

**Sent:** Saturday, March 18, 2006 2:39 PM

**Subject:** THE CLEAN WATER ACT: WHERE ARE WE GOING?

*Dear Aquathin Dealer OnLine, Splash NewsBulletin and Allergic Reaction NewsBulletin Members;*

*Over the years since we began publishing the Splash NewsBulletins, you've read many incredibly important points including:*

*1. The Clean Water Act, EPA began regulating 22 contaminants and today only 91 contaminants in total...every year the U.S. creates 10,000 new chemicals...over 700 different chemicals, including over the counter and prescription drugs are showing up in our drinking water, and these items are not regulated yet.*

*2. Estimated costs to bring the drinking water infrastructure up to suitability began at \$350 billion and presently are at \$985 billion...almost 1 trillion dollars to get safe water to our homes and businesses by 2020.*

*Take a look at this terrific article by a leading environmental attorney and pay particular attention to the last paragraph.*

*3. It is up to each and every one of us to take control by protecting the water as it enters our homes and taps through cost effective state of the art leading technologies.*

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*Warmest regards to all...as well, your comments are always welcome and very much appreciated.*

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# The Clean Water Act: Where Have We Been, and Where Are We Going?

*We've come a long way, but the future will be about money*

*By J. Daniel Hull, JD*

**PITTSBURGH** -- First things first. In the chart accompanying the January/February *Water & Wastewater Products* edition of this column -- it was entitled "Who's Greener-Democrats or Republicans?" -- there were two overall errors. Both stemmed from neglecting to reflect that a new American president is not in office the year he or she is elected. Bob Eriksen, the Environmental Compliance Administrator with the Basin Electric Power Cooperative in Bismarck, N.D., wrote to me and pointed out the errors. First, the Resource Conservation and Recovery Act (RCRA), America's major "cradle-to-grave" hazardous waste management legislation, was passed in 1976 near the tail end of Republican Gerald Ford's administration, and not during Democrat Jimmy Carter's watch. Carter, of course, was elected in 1976, but he didn't take office until early 1977. Similarly, the Toxic Substances Control Act (TSCA) was passed in October 1976 (again, Ford, not Carter, was in office). Second, all three environmental statutes in the chart that passed in 1990 -- the Clean Air Act Amendments, the Federal Pollution Prevention Act, and the Oil Pollution Act -- were passed in the late first year of George H.W. Bush's (Bush I) administration, not during Ronald Reagan's.

The corrections don't change the results. Republican Ronald Reagan and his mixed Congress (Republican Senate/Democratic House) still win the green sweepstakes. It's true that during all eight of Reagan's years, none of the first building-block statutes were enacted. But both the quality and breadth of the legislation -- major amendments to RCRA (1984), to Superfund (1986), to the Clean Water Act (1987), and to the Safe Drinking Water Act (1986) give the Reagan administration an edge on substance. Interestingly, in view of the corrections that Bob flagged, Reagan on environmental progress is now closely followed by Republican Richard Nixon (four major legislations) and Ford (also four major statutes) -- and then by Bush I and Carter. And, interestingly, the eight years of Clinton-Gore and the five years of George W. Bush (Bush II) to date gave us the least in terms of major legislation. Again, my thanks to Bob for pointing this out. The errors are mine alone.

The corrections also strengthen one of the article's conclusions. The passage of the "building block" statutes of modern American environmental policy are more likely the result of national bipartisan momentum and unrelenting public "buzz" than a function of any political party's agenda. The statutes progressed in a more or less linear and uninterrupted wave once the American public started to demand attention be given to environmental concerns beginning in the mid and late sixties. The first really major one, the subject of this column, was the original Clean Water Act of 1972.

## The Crying Indian -- The Path of the Clean Water Act

Does anyone remember the "Crying Indian" of the Keep America Beautiful campaign? The 60-second public service spot featured a regal looking Native American nobly paddling his canoe down a nameless American river lined with flotsam, garbage, and smokestacks spewing black fumes into the air. At the end of the spot, he comes ashore, and litter from a passing car is thrown at his feet. As he stands out on the trashed riverbank and surveys the scene, a huge tear streams down his cheek. The tagline was moving, too: "People Start Pollution; People Can Stop It." We baby boomers generally saw this during our high-school or college days, and it was aired a lot beginning in March 1971. And whether or not your dad worked for General Electric or the Sierra Club, it was a very moving "commercial."

The timing of that ad makes sense. It was apparently developed to coincide with the second Earth Day in 1971. By that time, industrial pollution was a national focus, and for good reason. Between 1968 and 1972, the physical, biological, and chemical integrity of the nation's waters -- lakes, rivers, and coastal waters -- started to really alarm the general American public for the first time. By 1968, the fishing industry in the Chesapeake Bay, close to Washington D.C., was losing millions each year to water pollution. In the same year, the U.S. Bureau of Sport Fisheries found the pesticide DDT in 580 out of 590 samples; some of the levels measured were up to nine times the limit then set by the U.S. Food and Drug Administration (FDA).

And 1969 was an especially disturbing year:

- Bacteria levels in the Hudson River were measured at 170 times above the safe biological limit.
- "Fish kills" from pollution that year were at an all time high -- over 41 million. In Lake Thonotosassa, Fla., discharges from a handful of food-processing plants alone were estimated to have killed 26 million fish. A little more than a year later, in early 1971, the FDA also reported 87 percent of swordfish samples had mercury levels that made swordfish unfit to eat.
- In June 1969, the "poster event" for the clean water initiative, and perhaps the U.S. environmental movement in general, occurred. An oil slick floating on the Cuyahoga River, southeast of Cleveland, Ohio, caught fire. It's likely that a spark from a passing train ignited the slick. Two key railroad trestles were damaged. The chemical cause was a "discharge of highly volatile petroleum derivatives with a sufficiently low flash point to be ignited by a chance occurrence."

Drinking water was at risk, too. In 1970, the Bureau of Water Hygiene at the U.S. Department of Health Education and Welfare reported that nearly one-third of the water it sampled did not meet U.S. Public Health Service standards on chemicals in drinking water. In the following year, 1971, the FDA reported that 87 percent of swordfish had mercury levels which made the fish unfit for humans to eat.

## 1972 Act

To its credit, Congress responded comprehensively and ambitiously in 1972. Originally enacted in 1948, and now known popularly as the Clean Water Act (CWA, Act), the Federal Water Pollution Control Act was overhauled in 1972 (33 U.S.C. §§ 1251-1376). By the time of passage, nearly two-thirds of the nation's waters had become unsafe for fishing or swimming. Congress also noted that untreated sewage was regularly dumped into open water. The still unattained goal of the Act was zero discharge of pollutants into navigable waters by 1985. The effort continues.

For the most part, the legislation was a great success. The basic three-part framework of the 1972 Act -- (1) limits on discharges; (2) maintaining water quality; and (3) a permit program -- is still with us today. The statute required the U.S. Environmental Protection Agency (EPA), which had been created only three years before, to set nationwide "effluent" standards on an industry-by-industry basis. Cities were required to achieve an equivalent goal. The standards were based on both the capability of the pollution-control technology available to the industry in question and its cost to that regulated industry. Second, and importantly, the Act said that stricter controls could be imposed where technology-based limitations were not sufficient to ensure that waters receiving discharge would not deteriorate or remain at unacceptable levels. Third, the 1972 legislation established the National Pollution Discharge Elimination System (NPDES) for permitting. The program would be administered by an individual state after EPA gave the state authorization -- or "federal program approval." NPDES, while often financially strapped in some states, is, in particular, regarded as a program that works. Finally, the 1972 Act greatly expanded a system of grants to states for the construction of municipal sewage treatment plants. The new program (Titles II and IV of the 1972 Act) was designed to be generous. Between 1991 and 2003, for example, Congress appropriated, for each of those years, an average of \$1.37 billion for sewage-facility construction.

## 1987 Amendments

In 1987, Congress significantly amended the Clean Water Act again -- this time focusing on the Act's toxic control programs. A "toxic hot spots" program was established to address waterways that would remain a problem even after the strictest technology-based requirements were applied. Further, the 1987 amendments established a timetable for "non-point" pollution control and stormwater regulation (the subject of this column for *WWP's* May/June issue). The 1972 Act had focused on "point source" pollution from pipes and outfalls. Non-point pollution -- runoff from urban areas, construction sites, and farms and forestry areas -- was thought to be 50 percent of the nation's water pollution problem. The 1987 amendments set up a revolving loan fund for construction of sewage-treatment plants and expanded EPA's enforcement tools -- they even made negligent violations of the Act a crime. (See Waterlawged, "A Short History of Environmental Crime, July/August 2005, *Water & Wastewater Products*, which can be accessed by going to [www.wwp-online.com](http://www.wwp-online.com) and looking under "Archives.").

The 1987 amendments -- the Water Quality Act of 1987 (P.L. 100-4) -- were the last major changes to the Clean Water Act. They also marked the last critical piece in what is arguably the nation's most comprehensive and complex environmental law. Since 1987, Congress has limited its oversight of water quality issues to primarily specific concerns. Subcommittees have held hearings on wetlands protection, Chesapeake Bay programs, and toxics contamination of Great Lake regions. It's 18 years later, and we are still in the process of implementing the apparatus assembled in 1972 and 1987 statutes. Lots of progress has been made on these two ambitious laws. In 2000, nearly 30 years after the 1972 legislation, EPA reported that 39 percent of "river-and-stream miles" and 45 percent of "lake acres" did not meet applicable water quality standards -- yet this was a drastic improvement over water quality in 1970.

There are still significant implementation problems with the Clean Water Act these days. And most of them have to do with money. First, the funding to construct municipal wastewater treatment plants under the 1972 Act and the state revolving fund (SRF) provisions of the 1987 amendments has been significantly curtailed in recent years -- especially since 2004. Money for design and construction of wastewater facilities has been a popular and needed program that the states have tended to rely on through the years. Currently, the wastewater infrastructure funding just isn't there, presumably allocated instead to homeland security and the war in Iraq. Last August, before the recess, Congress did appropriate \$887 million for clean water SRF grants (to capitalize the revolving loan fund) for Fiscal Year 2006 (FY 2006). This was \$204 million less than Congress appropriated for FY 2005 -- a decrease of nearly 19 percent from 2005. And the Bush administration had requested an even smaller amount for the FY 2006 budget: \$730 million. Congress appropriated the extra \$157 million anyway.

Similarly, for FY 2005, although the amount appropriated by Congress for clean water SRF grants in November 2004 was \$1.09 billion, this represented another 19 percent drop from FY 2004, when the amount was \$1.34 billion. You get the picture.

In fact, between 1991 and 2003, Congress rarely appropriated less than \$1.2 billion for these state grants -- and often much more. While Congress, since 1972, has provided more than \$75 billion to help states in wastewater treatment construction, the money is starting to dry up when the need for funding is still great. In late 2003, EPA estimated that an additional \$181 billion is needed nationwide for all infrastructure funding available under the Act. The year before, in 2002, EPA released a study called the "Gap Analysis," that tried to determine the difference between current spending for wastewater infrastructure and total funding needs. To make a long story short, EPA estimated that the United States needs to spend nearly \$400 billion over the next 20 years.

## Non-point Pollution Management

A second problem has been in implementing the "non-point pollution" management provisions added to the Act in 1987. Under Section 319 of the Act, the states were required to develop programs to control pollution sources not specifically targeted by the NPDES system of the 1972 legislation. NPDES focused at first on "point" discharges -- pollutants pouring from factory and other discrete industrial pipe outfalls into navigable waters. As

mentioned above, by 1987, EPA and policymakers had finally figured out that 50 percent of American water pollution was caused by rainfall run-off from farm and urban areas and from construction, forestry, and mining.

Generally referred to as stormwater management, the effort to control non-point pollution is also losing ground. Here, state (not federal) resources are the main problem. To their credit, most states have developed programs to reduce non-point pollution. And now that they have passable or adequate programs, they often simply lack the money and personnel to implement and enforce them. Environmental groups have criticized EPA for providing the states inadequate guidance on methods and management practices on this issue. But it's increasingly apparent that this is purely a "money and resources issue." In 1994, EPA estimated that combined monies from private, state, and municipal sources for current and planned non-point pollution management is no more than approximately \$1 billion a year for the entire nation. That's just not enough.

### **TMDL Requirements**

One final problem involves the Act's requirements for the states to restore our dirtiest waterways. Section 303(d) of the Clean Water Act demands that states identify "pollutant impaired" waters and then develop "total maximum daily loads" (TMDLs) that set the amount of pollution a water body can receive without violating water-quality standards. If the state fails to do this, EPA can step in, develop a priority list for the state, and make its own TMDL determination. Most states don't have the money to even make TMDL studies, which involve complex assessments of both point and non-point pollution sources and mathematical modeling. Here, both federal and state resources are the problem. EPA has been slow to override financially strapped states which haven't done TMDL studies, and it lacks the resources to do the studies itself. In the last 10 years, there have been more than 40 lawsuits in nearly as many states by citizen groups for failure to fulfill requirements of Section 303(d) on TMDLs. Twenty-two of the cases have resulted in court orders requiring EPA to develop TMDLs as soon as practicable. Advisory committees were set up and rulemakings conducted over the past 10 years to breathe life back into the TMDL program. Currently, the program is not only at a standstill, but in jeopardy.

### **Conclusion**

"Reauthorization" of the Clean Water Act -- the Congressional process whereby a program is approved or renewed, as opposed to the "appropriation" of money for the program -- has been on Congress's agenda for several years. No comprehensive amendments have been enacted since 1987. Overhauling the Clean Water Act is, however, simply not needed. The basic structure of the program is generally regarded as sound: (1) progressively stringent requirements imposed on industries to meet the goal of zero discharge of pollutants; (2) federal financial assistance for municipal wastewater construction, including the SRF program; (3) the NPDES permitting program; (4) toxics program; (5) non-point pollution management; and (6) enforcement tools. The Act, while complex, is well thought out and arguably the most comprehensive environmental statute in the world.

**Funding -- especially with respect to non-point pollution and TMDL assessment -- is and has been the main drawback to implementation for the last decade or so, and that problem continues to look bleak. Where will it come from? The answer is not likely to be Congressional appropriations with the current wartime demands on the nation's coffers. In fact, the Clean Water Act demands levels of funding that are not likely to be restored in either the long or short term from taxpayer money. My sense is that EPA and Congress will do the only two things it can do: (1) relax both enforcement and federally imposed deadlines under current CWA provisions and rulemakings, and (2) put as much burden as possible on state, municipal, and private sources of funding and enterprise to fund the Act's sound but expensive programs.**

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*J. Daniel Hull is an environmental lawyer, litigator and lobbyist with Hull McGuire PC ([www.hullmcguire.com](http://www.hullmcguire.com)), which has offices in Pittsburgh, Washington, D.C. and San Diego. The firm practices in the areas of environmental law, litigation, legislative affairs, IP, employment practices and international tax and transactions.*