California toxic waters rise despite decades of regulations and expenditure of $50 Billion

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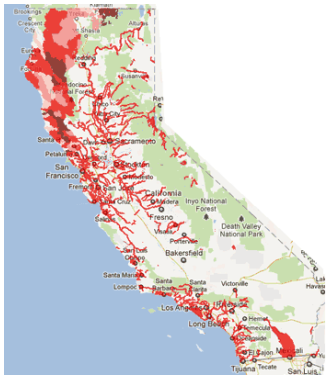
Public records attest to the fact that after 40 years of regulatory programs, and more than $50 billion in expenditures, the Golden State's water bodies have increased in toxicity! **Trends Include 170% Increase In CA Toxicity Listings Since 2006:** Increased water monitoring data shows the number of rivers, streams and lakes in California exhibiting overall toxicity have increased 170 percent from 2006 to 2010.



Map CA Impaired Water Bodies

More of California's waterways are toxically polluted "water quality impaired" than previously known, according to a list of polluted waterways submitted by the State Water Resources Control Board (State Water Board) to the U.S. Environmental Protection Agency (EPA) and finalized by the agency in 2011.[1] Map of California's Impaired Water Bodies.[2]

All assessed waters in the 2010 Report are a compilation of the latest approved data. The data indicate an increase in toxicity and listing of water impaired bodies will continue to rise.[3] The State Water Board and regional water boards administer the provisions of the CWA under an agreement with EPA.

Unfortunately, the public may not know just how bad things are statewide until 2017or beyond, as government regulators failed to provide an updated assessment listing the status of the State's waters.[4] Even then, critics point out that water quality monitoring, and the related data, are conducted almost extensively by the polluters.

Data Gap not Due to a Lack of Grant Funds: Elements of a State Water Monitoring and Assessment Program: Clean Water Act Section 106(e)(1)[5] and 40 CFR Part 35.168(a) provide that EPA award Section 106 funds to a State only if the State provided for, or is carrying out parts of its program the establishment and operation of appropriate devices, methods, systems, and procedures necessary to monitor and to compile and analyze data on the quality of navigable waters of the State, and provisions for annually updating the data and including it in the Section 305(b) report.[6] This document recommends the basic elements of a State water monitoring program and serves as a tool to help EPA and the States to determine whether a monitoring program meets the prerequisites of CWA Section 105(e)(1).[7] Since fiscal year 2000 through 2014-2015 FY, California received $161,297,325 from EPA in grant funds (CWA, 106 Grants) for the administration of the 303(d) listing program, and $170 million for CWA, section 319(h) non-point source Grant Program.[8]

Forty-two years ago, a united Congress overrode President Nixon's veto of the Clean Water Act (CWA), which ordered states to limit pollutants in the nation's waterways.[9] Coupled with subsequent amendments, the CWA required all states to assess and establish Total Maximum Daily Limits (TMDLs) of pollutants for lakes, creeks, rivers, estuaries and ocean shorelines. If the states wouldn't do it, the U.S. Environmental Protection Agency (EPA) "could" step in and impose safety limits. "Under the CWA TMDLs are not self-implementing, meaning EPA cannot enforce implementation of a TMDL once the analysis is complete."[10]

Goal of the Clean Water Act: The goal of the Clean Water Act (CWA)[11] is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" (33 U.S.C §1251(a)). Under section 303(d) of the CWA, states, territories, and authorized tribes, collectively referred to in the act as "states," are required to develop lists of impaired waters. These are waters for which technology-based regulations and other required controls are not stringent enough to meet the water quality standards set by states.

The law requires that states establish priority rankings for waters on the lists and develop TMDLs for these waters. A TMDL is a calculation of the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards. The CWA was authorized to make U.S. waterways fishable and swimmable by 1983 and to achieve "zero" discharge of pollutants to waterways by 1985**.** The records and status of the widespread pollution of the public's streams, rivers, lakes, reservoirs and ground water basins are a testament to the manner in which the federal CWA of 1972 and Safe Drinking Water Act[12] of 1974 are administered by State officials.

California has some of the most magnificent rivers, lakes and coastal waters in the country. However, of its 3.0 million acres of lakes, bays, wetlands and estuaries, 1.6 million acres are not meeting water quality goals, and 1.4 million acres still need a pollution clean-up plan, known as a TMDL. Of the 215,000 miles of shoreline, streams and rivers, 30,000 miles are not meeting water quality goals, and 20,000 miles still need a TMDL.[13] The most common contaminants in these waterways are pesticides and bacteria, followed by metals and nutrients, according to EPA.[14]Last count, California has 1,021 impaired water bodies listed on the 303(d) list, according to EPA's website.[15] To its credit the Golden State ranks eight in "Approved TMDLs by State".[16]

The federal CWA requires states to develop TMDLs for impaired water bodies; i.e. streams, rivers, and lakes Informally, an impaired water body is any water that is not meeting the water quality standards established for that water. Formally, an impaired water body is one that is not attaining water quality standard after standards after technology based discharge limits on point sources are implemented. Section 303(d) of the federal Clean Water Act requires each state to maintain a list of impaired water bodies and revise the list from time to time (currently in even numbered years). In the State Water Boards' 2008-2010 report to EPA, Region IX, it lists impaired water bodies adopted by the Board in September 2008.[17]

Site-Specific Targeted Monitoring Results of California Rivers and Streams in 2010: The data indicate California still has a long ways to go in assessing and establishing TMDLs statewide. EPA's latest published report revealed only 15.8% of the State's 211,513 miles of rivers and stream was assessed; 84.2% unassessed of which 89.5% classified as "water-quality impaired".[18]

Monitoring Results of California Lakes, Reservoirs, and Ponds in 2010: Site-specific targeted monitoring results for California 2,086,230 acres of lakes, reservoirs, and ponds indicate that 99.9 percent were unassessed; 97.9 percent impaired, and 72.6 percent needed TMDLs.[19] More specifically, the monitoring results indicate 99.8 percent of the agricultural supplies as impaired; cold fresh water 82.6 percent impairment; commercial and sport fishing 80.2 percent impaired; estuarine habitat 100 percent impaired; ground water recharge 100 percent impaired; municipal and domestic supply 67.6 percent impaired, and wildlife habitat 100 percent impaired. According to the report, the major causes of impairment, arsenic, mercury, nutrients, DDT, salinity, selenium, bacteria, phosphorus, nitrogen, and PCBs.[20]

Monitoring Results of California Bays and Estuaries in 2010: Site-specific targeted monitoring results of California bays and estuaries indicate that 58.1 percent of the 2,139 square miles were unassessed; 100 percent were impaired, and 99.5 percent of the threatened and impaired bays and estuaries were in need of TMDLs. The data also indicate of the square miles assessed agricultural supply was 100 percent impaired; cold freshwater habitat 98.5 percent impaired; commercial and sport fishing 99.7 percent impaired, estuarine habitat 96.9 percent impaired; marine habitat 91.2 percent impaired; municipal and domestic supply 100 percent impaired, warm freshwater habitat 99.9 percent impaired and wetlands habitat 100 percent impaired. Government lists the causes of impairment" from mercury, Polychlorinated Biphenyls (PBSs), invasive species, and pesticides. as non-point source discharges (includes, agricultural drainage); subsurface mining; unknown sources; industrial point source discharge; atmospheric deposition of toxics; ballast water releases; and municipal point source discharges, and urban runoff/storm sewers.[21]

Monitoring Results of California Wetland in 2010: Site-specific targeted monitoring results of California 357,064 acres 99.9 percent were unassessed; the 219.2 acres assessed were 100 percent impaired, and 100 percent of those acres needed TMDLs. The data also indicate of the square miles assessed agricultural supply was 100 percent impaired; cold freshwater habitat 100 percent impaired; commercial and sport fishing 100 percent impaired, estuarine habitat 100 percent impaired; shellfish harvesting 100 percent impaired; water contact recreation100 percent impaired, and warm freshwater habitat 100 percent impaired.[22]

State and Federal Water Projects

The California State Water Project (SWP) and the federal Central Valley Project (CVP) are two major contributors to the degradation of the waters of the state. Neither of the projects provides drainage facilities for nonpoint source toxic agricultural drainage, a major cause of the state's water (impairment) pollution, resulting from irrigation return flows from SWP and CVP water deliveries. Nonpoint sources; i.e., agriculture drainage discharge is the leading cause of impairment of the nation's waters, according to EPA.[23]

CWA Strategies for Managing Water Quality: The federal CWA contains two strategies for managing water quality. One, a technology-based approach that envisions requirements to maintain a minimum level of pollutant management using the best available technology, was the great innovation of the 1972 Act. The other, a water quality-based approach, relies on evaluating the condition of surface waters and setting limitations on the amount of pollution that the water can be exposed to without adversely affecting the beneficial uses if those waters. Section 303(d) bridges these two strategies.

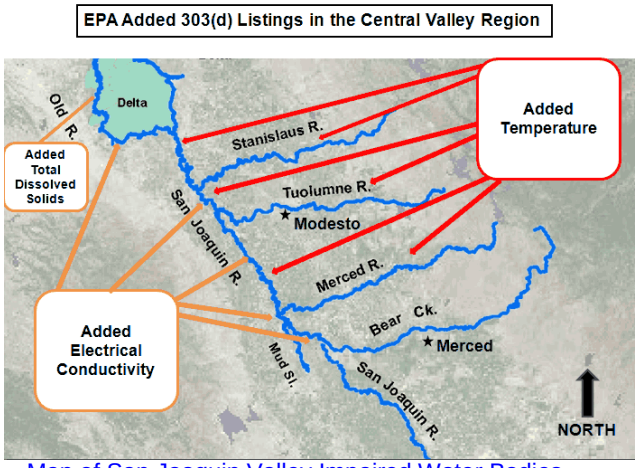
The CWA gives States the primary responsibility for protecting and restoring surface water quality. Under the CWA, States that administer the CWA must review, make necessary changes, and submit the CWA section 303(d) list to the EPA. CWA Section 305(b) requires each State to report biennially to EPA, on the conditions of surface water quality. The EPA has issued guidance to States which requires the two reports to be integrated. For California, this combined report is called the California 303(d)/305(b) Integrated Reports.[24] Section 303(d) of the Clean Water Act requires states to identify all seriously polluted, or "impaired," water bodies every two years. The states put each polluted water body and its associated contaminants on what they call the "303(d) list." In California, the State Water Resources Control Board and nine Regional Water Boards[25] maintain and update the 303(d) list.[26] Navigating the State Water Boards' websites to ascertain the total number of impaired water bodies was difficult, even with the assistance of Board personnel. A water body may be assessed for several different uses. In order to be considered "good," it must meet all the uses for which it was assessed. It is considered "threatened" if it is meeting all assessed uses but if water quality conditions appear to be declining. It is considered "impaired" if any one of its assessed uses is not met," according to EPA.[27]

What Happens when a Water Body Is Placed on the 303(D) List?: Once a water body is placed on the 303(d) list, Regional Board staff evaluates the nature of the impairment and begins developing a TMDL, if appropriate and necessary. For each TMDL developed, State Water Board staff will also develop an implementation or water quality control plan for each water body and associated pollutant/stressor on the list. The TMDL and the implementation plan serve as the means to attain and maintain water quality standards for the impaired water body. During each 303(d) listing cycle the water bodies on the list are prioritized in order to facilitate scheduling and budgeting to develop TMDLs and implementation plans.

State Water Board Did Not Adopt CWA Section 303(D) List Until 2004: TMDLs were first required by the CWA in 1972. EPA first issued regulations governing states development of TMDLS in 1985 but little to ensure that states enforced them. In recent years, lawsuits alleging inaction by EPA and the states have spurred increased attention to the development of TMDLs by imposing judicial deadlines in some states. The State Water Board did not adopt a Water Quality Control Policy for Developing California's CWA

Section 303(d) List, until September 2004. The 2011EPA approved TMDL list[28] from which portions of this data was extrapolated is the latest numbers available from the Boards' 2008-2010 report to EPA[29] (two-year reporting cycle). An updated TMDL list was due from the State Water Boards back in the year 2013 for the 2011-2012 reporting cycle.[30] However, the public may not know just how bad things are statewide until 2017or beyond, as state water officials failed to provide an updated 303(d) and 305(b) lists to EPA, and requested several delays in submitting the data.[31] [32] [33]

Four Decades Later and More than $50 Billion Spent – State's Clean And Safe Drinking Water Acts Track-Record is in Question: Although billions of dollars have been expended for Clean and Safe Drinking Water programs; reportedly only a dozen previously listed water bodies have been restored in California since 2002.[34] Request have been made to the government to provide the total amount of money expended on CWA and Safe Drinking Water Act (SDWA) grant programs; however, the total dollar amounts have yet to be received. Amount EPA allocated to States since 1972-2010 was $85 billion;[35] sources contend California received about 9% to 10% of the historical appropriations, estimated to be about $7 to $8.5 billion for Clean Water funding. However, more than $50 billion of federal taxpayer funds and state borrowed money have been spent under the guise of "Safe, Clean, and Reliable Drinking water supply". In California, the amount of federal funds for CWA and SDWA programs pale in comparison to the vast sums of funds the State gets from the issuance of voter approved General Obligation (G.O.) bonds. Since the mid-1990s, a significant portion of the $26 billion in G.O. bonds approved has been used for CWA and SDWA programs and related projects. The money to repay debt on G.O. bonds comes from the State's General Fund which receives revenue from the taxpayers. According to the State Treasurer's Office for every dollar borrowed in G.O. bonds cost a total of $2 in repayment.[36]



Map of San Joaquin Valley Impaired Water Bodies

Since 1997, EPA has provided the California Safe Drinking Water State Revolving Fund more than $1.5 billion for infrastructure projects throughout the state, much of which was used to help disadvantaged communities. EPA works with the California State Water Resources Control Board and other local and state agencies to assist providers who are working with small drinking water systems to enhance their technical, managerial, and financial capability to reliably provide safe drinking water to communities.[37] However, California failed to spend $455 million in federal safe-drinking-water funds and isn't adequately managing the program that administers the money. Jared Blumenfeld, EPA's Regional Administrator for the Pacific Southwest, sent a notice of noncompliance to the California Department of Public Health, warning that if the state doesn't take corrective action within 60 days, EPA may suspend grant payments to the program.[38] In response to the Notice of Noncompliance, the California Department of Public Health developed a Corrective Action Plan for full compliance by June 2016.[39]

California Voters Pass $7.5 Billion Bond: On November 4, 2014, California voters approved a $7.5 billion injection of taxpayer funds to address the state's aging water infrastructure. The bond was the fourth largest in California's history. The bond, known as Proposition 1, is intended to help California's ability to cope with drought conditions, increase its water storage capacity and protect drinking water.[40] Albeit, California's waterways remain contaminated, and, according to the data, the problem is getting worse. Clean water is vital to California's public health, economy, recreation and wildlife. California has done an excellent job of increasing the amount of water monitored. Unfortunately, much of the data points in the wrong direction. The list of impaired waters is a wake-up call to continue critical local and statewide work needed to heal California's damaged waters, according to EPA.[41] Data indicate a synergistic[42] problem with toxic in our water, in need of assessment.[43]

Nationwide Funding Needs for Drinking and Wastewater Infrastructure: In its most recent needs surveys, the Environmental Protection Agency (EPA) estimated that the funding needs for drinking water infrastructure totaled $335 billion ((in 2007 dollars) and wastewater infrastructure needs totaled $298 billion (in 2008 dollars).[44]

EPA Celebrates Safe Drinking Water Act 40TH Anniversary: On 16 December 2014, EPA Celebrates 40th Anniversary of the Safe Drinking Water Act. **"**Every day more than 38 million Californians rely on clean water for cooking, washing, and bathing," said Blumenfeld. "We have made incredible progress in improving water quality and are tackling the remaining challenges so that every American will have access to clean drinking water."[45]

California Underperforms in Productive Use of funds*:* According to a 2004 Report of the California Performance Review,[46] California ranked second nationally in total Revolving Fund federal grant awards for wastewater treatment ($1.5 billion), but ranks 23rd for productivity. Productivity is measured by the percentage of total financial assistance provided (includes federal grant, state match, loan repayments, and leveraging) to the amount of federal capitalization grant awarded from 1988 to 2003. For the Drinking Water Fund, California ranks first in total federal grant awards ($360 million) among the states, but ranked 50th for productivity from 1996 to 2003. California has provided $2.7 billion of Revolving Fund assistance and $190 million of Drinking Water Fund assistance.[47] The Performance report indicate that California officials have a lack-luster track-record in productivity for its expenditure of CWA and SDWA funds, failure to provide required updated 303(d), and the vast amounts of water bodies yet to be assessed is indicative of a system in need of innovative progress, oversight and regulatory reform.

[**Read more**: Patrick Porgans, Porgans & Associates, and Lloyd Carter, Save Our Streams conducted reports on the CWA, and Safe Drinking Water Act. **Note:** To date, financial support for this article/fact sheet was provided by Save Our Streams and Patrick Porgans & Associates.
Part I: Health and Safety Gaps in Safe Drinking and Clean Water Acts,[48]
Part II: State and Regional Boards and State Health Department run afoul of Clean Water Act and Safe Drinking Water Act.][49]

ENDNOTES:

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