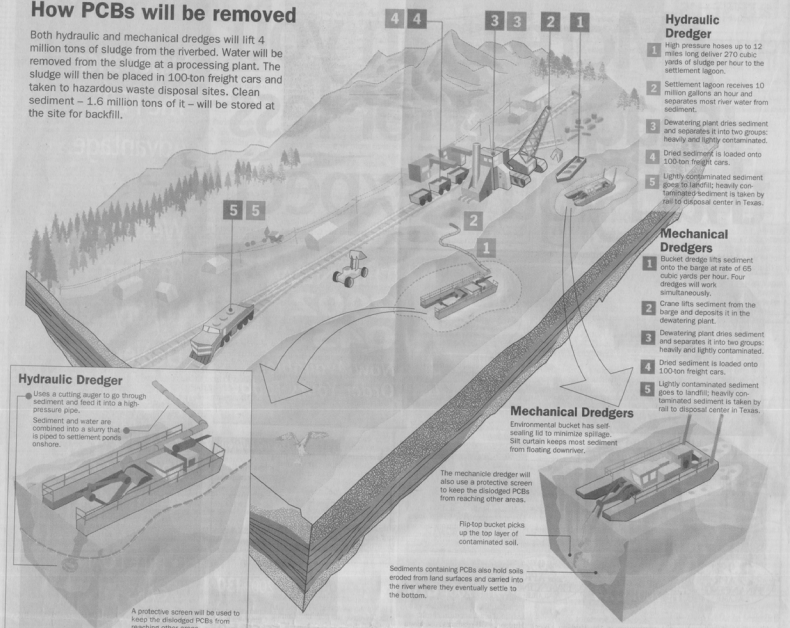
Dredging up the past

How PCBs will be removed

Both hydraulic and mechanical dredges will lift 4 million tons of sludge from the riverbed. Water will be removed from the sludge at a processing plant. The sludge will then be placed in 100-ton freight cars and taken to hazardous waste disposal sites. Clean sediment – 1.6 million tons of it – will be stored at the site for backfill.



Hydraulic Dredger

1. High pressure hoses up to 12 miles long deliver 270 cubic yards of sludge per hour to the settlement lagoon.
2. Settlement lagoon receives 10 million gallons an hour and separates most river water from sediment.
3. Dewatering plant dries sediment and separates it into two groups: heavily and lightly contaminated.
4. Dried sediment is loaded onto 100-ton freight cars.
5. Lightly contaminated sediment goes to landfill; heavily contaminated sediment is taken by rail to disposal center in Texas.

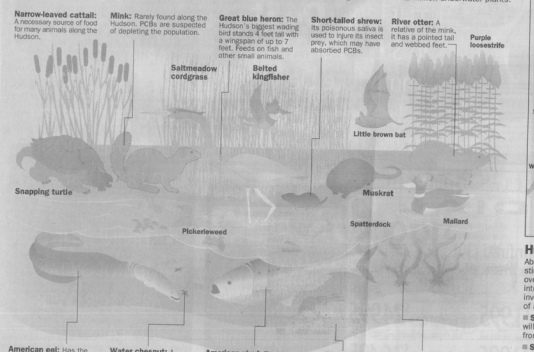
Mechanical Dredgers

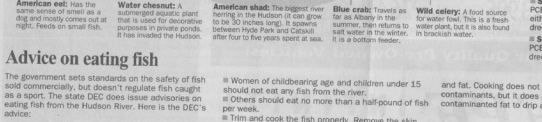
1. Bucket dredge lifts sediment onto the barge at rate of 65 cubic yards per hour. Four dredges will work simultaneously.
2. Crane lifts sediment from the barge and deposits it in the dewatering plant.
3. Dewatering plant dries sediment and separates it into two groups: heavily and lightly contaminated.
4. Dried sediment is loaded onto 100-ton freight cars.
5. Lightly contaminated sediment goes to landfill; heavily contaminated sediment is taken by rail to disposal center in Texas.

Sources: EPA, DEC, 2000-20001 Health Advisories: Chemicals in Sportfish and Game, NYS Department of Health (further information is available at the state Health Department Web site, www.health.state.ny.us), Stephen Ruff, science coordinator of the Hudson River Museum

How PCBs and dredging affect the environment

The river is home to a wide variety of plants and animals that live in a delicate balance with their surroundings. One group may feed on local flora for food, while another may depend on the first group for its meal. In this way PCBs work their way up the food chain. Dredging will destroy more than 100 acres of underwater marshes, disrupting shad and other creatures that share this habitat. Restoration of these spawning grounds will require the replanting of more than 1 million underwater plants.





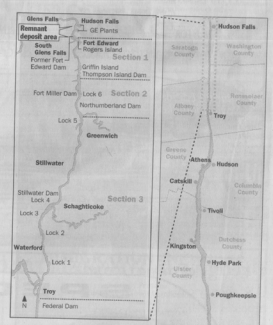
American eel: Has the same sense of smell as a dog and mostly comes out at night. Feeds on small fish.

Water chesnut: A submerged aquatic plant that is used for decorative purposes in private ponds. It has invaded the Hudson.

American shad: The biggest river herring in the Hudson (it can grow to be 30 inches long). It spawns between Hyde Park and Catskill after four to five years spent at sea.

Blue crab: Travels as far as Albany in the summer, then returns to salt water in the winter. It is a bottom feeder.

Wild celery: A food source for water fowl. This is a fresh-water plant, but it is also found in brackish water.



Hudson River "hot spots"

About 500 pounds of PCBs per year is stirred up from sediments and washed over the Federal Dam at Troy, flowing into the lower Hudson. Dredging would involve 493 acres, including 100 acres of aquatic marshlands.

- **Section 1:** 26,460 pounds of PCBs will be removed by hydraulic dredging from 20 deposits.
- **Section 2:** About 52,920 pounds of PCBs will be removed from 15 sites by either hydraulic or mechanical dredging.
- **Section 3:** About 22,050 pounds of PCBs will be removed by mechanical dredging.

Advice on eating fish

The government sets standards on the safety of fish sold commercially, but doesn't regulate fish caught as a sport. The state DEC does issue advisories on eating fish from the Hudson River. Here is the DEC's advice:

- Women of childbearing age and children under 15 should not eat any fish from the river.
- Others should eat no more than a half-pound of fish per week.
- Trim and cook the fish properly. Remove the skin and fat. Cooking does not get rid of all the contaminants, but it does allow some of the contaminated fat to drip away.

South of the bridge at Catskill, the DEC has the following recommendations:

White perch No more than one meal per month

American shad No more than one meal per week

Bluefish No more than one meal per month

American eel No more than one meal per month; none south of Dobbs Ferry to Greystone

Striped bass No more than one meal per month

Blue crab No more than six per week. Do not eat mustard, liver or tomalley

This page was compiled through the efforts of Roger Witherspoon, Leah Rae, Bill Beckers, John Conell, Benjamin Mamo and Pak Nagasing.