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The Newsletter of Friends of Casco Bay / Casco BAYKEEPER® Protecting the Bay for 20 years

Casco Bay Bulletin

Autumn 2009

A Hole in the Bottom of the Bay?

Thanks to Casco BAYKEEPER® Joe Payne, "CAD cell" is the buzzword at the Portland Waterfront Alliance Dredge Committee. A little over a year ago, Joe proposed that the committee look into the feasibility of CAD, short for Confined Aquatic Disposal. This storage method essentially consists of digging a deep, rectangular hole beneath the Bay and isolating contaminated dredge sediments in it.

Sediments flow off the city streets into the Bay, settling in the ship channel and around the twenty or so piers that dot the waterfront. Water around many of the piers is now too shallow for vessels to tie up at low tide. While the sediments in the ship channel are fairly clean, those along the shoreline have accumulated decades of "legacy contaminants" from old factories and shipyards and from modern-day urban runoff.

The Dredge Committee commissioned a study to explore if a CAD cell might work for disposing of contaminated dredge spoils from around the privately-owned wharves. The waterfront business owners would have to pay to excavate the sediments around their piers, but outside funding would be sought to dig the CAD cell.

At first glance, wouldn't Friends of Casco Bay be against a solution that leaves contaminated sediments in the ocean? Joe explains that moving mud and contaminants away from the shoreline and sequestering them would improve the health of the harbor. "Tests have found that the mud in CAD cells stays where it is put. Our first priority is always going to be protecting the water quality of Casco Bay. When a solution is good for the environment and good for the economy, that's a win-win."

Sediments are filling in berthing space around Portland's piers, as well as the federal ship channel that conveys large ships into the harbor. Casco Baykeeper Joe Payne is working with business owners and state and federal authorities to ensure that dredging does not harm the water quality of Casco Bay.

Record Rain Wreaks Havoc on the Bay

Forty days of rain this summer caused environmental and economic damage. Stormwater has washed oil and gas from cars, sewage, and other pollutants into the Bay. High bacteria counts have closed swimming beaches and clam flats up and down the coast, resulting in millions of dollars in economic losses.

The National Weather Service reports that Portland has received over twenty inches of rain since June 1st. That's more than ten inches above normal. The soggy summer surely dampened vacation plans, but what has it done to Casco Bay? Said Joe Payne, "The heavy rains scoured bacteria, nitrogen, and toxins from streets, lawns, and parking lots and washed them into Casco Bay."

More than 40 days of measurable rainfall this summer meant that underground pipes that normally carry stormwater and household waste to sewage treatment plants instead diverted the overflow into an almost continuous stream of sewage and street runoff flowing into the Bay. The resulting high bacteria count closed swimming beaches and clam flats. An influx of nitrogen from sewage and lawn fertilizers encouraged phytoplankton growth and exacerbated red tide outbreaks.

Researcher Kevin Athearn at the University of Maine Machias calculates the economic costs of red tide and flood closures. In 2005, another year with above-average rainfall, the lost income to Maine shellfish harvesters was nearly $6 million. Friends of Casco Bay Research Associate Mike Doan believes the heavy rains also affected the juvenile lobsters that find shelter in coastal tidepools. At our monitoring site in Cape Elizabeth, he found a dead lobster whose intertidal hiding place had been flooded by a torrent of stormwater. "This was likely a casualty of the unusual amount of fresh water from the record rains," Mike reasoned.