

SUPPORTING STATEMENT

PROFESSIONAL DEVELOPMENT WORKSHOPS AND FORMAL EVALUATION OF NOAA ONLINE EDUCATION MATERIALS

OMB CONTROL NO.: 0648-xxxx

A. JUSTIFICATION

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

According to the American Association for the Advancement of Science (AAAS), studies show that “our nation’s education system is failing to prepare students with the essential science skills required in an increasingly competitive global economy.” Minority students and those from low-income families perform particularly poorly. Adults, including educators, also lack knowledge. According to the 1999 survey *Communicating About Oceans*, nearly 60% of Americans do not realize that more plants and animals live in the oceans than on land; 75% mistakenly believe that forests, rather than oceans, are the planet’s main sources of oxygen; and 40% are unaware of the essential role oceans play in regulating climate. Thus, a project that seeks to educate first teachers and then students, and at the same time evaluate the efficacy of NOAA products, will enable NOAA to build new environmental literacy capacity in all four of its mission-goal areas.

The Oceans Act of 2000 ([P.L. 106-256](#)) established a commission to make recommendations for a coordinated and comprehensive national ocean policy, with goals including “stewardship of ocean and coastal resources” and “expansion of human knowledge of the marine environment.” The Commission on Ocean Policy produced *An Ocean Blueprint for the 21st Century* (2004) which highlights the importance of ocean science in teaching basic scientific concepts, as well as how it can enhance the teaching of social sciences (e.g., economics, history). It concludes: “Because scientists typically do not know what type, level, or format of information K-12 teachers require, and because teachers generally are not aware of how ocean-related data can be used to advance student achievement, collaborative efforts will be needed to develop and disseminate research-based, ocean-related curricula that are designed with state and national educational standards and meet the needs of teachers.”

Since 2004, NOAA’s National Ocean Service (NOS) has produced and offered Web-based formal educational products geared toward educators and students at the high school level. They are comprised of tutorials, case studies, and lesson plans based on NOAA research, and are correlated to National Science Education Standards and the AAAS Benchmarks for Science Literacy.

These products have been widely accessed. In 2006, NOS’s education Web site received nearly five million hits, and lesson plans have been downloaded at an average rate of 16,000 every month. In 2004, NOS entered into a Cooperative Agreement with the National Science Teachers Association (NSTA) to evaluate the content of its educational products. All of the products received high marks for age-appropriate, Web and inquiry-based materials.

Through its partnership with the NSTA, NOS has become acutely aware of teachers' growing needs for educational materials on ocean-science topics, as well as their need to learn more about the topics themselves and how best to teach them. NOAA has the opportunity to fulfill a specific and critical need by reaching out to these educators, informing them of the availability of NOAA educational materials, and providing them with professional development to implement them in their classrooms. In addition, it is essential for NOAA to create a formal mechanism by which its educational materials may be evaluated by the educators and students who use them. NOAA needs objective external feedback to assess the effectiveness of its educational materials in improving the teaching of state and national education standards, and to determine its success in promoting the concepts and content of the major ocean literacy principles.

The *NOAA Education Plan* states that NOAA's Education Program will "support educator professional development programs to improve understanding and use of NOAA sciences," that these planning efforts will "incorporate external evaluation and review," and that "NOAA's educational activities will include goals, measurable objectives, and an evaluation component." The Education Branch of NOS's Communication and Education Division, together with the National Education Coordinator of NOAA's Office of Ocean Exploration (OE), conclude that conducting a series of one-day professional development seminars for educators, which will include a rigorous evaluation and feedback component as well as an in-classroom follow-up component, is the best way for NOAA to achieve these goals.

In *Great Lakes Educational Needs Assessment: Teachers' Priorities for Topics, Materials, and Training* (Fortner & Corney, 2002), the authors write that "Research indicates that high-quality curriculum materials, accompanied by extensive teacher preparations for their use, can increase student achievement . . . In fact, research has shown that unless curriculum innovations are accompanied by teacher education, the materials are unlikely to be implemented. Thus it is critical for providers of materials to think not only about what is needed for the curriculum, but how teachers will react to specific opportunities for learning. Effective use of funds for teacher enhancement could depend on knowing more about teachers' priorities and needs." The authors also found that "respondents indicate that workshops are a primary source of . . . information, and one-day formats are preferred. This reinforces earlier research that found that one-day workshops were most effective in getting teachers to use new materials and introduce them to other teachers."

Similarly, in the article *Relative Effectiveness of Four Modes of Curriculum Dissemination* (Mayer & Fortner, 1987) the researchers found that 80% of educators who participated in a one-day professional development seminar continued to utilize the materials in their classrooms for up to four years.

To address the educational needs of today's teachers and students, NOAA must provide formal materials that teachers can use in the classroom. These materials should be multidisciplinary and relate to the real world. NOS's and OE's combined efforts will make it possible for NOAA to provide teachers with professional development opportunities that cover the entire realm of coastal and ocean science, from the study of near-shore habitats and processes (NOS's focus) to open ocean processes and deep-sea exploration (OE's focus).

In doing so, the project will directly support NOAA's cross-cutting priority for environmental literacy, outreach, and education. NOAA hopes to inspire the nation's youth to pursue scientific careers and improve the public's understanding of ecosystem processes and natural hazards. Regarding strategies and measures of success in this area, the *NOAA Strategic Plan* states that "NOAA will create an agency-wide mechanism for distributing and using its educational materials and services and for measuring the effectiveness of its outreach efforts," and suggests that these mechanisms can be measured by "an increased number of favorable survey scores of NOAA's performance in delivering accurate, prompt, and comprehensible information."

For this reason, formal and rigorous evaluation must take place. Due to privacy laws and other regulations, it can prove difficult for federal agencies to conduct evaluations of material presented on federal Web sites. Among the ways that evaluative information can be collected on formal educational materials presented online are via feedback from educators who have participated in professional development seminars and workshops, as well as from students who have utilized the materials firsthand in the classroom.

In summary, the purpose of this study is to assess the usefulness and effectiveness of the online education resources of NOAA's Ocean Service education Web site and the Office of Ocean Exploration's Expedition Online Education Modules in enhancing the teaching of National Science Education Standards (NSES) and promoting the Ocean Literacy Principles and Fundamental Concepts.

The bulleted list below provides the constitutive definitions of "usefulness" and "effectiveness" in accordance with the statement of purpose:

"Usefulness" means teachers...

- Think they have found a wealth of exemplary resources.
- Think about how they can incorporate the NOAA online educational materials into their curricula—not necessarily ocean science—in order to meet the educational standards they need to teach to.
- Perceive NOAA education Web sites as a "go to place" for resources they will need.
- Think the information appears in a usable format, can access information quickly, and in a targeted way - i.e., *user-friendly*.
- See that education standards are clearly labeled, easy to access, useful.
- Use NOAA education Web sites on a regular basis.

"Effective" means teachers are...

- Empowered as teaching professionals using these materials.
- Excited about bringing these materials to their students.
- Thinking about students reactions to the materials.
- Thinking about how these materials will help them meet education standards.
- Thinking about coastal and ocean environments.
- Thinking about NOAA and why the organization exists/what the organization does.
- Intrigued by these NOAA Web sites, and encouraged to explore additional NOAA online education resources.
- Clearly understanding the collaboration between scientists and educators.

- Clearly understanding that these materials have been written by educators.
- Recognizing that these materials represent reliable scientific information.
- Recognizing that, as an organization, NOAA is working for them, as a resource.
- Increasing the number of online components they use - Increasing NOAA Web site usage in the classroom.
- Are feeling enhanced as a professional.
- Achieving classroom success through use of the online materials.

“Effective” means students are...

- Excited about using these materials.
- Intrigued by these NOAA Web sites, and encouraged to explore additional NOAA online resources.
- Engaged when using the online educational materials.
- Recognizing that these materials represent reliable scientific information.
- Recognizing that, as an organization, NOAA is working for them, as a resource.
- Increasing their knowledge of ocean science.
- Increasing their awareness of potential ocean science careers.

The Evaluation Plan

Using the statement of purpose previously presented, an evaluation plan was developed for the study. The evaluation plan was built upon the theory that when adopting materials for use, participants follow a logical progression of steps (Guskey, 2000). At the foundation, there are sufficient inputs to a program; the material must be valid and thorough for the needs of the audience. Upon introduction to new material, participants will react to it. If the reaction is positive, they will likely develop skills to use it. Once skills are acquired, participants often will plan on how they will use the material, before the behavior actually takes place. If behavior has occurred, it is important to look at the environmental circumstances that helped or hindered the behavior being performed as intended. A successful evaluation must take measures at each of these steps in order to fully inform the outcome of the program.

The following Evaluation Questions were developed, based on the logic above, to guide the assessment of the usefulness and effectiveness of NOAA’s online educational materials. A grid displaying how each of the questionnaire items is related to the evaluation questions can be found at the end of the document.

Teacher Professional Development

- a.(Inputs) What are the characteristics of the teachers and classroom environments that correlate with measures of participants’ reactions, skills, intentions, and behavior?
- b. (Inputs) Do participants perceive the overall workshop as useful in accordance with specific needs of teachers?
- c.(Reactions) Do the teachers have a positive attitude toward using the NOAA’s online education resources?
- d. (Reactions) Does the professional development workshop have the effect of increasing teachers’ awareness or interest in incorporating ocean related materials and/or activities into their curriculum?

- e.(Skills) Does the professional development workshop enhance teachers’ perceived ability to utilize NOAA’s online education resources?
- f. (Intention to Behave) Does the professional development workshop increase teachers’ intentions to utilize NOAA’s online education resources?
- g. (Behavior) Does the teacher attending the professional development workshop utilize the NOAA online education resources? What is their experience?
- h. (Behavior) What contextual factors impact teacher utilization of NOAA’s online education resources in the classroom?

Student Academic Development

- a.(Reactions) Do the students have a positive attitude toward using NOAA’s online education resources?
- b. (Reactions) Does utilization of NOAA’s online education resources increase students’ characteristics associated with academic achievement (e.g., engaged in learning)?
- c.(Skills) Does utilization of NOAA’s online education resources increase students’ academic achievement as measured by a pre-post knowledge test?
- d. (Intention to Behave) Does utilization of NOAA’s online education resources increase students’ characteristics associated with environmental stewardship (e.g., knowledge of ocean science issues, intention to participate in ocean science related volunteer opportunities or work)?

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.

The instruments and sources of measures that will be used to collect data for answering the research questions are summarized in Table 1. To ensure the validity and reliability of the scales used in this evaluation, measures were taken from past, peer-reviewed, published studies and adapted to this study. Adapted instruments were reviewed and edited by former educators. Table 2 presents the timeline for instrument distribution.

Table 1. Levels of Measurement by Instrument

| | Level of Measurement | | | | |
|---------------------------------------|----------------------|-----------|--------|---------------------|----------|
| | Inputs | Reactions | Skills | Intention to Behave | Behavior |
| Workshop Pre-Questionnaire | x | | | | |
| Workshop Post-Questionnaire | x | x | x | x | |
| Follow-Up Questionnaire | | | x | | x |
| Student Pre/Post Questionnaire | x | x | x | x | x |

Table 2. Instrument Distribution Timeline

| | At start of workshop | At end of workshop | After Unit Completion (3-6 months following workshop)* |
|---------------------------------------|-----------------------------|---------------------------|---|
| Workshop Pre-Questionnaire | X | | |
| Workshop Post-Questionnaire | | X | |
| Follow-Up Questionnaire | | | X |
| Student Pre/Post Questionnaire | | | X |

**depending on workshop date*

The Pre-Workshop Questionnaire is designed to measure program inputs. It will collect demographics of the participants, confirm the program products are compatible with the needs of the audience, and take measures of baseline participant reactions. The Post-Workshop Questionnaire is designed to answer questions regarding participants' reactions to materials, their perception of their ability to use materials, their intentions to use materials in the classroom, and their overall assessment of the program inputs. The Post-Workshop Questionnaire will be divided into three sections: one for the end of the NOS session, one for the end of the OE session, and one overall questionnaire section (as the NOS questionnaire will be administered directly after the morning session, and as the OE presentation is after the break, the last two sections will be administered in a separate document).

Participants will be directed to administer the Student Pre-Lesson Questionnaire within the week prior to beginning the lesson(s) with their classes. Instructions for Administration will be provided. Baseline information will be collected from students regarding their attitudes toward science and ocean science and their knowledge of related items¹. The Student Post-Lesson Questionnaire will assess changes in these baseline measures and also ask students to document their reactions to using the online materials. Teachers will be directed to administer the Post-Lesson Questionnaire the day after, or as soon as possible after, the completion of the NOAA related lesson or activity.

Approximately three to six months following the workshop, workshop participants will complete a Follow-Up Questionnaire. The purpose of this instrument is to assess teachers' use of the materials in the classroom, document their reactions to the experience and their perception of the materials' impact on students, and collect an overall assessment of the program outcomes in terms of the usefulness and effectiveness of program material.

¹ Two versions of the Pre and Post-Lesson questionnaire exist for the attitude portion of the evaluation, tailored for grades 6-8 and 9-12. We are not required to seek approval for the knowledge assessment portion of the evaluation, per the Paperwork Reduction Act, 1320.3(7).

A summary of this information is provided in Table 3.

Table 3. Program measures

| <i>Evaluation Question</i> | <i>Instrument</i> | <i>Measures</i> | <i>Sources for measures</i> | <i>Use of information</i> |
|--|--|---|---|---|
| What components of the teacher professional development programs contribute to teachers feeling prepared to utilize the NOAA online education resources with their students? | Workshop Pre-Questionnaire | Demographic information: Years as a teacher, grade(s) taught, subject(s) taught, number of students | The Holden Arboretum, OH: <i>Growing Students with Science</i> (2006) | Collection of demographic data for description of target audience |
| | | Program inputs: computer use in school, topic priority and coverage in school | NASA Explorer Schools (ongoing) | Contextual information describing an environment in which to use online materials |
| | | Teacher familiarity with NOAA, teacher confidence in teaching ocean science, teacher comfort with computer online environment | The Holden Arboretum, OH: <i>Growing Students with Science</i> (2006) | Control for teacher characteristics that can influence outcomes of workshop |
| What components of the teacher professional development programs contribute to teachers feeling prepared to utilize the NOAA online education resources with their students? | NOS, OE, Overall Workshop Post-Questionnaire | Teacher reactions to online materials, teacher prediction of student reactions to online materials | Guskey (2000) | Building blocks of logic model |
| Do the teachers have a positive attitude toward using the NOAA online education resources? | | Teacher assessment of professional development experience | Guskey (2000) | Building blocks of logic model |
| Do the professional development programs increase teachers' intentions to utilize the NOAA online education resources? | | Teacher intention to use online materials in classroom. | Guskey (2000) | Building blocks of logic model |

| Evaluation Question | Instrument | Measures | Sources for measures | Use of information |
|--|--|--|--|---|
| Do the students have a positive attitude toward using the NOAA online education resources? | Student pre-lesson questionnaire | Student attitude toward science, student attitude toward Internet | NASA Explorer Schools <i>Classroom of the Future</i> (2005) | Building blocks of logic model |
| Does utilization of the NOAA online education resources increase students' characteristics associated with academic achievement (e.g., engaged in learning)? | Student post-lesson questionnaire Teacher follow-up questionnaire | | | |
| Does utilization of the NOAA online education resources increase students' academic achievement in the NOS lesson plan content as measured by a pre-post knowledge test? | Student pre-lesson questionnaire Student post-lesson questionnaire Teacher follow-up questionnaire | Student changes in results of knowledge items | NOAA's National Ocean Service | Building blocks of logic model |
| Does utilization of the NOAA online education resources increase students' characteristics associated with environmental stewardship (e.g., knowledge of ocean science issues, intention to participate in ocean science related volunteer opportunities or work)? | | Student interest in ocean science related careers, volunteer opportunities | NASA Explorer Schools <i>Classroom of the Future</i> (2005) | Building blocks of logic model |
| | | Teacher perception of student reactions | The Holden Arboretum, OH: <i>Growing Students with Science</i> (2006) | Triangulation; Multiple respondents' data strengthen validity of findings |
| Do the students have a positive attitude toward using the NOAA online education resources? | Student Pre-, Post Teacher Follow-Up | Student reactions toward online education resources | Guskey (2000) | Building blocks of logic model |
| Are the teacher professional development programs increasing the utilization of the NOAA online education resources by teachers? How consistently are the materials being utilized? | Teacher Follow-Up Questionnaire | Teacher behavior | Guskey (2000); Danter (2005) | Provide evidence for effectiveness of professional development workshop |
| What contextual factors impact teacher utilization of the NOAA online education resources in the classroom? | | Teacher perception of supports and barriers | Danter (2005) | Control for extraneous variables that may impact outcomes |

Summary

This initial evaluation will provide baseline data and offer NOAA proven, pilot-tested instruments for use in future educator workshops on this topic. As an outcome of this evaluation, NOAA's NOS and OE will learn about how the workshop materials are being implemented by the teachers and what benefits they are having for participants and students. The evaluation results will be used by managers to document the effects of currently-funded programs, to inform future decisions on what programs to fund, and to share critical "lessons learned" with national education communities. The instruments developed as part of this evaluation will be made available to professional development program providers for their use in monitoring their individual programs' effectiveness.

As explained in the preceding paragraphs, the information gathered has utility. NOAA will retain control over the information and safeguard it from improper access, modification, and destruction, consistent with NOAA standards for confidentiality, privacy, and electronic information. See response #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 purpose of the project is to allow teachers and students to gain access to NOAA materials through the Internet. By allowing teachers to explore the Web sites during the workshop and to adopt the materials that are necessary and sufficient for their needs, workshop providers will avoid unnecessary printing of materials that would otherwise be discarded. Teachers will be asked to evaluate the online education resources, in some cases, while they are viewing them.

Facilities employed to host the workshops will only have sufficient computer resources for teachers to view the Web resources in groups of two. Due to the fifteen minute time limit for questionnaire completion, coupled with the lack of individual computer resources, teachers will be asked to complete paper versions of questionnaires. Paper versions of the questionnaires will ensure that all teachers have the opportunity to complete the questionnaire, given the possibility that each participant will not have his or her own computer to access an online version.

Teachers will need to access the Web sites while completing the Follow-Up Questionnaire. For ease of completion, they will be supplied with a paper version of the instrument, but will have the option of completing and submitting the questionnaire online. Due to the potential limitations of computer access for each individual student, students will be asked to complete paper versions of questionnaires. This is ensure that all students have the opportunity to complete the questionnaires, and also reduces the risk that students will share their answers on the Pre and Post knowledge questionnaires.

All data received will be entered into SPSS for statistical analysis.

Communications with participants regarding post-workshop requirements will be conducted via email. Email addresses and phone numbers will be collected from workshop participants at the workshop setting. Contact information will be stored in a locked file cabinet accessible only to the data analyst and shredded following the termination of the project, in accordance with guidelines established to protect personally identifiable information.

The reports containing the results of the evaluation will be available to the public via the NOAA Web site.

4. Describe efforts to identify duplication.

No other NOAA programs are surveying teachers and students regarding NOAA's NOS and OE's online education resources.

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

The questionnaires for this program were designed to maximize data collection regarding use patterns and outcomes while ensuring that respondents could complete them in a budgeted time frame. The program providers seek to ensure maximum participation and minimal burden for the participant.

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

The evaluation results will provide NOAA with insight into the targeted user's perception and effective use of the NOAA's NOS and OE's online education resources. It will inform NOAA about the outcomes of the funding which is allocated toward the development of online education resource materials, the workshops held to promote them, and improve/refine the quality of future online education resources.

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

The collection will be conducted in a manner consistent with OMB guidelines.

8. Provide a copy of 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.

Public comment was solicited via a PRA Federal Register notice. No comments were received.

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

NOAA's Ocean Service and Ocean Exploration Education Programs received a grant from NOAA's Office of Education to conduct a series of professional development workshops and evaluate NOAA online education resources. A portion of the granted funds was specifically designated as stipends for participating teachers, recognizing that participation in the workshop and completion of all of the evaluation requirements for the project would require the teachers to work above and beyond their regularly assigned duties. Respondents will receive a stipend of \$250.00 for their participation in the workshop and successful completion of all evaluation requirements. Materials needed to fulfill this obligation will be provided to the participant.

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

Workshop participants will be asked to provide their name on their questionnaire so that they may receive credit for completing the workshop requirements. Although confidentiality cannot be promised to participants, as there is no applicable statutory authority in this case, it will be explained to participants that only the data analyst will have access to the completed questionnaires. All reports of data analysis will provide responses in aggregate form only, thus individual respondents will not be identifiable. No names of participants will be included in the final report.

In addition, students will be instructed not to include their names on their questionnaires. To allow student pre- and post-questionnaires to be matched, students will be asked to provide an identification code consisting of their birth date and month, and the last two digits of their home phone number. This code will be used only to physically match the questionnaires and will not be entered into the SPSS database.

Data will be maintained in a secured database. Paper questionnaires will be stored in a locked file cabinet accessible only to the data analyst and shredded following the termination of the project. Data without identifiers will be permanently stored in NOAA archives.

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 will be asked.

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

Total respondent burden hours are reported in Table 4.

Table 4. Total Respondent Burden Hours

| Instrument | Estimated number of respondents | Estimated number of responses | Estimated Time Per Response | Estimated Total Annual Burden Hours | Estimated Total Annual Cost to Public |
|--|---------------------------------|-------------------------------|-----------------------------|-------------------------------------|---------------------------------------|
| Workshop Pre-Questionnaire | 60 | 60 | 15 minutes | 15 | 0 |
| NOS Workshop Post-Questionnaire | 60 | 60 | 10 minutes | 10 | 0 |
| OE and Overall Workshop Post-Questionnaire | 60 | 60 | 20 minutes | 20 | 0 |
| Follow-Up Questionnaire | 60 | 60 | 1 hour | 60 | 0 |
| Student Pre-Lesson Questionnaire | 1500 ² | 1500 | 15 minutes | 375 | 0 |
| Student Post-Lesson Questionnaire | 1500 | 1500 | 15 minutes | 375 | 0 |
| Totals | 1560 | 3240 | | 855 | 0 |

13. Provide an estimate of the total annual recordkeeping/reporting cost burden to the respondents resulting from the collection (excluding the value of the burden hours in #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 item 12 above. No capital equipment, start-up, or record maintenance requirements are placed on respondents.

² Estimated figure based on 25 students per each teacher participant.

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

The estimated cost to the federal government of conducting the *Evaluation of NOAA's Professional Development Workshops and Online Education Resources* is based on the government's contracted cost of the data collection and related study activities along with 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 \$25,000 over a one year period. This includes:

- \$23,000 annually for contracted activities including instrument development; data collection; transcription; analysis; and report writing.
- \$2,000 annually for government personnel costs in overseeing the evaluation activity.

This estimate is based on the evaluation contractor's previous experience managing other research and data collection activities of this type.

15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB 83-I.

N/A

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

Information collected through these questionnaires will be summarized and presented in a complete technical document as well as a condensed executive summary. Evaluation results will be presented at national education annual conferences including the National Marine Educator's Association, North American Association for Environmental Education and the NSTA.

The evaluation results will be published as a technical report with summaries appropriate for stakeholders such as NOAA administration, workshop providers, and others interested in professional development for educators of ocean science. The reports will summarize the answers to the research questions posed in Item 1 of this Supporting Statement. The evaluator may also seek to publish results in a peer-reviewed journal.

Tabulation will follow the style rule requirements of the publishing journal. The technical report will be written according to the American Psychological Association style guidelines.

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.

The expiration date for OMB approval will be displayed on all collection instruments.

18. Explain each exception to the certification statement identified in Item 19 of the OMB 83-I.

This data collection meets the criteria of the certification statement in Item 19 of the OMB 83-I.