



Love Canal: The Start of an Environmental Justice Movement

Lois Gibbs was raising her family in Love Canal, near Niagara Falls in upstate New York, in 1978 when she discovered that her home and those of her neighbors were sitting next to 20,000 tons of toxic chemicals.

That shocking discovery spurred Lois to lead her neighbors in a three-year struggle to protect their families from the hazardous waste buried in their backyards. In that fight, Lois discovered that no local, state or national organization existed to provide communities with strategic advice, guidance, training and technical assistance.

Lois with her neighbors on their own, by trial and error, developed the strategies and methods to educate and organize their neighbors, assess the impacts of toxic wastes on their health, and challenge corporate and government policies on the dumping of hazardous materials. Her leadership led to the relocation of 833 Love Canal households.

Love Canal: the Start of a Movement

The history of Love Canal began in 1892 when William T. Love proposed connecting the upper and lower Niagara River by digging a canal six to seven miles long. By doing this, Love hoped to harness the water of the upper Niagara River into a navigable channel, which would create a man-made waterfall with a 280-foot drop into the lower Niagara River, providing cheap power.

However, the country fell into an economic depression and financial backing for the project slipped away. Love abandoned the project, leaving behind a partially dug section of the canal, sixty feet wide and three thousand feet long. In 1920, the land was sold at public auction and became a municipal and chemical disposal site until 1953. The principal company that dumped wastes in the canal was Hooker Chemical Corporation, a subsidiary of Occidental Petroleum. The City of Niagara and the United States Army used the site as well, with the city dumping garbage and the Army possibly dumping parts of the Manhattan Project and other chemical warfare material.

In 1953, after filling the canal and covering it with dirt, Hooker sold the land to the Board of Education for one dollar. Hooker included in the deed transfer a “warning” of the chemical wastes buried on the property and a disclaimer absolving Hooker of any future liability.

Perhaps because they didn’t understand the potential risks associated with Hooker’s chemical wastes, the Board of Education began in 1954 to construct an elementary school on the canal property. The 99th Street School was completed by 1955, opening its doors to about 400 students each year.

Homebuilding around the old canal also began in the 1950’s. However, homeowners were never given any warning or information that would indicate that the property was located

near a chemical waste dump. Most families who moved into the area were unaware of the old landfill and its poisons. The canal looked very innocent, like any field anywhere. It certainly did not appear to be a chemical dump with 20,000 tons of toxic wastes buried beneath it.

In 1978, there were approximately 800 private single-family homes and 240 low-income apartments built around the canal. The elementary school was located near the center of the landfill. The Niagara River, to the south and a creek to the north of the landfill formed natural boundaries for the area affected by the migrating chemicals.

From the late 1950's through the 1970's, people repeatedly complained of odors and substances surfacing near or in their yards and on the school playground. The city, responding to these complaints, visited the area and covered the "substances" with dirt or clay.

After years of complaints, the city and county hired a consultant to investigate. In 1976, the Calspan Corporation completed a study of the canal area and found toxic chemical residues in the air and sump pumps of a high percentage of homes at the southern end of the canal. They also found drums just beneath or on the surface, and high levels of PCB's in the storm sewer system. Calspan recommended that the canal be covered with clay, home sump pumps be sealed off and a tile drainage system be installed to control the migration of wastes. However, nothing was done by the city with the exception of placing window fans in a few homes found to contain high levels of chemical residues.

In March of 1978, the New York State Department of Health (NYSDOH) began collecting air and soil tests in basements and conducting a health study of the 239 families that immediately encircled the canal. The Health Department found an increase in reproductive problems among women and high levels of chemical contaminants in soil and air.

The Love Canal Homeowners Association

Love Canal Homeowners Association (LCHA) was established in August of 1978 to give the community a voice in the decisions made during the Love Canal environmental crisis. LCHA membership consisted of approximately 500 families living within a 10-block area surrounding the Love Canal landfill. The community consisted of blue-collar workers with an average annual income of \$10,000-\$25,000. The majority of people worked in local industries, which were largely chemical.

The Love Canal Homeowners Association had grown out of another group established that June, the Love Canal Parents Movement, started by Lois Gibbs, who lived in the neighborhood and whose children attended the 99th Street School. Ms. Gibbs, unaware of the dump, was alerted first by newspaper articles describing the landfill, its wastes and proximity to school. Having a small sickly child attending the school, Gibbs became very concerned about the danger the landfill posed. She also realized that the school being built so close to the landfill might have something to do with her son's poor health.

Gibbs first approached the School Board armed with notes from two physicians



recommending the transfer of her child to another public school. But the Board refused to transfer her child stating that if it was unsafe for her son, then it would be unsafe for all children and they were not going to close the school because of one concerned mother with a sickly child. Gibbs was angered and began talking with other parents in the neighborhood to see if they were having problems with their children's health. After speaking with hundreds of people, she realized that the entire community was affected.

On August 2, 1978, the New York State Department of Health (NYSDOH) issued a health order. The health order recommended that the 99th Street School be closed (a victory), that pregnant women and children under the age of two be evacuated, that residents not eat out of their home gardens and that they spend limited time in their basements. A few days later, the state agreed to purchase all 239 homes in the first two rings of homes closest to the canal.

These unprecedented actions served to bring the residents together to form a strong united citizens organization, and served as the stepping stone to the establishment of the Love Canal Homeowners Association. Within a week of the health order, the residents held a public meeting, elected officers and set goals for the newly formed organization. All goals set at that time were ultimately reached.

Remedial Construction

At the time of the first evacuation order in August of 1978, the state established the Love Canal Interagency Task Force to coordinate the many activities undertaken at the canal. The task force had three major responsibilities: the relocation of evacuated families, the continuation of health and environmental studies and the construction of a drainage system to prevent further migration of toxic chemicals.

Because of the close proximity to the Niagara River, the water table in the canal would rise and fall substantially. As this occurred, water would mix with chemicals in the landfill and move out into the community as "leachate." As the water table rose, so did the leachate which moved out through the topsoil to homes built nearby. There was also an old stream bed that crossed the canal and underground sand layers that carried this overflow into the basements of adjacent homes and throughout the community.

The cleanup plan consisted of a tile drain collection system designed to "contain" the waste and prevent any outward migration of chemical leachate. A graded trench system was dug around the canal to intercept migrating leachate and create a barrier drain system. The leachate collected from the drain system was pumped to an on-site treatment plant that uses a series of filters, most importantly, activated charcoal, to remove chemicals from the waste stream. The remaining "clean" water was then flushed down the sanitary sewer system.

Chemicals such as mercury and other heavy metals are not removed by this treatment and find their way into the Niagara River. A clay cap was placed over the canal as a cover to minimize rainwater entering the canal surface, to prevent chemicals from vaporizing into the air and to prevent direct contact with contaminated soil. The 20,000 tons of wastes are still buried in the center of this community.



The “Unaffected” Community

Once the state had evacuated 239 families and began the cleanup, they arbitrarily defined the affected area and erected a 10-foot fence around the evacuated area. However, at the time nobody knew how far the chemicals had gone or how many people were affected. At this same time, the state began to make public statements that there was no evidence of abnormal health problems outside the fenced area. Consequently, the families in the outer community became angry and began to look at the fence as though it fenced them in. The residents knew there were health problems outside the first 239 homes because of a health survey that LCHA had conducted.

The community quickly began to express their anger and concerns. Even quiet and retiring residents suddenly found themselves raising their voices in public protest. The protests included mothers and fathers with their babies and old people who were ready for retirement. They marched into the streets on Mother’s Day, carried symbolic coffins to the state capitol, and held prayer vigils. The residents also picketed at the canal every day for weeks in the dead of winter, hoping someone would hear them and someone would help. Their children were sick, their homes were worthless and they were innocent victims.

Because of the pressure created by the protests and the persistence of the community, the state was forced to address the community’s concerns. They gave the residents “concessions” such as an extensive safety plan, a scientist-consultant of their choosing whose salary was paid by the state, and a \$200,000 Human Services Fund to pay some of the residents’ medical expenses. But residents did not want concessions. They wanted and needed to be evacuated as the first 239 families were.

Community Health Studies

With the help of a dedicated volunteer scientist, LCHA began to interview families. Once the data was collected, they plotted the results on a map and immediately noticed a clustering of diseases in certain areas of the neighborhood. Elderly residents suggested that the clusters seemed to follow the path of old stream beds that had crossed the canal many years ago.

LCHA looked at old aerial photographs, geological survey maps and personal photographs that residents brought forth. One of these photographs showed an old stream bed which appeared to be 10-feet deep and more than 20-feet wide. These stream beds crossed the canal carrying water to and from the Niagara River. When the area was developed, the stream beds were filled with dirt and building rubble through which water flowed easily. Even though there was no surface evidence of these stream beds, they provided an easy pathway for chemicals to flow out of the canal.

The scientist who helped the residents with their health study was Dr. Beverly Paigen, a cancer research scientist at Roswell Memorial Institute in Buffalo, New York. The data was collected by interviewing each family using a questionnaire. More than 75% of the



homes outside the fenced area were included in the study. The 239 families who lived closest to the canal were not included because they were already evacuated. Thus, the results were an underestimate of the total health damages in the community. The study was completed in February, 1979.

The study found increases in miscarriages, still births, crib deaths, nervous breakdowns, hyperactivity, epilepsy and urinary tract disorders. Each of these diseases was plotted on a map using dots to represent each disease. Many of the dots clustered around the old stream beds or “historically wet” areas.

When the observed miscarriages were compared to the number of miscarriages that occurred in the same women before they moved to the Love Canal, miscarriages were found to have increased 300%. Most of these miscarriages occurred in women who lived in the historically wet areas.

When comparing the number of birth defects in historically wet areas with homes outside these areas, there were almost three times as many birth defects. Importantly, no birth defects were found in homes located on the stream bed that did not cross the canal. The study also showed that during the 5-year period from 1974 to 1978, 56% of the children in the Love Canal neighborhood were born with a birth defect (9 birth defects among 16 children born) that included three ears, double row of teeth, and mental retardation.

LCHA also examined the pregnancies that occurred between January 1979 and February 1980, the construction period. This study found that out of 22 pregnancies occurring among Love Canal women, only four normal babies were born. The rest of the pregnancies ended in a miscarriage, stillbirth or a birth-defected child.

Many of the chemicals in Love Canal are also known to affect the kidneys and the urinary system. The study showed an increase of almost 300% in urinary tract disorders. LCHA found a great number of the canal children to have urinary tract disorders.

LCHA presented these findings to the state health authorities who quickly dismissed the study calling it “useless housewife data,” saying residents’ illnesses were all in their heads, the birth defects were genetic, and the urinary disease the result of sexual activity (in a five-year-old boy??).

So, the community went back to the streets and explained their problems to the public in order to gain the public support needed. Thousands of people soon began to write letters and send telegrams to the Governor, to legislators and to the President. Residents created so much pressure and public outcry that the health authorities were forced to investigate the claims.

On February 8, 1979, after the health department looked at the reproductive problems in the outer community, they confirmed the homeowners’ findings and issued a second evacuation order for pregnant women and children under the age of two. This evacuation was a step in the right direction, but it was still not enough. It was not until October of 1980 that a total evacuation of the community was ordered by President Carter. Everyone who lived at the Love Canal had the option of moving away, with the government purchasing their homes at fair market value.



The Next Chapter

It is unfortunate that everything done at Love Canal, from the health studies to evacuation, was done for political reasons. None of the decisions were based on scientific evidence. LCHA truly believes that if it had not been for the large, strong citizen organization, families would still be living at Love Canal with the health authorities saying there were no health problems.

For these same reasons, in September, 1988, the Love Canal was declared “habitable,” not to be confused with “safe.” While the 239 homes closest to the canal have been demolished, the remaining homes were available to be sold to new families. There was no cleanup measures taken around the homes, which were found to have several toxic chemicals in and around them. Only the creek and sewer systems were cleaned.

In the case of Love Canal, history will most likely repeat itself. The deeds will contain a clause stating that if the new owners become sick, harmed, or die due to the Love Canal wastes, the city, state or federal governments will not be responsible. This clause is similar to the “Hooker Clause” in the earlier land transfer in 1950.

In conclusion, it is important to add that canal families didn’t know that they were being exposed to poisonous chemicals, nor were they aware that chemical wastes were being dumped in our rivers, soil, and air. Love Canal awoke a community to the unpleasantness and unfortunate realization of how toxic wastes affect our lives, and destroy our environment. Residents at Love Canal always believed that the government would automatically protect them. They were wrong; in some cases dead wrong!

Lois Gibbs’ book, *Love Canal the Story Continues...* published April 1998, can be obtained from the Center for Health, Environment and Justice, P.O. Box 6806, Falls Church, VA 22046 (703) 237-2249 or e-mail info@chej.org

