Basin Briefs

Pollution Worksheets

Finding the most cost-effective pollution control program for a drainage basin is the goal of a new technique developed by the staff of the Great Lakes Basin Commission. Using a series of worksheets, decision makers can compile data on pollution sources and calculate costs and benefits of particular programs for reducing pollution. The application of this "Watershed" method will be explained in a handbook scheduled for release next summer. Copies of two preliminary reports on the technique are available from the Great Lakes Basin Commission, P.O. Box 999, Ann Arbor, MI 48106.

Corps General Retires

Major General Richard L. Harris retired Nov. 30 as commander of the U.S. Army Corps of Engineers' North Central Division. He is succeeded by Brigadier General Scott B. Smith, who will become the Corps' new commissioner on the Great Lakes Basin Commission. During his command, Harris oversaw the Corps' study of an extended shipping season on the Great Lakes and St. Lawrence Seaway.

Midwest Water Study

A study by the Northeast-Midwest Institute has declared that water quality problems and decaying municipal water supply systems may make water the area's most serious problem before long. Send $3 to the institute and request *Water Resource Priorities for the Midwest*. Address: P.O. Box 37209, Washington, D.C. 20513.

"Superfund" Support

The Great Lakes Basin Commission has endorsed swift Congressional action to pass "Superfund" legislation. The two related laws would authorize $1.2 billion to clean up abandoned hazardous waste spills in navigable waterways. Many Great Lakes congressman and senators responded to the resolution with indications of support. Both bills passed the House in late September. At this writing, the bills are pending in the Senate for possible action during the post-election "lame duck" session.

PCBs in the U.S.: The Background

PCBs are a group of chemicals, generally clear and odorless ranging in consistency from that of thin oil to that of wax.

Until the early 1970s, PCBs were used in adhesives, plastics, paints, varnishes, sealants, and even carbonless copy paper.

Although manufactured in the U.S. from 1929 to 1977, they were not seen as a problem until a decade ago. A study of museum specimens of Lake Michigan fish detected no PCBs until 1949, and a progressive increase from 1949 to 1966.

PCBs are still in use as coolants in many capacitors and transformers, especially in the utility industry. High voltage capacitors are common on ordinary utility poles, where they store voltage momentarily and correct imbalances that occur over long distances. Capacitors are also used in air conditioners, microwave ovens, and fluorescent light ballasts made before 1977. There is no easy way to distinguish a PCB capacitor from a non-PCB one.

Transformers change electrical voltage to a level required by the equipment drawing current. They are common in industrial buildings and generating stations, and they last 30 to 40 years.

Industry has developed substitutes for PCBs in both transformers and capacitors. Fluorocarbons, silicone fluids, and mineral oils are now used in transformers.

PCBs are toxic to humans. They are suspected carcinogens. They have caused tumors in rats and mice, reproductive dysfunctions and other problems in monkeys, and increased liver weight and other problems in rats and guinea pigs. In humans, excessive PCBs may cause skin eruptions, nausea, abdominal pain, jaundice, and fatigue, among other things.

The U.S. Environmental Protection Agency considers the release of even slight amounts of PCBs significant. "The available data indicate that PCBs may cause several adverse effects in humans, mammals, birds, and aquatic organisms at extremely low concentrations," a recent EPA report said.

Avoiding contaminated foods, however, does not eliminate exposure to PCBs. Airborne PCBs may be absorbed through the lungs. PCBs circulate in the blood and accumulate in the fat, liver, kidneys, brain, heart, and other organs. Breast-fed infants may receive 50 or more times the PCBs in food their mothers eat. □

Next Month: Transportation

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