



# How the 2011 Japanese Earthquake and Tsunami Prompted a Marine Debris Monitoring Program in North Central California

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March 11, 2011  
Japanese Earthquake and Tsunami

22 Thousand  
309 Billion  
50 Million  
5 Million tons  
1.5 Million tons





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# June 5<sup>th</sup> 2012 Agate Beach, Oregon



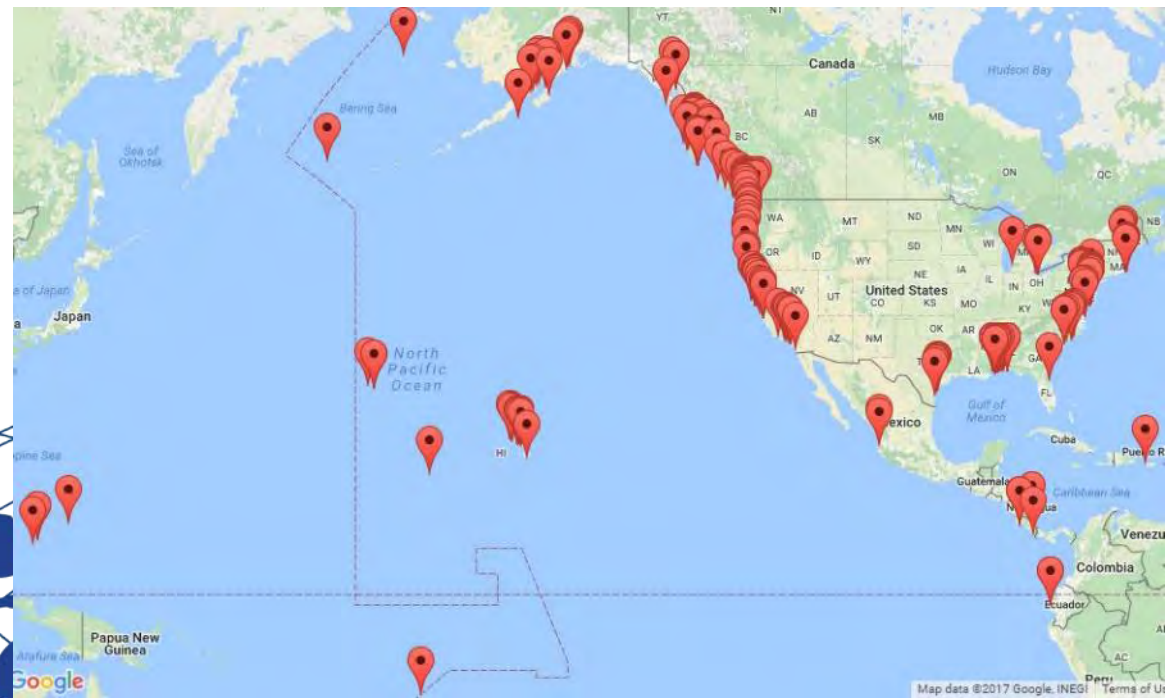
# Marine Debris Monitoring and Assessment Project (MDMAP)

NOAA MDP executed a **national shoreline monitoring program** in 2012, in order to compile a rigorous **marine debris dataset** and establish **standardized protocol**

Citizen science effort to track **abundance, types, and concentration** of debris on beaches

Globally, **341 shoreline sites** surveyed

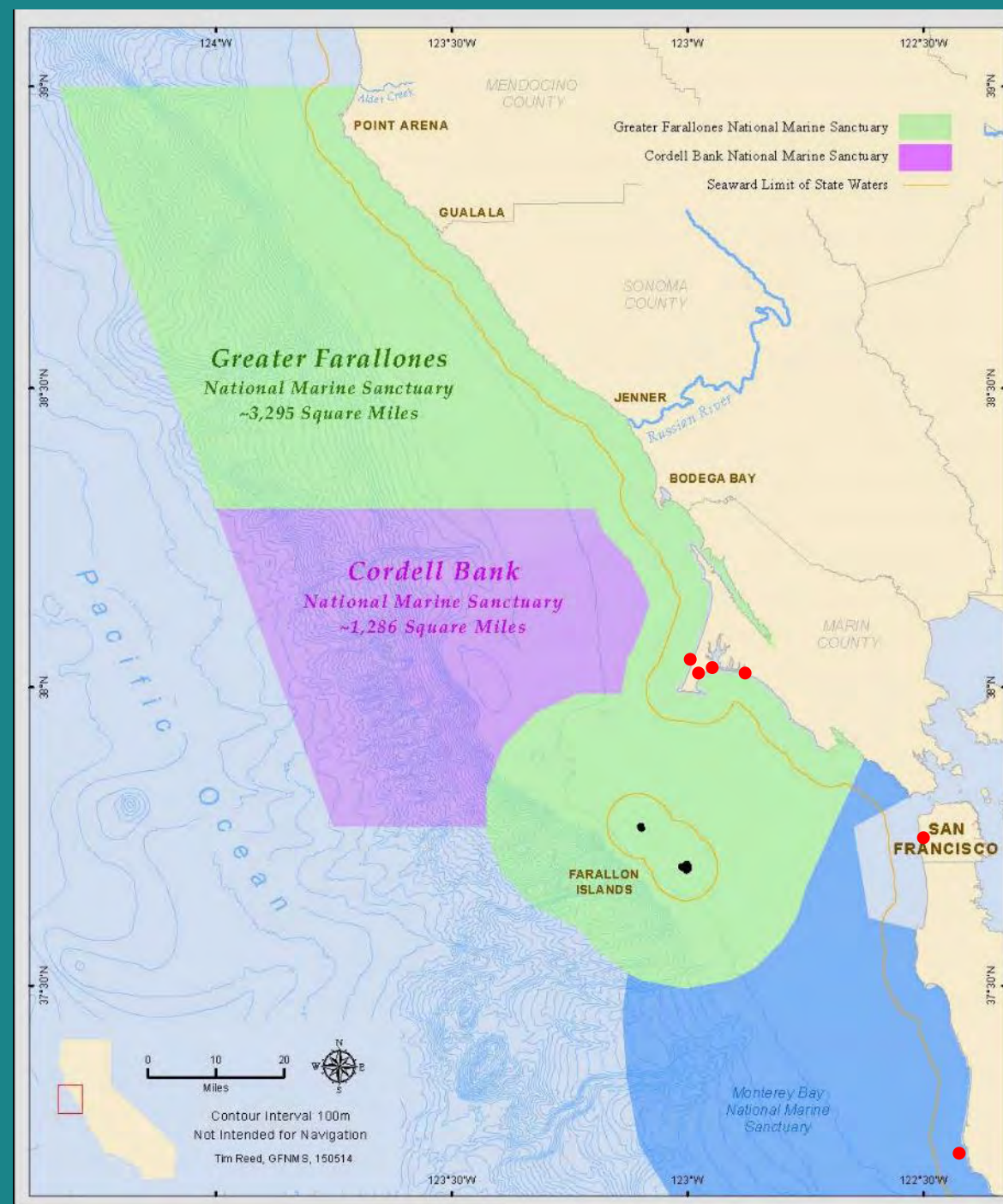
Over **4,000 surveys** uploaded to NOAA's online database





# July, 2012 to February, 2018

- 6 permanent beach survey sties
- 324 surveys conducted
- 126 volunteers
- Over 30,000 items recorded

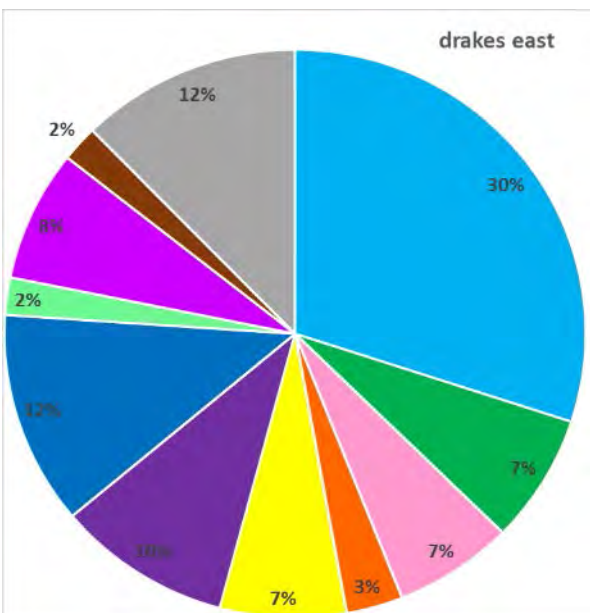
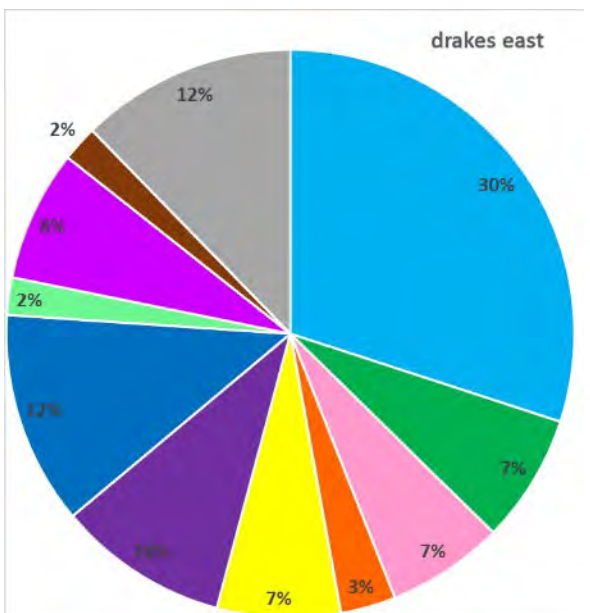
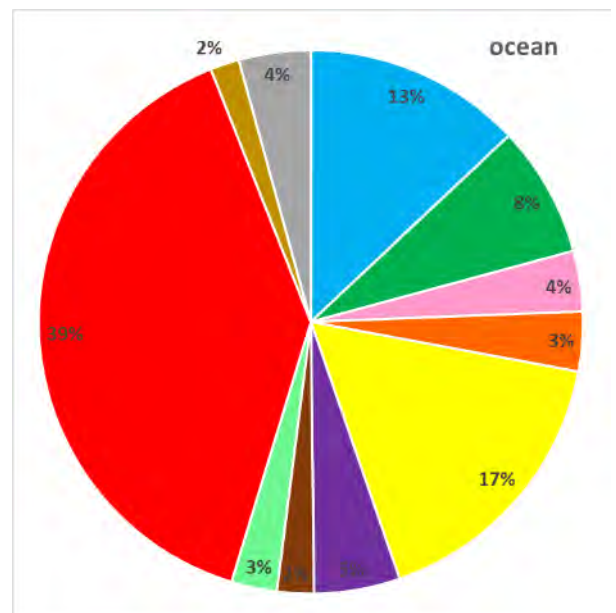
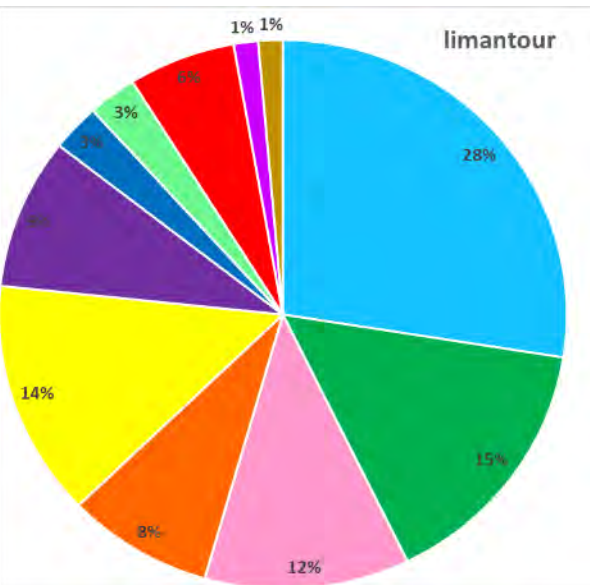
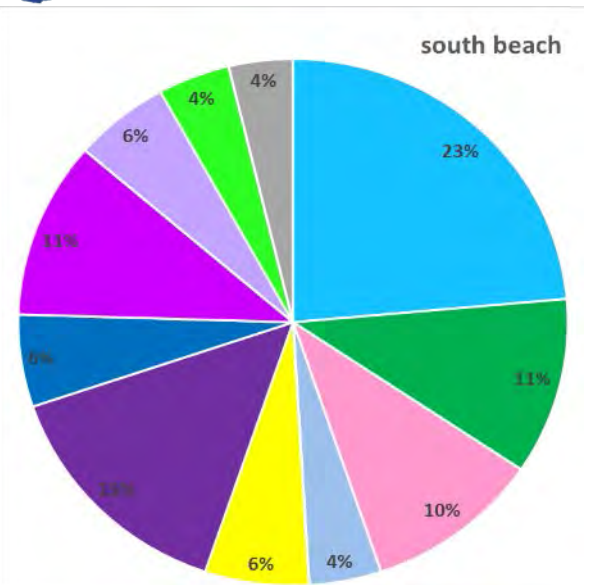
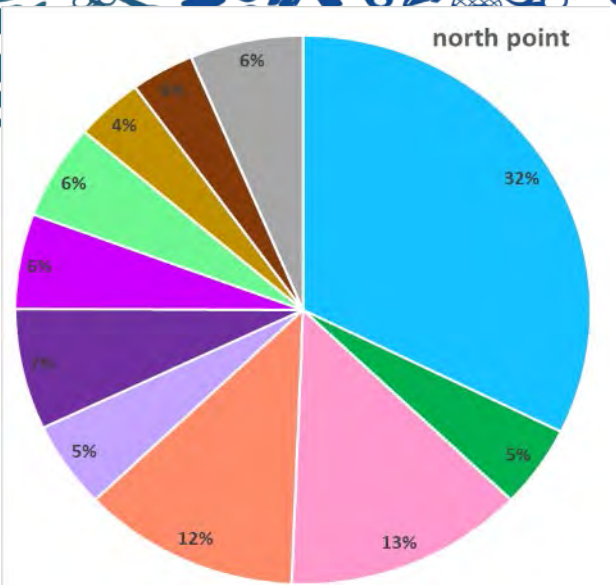




Record counts of man-made items larger than 2.5 cm (1 inch) within seven different categories

- 1) Plastic
- 2) Metal
- 3) Lumber
- 4) Rubber
- 5) Glass
- 6) Fabric/cloth
- 7) Unclassified





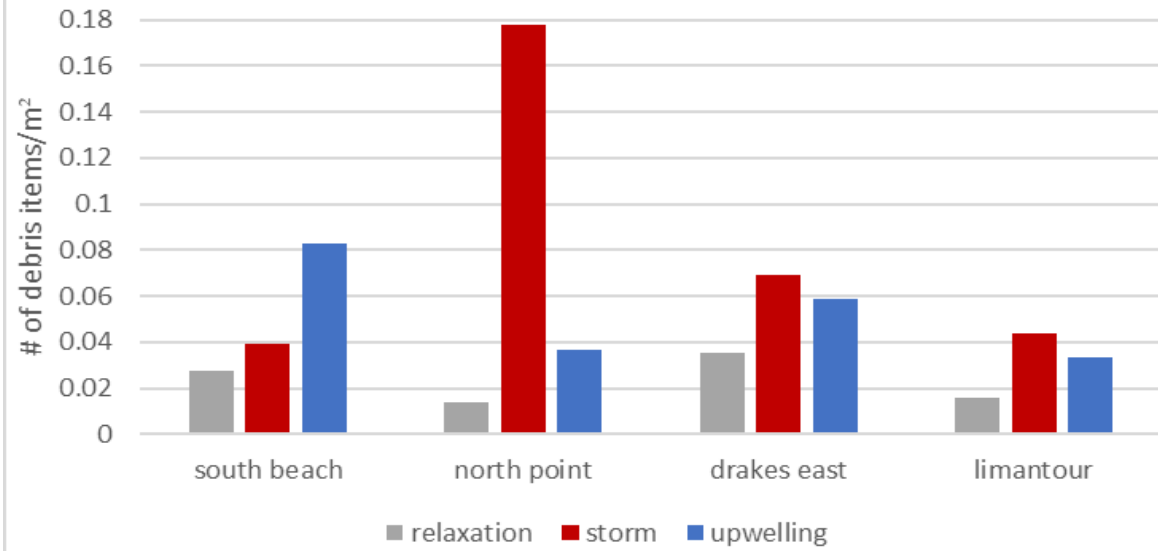
- bottle caps
- straws
- shotgun wads/shells
- cigar tips
- food wrappers
- rope
- oyster farm debris
- personal care
- cigarettes
- beverage bottles
- utensils



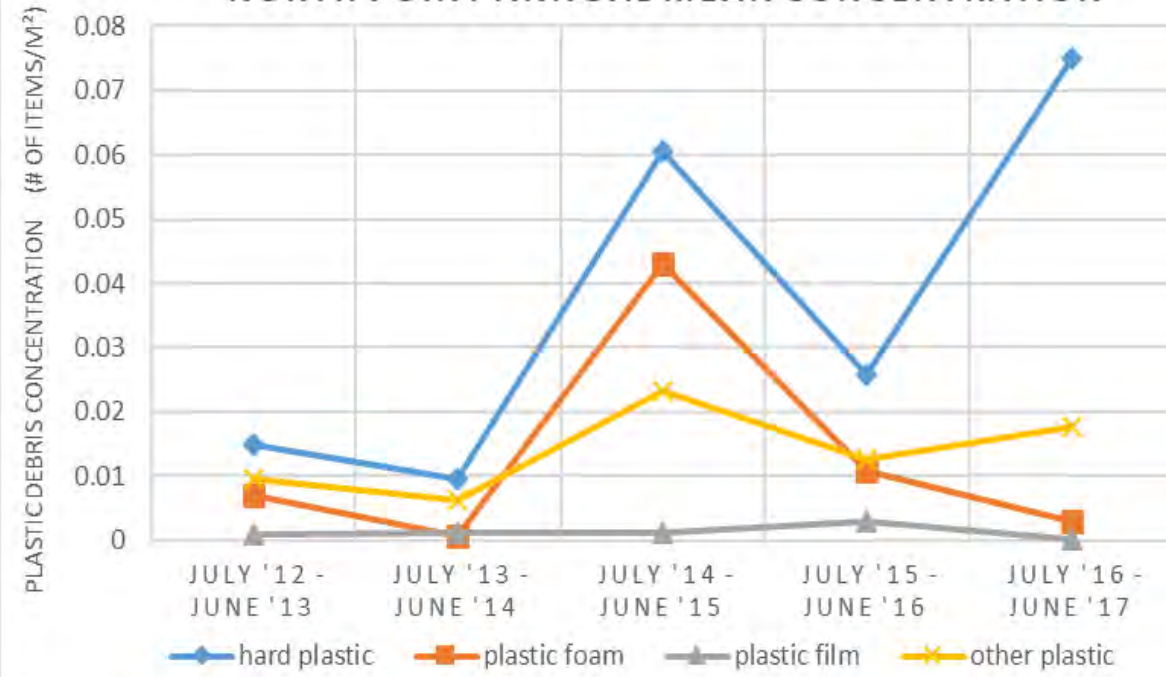




Standing Stock Mean Seasonal Debris Concentration



NORTH POINT ANNUAL MEAN CONCENTRATION







THANK YOU!