

Environmental Justice in North Carolina

All people deserve to live in a **safe and healthy environment**.

However, some wealthier communities and industries take advantage of the power of **racial and ethnic discrimination** and **income inequality** to subject many North Carolina communities to unhealthy environments.

This is environmental injustice!

Where did **environmental injustice** come from, what is happening now in North Carolina, and what can we do about it?

Read on to find out more.



For community members, workers, growers, and researchers.

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Who is this booklet for?

Community Members: Do you live near a source of pollution like a farm, landfill or industrial plant? Or have you heard about a proposed new plant in your town? You might have concerns and want to understand more about what you're exposed to, why, and what your community could do about it. You might also have family and friends who work or would work in these industries and want them to receive fair wages and protection at work.

Workers: Are you concerned about your health, safety, or pay at work? You might want more protection from pollution but are worried about taking a pay cut or losing your job. You may be interested in learning about what other workers have done to protect their health and improve their pay.

Growers: Do you have a farm that has been in the family for generations? You might be considering a hog or other livestock contract, or may have already signed a hog contract to protect your farm. You may be interested in learning about the challenges that farmers have faced after signing hog contracts, and why neighbors are opposed to them.

Students & Researchers: Are you a student, researcher, or policy maker studying environmental health or farmer advocacy? Are you interested in connecting to a diverse network of students, faculty, and organizers contributing to community-led research?

If you answered yes to any of those questions, **this booklet is for you!**

What is Environmental Justice (EJ)?

Everyone deserves to live in a safe and healthy environment.

But when industries and governments prioritize profits over people, they avoid taking full responsibility for the costs and wastes of making products. Instead, it is often cheaper for them to leave some of those costs and wastes for communities to deal with. Many people are subjected to these unhealthy environments because they lack the economic and political power to stop the pollution that wealthy communities don't want. This leaves many North Carolinians living in unsafe environments because of their race, ethnicity, or income.

This is environmental injustice!

These discriminatory practices often do not happen person to person. Environmental injustices exist because many businesses, government agencies, and other organizations in positions of power have discriminatory practices and policies. This is what it means when something becomes “institutionalized.”

These practices concentrate wealth in a few communities and industries at the top, make folks in the middle compete for a spot at the table, and concentrate waste in communities without as much power. They happen in many connected, and self-supporting systems (so we call them “systemic”), and have played a role across many generations.

Environmental injustices occur not only in our backyard, but also at the state, national, and international level. Thus, environmental injustice is everyone's problem.

The North Carolina Environmental Justice Network (NCEJN) is helping connect communities facing different types of environmental injustice.

Environmental Injustice in North Carolina

This booklet shows examples of environmental injustice in North Carolina.



Hog farms



Poultry farms



Landfills



Coal ash & fracking

Communities working against environmental injustice can learn a lot from past struggles and can often find support from other communities facing environmental injustices.

This booklet uses hog factory farming as an example of an environmental injustice facing North Carolinians and then draws connections to other types of environmental injustices happening in the state.

Hog factory farms

North Carolina is one of the biggest hog producers in the nation, with around 18% of the country's hog operations. One out of every ten North Carolinians lives within a few miles of a hog factory farm. The hog industry has a large impact on local economies, jobs, environments, and health. They also can give money to people in government. This impact means that the hog industry also has a lot of control over North Carolina.

To understand hog factory farms, we must understand their **history**, their **economics**, and their impact on **health** and the **environment**. In the factory farm system, only a few large corporations and farmers do well. Communities, workers, and most farmers experience health, financial, and environmental problems.



A hog factory farm in Eastern North Carolina. The large, long buildings are hog confinement buildings. The large ponds are football-field-sized waste lagoons. Photo: Donn Young.

History of hog farming

In the past, many North Carolina families grew hogs. Few families had more than 25 hogs. These hogs were fed scraps and crops grown on the farm, and their wastes could be used as fertilizer.



A family hog farm in the old style, Franklin Co, NC. Mae Farm. © Indy 2007

In the last thirty years, hog factory farms have replaced almost all of these traditional farms. Today, hog factory farms can raise as many as 60,000 hogs on one farm. There are over 9 million hogs in North Carolina today – about as many hogs as people in the state. But hogs grow much larger and produce more waste than people do.

North Carolina law allows hog growers to dump the feces and urine produced by these hogs into open pits. The wastes rot and then are applied, usually with sprayers, on nearby fields. This produces air pollution that can harm neighbors' health. It can also contaminate ground and surface water.

Hog farming today: contract growing

You may have heard talk about **family-owned hog farms** in NC. It is easy to picture these farms like those of the past. But almost all family farmers in North Carolina farmers are contract growers.

How does contract growing work?

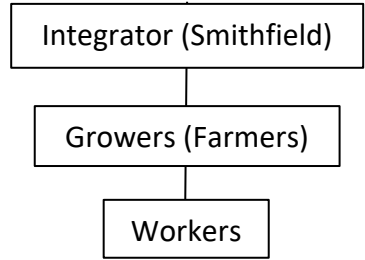
From a business perspective, contract growing works like a fast food restaurant chain.

An **Integrator** sets the rules of the growing contracts. This company owns the hogs and the slaughterhouses. They set the prices for the feed and the finished hogs, and are the ones to make the most profits.

Growers raise the hogs using the integrator's feed and supplies. The contract growers own the land, equipment and buildings, usually going into debt to do so. This makes give integrators power over growers, because of small profit margins and the need to make payments on debts. Growers also own the waste, meaning they are stuck with costs of cleaning it up.

Workers raise the hogs on the farm. Their wages have to come from the grower's pocket, and sometimes lives at the farms. Fewer than half of the factory farm workers in North Carolina make more money than the Federal Poverty Guideline for a family of four.

From a larger economic view, new businesses are often reluctant to set up in areas that are polluted by hog farms.



In the contract grower system, workers and farmers have contracts with a larger company. This is similar to a fast food restaurant chain.

Hog farms and health

Wastes from hog farms are collected in large uncovered pits called lagoons. Wastes from these pits are then sprayed onto nearby fields, where they drift into neighboring communities. Over-spraying can contaminate groundwater that some rural people depend on for drinking.



Imagine if your home was downwind of this moving waste sprayer. Photo: Donn Young

Research in Eastern North Carolina has linked exposure to hog factory farm pollution to many **disease symptoms**:

| | | |
|--------------|-------------|---------------------|
| Burning eyes | Sore throat | Runny nose |
| Wheezing | Coughing | Shortness of breath |
| Nausea | Vomiting | Diarrhea |
| Headaches | Dizziness | Stress |

Researchers are currently studying if hog factory farms could spread bacterial infections that are resistant to antibiotics.

Hog farms and quality of life

Smelly pollution released by hog factory farms can damage quality of life. Nobody wants to live with these smells in and around their home. Even with the windows closed, the pollutants can still get inside a home. These smells aren't just unpleasant: they are odorant chemicals that can hurt your health.



Clothes dried outside can pick up hog waste particles and smells.
Photo: Donn Young

Pollution from hog factory farms can interfere with many outdoor activities important to life and health. This includes gardening, hunting and fishing, holding outdoor social events, attending religious services and funerals, paying respects at gravesites, and just enjoying the outdoors. It impacts everything people do.

Research in Craven County, North Carolina has also shown that hog factory farms reduce neighbors' property values. Residents still pay property taxes, even when homes can't sell at any value.

Hog farms and the environment

Hog wastes can damage water and land ecosystems, harming public and private game lands used for hunting and fishing.

Fish kills: Hog wastes entering waterways can kill fish. Too much nitrogen in water can cause algae to grow quickly and use up all the oxygen dissolved in the water, leading to fish deaths. Fish can also become sick with pfiesteria (sores and bores).



People used to fish in this Duplin County stream, now polluted by hog waste. Photo: USGS

Water contamination: Hog wastes contain heavy metals, growth hormones, and antibiotics, and high levels of excess nutrients. The tiny organisms at the bottom of the food chain can be harmed by these contaminants. This leaves larger animals like fish without a food supply.

Vermin: Pests, vermin, and their predators can be attracted by hog wastes. Neighbors say they have trouble dealing with swarms of flies, yellow-jackets, rats or buzzards.

Poultry factory farms and waste incinerators

Poultry farms are a growing business in North Carolina. Neighbors of poultry factory farms face many of the same problems with air and water pollution as neighbors of hog factory farms (see pages 9-11).

Instead of being stored in pits, poultry deposit their feces and urine on dry litter that is spread on fields to dry before burning. This burning process releases chemical pollution into the air. Some of the parts of this pollution mixture and their effects on disease symptoms are listed in the table below:

| Chemical | Disease Symptoms |
|---|---|
| Inorganic arsenic: comes from a poultry feed additive called Roxarsone that is used to promote growth and weight gain in chickens. | Causes cancer, diabetes, damages the developing brain. Can contaminate water and soils. |
| Particulate Matter (PM10): soot and dusts in smoke left over from burning the wastes. | Breathing problems, heart problems. |
| Sulfuric acid: comes from a poultry litter additive (like Poultry Guard) used to protect chickens from rotting wastes. | Causes breathing problems and cancer. Contributes to acid rain. |
| Dioxin: forms when the chlorine present in poultry antibiotics and pesticides is burned with the poultry wastes. | Causes cancer and immune system problems. Can contaminate the meat of nearby fish and game animals. |

Waste to Energy

Waste to energy (WTE) plants use household waste or animal waste from hogs or poultry to produce energy. Industry groups say the plants will boost the local economy and protect the environment. But these plants produce pollution of their own.

Greenwashing: Some of these plants, once operational, have produced more pollution than they promised when they were built and failed to notify residents of it. This is an example of “greenwashing” – hiding true environmental and community costs, and playing up select environmental benefits.



Waste to energy plant protesters in Gonzales, California.

Photo: Greenaction for Health and Environmental Justice, CA

Protest: There are a small number of these plants in the US, but pressure to build more. Communities in many states, including here in NC, have successfully protested WTE plants.

Better processing of landfill and animal waste is an important step in protecting communities. But history shows us that, without community control, environmental protections will be limited to ones that bring plant owners profit. Communities nearby new plants will have more pollution and see little of the benefits.

Landfills

Every year, North Carolinians throw out over **10 million tons** of trash. Wealthy areas produce the most trash, but most of it ends up in landfills near low-income communities of color. Because it is cheaper to build new landfills near or on top of old ones, this environmental injustice often gets worse over time. Landfills produce air and water pollution and lower property values.



Landfills also attract buzzards, vermin like rats, and pests.

Water Pollution: Modern landfills have a plastic liner that collects water pollution called “leachate.” Leachate goes to a treatment plant, but the chemical sludge left over is often sent back to the landfill. When the liner leaks, leachate pollutes the groundwater. Sometimes it is spread on nearby farmland instead, but will still flow back to the groundwater.

Air Pollution: Modern landfills also use underground pipes to vacuum up and burn the air pollution (“landfill gas”) produced by the landfill. But not all the gas can be collected - some of it escapes into the air. Burning the landfill gas removes some chemicals and can create energy but also produces new types of pollution. Air pollution also comes from diesel trucks and earth-moving equipment. Trucks and equipment also create noise pollution and make roads unsafe.

Coal ash

Coal ash is the waste left over after burning coal to generate power. North Carolina produces over **5 million tons** per year. Coal ash contains heavy metals like mercury and arsenic, that cause disease. If coal ash gets into a river, it can contaminate the meat of fish that some people depend on for food.

Coal ash is stored in large open pits called ponds or lagoons. Many of these pits do not have a protective liner to contain the waste. Due to public outcry over these pits, coal ash is being moved to landfills.

But landfills also produce water pollution that can leak into the groundwater. Because water pollution from landfills also ends up in sewage sludge (see previous page), some of this coal ash pollution may also end up being spread on farmland.



Duke energy's coal ash pond in Eden, NC spilled into the Dan River in 2014. Photo: Dan River Basin Association.

Fracking

Fracking goes by many names: “hydraulic fracturing”, “horizontal drilling”, or “shale gas extraction”. But the basic process is the same. A large amount of water is mixed with chemicals to create fracking fluid. This fluid is pumped deep underground at high pressure to harvest natural resources. Fracking is currently not happening in NC, but some communities are being pushed to allow it.



Fracking contaminates a lot of water. Photo: Joshua Doubek.

There are many environmental justice concerns with fracking:

Groundwater contamination – the drilling and fracturing process can leak fracking chemicals into the groundwater. The exact recipe is a trade secret but contains hundreds of ingredients. Many known ingredients cause disease.

Earthquakes – fracking can cause earthquakes. Most of these earthquakes are caused by the disposal of fracking and drilling waste water, which is also pumped underground.

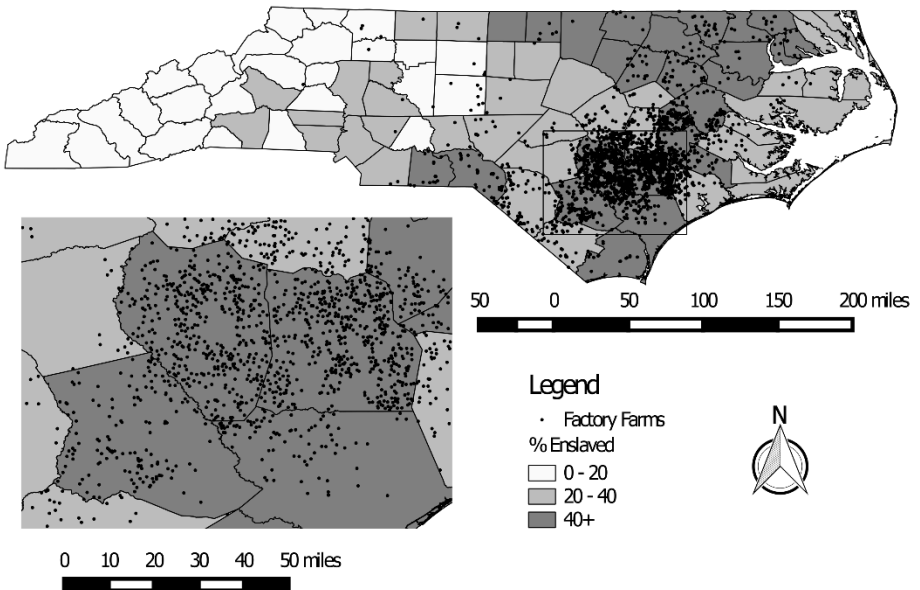
Forced pooling – unfair laws can prevent landowners from saying “no” to fracking on their own land, which forces them to accept the costs and effects of drilling.

Environmental Justice: Past and Future

Environmental injustices in Eastern North Carolina today are nothing new – they are rooted in historical injustices.

Take the example of slavery. In 1860, about 1 in 3 of North Carolina’s 1 million inhabitants were enslaved Black people. Eastern North Carolina had few industries after the Civil War because the area had become so dependent on slavery.

These same communities still struggle today, since political power often builds over a long period of time. Today, we see 15 times more hogs in counties that had more than a third of the population enslaved in 1860 compared to other counties.



Black dots above are industrial hog factory farms. Darker shaded counties had higher percent of the population enslaved.

Environmental justice and civil rights

Today's struggles for environmental justice can be understood as part of a larger and continuous fight for justice, self-determination, and human rights.

The timeline on the next page shows one way of looking at the fight in North Carolina. This view focuses on three groups: the united *people* (labeled "organizing"), *state and local governments* ("NC"), and the United States government ("U.S. Law"). It also focuses on rights in four progression categories: citizenship, voting, segregation, and finally environment.


From the events shown in the timeline, you can see the same general pattern repeat itself over the last 150 years:

The People demand their rights and organize themselves to secure those rights. This has included political action and non-violent resistance.

The federal government should write the will of the people into federal law. But often the federal government represents the interest of the wealthy by protecting corporations and banks and helping the rich avoid taxes and regulations that protect people. Federal changes only come after great struggle and often with compromise. These changes are not always for the better.

North Carolina state and local governments sometimes pass laws against civil rights to suppress the will of the people. Recent legislation has reversed prior gains on many civil rights issues. Many of these unjust laws are eventually struck down by the court system, but some stay for a long time.

A timeline of civil rights in North Carolina



| | 1850: Citizenship | 1900: Voting |
|-------------------|--|---|
| Organizing | <p>1865 & 1866: Freedman’s conventions advocate equal rights for all.</p> <p>1898: The white supremacist Red Shirts violently overthrow the Wilmington government.</p> | <p>1915: NC Equal Suffrage Association begins writing brochures to promote women’s right to vote.</p> <p>1931: Negro Voter’s League formed to assist Black voter registration.</p> |
| U.S. Law | <p>1865-1867: Congress passes the 13th through 15th amendments to the U.S. constitution. These laws abolish slavery and grant freed slaves voting rights and citizenship.</p> | <p>1920: Congress passes the 19th amendment, giving women the right to vote.</p> <p>1948: A U.S. Supreme Court decision makes it illegal to discriminate on the basis of race in housing contracts.</p> |
| NC | <p>1866: NC legislature creates Black Codes to deny rights to freed slaves.</p> | <p>1900: NC legislature creates poll taxes and literacy tests to prevent Black citizens from voting.</p> |

From left to right, this timeline shows some major events in the struggle for human and civil rights for Black North Carolinians. The goals of this struggle have progressed from basic citizenship to voting rights, desegregation, and finally environmental justice.



| 1950: Segregation | 2000: Environment |
|--|---|
| <p>1960: Greensboro sit-ins</p> | <p>1982: Warren County residents fight toxic PCB landfill</p> |
| <p>1964: Congress passes the Civil Rights Act, which outlaws racial discrimination</p> <p>1965: Congress passes the Voting Right Act, which prevents NC from passing discriminatory voting laws.</p> | <p>1994: President Bill Clinton issues executive order 12898 directing federal agencies to consider environmental justice when making decisions.</p> |
| <p>1950's: NC legislature passes segregation laws for schools, hospitals, bathrooms, and the military.</p> | <p>2015: NC legislature passes an "Anti-Sunshine" law that prevents citizens from reporting unfair pollution.</p> |

North Carolinians have been fighting for their Civil Rights for over 150 years. Their organizing has prompted positive changes to federal laws, but progress has often been resisted by the North Carolina state government. Recent years have seen setbacks in voting rights, education disparities, and the environment, often impacting communities of color the most.

Environmental justice organizing

Change can take years or decades, and can also be rolled back. Despite the challenges, community organizing for environmental justice *has* seen successful in North Carolina in many communities. Here are some lessons from those successes:

Community participation

The most important first step of making positive change is for community members to talk with each other, and eventually organize themselves in a group that grows over time. This group can coordinate local action. For example, attendance at local government meetings has been a powerful tool when community members show up to observe and make comments. This can be even more effective when many different community members make appearances. For example, the Rodgers-Eubanks Rd. community in Orange Co. NC successfully fought to close a decades-old landfill in their midst, stop a waste transfer station, bring in water & sewer lines and a community center.

Community leadership

It is important for leadership on environmental justice issues to come from people who live in the community. Community members know their community best, and can be involved in the long term.

Community connections

The most important connections that communities facing environmental injustice can make are connections to other communities facing environmental injustice. Each community will be able to draw from others' strengths, successes, resources, and strategies. Scientists and lawyers (see next page), can also help provide support, but ultimately should work under the direction of strong, organized communities.

Organizing tools: direct action

Though there are many kinds of assistance that people outside of impacted communities can give, the most important form of resistance against environmental injustice comes when people who are directly impacted speak and act out. There are many kinds of direct action, like non-violent protest and speaking out at government meetings. Speaking and acting out can be risky, especially in communities where industry has a history of retaliation. But being part of a group can let the right people lead and take risks at the right time and places.

Political Theatre & Education: Media outlets are more likely to cover stories about environmental injustice when the story is packaged in an interesting way. For example, NC EJM and community members created a small hog CAFO, complete with a kiddie pool full of feces, in downtown Raleigh. Organizers used this to teach legislators how CAFOs really work. They also showed how hog feces are treated as toxic waste on the capital, but are called valuable resources when they pollute rural communities.



Naeema Muhammad of North Carolina Environmental Justice Network speaking at a community meeting.

Organizing tools: growers & workers

Livestock contract growers and workers have special relationships to environmental and economic justice, since their livelihoods often depend directly on these large, powerful corporations and the industry they control.

Growers may be open to better environmental practices, but are often in debt to large corporations and hoping to keep their family land and farm. Those corporations may put pressure on them or put them out of business if they are critical of their contracts or speak up on behalf of workers or the community.

Workers often experience the highest direct exposures of pollutants. They sometimes do not have the workplace protections the law requires, and sometimes the law is too relaxed about their exposure to risks compared to other workplaces. But workers who speak up can be fired.

What growers can do

Many growers are locked into competitive “tournaments” and contracts that leave the risks with them, but the power to negotiate and control purchasing with their corporate integrator. Some growers are banding together with local farmer’s rights organizations to demand fairer contracts and better understand the contracts they are in.

What workers can do

Workers historically have organized to demand safe working conditions and fair pay for themselves, and fair treatment for their families and communities. They have used strikes, collective bargaining and other means to be heard, but often have to coordinate carefully, sometimes anonymously, to avoid being fired, evicted or deported. Workers recently used some of these tactics successfully to raise wages and improve health care and safety at the world’s largest meatpacking plant in Tarheel, NC.

Organizing tools: the law

Communities organizing against environmental justice have found that the courtroom can be used as a tool for change. Sometimes, court cases can have significant impacts – for example the court case *Brown v. Board of Education* helped desegregate schools in the United States. Often, court battles can take years - or decades. Many do not lead to any changes.

But even with these limits, the courts can be a powerful way to help spread the word about environmental justice issues. The UNC Civil Rights Law Center has been a helpful partner to the NC Environmental Justice Network, often providing free services to people in communities. Here are other examples of how organizers are using the law to help their case:

Title VI of the Civil Rights Act of 1964

This law says it's not ok to have worse impacts in communities by race. It is being used to petition the Environmental Protection Agency to stop North Carolina's discriminatory permitting of hog factory farms in communities of color.

Class-action nuisance lawsuits

Neighbors of hog factory farms filed lawsuits against hog integrators for personal and property damages caused by pollution coming from hog factory farms, including some owned by Smithfield.

Executive Order 12898

This presidential order from Bill Clinton in 1994 required federal agencies to take environmental justice into consideration when making decisions about the funding, location and operation of their programs.

Organizing tools: planning & zoning

Many local governments keep maps that determine what residential, commercial and industrial uses are allowed in each area. These rules can provide protections for residents... or make it easier for commercial and industry to pollute them. These maps and the rules for each area change over time.

Community residents can have a say in this process – both in how the planning and zoning maps change over time, and in giving input on the rules of what’s allowed in each zone. Community members can volunteer to sit on local planning and zoning boards, helping to protect their local communities and ensure fair and safe use of industry and commercial areas.

Protecting communities: The North Carolina Environmental Justice Network has helped communities use planning and zoning rules to protect communities from unwanted commercial and industrial building.

Industry and local government planned to place a new **waste incinerator** plant in Greene County. But community members and NC EJM worked together to protest at local board meetings, showing the plant violated local planning rules. The plant decided to try to build elsewhere.

The West End neighborhood in Mebane, NC had dealt with racial segregation and unequal access to water and sewer systems. Then local and state government decided to build a **large highway** through the neighborhood without taking public comments. Residents organized themselves and founded the West End Revitalization Association (WERA). This group protested their city council for not representing them at state meetings, and filed environmental and justice complaints to the federal government. Eventually the highway project was placed on hold until local and state governments complied with US federal civil rights and environmental justice laws.

Organizing tools: research

Research can help support community organizing by documenting environmental injustice and its impacts in a formal way.

The research process begins with collecting information. A scientist then uses this information to prepare a research report that is reviewed by other scientists. When published in a scientific journal, this report may have special standing as evidence in court. Even if findings aren't published, researchers can also help communities document evidence of the problems they face. Document evidence can help communities push for changes.

Research works best when community members affected by environmental injustices are leaders in the research process. This means that community members may participate in collecting information. But importantly, it also means that community members should help decide the questions the research aims to answer. This type of research is often called “community-driven research” or “community-based participatory research”.

When undertaking a research project, it is important to make sure that researchers and community members are true partners. In the past, scientists have taken advantage of communities for their own advancement. It is also important to clarify the expectations of each partner. While community members often need answers in weeks or months, the research process can take years or decades of careful observation, analysis, and debate.

Research also has limits on what can be claimed. For example, scientists could find a chemical known to cause cancer in tap water, but may not be able to say if a particular case of cancer was caused by that chemical. Despite these difficulties, research can play an important role in supporting community organizing for change.

Biography of a researcher: Steve Wing

Steve Wing was a good example of a researcher who worked with communities organizing against environmental injustices. Steve developed research in collaboration with community members to document how environmental injustices can harm health.

“Steve helped communities speak up and speak out about issues and what the impact could possibly be on their health and environment” said Naeema Muhammad, co-director and community organizer for the NCEJN. “He was truly the people’s professor.”

Steve began working with the Concerned Citizens of Tillery on the issue of hog factory farms and became a founding member of the NCEJN in 1997. His research on hogs included a



paper showing that North Carolina’s hog factory farms are concentrated in Black and low-income neighborhoods, and an intensive research study (CHEIHO) looking at the effects of these farms on health, quality of life, and disease symptoms among those living nearby. This research helped support complaints of environmental injustice and may contribute to positive changes.

Although Steve passed away in 2016, his legacy lives on through the relationships he formed with communities. His work also continues through his students, to whom he stressed the importance of putting communities first.

Scientific resources

These example research projects focused on environmental injustice in Eastern North Carolina's hog industry. They began at the request of community members affected by environmental injustice.

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Getting Involved

If you are a community member, talk to your friends and family about these issues of justice and the environment. Organize a local group of people who care about environmental justice and the consequences for the health of your families. If you would like to connect to other communities around the state to hear about similar struggles elsewhere, or are interested in tools to help tell your story, contact the **North Carolina Environmental Justice Network!**

And if you'd like to get involved in community-supportive research for environmental health, as an academic researcher or student, or policy advocate, contact the **North Carolina Environmental Justice Network!**

North Carolina Environmental Justice Network (NCEJN) organizes and connects state and local environmental justice efforts, including guiding policy, legal action and research that promotes the ability of communities to organize to protect themselves.

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If you have questions about the content of this brochure, contact Nathaniel MacNell (macnell@unc.edu) or Mike Dolan Fliss (fliss@email.unc.edu) at the University of North Carolina – Chapel Hill.

My Local NC EJM Organizer is:

Name: _____

Phone: _____

Email: _____

Address: _____

Meeting Notes

Meeting Notes, cont.
