

Air Alliance Houston: Working for Clean Air and a Healthy Future

A conversation with Bakeyah Nelson and Debbie Z. Harwell

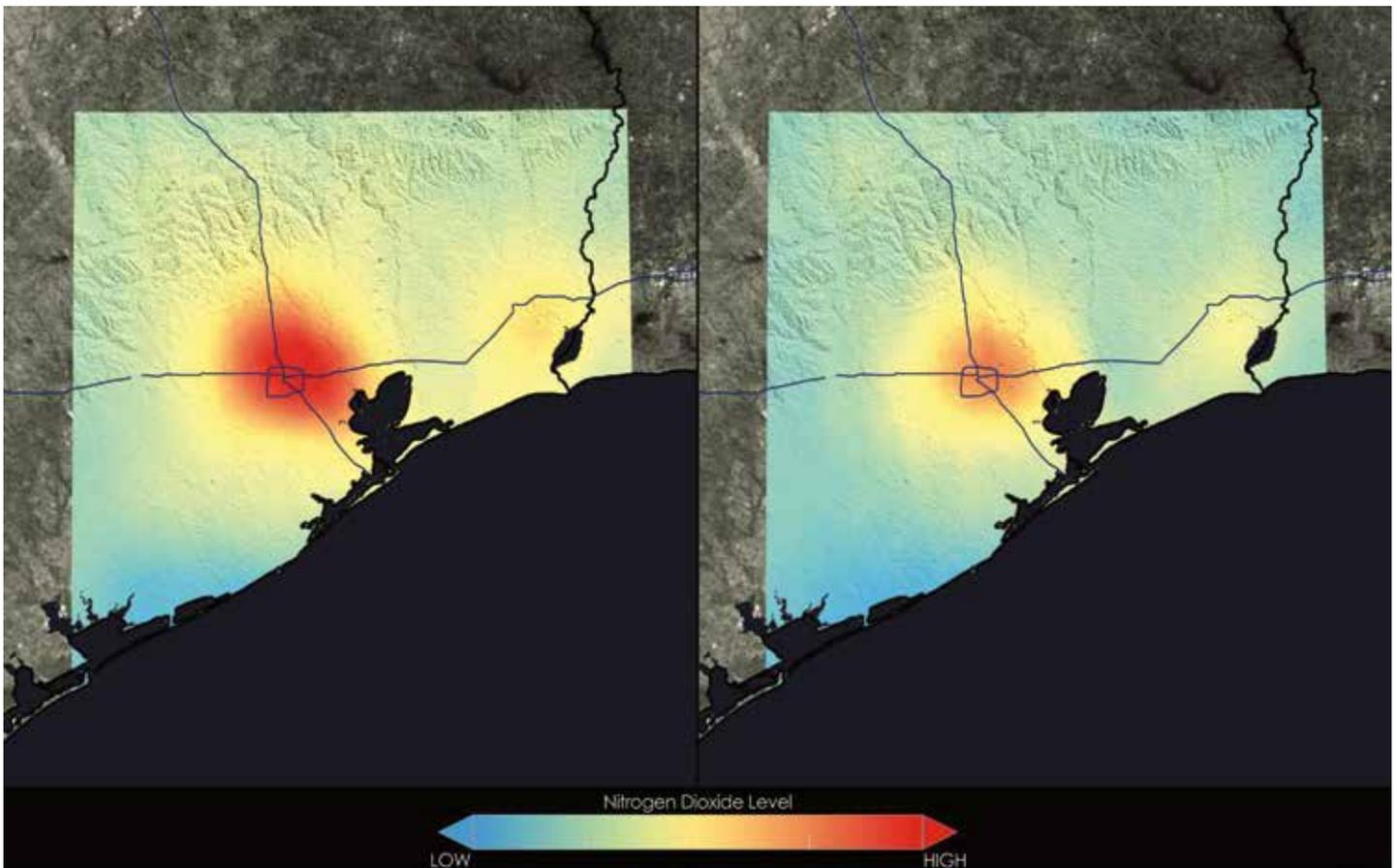
BAKEYAH NELSON, executive director of Air Alliance Houston, was born in South America and grew up in Silver Spring, Maryland. Her path to Air Alliance follows the trajectory of her education in many ways. She graduated from the University of Maryland, Baltimore County with a bachelor's degree in psychology, where she learned that people often have to work around the system, such as taking part in research studies, to get the mental health care they need. This led her to pursue a master's in sociology and Ph.D. in public policy as she thought more broadly about how external factors and policy impact our environment, our experiences, and our individual decisions.

In 2009 while working with Harris County Public Health, Dr. Nelson was tasked with a project to work with a local community to address environmental inequities. Focusing on Galena Park, she was shocked to see people living in such close proximity to refineries with different types of emissions. Through an open dialogue she learned what issues the community considered priorities and discussed how they might be addressed. The Clinton Drive air monitor was especially problematic, which is how she first became acquainted with Air Alliance. Named executive director of Air Alliance Houston in March 2017, Dr. Nelson is taking on the important quality of life issues faced by all Houston communities, as well as the health inequalities associated with environmental hazards in communities of color and low income. What follows is our conversation on Air Alliance Houston's past, present, and future direction.



Dr. Bakeyah Nelson, executive director of Air Alliance Houston.

All photos courtesy of Air Alliance Houston unless otherwise noted.



NASA's Aura satellite recorded these two images in 2005-2007 (left) and 2009-2011 (right) showing nitrogen dioxide concentrations in Houston, which were largely influenced by industry. The shift from the higher red and orange concentrations to the lower blue and green concentrations indicate a 24 percent decrease in nitrogen dioxide over this time period.

Photo courtesy of NASA from wikicommons.

DEBBIE HARWELL (DH): Can you give us a little background on Air Alliance Houston?

BAKEYAH NELSON (BN): Air Alliance Houston was a merger [in 2010] between Galveston Houston Area Smog Prevention and Mothers for Clean Air. Each of those organizations were working to improve air quality but working in different ways. Galveston Houston Area Smog Prevention was really focused on trying to reduce ozone pollution, on that science side, and then Mothers for Clean Air was focused on the community engagement piece and advocacy piece. So it made sense to bring those two together to form Air Alliance Houston, and that's the intersection where we do our work now: research, education, and advocacy ... to reduce air pollution and improve public health. From the research lens—we need to know what's going on. Once we know what's going on, we can educate the public, we can educate residents; and then ... we can figure out a strategy for what we need to do about it ... to reduce exposure and improve public health.

DH: Do you have a mission statement?

BN: We're currently in the process of going through an update to our strategic plan, ... but the mission statement is really to reduce air pollution in order to improve public health.

DH: What sorts of things are in the air in Houston that we need to be concerned about?

BN: There are a couple of things as it relates to Houston's air quality. One is ozone. We've never been in attainment of the national standards for ozone, and that should be a concern for the entire Houston region. I don't know if you saw the recent *Houston Chronicle* front page, which showed the big ozone plume over The Woodlands area. The second issue is particulate matter, and although we have been in attainment for the national standards around particulate matter, the Clinton Drive monitor, in particular, has always been somewhat problematic, meaning exceeding the thresholds at given points in time. However, the way that the EPA calculates attainment, it takes a three-year average. Because it's an average over time, when you enter in lower numbers, it brings the higher numbers down. So particulate matter remains a particular concern. ... Benzene sticks out to me particularly for communities like Manchester, also 1,3 butadiene, both are emitted through industrial processes as well as from mobile sources. So those are some of the main issues. ... There was a task force that was put together by former mayor Bill White [2004-2009], and they identified twelve pollutants present in Houston air they consider high priority, including ozone and PM_{2.5}, benzene and 1,3 butadiene due to their strong association with adverse health outcomes.

DH: Are they high priority because they are carcinogens?

BN: Yes ... those are ones that were found commonly in Houston's air and that had strong scientific evidence demonstrating a health impact ... not just cancer but other health outcomes such as respiratory illnesses.

DH: How have we changed what we're doing in Houston regarding air pollution?

BN: Because Houston has never been in attainment, we're required to submit a plan of action, our state implementation plan (SIP), to address our levels of ozone. The target has also changed during that time as well. So as the EPA has had better science to understand the levels at which ozone impacts public health, they've lowered the standard as we have learned from the science. For instance, back in 2008 they changed it from 80 parts per billion (ppb) to 75 ppb; and the 2015 standard from 75 to 70; and so the standards have ... been lowered as the science builds to show that [the lower level of ozone] ... is more protective of public health. ... In addition, the air pollution technologies that are available to us have changed. As we've learned more and required more of industry, it has required them to be more innovative about how they actually control their emissions. The challenge that has remained is that industry really cannot be trusted to regulate itself because we see time and time again when left unchecked they will emit tons and tons of pollution into the air. ... Also, the way in which we monitor has changed. Houston, although it's one of, if not the most heavily monitored region in the nation, in terms of the number of air monitors, ... considering the extent of the area we have to monitor and all of the factors that contribute to air pollution, there are significant gaps in our air monitoring network. We've got one of the largest petrochemical complexes, we've got four million people on the



Smoke billows from burning discarded automobile batteries at the Holmes Road incinerator south of the Astrodome in July 1972, demonstrating the need for air quality advocates like Air Alliance Houston.

Photo courtesy of the Environmental Protection Agency Records, 1944-2006, National Archives and Records Administration, NWDNS-412-DA-11382, from wikicommons.

road, [and]... we don't have a great public transit system. All of these are factors that contribute to the level of air quality. ... If we don't force industry to do its part then our air quality is that much worse off and the health of our residents suffer as a result. We all end up paying for that in some kind of way— in our health, our medical bills, [and] our tax dollars supporting agencies who are not enforcing the laws. ... So while it's gotten better, it's gotten better because we've required it. It didn't get better because industries felt a moral obligation to innovate on their own to reduce emissions, be better stewards of our environment, and limit exposures to protect public health. As long as we have a system that permits violations without enforcement, we can expect to see that same behavior until it hits their bottom line....



AAH staff receive training from the Community Science Institute on how to build and use air sampling buckets.

DH: What kind of discrepancies do you see between different Houston neighborhoods?

BN: There are very drastic differences between Houston neighborhoods. ... Although we experience pollution across our region, everyone who lives here should be concerned because Houston does not have land-use policies in place that prevent facilities that are potentially hazardous from coming into neighborhoods and locating themselves near schools, near homes, near hospitals, etc. In addition to that, we also don't have land-use policies in place that prevent the siting of schools near major traffic roadways or hospitals and so on. In public health we look at the root causes of issues ... What are the policies that create this environment in which we live? So there's an absence of some policies that could better protect neighborhoods; and, unfortunately, communities of color and low-income communities, the majority of the time, seem to bear the brunt of these types of decisions or the absence of decisions.

For instance, majority communities of color along the Houston Ship Channel are where you see higher exposures because they're in much closer proximity to these refineries; there are also other sources of pollution ... in neighborhoods not along the Houston Ship Channel, which also overconcentrate themselves in communities of color and low income. When you think about what fuels that behavior, perhaps, the land value is reduced; there's also a perception

because historically these same communities have been stripped of their rights in some ways to get involved; and then there's just the issue of environmental racism, specifically targeting communities because you know it's going to be easier, it's going to be cheaper [because] these communities historically don't have as much political weight behind them to fight back. ... And other types of companies are not going to want to invest there. So companies that can actually bring the value up for these communities, make the quality of life better in these neighborhoods, are really not going to want to invest there. ... Some communities [are] dumping grounds for industries, and until we actually address the underlying issues that permit this type of behavior ... we're going to continue to see differences in communities, exposure to air pollution, and the subsequent health outcomes. Communities of color and low-income communities as well, are already more compromised. There's already a higher rate of chronic diseases, higher rates of premature death, and ... there's less access to health insurance.

So you can begin to paint a picture that now is self-perpetuating because no one is really doing anything about the underlying root causes of those issues. We do things like put Band-Aids on issues instead of having serious dialogue about things that need to change. To have people in the twenty-first century, in 2017, still living in close proximity to refineries that we know, and the science has shown in ... study after study that people are at increased cancer risk, to continue to permit this is immoral and something should be done about it. ... [Houstonians] pride ourselves on freedom and independence, [but] I think it's important that we make a distinction between property owners; land owners have rights, but a home owner is also a property owner and no one should be able to come into your community and compromise your health status, regardless of who they are, ... and depress your land value, which impacts your ability to grow wealth for yourself and your family....

DH: Historically, what health issues or illnesses appear in larger numbers?

BN: The spectrum of illnesses that we've seen that are specifically related to living in close proximity to these types of facilities are mainly increased risk of cancer, increased risk of respiratory disease and triggers like asthma attacks, and then also headaches, dizziness, and those kinds of responses. ... Newer studies suggest that there are thousands of preterm births that can be attributed to exposure to particulate matter. ... The studies that just keep coming out about how bad particulate matter exposure is across the spectrum of health issues, triggering cardiac arrest, stroke, lung cancer, preterm births and low birth weight ... we need to do more to lower our exposure to fine particulates.

DH: What is the Houston region's official position on withdrawal from the Paris climate agreement?

BN: The city itself has [pledged to uphold the agreement], and the mayor [Sylvester Turner] is the co-chair of the nationwide Climate Mayors group. ... He has made a commitment to addressing climate change locally if our national government is not going to take the lead. So at the city level, I assume we do have plans to look into how we



AAH community outreach director Leticia Ablaza meets with Council Member Michael Kubosh about air quality concerns near Hobby Airport. Leticia's son is on the right.

can best address climate change. For example, the city has pledged to cut city greenhouse gas emissions by 80 percent by 2050. The implications for Houston, specifically, mean increased flooding, increased heat, and increased deaths from these events ... Who is impacted by that. If we look at, for instance, increases in heat, we have a lot of people who are employed by the construction industry and they work outdoors. ... It will impact industry's bottom line at some point, if it hasn't already, because you can't physically have people outside working in extreme heat. ... The challenge with climate change is to make those examples tangible in terms of how it's already impacting people and businesses on a daily basis and how it will continue to impact us.

DH: How is Air Alliance addressing the change in the Trump administration's stance on environmental issues?

BN: Some of this is still to be determined because, as I mentioned, we're still going through our internal process—but we as an organization really need to expand our reach and get more funding to be able to grow our capacity to address issues, whether it be more litigation, more research, more advocacy, ... [we] need to broaden our base in terms of who is involved or interested in Air Alliance's work. ... This is not just an issue of air pollution, right? It's a broader public health issue. If air pollution triggers an asthma attack, that asthma attack has implications not only for the public health system but it also has an implication for the education system. If a child has an asthma attack, they miss days of school; if they miss days of school, they're at increased likelihood of falling behind. It's also an economic issue for the parent if [their child] has to stay home from school, they miss days of work. If they have to take the child to the doctor, it becomes a transportation issue if they don't own a car or have access to public transportation that can take them where they need to go. ... So if we start connecting the dots to these issues it demonstrates that we all need to be working collaboratively on these issues ... [that have] very tangible, direct impacts on people's daily lives in multiple areas and ultimately determines how well and how long we live.

DH: What sorts of research initiatives either alone or in partnership with other groups has Air Alliance undertaken?

BN: There are two sources of potential air pollution that we're currently working in. One is a metal recycling study that we're doing in partnership with UT School of Public Health looking at exposure to air pollution from metal recyclers. That study is very unique in that we have the metal recyclers involved. ... We have a community advisory board, and we meet both with the residents and the companies and they give us feedback regularly. Once the study is done they will help inform what will go into our public health action plan ... Some of that work was started because the city of Houston did an investigation several years ago and found elevated levels of air pollution coming from metal recycling facilities and excess cancer risk associated with that. ... The metal recyclers were at that point wanting to get involved to do a more comprehensive study. That is a five-year study, and we're now going into year four.

Another research study that we're doing is in the city of Pasadena. We are going to do particulate matter air monitoring in Pasadena, similar to the Galena Park study we did several years ago ... hopefully, to pass an anti-idling ordinance to reduce residents exposure to diesel pollution. ... [We will] collect the air monitoring data, do a community survey to find out residents' perceptions and what they want us to do about it, and then use that information to then say, "Hey, we've got elevated levels of X, this is what we can do to reduce those levels and here's what the community wants, and how we can work together to make this happen." ... The aim of [the ordinance] is to reduce the diesel emissions from trucks....

The issue with policy in general is that even when we can successfully get a policy passed, there is also the enforcement of that policy, and ... the circling back to figure out how effective that policy was ... in other words – did it have the intended impact... Passing policy is not the last stop on the journey to addressing a particular social issue because, as we know, there are a lot of unintended consequences that come along with implementing public policies. ... That also speaks to why it's important to have a diverse set of stakeholders at the table. ... [For instance in] the metal recycling study, there are things that the metal recyclers can provide insight on that we wouldn't necessarily think about. It's our job also to make sure that whatever we're pushing forward is actually substantive and will make a difference and is not necessarily watered-down....

DH: What kinds of community engagement does Air Alliance do to increase awareness about air quality in Houston?

BN: We do it in different ways. For instance, we have Ozone Theater to educate children in K through eighth grade, and then we also have Air Pollution Solutions for high school students. We also do studies, like the ones that I just mentioned, and a lot of the success or failure of that work really relies on our ability to engage with community members and to make them aware of what we're doing, to make them aware of the possible sources of air pollution in their community, and then to come back after the fact ... saying, "Hey, this is what we found, this is what we think we need to



AAH staff members Paige Powell, director of operations, and Paula Torrado, community outreach coordinator, participate in the Latino Youth Leader Summit to raise awareness about air quality and public health.

do. What do you think we need to do and how can we work together to make that happen?” Our ability to even advocate for an anti-idling ordinance, the power in Air Alliance doesn’t rest with Air Alliance per se, it rests with the residents and the extent to which the community becomes engaged, so it’s very much a partnership and we very much rely on each other to develop and advocate for solutions. We get invited quite a bit to go to educational events ... [and] participate on panels at various events in Houston that are focused on environmental health issues.

DH: At what point would Air Alliance pursue some kind of legal action on behalf of the people in the community, or does that happen?

BN: Air Alliance Houston does not have any in-house legal or litigations arm per se, but the way in which we get involved in litigation is, for example, in the case of Pasadena Refining, which is one of the worst polluters in the state of Texas ... Air Alliance Houston’s role in that process was to, number one, monitor, when we noticed that Pasadena was having all of these emissions events, [and] contact local agencies and say, “Hey, ... Why are all these emissions happening and what’s being done about it?” ... Then getting residents engaged in that ... getting the media involved when needed to raise awareness among the broader community, ... and engage local agencies that are required to investigate these types of complaints. Eventually, because they were a repeat offender, Harris County filed a lawsuit against Pasadena Refining. So in that sense, it isn’t Air Alliance who is doing the litigation against this company but we were very involved in raising awareness to the point that the county has now filed a lawsuit ... The other way in which we get involved in litigation is ... [when] we feel that an issue [is] important, that has local implications, we will sign on to a lawsuit against the EPA, like the recent delay of the chemical disaster rule [conducted by a national organization like Earth Justice].

DH: What is your goal personally for Air Alliance?

BN: My personal goal for Air Alliance, first, is to be responsible for starting the dialogue about the root causes [of pollution] and moving that conversation forward in Houston. ... Then, secondly, I really would like to get some type of policy in place which prevents ... the overconcentration and the over siting of environmentally hazardous waste facilities in communities of color and low-income. ... I would be proud for the city of Houston and our region ... if we could be leaders in acknowledging that, yes, historically we have permitted environmentally hazardous facilities to be located near people, but we don’t have to continue historical patterns of behavior and we can and will do better moving forward, by implementing sensible policies that protect the public health of our residents.

DH: How would you respond to people who say, “they can move somewhere else”?

BN: I would say absolutely we want people to be able to move when their health is being put at risk, and that’s why people need living wages. ... Let’s make that happen so they can move somewhere else. ... It’s misleading to say that people can move wherever they want. ... Particularly when you’re talking about a low-income family because you need your income for the other resources needed to survive—for food, getting to and from work, if you have a chronic disease, these are all very real tangible bills. ... They should have an option not to live next to a refinery, but to make that a reality we need to have a conversation about how we pay people and affordable housing. Also, we need to think about the implications of a family moving – particularly those that have lived in a community for many years. You have relationships – social networks that can be invaluable resources when raising a family, and those networks people rely upon would be severed. So, on multiple levels, picking up and moving one’s family is not as black and white as it seems.

DH: Is there anything we haven’t talked about that you’d like to mention?

BN: We have to get to a point where we’re comfortable talking about race or at least being comfortable with the discomfort. ... If you look at what our demographic projections are, particularly in Houston, we’re already a majority-minority city, but if we look at even the broader region and when we look at the country itself, until we are able to really delve into these issues, I am somewhat pessimistic as to the future of where our country is heading. Because you have a majority of the population that is continuing to be left behind – economically, socially – continuing to be disrespected and constantly having their rights violated, ... being [intentionally] excluded from various decision-making structures that impact their daily lives. [Race is] very relevant to the conversation about environmental health and air pollution and even if you look at Flint, Michigan, with the water issue; again, it’s 2017 and ... we need to acknowledge our mistakes, hold people accountable, and get comfortable with having really difficult conversations about how we are going to move forward collectively, because it impacts each and every one of us.

Debbie Z. Harwell, Ph.D., is the editor of *Houston History*.