RMP
REGIONAL MONITORING PROGRAM
FOR WATER QUALITY IN SAN FRANCISCO BAY

Ten Years After Toxic Chemical Phase-Out, Strong Signs of Recovery for San Francisco Bay

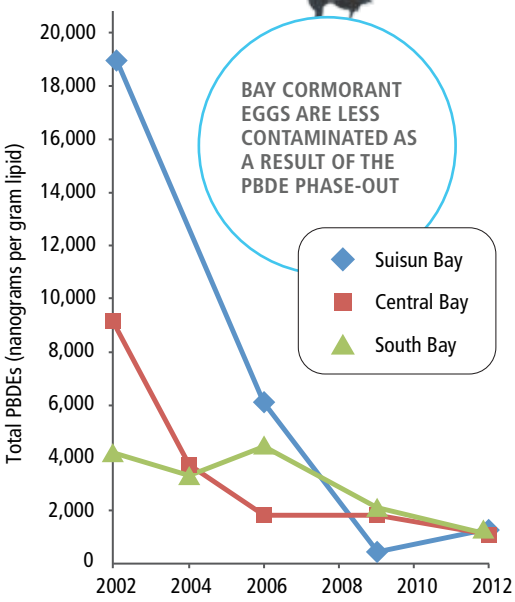
Scientists have found evidence of widespread and rapid declines in flame retardant pollution in many San Francisco Bay species, according to a new study released by the San Francisco Estuary Institute.

Ten years after an industry phase-out of widely-used toxic flame retardants known as polybrominated diphenyl ethers, or PBDEs, the study provides solid evidence that the Bay and its wildlife are recovering rapidly. PBDE levels in cormorants and terns have declined by 74-93%, and levels in sport fish have declined by nearly half. Mussels and sediment are also significantly less contaminated.

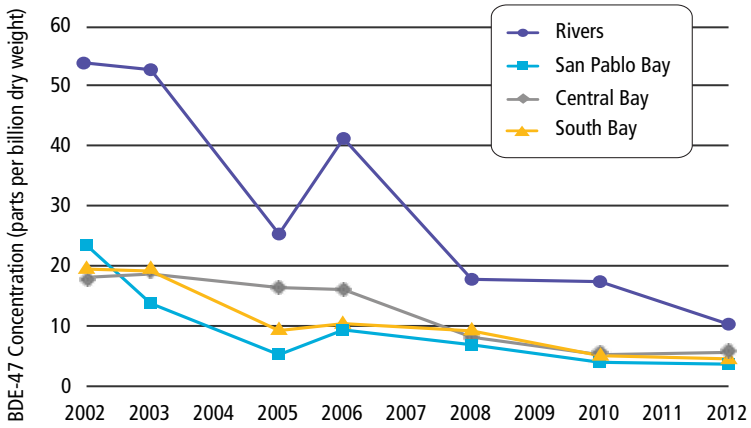
The study was part of the Regional Monitoring Program (RMP), administered by the San Francisco Estuary Institute. The RMP, now in its 23rd year, monitors contaminants in the Bay for government and industry leaders.

Once a global hot spot for PBDE contamination, the Bay is now cleaner after the halt in production and use of these toxic flame retardants. The study was published in *Environmental Science & Technology*.

While PBDEs have been phased out nationwide, other flame retardants are still in use. A key state flammability standard has undergone revisions that should reduce flame retardant chemicals in consumer goods, and further reduce contamination of the Bay and other aquatic ecosystems.



PBDE POLLUTION IN MUSSELS AND CLAMS HAS ALSO DECLINED



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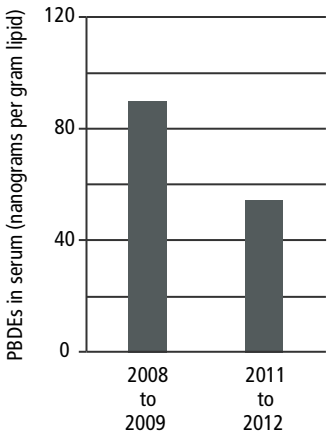
RMP UPDATE 2014 ebooks.sfei.org/update2014/#page/28:

OTHER RESEARCHERS HAVE DOCUMENTED LESS PBDE POLLUTION IN PEOPLE, INCLUDING THIS STUDY OF PREGNANT WOMEN IN SAN FRANCISCO (ZOTA ET AL. 2013)



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REFERENCES

Sutton et al. Declines in Polybrominated Diphenyl Ether Contamination of San Francisco Bay following Production Phase-Outs and Bans. Environmental Science & Technology, published online December 28, 2014.

Zota et al. 2013. Temporal Comparison of PBDEs, OH-PBDEs, PCBs, and OH-PCBs in the Serum of Second Trimester Pregnant Women Recruited from San Francisco General Hospital, California. Environmental Science & Technology 47:11776-11784.