



1. **Name of the project:** Micro-plastic education and outreach for youth on the North Pacific Coast

2. **Lead organization and Contact:**

Lee First, Twin Harbors Waterkeeper

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PO Box 751

Cosmopolis WA 98537

360 389 2979

3. **Start and end dates for your project:**

11/1/2021 - 6/1/2023

4. **Deliverables:**

- a) Conduct 2 virtual teacher training workshops to train high school teachers to perform microplastic outreach and protocol in the classroom (one per year)
First workshop: November 2021
Second workshop: November 2022
- b) Conduct classroom trainings (depending on Covid) in 4 schools (Neah Bay, Cape Flattery, Quileute, Forks) once per year (8 total trainings). In person training may or may not include a field trip to the beach for sand sampling and beach cleanup.
Due Date: June 1, 2023
- c) Provide 5 high quality project photos, an MRC newsletter article, and a projected presentation to the MRC.
Due Date: June 1, 2023

The exact number of hours are difficult to predict because of the Covid virus. If safe, lessons will be offered in person. Lessons will be offered virtually if it's determined to be the safest option. Results will be measured by the number of classrooms reached, number of students reached, and number of field trips.

Project staff:

Alexa Brown, Education Coordinator, is a graduate of Western Washington University. Alexa has a Bachelor of Science in Environmental Science and a Bachelor of Arts in Environmental Policy. She has been worked with Twin Harbors Waterkeeper and as the Grays Harbor Stream Team Coordinator since June 2020. Alexa's expertise includes extensive work with volunteers (invasive weed removal, native plant restoration, beach, stream and river cleanups, single us plastic and microplastic outreach, and salmon life cycle lessons). Alexa will develop and implement all project activities outlined in this proposal.

Lee First, Twin Harbors Waterkeeper, is a graduate of Western Washington University and the University of Washington. She has a Bachelor of Science in Environmental Science and a Professional Certificate in Wetland Science and Management. Lee has worked in the water quality field for 30 years, and in the Waterkeeper movement for 15 years. She has implemented microplastics education in high schools in Spokane, Aberdeen, Hoquiam, Ocosta, Taholah, and LaPush. Lee will participate in all aspects of this project.

- d) **Partners:** Nicole Harris, Education Specialist, Olympic Coast National Marine Sanctuary, will offer technical support.
- e) **Geographic Area:** Our project will focus on the geographic area covered by the North Coast Marine Resources Committee.
- f) **Permits:** This project does not require any permits.

g) Project Summary/Narrative

The purpose of this project is to educate youth to take action to reduce their use of single use plastic. Our presentations will inspire students to use as less single use plastic, to think carefully about how to incorporate fewer plastic items in everyday life, and to reuse plastic items as much as possible. Students and community members will learn about the “close the loop” concept, including options for purchasing items that are manufactured out of recycled plastic. Incorporating alternatives to plastic items in our homes and lives will also be stressed in this education.

Key to this work is educating teachers. We will provide one teacher workshop per year to train teachers to use lab equipment to separate and isolate microplastic fibers from samples collected on nearby beaches.

Twin Harbors Waterkeeper will teach youth the difference between primary and secondary micro-plastic. Youth will learn how and why micro-plastic is a health hazard to aquatic life, and to humans. Plastic pollution poses a serious threat to aquatic life including mammals, turtles, salmon, shellfish, as well as humans.

Plastic and micro-plastic pollution are especially relevant in Washington’s coastal counties because of our sensitive coastal habitats and economic drivers of fishing, shellfish growing areas, and tourism. In addition to large plastic debris, the ocean beaches in the area contain alarming amounts of small plastic bits that arrive with every high tide. Plastic, especially micro-plastic, is a serious threat to aquatic ecosystems, environmental and human health. Yet there are alternatives to using plastic and finding alternatives to single use plastic is gaining popularity amongst broad audiences. Twin Harbors Waterkeeper will target youth for this project, as they will suffer the consequences of plastic pollution, so youth-targeted outreach is imperative.

Background and Context:

Twin Harbors Waterkeeper has worked with these school districts on microplastic outreach during the past two years: Ocosta, Aberdeen, Hoquiam, Taholah, Quileute, Oakville, and Montesano. This program was originally created as part of a Public Participation Grant from the Washington State Department of Ecology in July 2019. A large component of that project was waste reduction and education. Starting in late 2019, we developed single-use plastic and microplastic outreach lessons and presented it 37

classrooms in the Chehalis River watershed, reaching almost 700 students. We hope to continue and expand this outreach work along the North Coast with funding for this proposal.

Through this request we hope to expand this education and outreach program to students along the North Pacific Coast including students in Quileute, Forks, Neah Bay and Cape Flattery.

North Coast MRC stated goal: The Marine Resources Committee (MRC) is an advisory group to the Board of County Commissioners and part of the regional Northwest Straits Marine Conservation Initiative. MRC members are citizen volunteers committed to protecting and restoring marine habitats in our ecologically rich corner of the world.

Our project is appropriate for MRC funding because it is about educating and involving the next generation and inspire them to protect our marine environments and aquatic life. Key to this project is our plan to educate teachers to bring about this lasting change.

We will bring students and community members the power of perspective by introducing them to the problems associated with single use, and the environmental health hazards caused by micro-plastics. Around the world fisheries are projected to catch more plastic than fish in coming years. Locally we can make a difference by educating our community.

Our project will focus on outreach to teachers and students in coastal communities. Outreach will consist of classroom and field activities (Covid-dependent).

Teachers will be confident in their skills to use lab equipment to illustrate the complexity of the microplastic problem in our oceans. Students will be inspired to reduce their use of single use plastic and reach out to others to prevent, reduce, and clean up pollution. Students will embrace the “close the loop” concept.

Depending upon Covid-19 protocols, we will either present the PowerPoint presentation we have developed and tested on plastics/micro-plastics during the first trip to the classroom, and/or provide the presentation virtually. If appropriate, we will accompany the class on a field trip to the beach to collect sand samples and beach trash.

We intend to reach up to 100 youth with micro-plastic education in the classroom and in the field.

Twin Harbors Waterkeeper plans to continue this project into the future. We are continually diversifying our funding to ensure project continuation.

APPENDIX C
Estimated Budget Template and Instructions

Category	Detail	MRC Request	Matching Contribution (not required)	Total
Salaries and Benefits or hourly wages	Lee First @ 25 hours @43/hour	\$1,075		\$1,075
Supplies/Equipment	Lab supplies	\$200		\$200
Travel	1 Trip each to Neah Bay, Cape Flattery, Forks, Quileute (1074 miles round trip) @ .57/mile	\$612		\$612
Contracted services	Alexa Brown @ 60 hours @ 30/hour	\$1,800		\$1,800
Indirect expenses <i>(All such expenses should be itemized.)</i>				
Other				
Totals		\$3,687		\$3,687

1. Personnel salaries and benefits (or hourly wages): Include the names of each individual to be supported by the project, anticipated numbers of hours, and hourly rate including benefits as applicable.
2. Supplies: Supplies are defined as those items purchased which are typically used up in the course of the project such as paper, staples, printer ink, etc.
3. Equipment: Equipment is defined as tangible property necessary to the project such as scientific equipment, electronic devices and sampling gear. All anticipated equipment purchases and costs must be included in the budget. Approved items may become the property of WDFW at the conclusion of the project depending on value and type.
4. Travel: All travel expenses will be reimbursed at standard WA State rates - <http://www.ofm.wa.gov/resources/travel.asp>. Please list destinations, number of trips and other details.
5. Contracted services: List any subcontractors and provide details of expenditures.

6. Itemized indirect expenses: No generalized "Indirect" "Overhead", "Administration" or similar categories of costs are allowable. Specific costs must be listed under this category or divided out among the other categories.
7. Other: Items such as entrance fees that don't fit well into the other budget categories.



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF NATIONAL MARINE SANCTUARIES
Olympic Coast National Marine Sanctuary
115 East Railroad Avenue, Suite 301
Port Angeles, WA 98362-2925

September 13, 2021

Attn: Tami Pokorney
North Pacific Coast Marine Resource Committee

Regarding: Letter of Commitment for Twin Harbor Waterkeepers Microplastic Education project proposal.

Olympic Coast National Marine Sanctuary (OCNMS) is pleased to provide a letter of commitment for Twin Harbor Waterkeepers North Pacific Coast Marine Resource Committee proposed microplastic education and outreach project

Marine Debris continues to be a pressing issue for our ocean and the marine life and human life dependent on our healthy ocean environment. OCNMS is committed to supporting the Twin Harbor Waterkeepers and the proposed microplastic education project through participation and support of teacher professional development workshops to train teachers in lab protocols of classroom microplastic investigations, as well as support of student engagement in the classroom and in the field as appropriate.

Education and outreach around marine debris and microplastics helps to protect marine life and habitats that are culturally, ecologically and economically significant to coastal communities. Engaging students in hands-on science provides opportunities to build skills, understanding and confidence of local students as the next generation of marine educators, scientists and managers of these critical yet finite resources. Additionally, it addresses goals and key initiatives of OCNMS through robust teacher professional development and student-led research, investigations and stewardship actions.

Please feel free to contact me at nicole.harris@noaa.gov with any questions you might have.

Sincerely,

Nicole Harris

Education Specialist with Olympic Coast NMS

