

A photograph of the Golden Gate Bridge in San Francisco, California, taken during sunset. The bridge's iconic orange-red towers and suspension cables are silhouetted against a clear, light blue sky. The bridge spans across the water, with the city skyline visible in the distance. The water is a deep blue, and a small boat is visible on the right side. The overall scene is peaceful and scenic.

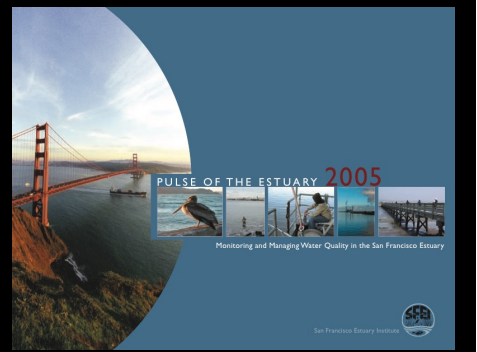
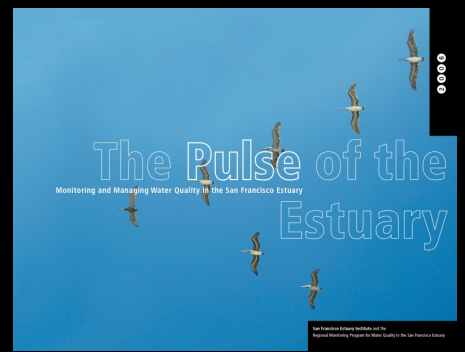
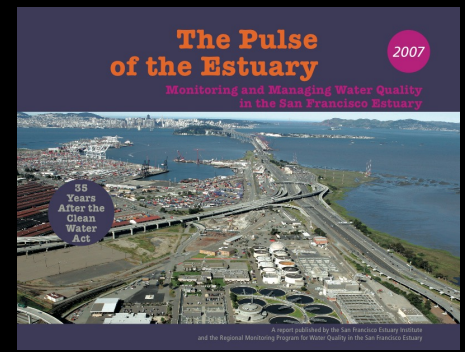
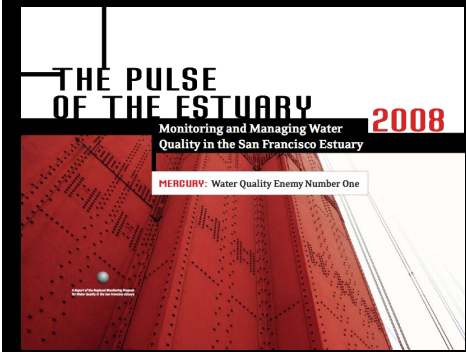
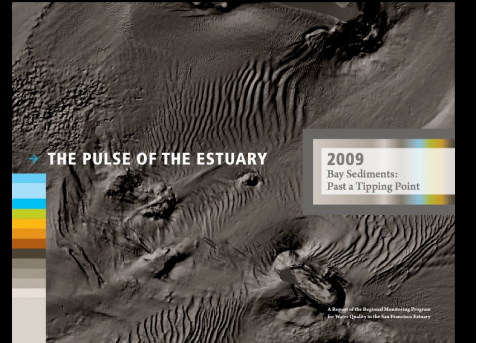
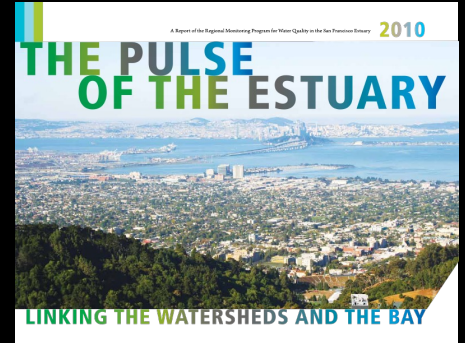
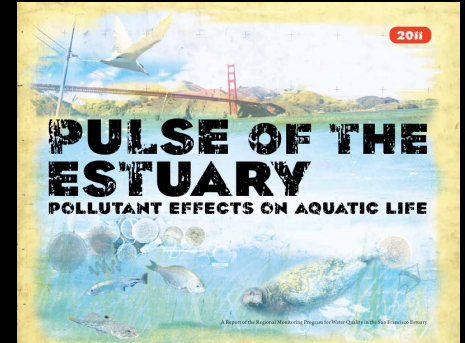
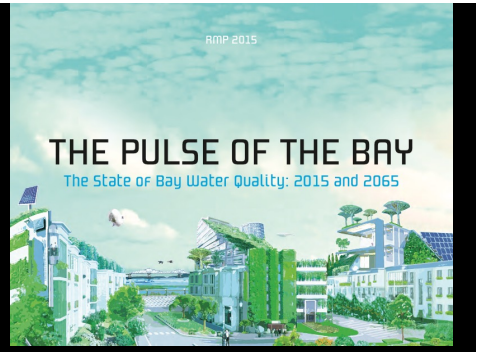
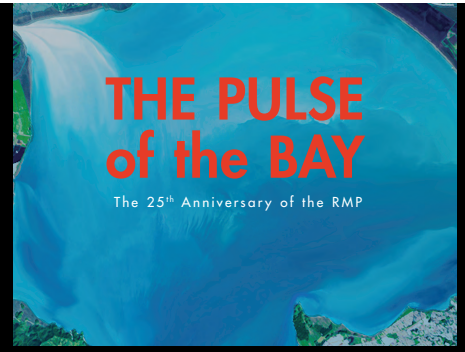
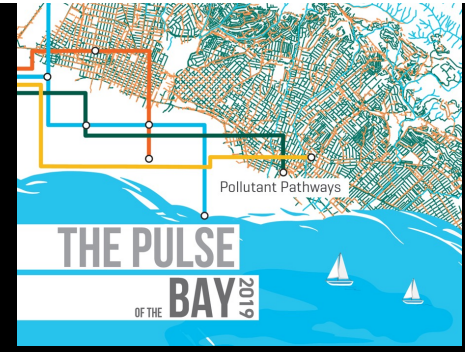
Regional Monitoring Program Update: 2022

Jay Davis
San Francisco Estuary Institute

Regional Monitoring Program for Water Quality in San Francisco Bay



- Began in 1993
- \$4 million/year of stable funding
- Multi-faceted
- Continually adapting



THE PULSE OF THE BAY 2022 • 50 YEARS AFTER THE CLEAN WATER ACT



1965



2022





1941



2022



1965



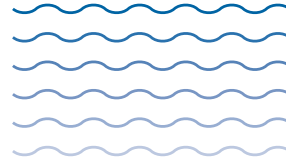
2022

1972



2022





Bay Area Municipal Stormwater Agencies

Chris Sommers and Jill Bicknell • Santa Clara Valley Urban Runoff Pollution Prevention Program

Reid Bogert • San Mateo Countywide Water Pollution Prevention Program

Emily Corwin • Solano Stormwater Alliance

The Bay Area Municipal Stormwater (BAMS) Collaborative is an informal association comprised of the municipal stormwater programs in the San Francisco Bay Area, which represent over 100 public agencies, including cities and towns, counties, and special districts. The BAMS Collaborative focuses on addressing regional challenges and opportunities to improve the quality of stormwater flowing to our local creeks, the Delta, San Francisco Bay, and the Pacific Ocean. The BAMS Collaborative represents and advocates for common interests of member programs at the regional and state levels.

The 1972 Water Pollution Control Act (commonly referred to as the federal Clean Water Act or CWA) and its amendments comprise some of the most expansive and foundational environmental laws enacted to date at the federal level. The CWA sets the overall goals of protecting and restoring the physical, chemical, and biological integrity of freshwater ecosystems (e.g., small creeks, large rivers, and lakes) and coastal waterways and wetlands, including San Francisco Bay and the Pacific Ocean. The integrity of these surface waters can be impacted by a number of factors, including pollutants in rainfall that flows over impervious surfaces, such as paved streets, parking lots, and building rooftops, and is conveyed through stormwater drainage systems, largely untreated, to surface waters. In the Bay Area, stormwater drainage systems are largely comprised of a complex array of storm drain inlets, underground pipes, and open channels, generally owned and operated by public stormwater agencies (i.e., cities, counties and special districts).

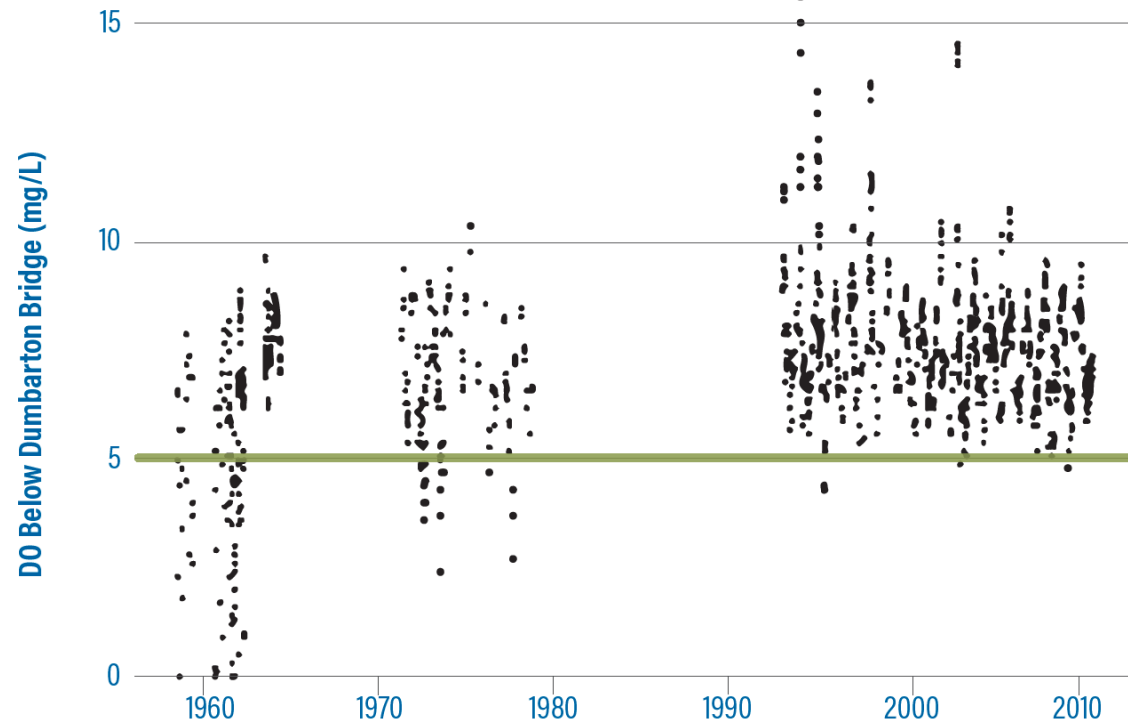
The National Pollutant Discharge Elimination System (NPDES) permitting program provides the US Environmental Protection Agency (USEPA) (or states designated by USEPA) the authority to regulate applicable “discharges” to surface waters, including those conveyed through stormwater drainage systems. In the Bay Area, CWA requirements have been implemented through NPDES permits issued by the San Francisco Bay Regional Water Quality

Success Stories

“Sewage from San José and other cities was discharged without treatment to San Francisco Bay. This practice has resulted not only in gross pollution of the receiving waters but has become a principal cause of a seasonal atmospheric condition manifested over a wide area by a sulfide odor, a tarnishing of household silver, and a blackening of painted surfaces.”

— From a 1953 report prepared for the City of San José. Cited in SFBRWQCB (2000).

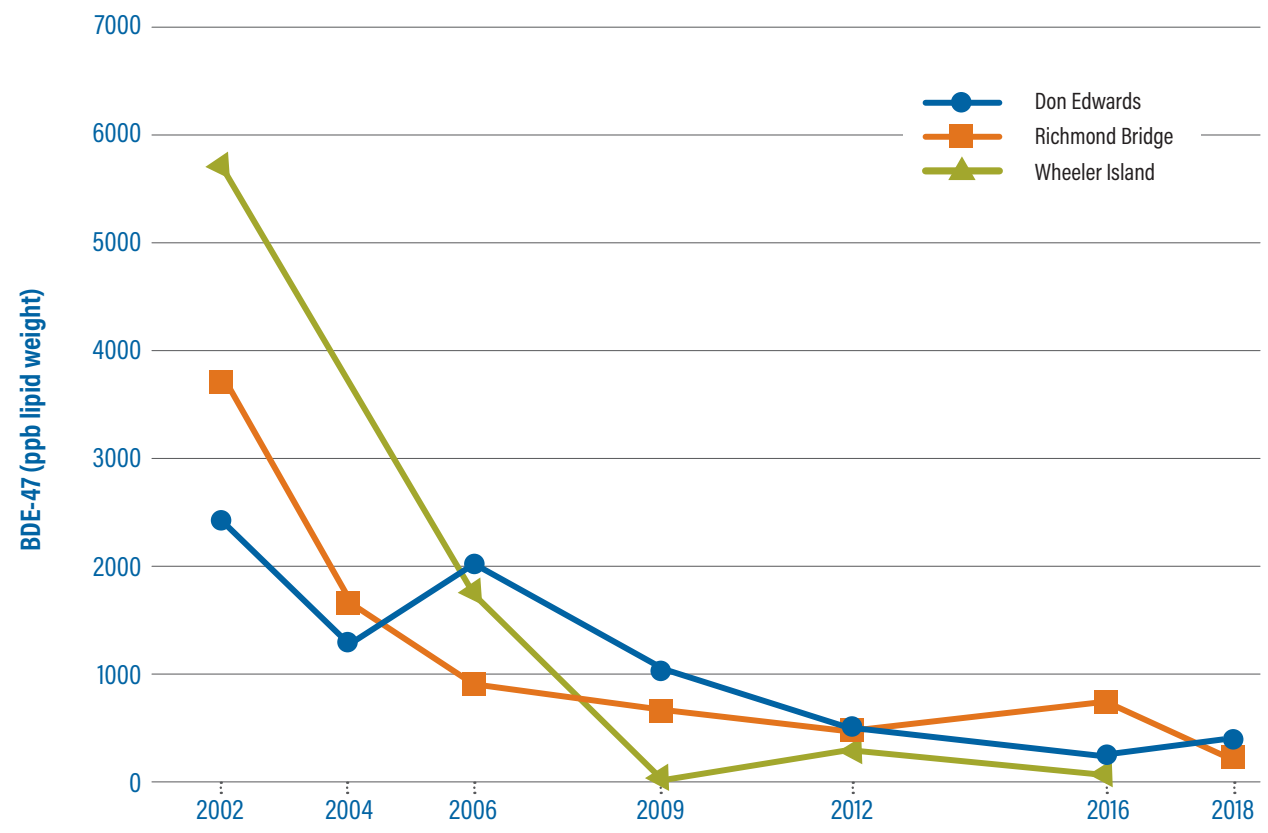
Dissolved Oxygen in the Lower South Bay (1959-2010)



FOOTNOTE: The green line represents a common standard to protect marine fish sensitive to low oxygen. From Cloern and Jassby (2012).

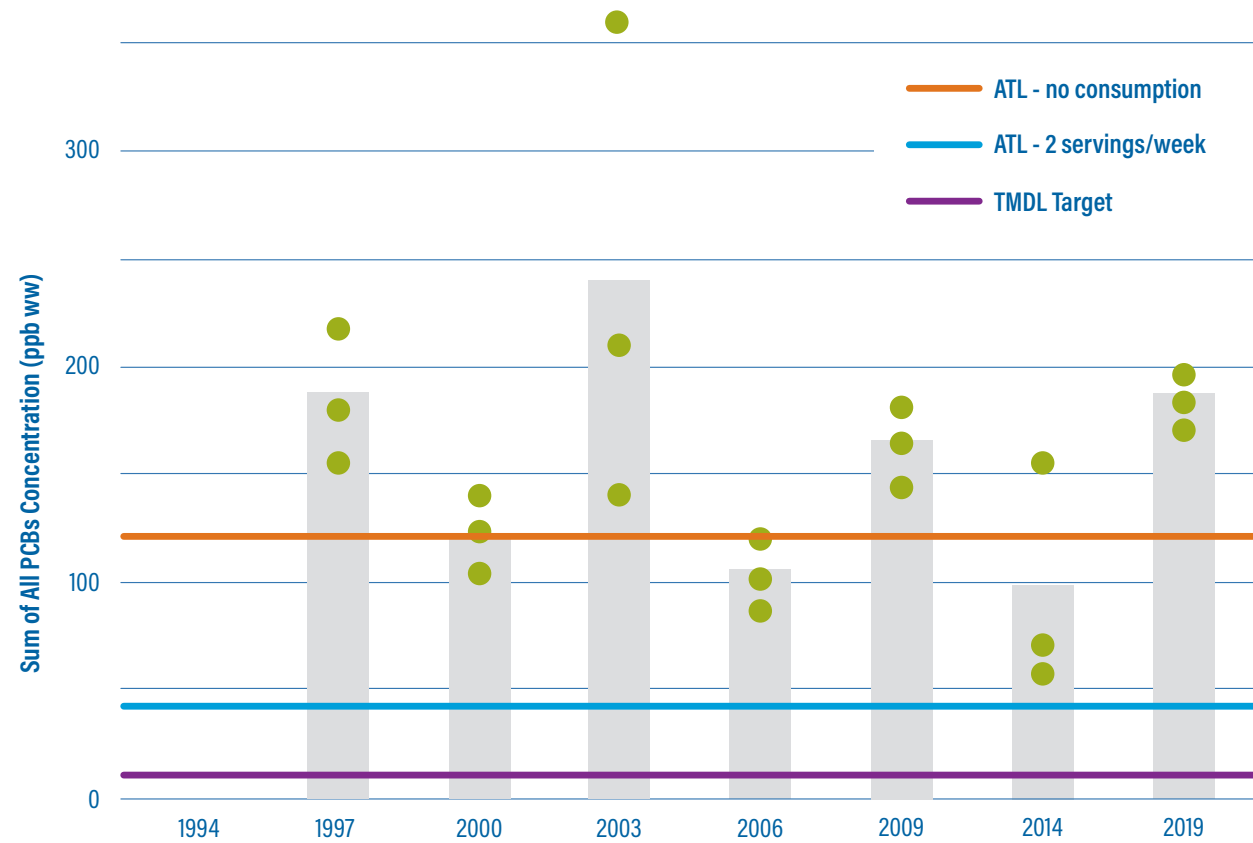
Success Stories

PBDEs in Cormorant Eggs



Remaining Challenges

PCBs in Shiner Surfperch, San Francisco Waterfront, 1994-2019



Many Challenges Ahead

- Stormwater loads
- Contaminated sites
- Infrastructure
- Nutrients and algal blooms
- Emerging contaminants
- Climate change



A photograph of the Golden Gate Bridge in San Francisco, California, taken from a high vantage point on a hillside. The bridge's iconic orange-red towers and suspension cables are silhouetted against a clear, light blue sky. The bridge spans across the water, with the city skyline visible in the distance. The water is a deep blue, and a small boat is visible in the lower right. The overall scene is peaceful and scenic.

More information:

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SFEI
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Healthy ecosystems, brighter future