

Discussion Guide for THE BELOVED COMMUNITY

A film by Pamela Calvert/Plain Speech

At the fenceline of Canada's "Chemical Valley," girls are being born at twice the rate of boys. How do you stay in the home you love when the price you pay may be your children's future?

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To Facilitate a Screening please see also THE BELOVED COMMUNITY [Facilitator Guide](#)

From the Filmmaker

In 1996, I began a journey of discovery, anger, and action by working with Judith Helfand on her remarkable documentary, *A HEALTHY BABY GIRL*. Judith's mother was one of the millions of pregnant women who were prescribed the anti-miscarriage drug DES—the very first synthesized hormone—and at the age of 25 Judith developed cervical cancer from her exposure *in utero*. She went home to heal and picked up a video camera; the result was a funny and heartbreaking diary of the next five years of her family's life, of “wonder drugs” and rude awakenings.



DES was first prescribed in 1941; now we are all exposed daily to literally thousands of synthetic chemicals that act like hormones in our bodies, wreaking havoc on reproductive and developmental health (see “Background Information,” p. 3). Scientists began to put all the pieces together with wildlife studies in the Great Lakes in the 1980s and 1990s—they were seeing birds with twisted beaks and clubbed feet, thinning and broken eggshells, infertility, ambiguous reproductive anatomy, nest abandonment—and in 1996 the book *Our Stolen Future* outlined the emerging theory of “endocrine disruptors.” Published in the same year that *A HEALTHY BABY GIRL* was released, *Our Stolen Future* has had a volcanic impact on environmental health research and advocacy, in many ways serving as the successor to Rachel Carson's *Silent Spring*.

The science surrounding the impact of endocrine disrupting chemicals on wildlife is now established, and has raised disquieting questions for humans—if we are sharing the same environment, not to mention being further up the food chain, then what does day-to-day exposure mean for the health and survival of our own species? The consequences seem inevitable, but there hasn't been a clear “test case.”

Fast forward to the summer of 2004. I was living in Oakland, CA and one day received a brief email with a link to an article in the *Toronto Globe and Mail* with the title “Where the Boys Aren't.” With alarm, I read that for the past ten years, girl babies had been outnumbering boys at a rate of 2:1 at the fenceline of Canada's “Chemical Valley”—on Lake Huron, the site of the original endocrine disruptor research. Sound of the other shoe, dropping. I emailed Judith: “You should make a film about this.” Her response: “Why don't you?” Knowing what I did about how important this story could be, I couldn't walk away; the result isn't a “who dunnit,” but a “what now.”

It took a long time for the film to tell me its name, but it finally came, clear as a bell. Dr. Martin Luther King spoke about The Beloved Community as a reachable goal for human society in the here and now—not conflict-free, not heaven, but a global condition in which simple human decency makes hunger and hate (and dare I say toxic exposure) simply unthinkable, and in which conflicts are resolved amicably but decisively on the side of justice. Wherever I went in Sarnia, people were determined to tell me, “This is not a bad place.” Indeed it's not, it's a microcosm of the world that all of us have made, and a most worthy place for Dr. King's beloved community to take root and grow.

Pamela Calvert, Oakland, 2007

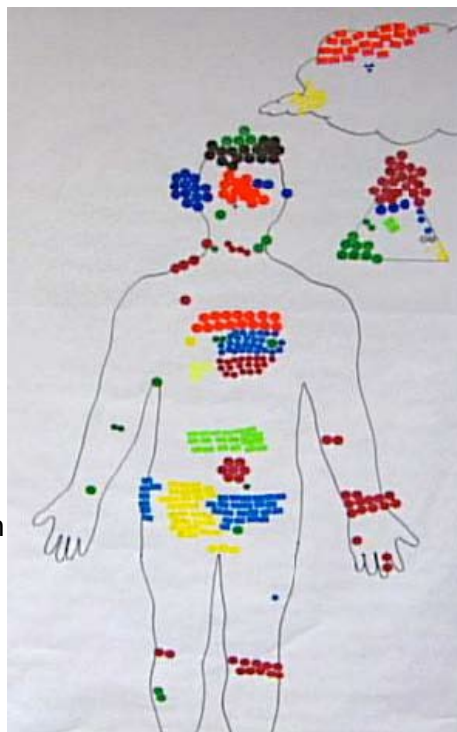
The Film

In the summer of 2004, Canadian health researchers made a startling discovery in the Aamjiwnaang (Chippewa) birth records for the city of Sarnia, Ontario—for the past decade, girl babies had been outnumbering boys at a rate of 2:1. Further investigation revealed large numbers of miscarriages and widespread neurological problems among the band's children.

THE BELOVED COMMUNITY looks at a Great Lakes oil town facing a toxic legacy head-on. The nerve center of Canada's petrochemical industry, Sarnia once enjoyed the highest standard of living in the country—but now the bill has come due, in compromised environmental and community health. The city has already lost a generation of men to workplace-related cancers. Now the women are discovering a reproductive timebomb—because of their own exposure to a cluster of hormone-mimicking chemicals called "endocrine disruptors," the next generation may be at risk. How do you stay in the home you love when the price you pay may be not only your own life, but your children's future?

The impact of endocrine disruptors on the reproductive health of wildlife is well-known, but the birth situation in Sarnia has never been documented in a human population exposed on a daily basis to industrial pollutants. Since these chemicals are in global use in everything from pesticides to dry cleaning fluid, what is happening in Sarnia has captured the attention of scientists and press all over the world.

A city mourning its past, Sarnia has suddenly found itself blind-sided by the future. Women who have never thought of themselves as "scientists" are now going door to door, collecting health data from their neighbors in a search for answers and re-negotiating relationships with the complex of giant multinationals—Dow, Shell, DuPont, Imperial Oil, Suncor, Nova, Bayer, and dozens of others—which have set the city's course until now. Rather than abandoning a place that's been called a "slow motion Bhopal," or trying to shut down the plants, they are pressing for answers that can close the books on the past and reclaim the future.



Background Information

Aamjiwnaang First Nation

Aamjiwnaang (*ahm-ji-nong*) is both the name of a place and of the people who live in that place. The Aamjiwnaang are members of the Ojibwe tribe, and have lived on the St. Clair River for more than 6,000 years. Their land originally covered large parts of southwestern Ontario. The Aamjiw-naang had first contact with French fur traders and missionaries in the early 1600s, and for the next century carried on regular trading activity while maintaining sovereignty over their lands.

From the mid-1700s when the first permanent European settlers arrived, and over the next two centuries, a series of government rulings alienated the Aamjiwnaang from their culture and language through enforced attendance at residential mission schools, and appropriated control over their land. By the 1950s, the reserve had shrunk to its current size of 2,700 acres.

Canada's Chemical Valley

The world's first oil strike was in 1857, in Black Creek, Ontario. The city of Sarnia, located on the nearby St. Clair River and on the border with the United States, became a major refining and trans-shipment site.

During World War II, Japan's invasion of Malaysia cut off supplies of rubber to the West—a catastrophic loss. In a crash program, the Canadian government built a synthetic rubber plant in Sarnia to supply the Allied war effort. After the war, industries flocked to Sarnia to take advantage of the new "petrochemical revolution." With access to raw materials, a network of pipelines, a prime location, and exploding consumer demand, Sarnia became an economic powerhouse.

Today, Sarnia is the site of 40% of Canada's petrochemical industry, with dozens of plants stretching along the St. Clair River waterfront. Immediately to the south of Sarnia's "Chemical Valley" is the Aamjiwnaang First Nations reserve.



Endocrine Disruptors

Certain synthetic chemicals interfere with hormonal messages involved in the control of growth and development, especially in the fetus. The developing fetus uses these natural hormonal messages, which come from both from its own hormone system and from its mother, to guide development. They influence virtually all of the growing individual's

characteristics, from determining its sex to controlling the numbers of toes and fingers to shaping intricate details of brain structure.

Scientific research accumulating over the last 50 years, and accelerating during the 1990's, has revealed that this hormonal control of development is vulnerable to disruption by synthetic chemicals. Through a variety of mechanisms, hormone-disrupting chemicals (also known as endocrine disrupting chemicals or endocrine disruptors) interfere with the natural messages and alter the course of development, with potential affects on virtually all aspects of bodily function.

Source: www.ourstolenfuture.org reproduced with permission

Statistics from *The Beloved Community*

- 40% of Canada's petrochemical industry is located in the immediate vicinity of Sarnia, ON.
- There are currently forty two chemical companies listed on the National Pollution Release Inventory within 10 km (6.2 miles) of Aamjiwnaang First Nation. Plans have just been announced to build a 53rd petroleum refinery in Sarnia.
- Beginning in 1993-94, girl babies at the Aamjiwnaang First Nation (AFN) began to outnumber boys, at a cumulative rate of 2:1 over the following decade. This has continued through the present. The normal human birth ratio is for 105 boys to be born for every 100 girls. The birth ratio for the non-Native population in Sarnia is unknown; the birth ratio for the children of Chemical Valley workers is also unknown.
- 39% of the women at Aamjiwnaang over the age of 18 have had at least one miscarriage or stillbirth. This compares to 25% in the general population. The rate of learning disabilities in children at Aamjiwnaang is 23%; Canada's average is 4%.
- In 2006, Environmental Defence tested families across Canada for the presence of 68 toxic chemicals in their blood and urine. Two of those families were in Aamjiwnaang/Sarnia and are in *THE BELOVED COMMUNITY*: Sandy Kinart and her daughter, and Wilson Plain and his son and granddaughter. Of all the volunteers across Canada, Sandy had the highest body burden of toxics, including the presence of 30 carcinogens and 31 reproductive/developmental toxins. Wilson's 14 year old granddaughter already carries 12 hormone disruptors and 17 reproductive/developmental toxins in her body. For the full report: environmentaldefence.ca/report/report-polluted-children-toxic-nation-a-report-on-pollution-in-canadian-families/



Solutions

For decades, the general population knew little about the serious health effects of industrial chemicals. However there is now a growing grassroots and scientific movement for good health, environmental protection, and sustainable industrial practice. The scope of the chemical contamination is vast; a truly toxic-free future requires that we begin employing practical solutions now. Following are some of the ideas and principles on which solutions can be found in science, industry, policy and communities.

Science—Green Chemistry

Green chemistry is “the design of chemical products and processes that reduce or eliminate the use and generation of hazardous substances.” Green Chemistry pioneers Paul Anastas and John Warner have proposed twelve principles, which include the following:

Prevention: It is better to prevent waste than to treat or clean up waste after it has been created.

Designing Safer Chemicals: Chemical products should be designed to effect their desired function while minimizing their toxicity.

Design for Degradation: Chemical products should be designed so that at the end of their function they break down into innocuous degradation products and do not persist in the environment.

Inherently Safer Chemistry for Accident Prevention: Substances and the form of a substance used in a chemical process should be chosen to minimize the potential for chemical accidents, including releases, explosions, and fires.

(from Paul Anastas and John Warner, Green Chemistry: Theory and Practice. New York: Oxford University Press, 1998. Complete text of the twelve principles available at www.greenchemistry.ca)

Industry—Ecological Intelligent Design

Michael Braungart, an ecological chemist, and Bill McDonough, an architect and designer, have created products and buildings using the criteria of what they have dubbed “Ecological Intelligent Design.” As one example, they designed an upholstery fabric derived from the ramie plant that can be composted and decomposes with no toxic byproducts. The dyes and chemicals used in the manufacturing process are likewise free from toxins; Braungart and McDonough approached sixty different chemical companies with specifications for a product free of mutagens, carcinogens, bioaccumulative compounds and persistent toxins, heavy metals and endocrine disruptors. Ciba Geigy agreed to supply

a dye with these criteria after considering 8,000 chemicals and eliminating 7,962. When regulators came to test the effluent from the manufacturing mill, they thought their instruments were broken because they found that the water coming out of the factory was as clean as the water going in. McDonough calls this the “next industrial revolution” and believes regulations should be seen as signals of design failure.

(For more information about ecological intelligent design and sustainable production, including other case studies: Clean Production Action, www.cleanproduction.org)

Policy—The Precautionary Principle

The Precautionary Principle is based on the basic premise that “when the health of humans and the environment is at stake, it may not be necessary to wait for scientific certainty to take protective action.” It has been applied in many contexts—including the Hippocratic Oath’s “First, do no harm”—and is coming to be a very powerful policy tool addressing industrial practices and pollution.

Precaution places the burden of proof on proponents of an activity rather than on victims or potential victims of the activity, and requires that they explore alternatives to possibly harmful actions and make substitutions wherever possible.



In the most ambitious adoption of the Precautionary Principle to date, the European Union’s 2006 REACH policy (Registration, Evaluation and Authorization of Chemicals) requires chemical manufacturers and importers to do rigorous testing and publish comprehensive safety data at an information clearinghouse where consumers and professionals can find hazard information. For chemicals found to cause cancer, gene mutations or reproductive hazards, to build up in the body (bioaccumulate), or to cause other serious health and environmental impacts such as endocrine disruptors, REACH mandates that such substances be phased out and less hazardous substitutes be found.

In Canada and the US, the Precautionary Principle has been adopted on a local level so far. Citing the Precautionary Principle as their basis for decision, more than 70 Canadian municipalities have banned the cosmetic use of pesticides, and in 2003, San Francisco became the first government body in the US to make the Precautionary Principle the basis for all its environmental policy.

(For more information on the Precautionary Principle: Science and Environmental Health Network, www.sehn.org. For more information on REACH: European Commission, https://environment.ec.europa.eu/topics/chemicals/reach-regulation_en)

Community—Environmental Justice

In 1987 the United Church of Christ published “Toxic Waste and Race,” which documented the siting of hazardous waste facilities in communities of color in the U.S., compared to more white and affluent communities. Delegates to the First National People of Color Environmental Leadership Summit in 1991 adopted seventeen “Principles of Environmental Justice” to address the disproportionate impacts of toxic exposure on communities of color and low income white communities, who take the brunt of polluting industry because they typically have less political power, fewer resources, and cultural and language barriers. These Principles include:



The cessation of the production of all toxins, hazardous wastes, and radioactive materials, and that all past and current producers be held strictly accountable to the people for detoxification and the containment at the point of production.

- The right of all workers to a safe and healthy work environment without being forced to choose between an unsafe livelihood and unemployment.
- The right to participate as equal partners at every level of decision-making, including needs assessment, planning, implementation, enforcement and evaluation.
- That we, as individuals, make personal and consumer choices to consume as little of Mother Earth’s resources and to produce as little waste as possible; and make the conscious decision to challenge and reprioritize our lifestyles to insure the health of the natural world for present and future generations.

(For more information and the full text: **Environmental Justice for All**, www.ej4all.org)

Thinking More Deeply

Discussion Questions

- Is there anything in this film that surprised you?
- What character do you identify with the most? Why?
- Does Sarnia's story have anything to do with you or your community? Are there any economic connections between your community and Sarnia? Are there any similar health issues your community is facing?
- How much data should people have to prove about the presence of toxic chemicals and direct health impacts before a community can take action on clean-up and prevention of further harm? Who should bear the burden of proof, the community (to prove that something is causing harm) or the corporation (to prove that it's not)?
- Does industry have any inherent responsibility to clean up its processing and products? Why should companies install cleaner operating systems if it will cost their stockholders money?
- Industrial groups like the Sarnia Lambton Environmental Association say they should be responsible for deciding how to operate safely-they understand their operations best, and they can be more responsible to the local environment than would be possible with uniform standards and mandatory legislation. Do you agree? Why or why not?
- Do you think it's inevitable that some communities like Sarnia are going to have to be less healthy so that industry can continue to produce the necessities of modern life? What's the alternative?
- What would Sarnia look like if the local corporations operated their facilities sustainably?
- How do the perspectives and interests of community advocates, industry representatives, and elected officials align and diverge? How do you think those similarities and differences will help or get in the way of finding solutions to the environmental and public health challenges in Sarnia?
- What kind of influence do consumers have over how industries make their products? Do consumers have any responsibility to exercise that influence? Why or why not?



Bringing It Home

Suggestions for Action

No matter whether you are a large and active advocacy organization or a single individual, there are concrete and substantive steps you can take to support environmental health and justice.

- *Educate yourself.* Go to www.scorecard.org (US) or www.pollutionwatch.org (Canada), enter your ZIP or postal code and read your community's "pollution report card." Find out what facilities are polluting your own home, what chemicals they are releasing, and what health impacts are connected with those chemicals. The scorecard.org website lets you send a fax directly to the company, email the EPA, and connect with others who are concerned with this facility.
- *Educate others.* Talk with your friends, neighbors, and elected officials about what you find out on the Scorecard website, and what you've learned from watching *THE BELOVED COMMUNITY*. Write a letter to the editor, or post something on a popular listserv or blog.
- *Support other educators.* Call the chemistry department of your local college and ask them if they are teaching about green chemistry in their curriculum. Donate the book *Green Chemistry: Theory and Practice* by Paul Anastas and John Warner to their departmental library.
- *Change your life.* Choose non-toxic products whenever possible. Websites such as www.pvcinformation.org, and www.safecosmetics.org are a good start to finding safer alternatives to toxic products.
- *Change the market.* Take the alternative products you've found to your employer, your school, your local government, and the businesses you patronize, and help them change their institutional purchasing practices.
- *Change the rules.* Advocate for your municipality, county, state/province, or tribal government to enact and enforce environmental policies based on the Precautionary Principle; you can find many examples from the US, Canada and Europe at www.sehn.org/govposit.html. Set the bar higher than the best policy you find there, and make it the new standard.

Resources for Further Study and Action

Center for Health, Environment & Justice

www.chej.org

Through skill training, strategic analysis and scientific research, CHEJ empowers communities to take steps to protect themselves from unnecessary chemical threats. Current campaigns focus on environmental health threats to children, and building public support for preventive action to protect public health, the environment and the economy.

Clean Production Action

www.cleanproduction.org

CPA promotes the use of products that are safer and cleaner across their life cycle for consumers, workers and communities. They work with companies to substitute hazardous chemicals in products and production processes with Green Chemistry and safer substitutes, and promote waste reduction through producer responsibility for product take-back.

Collaborative on Health and the Environment

www.healthandenvironment.org

CHE is a diverse network of over 2700 individual and organizational partners in 42 countries, working collectively to advance knowledge and effective action to address growing concerns about the links between human health and environmental factors.

Environmental Health News

www.environmentalhealthnews.org

A daily digest of articles in the world press about environmental health. Topics carried include chemical contamination, children's health, water and air pollution, sewage, environmental justice, reproductive disorders, and genetic engineering, as well as climate change, biodiversity, and sustainable business stories with a health dimension.

Indigenous Environmental Network

www.ienearth.org

IEN builds the capacity of Indigenous communities and tribal governments to protect sacred sites, land, water, air, natural resources, and the health of all living things. IEN maintains an informational clearinghouse and organizes public awareness campaigns and direct actions.

Our Stolen Future

The book *Our Stolen Future* brought world-wide attention to scientific discoveries about endocrine disruption and the fact that common contaminants can interfere with the natural signals controlling development of the fetus. This website tracks the most recent

developments, including information about ongoing policy debates and suggestions about what consumers and citizens can do to minimize risks related to hormonally-disruptive contaminants.

Refinery Reform Campaign

www.refineryreform.org

Refinery Reform is a national campaign seeking to clean up America's oil refineries and reduce our dependence on fossil fuels. Its “Bucket Brigades” program provides a simple, effective tool for grassroots communities to test their air for toxic chemicals.

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A note on spelling: Canada and US spell the word “defence/defense” differently; please be careful to notice this when going to the websites for Environmental Defence and/or Environmental Defens