

History: Love Canal: the Start of a Movement

By Lois Marie Gibbs

Lois Marie Gibbs was the key leader of Love Canal residents in their fight to be relocated away from a toxic dump containing over 20,000 tons of chemicals. She is the Executive Director of the [Center for Health, Environment and Justice](#), which she founded in 1981 following the Love Canal struggle. CHEJ is a national organization that assists local people to become empowered to protect their communities from environmental threats. The following text was written by Lois Marie Gibbs and CHEJ in 1983 and updated in 1997 and 2002.

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 then 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 grew out of another group established in June 1978, the Love Canal Parents Movement. The Parents Movement was

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 the 99th Street School. Having a small sickly child attending the school, Gibbs became very concerned about the danger the landfill posed to the school. 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.

Summary of Events

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. [Also, please see [Key Dates and Events at Love Canal.](#)]

Remedial Construction

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 streambed 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 consists 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 is 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. This decision was arbitrary because 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 streambeds 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 streambed, which appeared to be 10-feet deep and more than 20-feet wide. These streambeds crossed the canal carrying water to and from the Niagara River. When the area was developed, the streambeds were filled with dirt and building rubble through which water flowed easily. Even though there was no surface evidence of these streambeds, 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 streambeds 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 streambed 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 of our country. 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.

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." The 239 homes closest to the canal have been demolished and the remaining homes may be sold to new families. The homes that will be re-inhabited are still contaminated, still unsafe. There have been 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 did not 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!

Since Love Canal, Ms. Gibbs has founded the Center for Health, Environment and Justice (CHEJ) (formerly the Citizens Clearinghouse for Hazardous Waste - CCHW) which provides direct assistance to citizens faced with environmental problems. She started CHEJ because she was contacted by hundreds of people seeking help with their hazardous waste problems. As Director, she has traveled extensively across the country working with citizens and she quickly found that, although Love Canal is the most famous, it is not the only serious problem. In fact, chemical wastes and emissions continue to this day, to threaten thousands of communities across the country!

Residents learned at Love Canal that even low levels of chemical exposure have an effect on the human body, and that the government will protect you from this only when you force them to. If you think you're safe, think again. We can count only on ourselves to safeguard our families' health through vigilance, knowledge and collective action