

A Story Incomplete: Love Canal and the Debate Surrounding Environmental Justice

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Process Paper

As I browsed through potential National History Day (NHD) topics, my interests stretched across various categories, from the Russian Revolution to the Munich Agreement of World War II. However, given the accelerating problem concerning environmental justice and equity to those who seek safety, I chose the Love Canal disaster as my Historical Paper topic.

Though infamous, the Love Canal disaster stands as a prominent example of American citizens seeking environmental justice and finding numerous obstacles placed by both state and federal governments. In this historical event, the Love Canal Homeowners Association (LCHA), a group of residents living in the Love Canal area, represented the residents living near the canal. Containing over 21,000 tons of toxic chemical compounds, the canal had jeopardized hundreds of households, and created an eye-drawing spectacle for people across America.

Throughout the process of writing my historical paper, the main obstacles were researching and prioritizing. Throughout my research, I often felt lost, because there seemed to be an endless stream of events, and it was difficult to find the exact date of each event. However, with patience and corroboration, I learned that research is a long process that requires high-level comprehension at every step. Next, I have always been someone who has a difficult time selecting particular events out of so many events that all seem so historically significant. By excluding certain events, I have often felt pangs of guilt for not being able to include all the perspectives and all of the events of a historical era. With the tedious but priceless experience NHD has offered, I was able to step out of my comfort bubble and forced myself to prioritize as rationally as I could. Therefore, the debating and diplomatic events my paper is focused on is part of a months-long selection of deep questioning and contemplation.

Whether it may be by meeting at the White House, or talking to neighbors about dumped chemicals in a nearby school, the Love Canal calamity clearly reflects upon the NHD theme, debate and diplomacy. In this environmental battle, these working-class Love Canal residents protested against Hooker Chemical Corporation and various levels of indifferent governments, pushing for financially supported evacuations. Ultimately, hundreds of families were evacuated with financial support, and a principle restoration act was enforced by 1980.

This extraordinary also reflects upon the importance of the People in an American democracy. As shown by LCHA, the People are those who often provide new perspectives and demand change for the better; all the while giving future generations an enhanced view of past historical events.

Man is part of nature, and his war against nature is inevitably a war against himself.

- Rachel Carson, 1963¹

When Rachel Carson published *Silent Spring* in 1962, her groundbreaking book had a powerful impact on the people of the United States, topping *The New York Times* bestseller list with a sale of over 2 million copies.² Carson cautioned against wide scopes of pesticides, explaining their damage to the environment,³ resulting in laws regulating the use of pesticide, and the growth of environmental awareness among Americans.⁴ This prompted people to demand a safer environment, and fight for environmental justice.

Like *Silent Spring*, the Love Canal disaster was a wake-up call for America. In this catastrophe, approximately 21,000 tons of toxic chemicals were found buried under a school, dangerously near rows of homes.⁵ Facing an indifferent government, Love Canal residents joined together to form the Love Canal Homeowners Association (LCHA) and forced their way into the debate, demanding safety, equity, and action from both state and federal governments.⁶

¹ Leonard, Jonathan Norton. "Rachel Carson Dies of Cancer; 'Silent Spring' Author Was 56." *The New York Times*: On The Web, 15 Apr. 1964, archive.nytimes.com/www.nytimes.com/books/97/10/05/reviews/carson-obit.html?simple=True. Accessed 17 Feb. 2022.

² McDowell, Edwin. "'Silent Spring,' 20 Years a Milestone." *The New York Times*, 27 Sept. 1982, www.nytimes.com/1982/09/27/books/silent-spring-20-years-a-milestone.html. Accessed 26 Dec. 2021.

³ Ibid.

⁴ "Legacy of Rachel Carson's Silent Spring." *Environment and Society Portal*, edited by Environment and Society Portal, www.environmentandsociety.org/exhibitions/rachel-carsongs-silent-spring/legacy-rachel-carsongs-silent-spring. Accessed 22 Feb 2022.

⁵ Kleiman, Jordan, Dr. "Love Canal: A Brief History." *Geneseo*, https://www.geneseo.edu/history/love_canal_history. Accessed 27 Dec. 2021.

⁶ Bergeron, Emily. "Human Rights Hero: The Mother of Superfund." *American Bar*, 21 May 2021, Bergeron, Emily. "Human Rights Hero: The Mother of Superfund." *American Bar*, 21 May 2021, www.americanbar.org/groups/crsj/publications/human_rights_magazine_home/vol--44--no-2--housing/human-rights-hero--the-mother-of-superfund/. Accessed 27 Dec. 2021.

Eventually, on December 11, 1980, a toxic wasteland restoration law called the Superfund Act was enacted by Congress,⁷ protecting people across America.

Dreams of Model City

In 1892, Niagara Falls, New York, entrepreneur William T. Love proposed the construction of the Love Canal⁸ to support his dream of a city where residents would have access to electricity, gas, telephone, and clean water transported through newly built pipes.⁹ Love planned to connect the lower and upper parts of the nearby Niagara River by digging a canal around seven miles long.¹⁰ Water from the Niagara River would drop more than 300 feet to generate hydropower, and provide an economic boost in the area.¹¹ Since transmitting electricity over large distances was impossible, the location of the city Niagara Falls and the waterfall Niagara Falls only raised Love's hopes for success. Love Canal's construction began in May 1894.

However, Love's plan for a Model City was all but destroyed through the Panic of 1893.¹² As the stock markets crashed and businesses went bankrupt, Love's investors withdrew financial support, forcing him to scale back his vision.¹³ An additional factor that turned Love's canal plan

⁷ United States Environmental Protection Agency. "Superfund: CERCLA Overview." *United States Environmental Protection Agency*, www.epa.gov/superfund/superfund-cercla-overview#:~:text=The%20Comprehensive%20Environmental%20Response%20Compensation,Congress%20on%20December%201980. Accessed 27 Dec. 2021.

⁸ Center for Health, Environment, and Justice. "Love Canal." Center for Health, Environment, and Justice, chej.org/about-us/story/love-canal/#:~:text=The%20history%20of%20Love%20Canal,an%20three%20thousand%20feet%20long. Accessed 26 Dec. 2021.

⁹ Newman, Richard S. "Making Love Canal." *Lapham's Quarterly*, 13 July 2016, www.laphamsquarterly.org/roundtable/making-love-canal. Accessed 27 Dec. 2021.

¹⁰ Center for Health, Environment, and Justice. "Love Canal." Center for Health, Environment, and Justice, chej.org/about-us/story/love-canal/#:~:text=The%20history%20of%20Love%20Canal,an%20three%20thousand%20feet%20long. Accessed 26 Dec. 2021.

¹¹ Herdman, Roger C., et al., compilers. *Love Canal Public Health Time Bomb*. The Office of Public Health, Sept. 1978.

¹² Newman, Richard S. "Making Love Canal." *Lapham's Quarterly*, 13 July 2016, www.laphamsquarterly.org/roundtable/making-love-canal. Accessed 27 Dec. 2021.

¹³ Newman, Richard S. "Making Love Canal." *Lapham's Quarterly*, 13 July 2016, www.laphamsquarterly.org/roundtable/making-love-canal. Accessed 27 Dec. 2021.

into dust was Nikola Tesla's discovery of alternating electrical currents and their ability to transmit electricity across great distances.¹⁴ This discovery undermined Love Canal's convenience of having Niagara Falls nearby. By 1900, the canal was abandoned.

Ownership Shifts, Warnings Surface

In the early 1900s, Love's unfinished canal was used as a swimming hole for children in the LaSalle neighborhood.¹⁵ In 1920, the canal property was sold to Hooker Chemical Corporation¹⁶ for the manufacture of bleaches and caustic soda,¹⁷ or sodium hydroxide.¹⁸ Sodium hydroxide inhalation irritates the respiratory tract, and high inhalation doses create upper-airway obstruction.¹⁹ Hooker Chemical obtained government authorization to use the Love Canal as a chemical dump site.²⁰ From 1942 to 1953, the obsolete Love Canal gradually became home for over 21,000 tons of toxic chemical waste.²¹ Meanwhile, the majority of residents near the canal remained unaware of the hazardous substances seeping into their homes from below and hovering in the air above.²²

¹⁴ Beck, Eckardt C. "The Love Canal Tragedy." *EPA Journal*, Jan. 1979.

¹⁵ Herdman, Roger C., et al., compilers. *Love Canal Public Health Time Bomb*. The Office of Public Health, Sept. 1978.

¹⁶ Center for Health, Environment, and Justice. *Love Canal Guidebook*. Center for Health, Environment, and Justice, 2009. Pamphlet.

¹⁷ Lipsitz, Ponterio and Comerford. "Hooker Chemical." *Lipsitz, Ponterio and Comerford: Mesothelioma and Catastrophic Injury Attorneys*, edited by Lipsitz, Ponterio and Comerford, www.lipsitzponterio.com/asbestos-job-site/hooker-chemical/. Accessed 28 Dec. 2021.

¹⁸ Agency for Toxic Substances and Disease Registry. "Medical Management Guidelines for Sodium Hydroxide (NaOH)." *ATSDR: Agency for Toxic Substances and Disease Registry*, www.cdc.gov/TSP/MMG/MMGDetails.aspx?mmgid=246&toxicid=45. Accessed 28 Dec. 2021.

¹⁹ *Ibid.*

²⁰ Kleiman, Jordan, Dr. "Love Canal: A Brief History." *Geneseo*, https://www.geneseo.edu/history/love_canal_history. Accessed 27 Dec. 2021.

²¹ Engelhaupt, Erika. "HAPPY BIRTHDAY, LOVE CANAL." *Environmental Science and Technology*, 20 Nov. 2008. *ProQuest*, explore.proquest.com/elibrary/document/205046880?accountid=166406. Accessed 30 Dec. 2021.

²² Center for Health, Environment, and Justice. "Love Canal." Center for Health, Environment, and Justice, chej.org/about-us/story/love-canal/#:~:text=The%20history%20of%20Love%20Canal,an%20three%20thousand%20feet%20long. Accessed 1 Jan. 2022.

In 1953,²³ Hooker Chemical sold the Love Canal property to the Niagara Falls Board of Education to construct an elementary school.²⁴ Before handing the property over, the corporation placed dirt on top of the canal land.²⁵ They also wrote a document distancing themselves from the responsibility for future injuries or deaths, prohibiting the board from suing or setting demands in order to protect itself from future liability.²⁶

Construction on the 99th Street Elementary School began in 1954.²⁷ When workers noticed a drainage trench emitting chemical odors and a toxic waste pit, the board moved the school eighty feet away from its original site, and the construction continued.²⁸ During this time, LaSalle home constructions also began, adding one-hundred units to the LaSalle community.²⁹

A Bubbling Cauldron

Throughout the mid-1900s, residents near Love Canal reported odorous, unfamiliar substances surfacing both near their homes and 99th Street Elementary.³⁰ In 1959, 99th Street resident Aileen Voorhees observed a peculiar black sludge seeping through her basement walls, while a rancid smell pervaded her home. Although a gutter was constructed in hopes of preventing the sludge's spread, the efforts proved to be ineffective. Two decades later, another

²³ Center for Health, Environment, and Justice. *Love Canal Guidebook*. Center for Health, Environment, and Justice, 2009. Pamphlet.

²⁴ "Background Information." *University at Buffalo*, Aug. 1998, library.buffalo.edu/archives/lovecanal/about/background-information.html. Accessed 1 Jan. 2022.

²⁵ United States Environmental Protection Agency. "Superfund Site: Love Canal Niagara Falls, NY Cleanup Activities." *EPA: United States Environmental Protection Agency*, <https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.cleanup&id=0201290>. Accessed 1 Jan. 2022.

²⁶ *Ibid.*

²⁷ Center for Health, Environment, and Justice. *Love Canal Guidebook*. Center for Health, Environment, and Justice, 2009. Pamphlet.

²⁸ Brown, Michael H. *Laying Waste: The Poisoning of America by Toxic Chemicals*. New York: Pocket Books, 1981. *Internet Archive*, archive.org/details/layingwaste00mich/page/n3/mode/2up?view=theater. Accessed 1 Jan. 2022.

²⁹ Herdman, Roger C., et al., compilers. *Love Canal Public Health Time Bomb*. The Office of Public Health, Sept. 1978.

³⁰ Center for Health, Environment, and Justice. *Love Canal Guidebook*. Center for Health, Environment, and Justice, 2009. Pamphlet.

resident contacted city officials multiple times to discuss the chemicals affecting her property. Her reports prompted no actions: the city had been negotiating the construction of a \$17-million Hooker Chemical headquarters in downtown Niagara Falls.³¹ Niagara Falls prioritized a metropolitan aspiration over the health of its lower-class society, and was reluctant to jeopardize this opportunity. However, city officials placed additional layers of dirt on top of the canal and the chemicals it contained.³²

Nevertheless, years of strange and persistent observations prompted study by city-commissioned Calspan Corporation.³³ The study's report showed the presence of two concerning compounds in the sumps and sewers of the two streets closest to Love Canal: polychlorinated biphenyls (PCBs) and hexachlorocyclopentadiene (C-56).³⁴ PCBs are widely used compounds in electrical heat transfer equipment, pigments, dyes, and rubber.³⁵ In environmental history, these compounds are notorious. One PCB particle in a million parts of normal water is considered an environmental concern.³⁶ The sewers in the Love Canal area contained thousands of times more than that amount.³⁷ C-56, a predecessor of a banned organochlorine pesticide,³⁸ is capable of harming all bodily organs.³⁹ From the study, Calspan

³¹ Brown, Michael H. *Laying Waste: The Poisoning of America by Toxic Chemicals*. New York: Pocket Books, 1981. *Internet Archive*, archive.org/details/layingwaste00mich/page/n3/mode/2up?view=theater. Accessed 30 Jan. 2022.

³² Center for Health, Environment, and Justice. *Love Canal Guidebook*. Center for Health, Environment, and Justice, 2009. Pamphlet.

³³ *Ibid.*

³⁴ Calspan Corporation. *Characterization and Abatement of Groundwater Pollution from Love Canal Chemical Land Fill, Niagara Falls, N.Y.* Aug. 1977.

³⁵ United States Environmental Protection Agency. "Polychlorinated Biphenyls (PCBs): Learn about Polychlorinated Biphenyls (PCBs)." *EPA: United States Environmental Protection Agency*, National Service Center for Environmental Publications Warehouse, 13 May 2021, www.epa.gov/pcbs/learn-about-polychlorinated-biphenyls-pbcs. Accessed 18 Feb. 2022.

³⁶ Brown, Michael H. *Laying Waste: The Poisoning of America by Toxic Chemicals*. New York: Pocket Books, 1981. *Internet Archive*, archive.org/details/layingwaste00mich/page/n3/mode/2up?view=theater. Accessed 30 Jan. 2022.

³⁷ *Ibid.*

³⁸ Beyond Pesticides. "Pesticide Production Leaves a Legacy of Poisoning and Contamination." *Daily News Blog*, 30 June 2014, beyondpesticides.org/dailynewsblog/2014/06/industrial-pesticide-production-leaves-a-legacy-of-poisoning-and-contamination/. Accessed 16 Feb. 2022.

³⁹ *Ibid.*

advised the addition of a 12-inch soil cover over the Love Canal site, a surface drainage of the canal, and new sumps with air-sealed fume evacuation in each home.⁴⁰

Despite Calspan's suggestions for residents' safety, the city only placed several window fans in homes where high levels of chemicals were found.⁴¹ The city was afraid to risk negotiation with Hooker Chemical's downtown project. This was not a valid reason for Love Canal residents. Thus, the city's inaction sparked humanitarian debates and diplomacy between residents, government, and the corporation.

Grassroot Awareness

In 1978, Lois Marie Gibbs, a housewife living in the LaSalle neighborhood, read the *Niagara Gazette* and discovered that 99th Street Elementary was directly above a toxic chemical landfill.⁴² Acknowledging her five-year-old son's strokes⁴³ and determined to ensure his safety, Lois Gibbs went to the school board and requested moving her child to another school.⁴⁴ The superintendent rejected her inquiry, stating her child's removal from the school would lead to a domino effect where fearful parents would unenroll children from 99th Street Elementary.

Lois Gibbs knocked on neighborhood doors and garnered signatures for a petition to close 99th Street Elementary. Quickly, she grew aware of the many health problems her neighbors were facing. For instance, an immediate neighbor had severe migraines with four

⁴⁰ Calspan Corporation. *Characterization and Abatement of Groundwater Pollution from Love Canal Chemical Land Fill, Niagara Falls, N.Y.* Aug. 1977.

⁴¹ Center for Health, Environment, and Justice. *Love Canal Guidebook*. Center for Health, Environment, and Justice, 2009. Pamphlet.

⁴² Gibbs, Lois Marie. *Love Canal: My Story*. Compiled by Murray Levine, e-book ed., SUNY Press, 1982. PDF.

⁴³ Ibid.

⁴⁴ Center for Health, Environment, and Justice. "Love Canal." Center for Health, Environment, and Justice, chej.org/about-us/story/love-canal/#:~:text=The%20history%20of%20Love%20Canal,ands%20three%20thousand%20feet%20long. Accessed 12 Jan. 2022.

hospitalizations in 1978 alone, another had gastrointestinal problems, and a man two homes down was suffering from lung cancer despite never working in an industry.⁴⁵

Due to the Calspan study and residential pressure, NYSHD made an attempt at diplomacy by holding a public meeting at 99th Street Elementary a few weeks later.⁴⁶ In this meeting, NYS Chief Epidemiological Investigator⁴⁷ Nicholas Vianna⁴⁸ informed residents about an anticipated study by the NYSHD, where air, soil and blood samples were to be taken from the first ring of homes nearest to Love Canal. As the state officials explained the study's methodology, residents asked questions concerning personal observations and whether or not the school was safe. When the majority of the questions went unanswered, angry residents perceived the state's behavior as dismissive.⁴⁹

Conducted by NYSDEC,⁵⁰ the study found a high number of birth defects and miscarriages in the first two rings near the canal. The state also found 25 organic compounds buried in the Love Canal.⁵¹ Worse, in another study from the same year, 11 out of 82 buried chemical compounds buried in Love Canal were suspected carcinogens.⁵² Among those carcinogens was benzene,⁵³ a notorious cause of leukemia.⁵⁴

LCHA

⁴⁵ Gibbs, Lois Marie. *Love Canal: My Story*. Compiled by Murray Levine, e-book ed., SUNY Press, 1982. PDF.

⁴⁶ Brown, Michael H. *Laying Waste: The Poisoning of America by Toxic Chemicals*. New York: Pocket Books, 1981. *Internet Archive*, archive.org/details/layingwaste00mich/page/n3/mode/2up?view=theater. Accessed 30 Jan. 2022.

⁴⁷ Herdman, Roger C., et al., compilers. *Love Canal Public Health Time Bomb*. The Office of Public Health, Sept. 1978.

⁴⁸ Ibid.

⁴⁹ Gibbs, Lois Marie. *Love Canal: My Story*. Compiled by Murray Levine, e-book ed., SUNY Press, 1982. PDF.

⁵⁰ Ibid.

⁵¹ Brown, Michael H. *Laying Waste: The Poisoning of America by Toxic Chemicals*. New York: Pocket Books, 1981. *Internet Archive*, archive.org/details/layingwaste00mich/page/n3/mode/2up?view=theater. Accessed 30 Jan. 2022.

⁵² Beck, Eckardt C. "The Love Canal Tragedy." *EPA Journal*, Jan. 1979.

⁵³ Ibid.

⁵⁴ Occupational Safety and Health Administration. "Benzene." *United States Department of Labor: Occupational Safety and Health Administration*, www.osha.gov/benzene. Accessed 19 Feb. 2022.

In August, Lois Gibbs founded the LCHA to represent residents of 93rd to 103rd Streets.⁵⁵ The LCHA had four main goals: providing financially-aided evacuations, obtaining increased property values, restoring the canal area, and conducting studies to acquire scientific knowledge of the Love Canal.

State's Emergency Declaration

On August 2, 1978, the state held a meeting, where Health Commissioner Whalen announced 99th Street Elementary School's closure during remedial constructions and an emergency for Love Canal. In this emergency declaration, the health commissioner urged pregnant women and children under two years from Rings 1 and 2 to evacuate.⁵⁶

The next day, state officials met at 99th Street Elementary to officially announce the emergency declaration and recommendations for the Love Canal residents.⁵⁷ Residents felt helpless, anxious, and furious towards the state officials because the evacuation order was directed only to pregnant women and small children.⁵⁸ To express their frustration, residents created posters to hang near homes and to carry in marches. One sign stated, “GiVE ME LiBERTY I’VE GOT DEAth”,⁵⁹ indicating the resident’s hopelessness amid this raging debate.

In October 18, 1979, LCHA published a newspaper advertisement, criticizing Hooker Chemical restrictions forced by the canal’s toxic compounds.⁶⁰ The LCHA showed its animosity

⁵⁵ Gibbs, Lois Marie. *Love Canal: My Story*. Compiled by Murray Levine, e-book ed., SUNY Press, 1982. PDF.

⁵⁶ Engelhaupt, Erika. "HAPPY BIRTHDAY, LOVE CANAL." *Environmental Science and Technology*, 20 Nov. 2008. *ProQuest*, [explore.proquest.com/elibrary/document/2050468802?accountid=166406](https://www.proquest.com/docview/2050468802). Accessed 30 Dec. 2021.

⁵⁷ Brown, Michael H. *Laying Waste: The Poisoning of America by Toxic Chemicals*. New York: Pocket Books, 1981. *Internet Archive*, archive.org/details/layingwaste00mich/page/n3/mode/2up?view=theater. Accessed 30 Jan. 2022.

⁵⁸ Gibbs, Lois Marie. *Love Canal: My Story*. Compiled by Murray Levine, e-book ed., SUNY Press, 1982. PDF.

⁵⁹ BS. Margaret Gizzarelli holds her daughter Donna in front of their home in the Love Canal area of Niagara falls prior to their evacuation from the area due to contamination from a nearby chemical dumping site. *The Buffalo News*, buffalonews.com/multimedia/a-look-back-at-the-love-canal-disaster/collection_d77d0659-8155-5db7-bd09-0627ee8cb281.html#34. Accessed 13 Feb. 2022.

⁶⁰ "Love Canal: Ask Those Who Really Know!" *University at Buffalo: Digital Collections*, 18 Oct. 1979, digital.lib.buffalo.edu/items/show/16743. Accessed 22 Feb. 2022.

towards Hooker while reprimanding the government's lack of action. In contrast, Hooker Chemical's advertisements worked to protect their public image. In one ad, the corporation excused themselves from disastrous responsibility by insisting that their chemical disposal was previously publicly praised.⁶¹

Protests and the State's Second Emergency Declaration

On August 7th, 1978, New York Governor Hugh Carey informed residents that the state government was going to purchase the homes that had been affected by Love Canal's chemicals.⁶² This announcement brought a degree of environmental justice to residents because it provided them monetary relief for settling in a healthier environment. The same day, more optimistic news arrived when President Carter issued a Love Canal emergency declaration, promising to provide federal-aided permanent relocation for 239 families nearest to the waste site.⁶³ By September, ninety-eight families within the two rings were evacuated.⁶⁴ By mid-October 1979, 237 had left LaSalle for good.⁶⁵

In February 1979, NYSHD imposed a second order, this time encouraging temporary evacuation for those pregnant or under two years of age outside the 239-home periphery.⁶⁶ Once the pregnancy was over, or once the child had turned two years old, they were to return to the canal vicinity. Families who felt excluded in the debate challenged the limited demographics

⁶¹ "A Hard Look at the Facts." *University at Buffalo: Digital Collections*, 5 Sept. 1979, digital.lib.buffalo.edu/items/show/16742. Accessed 22 Feb. 2022.

⁶² Beck, Eckardt C. "The Love Canal Tragedy." *EPA Journal*, Jan. 1979.

⁶³ Center for Health, Environment, and Justice, compiler. *Love Canal Chronology*. Center for Health, Environment, and Justice, 2015. *Center for Health, Environment, and Justice*, chej.org/wp-content/uploads/Love-Canal-Chronology-PUB-0071.pdf. Accessed 15 Feb. 2022

⁶⁴ Herdman, Roger C., et al., compilers. *Love Canal Public Health Time Bomb*. The Office of Public Health, Sept. 1978.

⁶⁵ "Love Canal Tragedy..PT 1 of 3." *Youtube*, uploaded by Fran Lucca, 2 Mar. 2016, www.youtube.com/watch?v=9iIqPI5cWtE. Accessed 18 Feb. 2022.

⁶⁶ Center for Health, Environment, and Justice, compiler. *Love Canal Chronology*. Center for Health, Environment, and Justice, 2015. *Center for Health, Environment, and Justice*, chej.org/wp-content/uploads/Love-Canal-Chronology-PUB-0071.pdf. Accessed 15 Feb. 2022

evacuated and the “temporary” component of the evacuation order. Residents of all ages participated in protests, holding signs to discourage living at Love Canal.⁶⁷ Angry residents even burned effigies of Jimmy, Amy, and Rosalynn Carter, on April 17, 1979.⁶⁸ Given that most residents could not afford two homes at once, this form of protest focused on the federal government’s resistance to providing financial assistance to Love Canal residents.

A Shocking Study

By February 1979, LCHA conducted a study with Dr. Beverly Paigen, a cancer research scientist from Roswell Park Memorial Institute.⁶⁹ Prior to families moving into the Love Canal area, 8.5% of pregnancies ended in miscarriages, but after moving into the area, the percentage jumped to 25.2%.⁷⁰ A separate study conducted by the British Journal of Industrial Medicine in 1992 found that exposure to higher concentrations of toluene (a chemical detected in Love Canal)⁷¹ doubled the chance of miscarriages.⁷²

A key point to remember is that this study began after the first 239 families evacuated around 1978. Its results did not include data from those who were most exposed to Love Canal, making clear the prevalence of eccentric health conditions throughout the LaSalle community.

⁶⁷ Ploughman, Penelope D. *Love Canal protester Debbie Cerrillo (left) with sign 'You buy, you die' at Governor Carey's speech to New York State teachers at the Niagara Falls Convention Center. University at Buffalo*, 27 Apr. 1979, digital.lib.buffalo.edu/items/show/16483. Accessed 16 Feb. 2022.

⁶⁸ Penelope, Ploughman D. *Love Canal Homeowners Association protest targeting the federal government held outside the Niagara Falls, N.Y. Dept. of Health building. Burning effigies of Jimmy, Rosalynn and Amy Carter are in the street*. 28 Jan. 2009. *University at Buffalo: Digital Collections*, 17 Apr. 1979, digital.lib.buffalo.edu/items/show/16713. Accessed 16 Feb. 2022.

⁶⁹ United States, Congress, House, House Sub-committee on Oversight & Investigations. *Health Hazards at Love Canal*. Testimony of Dr. Beverly Paigen. Government Publishing Office, 21 Mar. 1979.

⁷⁰ *Ibid.*

⁷¹ Herdman, Roger C., et al., compilers. *Love Canal Public Health Time Bomb*. The Office of Public Health, Sept. 1978.

⁷² Ng, T P et al. “Risk of spontaneous abortion in workers exposed to toluene.” *British journal of industrial medicine* vol. 49,11 (1992): 804-8. doi:10.1136/oem.49.11.804

Washington, D.C.

Lois Gibbs visited the White House multiple times as an informal diplomat. On August 9, 1978, she met state officials, President Carter's representative, and multiple Federal Agencies in the White House to discuss the quantity and purpose of federal aid. One month later,⁷³ Gibbs returned to the nation's capital for supplemental negotiations. In contrast with the 1978 meeting that led to fair-market home purchases,⁷⁴ the 1979 meeting lacked a desirable outcome for the LCHA.

A Trade Off

On May 17, 1980,⁷⁵ the EPA announced the results of a study conducted in relation to the Justice Department's four suits against Hooker Chemical Corporation.⁷⁶ These suits included unspecified civil penalties and a \$117,580,000 fee to clean up Love Canal.⁷⁷ From this study, 11 out of 36 Love Canal residents had chromosomal anomalies, setting a probable precedent for cancer and other health issues. In addition, "extra fragments" and an alarmingly large number of ring chromosomes were detected. Nevertheless, several EPA officials denied the study's credibility, insisting that it was conducted only to obtain favorable evidence.

One Channel 17 news reporter stated the study "proved to be the straw that broke the camel's back for the residents".⁷⁸ On May 21, several days after the EPA study's results were

⁷³ Center for Health, Environment, and Justice, compiler. *Love Canal Chronology*. Center for Health, Environment, and Justice, 2015. *Center for Health, Environment, and Justice*, chej.org/wp-content/uploads/Love-Canal-Chronology-PUB-0071.pdf. Accessed 15 Feb. 2022

⁷⁴ *Ibid.*

⁷⁵ "The Niagara Gazette Love Canal Chronology, 1894 - May 1980." *The Niagara Gazette*, 23 May 1980.

⁷⁶ EPA. "U.S. Sues Hooker Chemical at Niagara Falls, New York." *EPA: US Environmental Protection Agency*, 20 Dec. 1979, archive.epa.gov/epa/aboutepa/us-sues-hooker-chemical-niagara-falls-new-york.html. Accessed 12 Feb. 2022.

⁷⁷ *Ibid.*

⁷⁸ "Love Canal Special." *YouTube*, uploaded by Fran Lucca, 13 June 2016, www.youtube.com/watch?v=8mxLzWnoYsQ&t=757s. Accessed 12 Feb. 2022.

announced, approximately 150 residents gathered around the LCHA office lawn, demanding an additional evacuation of 710 families. Inside the office, two EPA officials were held “hostage”. Meanwhile, Congressman John LaFalce was at the White House, negotiating the Love Canal calamity with President Jimmy Carter. Serving as a diplomatic bridge between the federal government, the congressman, and the residents, Lois Gibbs received updates from LaFalce, and relayed them to the protesters. Approximately six hours after the residents had first gathered at the lawn, Gibbs finally had good news: in exchange for letting the two EPA officials go, the White House would issue an emergency declaration by the following Wednesday.⁷⁹

This extraordinary diplomacy proved successful for the LCHA. By Wednesday, the White House declared Love Canal a state of emergency,⁸⁰ allocating a temporary evacuation of every one of the Love Canal families until they could secure permanent relocation aid.⁸¹ Months of protests, debate and diplomacy, and fear had accumulated to this accomplishment.

A Settlement, A Study, and A Law

On December 21, 1995, a \$129 million settlement came between the Justice Department and Hooker Chemical, including \$101 million for clean-up compensation and an additional \$28 million for government taxes.⁸² Love Canal residents were finally able to see Hooker Chemical made responsible for its actions.

As the principle consequence of humanitarian debate and diplomacy turmoil in Love Canal, the Superfund Act was adopted into law by Congress in 1980. The Superfund Act

⁷⁹ Ibid.

⁸⁰ "The Niagara Gazette Love Canal Chronology, 1894 - May 1980." *The Niagara Gazette*, 23 May 1980.

⁸¹ Center for Health, Environment, and Justice, compiler. *Love Canal Chronology*. Center for Health, Environment, and Justice, 2015. *Center for Health, Environment, and Justice*, chej.org/wp-content/uploads/Love-Canal-Chronology-PUB-0071.pdf. Accessed 15 Feb. 2022

⁸² "Occidental to Pay \$129 Million in Love Canal Settlement." *The United States Department of Justice*, Simon & Schuster, 21 Dec. 1995, www.justice.gov/archive/opa/pr/Pre_96/December95/638.txt.html. Accessed 18 Feb. 2022.

established a clear outline of components necessary for a responsible restoration process, while taking the human health risks into account.⁸³

Love Canal was listed as a Superfund site in September 1983, and was finally declared safe in 2004.⁸⁴ By 2020, the EPA had completed 97,447 remedial site assessments. In 2020 alone, the act removed 438 sites from the Superfund list and allocated \$258 million for restoration purposes.⁸⁵

In Irvine, California, the former El Toro Marine Base is contaminated with chemical compounds from airplanes, raising concerns about drinking groundwater near the area.⁸⁶ However, through Superfund, the site is now undergoing restoration. According to Irvine Mayor Farrah Khan, the Superfund Act contributes significantly to restoration processes by making land usable once more.⁸⁷ This piece of legislation, compelled by working-class citizens fearless to participate in debate, has supported 21 million people across the nation.

⁸³ United States Environmental Protection Agency. "Superfund Cleanup Process." *EPA: United States Environmental Protection Agency*, National Service Center for Environmental Publications Warehouse, 12 July 2021, www.epa.gov/superfund/superfund-cleanup-process. Accessed 18 Feb. 2022.

⁸⁴ United States Environmental Protection Agency. "Superfund Site: Love Canal Niagara Falls, NY Cleanup Activities." *EPA: United States Environmental Protection Agency*, <https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.cleanup&id=0201290>. Accessed 20 Feb. 2022.

⁸⁵ Environmental Protection Agency. "Superfund Remedial Annual Accomplishments: Fiscal Year 2020 Report." *EPA: United States Environmental Protection Agency*, 12 July 2021, www.epa.gov/superfund/superfund-remedial-annual-accomplishments. Accessed 22 Feb. 2022.

⁸⁶ McLaughlin, Karen. "McLaughlin: Greater Transparency is Needed on El Toro Plume Cleanup." *Voice of OC*, 13 Oct. 2020, voiceofoc.org/2020/10/mclaughlin-greater-transparency-is-needed-on-el-toro-plume-cleanup/. Accessed 22 Feb 2022.

⁸⁷ Khan, Farrah. Personal Interview. 24 January 2022.

Annotated Bibliography

Secondary Sources

Pamphlet

Center for Health, Environment, and Justice. *Love Canal Guidebook*. Center for Health, Environment, and Justice, 2009. Pamphlet.

This source is a pamphlet that includes background information about Love Canal, Lois Gibbs, and numerous main events from the Love Canal disaster. By using this source, I was able to implement understandable reasoning behind important Love Canal initiatives, such as how the residents reported eccentric substances. Aligning with the majority of my sources, the pamphlet's information was a principle player in corroboration.

Articles

Agency for Toxic Substances and Disease Registry. "Medical Management Guidelines for Sodium Hydroxide (NaOH)." *ATSDR: Agency for Toxic Substances and Disease Registry*, www.cdc.gov/TSP/MMG/MMGDetails.aspx?mmgid=246&toxicid=45. Accessed 28 Dec. 2021.

This informational text explains sodium hydroxide is, as well as its multiple effects from different ways of exposure. From this source, I learned that, as a caustic compound, sodium hydroxide inhalation can lead to respiratory irritations, its ingestion can lead to stomach corrosion, and its eye contact can even lead to blindness. While chemicals were being dumped out in tons, Hooker Chemical Corporation was manufacturing this substance. Through this connection, I was able to use sodium hydroxide information to dig deeper into which compounds had resided in the Love Canal. This source also provoked remorse in me, because residents and (especially) industrial workers had to be exposed to dangerous levels of sodium hydroxide from 1942 to 1953.

"Background Information." *University at Buffalo*, Aug. 1998, library.buffalo.edu/archives/lovecanal/about/background-information.html. Accessed 1 Jan. 2022.

Similar to Geneseo's "Love Canal: A Brief History", this source also provides a brief summary of multiple notable events in the Love Canal disaster. However, this source importantly contributed to my paper because it was a source of corroboration. As stated in an NHD Webinar, corroboration helps ensure that there are no assumptions in your project. As a result, I was able to be more confident in the historical accuracy of my paper and adjust statistics when multiple sources disagreed upon them.

Bergeron, Emily. "Human Rights Hero: The Mother of Superfund." *American Bar*, 21 May 2021, Bergeron, Emily. "Human Rights Hero: The Mother of Superfund." *American Bar*, 21 May 2021, www.americanbar.org/groups/crsj/publications/human_rights_magazine_home/vol--44-no-2--housing/ human-rights-hero--the-mother-of-superfund/. Accessed 27 Dec. 2021.

In this article describing the life of Lois Marie Gibbs, Bergeron also describes the activist's role in bringing environmental justice to the affected LaSalle community. By exploring this secondary source, I was able to gain supplemental insight on the Love Canal Homeowners Association (LCHA), which Gibbs was president of. For example, in my paper, I was able to include how this association formed. This was significant in displaying a fuller scope of the debate and diplomacy because LCHA was a major representative for the residents' perspective.

Beyond Pesticides. "Pesticide Production Leaves a Legacy of Poisoning and Contamination." *Daily News Blog*, 30 June 2014, beyondpesticides.org/dailynewsblog/2014/06/industrial-pesticide-production-leaves-a-legacy-of-poisoning-and-contamination/. Accessed 16 Feb. 2022.

This article describes C-56 as a predecessor of a banned organochlorine pesticide and also emphasizes on this compound's harmful effects to human health. By implementing this article's information into my paper, I was able to support how there were dangerous compounds buried under the Love Canal. Therefore, this source helped me justify why residents were so driven for environmental change in their community.

Center for Health, Environment, and Justice. "Love Canal." Center for Health, Environment, and Justice, chej.org/about-us/story/love-canal/#:~:text=The%20history%20of%20Love%20Canal, and%20three%20thousand%20feet%20long. Accessed 26 Dec. 2021.

Written by the Center for Health, Environment, and Justice (CHEJ), this overview discusses the sequence events that followed Lois Gibb's discovery of 21,000 tons of chemicals under her five-year-old son's school. This source held a fundamental role in my historical paper because it provided corroboration, one of the elements of effective research. This source also led to my discovery of various other sources, all of which have contributed to my project significantly.

Environmental Protection Agency. "Superfund Remedial Annual Accomplishments: Fiscal Year 2020 Report." *EPA: United States Environmental Protection Agency*, 12 July 2021, www.epa.gov/superfund/superfund-remedial-annual-accomplishments. Accessed 22 Feb 2022.

This informational article highlights the Superfund Act's accomplishments, especially in the year of 2020. Using the statistics this article offers, I was able to clearly and effectively communicate the law's impact on Americans. This portion helped support

my thesis because it showed the significance of the Love Canal, for it was the event that brought Superfund into existence.

Kleiman, Jordan, Dr. "Love Canal: A Brief History." *Geneseo*,
https://www.geneseo.edu/history/love_canal_history. Accessed 27 Dec. 2021.

In this “brief history” of the Love Canal disaster, Dr. Kleiman shares background information concerning the Love Canal disaster. From this information, key points that I adapted into my paper include the number of tons of chemicals dumped into the canal, and how the government granted Hooker Chemical the right to dump those compounds into the Love Canal. The former significantly contributed to my paper by providing a sheer scale of the potential danger in the canal, while the latter provided the government’s viewpoint of dumping chemicals into canals.

"Legacy of Rachel Carson's Silent Spring." *Environment and Society Portal*, edited by Environment and Society Portal,
www.environmentandsociety.org/exhibitions/rachel-carsongs-silent-spring/legacy-rachel-carsongs-silent-spring. Accessed 22 Feb 2022.

This source is an article in remembrance of Rachel Carson’s legacy through *Silent Spring*. In this article, the writer discusses how *Silent Spring* significantly helped expand environmental awareness among the American people. Using this source, I was able to construct a stronger connection between the Love Canal disaster and this book.

Leonard, Jonathan Norton. "Rachel Carson Dies of Cancer; 'Silent Spring' Author Was 56." The New York Times: On The Web, 15 Apr. 1964,
archive.nytimes.com/www.nytimes.com/books/97/10/05/reviews/carson-obit.html?simple=True. Accessed 17 Feb. 2022.

In this Rachel Carson obituary, Leonard discusses the works the biologist bequeathed as she passed away on April 14, 1964. This source also includes information about a television program, called “ ‘The Silent Spring of Rachel Carson’ ”, where Carson made a resonating statement that I was able to use at the very beginning of my paper. This quote’s meaning reflects on the city Niagara Falls at the initial point of the Love Canal disaster because it had been insisting the chemicals were of little, or even no, harm. And, as the quote suggests, nature prevailed: compounds spread, protests grew prevalent, and demand for environmental justice soared.

Lipsitz, Ponterio and Comerford. "Hooker Chemical." *Lipsitz, Ponterio and Comerford: Mesothelioma and Catastrophic Injury Attorneys*, edited by Lipsitz, Ponterio and Comerford,
www.lipsitzponterio.com/asbestos-job-site/hooker-chemical/. Accessed 28 Dec. 2021.

This article states information concerning sodium hydroxide and bleaches, which were manufactured by Hooker Chemical. Building off of this information, I was able to clearly explain the side effects of a manufactured good. By helping me provide an insight on the toxic waste’s danger, this source favorably contributed to my project.

McDowell, Edwin. "'Silent Spring,' 20 Years a Milestone." *The New York Times*, 27 Sept. 1982, www.nytimes.com/1982/09/27/books/silent-spring-20-years-a-milestone.html. Accessed 26 Dec. 2021.

In this article, McDowell writes about the impact the novel, *Silent Spring*, had on the American people. In my paper, I used this source by emphasizing upon the novel's omnipresence. This information was crucial in supporting the connection between Love Canal and this novel because it showed me that, all across the nation, people across the United States were able to acknowledge their harmful actions and demand change for the better.

McLaughlin, Karen. "McLaughlin: Greater Transparency is Needed on El Toro Plume Cleanup." *Voice of OC*, 13 Oct. 2020, voiceofoc.org/2020/10/mclaughlin-greater-transparency-is-needed-on-el-toro-plume-cleanup/. Accessed 22 Feb 2022.

This local newspaper article describes the contaminated El Toro Marine Base, a Superfund site near my home. By including information about this place, I was able to show how the Superfund Act influences my personal life, which further supported my argument that the law was a significantly beneficial consequence of the Love Canal disaster.

Newman, Richard S. "Making Love Canal." *Lapham's Quarterly*, 13 July 2016, www.laphamsquarterly.org/roundtable/making-love-canal. Accessed 27 Dec. 2021.

In this source, Newman dives deep into the origin of the Love Canal, explaining William T. Love's motives behind its construction. To explain this, the article shows how Love Canal was to contribute to a Model City—a plan initially backed by a plethora of funding. By learning and implementing these parts into my project, I was able to contextualize while becoming aware of key events from when the Love Canal was being built (in the 1890s).

Occupational Safety and Health Administration. "Benzene." *United States Department of Labor: Occupational Safety and Health Administration*, www.osha.gov/benzene. Accessed 19 Feb. 2022.

Issued by the Occupational Safety and Health Administration of the U.S. Department of Labor, this informational text concerns the notorious human carcinogen benzene, its uses, and, most importantly, its side effects. Because benzene was one of the 82 toxic compounds found buried under the Love Canal, showing its impact on residents was important to include in my paper. To show its impact on humans, I included how benzene exposure can lead to leukemia.

United States Environmental Protection Agency. "Polychlorinated Biphenyls (PCBs): Learn about Polychlorinated Biphenyls (PCBs)." *EPA: United States Environmental Protection Agency*, National Service Center for Environmental Publications Warehouse, 13 May 2021, www.epa.gov/pcbs/learn-about-polychlorinated-biphenyls-pbcs. Accessed 18 Feb. 2022.

Published by the EPA, this article discusses the impact of PCBs, a compound detected in Love Canal through the Calspan study of 1977. This source came to use because it includes information about the uses of PCBs. By implementing this information into my paper, I was able to show how a harmful compound can be found in mundane, everyday objects like pigments, rubber, and dye.

United States Environmental Protection Agency. "Superfund: CERCLA Overview." *United States Environmental Protection Agency*, www.epa.gov/superfund/superfund-cercla-overview#:~:text=The%20Comprehensive%20Environmental%20Response%2C%20Compensation,Congress%20on%20December%2011%2C%201980. Accessed 27 Dec. 2021.

This article informs readers about the Superfund Act, and specifically states the date the Superfund Act was enforced by Congress on December 11, 1980. By being aware of this fact, I was able to comprehend how long it took for residents to bring permanent environmental justice to communities across the United States. This proved to ascertain my understanding of how much is required to bring justice: that, bringing justice is not something that happened in the matter of months; instead, it is the process of debating, compromising, for years, if not decades.

United States Environmental Protection Agency. "Superfund Cleanup Process." *EPA: United States Environmental Protection Agency*, National Service Center for Environmental Publications Warehouse, 12 July 2021, www.epa.gov/superfund/superfund-cleanup-process. Accessed 18 Feb. 2022.

This source is a reliable article from the Environmental Protection Agency (EPA) explaining the process of Superfund restorations. Because the Superfund Act of 1980 was the main consequence of the Love Canal disaster, providing information about the law's functioning process was necessary to include in my paper. The objective of including this context was to help readers understand the foundational base Superfund provides for Americans seeking environmental justice.

Report

United States Environmental Protection Agency. "Superfund Site: Love Canal Niagara Falls, NY Cleanup Activities." *EPA: United States Environmental Protection Agency*, <https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.cleanup&id=0201290>. Accessed 1 Jan. 2022.

In this report, the EPA describes the Love Canal disaster in accordance with the Superfund Act. By explaining the history of the canal and what has been done to restore the site, this source provided more information about what Hooker Chemical did to “protect” the chemicals from leaking out. From learning this fact, I was able to be more sagacious of the corporation’s perspective in this environmental disaster. Personally, this report expanded my knowledge of Superfund’s role in the Love Canal restoration.

Database Source

Engelhaupt, Erika. "HAPPY BIRTHDAY, LOVE CANAL." *Environmental Science and Technology*, 20 Nov. 2008. *ProQuest*, explore.proquest.com/elibrary/document/205046880?accountid=166406. Accessed 30 Dec. 2021.

This database article deeply elaborates on the history involved in the Love Canal disaster, and also includes a firsthand account of today’s LaSalle community. Because effective and accurate information is obtained through corroboration, this lengthy source helped me ensure the legitimacy of various statements across the event’s years-long progression.

Book

Carson, Rachel. *Silent Spring*. Houghton Mifflin, 1962.

In this book, Rachel Carson describes the deprecating effects of pesticides, a product society had supported in the mid-1900s. By reading this, I gained a perceptive understanding of pesticides, and their history in the scientific field. Another key takeaway from this read was the importance of being environmentally educated. This book not only helped me make a logical connection for my NHD project; it also helped me view nature in a different and more grateful perspective.

Interview

Khan, Farrah. Personal Interview. 24 January 2022.

On January 24, 2022, I had the privilege of interviewing Mayor Farrah Khan, a local city council member representing Irvine, California. Through this interview, I was able to learn about how the Superfund Act, the principle consequence of the Love Canal, influences the city I live in. This was the objective I had in mind when interviewing Mayor Khan, and I am grateful to be able to share this insight with readers. Another fundamental takeaway was how environmental justice must be delivered so that, when fighting for a cleaner environment, there is equity. This is the objective of

environmental justice, and must resonate in society's mind as people strive to reach this form of liberty.

Primary Sources

Pamphlets

Center for Health, Environment, and Justice, compiler. *Love Canal Chronology*. Center for Health, Environment, and Justice, 2015. *Center for Health, Environment, and Justice*, chej.org/wp-content/uploads/Love-Canal-Chronology-PUB-0071.pdf. Accessed 20 Jan. 2022

Although identical at first glance, the *Love Canal Chronology* is distinct from the *Love Canal Guidebook* because, instead of including additional information about Lois Gibbs, it consists of a detailed chronology unfolding more than 100 events. As I prepared my project, this chronology was particularly helpful because it helped me ascertain the dates and order of Love Canal events.

"The Niagara Gazette Love Canal Chronology, 1894 - May 1980." *The Niagara Gazette*, 23 May 1980.

Due to the countless number of events, I had to use this reliable source to deliver accurate information to my readers. This chronology is issued by *The Niagara Gazette*, and lists a clear order of events that took place over the course of multiple years. Because I believe that historical accuracy is most important in a historical paper, I was able to implement this source to make my project as reliable as possible.

Reports

Calspan Corporation. *Characterization and Abatement of Groundwater Pollution from Love Canal Chemical Land Fill, Niagara Falls, N.Y.* Aug. 1977.

This primary source is Calspan Corporation's report to the city of Niagara Falls, in August 1977. Calspan's report describes the results of its study, which discovered the presence of polychlorinated biphenyls (PCBs) and hexachlorocyclopentadiene (C-56). By using this report, I was able to emphasize how the local government's actions contradicted the recommendations of Calspan researchers. Also, I was able to learn about the city's perspective amidst the Love Canal disaster.

Herdman, Roger C., et al., compilers. *Love Canal Public Health Time Bomb*. The Office of Public Health, Sept. 1978.

A state report from the New York State Health Department (NYSHD) to former New York Governor Hugh Carey, this source informs readers about the studies and events leading up to the 1978 state emergency declaration. Since the report included detailed information about this, I was able to use how, just one month after the emergency declaration, more than one-third of the 239 families evacuated. This contributed to my paper beneficially because it showed the residents' strong desire to evacuate.

Books

Gibbs, Lois Marie. *Love Canal: My Story*. Compiled by Murray Levine, e-book ed., SUNY Press, 1982. PDF.

In this book, Lois Marie Gibbs shares her account of the entire Love Canal calamity. Since Gibbs is an active leader who personally strived for environmental justice through Love Canal, her perspective provided a transparent account of this debating sequence of events. Using this source, I was able to include perspectives that I could not find in government reports and websites, such as the government's behavior towards residents in public health meetings.

Brown, Michael H. *Laying Waste: The Poisoning of America by Toxic Chemicals*. New York: Pocket Books, 1981. *Internet Archive*, archive.org/details/layingwaste00mich/page/n3/mode/2up?view=theater. Accessed 1 Jan. 2022.

Written by reporter Michael H. Brown, this packed book captures many details from each public health meeting and announcement in the Love Canal disaster. Because this book was written by someone who interviewed both residents and government officials, I was persuaded that this book was impartial to either side of this debating and diplomatic calamity. In my paper, I was able to elaborate on multiple perspectives with the help of this source.

Advertisements

"Love Canal: Ask Those Who Really Know!" *University at Buffalo: Digital Collections*, 18 Oct. 1979, digital.lib.buffalo.edu/items/show/16743. Accessed 22 Feb. 2022.

This source is a LCHA newspaper advertisement published on October 18, 1979. This primary source contributed to my paper beneficially because it showed the residents' efforts to contradict Hooker Chemical's advertisements. Furthermore, this source helped me understand the reasons why the LCHA members were so adamant in demanding change from the government—they had been barred from exercising mundane actions, such as using their own basement freely or allowing their children to play in backyards.

"A Hard Look at the Facts." *University at Buffalo: Digital Collections*, 5 Sept. 1979, digital.lib.buffalo.edu/items/show/16742. Accessed 22 Feb. 2022.

As Hooker Chemical's advertisement, this source attempts to justify the corporation's actions as rational and not indifferent to residents. . This advertisement held a great role in my paper by showing how, to its own view, the corporation was not careless and had only followed other chemical corporations when dumping the chemicals. By using this source, I was able to maintain an effective balance between the perspectives of the government, residents, and Hooker Chemical Corporation.

Deed

"This Indenture." 28 Apr. 1953.

This primary source is a Quit Claim issued by Hooker Chemical Corporation describing the negotiation between the corporation and the Niagara Falls Board of Education. By inspecting this source, I learned that Hooker Chemical did not want to get caught up in any sort of Love Canal complications, even though it had been solely responsible for 21,000 tons of chemicals in the canal land. This source profoundly contributed to my paper because it provided a deeper understanding of Hooker Chemical's perspective in the Love Canal disaster.

Videos

"Love Canal Special." *YouTube*, uploaded by Fran Lucca, 13 June 2016, www.youtube.com/watch?v=8mxLzWnoYsQ&t=757s. Accessed 12 Feb. 2022.

This video is a 29-minute Channel 17 Report of the Love Canal disaster that includes an abundant collection of clips from public meetings, protests, and interviews. Due to the publicity scale of the Love Canal disaster, I used available news clips in my project. Parts of this video that I used include an EPA press conference and residents protesting on the LCHA office lawn. Through these clips, I was able to impactfully support how the Love Canal disaster brought environmental justice through debate and diplomacy.

"Love Canal Tragedy..PT 1 of 3." *Youtube*, uploaded by Fran Lucca, 2 Mar. 2016, www.youtube.com/watch?v=9iIqPI5cWtE. Accessed 18 Feb. 2022.

Recorded on January 11, 1980, a notable video source is another Channel 17 Report, also consisting of interviews and frustrated Love Canal residents. This source provides the information that, out of 239 families, 237 had evacuated by months after the state's second emergency declaration. This detail was crucial in my paper because it showed how the majority of Love Canal residents evacuated immediately after they were financially liberated to do so.

Journal

Beck, Eckardt C. "The Love Canal Tragedy." *EPA Journal*, Jan. 1979.

In this EPA journal, Beck informs readers about the 82 chemicals residing in Love Canal, of which 11 were potential carcinogens. This information helped my paper because it supported how residents were exposed to toxic health risks. Through this support, I was able to argue how the government's actions were unfair in comparison to the health risks Love Canal residents had to face.

Photographs

BS. Margaret Gizzarelli holds her daughter Donna in front of their home in the Love Canal area of Niagara falls prior to their evacuation from the area due to contamination from a nearby chemical dumping site. *The Buffalo News*, buffalonews.com/multimedia/a-look-back-at-the-love-canal-disaster/collection_d77d0659-8155-5db7-bd09-0627ee8cb281.html#34. Accessed 13 Feb. 2022.

This photograph is of a mother with her child, holding a sign with an anxious expression etched across her features. I was prompted to use this photograph in my paper because it clearly showed residents' motive behind fighting and fighting until justice was delivered.

Penelope, Ploughman D. *Love Canal Homeowners Association protest targeting the federal government held outside the Niagara Falls, N.Y. Dept. of Health building. Burning effigies of Jimmy, Rosalynn and Amy Carter are in the street*. 28 Jan. 2009. *University at Buffalo: Digital Collections*, 17 Apr. 1979, digital.lib.buffalo.edu/items/show/16713. Accessed 16 Feb. 2022.

This source depicts residents burning effigies of Jimmy, Amy, and Rosalynn Carter, with multiple reporters filming the blazing scene. This photograph is symbolic because it shows how far LCHA residents were willing to go to reach Love Canal environmental justice. I was able to adapt this source into my paper supporting it with evidence of diplomacy between the LCHA and the national government.

Ploughman, Penelope D. *Love Canal protester Debbie Cerrillo (left) with sign 'You buy, you die' at Governor Carey's speech to New York State teachers at the Niagara Falls Convention Center*. *University at Buffalo*, 27 Apr. 1979, digital.lib.buffalo.edu/items/show/16483. Accessed 16 Feb. 2022.

In this photograph, two protesters hold up a sign, urging people to not purchase homes in the Love Canal area because it risked their mortality. This captured moment shows how residents protested to debate any prospect that living in LaSalle was safe. In my historical paper, I used this photograph to provide a supplemental example of residents using their freedom of speech for their journey towards environmental justice.

Press Releases

EPA. "U.S. Sues Hooker Chemical at Niagara Falls, New York." *EPA: US Environmental Protection Agency*, 20 Dec. 1979, archive.epa.gov/epa/aboutepa/us-sues-hooker-chemical-niagara-falls-new-york.html. Accessed 12 Feb. 2022.

This is an EPA press release declaring the U.S. Justice Department's four suits against Hooker Chemical Corporation. By reading this source, I was able to expand my knowledge about how the EPA felt about the Love Canal situation, since their representative was the justice department. As a result, I used this source to implement the EPA's perspective into my paper.

"Occidental to Pay \$129 Million in Love Canal Settlement." *The United States Department of Justice*, Simon & Schuster, 21 Dec. 1995, www.justice.gov/archive/opa/pr/Pre_96/December95/638.txt.html. Accessed 18 Feb. 2022.

In this press release, the Hooker Chemical Corporation (a subsidiary of Occidental Chemical Corporation) was ordered to pay \$129 million total for the four U.S. Justice Department suits. This settlement was the consequence of the diplomatic efforts between the LCHA, EPA, and government. By including this important outcome in my project, I was able to show environmental justice's partial deliverance from Love Canal.

Court Papers

United States, Congress, House, House Sub-committee on Oversight & Investigations. *Health Hazards at Love Canal*. Testimony of Dr. Beverly Paigen. Government Publishing Office, 21 Mar. 1979.

In Dr. Beverly Paigen's testimony, she outlines her role in the Love Canal calamity. By including Dr. Paigen's profession in my paper, I was able to show readers that the LCHA had research backed up by a licensed scientist. As a result, my understanding of the LCHA study became one without suspicion, since I now knew that it was conducted with the help of a cancer research scientist.