Assessing the Condition of San Diego Bay for Non-Water Contact Recreation

Monitoring and Assessment
San Diego Water Board October 2017

Types of Recreation in the San Diego Bay

San Diego Bay provides opportunities for many types of recreation in, on, and around the water. Activities may (e.g., swimming) or may not (e.g., birdwatching) involve contact with the water. This status sheet focuses on types of San Diego Bay recreation that do not require water contact. Specifically, it discusses patterns of trash abundance in the Bay that may negatively affect enjoyment of non-water-contact recreation (also called the "REC-2" beneficial use). A separate status sheet describes risk of exposure to human pathogens resulting from contact with the water (and any incidental ingestion) in high activity parts of the Bay.

Stressors Impact Recreation

People cause "stressors" such as trash, oil spills, massive growths of algae, and illegal discharges of sewage that affect the REC-2 beneficial use either as eyesores or unpleasant odors. Our goals are to evaluate the Bay's REC-2 status and eventually to develop an ongoing, Unified Monitoring Program that will involve coordinated, standardized efforts to assess whether REC-2 (and other beneficial uses) is attained in the Bay and assess trends in condition over time.

The San Diego Bay: A Resource of Many Uses

San Diego Bay is an important water body in the San Diego region due to its ecological value and because it supports tourism; commercial, recreational, and subsistence fishing; and a variety of recreational, maritime, industrial, commercial, and military uses. For this reason, the San Diego Water Board endorsed a "Strategy for a Healthy San Diego Bay" via Resolution No. R9-2015-0086 in June 2015. The Strategy identified the key beneficial use categories of the Bay as: Recreation (water contact ("REC-1") and non-water contact ("REC-2")); Human consumption of fish and shellfish; and Habitats and ecosystems. A primary goal of the Strategy is to use monitoring data to assess attainment of these key beneficial uses, as well as changes in their status over time, and to communicate findings to the public.

Who Is Collecting Data on Trash?

Data are available from sources such as permit-required monitoring, studies by citizen volunteers, the Port of San Diego and its tenants, and from research scientists that collect, quantify, and classify trash. Because these data come from different groups using different methods and focusing in different areas, we cannot create a complete picture of the status of the REC-2 beneficial use throughout the Bay. Rather, this analysis highlights some results from a selection of diverse sources.

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Data Sources:

I Love a Clean San Diego hosts Coastal Cleanup Day every year, where volunteers collect data on trash removed. Results indicate that the most common trash items around the Bay are cigarette butts, followed by snack-food bags and plastic bottle caps. Trash not only impacts the REC-2 beneficial use; it is also a major concern because of its well-documented harmful effects on wildlife. The picture below depicts a seabird with a fishing weight hanging from its mouth.

Photo: J. Haas

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Trash "Hot Spots" & Sources

Several studies have identified candidate "hot spots," where trash appears to accumulate in the Bay due to transport by runoff from the land or from prevailing winds concentrating existing trash in eddies. For instance, the US Navy operates a trash boom at the mouth of Chollas Creek, which is impaired for trash, to prevent trash discharges to the Bay via the Creek. The most recent trash haul from the boom was over twice the typical annual amounts recorded previously, possibly due to recent heavy rains moving trash down the watershed following a prolonged drought. Within the Bay, the San Diego Bay Debris Study identified candidate hot spots by using surface trawls to quantify amounts of floating trash, once in the dry season and once again in the wet season. Interestingly, trash monitoring carried out by the Port of San Diego at storm drain and creek outfalls has suggested similar hot spots.

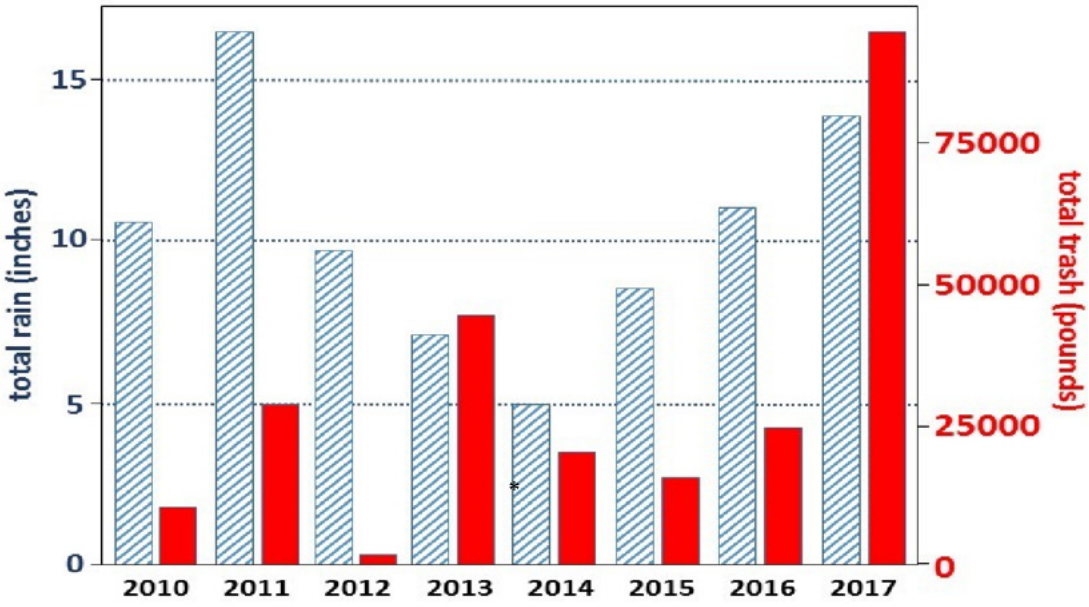

*Figure 1. Annual pounds of trash removed from Chollas Creek trash boom (solid red bars; right y-axis) compared to total rainfall (hatched blue; left y-axis). *2014 trash quantity was estimated based on previous data.*

Information about trash hot spots and sources is important for the San Diego Water Board and partners to craft effective monitoring and assessment programs to track and improve the success of trash-abatement/control measures in order to achieve REC-2 and other beneficial uses in the Bay.

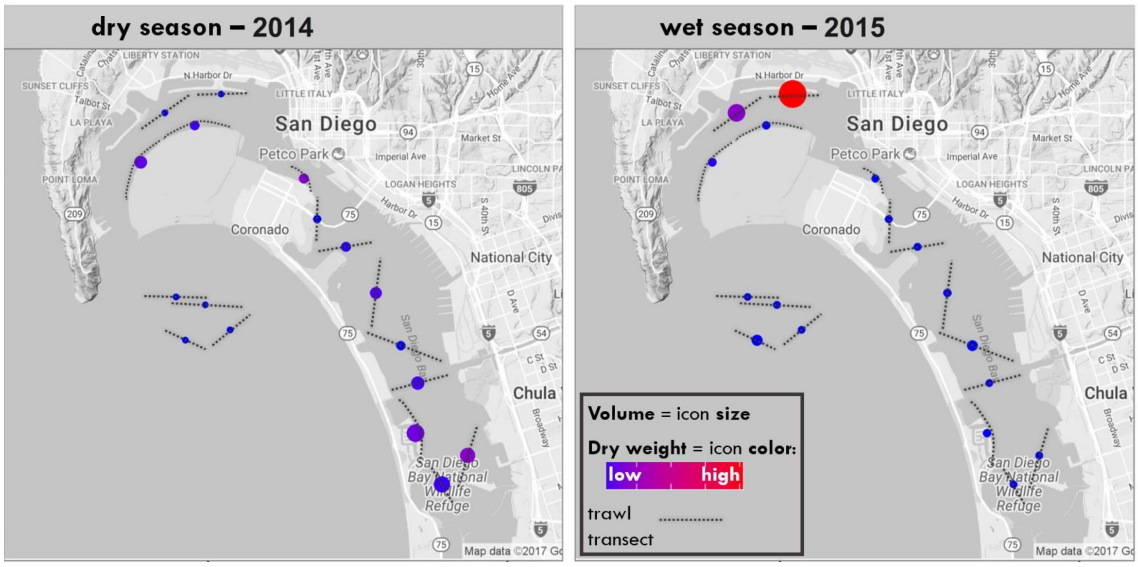

Figure 2. Snapshots–in–time of total volume and weight (see legend) of floating trash collected along trawling transects in San Diego Bay in the dry (left panel) and wet (right) seasons. Candidate seasonal hot spots (based on one-time sampling in each season) are in the south Bay (dry season) and north Bay (wet).

Be Part of the Solution

- do not litter or leave fishing gear behind
- properly pump out boat holding tanks
- clean up after your pet
- report oil spills (dial 800-OILS-911)
- participate in *trash clean-up events*
- *place residential/business trash containers out only on collection day, and keep them covered*
- reduce consumption of single-use, disposable items
- reuse/recycle whenever possible
- *advocate for "end-of-life" responsibility* from manufacture

The San Diego Water Board's website: Heathy waters realized through collaborative, outcome-focused efforts that support both human uses and sustainable ecosystems.