

**Project Title:** Marine Debris Monitoring and Assessment Project (MDMAP)

**Program Office Sponsoring or Conducting this CSC Project:** NOS/Office of Response and Restoration, Marine Debris Division

**Authority for this CSC Project:** CCSA and MDA

**Purpose of this CSC Project:** NOS developed the Marine Debris Monitoring and Assessment Project (MDMAP) to engage NOAA partners and volunteers around the world in surveying and recording the amount and types of marine debris on shorelines using a robust and consistent methodology and making that data readily and openly accessible via an API and a NOAA hosted database and application. This project contributes to meeting the mission of the Marine Debris Division, which is to “identify, determine sources of, assess, prevent, reduce, and remove marine debris and address the adverse impacts of marine debris on the economy of the United States, marine environment, and navigation safety.” In part, MDMAP does this by serving as a tool for identifying, determining sources of, and assessing marine debris and informing prevention and removal activities. As a citizen science project, it also serves as an education and outreach tool that can inspire action by participants and users of the data.

**Type(s) of Information Collected and From Whom It Is Collected:** One time information is collected to define a 100-meter long stretch of shoreline, including GPS coordinates and descriptions of the site and nearby environment. During each MDMAP survey, information is collected about the conditions of the site, the number of people participating, and the amount and types of marine debris encountered during the survey. That information is collected from NOAA partners and volunteers around the world.

**Use of the Information:** Researchers, community organizations, NOAA, and other agencies use this information to document, understand and communicate the status of marine debris on shorelines.

**Method(s) of Information Collection:** Paper format and/or electronically

**Affected Public:** Individuals or households, business or other for-profit organizations, not-for-profit institutions, State, Local, or Tribal government, and Federal government

**Estimated Average Annual Number of Participants:** 250

**Estimated Average Annual Number of Responses per Participant:** 12.7

**Estimated Average Minutes per Response:** 135

**Estimated Average Annual Burden Hours:** 7,150

**Estimated Total Annual Cost to Participants in this CSC Project: \$2,855**

Total capital and start up costs are approximately \$1,939 per year (\$96.93 x 20 individuals)

Annual operating/maintenance costs include paper, ink/toner, and mobile data/internet service provider are ~ \$9.16 per year. Assuming that 100 individuals need to purchase this material each year, the annual cost is \$916.

Total costs = \$1,939 + \$916 = \$2,855

**Estimated Average Annual Costs to the Federal Government: \$166,102**

**Estimated Average Annual Number of Federal Government Employees (FTEs): 0.40**

**Recruitment and Retention Methods for Voluntary Participants (SSA item 1):**

The NOAA Marine Debris Program has developed a suite of outreach/recruitment and retention tools and strategies briefly described as follows:

- For any relevant Notice of Funding Opportunity, MDMAP is promoted as a method of incorporating shoreline marine debris monitoring into proposed projects
- Communications platforms including listservs, newsletters, the Marine Debris Program website, blog, social media, and public outreach/engagement events and meetings regularly feature information about how to get involved with MDMAP, as well as how the data are used
- Marine Debris Program staff are trained and equipped with information about MDMAP and routinely promote it to potential partners and participants both opportunistically and through regular communication channels
- Participants receive individual onboarding and ongoing technical support from the Marine Debris Program
- Data are verified by NOAA, and participants receive individual communication about their surveys
- The Marine Debris Program publishes a quarterly MDMAP newsletter that features participant stories and contributions as well as examples of how the data are being used
- The Marine Debris Program provides an email address and other PRA-compliant opportunities for open-ended suggestions and feedback. This information has come from data contributors and users, and is incorporated to improve their experience and demonstrate responsiveness to stakeholder input
- Subtitled training videos are available in both English and Spanish

**Gifts or Payments (SSA Item 9):** We do not plan to provide a gift or payment to the voluntary participants.

**Annual and Multi-Year Schedules (SSA Item 16):** A quarterly MDMAP newsletter is published (October, January, April, and July). At the beginning of each year, the newsletter highlights accomplishments and achievements over the prior year, including number of surveys, any reports or peer-reviewed publications, and other data uses and results. MDMAP is also featured in broader Marine Debris Program communications during the annual Citizen Science Month of April. There are no set beginning or end dates for the collection of information, it is up to the participant or participating organization, many of whom have their own goals and uses for the data they contribute.

**Display OMB Control No. and Expiration Date (SSA Item 17):**

All written and electronic information collections will display the OMB Control No. and expiration date.

**Statistical Methods:** The CSC component of MDMAP may employ statistical methods. Sites that are monitored by voluntary participants are self-selected, and may or may not be appropriate for use in a larger statistical analysis to extrapolate to a larger geographic area. NOAA will assess that on a case-by-case basis as it uses the data. Because the data are publicly available, anyone including the groups who collect the data can choose what statistical methods are appropriate for their analysis. More information on the statistical methods to be used is provided below in the response to each of five questions.

1. Who will be surveyed and why is it appropriate to survey that group?

Sites monitored by volunteers are chosen by volunteers for their own reasons based on their own goals. NOAA does not prescribe sites, but it does provide some general criteria to help ensure that data collected by volunteers is generally comparable.

2. How was the survey developed including consultation with interested parties, pretesting, and responses to suggestions for improvement?

As a marine debris monitoring method, MDMAP was developed iteratively and has been adapted over time based on feedback from a diversity of stakeholders including contracted scientists, participants, other agency personnel, researchers, outside experts in marine debris and citizen science brought together for workshops, staff and working groups.

3. How will the survey be conducted, how will the population be sampled if not all the population will be surveyed, what is the expected response rate, and what actions does NOAA plan to take to improve the response rate?

The Marine Debris Program is presently developing a spatially-balanced survey design for inferences at greater geographic scales. This design will be informed by a power analysis and previous survey data, as well as an outside panel of experts. If the survey design is implemented, data will be collected by contractors rather than through the CSC project.

4. How will NOAA analyze the results of the survey and generalize the results to the entire population?

NOAA will compare results with and without CSC data to examine the influence of self-selection of sites on larger scale patterns. If they do not bias results, they will be included in overall analysis using Generalized Linear Mixed Models to identify trends over time in the amount and types of marine debris on shorelines within the geographic areas of interest.

5. What is the contact information for individuals consulted on the statistical aspects of the design, and for the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency? The contact information should include name, title, affiliation, email address, and telephone number.

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**Approval for Pretesting:** This CSC project will not require additional pretesting with more than nine members of the public.

**Supplemental Documents:** The six supplemental documents for this CSC project are as follows:

Datasheets:

Shoreline Site Characterization Form

Survey Cover sheet

Transect Survey Form

User Guides:

Shoreline Survey Guide

Marine Debris Item Categorization Guide

Monitoring Toolbox (with instructions on how to get started as a volunteer)

In addition, there is a recruitment [video](#).

**CERTIFICATION:** I certify the following are true.

1. The collection is voluntary.
2. The collection is low-burden for respondents and low-cost for the Federal Government.

3. The collection is non-controversial and does not raise issues of concern to other federal agencies.
4. The collection will not include highly influential scientific information, which is information NOAA or OMB determines: (i) could have a potential impact of more than \$500 million in any year, or (ii) is novel, controversial, or precedent setting or has significant interagency interest.
5. The collection complies with 5 CFR 1320.9 and the related provisions of 5 CFR 1320.8(b)(3).
6. The collection will provide qualitative and quantitative data that help inform scientific research and monitoring, validate models or tools, support STEM learning, and enhance the quantity and quality of data collected to support NOAA's mission.

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