

Sanctuaries 360° Education Materials Statement of Work

2019

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The National Marine Sanctuary Foundation (Foundation) in cooperation with NOAA’s Office of National Marine Sanctuaries (ONMS) is requesting the development of education materials that align with ONMS’s existing Sanctuaries 360° videos and current educational standards.

Proposals to complete this statement of work are due by January 7, 2020. Applicants will be notified if they were selected to complete the statement of work by mid January with work expected to start by late January.

Statement of Work Part A: Overview and Products

National Marine Sanctuary Foundation Overview

The National Marine Sanctuary Foundation, established in 2000, is the national non-profit partner of the National Marine Sanctuary System. Working in close partnership with the National Oceanic and Atmospheric Administration (NOAA), the trustee of marine sanctuaries and two marine monuments, the Foundation supports scientific research, promotes community

stewardship of our environment, and fosters the next generation of ocean guardians. Through our work with national marine sanctuaries and monuments, we protect species, conserve ecosystems and preserve America's maritime heritage, in part through public outreach and education.

Office of National Marine Sanctuaries Overview

Managed by the National Oceanic and Atmospheric Administration, the [National Marine Sanctuary System](#) includes 14 national marine sanctuaries, and two marine national monuments, Papahānaumokuākea and Rose Atoll (two of the largest marine protected areas in the world) that encompass more than 600,000 square miles of marine and Great Lakes waters from Washington State to the Florida Keys, and from Lake Huron to American Samoa. Since 1972, the Office of National Marine Sanctuaries (ONMS) has worked cooperatively with the public and federal, state and local officials to promote conservation while allowing compatible commercial and recreational activities. National marine sanctuaries are places where anyone can go to experience the power and beauty of the ocean and Great Lakes and participate in recreational activities in protected natural settings. They are sources of inspiration, recreation, rejuvenation, and discovery and they enhance our understanding of our cultural connections to the ocean and Great Lakes. Increasing public awareness of our marine heritage, scientific research, monitoring, exploration, outreach and educational programs are just a few of the ways the Office of National Marine Sanctuaries fulfills its mission to the American people. Our nation's sanctuaries can provide a safe habitat for species close to extinction or protect historically significant shipwrecks. Ranging in size from less than one square mile to 137,792 square miles, each sanctuary site is a unique place requiring special protections. Natural classrooms, cherished recreational spots and valuable commercial industries — marine sanctuaries represent many things to many people.

The Office of National Marine Sanctuaries aims to create an ocean-literate public making informed environmental decisions. Educators are equipped with the resources to support and inspire ocean literacy in classrooms and informal settings. The [ONMS Education](#) Team develops lessons, curriculum and activities; provides training, funding and other learning opportunities to equip the nation's educators with the knowledge and resources to connect students of all ages to national marine sanctuaries.

Sanctuaries 360° Overview

NOAA's Office of National Marine Sanctuaries protect the most pristine marine ecosystems in the world. Due to their location and the use of diving gear, these special underwater places can be hard to access. ONMS is launching Sanctuaries 360°, a media tool to enable people to connect to national marine sanctuaries through the use of immersive virtual reality technology, bringing the beauty and wonder of marine ecosystems to screens. Sanctuaries 360° will include a series of short virtual reality videos that explore our system of marine protected areas. Through this virtual resource, viewers can dive into national marine sanctuaries through a variety of technology, including smartphones, tablets, computers and virtual reality headsets.

This immersive experience will place the viewers in these special marine ecosystems to tell the stories of the creatures and cultures that reside within.

As virtual reality technology make its way into classrooms, teachers are seeking ways to meet educational standards while giving the students engaging lessons through immersive experiences. The National Marine Sanctuary Foundation is requesting the development of education materials that align with existing Sanctuaries 360° videos, in support of the launch of this new media tool.

Project objective:

To maximize the use of Sanctuaries 360° in formal and informal education, the development of educational materials that align with current virtual reality 360° videos is critical. The created materials should enable educators to easily transform a virtual reality video into a lesson that meets their curriculum requirements and inspires ocean and climate literacy. These resources will be distributed to our network of education coordinators located at each national marine sanctuary site, teachers interested in ocean and Great Lakes education, virtual reality education partners, and showcased at conferences and listed on our website.

Products

Products are designed to align with four existing Sanctuaries 360° videos. A brief description of each of the videos is below. To receive the link to these unpublished videos please email hannah@marinesanctuary.org with the subject: *Sanctuaries 360 Video Request*. These videos are in draft form and unlisted on YouTube. They cannot be shared outside of your organization. ONMS will launch the final videos publicly in April 2020.

Channel Islands National Marine Sanctuary - Sea Lion Encounter

- Divers take you on a journey with a sea lion encounter through a submerged underwater arch. Kelp forests, soft corals and garibaldi are recognizable throughout the film.

Thunder Bay National Marine Sanctuary - Wreck of the Wilson

- National Marine Sanctuaries protect more than just aquatic life. Join your dive buddies and travel back in time on the D.M. Wilson, one of the hundreds of shipwrecks protected in Thunder Bay National Marine Sanctuary. You will travel from bow to stern on the vessel.

Florida Keys National Marine Sanctuary - Coral Restoration

- Critical conservation efforts are taking place to combat the coral disease throughout the Florida Keys reef tract. Experience planting healthy corals that will grow into thriving colonies to support reef recovery.

Hawaiian Islands Humpback Whale National Marine Sanctuary - Turtle Extravaganza

- Experience green sea turtles swarming around you in their habitat while they take turns cleaning their shells. Swim with white tip reef sharks who also live in this sanctuary.

Statement of Work Part B: Tasks and Timeline

Project Manager Tasks

As mentioned in Part A above, the National Marine Sanctuary Foundation seeks a project manager to work with project leads at Office of National Marine Sanctuaries to develop education resources that align with Sanctuaries 360° videos. For this contract, the project manager will submit a proposal and if selected work closely with national marine sanctuary staff to create education material that incorporates ONMS messaging and aligns with current education standards.

Task 1. Develop the education materials design

This contract is for the development of the following five lessons:

- 1) One primary lesson that includes information and messaging on the overall National Marine Sanctuary System (see 2.a)
- 2) Four individual lessons that include activities, information and messaging about each of the four 360° videos on specific sanctuaries

In total this contract will produce five lessons. Preference will be given to proposals which best meet the needs of the Sanctuaries 360° campaign launch as outlined in section 2 below.



1. Create lessons/activities for middle school students that align with the Next Generation Science Standards, Ocean Literacy Principles and other standards as mentioned in

Section 2.b below. Lessons should include information on stewardship of our ocean and Great Lakes.

2. Final lesson plan format must be in Office of National Marine Sanctuaries Lesson Plan Template format. See [lesson](#) from Deep Sea Coral Curriculum for template which includes required categories. A blank template (Word or InDesign file) will be shared at the start of the project.
 - a. Primary lesson should include messaging on overall connectivity of National Marine Sanctuary System
 - i. Referencing Sanctuaries 360 videos, this lesson will...
 1. Enhance public awareness and appreciation of national marine sanctuaries.
 2. Understand this is a system of protected places.
 3. Understand that national marine sanctuaries help protect the ocean and Great Lakes.
 4. Understand national marine sanctuaries are designated for their conservation, recreational, ecological, historical, scientific, cultural, archaeological, educational or aesthetic qualities
 5. Understand national marine sanctuaries protect a vast diversity of ecosystems, animals and cultural and historic resources
 - b. Individual site/video lessons: it is encouraged that elements listed below are included when applicable.
 1. Channel Islands Lesson
 - a. Adaptation, biodiversity of a rocky reef/kelp forest
 - b. Physics of SCUBA diving in cold water environments
 - c. Align with applicable State of California standards
 2. Florida Keys Lesson
 - a. Seagrass and coral ecology
 - b. Importance of marine protected areas and climate change
 - c. Align with applicable State of Florida standards
 3. Thunder Bay Lesson
 - a. Address Great Lakes Literacy Principles
 - b. Significance of protecting shipwrecks
 - c. Distinguishing features of shipwreck to identify how it sank
 - d. Align with applicable State of Michigan standards
 4. Hawaiian Islands Humpback Whale Lesson
 - a. Roles and relationships of animals found on the reefs (predator prey, symbiotic relationships, etc)
 - b. Assessment of the condition of the water (turbidity, productivity, salinity)
 - c. A lesson on cultural connections (the shark and the turtle to the Hawaiiin culture)
 - d. Align with applicable State of Hawaii standards

- c. All lessons will emphasize national priorities and universal themes as mentioned in [Five Year Strategy for National Marine Sanctuary System](#) including:
 - 1. Goal 1.4: Ensure that public education programs incorporate messaging on changing ocean conditions.
 - 2. Goal 3.3: Provide ocean education programs to inspire the next generation of innovators.
 - 3. Human connection to the ocean.
 - d. All lessons should be available and applicable to all virtual reality technologies (smartphones, virtual reality headsets, computers, etc)
 - e. Lessons should include best practices in lesson plan development including addressing different learning styles, meeting the needs of students of all backgrounds, include assessment strategies, etc.
3. A survey for ONMS partner teachers and educators will be created, distributed, summarized and used to evaluate the draft lessons developed and make recommendations for edits. ONMS staff will assist in distribution to partner teachers and educators. See Phase 2 of the project schedule.

Task 2. Proposed Budget

Develop your budget to reflect phases in project schedule below. All aspects of work should not exceed \$15,000.

Project Schedule

Once notified of the selection of your organization to design the education material, a final product is due by April 15th, 2020. ONMS staff is located in Silver Spring, MD as well as in various national marine sanctuary offices around the country. The project manager will work remotely and communication with ONMS staff is to take place through video chat bi-weekly or when requested by either party.

Phase 1: Design (late January - late February)

Billing up to \$5,000 allowed

During this process you will work with the ONMS education team to develop the education materials outlined in your proposal. Bi-weekly calls will be facilitated by ONMS to ensure that progress is being made and that the developed materials align with current messaging and needs. A first draft of all the lessons is complete at this phase. ONMS will share Sanctuaries 360° videos as they are available for your reference.

Phase 2: Prototype (late February - late March)

Billing up to \$5,000 allowed

During phase 2, the project manager will create and distribute a survey to evaluate the lessons created. ONMS staff will facilitate connections with teachers in our network to test out materials. Feedback will be collected from educators and used to make changes that are integrated into the final product.

Phase 3: Build (late March - April 15th)

Billing up to \$5,000 allowed

Finalize the product by April 15th for distribution and launch on April 21st, 2020.

Project Deliverables

1. Microsoft Word files of Sanctuaries 360° education materials which includes one primary lesson and four site/video specific lessons including activities
2. Design template for any physical resources you may require in lesson activities (i.e. activity cards, art materials, student worksheets)

Adoption Plan

ONMS will host the Sanctuaries 360° education materials on their website in the For Teachers section as well as linked in the Multimedia section. ONMS will broadcast the resource to their national network of educators and partners. All national marine sanctuary sites will receive a digital copy of the education materials and the resources needed to share it to their local network of teachers.

Proposal Outline Due January 7, 2020 to hannah@marinesanctuary.org with the subject Sanctuaries 360° Education Materials Statement of Work.

Proposals to meet the statement of work as outlined below should be no longer than four pages. C/V and supplemental materials do not count towards the four page limit.

Project Description - no more than 4 pages

- Explanation of how you would meet the statement of work. Including:
 - Brief explanation of you/your organizations experience in formal/informal education and/or marine education
 - Explanation of familiarity or experience creating products which align to Next Generation Science Standards (NGSS), Ocean Literacy Principles and other standards.
 - Explanation of knowledge and familiarity with national marine sanctuaries
 - Familiarity with virtual reality education and any past experience your organization has had creating or using VR material.
- Identify what videos will be incorporated in the primary overall national marine sanctuariesOU lesson plan
 - Identify what possible themes, activities and learning styles and assessment may be included
- Identify what possible themes, activities and learning styles and assessment may be included in the individual lessons
- Identify what type of information you would like to collect in the survey in the prototype phase

C/V

Supplemental Materials

- Example of other lesson plans developed by you or your organization
- Virtual reality education resources previously created

Project Management

Reporting

ONMS education team will facilitate bi-weekly virtual check ins with the project manager. ONMS education team members will work with National Marine Sanctuary Foundation staff to approve the scope of work changes and adjustments and sign off on deliverables. ONMS education team will facilitate the adoption plan and maintain resources once project period is completed.

Payment

Invoices will be processed through the National Marine Sanctuary Foundation after each phase is complete. All aspects of work should not exceed \$15,000. Note that the selected contract will be supported through funds from federal awards NA17NOS4290190 and NA19NOS4290190A, received by the National Marine Sanctuary Foundation July 1, 2017. All funds received by the selected contractor are considered federally-sourced funds.

Terms

All materials, activities and products are considered work-for-hire and will be National Marine Sanctuary Foundation products shared exclusively with ONMS and contain ONMS and/or Foundation logos and branding. All materials will be public domain and cannot be used for commercial purposes. For information on ownership, intellectual property, and warranties email hannah@marinesanctuary.org with the subject Sanctuaries 360 Contract Information. Full ownership information will be shared with the chosen project manager.