

EPA Failed to Implement the Clean Water Act and Blames the States.

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September 2009.

When Congress passed the Clean Water Act in 1972, with its goal to eliminate all water pollution by 1985 and as interim goal 'swimmable and fishable' waters by 1983, Congress specifically demanded a "technology-based" implementation program, whereby all national permits would require "best available treatment technology". A water-quality based program (treatment based on water quality of receiving waters) would be too easy to manipulate by local politicians and basically defeat the purpose (setting national treatment standards) of the Act.

Since "secondary treatment" of sewage was considered 85% treatment, the Act initially demanded this type of treatment for all new treatment and when EPA established treatment standards for its NPDES (National Pollution Discharge Elimination System) permit program, it used the 85% treatment requirement for two worldwide used pollution tests, the BOD5 (Biochemical Oxygen Demand after 5 days) test and the SS (Suspended Solids) test. Since the literature assumed that in raw sewage the medium concentrations of both tests to be 200 mg/l, EPA's secondary treatment (definition) demanded that effluents contained less than (85% of 200) 30 mg/l for both BOD5 and SS.

Sadly, what EPA and many others at that time, did not realize was that this 5 day reading of the BOD test only represents 60% of the BOD (C-BOD) exerted by carbonaceous (fecal) waste and ignored all the BOD (N-BOD) exerted by nitrogenous (urine and protein) waste. Consequently EPA only demanded (85% of 40) 34% treatment, clearly inadequate to meet any of the goals of the CWA and basically qualifying all types of sewage treatment systems to meet the 'secondary treatment' standards, without the ability to know or compare their real treatment.

By solely using these two tests, it is impossible to evaluate the real performance of a sewage treatment plant and what its effluent waste loading is on receiving water bodies. Many sewage treatment plants in the seventies violated their NPDES permits, by measuring higher than 30 mg BOD5/l values in their effluents, while a lot of the reading represented N-BOD, which was not required to be treated. Many plants had to pay fines (or were replaced); while in fact they treated the sewage better than was required by their NPDES permits.

EPA finally in 1983 acknowledged the problems with the test, but in stead of correcting the test, it allowed the addition of a chemical to the test, which selectively kills only those bacteria that feed on nitrogenous waste. It was estimated that 60% of all the plants violating their permits, got into compliance by adding this chemical to their BOD5 test.

This administrative rule solved the 'NPDES permit violation' problems, but did not address the pollution caused by nitrogenous waste, while this waste besides exerting an oxygen demand (N-BOD) in all its forms is a fertilizer for algae. It also did not solve other problems that were caused by solely measuring the BOD5 and SS tests, among

them it still is impossible to evaluate the true treatment efficiency of a sewage treatment plant and comparing the different treatment processes, in order to establish what “best available treatment” is. However, if tests had been performed correctly in the past, it would have been known that not only much better sewage treatment (more than only odor control) is possible but that such treatment can be achieved at lower cost.

In 1984 Utah State’s Science Council recommended that this test should be corrected and applied as intended, but the governor rejected his council’s recommendation, based on the misinformation that the State would have to repay Uncle Sam all the money it received for all the engineering studies and would delay the millions coming for the construction of two new sewage treatment plants.

In 1993 environmental groups (mostly from Utah) petitioned the EPA to modify its definition of secondary treatment and establish effluent standards for “best available treatment technology”, which, according EPA’s own documentation is possible. The new proposed standards would have corrected the BOD test and would have included effluents requirements for nitrogen and phosphorus (nutrients), now considered causing major eutrophication problems due to excessive algae growth.

In 1995 EPA rejected the petition and this rejection was taken to the Tenth District Federal Appeals Court in Denver. The majority (two judges) sided with EPA and rejected the lawsuit, while the dissenting judge stated that the majority allowed EPA to return to pre-1972 conditions by basically allowing a water-quality based implementation program and also over-ruled an earlier Supreme Court decision. The Supreme Court denied the petition for certiorari in 1997.

The members of ASIWPCA (Association of State and Interstate Water Pollution Control Administrators) are basically responsible for the implementation of the Clean Water Act on November 26, 2007 wrote a letter to EPA’s Office of Water and Office of Science and Technology requesting effluent standards for nutrients, both nitrogen and phosphorus. In the letter these administrators state:

Since the initial passage of the Federal Water Pollution Control Act of 1972, water quality management has evolved significantly through technological advances in required treatment levels, the implementation of water quality based effluent limits and the widespread application of disinfection technology to point sources. By almost every measure, surface waters are closer than ever before to fully achieving the fishable, swimmable goals espoused by the Act.

First of all the letter admits that even the 1983 interim goals of the Act, after 37 years, are not met, but also that the States are implementing a “water-quality” based program, a program specifically rejected by Congress in 1972. The letter also states that the States are struggling to further improve water quality when there are no national standards for nutrients and request the EPA to set treatment standards, based on “best available treatment technology”, which can be achieved.

What the letter does not state is the fact that EPA never established the treatment standards of “best available treatment technology” and again ignored such requirement under the CWA.

The incorrect use of this essential test, clearly not only interferes with the cleaning of our open waters, but also stifles a progress to find solutions to address problems related to pollutants, like herbicides, pesticides, PPCPs (Pharmaceutical and Personal Care Products), carcinogenic industrial products, endocrine disrupters, antibiotic resistant bacteria, to name a few, that now are mostly ignored and are starting to impact our public drinking water supplies.

While clearly EPA failed to implement the CWA, nobody is holding EPA accountable, even not State administrators, now responsible to implement the CWA. Some environmental groups are suing EPA for local situations, but they too fail to acknowledge that if EPA would be forced the CWA as it was intended, none of these suits would be necessary.