did students participate in a MWEE over the course of:

- ❍ One day (1)
- ❍ 2-6 days (2)
- ❍ One week (3)
- ❍ 2-3 weeks (4)
- ❍ One month (5)
- ❍ 2-3 months (6)
- ❍ 4-8 months (7)
- ❍ A full school year (about 9 months) (8)
- ❍ A full calendar year (9)
- ❍ Multiple years (10)

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	113	5.43	2.63	2.16	0.03
Non-response questionnaire	27	4.26	2.12		

MGQ43 On average during the last school year, about how many hours did a typical student spend involved in MWEE activities? (check one)

- ❍ None (0)
- ❍ 1-2 hours (1)
- ❍ 3-5 hours (2)
- ❍ 6-9 hours (3)
- ❍ 10-16 hours (4)
- ❍ 17-24 hours (5)
- ❍ 25-40 hours (6)
- ❍ more than 40 hours (7)

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	113	4.08	1.72	0.22	0.83
Non-response questionnaire	27	4	1.59		

MGQ44 On average during the last school year, about how many hours did a typical student spend outdoors during MWEE activities? (check one)

- ❍ None (0)
- ❍ 1-2 hours (1)
- ❍ 3-5 hours (2)
- ❍ 6-9 hours (3)
- ❍ 10-16 hours (4)
- ❍ 17-24 hours (5)
- ❍ 25-40 hours (6)
- ❍ more than 40 hours (7)

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	113	3.13	1.47	1.97	0.05
Non-response questionnaire	27	2.58	1.24		

MGQ52 As a result of participating in MWEEs, students:

	NA (55)	Strongly disagree 1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	Strongly agree 7 (7)
Know more about watersheds (1)	❍	❍	❍	❍	❍	❍	❍	❍

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	111	6.13	1.28	1.02	0.31
Non-response questionnaire	27	5.85	1.13		

Express greater caring and concern for their local watershed (2)	❍	❍	❍	❍	❍	❍	❍	❍

	n	Mean	Standard	t-test statistic	p value

			deviation		
Initial questionnaire	110	5.80	1.27	0.60	0.55
Non-response questionnaire	27	5.67	1.11		

Are more confident in their ability to protect and/or restore watersheds (3)	❍	❍	❍	❍	❍	❍	❍	❍

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	111	5.49	1.37	0.28	0.78
Non-response questionnaire	27	5.41	1.00		

Are more likely to act to protect or restore watersheds (4)	❍	❍	❍	❍	❍	❍	❍	❍

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	110	5.65	1.18	1.37	0.17
Non-response questionnaire	27	5.30	1.35		

Are better able to make informed decisions about how to protect or restore watersheds (5)	❍	❍	❍	❍	❍	❍	❍	❍

	n	Mean	Standard	t-test statistic	p value

			deviation		
Initial questionnaire	108	5.69	1.18	0.51	0.61
Non-response questionnaire	27	5.56	1.22		

Are better able to conduct scientific investigations (6)	❍	❍	❍	❍	❍	❍	❍	❍

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	112	5.77	1.14	-0.04	0.97
Non-response questionnaire	27	5.78	0.80		

Are better able to understand the nature of scientific research (7)	❍	❍	❍	❍	❍	❍	❍	❍

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	112	5.77	1.18	-0.35	0.73
Non-response questionnaire	27	5.85	0.86		

Are more likely to express an interest in pursuing science careers (8)	❍	❍	❍	❍	❍	❍	❍	❍

	n	Mean	Standard deviation	t-test statistic	p value
Initial	109	5.55	1.30	2.50	0.01

questionnaire					
Non-response questionnaire	27	4.85	1.29		

Perform better in science (9)	❍	❍	❍	❍	❍	❍	❍	❍

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	111	5.66	1.25	0.39	0.70
Non-response questionnaire	27	5.56	1.05		

Perform better academically (10)	❍	❍	❍	❍	❍	❍	❍	❍

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	109	5.35	1.31	2.35	0.02
Non-response questionnaire	26	4.85	1.19		

Perform better on state standardized tests (11)	❍	❍	❍	❍	❍	❍	❍	❍

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	104	4.92	1.54	2.70	0.01
Non-response questionnaire	26	4.19	1.23		

Are more engaged in their science learning (12)	❍	❍	❍	❍	❍	❍	❍	❍

	n	Mean	Standard deviation	t-test statistic	p value
Initial questionnaire	111	6	1.26	-0.14	0.89
Non-response questionnaire	27	6.04	0.98		

Attachment 6: Email Correspondence with Grantees

Grantee Pre-notification

Dear ${m://FirstName} ${m://LastName},
As a recipient of a grant from NOAA B-WET (Award Number ${e://Field/AwardPanel}), we would like your organization, ${e://Field/Organization}, to participate in our national evaluation system. The evaluation results will provide insight into how we can improve the NOAA B-WET program and tailor our services to you and the teachers and students you serve.

All grantees will receive an online survey at the end of their award year. If your organization provides B-WET-funded professional development (PD) for teachers, we will also collect teacher contact information from you (email addresses only) so that we can survey them following their PD, and again at the end of the school year following their PD. (You may have already received an email requesting this information.) All of the results that are viewed by NOAA B-WET staff will be aggregated at the regional or national level, and we will not review individual organizations' or teachers' results.

Additional information about this project, including background, FAQs, survey instruments, and suggested text for communicating with your teacher participants about this project, is available on the B-WET National Evaluation website here:
http://www.oesd.noaa.gov/grants/bwet_eval.php

Thank you in advance for your participation in NOAA B-WET's evaluation system!

Bronwen Rice, NOAA B-WET National Coordinator
NOAA Office of Education
Bronwen.Rice@noaa.gov
202.482.6797

You may also contact your regional program manager for more information:
${e://Field/BWETName}
${e://Field/BWETEmail}
${e://Field/BWETPhone}

OMB Control Number: 0648-0658 Expires: 02/29/2016

Follow the link to opt out of future emails:
${l://OptOutLink?d=Click here to unsubscribe}

Grantee Survey Invitation

Dear ${m://FirstName} ${m://LastName},
You received this email because your organization, ${e://Field/Organization}, is at the end of its NOAA B-WET grant year (Award Number ${e://Field/AwardPanel}). Please provide NOAA with feedback on B-WET's services to you as a grantee and with information on how you implemented your B-WET-funded programs. The questionnaire will take about 30-60 minutes to complete.

Follow this link to the Survey:
${l://SurveyLink?d=Take the Survey}

Or copy and paste the URL below into your internet browser:
${l://SurveyURL}

Please be completely honest in your responses. YOUR RESPONSES WILL BE ANONYMOUS. None of the data you provide will be associated with your name or other identifying information. Your responses are very important and will be used to improve future NOAA-funded programs.

To review the survey questions ahead of time, click here: BWET Grantee Survey Preview
More information about the B-WET national evaluation system is available here: http://www.oesd.noaa.gov/grants/bwet_eval.php

Thank you for taking the time to complete this questionnaire! If you have any questions or concerns, please contact either of the contacts below.

Bronwen Rice, NOAA B-WET National Coordinator
NOAA Office of Education
Bronwen.Rice@noaa.gov
202.482.6797

B-WET Regional Coordinator:
${e://Field/BWETName}
${e://Field/BWETEmail}
${e://Field/BWETPhone}

OMB Control Number: 0648-0658 Expires: 02/29/2016

Follow the link to opt out of future emails:
${l://OptOutLink?d=Click here to unsubscribe}

Attachment 7: Email Correspondence with PD Teachers

PD and MWEE Teacher Pre-notification

We are contacting you as a participant in a professional development program provided by ${e://Field/PROJECT} - ${e://Field/ORGANIZATION}, and funded by the National Oceanic and Atmospheric Administration's Bay Watershed Education and Training program (NOAA B-WET). ${e://Field/ORGANIZATION} and NOAA would like your feedback on the professional development.

After the professional development, NOAA B-WET will send you an email containing a link to an online questionnaire. The questionnaire will ask for your opinion of the professional development and how well-prepared you feel to teach students about water bodies and watersheds. The questionnaire will take about 20-30 minutes to complete.

At the end of the school year following the completion of the professional development, you will receive a request to complete a follow-up questionnaire. That questionnaire will ask you whether you taught your students about water bodies and watersheds and what additional resources you need.

Your responses will be anonymous. None of the data you provide will be associated with your name or other identifying information.

Additional information about this project, including background and FAQs, is available here: http://www.oesd.noaa.gov/grants/bwet_eval.php

Your feedback is very important and will be used to improve future professional development programs. Thank for you in advance for participating in this survey. If you have any questions, please contact:

Bronwen Rice, NOAA B-WET National Coordinator
NOAA Office of Education
Bronwen.Rice@noaa.gov
202.482.6797

OMB Control Number: 0648-0658 Expires: 02/29/2016

Follow the link to opt out of future emails:
${l://OptOutLink?d=Click here to unsubscribe}

Post-PD Teacher Survey Invitation

You received this email because you are at the close of, or recently participated in, the ${e://Field/PROJECT} professional development provided by ${e://Field/ORGANIZATION}. This professional development project was funded by the National Oceanic and Atmospheric Administration's Bay Watershed Education and Training program (NOAA B-WET).

Please provide ${e://Field/ORGANIZATION} and NOAA with feedback on the professional development by completing a post-program questionnaire. The questionnaire asks for your opinion of the professional development and how well-prepared you feel to teach students about water bodies and watersheds. The questionnaire will take about 20-30 minutes to complete. If you never participated in this PD, please let us know by clicking on the link and selecting that response on the third page of the survey.

Follow this link to the Survey:
${l://SurveyLink?d=Take the Survey}

Or copy and paste the URL below into your internet browser:
${l://SurveyURL}

To review the survey questions ahead of time, click here: B-WET Teacher PD Survey Preview
More information about the B-WET national evaluation system is available here:
http://www.oesd.noaa.gov/grants/bwet_eval.php

Please be completely honest in your responses. YOUR RESPONSES WILL BE ANONYMOUS. None of the data you provide will be associated with your name or other identifying information. Your responses are very important and will be used to improve future NOAA-funded professional development programs.

Thank you for taking the time to complete this questionnaire! If you have any questions or concerns, please contact:

Bronwen Rice, NOAA B-WET National Coordinator
NOAA Office of Education
Bronwen.Rice@noaa.gov
202.482.6797

OMB Control Number: 0648-0658 Expires: 02/29/2016

Follow the link to opt out of future emails:
${l://OptOutLink?d=Click here to unsubscribe}

Post-PD Teacher Nonresponse Survey Invitation

We did not receive a response from you regarding your use of Meaningful Watershed Educational Experiences (MWEEs) following the professional development provided by ${e://Field/ORGANIZATION} and funded by the National Oceanic and Atmospheric Administration's Bay Watershed Education and Training program (NOAA B-WET).

We recognize this is a busy time of year, but we hope that you will assist us with the evaluation of our programs by completing this very short follow-up questionnaire. **It should take you about 5 minutes to complete.** If you never participated in this PD, please let us know by clicking on the link and selecting that response on page 3 of the survey.

Follow this link to the Survey:
https://bwet.co1.qualtrics.com/SE/?SID=SV_1Bp2XBoOU42xJIx

The questionnaire asks a few questions about you and your experiences teaching students about water bodies and watersheds.

Please be completely honest in your responses. YOUR RESPONSES WILL BE ANONYMOUS. None of the data you provide will be associated with your name or other identifying information. Your responses are very important and will be used to improve future NOAA-funded professional development programs.

Thank you for taking the time to complete this questionnaire! If you have any questions or concerns, please contact:

Bronwen Rice, NOAA B-WET National Coordinator
NOAA Office of Education
Bronwen.Rice@noaa.gov
202.482.6797

OMB Control Number: 0648-0658 Expires: 02/29/2016

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Attachment 8: Email Correspondence with MWEE Teachers

PD and MWEE Teacher Pre-notification

We are contacting you as a participant in a professional development program provided by ${e://Field/PROJECT} - ${e://Field/ORGANIZATION}, and funded by the National Oceanic and Atmospheric Administration's Bay Watershed Education and Training program (NOAA B-WET). ${e://Field/ORGANIZATION} and NOAA would like your feedback on the professional development.

After the professional development, NOAA B-WET will send you an email containing a link to an online questionnaire. The questionnaire will ask for your opinion of the professional development and how well-prepared you feel to teach students about water bodies and watersheds. The questionnaire will take about 20-30 minutes to complete.

At the end of the school year following the completion of the professional development, you will receive a request to complete a follow-up questionnaire. That questionnaire will ask you whether you taught your students about water bodies and watersheds and what additional resources you need.

Your responses will be anonymous. None of the data you provide will be associated with your name or other identifying information.

Additional information about this project, including background and FAQs, is available here: http://www.oesd.noaa.gov/grants/bwet_eval.php

Your feedback is very important and will be used to improve future professional development programs. Thank for you in advance for participating in this survey. If you have any questions, please contact:

Bronwen Rice, NOAA B-WET National Coordinator
NOAA Office of Education
Bronwen.Rice@noaa.gov
202.482.6797

OMB Control Number: 0648-0658 Expires: 02/29/2016

Follow the link to opt out of future emails:
${l://OptOutLink?d=Click here to unsubscribe}

Post-MWEE Teacher Survey Invitation

You received this email because you participated in the ${e://Field/PROJECT} professional development provided by ${e://Field/ORGANIZATION} in the past. That professional development program was funded by the National Oceanic and Atmospheric Administration's Bay Watershed Education and Training program (NOAA B-WET).

Please provide ${e://Field/ORGANIZATION} and NOAA with feedback on your experiences teaching students about water bodies and watersheds, and on your resource and professional development needs. The questionnaire will take about 20-30 minutes to complete. If you never participated in this PD, please let us know by clicking on the link and selecting that response.

Follow this link to the Survey:
${l://SurveyLink?d=Take the Survey}

Or copy and paste the URL below into your internet browser:
${l://SurveyURL}

To review the survey questions ahead of time, click here: B-WET Teacher MWEE Survey Preview
More information about the B-WET national evaluation system is available here:
http://www.oesd.noaa.gov/grants/bwet_eval.php

Please be completely honest in your responses. YOUR RESPONSES WILL BE ANONYMOUS. None of the data you provide will be associated with your name or other identifying information. Your responses are very important and will be used to improve future NOAA-funded professional development programs.

Thank you for taking the time to complete this questionnaire! If you have any questions or concerns, please contact either of the contacts below.

Bronwen Rice, NOAA B-WET National Coordinator
NOAA Office of Education
Bronwen.Rice@noaa.gov
202.482.6797

OMB Control Number: 0648-0658 Expires: 02/29/2016

Follow the link to opt out of future emails:
${l://OptOutLink?d=Click here to unsubscribe}

Post-MWEE Teacher Nonresponse Survey Invitation

We did not receive a response from you regarding the professional development provided by ${e://Field/ORGANIZATION} and funded by the National Oceanic and Atmospheric Administration's Bay Watershed Education and Training program (NOAA B-WET).

We recognize this is a busy time of year, but we hope that you will assist us with the evaluation of our programs by completing this very short follow-up questionnaire. **It should take you about 5 minutes to complete.** If you never participated in this PD, please let us know by clicking on the link and selecting that response.

Follow this link to the Survey:
https://bwet.co1.qualtrics.com/SE/?SID=SV_cwHDcfihMAaEar3

The questionnaire asks a few questions about your experiences teaching students about water bodies and watersheds, and on your resource and professional development needs.

Please be completely honest in your responses. YOUR RESPONSES WILL BE ANONYMOUS. None of the data you provide will be associated with your name or other identifying information. Your responses are very important and will be used to improve future NOAA-funded professional development programs.

Thank you for taking the time to complete this questionnaire! If you have any questions or concerns, please contact:

Bronwen Rice, NOAA B-WET National Coordinator
NOAA Office of Education
Bronwen.Rice@noaa.gov
202.482.6797

OMB Control Number: 0648-0658 Expires: 02/29/2016

Follow the link to opt out of future emails:
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to levels that will permit the optimum yield from the Pacific halibut fishery and to maintain the stocks at those levels. The IPHC fulfills this objective in part by recommending Pacific halibut fishery conservation and management measures for approval by the United States and Canada. Pursuant to the Northern Pacific Halibut Act of 1982, the Secretary of State, with the concurrence of the Secretary of Commerce, may accept or reject, on behalf of the United States, conservation and management measures recommended by the IPHC. 16 U.S.C. 773b. Measures accepted by the Secretary of State are adopted as binding regulations governing fishing for Pacific halibut in Convention waters of the United States. 16 U.S.C. 773c(b)(1). More information on the IPHC can be found at *http://www.iphc.int.*

Section 773a of the Northern Pacific Halibut Act of 1982 (16 U.S.C. 773a) requires that the United States be represented on the IPHC by three U.S. Commissioners. U.S. Commissioners are appointed for a term not to exceed 2 years, but are eligible for reappointment. Of the Commissioners:

(1) One must be an official of the National Oceanic and Atmospheric Administration; and

(2) Two must be knowledgeable or experienced concerning the Northern Pacific halibut fishery; of these, one must be a resident of Alaska and the other shall be a nonresident of Alaska. Of the three commissioners described in paragraphs (1) and (2), one must also be a voting member of the North Pacific Fishery Management Council.

(3) Commissioners who are not Federal employees are not considered to be Federal employees except for the purposes of injury compensation or tort claims liability as provided in section 8101 *et seq.* of title 5 and section 2671 *et seq.* of title 28.

In their official IPHC duties, Commissioners represent the interests of the United States and all of its stakeholders in the Pacific halibut fishery. These duties require a modest amount of travel (typically two or three trips per year lasting less than a week), and travel expenses are paid by the U.S. Department of State. Commissioners receive no compensation for their services.

Nomination Process

NOAA Fisheries is currently accepting nominations for two U.S. Commissioners for the IPHC who are not officials of NOAA. Successful nominees will be considered for appointment by the President and (pending Presidential action) interim designation by the Department of State.

Nomination packages should provide details of an individual's knowledge and experience in the Pacific halibut fishery. Examples of such knowledge and/or experience could include (but are not limited to) such activities as: Participation in commercial, tribal, Community Development Quota (CDQ) and/or sport and charterboat halibut fishing operations; participation in halibut processing operations; and participation in Pacific halibut management activities.

Nomination packages should document an individual's qualifications and state of residence. Self-nominations are acceptable, and current and former IPHC Commissioners are eligible for reappointment. Résumés, curriculum vitae, and/or letters of recommendation are useful but not required. Nomination packages will be evaluated on a case-by-case basis by officials in NOAA and the Department of Commerce who are familiar with the duties and responsibilities of IPHC Commissioners; evaluations will consider the aggregate of an individual's prior experience and knowledge of the Pacific halibut fishery, residency requirements, and any letters of recommendation provided. Nominees will be notified of their status (including rejection or approval) and any need for further information once the nomination process is complete.

Dated: August 13, 2015.

John Henderschedt,

Director, Office of International Affairs and Seafood Inspection, National Marine Fisheries Service.

[FR Doc. 2015–20440 Filed 8–18–15; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

North Pacific Fishery Management Council; Public Meeting

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of telephonic meeting.

SUMMARY: The North Pacific Fishery Management Council (Council) Electronic Monitoring Workgroup (EMWG) will meet by teleconference September 8, 2015.

DATES: The meeting will be held on Tuesday, September 8, 2015 from 8 a.m. to 5 p.m.

ADDRESSES: The meeting will be held telephonically at the North Pacific Fishery Management Council, 605 W. 4th Ave., Suite 306, Anchorage, AK 99501–2252. Please call (907) 271–2896.

Council address: North Pacific Fishery Management Council, 605 W. 4th Ave., Suite 306, Anchorage, AK 99501–2252; telephone: (907) 271–2809.

FOR FURTHER INFORMATION CONTACT: Diana Evans, Council staff; telephone: (907) 271–2809.

SUPPLEMENTARY INFORMATION:

Agenda

Tuesday, September 8, 2015

The agenda will include: (a) Review the draft 2016 EM Pre-Implementation Plan (b) discuss other 2016 EM research, and (c) scheduling and other business. The Agenda is subject to change, and the latest version will be posted at *http://www.npfmc.org/*

Special Accommodations

The meeting is physically accessible to people with disabilities. Requests for sign language interpretation or other auxiliary aids should be directed to Shannon Gleason at (907) 271–2809 at least 7 working days prior to the meeting date.

Dated: August 13, 2015.

Tracey L. Thompson,

Acting Deputy Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2015–20405 Filed 8–18–15; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Proposed Information Collection; Comment Request; National Oceanic and Atmospheric Administration's Bay Watershed Education and Training Program National Evaluation System

AGENCY: National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice.

SUMMARY: The Department of Commerce, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on proposed and/or continuing information collections, as required by the Paperwork Reduction Act of 1995.

DATES: Written comments must be submitted on or before October 19, 2015.

ADDRESSES: Direct all written comments to Jennifer Jessup, Departmental Paperwork Clearance Officer, Department of Commerce, Room 6616, 14th and Constitution Avenue NW., Washington, DC 20230 (or via the Internet at *JJessup@doc.gov*).

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the information collection instrument and instructions should be directed to Bronwen Rice, NOAA Office of Education, (202) 482–6797 or *Bronwen.Rice@noaa.gov.*

SUPPLEMENTARY INFORMATION:

I. Abstract

This request is for an extension of a currently approved information collection.

The NOAA Office of Education's Bay Watershed Education and Training (B–WET) program seeks to contribute to NOAA's mission by supporting education efforts to create an environmentally literate citizenry with the knowledge, attitudes, and skills needed to protect watersheds and related ocean, coastal, and Great Lakes ecosystems. B–WET currently funds projects in seven regions (California, Chesapeake Bay, Great Lakes, Gulf of Mexico, Hawaii, New England, and the Pacific Northwest). B–WET has created an across-region, internal evaluation system to provide ongoing feedback on program implementation and outcomes to ensure maximum quality and efficiency of the B–WET program. The evaluation system is sustained by B–WET staff with occasional assistance from an outside contractor.

B–WET awardees and the awardees' professional development teacher-participants are asked to voluntarily complete online survey forms to provide evaluation data. One individual from each awardee organization is asked to complete a form once per year of the award, and the teacher participants are asked to complete one form at the end of their professional development program and another form at the end of the following school year.

II. Method of Collection

Respondents submit their information electronically on web-based survey forms.

III. Data

OMB Control Number: 0648–0658.

Form Number: None.

Type of Review: Regular submission (extension of a currently approved collection).

Affected Public: Not-for-profit organizations and individuals or households.

Estimated Number of Respondents: Given the funding levels of the past three fiscal years, NOAA B–WET estimates that approximately 86 not-for-profit awardees and 4,000 teachers will be invited to respond each year.

Estimated Time per Response: Awardee-respondents will complete an online survey in 60 minutes and teacher-respondents will complete two online surveys in 30 minutes each.

Estimated Total Annual Burden Hours: 2,325.

Estimated Total Annual Cost to Public: $0 in recordkeeping/reporting costs.

IV. Request for Comments

Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden (including hours and cost) of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval of this information collection; they also will become a matter of public record.

Dated: August 14, 2015.

Sarah Brabson,

NOAA PRA Clearance Officer.

[FR Doc. 2015–20485 Filed 8–18–15; 8:45 am]

BILLING CODE 3510–12–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XE119

Permanent Advisory Committee To Advise the U.S. Commissioners to the Western and Central Pacific Fisheries Commission; Meeting Announcement

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of public meeting.

SUMMARY: NMFS announces a meeting of the Permanent Advisory Committee (PAC) to advise the U.S. Commissioners to the Western and Central Pacific Fisheries Commission (WCPFC) on October 14–October 15, 2015. Meeting topics are provided under the **SUPPLEMENTARY INFORMATION** section of this notice.

DATES: The meeting of the PAC will be held on October 14, 2015, from 8 a.m. to 4 p.m. HST (or until business is concluded) and October 15, 2015, from 8 a.m. to 4 p.m. HST (or until business is concluded).

ADDRESSES: The meeting will be held at the Outrigger Reef Waikiki Beach Resort, Diamond Head Terrace, 2169 Kalia Road, Honolulu, Hawaii 96815.

FOR FURTHER INFORMATION CONTACT: Emily Crigler, NMFS Pacific Islands Regional Office; telephone: 808–725–5036; facsimile: 808–725–5215; email: *emily.crigler@noaa.gov.*

SUPPLEMENTARY INFORMATION: In accordance with the Western and Central Pacific Fisheries Convention Implementation Act (16 U.S.C. 6901 *et seq.*), a Permanent Advisory Committee, or PAC, has been convened to advise the U.S. Commissioners to the WCPFC, certain members of which have been appointed by the Secretary of Commerce in consultation with the U.S. Commissioners to the WCPFC. The PAC supports the work of the U.S. National Section to the WCPFC in an advisory capacity. The U.S. National Section is made up of the U.S. Commissioners and the Department of State. NMFS Pacific Islands Regional Office provides administrative and technical support to the PAC in cooperation with the Department of State. The next regular annual session of the WCPFC (WCPFC12) is scheduled for December 3–December 8, 2015, in Bali, Indonesia. More information on this meeting and the WCPFC, established under the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, can be found on the WCPFC Web site: *http://wcpfc.int/.*

Meeting Topics

The PAC meeting topics may include the following: (1) Outcomes of the 2014 Annual Meeting and 2015 sessions of the WCPFC Scientific Committee, Northern Committee, and Technical and Compliance Committee; (2) conservation and management measures for bigeye tuna, yellowfin tuna, skipjack tuna and other species for 2016 and beyond; (3) a permanent measure for the WCPFC compliance monitoring scheme and development of a companion measure addressing responses to non-compliance; (4) potential U.S. proposals to WCPFC12 (5) input and advice from the PAC on issues that may arise at