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# CLCP NEWS





**By Kacie Dominici**

Citizen science in the form of marine debris clean-up is observational. Observation is of utmost importance in science and to researchers. Observing the world around us is how we innovate, interact, and theorize from the simple to the complex. Whether observing change, the lack thereof, or trends over time, there is no scientific process without it.

In *Biological Conservation*, Van der Velde writes, "Suitably trained citizen scientists may have great potential to contribute valuable data on widespread environmental issues such as marine debris" (128.) With standardized methodology, citizen science is responsible for informing researchers and the public, observing and collecting data and recording those observations, and creating stewards of the land, proving that citizen science plays a crucial role in environmental science and knowledge expansion.

Citizen scientists can make observations that contribute to expanding knowledge for research and the public. We take the NOAA Marine Debris Mapping project, for example. Volunteers survey specific beaches, noting the GPS coordinates and taking pictures of what they find. This information then goes into the MD Map website, which gives real-time answers to long-standing questions. What types of plastics are coming to shore, and how long have they been in the water? Demonstrating citizen science at work, the MD Map helps researchers with a timeline of plastics and trends over that time. Van der Velde "demonstrated that with appropriate protocols, methodology, and training, citizen scientist volunteer significantly contributes to marine debris data collection, and such efforts can enhance a national research program" (133.) This holds especially true on the beach, where miles of shoreline need observation and

stewardship, and when done methodically, the imperial evidence is precious.

Hidalgo-Ruz states, “particularly in marine debris studies, volunteer participation has been instrumental for the generation of extensive sets of data in many countries of the world” (13.) Volunteers gather knowledge quicker and more efficiently than researchers constrained by time and budget. Citizen science can provide a wealth of information that is becoming highly useful in the modern era.

### **THE PROCESS IN ACTION**

The role that citizen science plays in marine debris clean-up is defined as identifying and mapping out relevant areas to survey and then finding and identifying anthropogenic (human-caused) debris. Arriving before high tide, volunteers lay out a survey site 100 meters long. Inside the site, they construct four entirely random transects to search. Pairs of volunteers then search the transects learning to recognize and accurately identify categories of marine debris to collect accurate and reliable data. *We cannot overemphasize the importance of a standardized methodology.* Citizen science only produces valuable results when conducted the same way each time in the same manner that NOAA, or any oversight committee, would manage a site. Within that constraint, the role of accurately identifying and transcribing data has made citizen science a rapidly growing offshoot of ecology and sustainability.

Finally, citizen scientists input their data into a national database for researchers and the public to reference, demonstrating a brilliant symbiotic relationship with long-lasting benefits. Within the MD Map, valuable coordinates, details, and pictures of marine debris help point researchers in the right direction. As that input increases, it is possible to distinguish trends, and trends produce imperial evidence. That evidence helps scientists formulate solutions and plans. Citizen science and marine debris removal are mutually beneficial. Wildlife and ecology benefit, while citizens become better land stewards. As citizens perform beach science, they effectively take stewardship of the land.

Beach clean-ups “help promote local custodianship and caretaking... [while] citizen scientists mak[e] valuable contributions to coastal knowledge” (Van der Velde, 132.) The more in tune we are with the world around us, the more observant we become. We become more invested because of a sense of belonging—us to the land and the land to us. That connection creates a new perspective and respect for the land and ecosystems. Removing beach debris reminds us that we are stewards of this land and responsible for it. Not only does citizen science help researchers and the public with helpful knowledge, but it also gives citizens an active contribution with defined roles and responsibilities and promotes a change in perspective. When one can read scholarly articles based on clean-up evidence, it means they have contributed something of worth. When reports help develop remediation, citizens see the plan in action. And when it comes to cleaning up plastics from our marine environment, observance, data configuration, analysis, and remediation are outstanding outcomes for citizen science.

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Upcoming Schedule of Clean-ups  
**BOLD** indicates schedule variation

Keystone East	Tuesday 11/22	<b>9-11</b>
Ebey's Landing	Tuesday 11/29	1-3
Windjammer	Tuesday 12/6	9-11
Possession Point	Tuesday 12/13	2-4
Joseph Whidbey	Tuesday 12/20	2-4
Keystone West MDMAP	<b>Thursday 12/29</b>	2-4

Please feel free to send in any articles or pictures relevant to CLCP.

We would love to hear from you!

# Shotgun Wads Help!

## Volunteer Column

By Dar Christopherson

CLCP Volunteer and Solid Waste Advisory Board Member

Duck Hunters Please help!

Hunters are among the most environmentally responsible members of our community. We thank you for picking up your wads and casings. However, it is not enough.

The Community Beach Cleanup group sponsored by WSU Extension and Island County has over a hundred members. Weekly we are on our public beaches picking up the “dandruff of our society”. Most items are not traceable as they have degraded into unrecognizable micro plastic. However, shot gun wads are clearly identifiable and traceable.

A Recent NOAA report explores the subject of shot gun wads on beaches. The study places plastic shotgun wads in the top ten list of plastic pollution on San Francisco beaches. You can review the study by going to [Shotgun Wad Debris Reduction Project | Greater Farallones National Marine Sanctuary \(noaa.gov\)](#).

We are also choking on plastic wads. Surveying Penn Cove, Crescent Harbor, Keystone, and many other Island County beaches will sicken you. **Wads are seemingly everywhere**, and it is only the “tip of the iceberg.” I have witnessed volunteers removing thousands of wads annually for the last 5 years. We can’t get them all. They are buried under logs and hidden in the sand and grass. Even worse, **most** have degraded to unretrievable micro plastic.

Plastic wads are already illegal in much of Europe. Volunteer beach cleaners are becoming very frustrated and **angry** at the industry, our government and sport groups muted responses. I am



fearful that if there is no positive action toward cleaning this up there will be legal efforts to regulate the sport. Why wait to act?

I write to ask hunters to leverage change. Please tell your retailers you will not buy plastic wad shells. Demand they stock biodegradable wads for your water and wetland hunting. This may be painful at first. Bio wads have not been readily available in the US because we have not demanded it. Only your demand will drive economy of scale, pricing, and a reliable supply. Please let the industry know you want the right wad for those venues where wads are not retrievable. If we don't, the industry will continue taking the easiest and most profitable path.

I want to believe that constructive conversations could lead to financial incentives to help manufactures and retailers get the right product on the shelves for our hunters. I am disappointed at the complacency of the EPA and the Washington State Wildlife and hunting regulators around this blatant problem.

We all can assist by contacting state representatives and the governing officials at the Washington State Department of Wildlife and EPA. Additionally, beach owners and cleaners can post "find pics" to <https://sf.surfrider.org/shotgun-wad-watcher/>. The Surfrider organization of Northern California and Oregon is far ahead of our own efforts around this matter. Please join with them and post your finds on their site map. Help us help the duck hunters access a reasonably priced and readily available alternative to plastic wads.

Dar Christopherson

Community Beach Clean Up Volunteer, Island County



