CBs cleanups often long-haul investments

HUDSON RIVER
PCB contamination proved more extensive than believed as cleanup got underway.

Hudson River project shows new problems can be dredged up in process

OWEN RILEY JR. / Staff

TWELVE MILE RIVER Conservation groups continue to be concerned the Twelve Mile River could be recontaminated by PCBs during the cleanup effort.

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NORRIS — As conservation groups push for more dredging behind dams coming down to clean PCBs from the Twelve Mile River and Lake Hartwell, a huge dredging project to rid New York's Hudson River of PCBs looks for answers to similar concerns.

The New York and South Carolina waters share a legacy of contamination from capacitor manufacturing plants and heath advisories not to eat fish carrying toxins in their fat.

DIG DEEPER
Watch dredging operations on the Hudson River by going to the link with this story at GreenvilleOnline.com.

"I hope I live long enough to see the day we can remove the 'Don't eat the fish' signs," said Herb Burnham, president of the Lake Hartwell Association.

Like the stubbornly persistent chemical compounds they're meant to eradicate, PCB cleanups can be long-lived. That's the case for the

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huge project on 40 miles of the Hudson River.

"It's going to take 20 years perhaps, maybe a little more, depending on what section of the river you're in. This is a fix for our grandchildren," David King, director of the Environmental Protection Agency's Hudson River field office, told Greenville-Online.com.

And people on both rivers share concerns about recontamination by PCBs stirred up by cleanup activity.

"While every project is unique, virtually any dredging project has the potential for resuspension, recontamination and transport of contaminants in sediments," said Tom Brosnan, a Hudson River Natural Resource trustee for the National Oceanic and Atmospheric Administration.

Federal trustees on the Hudson worry about potential recontamination of dredged areas by high levels of surface PCBs directly adjacent to the dredged areas, Brosnan said.

On the Twelve Mile, the 2,000-member Lake Hartwell Association, Upstate Forever and the Pickens Soil and Water Conservation District expressed fears that, following removal this past February of a first dam, long-buried PCBs are washing from floodplains into the river.

Testing by Upstate Forever and Pickens County found high concentrations of PCBs in the floodplains, although settlement trustees overseeing the court-ordered dam removal said samples from a small number of suspicious locations don't indicate widespread contamination.

Mark Behan, a spokesman for General Electric, which is responsible for the New York Superfund cleanup, said, "Resuspension is fundamentally counterproductive to the whole environmental remedy, and yet it is an inevitable fact of life for environmental dredging projects. It has to be considered and managed."

A key question is whether short-term pain is worth long-term gain in cleaning toxic carcinogens from the waters.

"Short-term pain for long-term gain is one way to consider it," Brosnan said. "Data from other remediated sites show that after dredging, concentrations in sediments and fish and transport of PCBs should show accelerated rates of decline."

Dredging and demolition of a second dam on the Twelve Mile should be complete in August, said Stephen Harris, a spokesman for Schlumberger Technology Corp., which owns the former capacitor manufacturing plant site and is responsible for the cleanup.

Schlumberger plans no further testing of flood plain sediment "as we continue to adhere to the project's approved removal and testing specifications," Harris said.

EPA will test for PCBs and will document the amount and area of residual sediment left in the Twelve Mile when the court-ordered dam removal is done, said Craig Zeller, EPA project manager for the Superfund cleanup in Pickens County.

The EPA, which isn't a party to the court-ordered natural resources settlement, will meet with Schlumberger and state health officials after demolition is complete and settlement trustees sign off on the dredging, Zeller said.

Schlumberger will be held responsible for any work needed if ecological and human health assessments find unacceptable risk, Zeller said.

Removal of the two century-old dams on the Twelve Mile was ordered to allow better flow of sediment to bury PCBs on the bottom of Lake Hartwell as prescribed in the Superfund cleanup.

The nightmare on the Hudson began with removal of a crumbling dam in 1973 followed by two years of heavy rain that washed contamination formerly behind the dam downstream.

Underestimates of the amount of sediment behind the dam and insufficient sampling are "the principal causes of the downstream transport of PCBs in the Hudson," Behan said. Neither GE nor the EPA was involved in the sampling or dam removal, he said.

"Before any dam is taken out I would sample the heck out of it. If we had known what that was, we would have dredged out everything before that dam was taken out," King said.

To date, 60,000 samples have been tested in the cleanup and more sampling is now being done in floodplains, King said.

After the first phase of dredging on the Hudson in 2009, reports from the EPA and GE show more PCB contamination than originally thought when dredging started — "a good 40 percent more," King said.

Dredging released nearly 25 times more PCBs into the water than the EPA anticipated and spread previously buried PCBs downstream "where they are mobile and available to be taken in by fish," states GE's evaluation of Phase 1 on the Hudson.

Although more than 50,000 sediment samples were taken before dredging started, equipment mistook a layer of wood debris from logging and paper mills as the river's bottom, Behan said. More PCBs were underneath.

Because dredging can stir up PCBs, precautions on the Hudson include a studied balance between the pace of work and the depth of dredging — in other words, deeper dredging and fewer passes, to minimize resuspension, Behan said.

Silt curtains and small dams — two methods also used on the Twelve Mile — were successfully used in areas of the Hudson to reduce movement of PCBs downstream, Behan said.

The second phase of work on the Hudson requires removal of about 2.5 million cubic yards of sediment, about 95 percent of the materials EPA targeted for removal; covering all dredged areas with up to a foot of clean sediment; and securely capping other areas to keep it in place even in high flow, Behan said.