

Detection & Shoreline Monitoring

Nancy Wallace, Director
NOAA Marine Debris Program

Tokyo University of Marine
Science and Technology
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NOAA Marine Debris Program

Established in **2006** by the United States Congress as the federal lead for marine debris

5 Program Pillars:

Research, Removal, Prevention, Emergency Response, and Regional Coordination

Mission:

To investigate and prevent the adverse impacts of marine debris

Vision:

The global ocean and its coasts free from the impacts of marine debris



Estimated 5 million tons of debris

70% of debris sank

1.5 million tons remained afloat



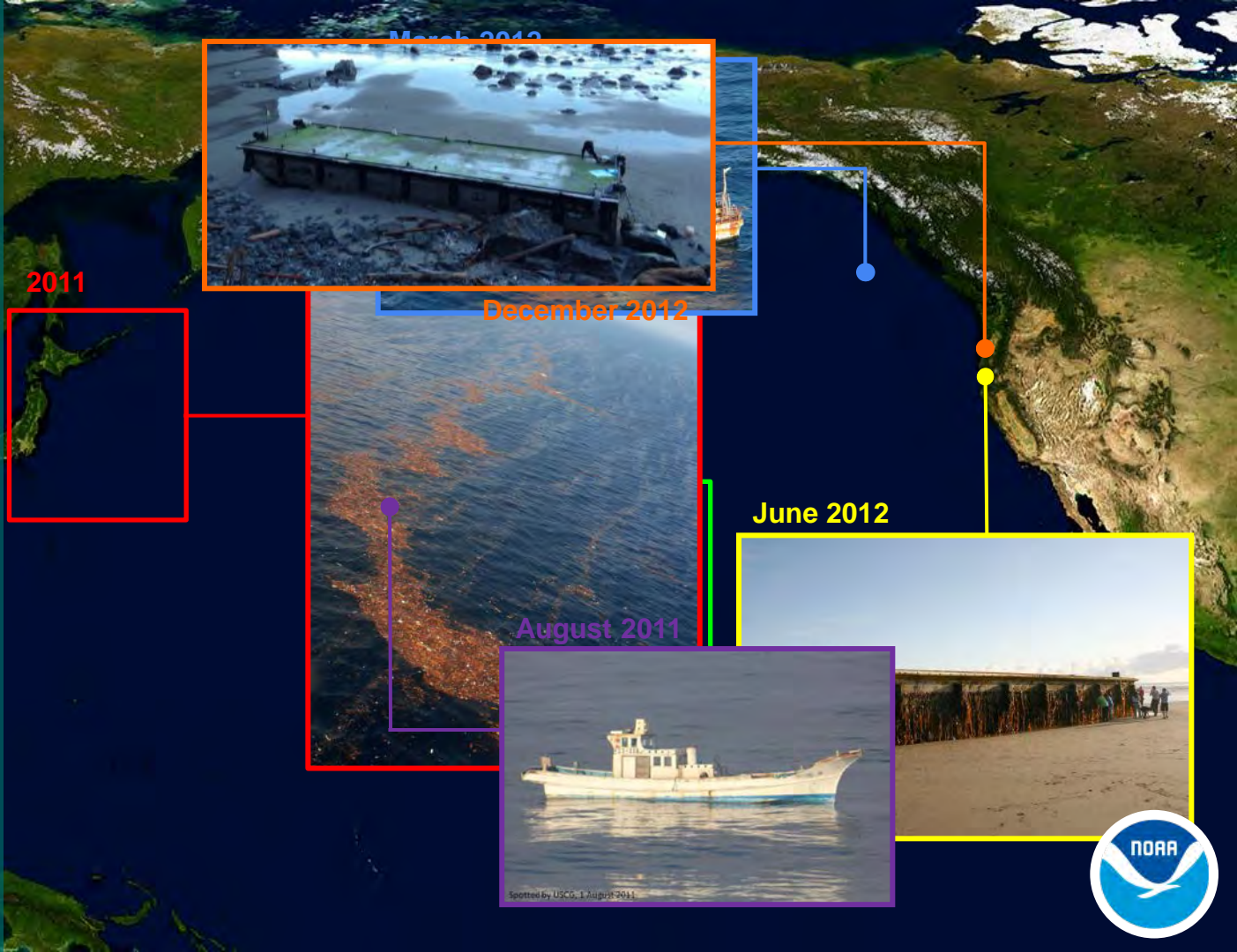
**How will tsunami debris impact the
West Coast of North America?**



Early Sightings

Debris Types:

- Floating patches
- Wood, construction materials
- Large debris
- Vessels
- Misawa docks



March 2012

December 2012

2011



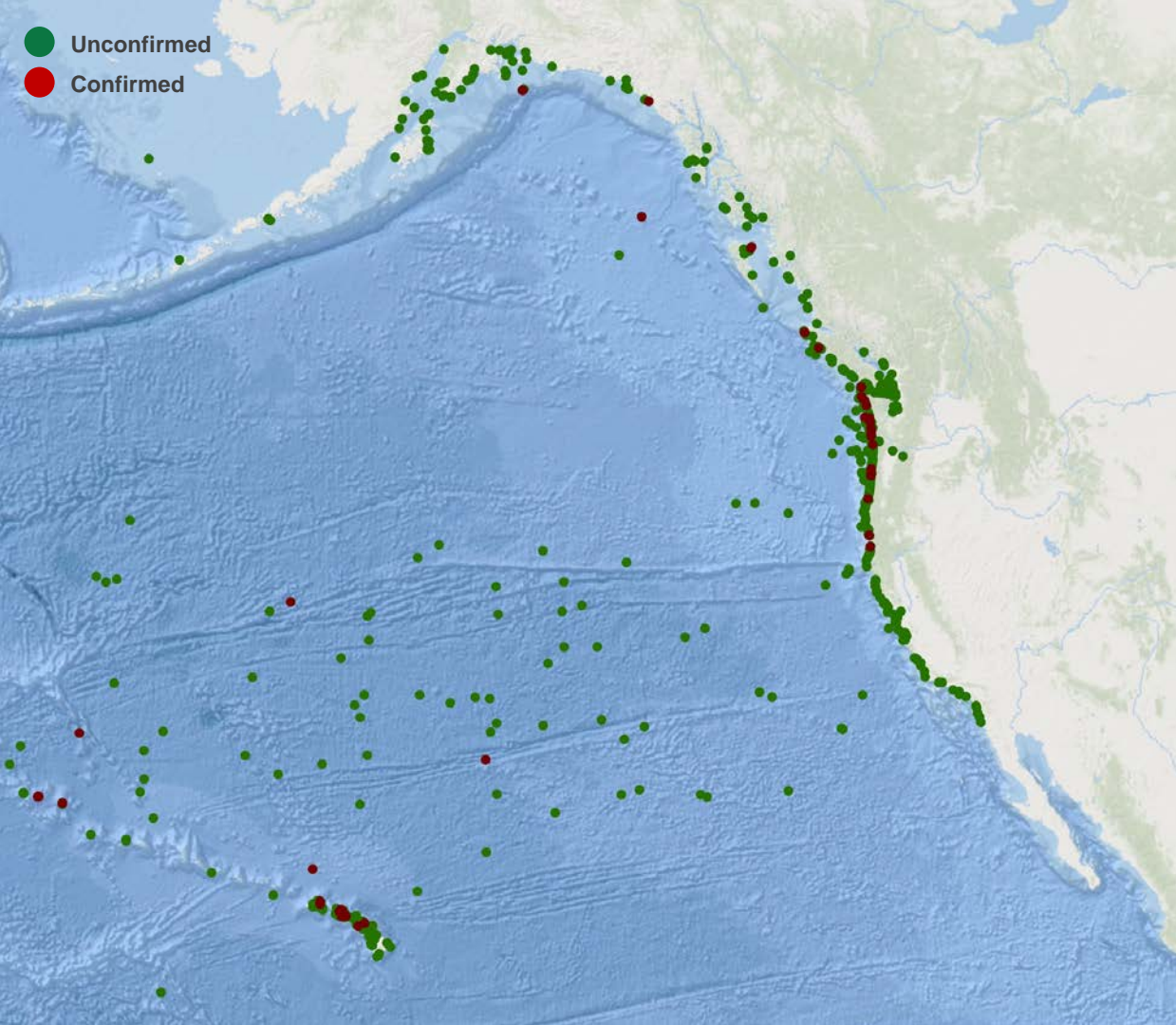
August 2011

June 2012



Spotted by USCG, 1 August 2011





Opportunistic Detection

- Existing volunteer and state partners
- Marine Debris Tracker smartphone app
- Debris email reporting



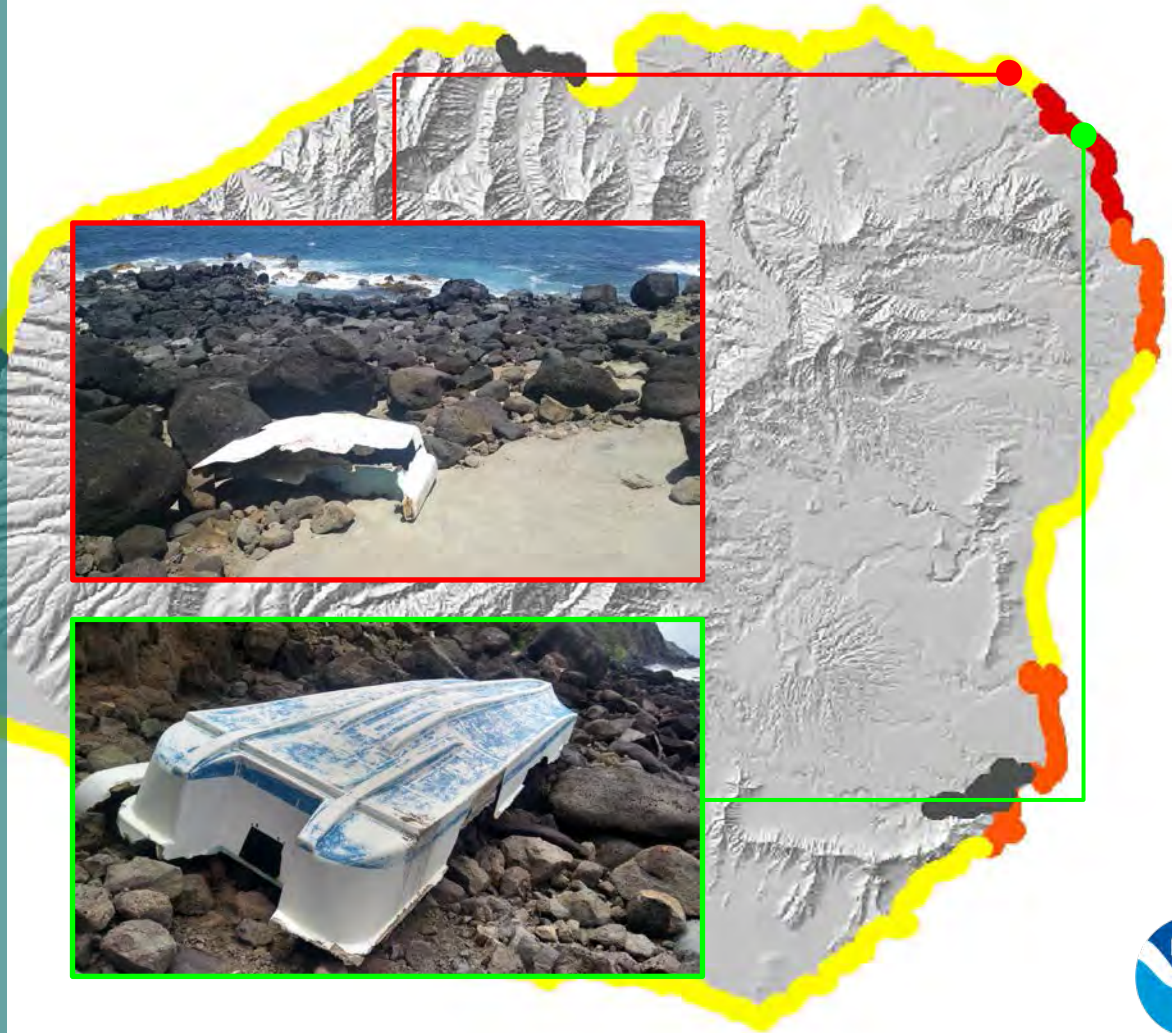
Targeted Detection

- **Satellite**
 - Regular monitoring of 7 sites
- **Aerial Surveys**



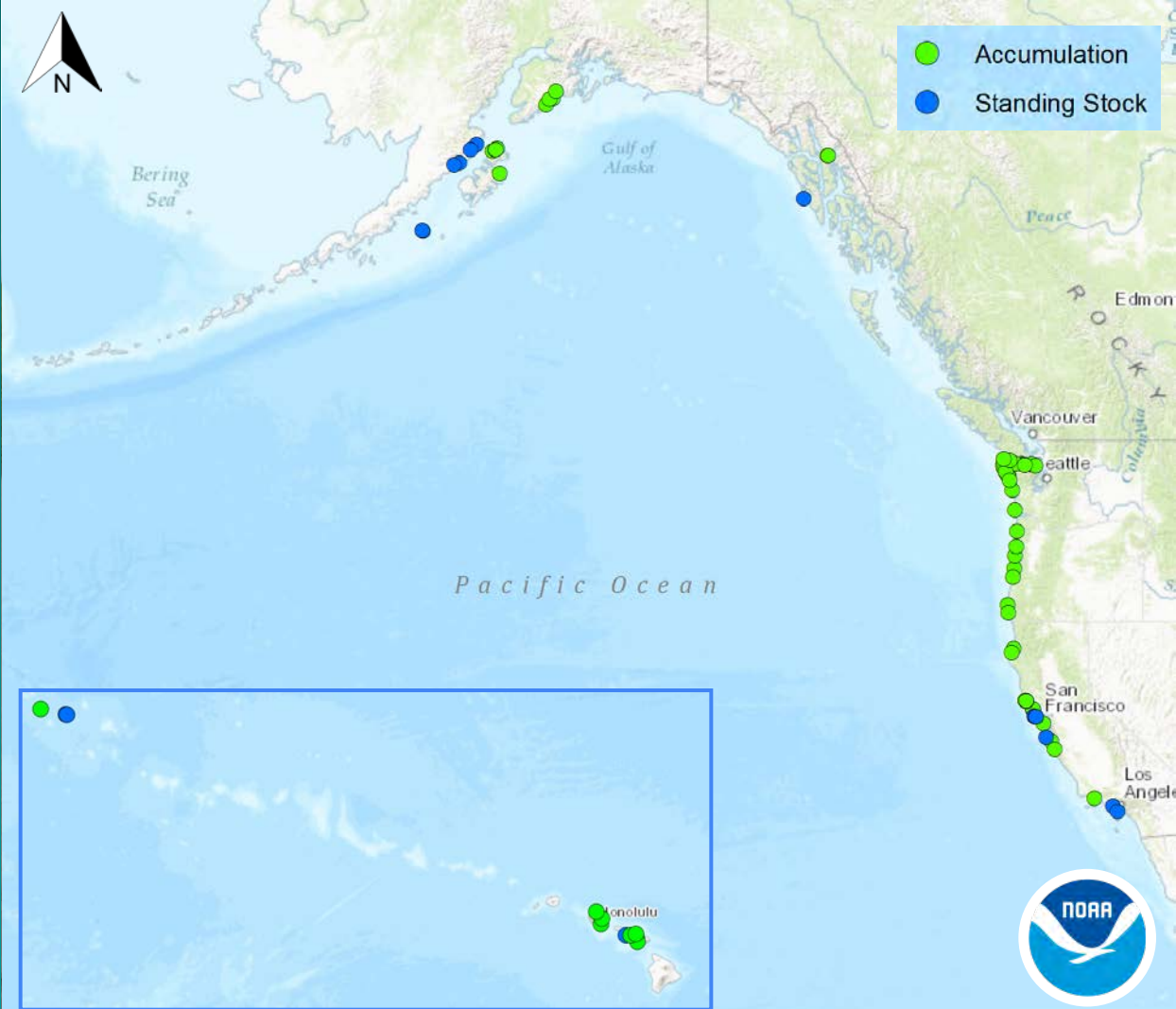
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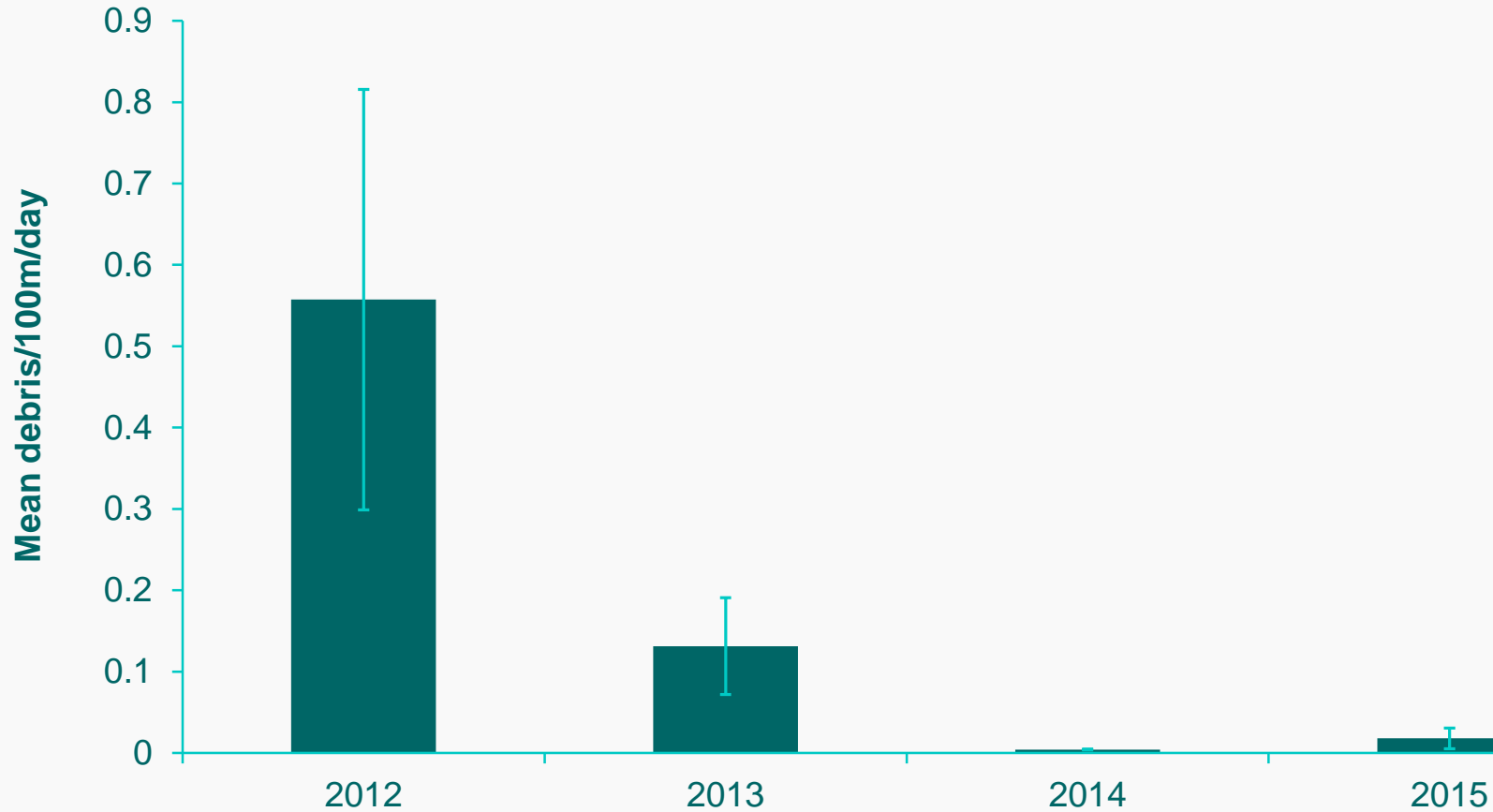


Monitoring

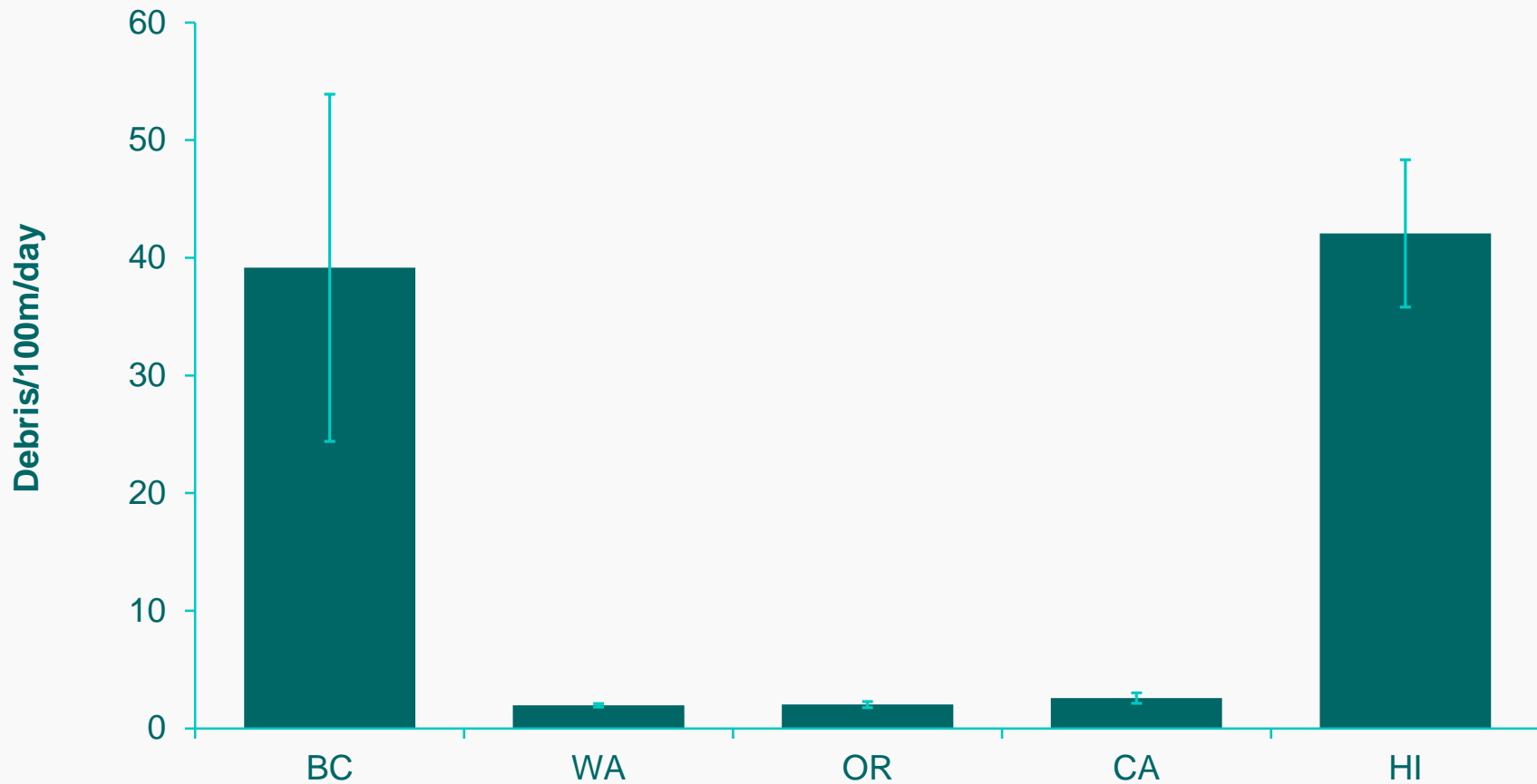
- Marine Debris Monitoring and Assessment Project
- Volunteer citizen science initiative
- NOAA standardized monitoring protocols
- Monthly site surveys
 - 293 Sites
 - 5342 Surveys completed
 - 355,966 Items recorded



Shoreline debris in Alaska



Shoreline debris across the West Coast



What happened to the tsunami debris?



Removal

- NOAA distributed initial funding to each impacted state
- **Further support from Government of Japan**
- Funds used for:
 - Volunteer cleanups
 - Large scale removal
 - Tipping fees
 - Garbage bins
- Majority of removal in Alaska

Photo: Gulf of Alaska Keeper

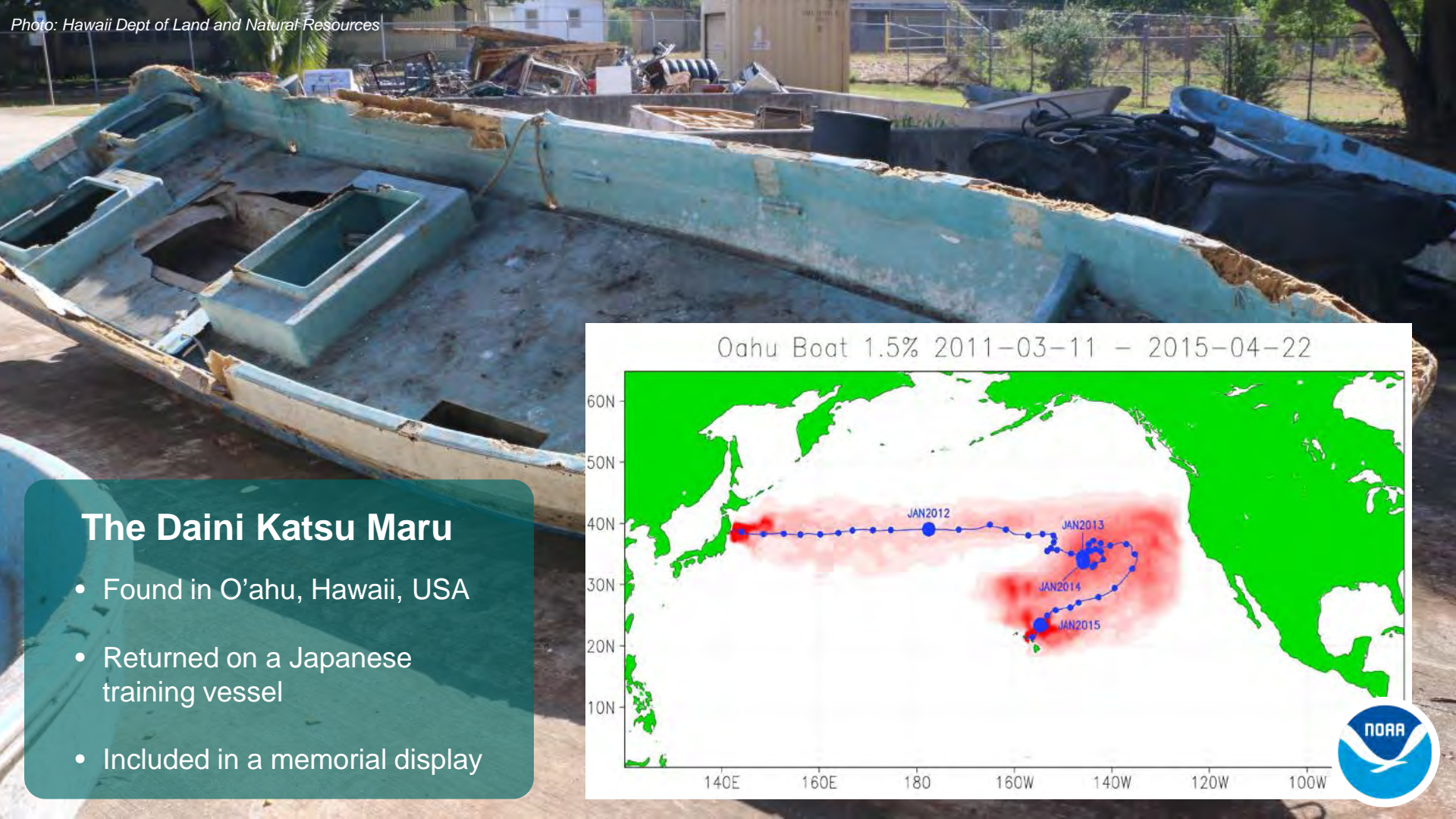




Gulf of Alaska Keeper

- Removed ~50 tons of debris
- Ranged from small items and foam, to large bulky items
- Shipped to Seattle, Washington, USA for disposal
- Not all confirmed tsunami debris

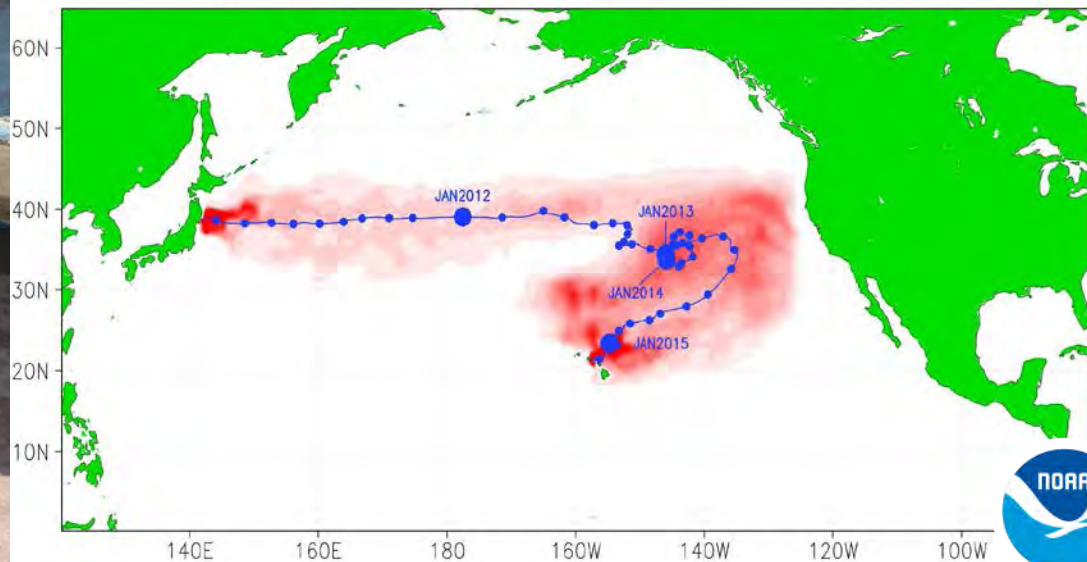




The Daini Katsu Maru

- Found in O'ahu, Hawaii, USA
- Returned on a Japanese training vessel
- Included in a memorial display

Oahu Boat 1.5% 2011-03-11 - 2015-04-22





Football

- Found on Middleton Island, Alaska, USA
- Returned to student with help from the Japan Consulate

Photo: Reuters

Photo: David Baxter



Motorcycle

- Found in Haida Gwaii, British Columbia, Canada
- Located owner through license plate
- Featured at the Harley-Davidson Museum in Milwaukee, Wisconsin, USA



PLEASE DO NOT TOUCH

Photo: Harley-Davidson Museum



The Kamome

- Found in Crescent City, California, USA
- Students in Crescent City restored and returned the Kamome
- Adapted into a children's book
- Displayed at the Tokyo National Museum

THE EXTRAORDINARY VOYAGE OF KAMOME

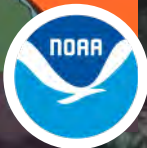
A Tsunami Boat Comes Home

いつまでもともだちでいようね

ローリー デングラー と アミヤ ミラー 作
エイミー ウエキ 絵



WRITTEN BY LORI DENGLER AND AMYA MILLER, DESIGNED AND ILLUSTRATED BY AMY



ありがとう Thank You

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