Protecting Public Health During the Hudson River PCB Dredging Project in 2011

Some people are concerned about whether the dredging project will affect their public drinking water or increase their exposure to PCBs.

In 2008, the New York State Department of Health (NYSDOH) collected PCB samples at nine public drinking water supplies along the Hudson River to provide information about PCB levels before dredging. In 2009, the NYSDOH compared samples taken before dredging to samples taken during dredging. No changes were seen in the Lower Hudson and all samples met drinking water standards for PCBs. NYSDOH will continue monitoring in 2011 during this next phase of dredging (Phase 2) to ensure that public water systems meet the drinking water standards for PCBs. If needed, plans are in place to protect public water supplies.

This brochure provides more information about PCBs and the public drinking water supplies along the Hudson River.

MAP INSIDE

What are PCBs?

PCBs (polychlorinated biphenyls) are a group of chemicals consisting of 209 individual compounds. PCBs were used in transformers, capacitors and other commercial and electrical products until their manufacture was banned in the mid-1970s. PCB levels build up in the environment (river sediments) and also in the fat of fish and other animals.

How did PCBs get in the Hudson River?

From approximately 1947 to 1977, General Electric Company (GE) discharged PCBs from its capacitor manufacturing plants at Hudson Falls and Fort Edward into the Hudson River. In 2002, the US Environmental Protection Agency (USEPA) issued a Record of Decision (ROD) that called for dredging of the Upper Hudson. Phase 1 has been completed. Phase 2 is starting May 2011.

How close are the dredging locations to public water supplies?

The inside map shows the areas of the Hudson River that will be dredged in Phase 2. It also shows the locations of the public water supplies downstream of these areas. These water supplies have intakes in the river or use water that is drawn from the groundwater that is replenished by the river. Stillwater, Halfmoon, and Waterford are the three upper river water systems that could be most influenced by Hudson River dredging. Halfmoon and Waterford are using an alternate water supply from Troy. Stillwater is using a USEPA-installed PCB treatment system. The Stillwater supply wells are about 26 miles from the dredging site, the Halfmoon intake is 36 miles away and the Waterford intake is 38 miles from the dredging site.

During dredging, what will be done to protect public drinking water?

During dredging, the levels of PCBs in the Hudson will likely rise above the levels typically found in the river water. PCB samples are being collected from both public water supplies and river water. River water results are reported to the USEPA, NYSDOH and NYSDEC (Department of Environmental Conservation). Results are posted on the web (see *1. under More Information,* back page). These in-river samples are intended to provide an early warning of increases in PCB levels. Sampling at the Thompson Island Dam, which is 30 miles north of the nearest public water intake, serves as the earliest indicator of any problems. During dredging, if the PCB drinking water standard is exceeded in the river, the cause will be investigated, addressed and dredging activities will be modified, if needed.

Upper river water supplies, with the highest potential to be affected by dredging, have already taken action to protect their supplies. Halfmoon and Waterford are using an alternate water source from Troy through a water line installed and operated by the USEPA and General Electric. Public water supply monitoring at these locations will not be necessary unless the suppliers resume use of their public water intakes from the Hudson River. Stillwater is using a USEPA-installed PCB treatment system, which continues to effectively remove PCBs from their water supplies.

Lower river water supplies are less likely to be affected by dredging, but PCB samples will be collected routinely to confirm that is the case. See the inside map for more details about specific water systems.

How can I be exposed to PCBs from the Hudson River?

To be exposed means that a substance comes in contact with the body through breathing, eating or touching. Exposure to PCBs from the Hudson can come from food, soil, air or water.

Fish: PCBs in fish can reach levels many thousands of times higher than in water. For this reason, eating PCB-contaminated sportfish is by far the biggest potential source of exposure. This is why the NYSDOH issues advisories to limit the eating of sportfish. The NYS Department of Environmental Conservation maintains a catch-and-release regulation between Baker's Falls and the Troy Dam. No one should keep or eat fish from that part of the Hudson.

Soil and air: People may be exposed to soils contaminated with PCBs in low-lying areas next to the river that flood frequently, areas on the inside of large bends of the river or backwater areas. Although the possibility exists that PCBs can be released into the air from both soil and water, these potential exposures are less than those from fish. Air monitoring was conducted during Phase 1 and dredging was modified to reduce PCB air releases associated with the project. Air monitoring will continue during Phase 2 and dredging activities will continue to be adjusted when needed.

Public and private drinking water: In 2008, NYSDOH sampled nine public water supplies along the River for both raw (before treatment) and finished (after treatment) water to learn about PCB levels before dredging. All samples collected were below the PCB federal and state drinking water standard of 500 parts per trillion (see *2. under More Information,* back page). In 2009, NYSDOH sampled during dredging and confirmed that drinking water met the standard for PCBs. In-river and public water supply monitoring will continue during dredging in 2011.

As part of an Upper Hudson River private well survey, NYSDOH worked with NYSDEC and USEPA to sample a number of wells. More sampling is planned for 2011. PCBs have not been detected in any of the private wells sampled. Hudson River water pulled for drinking water directly from the river is not recommended because surface water that is not properly filtered and disinfected can contain bacteria, parasites, viruses and possibly other contaminants (see *3. under More Information,* back page).

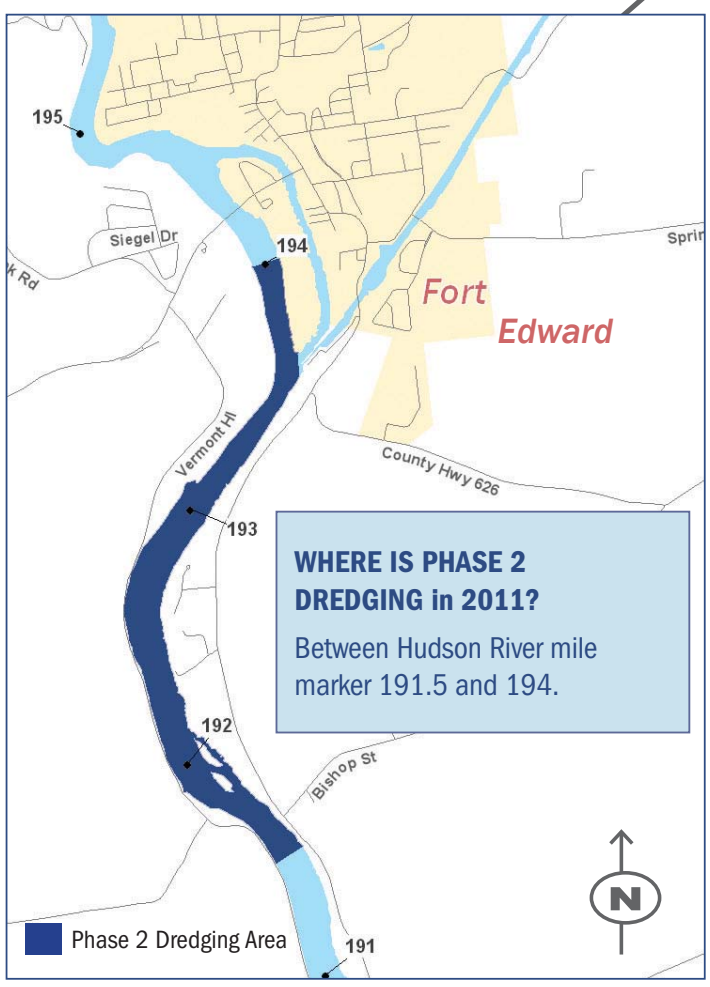
How can I reduce my exposure to PCBs in the Hudson River?

You can reduce your exposure to PCBs in Hudson River fish by following the NYSDOH advisories. Women of childbearing years and children under 15 should not eat any fish from the Hudson. The advice for men and for some women depends on where they fish on the river and the type of fish they catch (see *4. under More Information, back page*). You can reduce potential exposure to PCBs in floodplain soils by washing hands, feet and children's toys after playing or digging in dirt. You can also minimize exposure by not tracking soil and mud into your home (see #5 *under More Information, back page).*

Drinking water from Hudson River public water supplies has been monitored for PCBs and will continue to be monitored during dredging to ensure that the drinking water standard is not exceeded. Some people have asked if there is anything they can do to lower PCB levels in their drinking water. Common household charcoal filters (such as the ones attached to kitchen sink faucets) can reduce PCB levels. The filters need to be changed as recommended by the manufacturers (see #6 *under More Information,* back page). NYSDOH is evaluating how well they work at the very low levels of PCBs found in Hudson River water supplies.

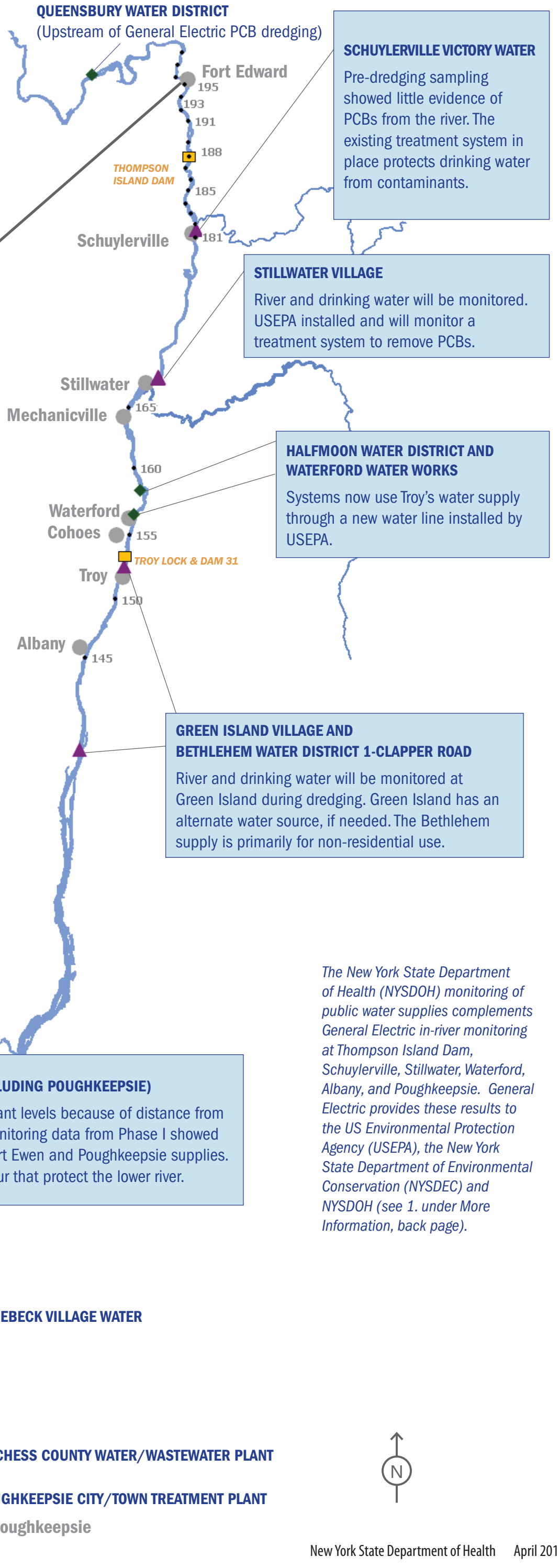
Protecting Drinking Water Supplies During General Electric PCB Dredging

The New York State Department of Health is working with the US Environmental Protection Agency (USEPA) to take actions to protect public drinking water during dredging. Drinking water supplies are being monitored. Halfmoon and Waterford water supplies are using an alternate water source. Stillwater is using a USEPA-installed and operated PCB treatment system. Other water supply systems will take action if necessary. If drinking water standards are not met in river water, the cause will be investigated, and, if needed, activities will be modified.



WHERE IS PHASE 2 DREDGING in 2011?

Between Hudson River mile marker 191.5 and 194.



SCHUYLERVILLE VICTORY WATER

Pre-dredging sampling showed little evidence of PCBs from the river. The existing treatment system in place protects drinking water from contaminants.

STILLWATER VILLAGE

River and drinking water will be monitored. USEPA installed and will monitor a treatment system to remove PCBs.

HALFMOON WATER DISTRICT AND WATERFORD WATER WORKS

Systems now use Troy's water supply through a new water line installed by USEPA.

GREEN ISLAND VILLAGE AND BETHLEHEM WATER DISTRICT 1-CLAPPER ROAD

River and drinking water will be monitored at Green Island during dredging. Green Island has an alternate water source, if needed. The Bethlehem supply is primarily for non-residential use.

LOWER RIVER – FROM RHINEBECK TO CASTLE POINT (INCLUDING POUGHKEEPSIE)

It is unlikely that the lower river will see higher contaminant levels because of distance from dredging and dilution as water travels down the river. Monitoring data from Phase I showed this to be true. Water will be monitored at Rhinebeck, Port Ewen and Poughkeepsie supplies. If a problem is found in the upper river, changes will occur that protect the lower river.

The New York State Department of Health (NYSDOH) monitoring of public water supplies complements General Electric in-river monitoring at Thompson Island Dam, Schuylerville, Stillwater, Waterford, Albany, and Poughkeepsie. General Electric provides these results to the US Environmental Protection Agency (USEPA), the New York State Department of Environmental Conservation (NYSDEC) and NYSDOH (see 1. under More Information, back page).

KEY

- Cities
- Mile markers
- Public water river intakes
- Public water supply wells
- Waterbody

1" = 8 miles

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How can PCBs affect health?

The risk of health effects from any chemical, including PCBs, depends on the amount of chemical exposure. The amount of exposure depends on the concentration of the chemical and the length of exposure. It also depends on individual characteristics, such as a person's age at the time of exposure. All Americans are exposed to PCBs and have low levels of PCBs in their bodies.

Studies of industrial workers exposed to PCBs identified several health effects. Animal studies identified many health effects from exposure to PCBs, including reproductive problems and cancer. Typical exposures associated with PCBs in Hudson River fish, floodplain soil, air and water are unlikely to result in PCB doses as high as those that caused health effects in workers and animals. However, some studies of people in the general population of the U.S. and other countries suggest the possibility that lower levels of exposure, primarily from diet, also may cause health effects.

More information is available at these web sites:

1. **Hudson River Dredging Data**
   www.hudsondredgingdata.com
2. **New York State Department of Health Hudson River Information**
   www.health.ny.gov/environmental/outdoors/hudson_river
3. **Concerns About Surface Water as a Drinking Water Source**
   www.health.ny.gov/environmental/water/drinking/surface_water_fact_sheet.htm
4. **Fish Advisories for the Hudson River**
   www.health.ny.gov/environmental/outdoors/fish/docs/hudson_river.pdf
5. **PCBs and the Upper Hudson River Floodplain**
   www.epa.gov/hudson/floodplains.htm
6. **Home Water Treatment Devices: The National Sanitation Foundation**
   www.nsf.org/consumer/drinking_water/dw_treatment.asp?program=WaterTre
7. **Frequently Asked Questions about PCBs: The Agency for Toxic Substances and Disease Registry**
   www.atsdr.cdc.gov/toxfaqs/tf.asp?id=140&tid=26
8. **Community Advisory Group: Hudson River PCBs Superfund Site**
   www.hudsoncag.ene.com/default.htm
9. **GE: The Hudson River Dredging Project**
   www.hudsondredging.com/

For additional information, contact the New York State Department of Health at **518-402-7530** or (800) 458-1158 or ceheduc@health.ny.gov.