

Lack of Basic Amenities: Indicators of Health Disparities in Low-Income Minority Communities and Tribal Areas

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North Carolina has numerous low-income minority communities and tribal areas where basic public health amenities are lacking. Disparities in clean air, safe drinking water, and toxin-free soil create human exposures that result in poor health, depressed property value, and more contaminated environments than are present in higher income communities.

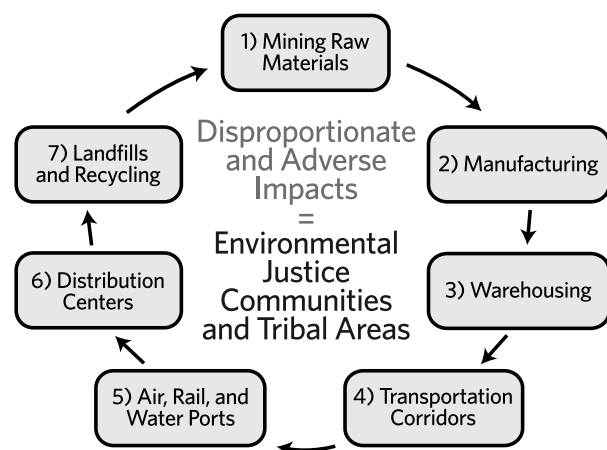
As a cofounder of the West End Revitalization Association (WERA; Mebane, NC), I have worked with legal, public health, university, foundation, and government partners to install first-time sewer and safe drinking water services, to pave dirt streets, and to remove underground storage tanks leaking petroleum and cancer-causing benzenes and xylenes [1]. As a member of the US Environmental Protection Agency's (EPA's) National Environmental Justice Advisory Council (NEJAC) during 2007-2010, I provided input on interagency policy and compliance for air, water, and soil in low-income minority communities and tribal areas. The NEJAC's Goods Movement Workgroup involved air, maritime, and rail ports and highway corridors that adversely affect low-income minority communities and tribal areas [2].

The Obama-Biden transition team requested my input, on December 16, 2008, in its Environmental Justice Forum [3]. I served as the first community planner/leader of the Community/Tribal Facilitated Strategy track at the EPA's 2010 Conference on Environmental Justice, Air Quality, Goods Movement, and Green Jobs: Evolution and Innovation. After I submitted the principles and recommendations of our community-facilitated strategies (CFS), the EPA designated WERA as the national prototype for empowering the "community voice" against transportation-corridor environmental hazards (Figure 1) [4].

Collaborative Partnerships

To improve the quality of life in low-income minority communities and tribal areas, North Carolina must address institutional barriers of old-South cultural and racial legacies and "primacy" or "states' rights" over federal statutes. It is time to form collaborative problem-solving (CPS) partnerships that move advocacy to activism and that translate common knowledge about health disparities into effective

FIGURE 1.
Sources of Environmental Factors That Adversely Affect Health



strategies, to eliminate hazards with measureable outcomes (Figure 2) [5].

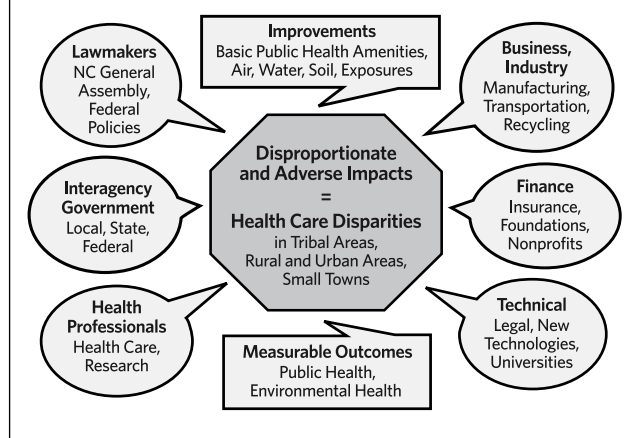
My 17 years as an environmental justice activist, a member of the North Carolina Environmental Justice Network, and a federal advisor give me an affected stakeholder's account of the denial of basic amenities and failure of enforcement of federal public health statutes. CPS partners should perform the following activities to solve public health problems associated with a lack of access to basic amenities: identify North Carolina General Assembly members, health care leaders, and industry innovators willing to sponsor a collaborative bill on health disparities and enforcement of federal public health statutes; address states' rights as a barrier to funding corrective actions in low-income, minority, and tribal areas; and educate lawmakers, public health professionals, and researchers on the legal obligations to support federal environmental policies under the National

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FIGURE 2.
Partners to Ensure the Availability of Basic Public Health Amenities



Environmental Protection Act, federal statutes, and health care reform.

Community-Facilitated Strategies

Low-income minority communities in the Mebane, North Carolina, area (ie, Alamance County and Orange County) are similar to other communities and tribal areas that lack basic public health amenities. The denial of or lack of access to “up-to-code” infrastructure (ie, safe drinking water, sewer collection, paved streets, sidewalks, and storm-water management) contributes to disparities in health. Long-term exposure to deficient infrastructure produces more adverse health effects in minority communities with depressed property values than are evident in white and higher-income communities [1, 4].

WERA was incorporated as a 501(c)(3) nonprofit in 1995, and it serves as Mebane’s first EPA “community-based environmental protection model” organization. It has led efforts in African American communities to stop racial discrimination and adverse effects associated with leaking underground storage tanks, unpaved streets, contaminated drinking water, failed backyard septic tanks, and landfills [1, 5-8]. Groundwater and drinking well water could be contaminated by construction of the highway and a 1-mile overpass.

In February 1999, WERA filed administrative complaints, under Title VI of the Civil Rights Act of 1964 and Environmental Justice Executive Order 12898 of 1994, at the US Department of Justice, when local, state, and federal government agencies had, for 16 years and without public input, planned construction of the Highway 119 bypass/interstate. The 4-lane highway, in an 8-lane corridor, would destroy homes and churches in 2 historic communities that had been denied access to basic municipal drinking water and sewer services [1, 5-8].

Water samples were collected from community streams by WERA and were analyzed at the University of North Carolina (UNC)-Chapel Hill Gillings School of Global Public

Health. *Escherichia coli* and other fecal coliform bacteria were detected at levels more than 300 times the standards established by the EPA’s Clean Water Act. Some residential drinking wells and Mebane’s treated water also contained *E. coli* and other fecal coliforms, in violation of the EPA’s Safe Drinking Water Act. Surface-water contamination was tracked to backyard septic systems, which had a failure rate of 50%-100% on some streets; the state average is 11% [1, 5-8].

WERA civil rights complaints, data collection efforts, and CPS partnerships helped leverage millions of dollars in block grants and municipal matching funds for the first-time installation of sewer services for more than 90 houses, for paving dirt streets, for removing underground storage tanks, and for stopping housing construction on a century-old industrial landfill. Residents have been within 2-3 blocks of a sewage treatment plant since the 1920s. The 119-bypass construction has been delayed by a construction moratorium since 1999, to seek continuing environmental-hazards mitigation under federal public health statutes and to document public input. In 3 environmental justice communities, more than 400 houses with backyard septic systems leaking human waste still need first-time safe drinking water and sewer lines [1, 5-8].

In 2008, the National Institute of Environmental Health Sciences awarded a community-university partnership grant to WERA and the Institute for Families in Society at the University of South Carolina-Columbia, to evaluate WERA’s CPS approach and its community-owned and -managed research (COMR) model, used for corrective actions, and to implement measurable results for an improved quality of life [9]. WERA received a National Environmental Justice Achievement Award from the EPA in 2008, for activism related to safe drinking water, surface water, storm-water management, dispute resolution, and civic engagement “beyond the vote” that removed environmental hazards in minority communities.

Environmental Health Disparities

Physical pain from diseases is more readily recognized, diagnosed, and accepted. Less recognizable are the effects of despair, fear, stress, and rage, from years of discrimination and disenfranchisement. Funders encourage WERA to monitor the psychological health effects of years of struggling against old-South cultural barriers in the new South of technological advancements [1].

Successful educators, health care professionals, scientists, and government officials grew up in these polluted communities and carry the legacy of human exposures with them to very-high-income professional lives and wealthy subdivisions. Some of these individuals risk more exposure each time they visit family and friends at the old “home place.”

Overcoming Barriers to Solutions

Mebane is recognized as the fastest-growing city in Alamance County, with developments in Orange County

TABLE 1.
Policy Priorities to reduce the Prevalence of Environmental Hazards and Disparities in Health Care

Policy priority	Reference(s)
Implement WERA's CFS, to leverage hazard reduction or elimination through the legal protection and redress offered by federal laws.	[1, 3, 4]
Expand the "right to basic amenities movement," to improve the missing, failed, and substandard infrastructure that produces disparities in health and depressed property values.	[1]
Incorporate environmental justice and basic public health amenities in federal, state, and local laws, with measurable outcomes.	[1, 3, 4]
Remove states' rights barriers to federal funding used to challenge transportation, infrastructure, and other land use projects that can create or exacerbate environmental hazards for low-income and minority residents.	[1, 3, 4]
Remove state laws that permit or create disadvantages for residents in extraterritorial jurisdiction or unincorporated areas, including low-income minority and farmland areas, in the planning and zoning for highways, landfills, and polluting industries.	[1, 7]
Establish WERA's Right to Basic Amenities Collaborative Institute for replicating COMR, CPS, and CFS models and strategies in other low-income minority and tribal areas in North Carolina and the southeast; ground-truthing databases to measure death, suffering, and solutions in site-specific populations; and increasing the environmental literacy necessary to respond to environmental-impact statements, health-impact assessments, and human-exposure studies.	[1, 4]
Develop new policies for EPA, US Department of Agriculture, US Food and Drug Administration, and other government agencies that permit spraying or spreading of human sewage sludge on farmland to fertilize human food crops. There are increasing numbers of reports of health effects from exposure to human sludge.	[10-12]
Develop new policies to address the situation wherein university and government researchers take 50%-97% of federal grants without funding equity and management parity for environmental justice organizations and community investigators.	[1-8]
Create new policies to remediate areas where major agribusinesses, livestock farming, and manure pits disproportionately and adversely impact human health, contaminate ground water and river basins, reduce air quality, and depress residential and small-business property values.	[3, 11, 12]
Generate new policies regarding sites of raw-materials mining, landfills, and recycling centers, which are disproportionately located in low-income minority communities and tribal areas (Figure 1).	[13, 14]

Note. CFS, community-facilitated strategies; COMR, community-owned and -managed research; CPS, collaborative problem-solving; EPA, Environmental Protection Agency; WERA, West End Revitalization Association.

(the city straddles the counties' shared boundary). North Carolina has many nationally recognized resources, including heavily funded research programs at respected academic institutions; Research Triangle Park, with the EPA's Office of Air Quality and Planning Standards campus, the National Institute of Environmental Health Sciences, and the Biotechnology Center; international business and industry; and billion-dollar financial corporations. These organizations have yet to produce solutions for environmental injustices and disparities in health care.

Three environmental justice communities with which WERA's CPS partners have worked are diverse examples of chronic health and environmental disparities in terms of clean air, safe drinking water, clean surface water, toxin-free soil, and safe disposal of industrial, medical, and pharmaceutical waste. The first community is Mebane (until recently a small mill town), where plans for an 8-lane, 27-mile interstate corridor to Danville, Virginia, the widening of a railroad corridor, and local highway accesses for an industrial park have not fully valued marginalized communities, human health, or environmental safety. The second community is the Rogers Road and Eubanks Road Neighborhood Association in the Chapel Hill and Carrboro area (a high-income university setting), where some of the largest contributors to a landfill with documented contaminated residential drinking wells are UNC Hospitals and public health research facilities at UNC-Chapel Hill. The landfill breeds insects, large rats, and buzzards that deposit feces on cars, houses, and gardens. The third community is the Rural Empowerment Association

for Community Help, in Duplin County (rural area), where hogs in confined animal-feeding operations outnumber humans. Twenty hours per day, the air is filled with a pungent odor of hog waste, agribusiness chemicals, and diesel emissions from transporting live animals, rotten dead animals, and the packaged meat products for US and foreign grocery stores.

The clout of business, industry, university, and government polluters still presents a difficult challenge for current public health policies, legal leverage, and public outcry to overcome in the effort to reduce the prevalence of environmental hazards and disparities in health care. I presented 10 policy priorities to incoming staffers of President-elect Barack Obama's administration that focus on interagency actions to reduce or eliminate environmental contaminants and health care disparities, to enforce health statutes, and to generate new preventive efforts [3] (Table 1).

Cause-effect research often fails to produce conclusive evidence for environmental hazards that contaminate air, water, and soil in areas where many low-income minority residents have lived since slavery ended, in 1865. WERA's successes are demonstrated through innovative community-led models for the reduction and removal of environmental hazards, with site-specific research and legal compliance by local, state, and federal government agencies. WERA's primary focus is to use CPS partnerships to collect the scientific data needed to leverage legal compliance for the reduction of hazards that have become a way of life.

In 2007, Sarena Seifer and Ella Greene-Moton, both of

Community-Campus Partnerships for Health, stated that, "as illustrated by the COMR model, we must overcome deeply entrenched views and policies that serve to maintain university control of the research enterprise, and we must build the research capacity of community-based organizations" [15].

The Republican-led US House of Representatives proposes to cut the budget of the EPA and to relax enforcement guidelines, as well as to repeal health care reforms. North Carolina needs bipartisan support for the installation of basic public health amenities that advance health care.

My experience as a life- and health-insurance agent since 1984 continues to reveal a confidential and up-close view of personal health histories in low-income minority communities, where underwriting decisions often substantially increase premiums, reduce coverage, or result in exclusions that may be related to chronic exposures. This is only a glimpse of the increasing lifetime cost of environmental hazards and health care disparities for minorities.

Successes in the areas addressed in this commentary will require partnerships at the highest levels of government agencies; funding organizations; major medical facilities; business, financial, and industrial institutions; and universities. NCMJ

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References

1. Wilson OR, Bumpass NG, Wilson OM, Snipes MH. The West End Revitalization Association (WERA)'s right to basic amenities movement: voice and language of ownership and management of public

- health solutions in Mebane, North Carolina. *Prog Community Health Partnersh.* 2008;2(3):237-243.
2. Environmental Protection Agency, National Environmental Justice Advisory Council (NEJAC) meetings. <http://www.epa.gov/environmentaljustice/resources/publications/nejac/nejacmtg/nejac-meet-trans-091807.pdf>. Accessed May 12, 2011.
3. Wilson OR. Environmental justice: priorities, recommendations, and policy concerns. Presented at: Environmental Justice Forum, Obama-Biden Transition Team; Washington, DC; December 16, 2008.
4. Environmental Protection Agency (EPA). EPA's Response to the National Environmental Justice Advisory Council Report: Reducing Air Emissions Associated With Goods Movement: Working Toward Environmental Justice. Presented at: Environmental Protection Agency Meeting; Washington, DC; January 27, 2010. <http://www.epa.gov/environmentaljustice/resources/publications/nejac/nejacmtg/nejac-meeting-trans-012710.pdf>. Accessed May 12, 2011.
5. Wilson SM, Wilson OR, Heaney CD, Cooper J. Use of EPA collaborative problem-solving model to obtain environmental justice in North Carolina. *Prog Community Health Partnersh.* 2007;1(4):327-337.
6. Heaney CD, Wilson SM, Wilson OR. The West End Revitalization Association's community-owned and -managed research model: development, implementation, and action. *Prog Community Health Partnersh.* 2007;1(4):339-349.
7. Wilson SM, Wilson OR, Heaney CD, Cooper J. Community-driven environmental protection: reducing the P.A.I.N. of the built environment in low-income African-American communities in North Carolina. *Social Justice in Context.* 2007-2008;3:41-57.
8. Wilson SM, Heaney CD, Cooper J, Wilson OR. Built environment issues in unserved and underserved African-American neighborhoods in North Carolina. *Environ Justice J.* 2008;1(2):63-72.
9. Environmental Justice: Partnerships for Communication. RFA-ES-04-007. <http://grants.nih.gov/grants/guide/rfa-files/RFA-ES-04-007.html>. Accessed May 8, 2011.
10. Division Waterborne Disease Measures Team, Office of Ground Water and Drinking Water Standards and Risk Management, Environmental Protection Agency (EPA). Trends of gastrointestinal illnesses in tribal communities in EPA Region 8 (ND, SD, MT, WY, CO, UT) from 2000 to 2005. Draft Study Design-09/28/2007. Washington, DC: EPA; 2007.
11. Rideout K, Teschke K. Potential for increased human foodborne exposure to PCDD/F when recycling sewage sludge on agricultural land. *Environ Health Perspect.* 2004;112(9):959-969.
12. Mirabelli MC, Wing S, Marshall SW, Wilcosky TC. Race, poverty, and potential exposure of middle-school students to air emissions from confined swine feeding operations. *Environ Health Perspect.* 2006;114(4):591-596.
13. Norton JM, Wing S, Lipscomb HJ, Kaufman JS, Marshall SW, Cravey AJ. Race, wealth, and solid waste facilities in North Carolina. *Environ Health Perspect.* 2007;115(9):1344-1350.
14. Dickson S. County board reviews transfer site complaint: Rogers Road complaint to EPA alleges discrimination. *The Carrboro Citizen.* January 24, 2008.
15. Seifer SD, Greene-Moton E. Realizing the promise of community-based participatory research: community partners get organized! *Prog Community Health Partnersh.* 2007;1(4):291-294.