



## MEMORANDUM

TO: Ocean Protection Council  
FROM: Sarah Flores, Project Manager  
DATE: September 13, 2012  
RE: Japan Tsunami Marine Debris

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### SUMMARY:

Staff have prepared an overview of California's planned response to the Japanese Tsunami Marine Debris (JTMD) including the implications for marine debris clean-up and communication efforts.

### BACKGROUND:

On March 11, 2011, a 9.0 magnitude earthquake off the coast of Japan prompted a devastating tsunami. The Government of Japan estimates the tsunami generated 5 million tons of marine debris and that 70 percent of that debris sank nearshore. Roughly 1.5 million tons remain afloat. Some debris has already arrived on the coast of Alaska, British Columbia, Washington and Oregon. The National Oceanic and Atmospheric Administration's (NOAA) tsunami debris models predicted that buoyant items would start reaching the Pacific Northwest in the winter of 2011-12. They predict Northern California will see the bulk of the tsunami debris in 2013.

Federal agencies are leading the response to Japanese Tsunami Marine Debris (JTMD), while state agencies are working closely to support and coordinate with federal agencies. NOAA is spearheading this effort and has developed a website (<http://marinedebris.noaa.gov/tsunamidebris/>) with clean up procedures, information on the predicted location of the debris field, answers to frequently asked questions, as well as an e-mail address where people can report debris sightings ([Disasterdebris@noaa.gov](mailto:Disasterdebris@noaa.gov)).

Currently, there have been 11 confirmed JTMD items on the shores of the West Coast; none have been confirmed in CA. Notable items include a nearly 70-foot-long dock (OR), a Harley Davidson motorcycle (B.C.), a soccer ball (AK), and a vessel (WA).

### *Issues of Concern*

**Aquatic Invasive Species:** The 70 foot dock that washed ashore in Oregon had marine species living on it that are not native to the West Coast. Some of these species are known to be invasive and could cause ecosystem and economic harm. Experts on marine invasives are currently collaborating to develop a framework to identify, detect, and respond effectively to minimize this threat.

**Radiation:** Experts agree that tsunami debris is highly unlikely to have harmful levels of radiation because the Fukushima plant meltdown occurred after the tsunami washed debris out to the ocean.

**Amount of Debris:** It is difficult to predict the magnitude and timing of potential JTMD, therefore, it is critical that we are prepared to address this issue through long-term, sustainable, and effective management and communication plans.

**Public Awareness:** The issue of JTMD provides an opportunity to raise awareness about the global problem of trash in our oceans. Globally, every year, 7 million tons of debris is washed out to sea, while 1.5 million tons of Japan tsunami marine debris is predicted to remain afloat.

### ***Response and Cleanup***

**Emergency Response:** The California Emergency Management Agency (CalEMA) and the California Environmental Protection Agency (CalEPA) are the two primary lead agencies for emergency response to JTMD. CalEMA is currently drafting a *Concept of Operation* document that outlines the framework for emergency response, including coordination with local agencies, procedures to minimize risk of injury from large debris and contaminants, and facilitation of removal and cleanup activities.

**Beach Clean-ups:** The California Coastal Commission (CCC) and California Volunteers are the agencies leading the effort to conduct beach-cleanups and the CCC has published Beach Cleanup Volunteer Protocols. A two-year West Coast shoreline monitoring project to determine JTMD baseline levels started recently through NOAA. Thirteen monitoring sites have been identified in CA; nine sites will be surveyed by the Gulf of the Farallones National Marine Sanctuary and four will be overseen by non-profit organizations.

On July 18<sup>th</sup>, seven governors (CA, OR, WA, HI, AK, Guam, Commonwealth of Northern Mariana Islands) sent a joint letter sent to President Obama asking for additional federal assistance. Most recently, NOAA offered \$250,000 in grants, \$50,000 for each of the five states that may be impacted by JTMD. CalEMA, in partnership with the Coastal Commission have applied for this grant in early August. It is expected that the funds will be utilized to deploy the California Volunteers and to assist with supplies for clean-up and removal of marine debris.

### ***Communication and Outreach***

**Marine Debris Steering Committee (MDSC):** The OPC recently re-convened an inter-agency Marine Debris Steering Committee. Supporting and coordinating current California JTMD response and communications efforts was agreed upon as a priority issue, and the MDSC is well-positioned to assist these efforts.

**The Joint Information Center** (<http://disasterdebris.wordpress.com>) portal is an online platform for sharing communication materials on JTMD. This website which targets the media, partners, and stakeholders, is a collaboration between various state and federal agencies.

**NOAA's Tsunami Debris Page** (<http://marinedebris.noaa.gov/tsunamidebris/>) has resources detailing clean-up procedures, forecasts and models of the debris field, and answers to frequently asked questions.

**Thank You Ocean Campaign:** The California [Thank You Ocean Campaign](#) is a partnership supported by the State of California, the NOAA Office of National Marine Sanctuaries and the Ocean Communicators Alliance. The campaign mission is to raise awareness of the benefits the ocean provides to us and to identify ways each of us can help protect the ocean in our everyday lives. The website provides educational resources on various ocean-related issues, one of them being marine debris.

In addition, the OPC has created a webpage with general JTMD information pulling mainly from the NOAA JTMD webpage: <http://www.opc.ca.gov/2012/06/information-on-efforts-to-address-marine-debris-resulting-from-the-2011-japanese-tsunami/>