

Massachusetts Red Tide Response

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The Red Tide event of 2005 overshadowed all other biotoxin episodes since 1972 both in elevation of toxin levels and the extent of area closed to shellfish harvesting. Toxin was actually recorded in locations that never experienced such elevated levels in the previous 33 years for which there are accurate records. Massachusetts' Division of Marine Fisheries (DMF) with the co-operation of numerous other state and federal agencies, local shellfish departments and private institutions managed this outbreak with no confirmed cases of Paralytic Shellfish Poisoning (PSP). All available staff was shifted to the Red Tide response at the expense of other important programs. Initially the bloom was tracked through routine sampling of Blue mussels at sentinel stations and other species at nearby secondary sites. Fortunately, WHOI was conducting PSP research in Massachusetts Bay and under a previously arranged agreement, communicated real time ocean current drifter data and *Alexandrium* cell counts that assisted DMF in determining the scope of the bloom and where to concentrate sampling effort. The Mass. Water Resources Authority (MWRA) also provided data.

DMF spearheaded the Commonwealth's response in concert with the State Environmental Police and the Department of Public Health (DPH) as well as the municipal shellfish departments. DMF monitored open shellfish areas, closed areas as necessary and communicated with all levels of government, the shellfish industry and the public through the media and the DMF website. The Environmental Police oversaw enforcement of closures and posting of closed areas under state control and coordinated similar efforts with local enforcement in town controlled waters. Market sampling of shellfish from sources both in and out of state and investigation of suspected illnesses was the responsibility of DPH. The opening of shellfish beds is a long and difficult process because it requires more extensive testing than closings. Individual species must be analyzed and must demonstrate three descending results over 14 days before being reopened to harvest. Due to longer toxin retention times and sampling difficulties in deep water, large areas remain closed to Surf clams, Ocean quahogs and whole Sea scallops.