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CHEMICAL & ENGINEERING NEWS

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In brief

For all the hardships it delivered, 2020 may be remembered as an awakening for America.

The outpouring of protest under the banner of Black Lives Matter this summer fostered a discussion of systemic racism that touches on all aspects of economic and social life. Environmental racism, characterized by the disproportionate impact of pollution on people of color, came to the fore as another reason for the cry of “I can’t breathe.” And a nearly 40-year-old civil rights movement for environmental justice found new momentum. But life for people at the industrial fenceline, as evidenced by three communities profiled in this article, continues to be a constant battle.



Members of the Coalition Against Death Alley and their supporters marched by chemical plants in Geismar, Louisiana, on day three of a 5-day march through Louisiana’s “Cancer Alley” between New Orleans and Baton Rouge.

The rise of environmental justice

In the midst of a pandemic and an uprising for racial equity, advocates for communities of color near industrial facilities seize the moment

RICK MULLIN, C&EN STAFF, WITH DATA ANALYSIS BY CHERYL HOGUE

The killing of George Floyd by police in Minneapolis turned an already fraught year on its head. A news cycle stuck for months on the COVID-19 pandemic went split screen with coverage of a second crisis as protesters across the country took to the streets under the banner of Black Lives Matter.

The 8 minute and 46 second incident on Memorial Day weekend was one of many similar killings in recent years, but it was catalytic, perhaps because of the starkness of the image—that of a police officer, Derek Michael Chauvin, with his knee on the neck of a Black man lying face down in the city street saying “I can’t breathe.”

Floyd’s dying words were also those of Eric Garner, similarly victimized by police in New York City in 2014. Since then, “I can’t breathe” has emerged as a rallying cry during protests against racist police brutality.

But those words can be seen in a broader context. “‘I can’t breathe’ predates the United States of America,” says Michele Roberts, a Black woman who is the national co-coordinator for the Environmental Justice Health Alliance for Chemical Policy Reform. “For us, it came when the first person came from the shores and was shackled to the bottom of that ship.”

For many people of color, the killing of Floyd in the middle of the COVID-19 pandemic put the spotlight on systemic racism—a continuum of slavery, Jim Crow, and segregation that impacts every aspect of life in America today. According to Roberts and other community advocates, “I can’t breathe” makes direct reference to environmental racism—the pollution burden borne by people in communities of color living near



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Robert D. Bullard, regarded as the father of environmental justice, cochairs the recently revitalized National Black Environmental Justice Network.

industry, toxic waste landfills, highway infrastructure, and other sources of extreme pollution.

“We are talking about what we breathe,” says Robert D. Bullard, a professor at Texas Southern University who is widely recognized as the father of the environmental-justice movement.

The disproportionate pollution burden these communities experience has been the focus of that advocacy movement since it formed in the decade following President Richard M. Nixon’s establishment of the Environmental Protection Agency 50 years ago. However, its message, often overpowered by mainstream environmentalist organizations focused on climate change, has not registered clearly with the public at large. And for the past 3 years it has endured a reversal of core protections under the administration of President Donald J. Trump.

The shocks of COVID-19 and the killing of Floyd are now shattering public complacency and creating an opening for the movement. “Environmental justice and environmental racism just happen to be in one of the many splintered threads that came from the busting of that glass,” Roberts says. And while no graphic video is propelling environmental racism into public view, both scholarly publications and real-world events in the past 18 months indicate heightened awareness and a chance for progress.

A recent article in the *Proceedings of the National Academy of Sciences of the United States of America* put the impact of pollution on communities of color into a full

racial-equity framework (2020, DOI: 10.1073/pnas.1818859116). On average, the study found that non-Hispanic white people experience a “pollution advantage” of 17% less air pollution exposure than is caused by the goods and services they consume. In contrast, Blacks and Hispanics bear a “pollution burden” of 56% and 63% excess exposure, respectively, relative to the pollution caused by their consumption.

In April, the Harvard T.H. Chan School of Public Health published statistics linking air pollution to higher COVID-19 death rates. Looking at 3,000 counties, the preprint, currently in peer review, found that someone who lives for decades in a county with high levels of fine particulate pollution is 8% more likely to die from

COVID-19 than someone who lives in a region that has just one unit (1 ug/m³) less of such pollution (medRxiv 2020, DOI: 10.1101/2020.04.05.20054502).

These findings follow a 2017 report by the National Association for the Advancement of Colored People (NAACP) and the Clean Air Task Force finding that African Americans are exposed to 38% more air pollution than white people and are 75% more likely to live near toxic pollution than the rest of the American population.

The impact of COVID-19 on communi-

“It took George Floyd a few minutes to die. His life was shortened faster than ours. Ours is shortening slowly but surely.”

—Sharon Lavigne, founder, RISE St. James

ties of color has triggered a revitalization of the National Black Environmental Justice Network, an organization launched in 1999 that had gone dormant following the death of its cofounder and original executive director, Damu Smith, in 2006.

“Today we are not only dealing with environmental threats and pollution, but also the economic stress caused by the coronavirus,” says Bullard, who cochairs the network. The virus has proven especially deadly in communities where long-term exposure to pollution has compromised health, contributing to high rates of asthma and heart disease, he notes.

This year has also seen the emergence of a climate-policy platform crafted by 12 environmental-justice groups and four prominent national environmental organizations in an effort to foster a détente between two camps that have operated at odds for decades. Bullard is a signatory to the platform, called the Equitable and Just National Climate Platform.

The effects of decades of pollution burden will be difficult to reverse, but some environmental-justice leaders see signs that a corner was turned in the weeks of protests that followed the killing of Floyd.

“As my 85-year-old father would say,” says Roberts, a biologist by training, “the pot will boil till the lid busts off.”

St. James Parish, Louisiana

Earlier this year, residents of St. James Parish, Louisiana, wanted to hold a June-teenth ceremony at a grave site of formerly enslaved people on land where Formosa Plastics Group plans to build a \$9.4 billion petrochemical plant. Formosa turned down their request.

“We recognize the sincerity of this request and the importance of acknowledging this historical and meaningful day for the African-American community, however FG must respectfully decline the site access request primarily due to safety concerns on an active construction site,” Janile Parks, director of community and government relations for FG LA LLC, the subsidiary of Formosa that is building the plant, responded in a statement.

The statement went on: “It is important to note that despite assumptions that have been made about ancestral ties to the burial site, no archaeologist has been able to confirm the identity or ethnicity of the remains discovered on FG property.”

That was all Sharon Lavigne, a lifelong resident of the community, had to hear. Given that the plant is being built on a former plantation and that freed slaves settled St. James after the Civil War, the

ST. JAMES PARISH, LOUISIANA

Residents of two adjacent census tracts, one encompassing the towns of Convent and Uncle Sam and the other covering the town of St. James, are predominantly Black. These areas are home to industries that emit 85% of reported air pollution in St. James Parish, according to the federal Toxics Release Inventory.

Towns of Convent and Uncle Sam

Population:
2,173

Median household income:
\$52,292
versus Louisiana's
\$47,942

Race and ethnicity:
61% Black
38% White
1% Other

Town of St. James

Population:
2,372

Median household income:
\$30,404
versus Louisiana's
\$47,942

Race and ethnicity:
91% Black
6% White
2% Two or more races
1% Hispanic

Shell Convent Refinery

Annual air emissions: 129,491 kg
Risk score: 116,800, compared with refining industry median of 8,871 for all toxic releases
Chemicals contributing most to risk score: Cobalt and cobalt compounds (possible carcinogens)

Occidental Chemical

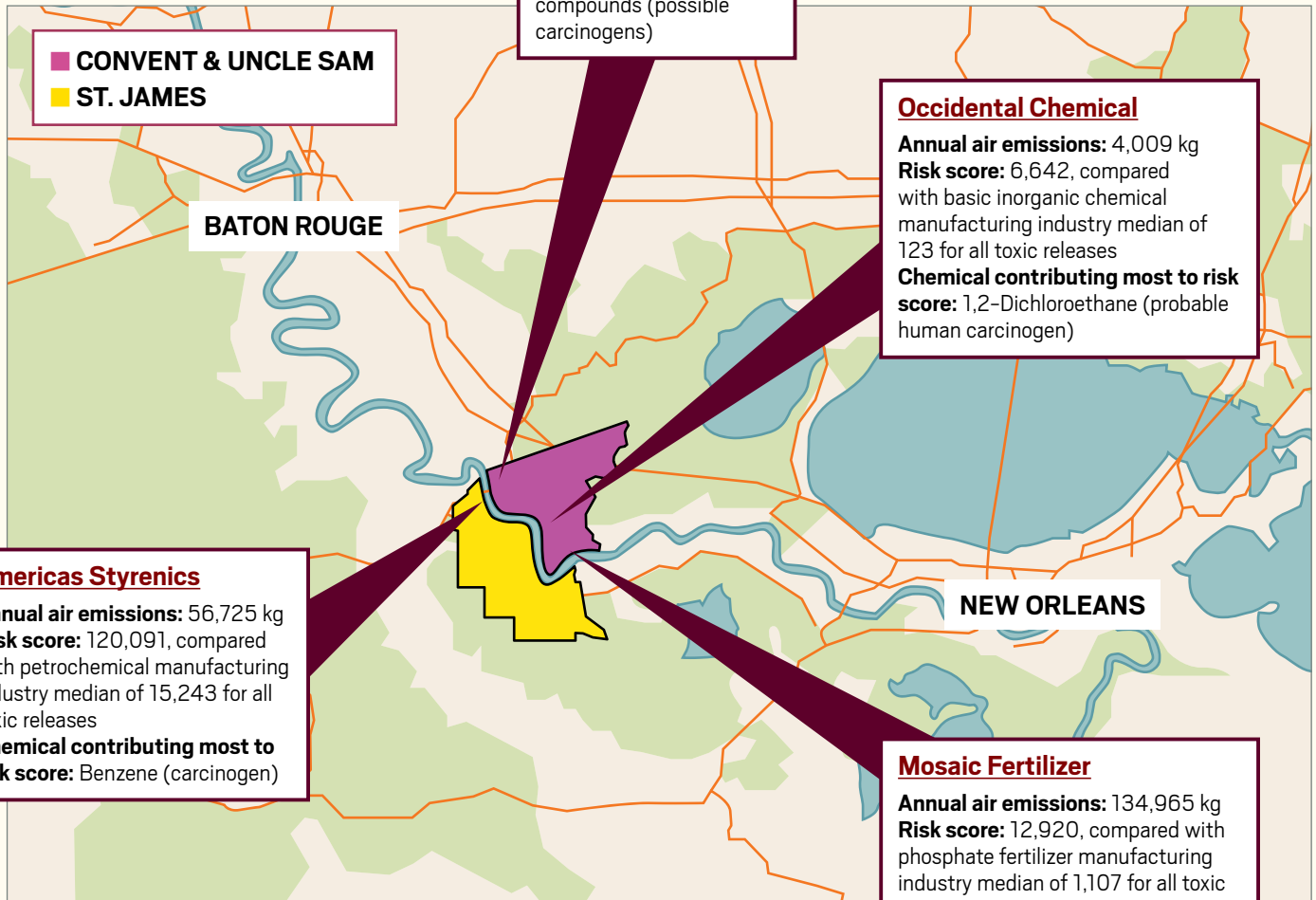
Annual air emissions: 4,009 kg
Risk score: 6,642, compared with basic inorganic chemical manufacturing industry median of 123 for all toxic releases
Chemical contributing most to risk score: 1,2-Dichloroethane (probable human carcinogen)

Americas Styrenics

Annual air emissions: 56,725 kg
Risk score: 120,091, compared with petrochemical manufacturing industry median of 15,243 for all toxic releases
Chemical contributing most to risk score: Benzene (carcinogen)

Mosaic Fertilizer

Annual air emissions: 134,965 kg
Risk score: 12,920, compared with phosphate fertilizer manufacturing industry median of 1,107 for all toxic releases
Chemical contributing most to risk score: Sulfuric acid (respiratory and eye irritant)



Sources: US Census Bureau via censusreporter.org, 2018 data; Environmental Protection Agency Toxics Release Inventory, 2018 data; and EPA Risk-Screening Environmental Indicators, 2018 data for individual facilities and 2017 data for industry medians. **Note:** The risk scores—formally called Risk-Screening Environmental Indicators (RSEI)—are calculated by an Environmental Protection Agency model that includes amounts of toxic chemicals released, substances' transport through the environment, each compound's relative toxicity, and potential human exposure. Data are shown for facilities with RSEI scores of at least 1,000 in 2018.



Sharon Lavigne of RISE St. James (speaking) and Father Vincent Dufresne of St. Michael the Archangel Catholic Church in Convent, Louisiana, led a Juneteenth ceremony on the site of Formosa’s planned plastics plant in St. James Parish.

assumption that the graves were those of slaves seemed safe, says Lavigne, who retired as a special education teacher in 2018 to form a community group opposed to the project. The group, RISE St. James, prevailed in a suit filed against Formosa in time for the community to hold the ceremony as planned on the June 19 holiday, the oldest nationally celebrated commemoration of the ending of slavery in the US, dating back to 1865.

RISE St. James has doggedly opposed the Formosa plant, filing a number of lawsuits in league with both local and out-of-state environmental groups, including the Louisiana Bucket Brigade and the Center for Biological Diversity, based in Tucson, Arizona. Lavigne’s group is the latest to rally local residents against industrial expansion in a community in the middle of Louisiana’s “Cancer Alley,” which stretches along the Mississippi River between New Orleans and Baton Rouge. Today, RISE St. James is the most active and, with protests featuring members in matching yellow T-shirts, the most visible opponent to Formosa.

“My whole life changed because of Formosa,” Lavigne says. “I would have been still teaching school if Formosa hadn’t decided to come into St. James. They are talking about putting this plant 2 miles from where I live? I’m not going to sit back and let that happen.”

The plant, for which Formosa acquired 2,400 acres of land in 2018, will cover an

expanse of river shore that can still be described as bucolic. It is expected to at least double pollution in St. James Parish, according to an analysis by the journalism nonprofit ProPublica. Neighbors told Lavigne they were hoping for a buyout from the industrial giant. But she was uncertain whether she should try to sell her home. “That’s when I spoke to God,” Lavigne recalls, “and He told me what to do.”

Lavigne, who was involved in earlier efforts against industrial projects, says many community leaders had become fatalistic in the face of a project moving through the permitting process in a state as friendly to industry as Louisiana. She made it clear that she was going to challenge Formosa.

Ten people showed up at her first meeting, she recalls. “The next time I had a meeting, I had 20 people in my garage,” including representatives from the NAACP in Baton Rouge who have helped her organize. “It took off like wildfire.” The group currently has 35 members, all local residents.

The COVID-19 pandemic has raised the level of urgency, Lavigne says, noting that a community with underlying health issues is highly vulnerable. “We have people over here dying. One died the other day of COVID. When it first started, we had a preacher that died. He thought he had the flu.”

She says RISE St. James members caught Formosa workers on the site the day after Governor John Bel Edwards issued a stay-at-home order in response to the pandemic.

“I busted them on that,” Lavigne says, explaining that she live-streamed the activity and notified the local Parish Council. The council stopped the work.

Earlier this year, RISE St. James was party to a federal suit accusing the US Army Corps of Engineers of failing to disclose the environmental damage and public health risks of the petrochemical facility under the National Environmental Policy Act. The plaintiffs in that case are also suing the Louisiana Department of Environmental Quality, contending Formosa’s own modeling shows the plant would exceed federal air pollution standards.

Last month, a judge dismissed an injunction filed by plaintiffs in the federal case attempting to block construction of the project. The court approved the company’s plan, which includes holding off on work near the grave site and in other areas until at least February of next year. Formosa said in a statement issued after the ruling that it “has always taken great care to protect and not disturb the known burial area.”

For Lavigne, who in 2016 was diagnosed with autoimmune hepatitis, a disease that has been associated with particulate air pollution, the insult regarding the grave sites extends to the entire project. “It is a form of racism,” she says. “It took George Floyd a few minutes to die. His life was shortened faster than ours. Ours is shortening slowly but surely. If Formosa comes, it’s going to shorten faster.”

Lavigne is partnering with community

advocates in St. John the Baptist Parish and other communities along the river in a group called the Coalition Against Death Alley. Last November, she and four others from St. James Parish traveled to Washington, DC, to participate in an environmental-justice summit sponsored by Representatives Raúl M. Grijalva (D-AZ) and A. Donald McEachin (D-VA). She says she senses momentum building for policy changes that will protect vulnerable communities of color.

Lavigne's effort to halt a huge project for which permits are in place may seem to border on the quixotic. But environmentalists note that organized community opposition played a part in turning away Shin-Etsu Chemical, which was set to build a polyvinyl chloride plant in St. James Parish in 1998. The Japanese firm moved its project to nearby Plaquemine, Louisiana.

"Sharon is fighting for the life of her community," says Julie Teel Simmonds, senior attorney at the Center for Biological Diversity. "It makes it so much more urgent that she is fighting for her health and life, and fighting for anyone who has ever suffered from the environmental impact of industry."

Lavigne says RISE St. James is renting a billboard visible from the Veterans Memorial Bridge crossing the river into town reading: Formosa, you are not welcome here. St. James is our home. "We want the world to take notice of what they are doing to the Black community," she says.

"We are not only talking about environmental policy. We're talking about economic policy that has really cut off economic opportunities for communities of color."

—Cathleen Kelly, senior fellow,
Center for American Progress

"What we are doing is going to change the way people look at the chemical industry. I think this time, a change will come."

Birth of a movement

In 1982, when dump trucks filled with PCB-laden soil headed to a newly designated landfill in Afton, North Carolina, they met resistance. Local residents of the poor, largely African American community came out and marched, laying down in front of the vehicles. Protests against an order to dump 6,000 truckloads of the contaminated soil lasted for a month, with more than 500 arrests.

The community lost the fight in the end, but their nonviolent action, the first of its kind against the siting of a landfill for toxic material, garnered national media attention. Advocates date the recognition of environmental justice as a civil rights movement to the protests in Afton.

The movement grew and achieved a milestone in 1991 at the National People of Color Environmental Leadership Summit where more than 300 Black, Latino, Native American, and Asian American delegates from across the Americas met for 4 days in Washington, drafting and adopting 17 principles of environmental justice. Three years later, President William J. Clinton signed an executive order requiring that federal agencies address the health and environmental impacts of their policies on minority and low-income populations.

The message from the current White House is drastically different. The Trump administration, partly in an effort to reverse the policies of President Barack Obama, is acting to increase fossil-fuel use and scrap environmental regulations. As of May, the administration had reversed nearly 70 environmental rules and regulations and has efforts underway to roll back more than 30 others, according to a tally published in the *New York Times*.

The pandemic and the killing of George Floyd energized a response from the environmental-justice movement that had been building in recent years, says Bullard of the National Black Environmental Justice Network. "The convergence of threats now calls for a new emphasis on the urgency of bringing attention to the underlying conditions that create the economic, health, and environmental disparity that relates to policing and criminal justice," he says. But understanding the disparity, he adds, requires knowing its history.

Beverly L. Wright, executive director of the Deep South Center for Environmental Justice and Bullard's cochair at the justice network, points to a misconception about

the historical relationship between fence-line communities and industry. The general assumption is that communities form around plants as people move to an area seeking employment, she says, but communities of color, especially in the south, were well established prior to industry's arrival. And the Jim Crow legacy of not hiring Blacks established a pattern that shadows employment to this day.

"Many of the people who are fencelined have been there since they bought property from their slave masters when they were freed," Wright says. She notes that racist zoning practices, industry's discriminatory residential buyout offers, historic segreg-

earlier name. The association's community outreach program has gained little traction in connecting communities to the industry at its property lines, in Wright's opinion. "They wanted that Responsible Care stuff, but it wasn't happening."

Wright says her organization has attempted for years to make fence-line communities more widely heard. In 2000, for example, she accompanied residents from Mossville and Norco to the Climate Justice Summit in The Hague. The delegation was well received as a voice from the front lines during long sessions of broad-stroke climate-sustainability discussions.

This year's broader awakening to the

community revitalization at the National Wildlife Federation (NWF) sees the turnout of white protesters as good news triggered by this year's bad news. "2020 is an awakening," Ali says. "Lots of times people don't pay attention until tragedy strikes."

Ali, who worked for 24 years at the EPA, where he tried to establish an office of environmental justice, points to improved communication as a start. "A couple of years ago, if you uttered the words 'racism' or 'systemic racism,' doors would shut, windows would close, people's minds wouldn't want to deal with it. But now it's part of the lexicon," he says.

One indicator of change is Ali's job at the NWF, a position created when he was recruited in 2019 by the group's president, Collin O'Mara, to help transform the group into "a 21st century organization." NWF is widely, and accurately, perceived as one of the more staid and politically moderate major environmental organizations, Ali says. "I like a challenge," he says.

Institute, West Virginia

"We are in the process of dissolving the organization this year," says Pam Nixon, president of the board of People Concerned about Chemical Safety (PCACS), a citizen's group in Institute, West Virginia, launched after the deadly release of methyl isocyanate (MIC) from a Union Carbide plant in Bhopal, India, in 1984.

Union Carbide operated a sister plant in Institute that also manufactured the pesticide precursor. People in the predominantly Black community organized to find out about the safety of MIC production. They demanded information about what all the chemical companies operating on the Kanawha River near the town were emitting into the air and water.

Nixon returned to work as a community advocate in 2015, after retiring from her position as an environmental advocate for the West Virginia Department of Environmental Protection. She says she is retiring for good this year after 35 years of clean-air and community advocacy. Others in the group have also moved on.

"And of course, with COVID-19 hitting the country, people are staying in and sheltering," she says. The organization, a forerunner in fence-line community activism, is simply winding down.

But a torch has been passed, Nixon says, to Kathy Ferguson, the daughter of Warne Ferguson, a community activist who started PCACS, originally called People Concerned about MIC. Warne was working at the time as an administrator at West Virginia State University, which was



Beverly L. Wright, executive director of the Deep South Center for Environmental Justice and cochair of the National Black Environmental Justice Network, was among the community advocacy leaders who worked with national environmental organizations on the Equitable and Just National Climate Platform.

gation, and a huge imbalance of political clout have ensured that industrial expansion over the years isolated Black communities near industry, steadily devaluing their property. Diamond and Mossville—fence-line communities in Louisiana—were severely depleted by chemical industry expansion and eventual buyouts, she says.

The Deep South Center has helped mediate between residents and individual companies in Mossville and Norco, a town that includes the community of Diamond. But, overall, Wright says, environmental-justice groups have had little luck establishing meaningful dialogue with the chemical industry.

"We have had individual relationships with companies, but never with the Chemical Manufacturers Association," she says, referring to the American Chemistry Council, an industry association, by an

impacts of racial inequity is only a start, says medical ethicist Harriet Washington. "We have to remember that the people who are directly and profoundly affected have always known about these issues," she says. "It's novel to mainstream America—essentially to many white people, including privileged white people who are now assuming an active role as white allies. Which is a good thing."

But expanded attention should not be confused with actual progress, Washington says. "When it comes to environmental concerns, what is of paramount importance is that the solutions to a lot of issues facing people of color now lie in the law—in the EPA being either persuaded or forced to follow its mandate to protect all Americans. We're not there yet."

Mustafa Santiago Ali, vice president of environmental justice, climate, and com-

founded in 1891 in InSTITUTE as the West Virginia Colored Institute, a land-grant college for Black students.

Kathy Ferguson—until recently the president of the Sub-Area Planning Committee, the local town council—is running for the West Virginia House of Delegates. She recently advanced in the primary election along with three other Democrats from a field of 16 with a campaign centered on environmental justice.

Institute, an unincorporated community, was settled on land bequeathed to Mary Barnes, a slave, by her owner, Samuel I. Cabell, with whom Barnes had 13 children. The college, built on property put aside for Mary's children, was integrated in 1954. Since then, enrollment has quadrupled. Meanwhile, the chemical industry flourished along the river.

The community has endured a steady cadence of explosions and accidental releases, some of which produced toxic clouds requiring residents to shelter in place. More recently, some of the facilities have closed, and few in town work at them anymore. The industry has some local support, largely among older men, but steady opposition has come from PCACS and women such as Ferguson.

She is confident that this year she can



Kathy Ferguson (right), a long-time community leader in Institute, West Virginia, is running for a seat in the West Virginia House of Delegates with a campaign centered on environmental justice.

make headway. “Environmental racism is part of the BLM story,” she says. “And I am very happy to report that there has been a lot of movement and conversation around environmental justice and how it is just another link in the chain of

structural inequalities across the board.”

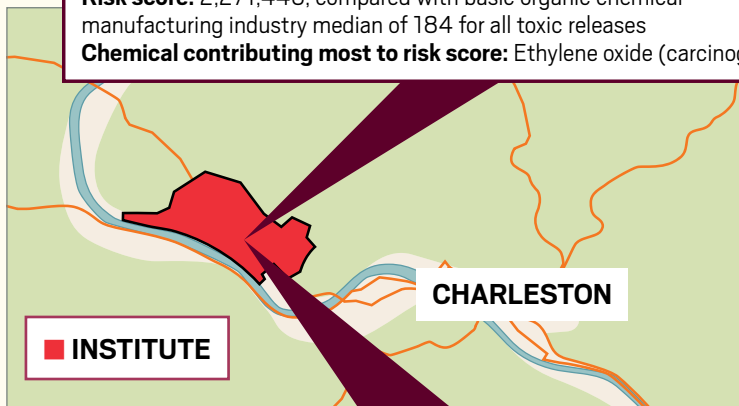
Ferguson says she participated in an NAACP program to form a Black Lives Matter action plan incorporating environmental justice and is working to get young people interested in advocacy. “There are

INSTITUTE, WEST VIRGINIA

This site next to West Virginia State University, a historically Black, land-grant university founded in 1891, was constructed to produce synthetic rubber during World War II. In 1947, Union Carbide purchased the plant to manufacture commodity chemicals. Over decades, the plant has changed to production of specialty chemicals.

Union Carbide, a Dow subsidiary

Annual air emissions: 57,252 kg
Risk score: 2,271,446, compared with basic organic chemical manufacturing industry median of 184 for all toxic releases
Chemical contributing most to risk score: Ethylene oxide (carcinogen)



Specialty Products US LLC, a DuPont subsidiary

Annual air emissions: 1,100 kg
Risk score: 411,101, compared with basic organic chemical manufacturing industry median of 184 for all toxic releases
Chemical contributing most to risk score: Ethylene oxide (carcinogen)

Population:

1,489

Median household income:

\$39,722
 versus West Virginia's
\$44,921

Race and ethnicity:

54%

Black

36%

White

5%

Two or more races

4%

Asian

1%

Native American

Data sources and notes: See page 31.

Additional note: Union Carbide sold part of its operations to Altivia in 2019.

a lot of folks working in different streams, and I sort of have my foot in each one," she says. "There will be a local effort, probably statewide and a national effort."

Donna Willis, a lifelong Institute resident active with PCACS over the years and a regular contributor of op-ed articles to the local *Charleston Gazette-Mail*, is one of the industry's most outspoken local critics. Diagnosed with congestive heart failure at the age of 41 after suffering for years undiagnosed—she attributes the ailment to exposure to a chlorine release when she was a teenager—Willis speaks of family and neighbors who have died of cancer over the years and a chipping away at what had been a thriving Black community.

"We lost our school, which used to be a black college," she says, referring to the integration of the West Virginia Colored Institute. Willis points to a new sports complex used primarily by people outside of Institute built on what had been Shawnee Park, a recreational area that had long been managed and used by residents of Institute. "We have nothing in our community anymore," she says.

But the steadiest erosion of community, Willis says, results from the pollution that sickens residents, many of them older people who live in fear of the next siren at a neighboring plant and can't afford to

move. "Sheltering in place was nothing new for us," she says, referencing the COVID-19 quarantine. "We've been holed-up in our homes for decades."

Détente

Environmental-justice leaders fighting on the industrial fenceline say they have battled for decades on a second front: against large national environmental groups such as the Sierra Club and the National Wildlife Federation.

One issue is diversity. A 2018 study by the University of Michigan found that 85% of people on the staffs of over 2,000 environmental nonprofits were white; the boards of these organizations were 80% white.

And agendas of the traditional and justice-oriented environmental groups differed fundamentally. Many of the major environmental groups got their start over a century ago with a focus on protecting natural resources and national parks. More recently, their focus has been on global climate change, with little or no consideration of the immediate impact of pollution on communities most heavily exposed, according to environmental-justice advocates.

A coalition of these advocates fired a shot across the bow of the major groups

30 years ago with a letter to the president of the National Wildlife Federation. Known in the environmental-justice community as the Letter to the Big Ten, it accused the national organizations of contributing to inequity with policies that "emphasize the clean-up and preservation of the environment on the backs of working people in general and people of color in particular."

Roberts of the Environmental Justice Health Alliance for Chemical Policy Reform speaks of her dissatisfaction in engagements with the major groups over the years. She describes them as self-appointed stewards of the environment with lofty budgets. Their policies, however, do not directly address the needs of communities that groups like hers are struggling to assist, she says.

Leaders of the national groups acknowledge a problem with diversity and the distribution of resources. But efforts to correct disparities—including a recent editorial by Michael Brune, executive director of the Sierra Club, denouncing the racism of the group's founder, John Muir—have a long way to go. Ali of the National Wildlife Federation estimates that 3% or fewer of resources circulating in environmental conservation and climate organizations make it to fenceline commu-

nities. “It’s been an evolutionary process,” he says. “Something has to change.”

The process has taken a leap forward over the past year, according to leaders on both sides, thanks to a 2018 initiative called the Equitable and Just National Climate Platform that was backed by four national organizations and a dozen environmental-justice groups. Participants gathered to hammer out an agenda for environment and climate policy that centers on communities most heavily impacted by pollution.

“We just decided to try again,” says Cecilia Martinez, cofounder and executive director of the Center for Earth, Energy, and Democracy (CEED), an environmental-justice policy research group. “We brought together green organizations we know had already been involved in some way, had some level of partnership and some knowledge of environmental justice, along with key environmental-justice coalitions, and tried to be as representative with racial mix, gender mix. We just tried to pull folks together and say can we do this.”

It wasn’t easy, Martinez says. Community-centered initiatives introduce a complex set of social and economic concerns not generally encountered by national groups.

“It’s a policy problem,” adds Cathleen Kelly, a senior fellow at the Center for American Progress, a public policy research organization that convened the platform group with CEED and the Natural Resources

“We just decided to try again,” says Cecilia Martinez (center), executive director of the Center for Earth, Energy, and Democracy, of the effort to bring national environmental organizations to the table with environmental-justice groups.

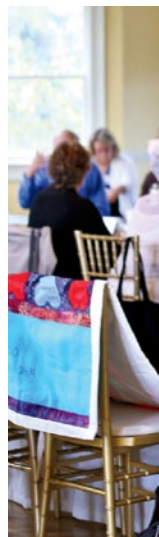


Defense Council. “We are not only talking about environmental policy. We’re talking about economic policy that has really cut off economic opportunities for communities of color, leaving them in a state of economic and financial insecurity.”

Roberts describes high expectations and heated debate. Finally agreeing on a platform last year—it occurred serendipitously on Juneteenth at the Josephine Butler Parks Center, a building with a civil rights and environmentalism heritage near Malcolm X Park in Washington, DC—was a spiritual moment, she recalls. A quilt commemorating victims of environmental racism that was present at the 1991 People of Color Summit was on hand for the platform signing after having been missing for years.

“I do believe it was a spiritual encounter,” Roberts says, “even more so now when I see what is happening in the streets.”

Participants are pleased with traction



A quilt commemorating victims of environmental racism that was present at the 1991 People of Color Summit was on hand for the signing of the Equitable and Just National Climate Platform on Juneteenth last year.

the initiative had gotten in Washington. Jill Tauber, vice president of litigation for climate and energy at Earthjustice, notes that a recently published report by the House Select Committee on the Climate Crisis draws from the Equitable and Just National Climate Platform on the need to craft climate policy that accounts for the cumulative impact of multiple pollution sources, community health and safety, and self-determination in land development.

“You don’t have to look further than page 4 to see discussion of the platform and a footnote citing it specifically,” Tauber says. Kelly of the Center for American Progress counts at least 12 references to the group’s platform in the report. She notes that the clean energy and social-justice policy platform of Joe Biden, the 2020 Democratic presidential candidate, also draws from the Equitable and Just National Climate Platform.

But much work lies ahead. “Environmental groups have had to look within and wrestle with the ways we have functioned within and contributed to the grave injustices and inequities of structural racism,” Tauber says. She points to growing concern that any transition to a clean-energy economy, an item topping the agenda of the traditional environmental groups, could perpetuate inequity of access for communities of color.

Harrisburg/ Manchester, Texas

“One day I was driving on Highway 3 going to work, my wife was with me, and

we drove past this huge sign announcing the future site of the new high school,” Juan Parras recalls. His wife, Ana, called his attention to it. “I said I saw it, but she said to look what’s behind it. There were huge smoke stacks.”

It was 1995, and Juan and Ana had just returned from working on a community outreach project in Baton Rouge, Louisiana. Juan, a long-time union organizer, had been lured back to his home state to work at an environmental-justice clinic at Texas Southern University, a historically Black university in Houston. The sign, heralding a high school for the twin neighborhoods of Harrisburg and Manchester a half mile from the refineries and chemical plants that overshadow the predominantly Hispanic community, registered as another new assignment.

Juan, Ana, and their son Bryan organized protests, hoping to convince local leaders to find a new site for the high school. The project to build near the refineries went ahead, but so did the organizers.

The Parras family, motivated by industry’s impact on Harrisburg/Manchester and similar fenceline communities on the Houston Ship Channel, launched a citizen’s action group that today is called Texas Environmental Justice Advocacy Services, or TEJAS. Harrisburg/Manchester has been a focus of their activism.

The community is in one of the oldest settled areas of Houston. “The first Anglo/European settlers set up shop here,” says Bryan, who is vice president of the TEJAS board and a local organizer for the Sierra Club. Harrisburg was the site of a trading post and gristmill. John R. Harris established the town in the 1820s. The chemical and plastics industry moved in after World War II. By the 1980s, the population was predominantly Hispanic.

Today, the community is boxed in by heavy industry and transportation infrastructure. Its largest industrial neighbor, on the northern border, is a Valero refinery. To the west is the 610 Ship Channel Bridge, and across the southern border run more than 25 lines of Union Pacific rail track. There are more than 20 industrial operations in Harrisburg/Manchester that report air, water, and waste emissions to the EPA.

“It’s difficult to organize here,” Bryan

says. “When we started in the ’90s, people thought we were crazy. Many of them worked in these companies, and it was part of their culture. The schools had a direct pipeline to jobs in the industry.”

But an environmental-justice movement has been building since Hurricane Katrina shone a light on imperiled communities of color one state over, Bryan says. Few people from the community are hired these days, he adds. And younger people, having gained access to higher education, are more socially conscious. “A lot of credit goes to Black Lives Matter and the indigenous struggle,” Bryan says.

Juan, executive codirector with Ana of TEJAS, hosts a “toxic tour” of the shipping channel region, spreading the word about the environmental impact on local communities. He is less optimistic than Bryan. “People have given up,” he says. “They feel powerless because of the industry.” Some have sought property buyouts from the local companies.

Still, this has been a busy year for TEJAS, Juan says, as it battles Valero on a permit the refiner submitted in 2018 to re-



Juan Parras, co-director of Texas Environmental Justice Advocacy Services, spoke at a recent hearing on Valero’s application for a permit to emit 178 metric tons of hydrogen cyanide at its refinery.

lease up to 464 metric tons of hydrogen cyanide per year—the Texas Commission on Environmental Quality is currently reviewing a revised application to emit 178 metric tons. TEJAS is challenging the permit and has also filed a language-access challenge, which would force future permitting processes to accommodate residents in communities such as Harrisburg/Manchester for whom English is a secondary language.

Juan says the difficulty of taking on in-

CREDIT: COURTESY OF BRYAN PARRAS

HARRISBURG/MANCHESTER NEIGHBORHOOD, HOUSTON, TEXAS

Refinery stacks loom over this lower-income area of Houston where the residents are almost all Hispanic. Much of the neighborhood is cut off from the rest of Houston by two multilane freeways, two bayous, and a rail yard.

Population:
1,146

Median household income:
\$28,988
versus Texas's
\$59,570

Race and ethnicity:
96%
Hispanic of all races
3%
White
1%
Black

Valero refinery and tank farm

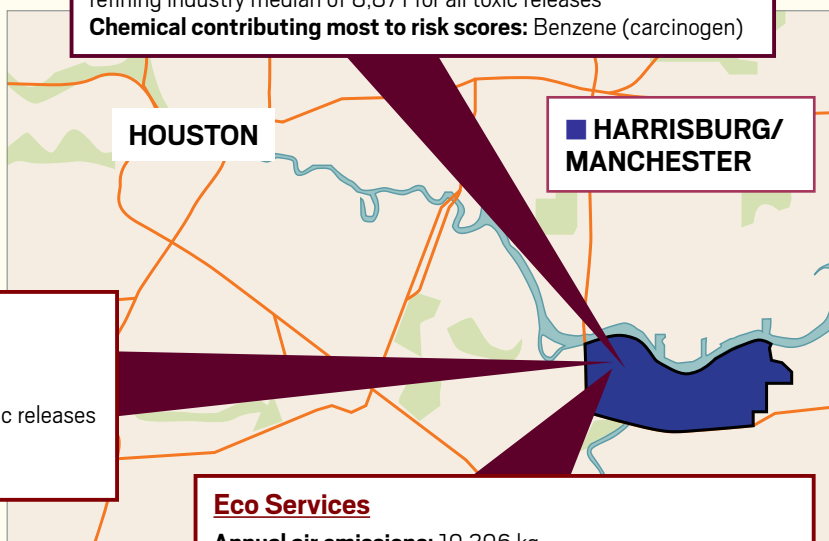
Annual air emissions: 28,247 kg and 12,465 kg, respectively
Risk scores: 24,566 and 26,449, respectively, compared with refining industry median of 8,871 for all toxic releases
Chemical contributing most to risk scores: Benzene (carcinogen)

Huntsman International

Annual air emissions: 709 kg
Risk score: 3,007, compared with petrochemical manufacturing industry median of 15,243 for all toxic releases
Chemical contributing most to risk score: 1,4-Dioxane (likely carcinogen)

Eco Services

Annual air emissions: 19,296 kg
Risk score: 19,235, compared with basic inorganic chemical manufacturing industry median of 123 for all toxic releases
Chemical contributing most to risk score: Sulfuric acid (respiratory and eye irritant)



Data sources and notes: See page 31.

dustry in Texas is illustrated by comparing Valero's permit application to one filed by Suncor Energy, which seeks to emit 18 metric tons of hydrogen cyanide at its refinery near Denver. Opposition to the Suncor permit is coming not only from concerned citizens but also from US Representative Diana DeGette (D-CO).

"Compare this with how Houston is being treated," Juan says. "We do not have political support from our elected officials, our congressional folks, or even from our district representative."

While Valero has no formal program to buy residential property near the plant, the company has accommodated individuals who pursued buyouts and offered them to others, Juan says.

He says the community has received a lot of attention from environmental groups in recent years, but little practical assistance. "There has been a lot of research and published data," he says. "But nobody is picking up on it." A representative of a national group recently contacted TEJAS, he says. "He was kind enough to visit our office to see if we want to do more air monitoring and testing," Juan says. "We said we appreciate your interest,

but we don't want any more research. We want money to address relocation."

The road ahead

Environmental-justice advocates have high hopes for progress on racial equity in 2020. A slew of statements voicing support for Black Lives Matter and commitments to increased diversity in the workplace have emerged from the CEOs of chemical and other industrial companies, many of which operate plants across the fence from communities of color. But for the communities themselves, little has changed.

Individual chemical companies contacted by C&EN declined to participate in interviews for this story. Instead, they emailed statements and written responses to questions that outlined investments in fenceline communities and engagement with local agencies such as parks and recreation departments.

Formosa responded that, after announcing the project in St. James Parish, the company invited community members to an open house to hear concerns and answer questions about hiring, safety, and environmental impact. The company has

an outreach program that meets regularly with residents and parish officials, Parks, the community and government relations director, said in an email.

In addition, Formosa pointed to a grant program called the FG Workforce Academy that offers training through local schools and awards grants to students in science, technology, engineering, math, and the arts.

"FG pledges that local residents who successfully complete the training program at the academy will be given an opportunity to interview for jobs with the Sunshine Project," Parks wrote, referring to the planned plastics facility. "We are certainly aware of the increased concentration on and public concern around racial equity in the US and FG is committed to hiring local."

Valero, in its 2020 Stewardship and Responsibility Report, lists \$64 million in charitable contribution and investment in communities in 2019. That included \$600,000 to renovate Hartman Park in Manchester. The park, the only green space in Harrisburg/Manchester, runs along the refinery fenceline.

DuPont forwarded a press release on the appointment of Kimberly Markiewicz,

who headed the company's PRIDE Employee Resource Group, an LGBTQ support initiative, to the position of vice president of diversity, equity, and inclusion. The CEOs of Dow and DuPont are among those who issued personal statements in support of Black Lives Matter. And BASF and DuPont highlighted Responsible Care initiatives in responses to C&EN.

"Recent public health and social justice concerns have highlighted that many minority and economically disadvantaged communities feel they have not had a strong voice in discussions about environmental quality," Anne Kolton, executive vice president for communications, sustainability, and market outreach at the American Chemistry Council, said in an emailed statement. "We look forward to being a constructive partner with policymakers as ideas and opportunities to address environmental-justice issues continue to develop."

If legislative activity is any indication, the trade association will have plenty of opportunities to engage with lawmakers in the months ahead. In July 2019, Sena-

"Environmental justice did not grow out of government, it grew out of community. When we fight for justice, it's not a sprint. It's a marathon."

—Robert Bullard, cochair of the National Black Environmental Justice Network

tor Cory Booker (D-NJ) introduced the Environmental Justice Act of 2019, which would require federal agencies, including the EPA, to consider cumulative impacts on communities in permitting decisions. Raul Ruiz (D-CA) introduced compan-

ion legislation in the House of Representatives.

Similar bills appeared in 2020. Representatives McEachin and Grijalva introduced the Environmental Justice for All Act in February, and Senator Kamala Harris (D-CA), Biden's vice presidential running mate, introduced a companion bill in the Senate last month. Also last month, Senator Tammy Duckworth (D-IL) and Representative Lisa Blunt Rochester (D-DE) introduced the Public Health Air Quality Act, which would require the EPA to implement fence-line monitoring of air pollutants at facilities contributing to high local rates of cancer and other illness.

Meanwhile a bill in New Jersey would require state agencies to assess cumulative impact in permitting and other decisions. Viewed as bellwether state-level legislation, the bill has garnered

much attention in the environmental-justice community. It cleared the state Senate and has the support of Governor Philip D. Murphy, but it failed to come up for a vote in the Assembly late last month.

Community advocates are generally



Harrisburg/Manchester, a Hispanic community in Houston, is boxed in by a highway bridge, rail lines, and a roster of polluting industries, including a Valero refinery.

unimpressed with companies' statements of support for people of color and commitments from corporate leaders. "Statements are not enough. I think it's past time for both regulatory agencies and industry to do more," says Sacoby Wilson, associate professor of applied environmental health at the University of Maryland School of Public Health and a member of the National Black Environmental Justice Network steering committee.

But 2020 does present a unique opportunity to raise issues with both government and industry as white Americans come to terms with racial inequity, including in pollution burden, Wilson says. "I think this year in many ways is a sort of a

moment in history where we have a real awakening to systemic racism," he says.

And, of course, the fall presidential election looms. While it will be easier to pass environmental-justice legislation if Democrats end up controlling the White House and both wings of Congress, Bullard, the environmental-justice pioneer, stresses that the election outcome is not an endpoint. "The fact is that environmental justice did not grow out of government, it grew out of community," he says. "When we fight for justice, it's not a sprint. It's a marathon. We run the 26.2 miles and then pass the baton to the next generation."

That baton is being passed amidst the turmoil of a pandemic and reaction in

the streets to the killing of George Floyd. "Millennials? I can't even credit them.

It's Generation Z, the under-30s, that are moving this message," says Ferguson, the statehouse candidate and community activist in West Virginia. She says she is involved in planning a statewide virtual conference on environmental justice geared toward young people.

Ali at the National Wildlife Federation also sees youth empowered to make a change. "Young people are saying that this is not the country we want," he says. They have a vision of racial equity in America that their elders may not see as clearly, Ali says, and they are willing to fight to make it happen. ■