

Mohawk way of life fouled by PCBs

Residents fear 250 years of history will be lost in contaminated rivers

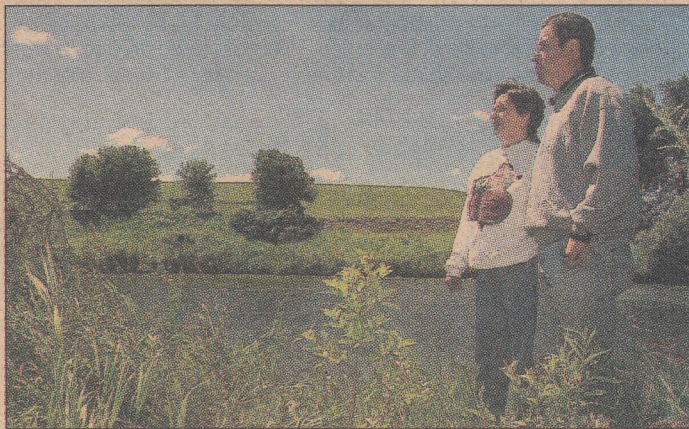
Leah Rae and Roger Witherspoon
The Journal News

ST. REGIS MOHAWK RESERVATION — A small inlet on the St. Lawrence River is so saturated with PCBs that scientists call it “Contaminant Cove.” Turtles tested there were so full of the toxic oil that they qualified as hazardous waste. The sediment is so toxic it’s been used in lab experiments.

The Mohawks call it home.

For more than 250 years the Mohawks have lived at Akwesasne, also known as St. Regis, at the northern tip of New York state. The land surrounds the St. Lawrence River and four other rivers feeding into it — the St. Regis, Grasse, Little Salmon and Raquette.

“Whenever you were thirsty you just drank the water, wher-



Seth Harrison/The Journal News

Standing on the St. Lawrence River near their home on the Akwesasne reservation, Dana Leigh and Larry Thompson look across a cove to a grass-covered landfill where General Motors illegally dumped PCBs and other toxins.



Rescuing the river

- Scientific studies trace effects of PCBs on residents of Mohawk reservation, **6A**
- The Thanksgiving Address, “the words that come before all else,” **7A**
- For more on this topic, visit: www.thejournalnews.com/pcb

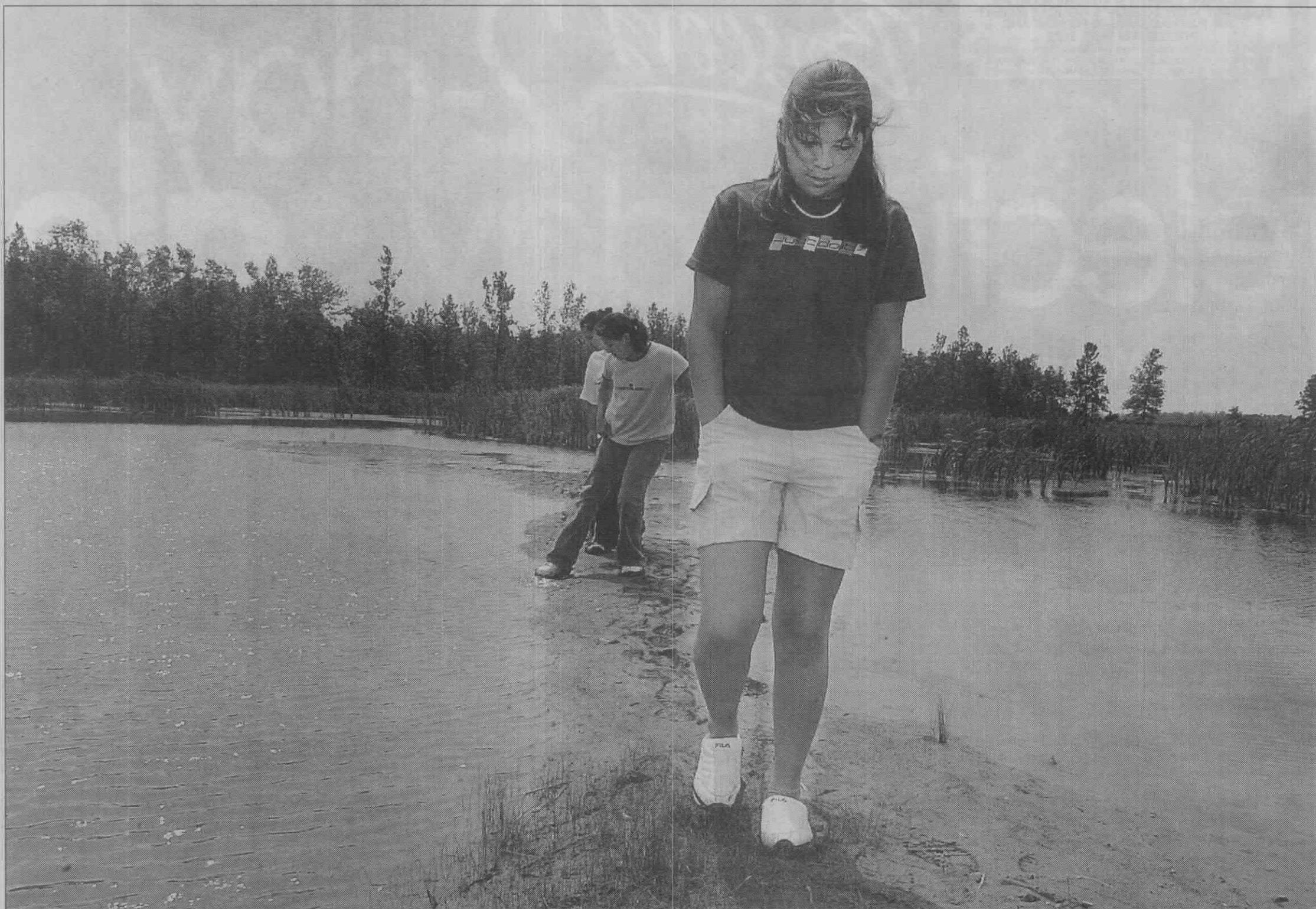
ever it was, from a stream or pond. It never hurt anybody in those days,” said Betty Kelly, a retired Akwesasne school teacher. “If you were ice skating, you made a hole with your skate and you drank the water. ... Today, though, I think I’d go forever without a drink because of the dangers there.”

There are no easy comparisons between the experience at Akwesasne and other places

where toxic dumping has turned the natural environment into a human health threat. Like the Hudson, the St. Lawrence is subject to fishing restrictions because of PCB contamination. Like the Hudson, the St. Lawrence is being dredged for polychlorinated biphenyls as part of a federal Superfund cleanup.

But dredging won’t reverse all

Please see PCBs, **6A**



Photos by Seth Harrison/The Journal News

Kanarahtenhawe Jackson, 14, a student at the Akwesasne Freedom School on the St. Regis Mohawk Reservation along the St. Lawrence River, makes her way through a wetland the students at the school created as an environmental project. The wetland is also used to grow some of the plants and herbs the Mohawks have used for traditional medicine for generations. The plants and herbs were previously taken from the St. Lawrence, but the people no longer use plants from the river because of high levels of PCBs and other contaminants.

TAINTED WATER

Mohawks' reservation, way of life fouled by PCB pollution

PCBS, from 1A

the damage here. The St. Lawrence was more than just a resource for consumer goods. For 250 years, it was the center of this community. At Akwesasne, a community of more than 10,000 people, there is no town square or central monument. There is only the river.

Another center of activity is Route 37, a wide thoroughfare on the American side where stores sell cheap gasoline and cigarettes. A huge pink casino recently opened up along that route.

"If people aren't on the river anymore, people are going to forget the names of islands, the names of rivers, creeks. They all have Mohawk names," said Mary Arquette of the Akwesasne Task Force on the Environment. "So if the language isn't used, if there's no opportunity to use it, then it dies. It goes extinct."

One enduring tradition is a prayer called the Thanksgiving Address, whose verses speak to the elements of nature in reverence and gratitude. Children at the Akwesasne Freedom School recite it daily in the Mohawk language.

"The love that our people have for nature is expressed in that Thanksgiving Address," said Katsi Cook, a Mohawk midwife who drew attention to the PCB problem in the 1980s. "And it's real. It's not some hippie thing, or New Age. Nothing New Age about it—it's about 1,500 years old."

We are thankful to our Mother, the Earth, for she gives us all that we need for life. She supports our feet as we walk about upon her.

The Mohawks, part of the Iroquois Federation, lived here for two centuries before they found themselves downstream of Reynolds Metals, General Motors and ALCOA.

The industries were drawn to the banks of the St. Lawrence in the 1950s primarily because of the cheap power available through the Moses-Saunders Power Project. In addition, the St. Lawrence provided easy access to the Atlantic Ocean and, through the Great Lakes, to the heartland of America.

All three manufacturing plants used PCBs extensively in their operations. The aluminum companies improperly dumped thousands of pounds of PCBs into the St. Lawrence, according to federal and state officials. In addition, the



A tanker moves along the St. Lawrence River, which is a major shipping route from the Atlantic Ocean into the Great Lakes and the Midwest.

aluminum refining process produced a number of toxic substances, particularly fluoride, which poured from their unfiltered smokestacks.

"At one point," said Mohawk attorney John Privatera, "there were 1 million pounds of fluoride a year coming from the Reynolds plant."

The GM plant, next to the reservation on the banks of the St. Lawrence, used PCBs as a hydraulic fluid in its die casting machinery. The U.S. Environmental Protection Agency and the state Attorney General's Office name GM as the biggest offender.

The automotive company has 10 illegal PCB dumps on its 270-acre, riverfront site, said EPA spokesman Marlo Wieder. The company used the river, adjacent waterways and coves as dumps and settling ponds. In addition, she said, GM built 8-acre and 4-acre open pits where tons of PCBs and other chemicals were dumped. They stopped adding to the pits nearly a decade ago.

"GM has two sites, and for about nine years they have not done anything about them," Assistant Attorney General Christopher Amato said. "They have provided various excuses to us, but none of them are particularly convincing."

The dumps containing PCBs and other chemicals are still unlined, uncleaned and uncapped despite years of litigation. The Mohawks do not know when — or if

— their land may begin to heal.

Studies have also established a link between local fish consumption and levels of PCBs in the blood, but there is little information about the overall effects on human health. One project looked at PCB levels in breast milk and found the levels were within the average range. Studies are examining hormone function and behavior in young residents.

Polychlorinated biphenyls probably cause cancer, and researchers are still trying to determine how the chemicals, in various mixtures, can affect growth and brain function.

"The Native Americans have been here since time immemorial," said Tribal Chief Paul Thompson. "We've taken care of the environment — the land, the rivers, the air. Big corporations have created a grave injustice to the environment. Then Nature fights back."

Akwesasne was a waterfowl and fish spawning habitat, said Ken Jock, environmental director for the Mohawks.

"This area, to us, was a paradise. It's not like the Indian reservations out west, where they were forced from their homelands onto government lands that nobody else wanted."

At first, the industries were welcome. But that changed over time.

"The entire GM facility was utilized for dumping — they dumped

all over the place," Amato said. "They never got permits from the state for these facilities."

John Hansen, attorney for GM at the Washington, D.C., law firm of Beveridge and Diamond, did not discuss GM's disposal practices.

"The EPA has to approve work proposed for the site before we can actually do it," he said. "We are in compliance with the order that the EPA issued ... but there are many different pieces to these remedies and they are proceeding at different speeds. Some pieces have been completed and some pieces are still under way."

As far as the eyes can see, the plants grow, working many wonders. They sustain many life forms.

On the reservation, the poisoned watershed changed the nature of the plants used for centuries by traditional Mohawk healers, who rely on the medicines provided in nature.

"There is no good feeling about this," said Junior Cook, traditional medicine counselor at the St. Regis Mohawk Tribal Health Service. "Everything has a spirit. Everything is alive, and you have to pick from a live plant and appeal to the spirit in the plant. But when the ground is poisoned, you can't use the water, you can't use the air, you can't use the plants. The spirit is gone and the earth is just go-

ing to die with the rest of it."

A section of the reservation called Frogtown was once farmland, characterized by a single, overwhelming sound.

"We didn't have lights, but you surely heard the frogs," Betty Kelly said. "Then, all of a sudden they were gone. We don't hear them anymore. We don't hear any crickets, either."

Farms and vegetable gardens are covered with scrub brush and vines. The ponds are still.

The loss is difficult for outsiders to understand, said Dana Leigh Thompson, who came to live with her husband's family at Akwesasne 23 years ago.

"If the land in your community is poisoned, you can move a few miles away or to another city," she told reporters visiting the reservation. "But this is all we have. This is the Mohawks' land. If this is poisoned, we have nowhere else to go."

We turn our minds to all the fish life in the water. They were instructed to cleanse and purify the water.

Akwesasne residents once relied on salmon, bass, sturgeon, walleye, northern pike, whitefish, eel and perch from the river. "Fish feeds" served as family reunions, offering tastes of different delicacies. People had their own nets, boats and fish boxes, especially in the traditional fishing village of St. Regis. Outsiders would come in to buy fish.

"Prior to industry coming," said Thompson, the tribal chief, "we survived off the land, and our main diet was the fish diet. That gave us the protein we needed."

"Years ago," added sub-chief John Bigtree, "I raised 10 kids and we fished a lot. Then they got sick. They got upset stomachs, and some of them were throwing up. And I said, 'That's it.' We stopped eating fish out of the river."

In the past, seine nets were set up along the shore in the spring, and were pulled in by men like Jerry King, a retired welder who still motors his homemade fishing boat out into the river each morning. He passes the spire of St. Regis church, the spot where Mohawks came 250 years ago with Jesuit missionaries from Montreal. The area was called Akwesasne, "Land Where the Partridge Drums."

Out in the water, King's wooden boat glides over international

Studies trace PCB effects on Mohawks

A number of studies have been carried out over the past 15 years by the Mohawk Nation of Akwesasne, the New York state Health Department and the SUNY Albany School of Public Health. Early research focused on the level of exposure to PCBs through consumption of fish from the St. Lawrence River. Data is still being analyzed on the links between contaminants and health problems. Some of the results:

Chronic diseases: A study of computerized medical records from the St. Regis Mohawk Health Services Clinic from 1992 through 1996 suggested higher rates of hypothyroidism and diabetes at Akwesasne than in the general U.S. population. Asthma and hypothyroidism also had increased over five years.

PCBs and thyroid function: A study of 117 Mohawk children, ages 10-16, found an association between highly chlorinated PCBs in the blood and thyroid hormones. The higher the PCB levels, the lower the level of thyroid hormone. Overall the children's PCB levels were about average for the United States, suggesting that PCBs may affect thyroid function even at low levels. The children were exposed to PCBs through their mothers' placentas and through breast feeding. They were born around the time advisories were being issued discouraging the consumption of local fish due to PCBs. Further studies will look at the adolescents' growth, sexual maturation, cognitive function and behavior.

Mother's Milk Project: Initiated by a Mohawk midwife and funded by General Motors, a study of 100 Mohawk mothers found that PCB concentrations in breast milk were similar to or lower than in other groups. The study did find a correlation between consumption of fish and PCB levels in the milk.

Please see TAINTED, 7A

TAINED LAND

On once pristine reservation, Mother Earth fouled by industrial pollution

TAINED, from 6A

boundaries. A narrow island to the west is in Ontario. Back on the mainland is a slice of Quebec with New York state beyond. But all King sees from beneath the visor of his red baseball cap is blue water and low-lying brush and trees, just like when he was growing up. "Looks the same. Only thing is, the water is polluted now," he said one morning. He was fishing with a pole and a pail of minnows at the back of his wooden boat, the only boat out on the water.

King throws back what he catches, except when he's collecting samples for the tribe's environmental scientists. "Catch and release," he said, laughing as he threw a small bass overboard.

The tribe issued fish advisories in the mid-1980s. Because of PCB contamination, women of child-bearing age and children up to age 16 are advised not to eat any fish from the St. Lawrence. Men are advised to eat no more than one meal of fish a month.

In recent years, Mohawk families have tried raising fish in clean ponds or floating cages, safely away from the sediment. Arquette's task force helps get these smaller projects going.

Over on Cornwall Island, on the Canadian side, a larger effort is under way in a collection of ponds and indoor tanks. Lloyd Benedict is carrying on a five-year experiment to hatch and raise yellow perch that could be sold back to the community.

"We do the American way," said Benedict, a former chief. "We take a bad situation and turn it into an industry."

We give thanks to all the waters of the world for quenching our thirst and providing us with strength. Water is life.

"This is where we'd teach our kids to swim," Dana Leigh Thompson said one afternoon, standing in the tall grass next to Contaminant Cove. A child could easily wade across, around the rocks, to the tidy green lawn on the opposite bank. The grass slopes upward, concealing one of the dumps at the neighboring GM plant.

News about the PCBs dumped at GM was just coming out when Thompson came to this Mohawk community. The dump was wide open, and considered a benefit to the Mohawks, who freely wandered through the muck looking for useful objects.

The children, she recalled, would make forts out of the strong boxes that once contained machine parts. The PCBs and other chemicals in the dump came in many colors, she noted, and in a cruel irony, "when they came out of that dump they had face paint. They didn't know it was dangerous."

Children are not swimming in the rivers the way their parents did. Pools are commonplace next to the ranch homes around the reservation. "We should be able to swim wherever we want," said 9-year-old Casey Cole Benedict, whose Mohawk name is Karonhiakwas. "It's not that way anymore."

We gather our minds together to send greetings and thanks to all the Animal life in the world. They have many things to teach us as people.

The fluoride problem came to a head first, when the herds of cattle and horses began to die.

The Mohawks sued the aluminum companies, and Reynolds spent millions of dollars installing scrubbers on the smokestacks, which no longer belch yellow smoke.

The wake-up call for PCBs came in 1985, when state wildlife pathologist Ward Stone and Health Department chemist Brian Bush went to Akwesasne. Katsi Cook, the Mohawk midwife, visited Stone to talk about her concerns about PCBs getting into the food supply.

"I was worried about the babies that I was delivering," she said.

At the now-infamous cove, Stone saw children wading in mud that turned out to be hazardous waste. He found a turtle so toxic that it, too, qualified as hazardous waste. People knew that there were PCBs at the GM dump, but they didn't know how badly the area was poisoned.

A group of summer interns collected animals for Stone in the late 1980s, and the numbers coming back on the shrews, mice, turtles, fish, frogs, rabbits, muskrats and ducks made the pattern clear.

"The stories the animals had to



Tetewentasawas McDonald, 6, a student at the Akwesasne Freedom School on the St. Regis Mohawk Reservation, plays outside during recess. The Mohawk language is the only language spoken at the school.

tell us were just compelling," said Arquette, one of the interns and a Cornell student at the time. "We had no doubt about the extent of contamination, the effects on wildlife. We had thousands of animals."

Most disturbing were the toxic turtles. Turtles don't move around much from year to year, and are considered indicators of the health of their immediate surroundings. They are also a religious symbol to Mohawks and other Indians, who believe the Creator formed Earth on a turtle's back. North America is frequently referred to as Turtle Island.

The GM dumps are a continuing source of contention. The Mohawks and the state of New York want them cleaned up and contaminants removed. They refuse to allow GM to work on projects on the reservation until the source of pollution is removed.

GM and the EPA want to cap the dumps, leaving the contents in place, and insert an underground wall to prevent further contamination of the watershed.

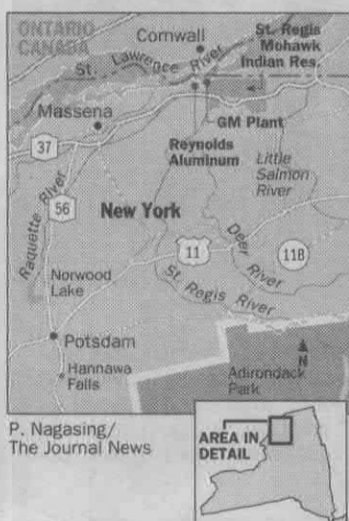
"GM cannot do anything, in terms of remedial work at the site, without EPA permission," said Hansen, the GM attorney.

GM removed some 18,000 cubic yards of contaminated sediment from the St. Lawrence in 1995, and Reynolds completed its dredging in the summer of this year.

Representatives of the state, the EPA, GM and the Mohawks met Thursday for the first time to attempt to work out a cleanup program satisfactory to all parties.

On the Hudson River, EPA chief Christie Whitman is to issue final regulations this month ordering the General Electric Co. to dig up sediment in a 40-mile stretch of the river upstate.

GE dumped the chemicals there for 30 years. The dredging will cost the company at least \$460 million.



P. Nagasing/
The Journal News

Everything we need to live a good life is here on this Mother Earth.

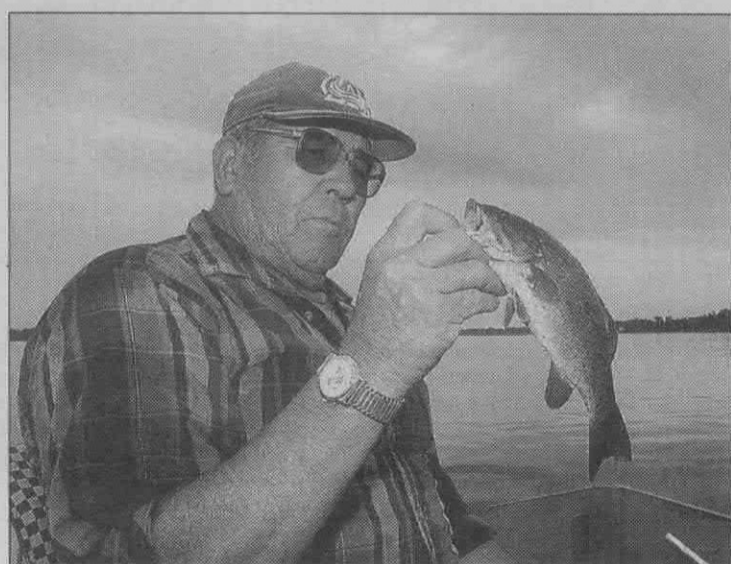
On the eastern end of the reservation there is a sloping, brush-covered field ending at the banks of a tributary to the Grasse River. About 50 yards from the water is a shallow pool with tall strands of sweetgrass, used in basket making.

Around the pool are small black ash saplings and other plants. It is a fledgling wetlands, filled with plants and trees that used to flourish on the reservation.

"The kids designed the wetlands," said teacher Elizabeth Perkins of the Freedom School. "They drew what they wanted in there, how they wanted it and then came and planted them."

The kids frequently had to peel off leeches after spending the afternoon working to reclaim the land. But their effort seems to be working. "We've lost whatever plants were in our wetlands," Perkins said. "But I think they can be restored."

And at summer's end, the little pond, flanked with sage, rippled from the antics of hundreds of baby frogs.



Jerry King, who has lived on the St. Regis Mohawk Reservation his entire life, looks at a bass he has just caught from the St. Lawrence River. King used to sell the fish he caught, but now he releases his catch because of the high levels of PCBs in the water and its fish.



WHAT ARE PCBs?

Manufactured by Monsanto from 1929 to 1977, polychlorinated biphenyls, or PCBs, were legally and widely used in the production of electrical insulation, plastics, dyes, coolants, hydraulic fluids, lubricants, adhesives and copy paper. Scientists now classify the chemicals as probable carcinogens and say they can also cause developmental defects in children, hormonal problems and reproductive abnormalities.

Some useful sites about PCBs and the Hudson River dredging:

- Environmental Protection Agency: www.epa.gov/hudson
- New York state Department of Environmental Conservation www.dec.state.ny.us/website/dfwmr/habitat/nrd
- Clearwater, a Hudson River environmental group: www.clearwater.org
- General Electric Co.: www.hudsonvoice.com
- Agency for Toxic Substances and Disease Registry: www.atsdr.cdc.gov/DT/pcb007.html

ON THE WEB