

ENVIRONMENTAL JUSTICE AND THE FLINT WATER CRISIS

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**Michigan Sociological Association Annual Meeting 2017  
Keynote Address**

**ENVIRONMENTAL JUSTICE AND THE  
FLINT WATER CRISIS<sup>1</sup>**

Paul Mohai, University of Michigan

*This article is dedicated to the people of Flint, Michigan, and to my longtime friend and colleague Professor Bunyan Bryant, Flint native and Environmental Justice pioneer.*

The Flint Water Crisis has received national and international attention. The Crisis began when State officials decided to switch the City's water supply from the Detroit water system to the Flint River as a cost-cutting move. However, necessary corrosion controls were not added. The improperly treated river water corroded the City's service lines causing lead and other contaminants to leach out. When residents noticed changes in water quality shortly after the switch and expressed concerns about impacts to their health, State officials dismissed their concerns and provided assurances that the water was safe, even in the face of growing evidence to the contrary. Denial and inaction by the State continued over the next year and a half, resulting in a public health disaster.

This article is intended to provide an understanding of the concept of environmental justice and to apply that concept to the Flint Water Crisis. I begin by providing a brief history of the origins of the

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<sup>1</sup> This article is based on a keynote speech given at the 2017 Annual Meeting of the Michigan Sociological Association held at Grand Valley State University on October 28, 2017 in Grand Rapids, Michigan. I would like to thank Prof. Robert D. Bullard, Mr. Charles Lee, Prof. Robert Kuehn, Dr. Lawrence Reynolds, Prof. Cedric Taylor, Prof. Benjamin Pauli, and Dr. Mona Hanna-Attisha for their helpful comments on earlier drafts of this article. I am especially indebted to Prof. Bunyan Bryant, Emeritus Professor at the University of Michigan.

environmental justice movement, including important roots in Michigan. Some of that history is based on my firsthand accounts, some is based on published articles, reports, and other documents. I also provide various conceptualizations and definitions of “environmental justice” given by the environmental justice movement, academics, and government. I use these conceptualizations to analyze the Flint Water Crisis through an environmental justice lens and explain why environmental justice in the U.S. is at a critical moment.

## ENVIRONMENTAL JUSTICE: A BRIEF HISTORY

Many observers of the environmental justice movement point to protests in Warren County, North Carolina, in the early 1980s as the launch of the environmental justice movement (Bullard 1990; Bryant and Mohai 1992a; Bullard, Mohai, Saha, and Wright 2007; Mohai, Pellow, and Roberts 2009). The controversy began when the State of North Carolina proposed placing a hazardous waste landfill in a predominantly African American community there. Although similar controversies may have existed before then, what made the Warren County protests unique is that they gained attention from the national media and started a chain reaction of events that culminated into a full blown social movement and governmental response. One of the immediate consequences of the protests was the request by U.S. Representative Walter Fauntroy, who participated in the protests, to the U.S. General Accounting Office or U.S. GAO (now the U.S. Government Accountability Office) to investigate the racial composition of the communities surrounding the four major hazardous waste landfills in the Southern Region of the U.S. The GAO found that in all four cases, African Americans were disproportionately represented in those communities, and in three of the four communities, African Americans made up the majority (U.S. GAO 1983).

The Warren County protests and the findings of the U.S. GAO led members of the Commission for Racial Justice of the United Church of Christ (UCC), who participated in the protests, such as Mr. Charles Lee, to travel around the country to gain a better understanding of the extent of environmental impacts in people of color and poor communities firsthand. The findings from this investigation led the UCC to sponsor a quantitative national-level study to analyze the demographics surrounding hazardous waste sites in the U.S. The results of this analysis were reported in 1987 in the now historic report *Toxic*

*Wastes and Race in the United States* (UCC 1987), of which Mr. Lee was principal author. The study found that the percentage of people of color in communities containing a commercial hazardous waste facility was double that of communities not containing such facilities. The percentage of people of color in communities containing two or more such facilities was triple. Furthermore, when the mean income levels, mean housing values, and other characteristics of the communities were taken into account in a multivariate statistical analysis, the racial composition of the communities was found to be the best predictor of which communities contained commercial hazardous waste facilities and which did not.



Figure 1. African American residents of Warren County, North Carolina used non-violent civil disobedience to protest the delivery of toxic waste to a local dump. (Permission to use photo granted by Jenny Labalme.)

The U.S. Environmental Protection Agency (EPA) credited the publication of the 1987 UCC Report, *Toxic Wastes and Race in the United States*, as one of two events to bring the issue of environmental justice to the attention of the Agency (U.S. EPA 1992a). The second event was the 1990 Michigan Conference on Race and the Incidence of Environmental Hazards organized by Professor Bunyan Bryant and me and convened at the School of Natural Resources (now

the School for Environment and Sustainability) at the University of Michigan in January 1990 (Bryant and Mohai 1992b). This Conference, however, was also influenced by *Toxic Wastes and Race in the United States*.

In 1987, Professor Bryant, who was then an Associate Professor in the School of Natural Resources, attended a meeting of the Federation of Southern Cooperatives in Sumpter, Alabama. While there, he visited the largest of the four hazardous waste landfills included in the 1983 U.S. GAO study. At the time, this landfill received hazardous wastes from 48 states and three foreign countries (Bryant and Mohai 1992a). It was on this trip that Professor Bryant was given a copy of the just published report *Toxic Wastes and Race* by community activist Wendell Paris.

Coincidentally in 1987, I began an Assistant Professorship at the University of Michigan. At the time, I was working on an analysis of African American environmental attitudes from what was then (and still is) the largest national survey of American environmental attitudes ever conducted. The survey was conducted by Louis Harris, Inc., and consisted of over 7000 face-to-face interviews (Mohai 1990). Up to that point in time, very little had been written about the environmental concerns of African Americans, and no prior nationwide analysis of African American attitudes about the environment had yet been conducted.<sup>2</sup> Although I had at my disposal excellent national-level data, there existed very little published work for setting the context and developing hypotheses for the article I wanted to write.

However, when I arrived in 1987 at the School of Natural Resources I met Professor Bryant, the first African American environmental studies professor I came to know. I told him about the project I was working on and asked him if he could recommend to me articles I could use in developing the literature review for my paper. He pointed me to several papers and reports. Although I found them all useful, the one that stood out was *Toxic Wastes and Race in the United States*, which changed my life. Up until that point in time I believed that pollution and environmental contamination affected everyone in society *equally*. However, this report suggested that some groups in society were more affected by pollution and environmental contamination than others, an idea that was inconceivable to most

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<sup>2</sup> The publication "Black Environmentalism" (Mohai 1990) was the first to challenge with empirical evidence the conventional belief that African Americans are not as concerned about the environment as white Americans.

Americans at that time and vigorously challenged when it was first raised in the late 1980s and 1990s (see, for example, Anderton et al. 1994; Oakes et al. 1996; Foreman 1998).

Professor Bryant and I shared a keen interest in the UCC Report and the questions it raised. We began a collaboration involving three separate but related efforts. First, we conducted, to our knowledge, the first systematic review of earlier studies. We wanted to know whether other studies like *Toxic Wastes and Race* existed and whether the results pointed in the same direction. Specifically, did other studies exist that employed empirical data to analyze racial and socioeconomic disparities in the distribution of pollution, hazardous waste sites, and other environmental hazards? Furthermore, did these studies find the disparities to be significant? And is the racial composition of the communities a better predictor of the distribution of environmental burdens than the socioeconomic characteristics, as *Toxic Wastes and Race* found? This was a challenging task at the time as neither the internet nor a computerized cataloging system existed at the University of Michigan Library. I started my search with the list of references in *Toxic Wastes and Race* and eventually sought the help of information specialists at the University Library who were able to retrieve papers for me based on key words I gave them. Through this effort, I found about a dozen empirical studies overall, the results of which were very consistent with the findings of *Toxic Wastes and Race* (Mohai and Bryant 1992).

Interestingly, I found that the very earliest study to examine socioeconomic disparities in the distribution of environmental hazards was included as an Appendix in the 1971 Council on Environmental Quality Annual Report (U.S. CEQ 1971). However, the name of the author of the study was not given. I found out only later in 1990 when the “Michigan Coalition” met with U.S. Environmental Protection Agency Administrator William Reilly (see below) that he had been the author. I found that the earliest study to examine *both* racial and socioeconomic disparities in the distribution of environmental hazards was that published in 1972 by economist A.M. Freeman (1972). It was interesting to me that, despite these and other studies published in the 1970s and 1980s, the issue of environmental inequality had not yet gained prominence, underscoring the importance of the Warren County protests and a growing environmental justice movement.

In our second effort, Professor Bryant and I wanted to conduct an environmental justice analysis focused on our own backyard, namely the Detroit Metropolitan Area. We got our chance when our

proposal to survey the environmental attitudes of African American and white residents in the Detroit Metropolitan Area was selected for the 1990 Detroit Area Study (DAS) by the Department of Sociology at the University of Michigan. Because the DAS involved face-to-face interviews of respondents in their homes, we were able to determine the exact geographic locations of where they lived and merge this information with data pertaining to the locations of industrial facilities, hazardous waste landfills, and other hazardous sites (Mohai and Bryant 1992, 1998). To our knowledge, our study was the first to employ demographic information collected from individual-level survey data to assess the demographics around environmentally hazardous sites. Previous environmental justice analyses, including *Toxic Wastes and Race*, employed Census data. We found similar patterns of racial and socioeconomic disparities in the distribution of environmental hazards in the Detroit Metropolitan Area as did the earlier studies elsewhere that used Census data.

In our third effort, Professor Bryant and I decided we wanted to convene a national conference of scholars already working on and writing about environmental racism and justice to discuss their research and the implications of their work. We identified many of these scholars from the literature search we were conducting through the help of the information specialists at the University of Michigan Library. Two names that kept appearing frequently included Professor Robert D. Bullard and Professor Beverly Wright, who had written a number of publications on the topic of race and the environment already in the 1980s (see, for example, Bullard 1983, 1987; Bullard and Wright 1986, 1987). In fact, I found Professor Bullard had conducted a study of the demographics around solid waste sites in the City of Houston that preceded *Toxic Wastes and Race in the United States* (Bullard 1983). In that study he found that such sites were most likely to be located in predominantly African American neighborhoods and near African American schools. African American neighborhoods were the “dumping grounds” for the area’s wastes (Bullard 1983). The names “Bullard” and “Wright” kept appearing so frequently, I knew I would have to eventually call them to make certain I did not miss any of their publications and to get recommendations from them about other scholars working in this area. With each call we made, Professor Bryant and I would seek recommendations for additional names of scholars and our list of potential conference participants grew.

Professor Bryant and I recognized the enormous policy implications of this research and scholarship and thus also invited representatives of the U.S. Environmental Protection Agency and the Michigan Department of Natural Resources to be observers at our conference (Bryant and Mohai 1992a; 1992b). We titled our conference the



Figure 2. Participants at the 1990 Michigan Conference on Race and the Incidence of Environmental Hazards held January 1990 at the School of Natural Resources, University of Michigan. (Author's photo taken January 27, 1990.)



“Michigan Conference on Race and the Incidence of Environmental Hazards” and convened it in January 1990 on the University of Michigan campus. The researchers and scholars we invited were asked to write and submit an original paper for presentation and discussion. These papers, first published in the *Conference Proceedings* (Bryant and Mohai, 1990), were subsequently reviewed and published in 1992 by Westview Press under the title *Race and the Incidence of Environmental Hazards: A Time for Discourse* (Bryant and Mohai 1992a). It represented the second book-length analysis and discussion of the topic of environmental racism and justice published by an academic press, the first having been Professor Bullard’s highly acclaimed *Dumping in Dixie: Race, Class, and Environmental Quality*, which was already in the works before our Conference convened in January 1990 and published later that year (Bullard 1990).

Even before our book was published, the Conference led to an important and more immediate outcome. Conference participants decided to write a letter to U.S. EPA Administrator William Reilly requesting a meeting with him and his staff to discuss the outcomes of our Conference and what the Agency could do to address environmental racism and discrimination. U.S. EPA Administrator Reilly responded positively to our letter and invited representatives from our Conference to meet with him and his staff on September 13, 1990. Representatives from our Conference included (in alphabetical order) Bunyan Bryant, Robert Bullard, Benjamin Chavis, Michel Gelobter, David Hahn-Baker, Charles Lee, Paul Mohai, and Beverly Wright (Mohai 2008; see also Figure 5). The EPA dubbed our group the “Michigan Coalition” and met with us regularly over the next several years to discuss the evidence pertaining to environmental injustice and what the Agency could do. Although the number of representatives from environmental justice communities and academia grew considerably after the initial meeting with the EPA, Administrator Reilly, and later Administrator Carol Browner, continued to refer to the group meeting with him to discuss environmental justice policy as the “Michigan Coalition”. An important outcome from the first meeting with Administrator Reilly was his decision to create an internal EPA work group (the “Environmental Equity Work Group”) to 1) conduct an investigation of the evidence pertaining to racial and socioeconomic disparities in the distribution of environmental burdens and 2) develop recommendations for addressing and reducing such disparities. It was at this meeting that Administrator Reilly also

revealed that he had been the author of the 1971 Council on Environmental Quality study (see above) that examined socioeconomic disparities in the distribution of air pollution, and that this study inclined him to agree with the findings of the Michigan Coalition.

Figure 3. Letter from the Michigan Coalition to the Heads of Federal Environmental Agencies, March 9, 1990.

THE UNIVERSITY OF MICHIGAN  
**School of Natural Resources**

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March 9, 1990

Louis W. Sullivan, Secretary  
United States Department of Health and Human Services  
200 Independence Ave., S.W.  
Washington, D.C. 20201  
(202) 245-7000

William K. Reilly, Administrator  
United States Environmental Protection Agency  
401 M Street, S.W.  
Washington, D.C. 20460  
(202) 382-4700

Michael R. Deland, Chairman  
Council on Environmental Quality  
White House  
722 Jackson Place  
Washington, D.C. 20503  
(202)395-5080

Dear Secretary Sullivan, Administrator Reilly, and Chairman Deland:

This is an invitation to join in truly expanding the scope of environmental management in this country. Together we can bring about a far more comprehensive and tangible environmental agenda that enfranchises all Americans in the process of environmental protection.

The University of Michigan Conference on Race and the Incidence of Environmental Hazards recently concluded an intensive review of various aspects of the racial and socioeconomic incidence of environmental risk. The conferees in plenary session concluded that, in the past sixteen years, a wide variety of studies have suggested that minorities and the poor face a disproportionate impact from environmental problems. This literature clearly indicates that these groups are likely to be exposed to higher levels of pollution than their white or more affluent counterparts, and has demonstrated that the economic costs of pollution control are borne more heavily by minorities and the poor than by other groups.

We believe that federal agencies concerned with environmental protection (such as the Environmental Protection Agency, the Agency for Toxic Substances and Disease Registry, the National Institute for Environmental Health Sciences and others) can play a vital role in understanding and alleviating these inequities. To this end, we would like to initiate a constructive dialogue on the options available to government, academia, citizens and the private sector for enhancing environmental awareness and equity.

Some proposals we would like to discuss include:

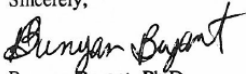
- undertaking research geared towards understanding environmental risks faced by minority and low-income communities;
- initiating projects to enhance risk communication targeted to minority and low-income population groups;

## MOHAI: FLINT WATER CRISIS

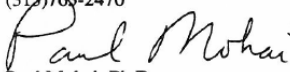
- requiring, on a demonstration basis, that racial and socioeconomic equity considerations be included in Regulatory Impact Assessments;
- insuring that a racial and socioeconomic dimension is overlaid on present and future geographic studies of environmental risk;
- enhancing the ability of Historically Black Colleges and Universities (HBCUs) and other minority institutions to participate in and contribute to the development of environmental equity;
- appointing special assistants for environmental equity at decision-making levels within your agencies
- developing a policy statement on environmental equity.

We stand ready to share our insights and expertise with your agencies. We are requesting a small meeting between yourselves and representatives from our conference to discuss ways of incorporating these concerns into our nation's environmental agenda. We will be calling your office within the next month to schedule a meeting.

Sincerely,



Bunyan Bryant, Ph.D.  
Conference Co-convenor, Associate Professor  
School of Natural Resources  
The University of Michigan  
(313)763-2470



Paul Mohai, Ph.D.  
Conference Co-convenor, Assistant Professor  
School of Natural Resources  
The University of Michigan  
(313)763-4598

Robert Bullard, Ph.D.  
Associate Professor  
Department of Sociology  
University of California at Riverside

Michel Gelobter  
Energy and Resources Program  
University of California at Berkeley

Charles Lee  
Director of Research  
United Church of Christ Commission for Racial  
Justice

Conner Bailey, Ph.D.  
Associate Professor  
Department of Agricultural Economics and Rural  
Sociology  
Auburn University

James Crowfoot, Ph.D.  
Dean, School of Natural Resources  
The University of Michigan

Henry Davis, Ph.D.  
Office of Minority Affairs  
The University of Michigan

Charles Griffith  
Director, Citizen Empowerment and Toxics  
Reduction Project  
The Ecology Center of Ann Arbor  
Ann Arbor, Michigan

Charles D. Moody, Sr., Ph.D.  
Vice Provost for Minority Affairs  
The University of Michigan

Ivette Perfecto, Ph.D.  
Assistant Professor  
School of Natural Resources  
The University of Michigan

Paul Robinson  
Southwest Research and Information Center  
Albuquerque, New Mexico

E. Wayne Say  
Program Representative  
School of Natural Resources  
The University of Michigan

Kwame Sarpong, Ph.D.  
Assistant Professor  
Center for Planning  
University of Massachusetts

Patrick West, Ph.D.  
Associate Professor  
School of Natural Resources  
The University of Michigan

Harvey White, Ph.D.  
Associate Professor  
Graduate School of Public and International Affairs  
University of Pittsburgh

Beverly Wright, Ph.D.  
Associate Professor  
Department of Sociology  
Wake Forest University

Miriam Zweizig  
School of Natural Resources  
The University of Michigan

PM,BB/sl

## MOHAI: FLINT WATER CRISIS

Figure 4. Letter of invitation from the U.S. Environmental Protection Agency to the Michigan Coalition to meet and discuss environmental justice policy with Administrator William Reilly.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON DC 20460

OFFICE OF COMMUNICATIONS  
AND PUBLIC AFFAIRS

Bunyan Bryant, Ph.D. and Paul Mohai, Ph.D.  
School of Natural Resources  
The University of Michigan  
Ann Arbor, Michigan 48109-1115

Dear Dr. Bryant and Dr. Mohai,

This letter is to confirm my telephone conversation with Dr. Bryant in which it was agreed that Administrator Reilly and senior staff people would meet with the Michigan Group for Environmental Equity on Thursday, September 13th.

As discussed, the meeting will take place from 2 p.m. to 4 p.m. in Room 1103 of the West Tower of EPA headquarters. The Administrator and Deputy Administrator will be present for the first hour. The second hour will be used for more in-depth discussion with program people.

We look forward to a productive dialogue on the issues you set out in your letter.

Sincerely yours,

A handwritten signature in cursive script that reads "Elaine M. Koerner".

Elaine M. Koerner  
Environmental Group Liaison

Figure 5. Letter from the Michigan Coalition to U.S. EPA Administrator William Reilly summarizing the outcomes of the September 13, 1990, meeting.

THE UNIVERSITY OF MICHIGAN  
**School of Natural Resources**

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October 3, 1990

William K. Reilly, Administrator  
U.S. Environmental Protection Agency  
401 M Street, S.W.  
Washington, D.C. 20460

Dear Administrator Reilly:

Please allow us to express our appreciation for your taking time out from your busy schedule to meet with us on September 13, 1990. We were pleased to learn that the U.S. Environmental Protection Agency had formed the Work Group on Risk Assessment in Minority Communities. We want to commend you and your staff for having the vision to embark upon such a project. We hope that you benefitted, as we did, from our frank discussion around the issues of race and environmental equity. Certainly, we wish to reiterate our willingness to assist the Environmental Protection Agency in addressing these issues.

We were extremely gratified to learn that you were in basic agreement with the basic intent of the proposals put forth in our letter of March 9, 1990, as expressed by the establishment of the work group and your presence at the September 13th meeting. We also are cognizant of the need for the agency to thoroughly review these proposals in order to develop mechanisms to address them in specific ways. The EPA no doubt has begun such a process with the above stated initiatives. We recognize that this is by no means an easy task and, in order to ensure their success, they must be done systematically.

For these reasons, we want to review the proposals in the March 9th letter as well as the understandings which emerged from our meeting, both when you were present personally and with your staff. The proposals in our letter were the following:

- undertaking research geared towards understanding environmental risks faced by minority and low-income communities;
- initiating projects to enhance risk communications targeted to minority and low-income population groups;
- requiring, on a demonstration basis, that racial and socioeconomic equity considerations be included in Regulatory Impact Statements;
- insuring that a racial and socioeconomic dimension is overlaid on present and future geographic studies of environmental risk;
- enhancing the ability of Historically Black Colleges and Universities (HBCUs) and other minority institutions to participate in and contribute to the development of environmental equity;

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Dana Building 430 E. University  
Ann Arbor, Michigan 48109-1115

## MOHAI: FLINT WATER CRISIS

*Administrator William K. Reilly/October 3, 1990*  
*Page 2*

- appointing special assistants for environmental equity at decision-making levels within your agency; and
- developing a policy statement on environmental equity.

It is our belief that your process would benefit greatly from a written response to these specific points. In addition, we want to stress our contention, as presented to you at our meeting, that the Environmental Protection Agency develop clear policy on environmental equity. We believe that such policy should be articulated in distinct policy statements which speak directly and exclusively to this issue. Such policy also should be reflected in all other relevant policy statements. We believe that the EPA at this point suffers from the perception of the general public, in many cases legitimately so, that it does not regard environmental equity as a priority concern. In addition, we put forward the belief that the agency would benefit greatly from an external advisory committee on issues of environmental equity.

Once again, we want to commend the Environmental Protection Agency for the steps that it has taken with regard to issues of environmental equity, and we look forward to working with you and your staff. Please note that future correspondence with our group should be directed to the following:

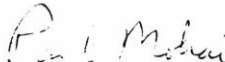
Mr. Charles Lee, Director of Research  
United Church of Christ Commission for Racial Justice  
475 Riverside Dr., Suite 1948, New York, NY 10115  
(212) 870-2077

Mr. Lee's office has agreed to coordinate communications for our group. We look forward to hearing from you soon.

Sincerely,



Bunyan Bryant, Ph.D.  
Conference Co-Convener  
Associate Professor  
School of Natural Resources  
University of Michigan



Paul Mohai, Ph.D.  
Conference Co-Convener  
Assistant Professor  
School of Natural Resources  
University of Michigan

Robert D. Bullard, Ph.D.  
Associate Professor  
Department of Sociology  
University of California at Riverside

Benjamin F. Chavis, Jr.  
Executive Director  
United Church of Christ  
Commission for Racial Justice

Michel Gelobter, Assistant Commissioner  
Department of Environmental Protection  
New York City

David Hahn-Baker  
Environmental Quality Coordinator  
National Wildlife Federation

Charles Lee  
Director of Research  
United Church of Christ  
Commission for Racial Justice

Beverly H. Wright, Ph.D.  
Associate Professor  
Department of Sociology  
Wake Forest University

The Environmental Equity Work Group completed its work in 1992, producing a report entitled *Environmental Equity: Reducing Risk for All Communities* (U.S. EPA 1992a). This report received considerable media attention; see, for example, articles in the *Washington Post* (Weisskopf 1992), *New York Times* (Cushman 1992), and the *Christian Science Monitor* (Knickerbocker 1992). It was also heavily criticized by environmental justice scholars and activists at the time because many did not believe the recommendations went far enough in achieving environmental justice (U.S. EPA 1992b). Despite this criticism, the 1992 EPA Report had two important outcomes: 1) it represented the first official acknowledgement by the U.S. EPA, and indeed by any major agency of the federal government, that environmental inequities existed and that the federal government needed to do something about them, and 2) like the Warren County protests, the 1983 U.S. GAO report, the 1987 UCC report, and the 1990 Michigan Conference before it, it continued a chain reaction of events leading to greater public awareness of environmental injustice as an important social problem, increased academic interest, and further government involvement.

For example, hearings on environmental justice were convened in the spring of 1993 for the first time before the House Subcommittee on Civil and Constitutional Rights of the Committee on the Judiciary (U.S. House of Representatives 1993). A number of environmental justice bills in Congress also began to be introduced as early as 1992, including those by U.S. Representative John Lewis and then Senator Al Gore. Although none were enacted into law, the U.S. EPA continued its efforts by creating an Office of Environmental Justice within EPA and a National Environmental Justice Advisory Council, both of which still exist today. These have provided a vehicle for focusing attention on environmental injustices around the U.S. and for debating and developing policy approaches and tools to achieve environmental justice.

Although no federal legislation has yet been enacted on environmental justice, in 1994 President Bill Clinton signed the Environmental Justice Executive Order 12898 calling on all the agencies of the federal government, not just the EPA, to consider environmental justice consequences in their rulemaking. Although not carrying the weight of a legislative act, Executive Order 12898 has served as guiding principle in environmental justice policy making at the federal level. It has also served as a framework for environmental justice pol-



## MOHAI: FLINT WATER CRISIS

icy in many states around the U.S., including Michigan. This Executive Order was and still is the high-water mark in Federal policymaking on environmental justice and is likely to remain so for some time, given the long history of unsuccessful attempts to pass environmental justice legislation in Congress.



Figure 6. Participants at the First National People of Color Environmental Leadership Summit held October 1991 in Washington, D.C., demonstrate on the steps of the U.S. Capitol. (Permission to use photo granted by Robert D. Bullard.)

In between the 1990 Michigan Conference and its Proceedings, Professor Bullard's 1990 book, and EPA's 1992 report was the convening of the historic First National People of Color Environmental Leadership Summit, the first and foremost outcome of which was the coalescing of a grassroots national environmental justice movement. The Summit was organized by the Commission for Racial Justice of the United Church of Christ and held in Washington, D.C., October 1991 (Bryant and Mohai 1992a, Lee 1992a, 1992b). The idea for such a Summit was discussed at the 1990 Michigan Conference (Bryant and Mohai 1992a). However, the impetus for the Summit came from grassroots leaders raising issues to the national environmental movement and Mr. Lee, then Director of Research for the Commission for

Racial Justice, wanting to make a statement about the depth, breadth, and history of heretofore unseen people of color leadership on the environment in places where we live, work, play and pray (Lee 1992b).

Professor Bryant and I were invited to serve on the Advisory Committee to this Summit. At the Summit, we heard firsthand the many accounts people gave about the environmental contamination in their communities and the concerns they had about health consequences. I was particularly struck by comments made, to the effect, that before coming to the Summit people thought the environmental problems facing their communities were happening just in their communities, but after hearing others tell their stories, people were realizing that what was happening in their communities was happening in people of color communities everywhere. These statements appeared to crystallize clearly the awareness in the room that environmental justice had indeed manifested into a full-blown national movement and that the attention the Summit was receiving would deliver added pressure on the U.S. EPA to take action.



Figure 7. President Clinton signs Environmental Justice Executive Order 12898, February 1994, Washington, D.C. (White House photo.)

ENVIRONMENTAL JUSTICE: ITS MEANINGS

A second important outcome of the 1991 Summit was the articulation of the 17 Principles of Environmental Justice by the delegates (Bryant and Mohai 1992a; Lee 1992b; Bullard, Mohai, Saha, and Wright 2007). These Principles conceive of environmental justice as a right and provide a fine-grained breakdown of its various components (see Table 1). Half of the 17 Principles explicitly incorporate the term “right” into them. For example, **Principle 1** states that: “1) Environmental Justice affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the *right* to be free from ecological destruction. **Principle 8** states that: “Environmental Justice affirms the *right* of all workers to a safe and healthy work environment without being forced to choose between an unsafe livelihood and unemployment. It also affirms the *right* of those who work at home to be free from environmental hazards.” **Principle 10** states: “Environmental Justice considers governmental acts of environmental injustice a violation of international law, the Universal Declaration on *Human Rights*, and the United Nations Convention on Genocide.” See also **Principles 3, 4, 5, 7, and 9** (Table 1; <http://www.ejnet.org/ej/principles.html>). Environmental *injustice* occurs when these rights and principles are violated. Together the 17 Principles of Environmental Justice define rather comprehensively what environmental justice means to the movement that spawned them.

Table 1. The 17 Principles of Environmental Justice

1) <b>Environmental Justice</b> affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction.
2) <b>Environmental Justice</b> demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias.
3) <b>Environmental Justice</b> mandates the right to ethical, balanced and responsible uses of land and renewable resources in the interest of a sustainable planet for humans and other living things.

- |   |
|---|
| 4) <b>Environmental Justice</b> calls for universal protection from nuclear testing, extraction, production and disposal of toxic/hazardous wastes and poisons and nuclear testing that threaten the fundamental right to clean air, land, water, and food                                    |
| 5) <b>Environmental Justice</b> affirms the fundamental right to political, economic, cultural and environmental self-determination of all peoples.   |
| 6) <b>Environmental Justice</b> demands 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.     |
| 7) <b>Environmental Justice</b> demands the right to participate as equal partners at every level of decision making, including needs assessment, planning, implementation, enforcement and evaluation.   |
| 8) <b>Environmental Justice</b> affirms the right of all workers to a safe and healthy work environment without being forced to choose between an unsafe livelihood and unemployment. It also affirms the right of those who work at home to be free from environmental hazards.              |
| 9) <b>Environmental Justice</b> protects the right of victims of environmental injustice to receive full compensation and reparations for damages as well as quality health care.   |
| 10) <b>Environmental Justice</b> considers governmental acts of environmental injustice a violation of international law, the Universal Declaration On Human Rights, and the United Nations Convention on Genocide.   |
| 11) <b>Environmental Justice</b> must recognize a special legal and natural relationship of Native Peoples to the U.S. government through treaties, agreements, compacts, and covenants affirming sovereignty and self-determination.   |
| 12) <b>Environmental Justice</b> affirms the need for urban and rural ecological policies to clean up and rebuild our cities and rural areas in balance with nature, honoring the cultural integrity of all our communities, and provided fair access for all to the full range of resources. |

13) <b>Environmental Justice</b> calls for the strict enforcement of principles of informed consent, and a halt to the testing of experimental reproductive and medical procedures and vaccinations on people of color.
14) <b>Environmental Justice</b> opposes the destructive operations of multi-national corporations.
15) <b>Environmental Justice</b> opposes military occupation, repression and exploitation of lands, peoples and cultures, and other life forms.
16) <b>Environmental Justice</b> calls for the education of present and future generations which emphasizes social and environmental issues, based on our experience and an appreciation of our diverse cultural perspectives.
17) <b>Environmental Justice</b> requires 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 ensure the health of the natural world for present and future generations.

### *Alternate Definitions of Environmental Justice*

Over time other definitions of environmental justice have emerged. However, one can typically see aspects of the 17 Principles embedded in them with emphasis placed on the concept of rights. For example, Professor Bullard uses a civil rights frame when he states: “Environmental justice embraces the principle that all people and communities are entitled to equal protection of our environmental, health, employment, education, housing, transportation, and civil rights laws” (Bullard 2005). The Asian Pacific Environmental Network (APEN) defines environmental justice similarly by stating it as: “The right to a decent, safe quality of life for people of all races, incomes and cultures in the environments where we live, work, play, learn and pray” ([http://archive.apen4ej.org/issues\\_what.htm](http://archive.apen4ej.org/issues_what.htm)). Boiling this down further one can say that: “Environmental justice is the right of everyone to a clean, healthy, and safe environment in which to live, work, learn,

play, and pray.” These definitions capture the essence of what environmental justice is and are easy to understand. In effect, they distill into a single sentence what is expressed in more detail in the 17 Principles of Environmental Justice.

### *The U.S. EPA’s Definition of Environmental Justice*

Although not as encompassing, the U.S. Environmental Protection Agency (EPA) has produced a working definition of environmental justice that is widely cited and often used as a basis for defining environmental justice in state environmental justice policies around the U.S., including in Michigan (see, for example, Executive Directive 2007 – 23; [https://www.michigan.gov/formergovernors/0,4584,7-212-57648\\_36898-180696--,00.html](https://www.michigan.gov/formergovernors/0,4584,7-212-57648_36898-180696--,00.html)). Specifically, the U.S. EPA states that:

“Environmental justice (EJ) is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies.

Fair treatment means no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies.

Meaningful involvement means: a) People have an opportunity to participate in decisions about activities that may affect their environment and/or health, b) The public's contribution can influence the regulatory agency's decision, c) Community concerns will be considered in the decision-making process, and d) Decision makers will seek out and facilitate the involvement of those potentially affected.” (<https://www.epa.gov/environmentaljustice/learn-about-environmental-justice>)

Although more limited, EPA’s definition is nevertheless consistent with the 17 Principles of Environmental Justice. For example, EPA’s definition of “fair treatment” affirms that there should be fairness in the distribution of environmental quality for all. This is consistent with **Principle 6** which states that: “Environmental Justice demands 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.” It is also consistent with **Principle 8**, which states that: “Environmental Justice affirms the right of *all* workers to a safe and healthy work environment without being forced to choose between an unsafe livelihood and unemployment. It also affirms the right of those who work at home to be free from environmental hazards.” And it is consistent with **Principle 12**, which states that: “Environmental Justice affirms the need for urban and rural ecological policies to clean up and rebuild our cities and rural areas in balance with nature, honoring the cultural integrity of *all* our communities, and provided fair access *for all* to the full range of resources.”

EPA’s definition of “meaningful involvement” affirms that those who would be affected by decisions impacting their neighborhoods and quality of life should be given a meaningful voice in those decisions. Similar to EPA’s definition of “fair treatment”, its definition of “meaningful involvement” is also consistent with the 17 Principles. For example, **Principle 2** states that: “Environmental Justice demands that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias.” **Principle 5** states that: “Environmental Justice affirms the fundamental right to political, economic, cultural and environmental self-determination of *all* peoples.” **Principle 7** states that: “Environmental Justice demands the right to participate as equal partners at every level of decision-making, including needs assessment, planning, implementation, enforcement and evaluation.”

An area where EPA’s definition of environmental justice falls short is its lack of mention of fairness in the distribution of environmental resources and amenities, such as access to clean air and clean water, food, resources, open space, parks, trees, areas safe from flooding, and others. In contrast, fairness in access to environmental resources and amenities are mentioned in the 17 Principles, such as in **Principle 1** (“right to be free from ecological destruction”), **Principle 4** (“right to clean air, land, water, and food”), **Principle 12** (“fair access for all to the full range of resources”), and others. EPA’s definition also does not explicitly address what is to be done when a harm has been created as does **Principle 9** of the 17 EJ Principles which states: “Environmental Justice protects the right of victims of environmental injustice to receive full compensation and reparations for damages as well as quality health care.”

*Kuehn's Taxonomy of Environmental Justice*

In 2000, Professor Robert Kuehn, former Director of the Environmental Law Clinic at Tulane University, conducted a comprehensive review of all the various terms and definitions used to describe the various aspects of environmental justice (or injustice). In addition to “environmental justice”, these terms included “environmental equity”, “environmental racism”, “environmental discrimination”, “environmental inequality”, and “environmental disparity” (Kuehn 2000). He attempted to understand nuances in the differences in these terms and definitions and boiled “environmental justice” down to four components. These include: 1) distributive justice, 2) procedural justice, 3) corrective justice, and 4) social justice.

**Distributive Justice:** Professor Kuehn defined distributive justice as “the right to equal treatment, that is, to the same distribution of goods and opportunities as anyone else has or is given” (Kuehn 2000: 10683). His definition of distributive justice is consistent with EPA’s notion of “fair treatment” and with **Principles 6, 8, and 12** of the 17 Principles of Environmental Justice.

**Procedural Justice:** Professor Kuehn defined procedural justice as: “... the right to treatment as an equal. That is the right, not to an equal distribution of some good or opportunity, but to equal concern and respect in the political decisions about how these goods and opportunities are to be distributed. ... It involves justice as a function of the manner in which a decision is made, and it requires a focus on the fairness of the decision-making process, rather than on its outcome.” (Kuehn 2000: 10688). His definition of “procedural justice” is consistent with EPA’s notion of “meaningful involvement” and with **Principles 2, 5, and 7** of the 17 Principle of Environmental Justice. Professor Kuehn’s idea of procedural justice focuses not only fairness in the decision-making process, but also on the *right* of those involved to *equal concern and respect*.

**Corrective Justice:** Professor Kuehn defined corrective justice as: “... fairness in the way punishments for law breaking are assigned and damages inflicted on individuals and communities are addressed. ... it attempts to restore the victim to the condition she was in before the unjust activity occurred. Corrective justice involves not only the just administration of punishment to those who break the law, but also a duty to repair the losses for which one is responsible” (Kuehn 2000; 10693). Although Professor Kuehn’s definition of corrective justice



is not inconsistent with EPA's notion of "fair treatment", it is nevertheless more clearly articulated and more closely aligned with **Principle 9** of the 17 Principles which states that: "Environmental Justice protects the right of victims of environmental injustice to receive full compensation and reparations for damages as well as quality health care."

**Social Justice:** Finally, Professor Kuehn defined social justice as "... that branch of the virtue of justice that moves us to use our best efforts to bring about a more just ordering of society—one in which people's needs are more fully met. The demands of social justice are . . . first, that the members of every class have enough resources and enough power to live as befits human beings, and second, that the privileged classes, whoever they are, be accountable to the wider society for the way they use their advantages" (Kuehn 2000: 10698). In effect, Professor Kuehn recognizes that environmental injustices are embedded in a larger social context where inequalities and injustices exist at many levels, including inequalities in access to housing, education, and employment opportunities, as well as inequalities in access to clean, healthy, and safe environments. These various forms of inequality and injustice are interconnected and addressing one form of injustice will not lead to a permanent solution until all the other forms are also addressed. He explains (Kuehn 2000: 10699):

"A social justice perspective presents environmental justice as part of larger problems of racial, social, and economic justice and helps illustrate the influence of politics, race, and class on an area's quality of life. ... Environmental justice's focus on social justice reflects reality. As one community organizer explained, oppressed people do not have compartmentalized problems—they do not separate the hazardous waste incinerator from the fact that their schools are underfunded, that they have no day care, no sidewalks or streetlights, or no jobs. The reason disadvantaged communities do not separate these problems is that their quality of life as a whole is suffering and the political, economic, and racial causes are likely interrelated."

Of the 17 EJ Principles, social justice is perhaps best captured by **Principle 5**: "Environmental Justice affirms the fundamental right to *political, economic, cultural and environmental* self-determination of all peoples."

*What is the role of race? What constitutes environmental racism?*

Reverend Benjamin Chavis, Executive Director of the Commission for Racial Justice at the time of the publication of *Toxic Wastes and Race in the United States* and a leader in the Warren County protests, has been credited for coining the term “environmental racism” (Lee 1992a). In *Toxic Wastes and Race in the United States*, he states that (UCC 1987; ix-x):

“Racism is racial prejudice plus power. Racism is the Intentional or unintentional use of power to isolate, separate and exploit others. This use of power is based on a belief in superior racial origin, identity or supposed racial characteristics. Racism confers certain privileges on and defends the dominant group, which in turn sustains and perpetuates racism. Both consciously and unconsciously, racism is enforced and maintained by the legal, cultural, religious, educational, economic, political, environmental and military institutions of societies. Racism is more than just a personal attitude; it is the institutionalized form of that attitude.”

Professor Robert Bullard has defined “environmental racism” as (Bullard 1993-94: 1037):

“... any policy, practice, or directive that differentially affects or disadvantages (whether intended or unintended) individuals, groups, or communities based on race or color.”

These definitions focus on the actions (use of power, policy, practice, directive) which lead to differential environmental outcomes (differential effects, exploitation of others), and specifically focus on the racial aspects of these outcomes.

That race plays a role in differential environmental outcomes has been supported by numerous empirical research studies over the past several decades. Specifically, these studies have demonstrated that the racial composition of communities is a statistically significant predictor of where environmental burdens are concentrated, even when controlling for other factors (see, for example, reviews by Mohai and Bryant 1992; Goldman 1994; Ringquist 2005). With the development and availability of Geographic Information Systems (GIS) and improved methods for conducting environmental inequality analyses, more recent studies have shown that racial and socioeconomic disparities in the distribution of environmental burdens are even greater than previously found (Bullard et al. 2007; Chakraborty et al.

2011; Collins et al. 2016; Mohai and Saha 2006, 2007, 2015b). Furthermore, these and subsequent empirical studies continue to demonstrate that racial and socioeconomic disparities in the distribution of environmental burdens exist, and when multivariate statistical methods are employed that control for confounding variables, race tends to remain a statistically significant independent predictor of the location of environmental hazards of a wide variety (Ash and Fetter 2005; Bullard, Mohai, Saha, and Wright 2007; Mohai, Lanz, Morenoff, House, and Mero 2009; Pais, Crowder, and Downey 2014; Zwickl, Ash, and Boyce 2014).

In addition to these statistical studies, over the years many in-depth case studies of specific environmental justice controversies have been conducted (see, for example, Bullard 1990; Bullard and Wright 2012; Cole and Foster 2001; Kemberling and Roberts 2009; Lee 1992a; Lerner 2012), such as those in New Orleans, LA, Chester, PA, Convent, LA, Dickson, TN, Kettleman City, CA, Port Arthur, TX, Ocala, FL, Warren County, NC, and others. See also the EnvJustice Project's worldwide Atlas of Environmental Justice Conflicts (<https://ejatlas.org/country/united-states-of-america>), which identifies the "40 Most Influential Environmental Justice Conflicts in U.S. History" as determined from a 2014 survey of environmental justice leaders in the U.S. (Grafton et al. 2015; Temper et al. 2015). Typically, these case studies find that the residents of impacted communities are predominantly people of color and poor.

Why does race tend to play such an important role in environmental justice controversies? It is believed by many researchers and scholars that people of color communities are targeted for hazardous waste sites, polluting industrial facilities, and other locally unwanted land uses (LULUs) because they lack the resources and political clout to fend off the siting of such facilities. They are often seen as the "paths of least resistance" by industry and government (Bullard and Wright 2012; Mohai and Saha 2015a; Pastor, Sadd, and Hipp 2001; Taylor 2014). At the same time, when their communities are found to be contaminated with unacceptable levels of pollution and toxins, low priority is given to addressing their concerns (Bryant and Mohai 1992a; Bullard and Wright 2012; Lerner 2012). In addition, because of past zoning decisions that turned African American and other people of color neighborhoods into mixed and industrial zoned areas, their communities have become the places where new industrial facility sitings are made, adding to the pollution burdens (Cole and Foster, 2001; Taylor 2014). Housing policies that have resulted in the

segregation of the races have made it further difficult for people of color to move from communities that have become burdened by environmental pollution (Mohai, Pellow, and Roberts 2009).

## THE FLINT WATER CRISIS

The poisoning of Flint's water supply has received wide national and international attention. It is not only an example of environmental injustice but perhaps the nation's most egregious, bringing us to a critical crossroads in our nation's history. Much has been written about the Flint Water Crisis in the past several years. I begin by reviewing some of the key events leading to and impacting the Crisis. I then explain how and why the Flint Water Crisis reflects the various meanings and dimensions of environmental injustice and why environmental justice in the U.S. is at a critical moment. For understanding what happened in Flint, some excellent sources of information include a) the Flint Water Advisory Task Force *Final Report* (2016), b) the Michigan Civil Rights Commission's (2017) report *The Flint Water Crisis: Systemic Racism through the Lens of Flint*, c) the University of Michigan School of Public Health report *Learning from the Flint Water Crisis* (Jacobson et al. 2018), d) the Michigan ACLU's documentary *Here's to Flint* (Michigan ACLU 2016), e) the documentary by Dr. Cedric Taylor *Nor Any Drop to Drink* (Taylor 2018), f) the book by Dr. Mona Hanna-Attisha *What the Eyes Don't See* (Hanna-Attisha 2018), and g) the book by Anna Clark *The Poisoned City* (Clark 2018).

The Flint Water Advisory Task Force (2016) provides a detailed timeline of key events. In examining this timeline, there is perhaps no single decision responsible for the catastrophe but rather a collection of disastrous decisions, mostly by State officials, and at a time when local democracy in Flint had been suspended by Public Act 436, the Emergency Manager Law. Public Act 436 allows the Governor to appoint Emergency Managers to financially stressed cities and gives them near absolute decision-making authority, including overriding decisions made by the Mayor, City Council, and School Board. Emergency Managers are non-elected officials accountable only to the Governor.

One of the critical decisions leading to the Water Crisis was made in April 2013 when an Emergency Manager approved the switch of Flint's water supply from the Detroit water system to a new pipeline

## MOHAI: FLINT WATER CRISIS

being constructed by the Karegnondi Water Authority (KWA) as a cost cutting measure. Initially, the plan was to switch off from the Detroit water system once the KWA pipeline was completed. However, the KWA pipeline was not expected to be completed until several years later (into 2016) and so as a further cost-cutting measure, the Emergency Manager decided in June 2013 to switch Flint's water supply to the Flint River in the interim.

Switching to the Flint River required using the Flint Water Treatment Plant (see Figure 8), but the Flint Water Advisory Task Force Report noted that the plant did not have the capacity to treat the Flint River water and was never sufficiently upgraded to adequate capacity. To make matters worse, the Michigan Department of Environmental Quality (MDEQ) failed to require optimized corrosion control in the treatment of the water, a critical failure "in contradiction to long standing federal policy" (Flint Water Advisory Task Force 2016:27). The Flint Water Advisory Task Force (2016: 52) concluded in fact that: "There was and remains no justification for MDEQ not requiring corrosion control treatment for the switch of water source to the Flint River." It was the lack of optimized corrosion control that resulted in the corrosion of water service lines and interior lead-based plumbing (solder, fixtures, faucets) in Flint, which in turn resulted in the leaching of lead and other contaminants into residents' water.



Figure 8. Flint Water Plant. (Photo taken by Ryan Garza. Permission to use photo granted by *Detroit Free Press*.)

When the switch was made to the Flint River in April 2014, residents noticed the change in water quality almost immediately. The water was discolored and had an odor and people began to complain about skin rashes and hair loss that they suspected were linked to the water. Later, concerns about lead poisoning emerged. Although not made public until January 2016, concerns about a Legionnaires' disease outbreak linked to the water were discussed internally among several public agencies in 2014 and 2015. The response by State officials was nevertheless to publicly dismiss these concerns and issue what turned out to be false assurances to the residents. As the 2016 Michigan ACLU documentary *Here's to Flint* shows, often times residents complaining about their water were treated disrespectfully. There is a scene in the documentary where a State official addresses a group of Flint protestors at the State Capitol with apparent mocking contempt as "YEEEOU PEOPLE". Flint resident, LeeAnne Walters, who first brought the contaminated water to the attention of public officials stated she was called a "liar" and "stupid".

Ironically, amid the public denials of water quality problems in Flint and unbeknownst to most residents, the State began in January 2015 to install coolers with purified water in State office buildings in the City and provide bottled water to its employees and visitors (Egan 2016; Flint Water Advisory Task Force 2016). This distribution began well before and continued well after the State's official acknowledgement of Flint's water contamination problem in October 2015 and, indeed, did not come to light until State government emails were released in January 2016 (Egan 2016).

In addition to the State's concern for its employees, General Motors was concerned that the Flint River water was even too corrosive for the auto parts in its Flint Engine Operations facility and decided in October 2014 to switch off of the City water system to the Township system, which was getting its water from Lake Huron (Flint Water Advisory Task Force 2016). However, General Motors' concerns and decision to switch off from the Flint River water, which unlike the State's action was known to the public, was still not enough to sway the State-appointed Emergency Manager to allow the City to do the same. In March 2015, the Flint City Council voted 7-1 to switch off from the Flint River water and return to the Detroit system, but a new State-appointed Emergency Manager again refused, citing financial concerns. Even when activists engaged in citizen science with water quality expert Dr. Marc Edwards at Virginia Tech and collected

## MOHAI: FLINT WATER CRISIS

and documented evidence of systemic lead contamination of residents' water (Edwards and Roy 2015), and even when elevated blood-lead levels of Flint's children were documented by pediatrician Dr. Mona Hanna-Attisha at Hurley Medical Center (Hanna-Attisha et al. 2016), the initial response by State officials was to dismiss their findings. It was not until October 16, 2015, a year and a half after the water switch was made and only after *Detroit Free Press* investigators found the State's own data confirmed Dr. Hanna-Attisha's findings, that the State finally acknowledged the water problems in Flint (Tanner and Kaffer 2015; Hanna-Attisha 2018). Even then, however, attempts by the State to fix and remedy the problems caused by the Water Crisis have been piecemeal and incomplete and indeed, at the time of this writing, the problems have yet to be resolved.



Figure 9. Flint mother LeeAnne Walters. (Photo taken by Ryan Garza. (Permission to use photo granted by *Detroit Free Press*.)

It was not until January 2016, and only after the Genesee County Health Department had already declared a Public Health Emergency and later Flint Mayor Karen Weaver and the County Commission declared States of Emergency, that the Governor declared a State of Emergency in Flint and that the State began distributing bottled water and filters to the residents (Flint Water Advisory Task Force 2016).

However, the distribution of free bottled water was ended in April 2018, despite the fact that only about a third of the City's affected service lines had been replaced and despite the City's and residents' continued concerns about their water quality and distrust in the decisions of State officials (Barrett 2018; Fortin 2018). In addition, throughout most of the Crisis residents continued to be charged for the tainted water (Clark 2018). At the time of this writing it furthermore remains unclear what the State's long-range plans are for providing health care and compensation to the victims in Flint.

In 2017, the Michigan State Attorney General indicted 15 government officials for their role in the Flint Water Crisis (Egan 2017). Twelve were State officials (including two of the State-appointed Emergency Managers to Flint) and three City officials. The charges ranged from willful neglect and misconduct in office to involuntary manslaughter (due to the deaths caused by *Legionella*).

### *Is the Flint Water Crisis a Case of Environmental Injustice?*

The Flint Water Advisory Task Force concluded that (2016: 54): "The facts of the Flint water crisis lead us to the inescapable conclusion that this is a case of environmental injustice. Flint residents, who are majority Black or African American and among the most impoverished of any metropolitan area in the United States, did not enjoy the same degree of protection from environmental and health hazards as that provided to other communities. Moreover, by virtue of their being subject to emergency management, Flint residents were not provided equal access to, and meaningful involvement in, the government decision-making process." Indeed, the Flint Water Crisis is an *extraordinary* example of environmental injustice affecting an entire city of 100,000 residents and reflecting all the dimensions of injustice discussed above.

**Distributive Justice:** Flint is a "majority minority" city. According to the U.S. Census, the City's African American percentage of 54.3% is almost four times greater than the State's 14.1 % (<https://www.census.gov/quickfacts/MI>). Furthermore, its poverty rate of 41.9% is almost triple the State's 15.0%. The concentration and overrepresentation of poor people and people of color in a space that also suffers from environmental contamination is a classic characteristic of a community suffering from environmental injustice. Furthermore, that Flint residents' concerns were dismissed and that



the government was slow to respond, even when it finally acknowledged the problem, is also a classic pattern that communities suffering from environmental injustices face.

Environmental justice researcher and scholar, Steve Lerner, has referred to such communities as “sacrifice zones”, underscoring the low priority given to the environmental and health concerns of low-income and people of color communities by those in positions of power (Lerner 2012). In many respects, the Flint Water Crisis goes beyond the “sacrifice zones” label that Professor Lerner used to describe the 10 communities he studied, in that the State government was not only slow to respond to the crisis, but State decision makers were largely responsible for the crisis in the first place (Flint Water Advisory Task Force 2016).

**Procedural Justice:** Procedural justice means that residents are given a meaningful voice in the decisions that affect their communities and their lives. Most communities around the country are given the opportunity to vote for local officials to make decisions for the community on their behalf. These officials live in the community and are accountable to those who elected them. Perhaps the single most important violation of the principle of procedural justice in the case of the Flint Water Crisis was the imposition of the Emergency Managers. In its report on the Flint Water Crisis, the Michigan Civil Rights Commission (2017: 100) concluded that “the [Emergency Manager] law functionally denied any semblance of the meaningful involvement required to meet the definition of procedural justice”. Furthermore, Emergency Managers have affected mostly African Americans in the State. Lee et al. (2016) found that of all Michigan residents who have lived under Emergency Management between 2008 and 2013, 71% have been African Americans. This is at the same time that African Americans make up only 14% of the State population.

Flint’s Emergency Managers were not elected by the community, were not accountable to the community, and did not live in the community. Yet an Emergency Manager made the decision to switch the drinking water supply from the Detroit water system to the corrosive and insufficiently treated Flint River water (Flint Water Crisis Task 2016). Even after residents complained about the quality of the water and expressed concerns about possible health impacts, even after General Motors discontinued using the water because of damage to its auto parts, and even when the evidence mounted that water quality had been impacted and that the water was linked to elevated blood-

lead levels in Flint's children, the presiding Emergency Manager refused to switch back to the Detroit system. Of course, by the time the switch back was made in October 2015, the damage was done. The lack of local democratic representation, the ignoring of resident complaints, the discounting of the scientific evidence, the disrespectful treatment of the residents concerned about the water quality and health impacts are all evidence that the principle of procedural justice in Flint was violated.

**Corrective Justice:** To achieve corrective justice, it would be important to repair the harms experienced by the residents of Flint and to compensate them for their losses. These include the harms to the lead-poisoned children and families, to those who have died or were sickened by Legionnaires' disease due to the contaminated water, and to others whose health and lives have been impacted. It would also be important to restore the property (plumbing, water heaters, washing machines, dish washers and other household items) or compensate those whose property has been damaged and whose housing and property values have been negatively affected by the contaminated water. Detailed plans with timelines for repairing these damages remain unspecified, as are the necessary sources of funding for the reparations. Even with such plans, there is the question of whether residents will ever be adequately compensated for the psychological trauma they have endured and continue to endure throughout the crisis and whether their trust in government can ever be restored (Barrett 2018).

In addition to the above, corrective justice means that upon finding out about the harm, *prompt* action is taken to abate further harm. Indeed, the slow response by government and knowing failure to address the ongoing harms is one of the most egregious aspects of the Flint Water Crisis.

**Social Justice:** The social justice perspective recognizes that environmental injustices are embedded in a larger social context where inequalities and injustices exist at many levels and are interconnected. As Professor Kuehn (2000: 10699) explained, "oppressed people do not have compartmentalized problems—they do not separate the hazardous waste incinerator from the fact that their schools are underfunded, that they have no day care, no sidewalks or streetlights, or no jobs." This interconnectedness was also recognized by the Michigan Civil Rights Commission in their analysis of the causes of the Flint Water Crisis (MCRC 2017: 10):

“... discussions around housing, employment, tax base and regionalization are interconnected. They share some causes and effects, and each continues to play a part in creating municipal distress.”

That the number, variety, and interconnectedness of the sources of injustice are recognized, yet not acted on, highlights the degree to which cities such as Flint are neglected by those in decision-making positions.

How then is social justice to be achieved? Professor Kuehn states that social justice demands “first, that the members of every class have enough resources and enough power to live as befits human beings, and second, that the privileged classes, whoever they are, be accountable to the wider society for the way they use their advantages” (Kuehn 2000: 10698). That the people of Flint have been deprived of the resources and power they need “to live as befits human beings” and that those in power eluded “accountability for the way they use[d] their advantages” have been well-documented by the Flint Water Advisory Task Force (2016) and the Michigan Civil Rights Commission (2017). Both advisory groups provide recommendations in their reports that represent steps in the right direction. It remains to be seen, however, how seriously these recommendations will be taken up by public officials and what impacts these ultimately will have.

*Is the Flint Water Crisis an Environmental Justice Issue Involving Race?*

I was asked by the Michigan Civil Rights Commission (MCRC) at its hearings held in Flint in September 2016 whether and how the Flint Water Crisis is an example of environmental *racism* (MCRC 2017; Mohai 2016). I responded that I doubted we would find anyone confessing that there was an *intent* to do harm in Flint because of the presence of a large number of poor people and African American residents. What stands out in the Flint water crisis, however, is the apparent *indifference* and *lack of concern* that harm might be created. And even after the harm was created and finally acknowledged, there has been an apparent lack of sense of urgency to fix the problem.

The racial and socioeconomic characteristics of the City are unmistakable. Are these characteristics then the key to understanding the apparent lack of concern for Flint and the weak response to the Water Crisis by public officials? Indeed, a lack of concern appeared to be expressed in an email by one EPA Region 5 official who stated:

"I'm not so sure Flint is the community we want to go out on a limb for" (Flint Water Advisory Task Force 2016; Appendix V, page 18). To what extent have other officials who played a role in the Flint Water Crisis held similar attitudes? And which are the communities that *do* warrant going out on a limb for? What are *their* characteristics?

What we have seen in Flint is a part of a larger pattern seen elsewhere in Michigan and the U.S. where certain communities are disproportionately burdened by environmental contamination and health risks. These places, like Flint, tend to be where poor people and people of color are concentrated (Bullard et al. 2007; Cole and Foster 2001; Lerner 2012; Mohai and Bryant 1992; Saha and Mohai 2005). They are also places where residents are not given meaningful say in the decisions that affect their communities and quality of life, where their concerns about pollution and the health impacts are minimized, discounted, or dismissed, and where residents are treated disrespectfully and shown they have little influence or clout. Flint follows these patterns. In Flint local democracy was suspended by the State and cost-cutting and austerity were placed ahead of public health and safety.

## CONCLUSIONS

The Flint Water Crisis is a defining moment for the nation. It has brought environmental justice to the American public in a most dramatic way. Prior to Flint, environmental justice was a conversation among a relatively small group of people compared to the population as a whole. Flint has made environmental justice a part of American consciousness. Given the magnitude of the disaster in Flint, the role that public officials' decisions played that led to the poisoning of the city's water, their slow pace at acknowledging and responding to the problem, and the fact that Flint is a city of almost 100,000 people, indeed makes this the most egregious example of environmental injustice and racism in my over three decades of studying this issue.

Furthermore, the problems in Flint have yet to be resolved (Barrett 2018; Redlener 2018). A fear I have is that the longer they remain unresolved, the more likely what has happened in Flint will become a precedent and model for how similar catastrophes are handled by State and Federal governments in the future. The Flint Water Crisis and its aftermath should serve as a wakeup call for us all.

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