Poughkeepsie Journal
OPINION

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AN EDITORIAL SERIES/ PART III

THE DAMAGE DONE
Purge the Hudson of PCBs

Begin the cleanup

As studies and debate drag on, PCBs remain buried in river silt

Every hard rain puts the Hudson River in danger, a major downpour in 1977 sent silt laced with toxic PCBs rushing downstream, accounting for 40 percent of the chemicals released to the lower river that year.

It happened again in 1982 and 1983, after which PCB levels in the Hudson's prized striped bass went up and didn't dip below 1981 levels for five years. Nature being what it is, a flood is due again soon.

Dredging the river's buried chemicals would stop the poisonous flow of PCBs. It would keep the chemicals from contaminating wildlife, entering the food chain – and, just possibly, ending up on dinner plates. Ocean fish are increasingly turning up with PCBs in their bodies from the Hudson and other sources.

State officials hope to recover 77,000 pounds of PCBs in about 40 concentrated areas of the river, called "hot spots," north of Troy. Another 92,000 pounds are too spread out in the upper river to be retrieved.

The General Electric Co., which discharged the chemicals from two plants, argues that removing the PCBs may not given result in cleaner fish. That argument is based on questionable scientific speculation. And it is flawed for other reasons that ought to anger anyone who loves the Hudson River. Its premise is that the upper Hudson is rife with PCBs anyway; removing the ones within reach would be meaningless. The irony is that argument is strengthened with every passing day that a cleanup isn't undertaken.

Risks worth taking

Endless studies and hearings on the Hudson River's PCB problem, first acknowledged in 1975, have so delayed action that the amount of PCBs that can be recovered grows smaller each day. It is not insignificant, however. Just one pound of PCBs is enough to contaminate a half-million pounds of fish to the unsafe level set by the federal government.

Dredging PCBs from a riverbed is not risk-free. Some PCBs will be stirred up and sent downriver on the current. "Dredging," states a GE flyer, "would virtually destroy environmentally significant wetlands and devastate a healthy ecosystem that could take decades to recover." The claims are farfetched when compared with studies of projects in which PCB-laced sediments were dredged. And while some wetlands, mostly river shallows, would be dredged, any harm would be less than the long-term damage of PCBs themselves.

New research by the U.S. Army Corps of Engineers, on a PCB-contaminated river in New Bedford, Mass., demonstrates that dredging can be done safely. The Corps recently tested a kind of vacuum dredge on an area of PCB-contaminated sediment in the Acushnet River, 50 miles south of Boston. The dredge recovered contaminated sediment that averaged 200 parts per million of PCBs. (The Hudson's sediments range from 20 parts per million to several hundred.) PCB levels did not rise in the water outside of the immediate vicinity of the dredging — and dredging was then recommended for the rest of the $58-million cleanup.

A cutterhead dredge was used in the study, essentially a pointed rotating basket at the end of a long suction pipe. Cutterheads are more precise than old clamshell dredges that merely scoop sediment from the bottom. Combined with silt curtains, which are weighted plastic sheets that help contain silt during digging, cutterhead dredges can limit PCBs from escaping in dredging.

Test dredging method first

GE says that dredging will be hampered by shallow water, buried debris and overhanging trees, and that it will create barge traffic on the river. The claims are specious. Cutterhead dredges can be used in shallow water, and submerged wood from bygone lumber operations should be soft enough to be dredged. While buried tires and such may create problems, those are to be expected, as is the need to trim trees.

As for barge traffic, there isn't much to begin with: river traffic has dropped by 75 percent since 1981, partly because the channel is clogged with PCB-laced sediment that can't be removed. And along half the route there won't be any traffic — 15 miles of pipeline will carry the sediment to its burial place.

Cutterhead dredging must first be tested on the Hudson. The Hudson's sediments may differ in their tendency to diffuse when disturbed. And the Acushnet's far more concentrated PCB problem makes recovering them easier. A test using clamshell dredging was conducted on the Hudson near Fort Edward in 1977. Only 2 percent of the PCBs in the sediment were lost in the operation, offering hope that a cutterhead can do even better.

The U.S. Environmental Protection Agency rejected a Hudson River cleanup in 1984 in part because the "reliability and effectiveness of current dredging technologies in this particular situation is subject to considerable uncertainty." Some of that uncertainty has been resolved. The EPA, should order a pilot study of cutterhead dredging in the Hudson — followed by a full cleanup if successful.

There are other PCB cleanups nationwide where dredging has been used safely. Moreover, these cleanups are testing methods that could apply to the Hudson:

Other tests show promise

■ In the Sheboygan River in Wisconsin, PCB-contaminated sediment has been dredged and subjected to a range of tests to render it relatively free of toxics. In one experiment, 2,700 cubic yards of PCB-laden sediment are being fed minerals, nutrients and, afterward, oxygen to speed up the two-step process under which PCBs break down.

The Hudson's PCBs should be treated in a similar manner. Such treatment eliminates one argument against dredging: that it merely moves the problem from one place to another.

■ In Waukegan Harbor, Chicago, where 300,000 pounds of PCBs were dumped, sediments have been removed with a cutterhead dredge. The material was placed in a large boat slip that was lined with clay to prevent leakage and cut off from the harbor by a high, thick wall. The PCBs are relegated to a place where they will not enter the food chain.

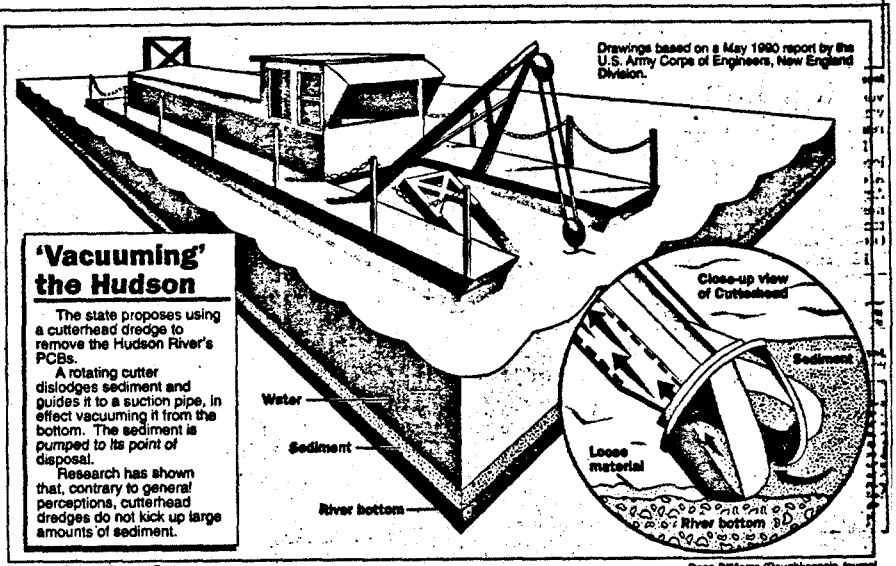
In the Hudson Valley, under a plan formulated by the Department of Environmental Conservation, three million cubic yards of sediment, containing about 250,000 pounds of PCBs, would be taken to a 253-acre tract in Washington County and buried in a clay-lined landfill. The facility, wisely, would be designed so that the sediment could be decontaminated if a feasible method was developed only after it was buried.

The sediment would include the 77,000 pounds removed from the river, 46,000 pounds removed from along the riverbank and 127,000 pounds removed from areas where they were improperly dumped before the problem of the PCBs in the Hudson River sediment was known.

The state's plan, unfortunately, is on hold. It awaits a decision by the federal Environmental Protection Agency — now already three years overdue — on whether to order a cleanup of the Hudson. Under federal law, the Potentially Responsible Polluter, in this case General Electric, would have to pay for the cleanup, and it should.

The EPA's first assessment of the PCB problem in the Hudson took 18 months. This one will last about 4½ years, should it conclude in mid-1994 as planned. For the Hudson, that's too long. GE must be held accountable, now.

To comment on a cleanup of the Hudson's PCBs, write to Constantine Sidamon-Eristoff, Regional Administrator, U.S Environmental Protection Agency, 26 Federal Plaza, New York, NY 10278. Send copies to local federal and state representatives, whose support of the cleanup is essential.



Source: U.S. Army Corps of Engineers

Dyan DiMarino/Poughkeepsie Journal

Two rivers, two problems

The Hudson River is in a sense two rivers, separated by the Troy Dam, 78 miles north of Poughkeepsie. The upper Hudson is where toxic PCBs were discharged and where they remain in highest concentrations. But the 150-mile lower Hudson, with Poughkeepsie at the mid-way point, is where the polychlorinated biphenyls inevitably end up, carried by normal currents or floods.

The General Electric Co., in its attempt to avoid a river cleanup, often cites a 1989 Manhattan College report that predicted PCBs levels in lower river fish if the chemicals were removed or if they were left in place. Using a highly complex model, researchers concluded that there would be little difference; either way, 95 percent of fish in the lower river would fall below the acceptable level of 2 parts per million by 2004.

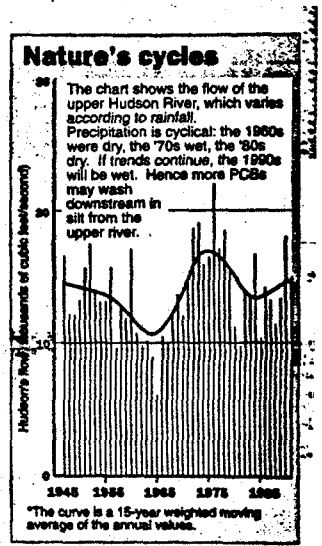
But that prediction is only slightly more reliable, many scientists say, than a crystal ball. In discussing the model, a report by the federal Environmental Protection Agency said, "In any model, there is often a great deal of skepticism concerning the various simulations."

Among the major uncertainties is the amount of PCBs flowing from the upper to lower river. The model estimated that three pounds of PCBs enter the lower river daily; a state researcher contends it is more like five or six pounds daily, which could significantly change the model's outcome.

Moreover, the researchers contended that there are major PCB sources downriver that contribute as much as 90 percent of the PCBs in striped bass in the lower river. But those sources have never been documented; the model estimated the contribution of sewage treatment plants, street runoff and even atmospheric deposition.

The model assumes that other PCBs from the lower river are so influencing the fish that cleaning the upper Hudson won't help. But it is flawed first because most other sources of PCBs are in the New York-metropolitan area. There are no PCB sources north of Poughkeepsie. The river north of that point would surely benefit from a cleanup — and so would the fish and wildlife that live in it.

Further, the model ignores the impact of a cleanup on fish in the upper river alone. Fish there are highly contaminated. The upper river is a dynamic ecosystem. It deserves to be cleaned, even if a cleanup doesn't affect the lower river at all — which is doubtful.



Source: U.S. Geological Survey, from readings taken at Green Island, near Troy.

Dyan DiMarino/Journal

Next week

This is the third in a series of editorials about the Hudson River's contamination with toxic PCBs, discharged from two upriver General Electric plants from 1946 to 1977. In two previous editorials the Journal examined the harm to the river and its commercial fishery, and criticized GE for relying too heavily on microbes in the river to break down the chemicals.

Next Sunday: What do PCB do to people?