



The NOAA Marine Debris Monitoring and Assessment Project: Four years of effort in the U.S. Pacific States

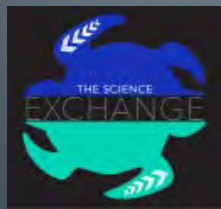
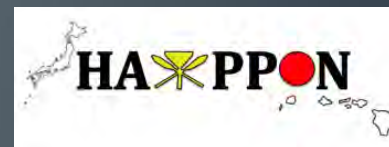
NOAA Marine Debris Program

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Carlie Herring, MDP Research Coordinator

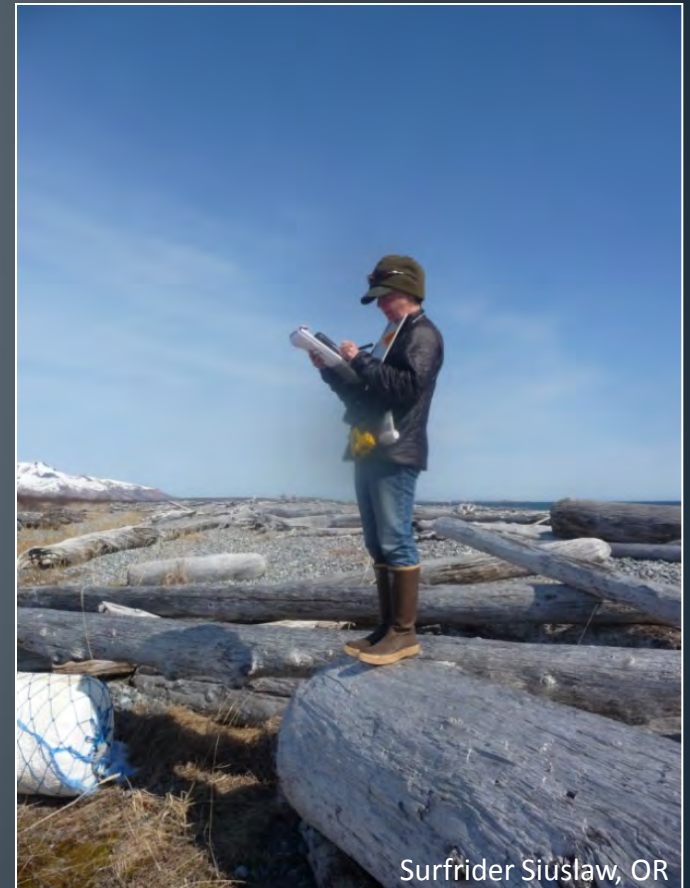
Nancy Wallace, MDP Director

Marine Debris Monitoring and Assessment Project (MDMAP)



MDMAP Goals

- Provide tools to partners
- Promote standardization
- Address research questions, detect JTMD arrival
- Raise awareness
- Guide prevention



Program Development

- MDP staff & Shoreline Survey Advisory Group
- CitSci program launched in 2012 w/response to JTMD
- **General question:** Is the amount and composition of marine debris changing in a given area?
- **Specific Question:** What is the total marine debris load at a 100 m site over a 28 day (\pm 3d) period?



Methods Overview

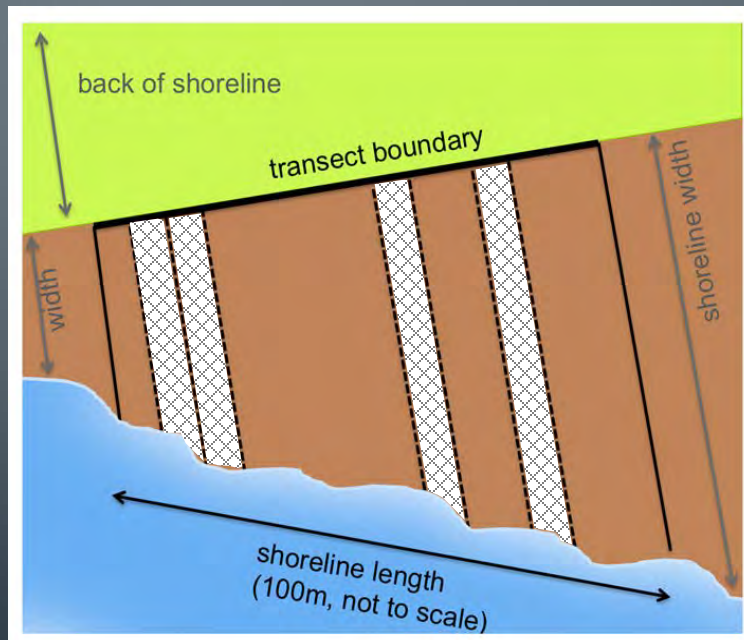
- Sites are self-selected by partners
- Partners conduct monthly shoreline surveys
- Data upload to online database
- Only items larger than 2.5 cm



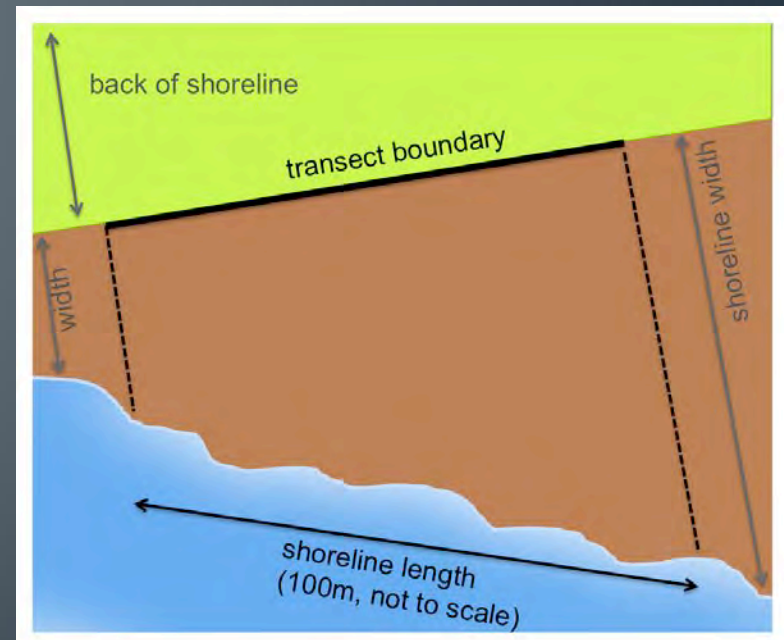
Methods

- Counts of debris items per m² of shoreline
- Emphasis on debris material type

Standing-Stock
(no debris removal)

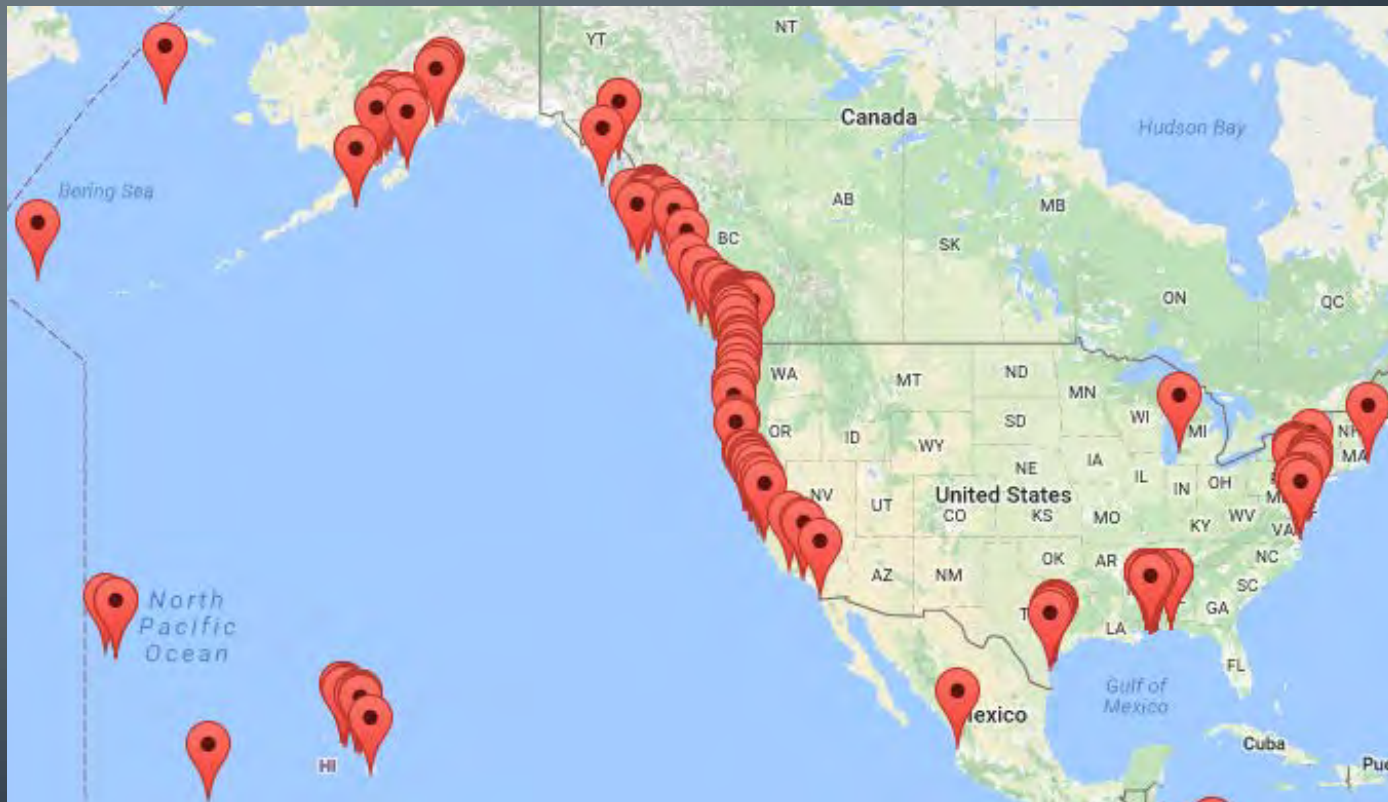


Accumulation
(beach cleanup)



MDMAP Stats

- Shoreline Sites: 250
- Surveys Uploaded: 5,025
- Database account holders: 261



Database

- mdmap.orr.noaa.gov
- “Verified” data is available to users
- Custom Item feature for locally relevant items





MDMAP “Get Started Toolbox”

- Tutorial Series
- Protocol Documents and Field Datasheets
- Protocol Quiz
- Database User Guide
- Data Analysis Templates
- Searchable Photo Gallery
- FAQs





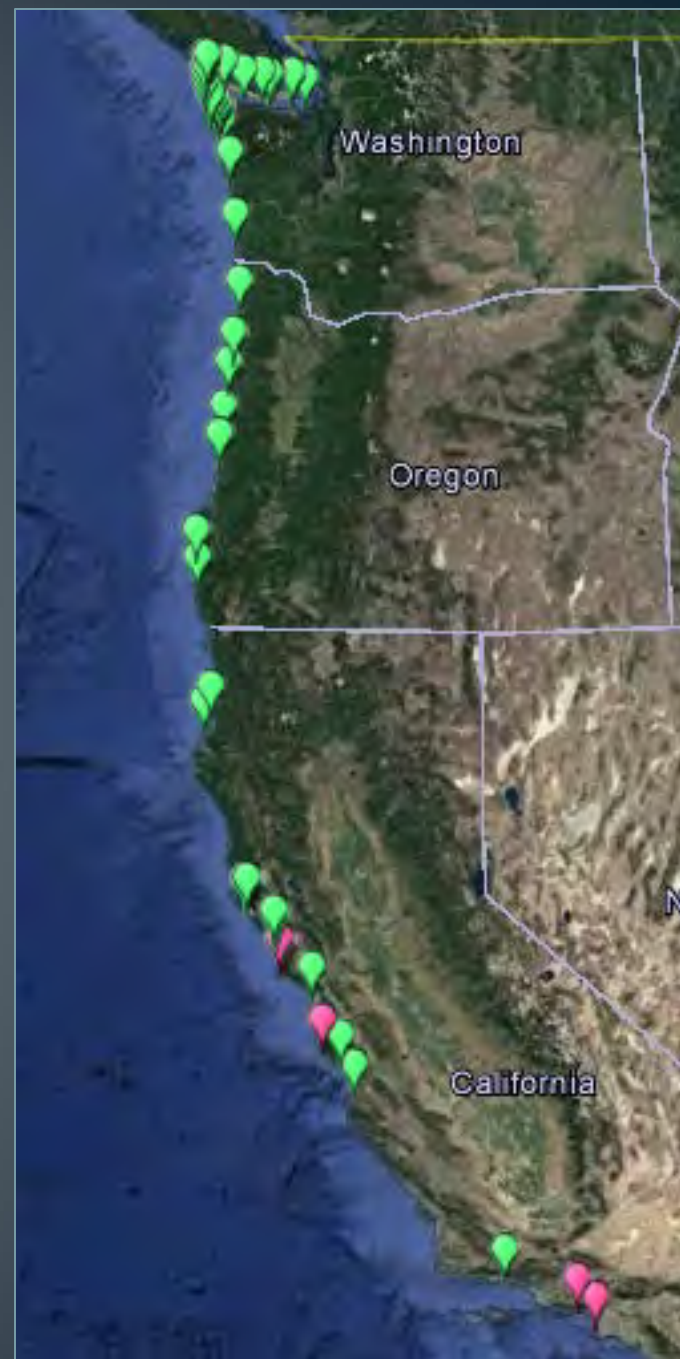
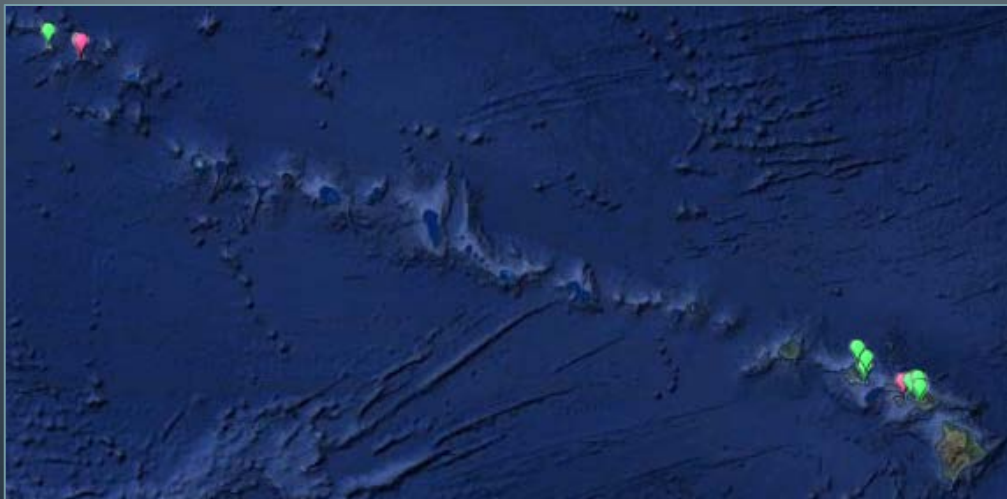
Shoreline Monitoring FAQs

Have a question about the MDMAP? Visit our [Frequently Asked Questions](#) page.

<https://marinedebris.noaa.gov/research/monitoring-toolbox>

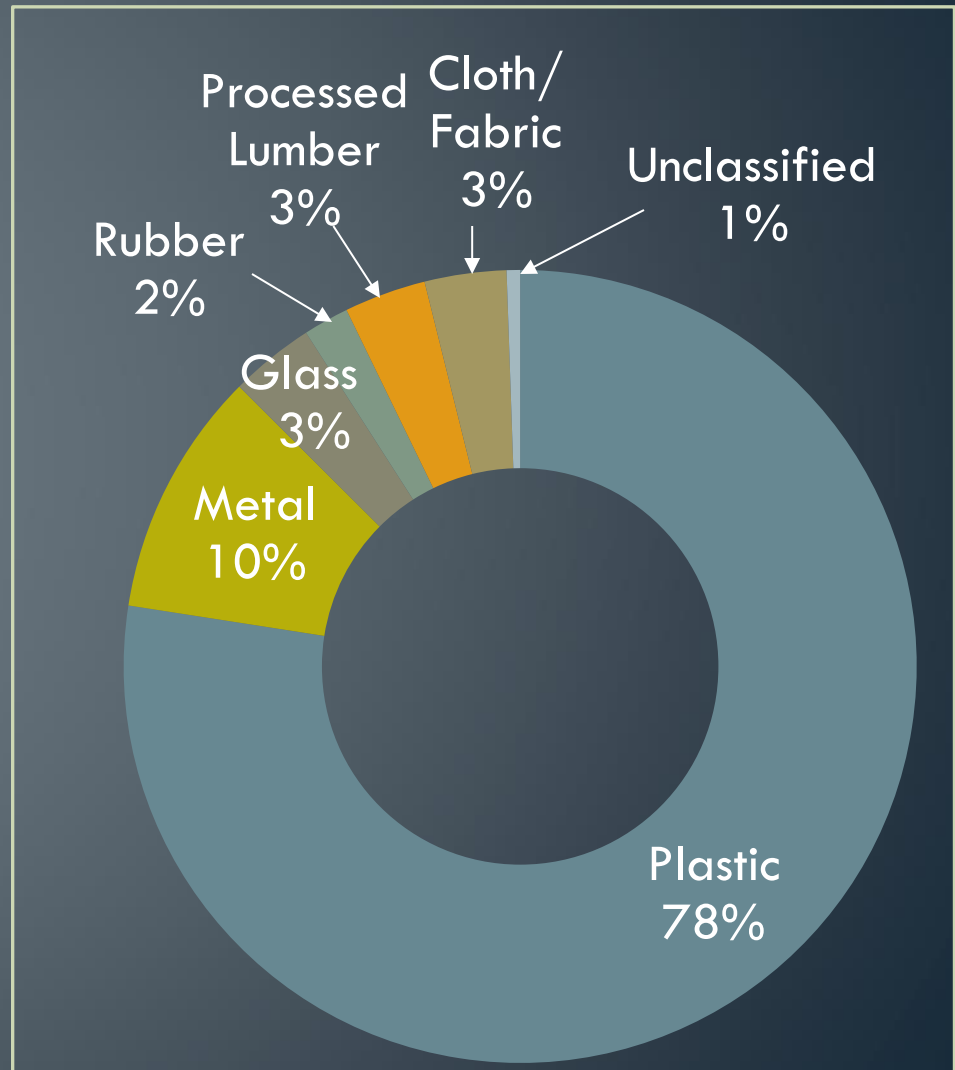
Results

-  - Accumulation
-  - Standing Stock



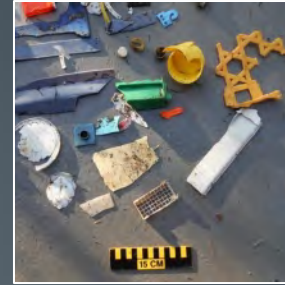
Results

- U.S. Pacific States
- 91 sites; 1476 surveys
- Mar 2012 – Feb 2016
- 211,709 items recorded

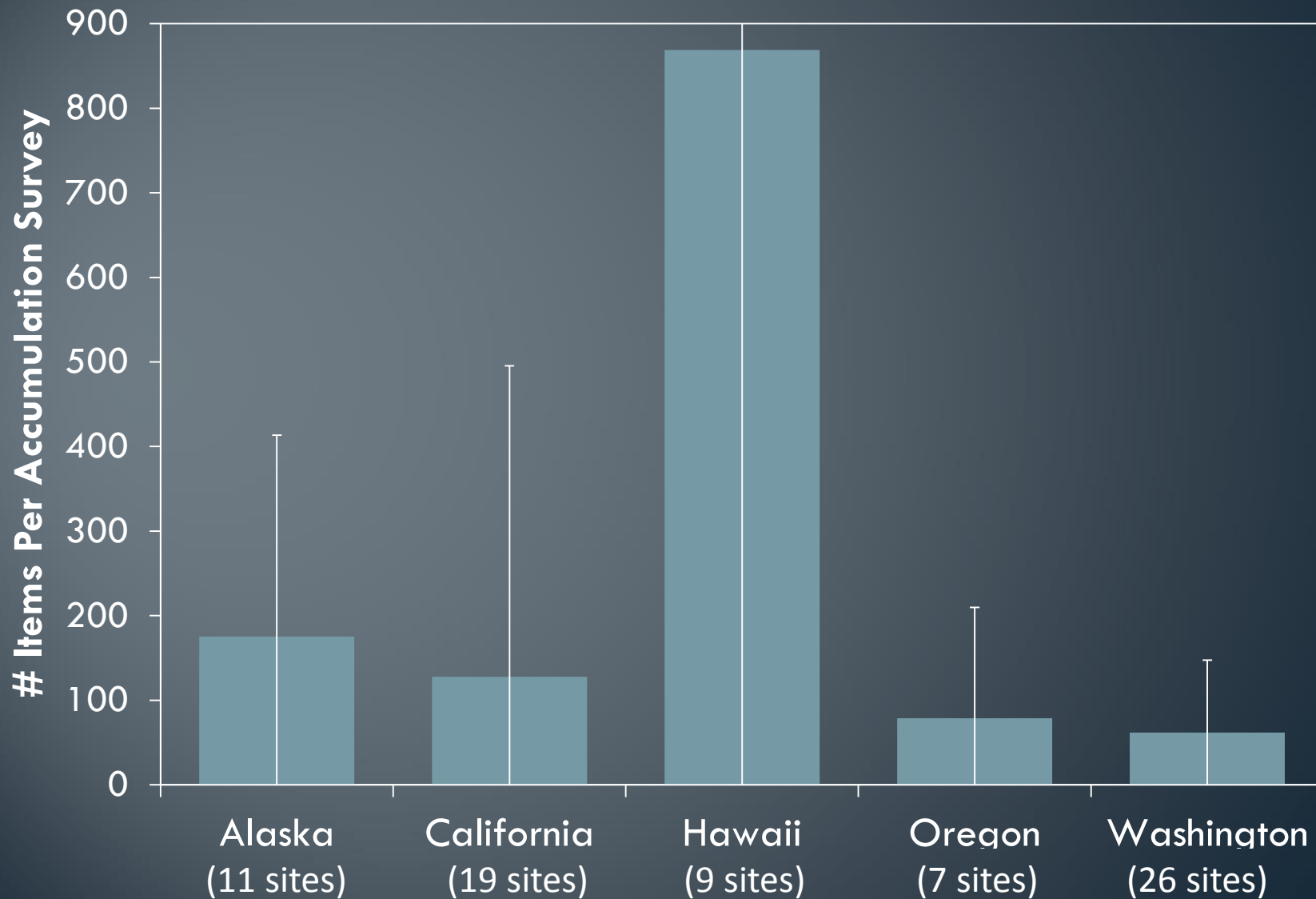


Results

- 42% of items were plastic fragments
- Plastic rope & net, bottle/container caps, food wrappers, & plastic beverage bottles are top 10 “Identifiable Items” across all states.



Results



Results

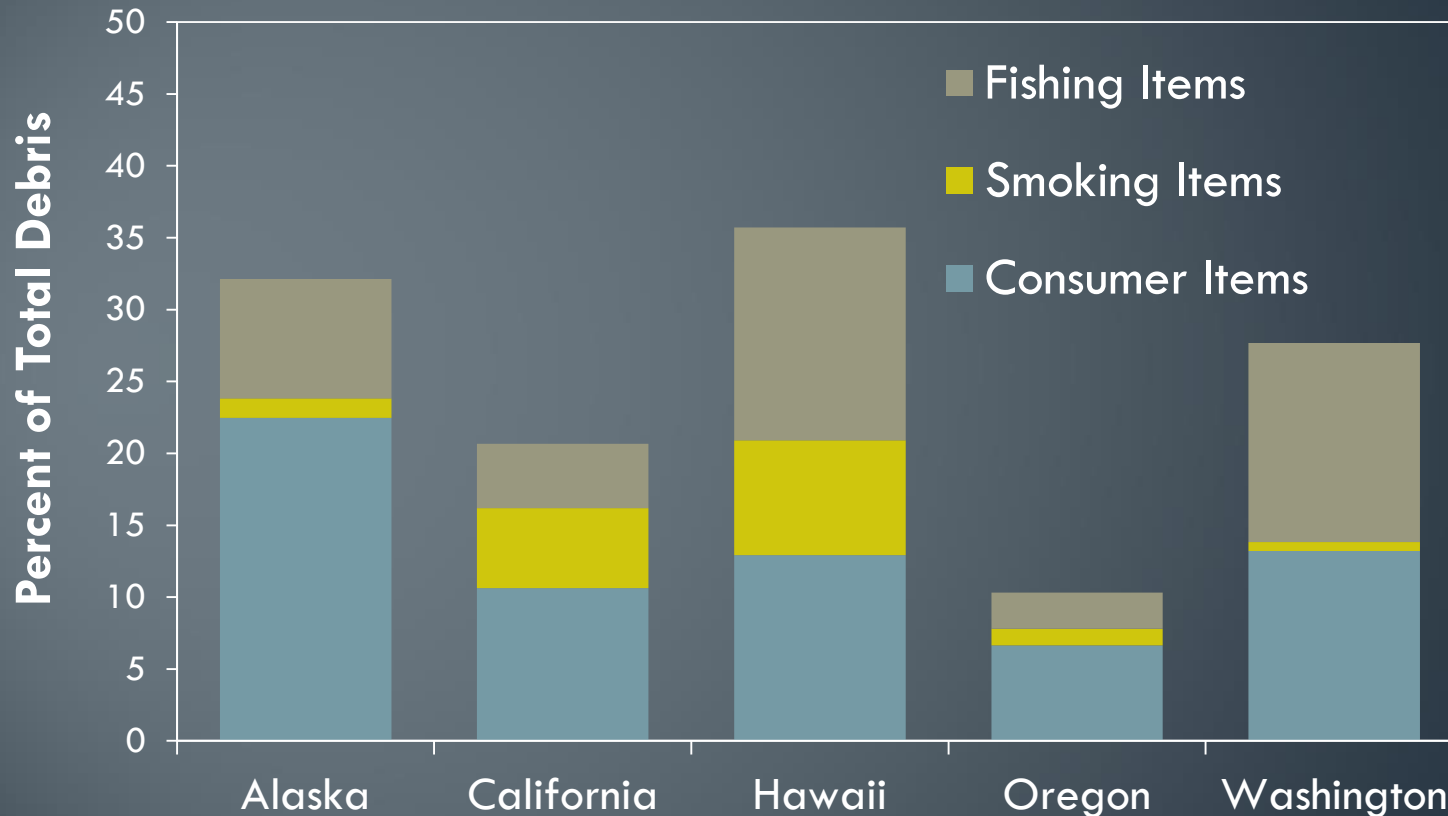


Hawai'i Wildlife Fund

Results



Plastic Debris by User Groups



* Does not include cigarette butts < 2.5 cm

Observations

- Across U.S. Pacific States, plastic dominates
- High prevalence of fragments
- Higher relative abundance of fishing debris in Hawaii and Washington
- Persistent debris travels far from origin (e.g., prevalence of consumer items in Alaska)



MDMAP Successes

- High level of interest & engagement
- Rewarding citizen science experience
- Qualified and committed partners
- Requests for data access



MDMAP Next Steps

- Improvements to MDMAP Toolbox and Database
- Promote & expand the program
- Partnering with Ocean Conservancy on analysis of drivers and trends



Questions?



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