

Events at Love Canal

This timeline describes events that affected a present-day residential community in the city of Niagara Falls, New York. Read the timeline carefully, noting the questions in parentheses. Then, consider the questions listed at the end, which we will discuss as a group.

30,000 years ago

According to geologic evidence, the Niagara River starts to flow northward to connect two glacial lakes, now called Lake Erie and Lake Ontario. Due to the resistant rock layers beneath the soil, the fast flowing waters erode unevenly, forming a gorge and waterfalls between the lakes. (What is this area called now?)

1757

Taking advantage of the swift currents, settlers of the region construct a small canal and a sawmill by the Niagara River. The settlers call their community LaSalle Village.

1830

An engineer reports that the river is a potential source of inexpensive power.

1879

Hydroelectric power, generated from the river, lights fountains in a nearby park.

1890

The dream of William T. Love is to see a model community develop in the area. He convinces the legislature to build a power-generating canal near Lake Ontario to encourage the growth of industry. (Why might a canal attract industry? How would the canal tap the water's energy before flowing back into the river below the falls?) Love is a good politician; he uses his persuasion and political connections to get the project started.

Mid-1890's

Economic depression hits the country. The discovery of alternating current makes industrial locations near the source of water-powered electricity less important to manufacturing. Congress protects the waterfalls with environmental legislation, making it harder to divert water from the river. Love's investors take their money out of the canal project, and the work stops---leaving a rectangular trench 20 m wide, 3 m deep, and 1000 m long.

1905

Its electrical industry attracts chemical manufacturers to the area. Elon Hooker starts the Hooker Electrochemical Company, which employs 75 local people to manufacture chlorine and caustic soda. These chemicals are widely used for industrial cleansing; however, they are hazardous to mass-produce. From the beginning, Hooker Electrochemical is an important part of the community's economy.

1927

LaSalle Village becomes part of the city of Niagara Falls, a chemical industry center, home of several nationally known chemical firms. Love Canal is annexed by the city. The abandoned canal is located 500 m from the Niagara River and drains directly into it by means of a trench. Residents swim and fish in the canal.

1942

The Niagara Power and Development Company, Love Canal's owner, gives Hooker Electrochemical permission to dispose of wastes into the canal. (Keep track of ownership of the canal on a piece of paper.)

1943

A woman later describes this year in a letter to the *Niagara Gazette*: "They dumped all year early in the morning...my husband was home sick and the smell was so bad that we had to put wet towels over my husband's mouth and nose. It came over toward the houses like a white cloud and killed the grass and trees and burnt the paint off the back of the houses and made the other houses all black."

1952

More than 19,000 metric tons of several different types of dangerous chemicals have already been dumped into the canal to a depth of 6 to 8 m. The chemicals, in the form of sludge or liquid, are contained in metal or fiber barrels. The local health department had issued Hooker Electrochemical a dumping permit. The canal, according to Hooker management, is an ideal dump site, as it is located in a thinly populated area and the canal walls are made of impermeable clay.

1953

Love Canal stands almost full of chemical wastes. Hooker has covered over the canal with clay and soil. Natural vegetation has grown up, giving the area a serene appearance. The Niagara Falls school board wants to buy 6.5 hectares of land, including the canal site, to build an elementary school for the rapidly growing community. The school board threatens to force Hooker to sell the land by having the property condemned for public use, but Hooker obliges, turning over the property for \$1. However, Hooker adds a disclaimer to the deed of sale that warns of chemicals in the area and transfers all liability to the new owners. (Define *disclaimer* and *liability*. Can Hooker give away the responsibility?)

1954

The architect of the elementary school warns the school board of a "pit filled with chemicals" beneath the school site under construction. The building site is moved 26 m northward, but another dumping area is found beneath the new playground. Drainpipes are sunk deep into the land-filled canal area for new buildings and houses of the booming city. (Where did all these people come from? What might be happening to the clay canal walls and the buried containers?)

1957

Residual chemicals seep from the canal to the surface. Strange skin rashes begin to be observed on pets and children who walk barefoot on the ground. Odors are bad, especially after heavy rains. People complain to the county health department. Over the next 20 years, the chemicals-related incidents that occur with increasing frequency are dealt with individually; the scope of the problem is not recognized.

1976

Local journalists write articles suggesting the danger of the canal site to nearby residents. Public health officials say they lack resources to investigate all the complaints thoroughly.

1977

A local congressman begins investigating the area. City agencies run out of funds to help residents, as the damages and expenses mount, Hooker, the city, and the state dispute over who should pay.

1978

Heavy snowfalls saturate the ground with water, which carries chemicals to the surface. Strange incidents occur: A swimming pool "pops up" from pressure underneath, holes full of chemicals appear throughout the neighborhood, and shrubbery begins to die. The state health department begins testing blood samples of residents. Real estate values plummet, and residents find it impossible to sell their homes--so they remain at Love Canal. A sampling of house basements detects benzene, toluene, carbon tetrachloride, and chloroform.

August 2, 1978

The health commissioner of New York makes a public statement: "The Love Canal Chemical Waste Landfill constitutes a public nuisance and an extremely serious threat and danger to the health, safety, and welfare of those using it or exposed to the conditions emanating from it, consisting, among other things, of chemical wastes lying exposed on the surface in numerous places and pervasive, pernicious, and obnoxious chemical vapors and fumes affecting both the ambient air and the homes of certain residents living near such sites."

The commissioner closes the elementary school and makes two recommendations: 1) All pregnant women living in a specified area should move from their homes as soon as possible; 2) Approximately 20 families between certain streets should relocate any children under the age of 2.

A week later

This recommendation broadens to include all persons living at 97th and 98th Streets and Colvin Boulevard in Niagara Falls, New York. The State of New York buys some of the homes of residents in this area who wish to relocate.

1979 and 1981

The relocation area is extended to a 6-block, then a 10 block area around Love Canal.

1985

Private lawsuits against Hooker are settled out of court, for a total of \$20 million, of which \$8 million is paid to attorneys and \$1 million to a medical trust fund. An average of \$10,000 each is awarded to 1327 residents, although the actual amounts vary widely.

Questions:

- 1) Who are the parties involved at Love Canal?
- 2) Who are the responsible parties?
- 3) Is any one party at fault?
- 4) Why is this such an excellent example of a controversial issue?
- 5) What can we learn from other people's tragedies?
- 6) Is there an urgent warning for the future in the events at Love Canal?
- 7) How can an individual help solve the problem of irresponsible disposal of toxic wastes?