

## LSU School of Public Health and Partners Monitor the I-10 Environment with Phillis Wheatley Students



*Phillis Wheatley students launch balloon to take aerial photographs of the I-10 with Mimi Spahn-Sattler of Public Lab (center)(May 13, 2019)  
Source: Adrienne Katner*

This summer, **Dr. Adrienne Katner**, Assistant Professor at **LSU School of Public Health (SPH)** and researcher **Aubrey Gilliland**, MPH, took fourth grade students from **Phillis Wheatley Community School** to collect water samples from faucets along the Lafitte Greenway, and to monitor traffic-associated air and soil pollutants along New Orleans' Claiborne Avenue corridor. Students also participated in launching a balloon to take aerial photos of the U.S. Interstate-10 (I-10) traffic. Their teacher **Kelly Davidson** is assembling the outcomes of the students' analyses and other I-10 related student projects in a book to document the environmental hazards, exposure pathways and potential risks along the I-10 corridor. The project strives to give a voice to students regarding their findings, reactions and concerns. Students were visibly shocked with their initial air particulate readings: in the words of one student, "[I found out that the cars are dropping gas and pollutions in the air, and that stuff is coming from the bridge, and that's what we breathe.](#)"

This project was part of a two-year grant funded by the **U.S. Environmental Protection Agency (U.S. EPA)**. Headed by Dr. Katner and **Dr. Kari Brisolara** the goal is to develop high school and elementary school curricula to introduce inner-city students to environmental public health through a series of interdisciplinary project-based hands-on assignments. The hope is that the class will motivate students to become advocates for their community, their environment, their families and their health by empowering them with strategies and tools adopted from the fields of science, policy, health, communications and even fine arts. Other partners in the planning of this event included **Mimi Spahn-Sattler of Public Lab, Amy Stelly and Emily Gaddis of the Claiborne Avenue Alliance, Anne Ohri of Urban Conservancy, Sarah Wilkins of the American Geophysical Union's (AGU) Thriving Earth Exchange (TEX)**, and lead expert **Dr. Howard Mielke of Tulane University's Pharmacology Department**.



*Phillis Wheatley students and Anne Ohri of Urban Conservancy (right) collect water samples from water fountains along the Lafitte Greenway (May 13, 2019)  
Source: Adrienne Katner*



Phillis Wheaton fourth grade teacher Kelly Davidson fields questions from the media during her class field trip to the I-10. (May 13, 2019)  
Source: Adrienne Katner

These partners have been involved in another project organized by Sarah Wilkins of AGU-TEX to [model the environmental health impacts of the I-10](#). LSU Public Health researchers have identified [environmental issues of potential concern for residents near the I-10](#), including air contaminants and noise pollution from continuous traffic; and legacy soil lead from historical automobile emissions. Adverse health impacts which have been significantly associated with traffic-associated pollution in the scientific literature include respiratory and cardiovascular diseases.

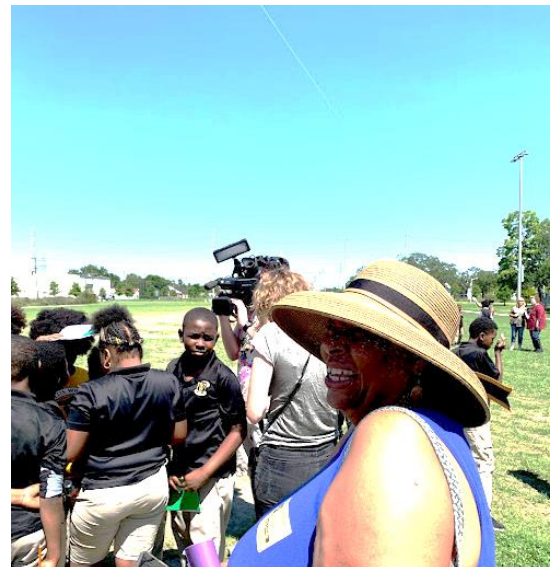
[The City is planning on developing the area underneath the I-10 overpass with shops and cafes](#), a plan which Dr. Katner believes will expose even more people to traffic pollution. “Many cities like New York, San Francisco, Portland and Seattle have transformed pollution-emitting inner city highways into green spaces, markets, and parks- but they either tore down the highway structures or re-routed traffic away from these structures to establish permanent car-free walkways and bike paths. Scientists have long understood the adverse health impacts of traffic-associated air emissions. I hold out hope that our city officials will take this knowledge into consideration when they decide the fate of the I-10 which is [now at the end of its 30- to 40-year engineered lifespan](#). The Claiborne

Expressway was built in 1969 to improve commute times, but it ended up destroying [Treme](#)- one of the most historically and culturally significant African American neighborhoods in the country. Building working establishments underneath an active interstate would add insult to injury. If the City goes ahead with its’ current plans, I would expect the rates of adverse health impacts in this area to rise.” Dr. Katner plans to present the results of her SPH graduate students’ I-10 environmental monitoring and data collection project before the New Orleans City Council.

**Press:** LSU School of Public Health/Phillis Wheatley Science Day:

- <https://www.wdsu.com/article/4th-graders-launch-weather-balloon-to-photo-document-traffic-related-pollutants-along-claiborne-corridor/27458285>
- <https://www.facebook.com/watch/?v=424683331427619>
- <https://www.wwno.org/post/claiborne-expressway-through-eyes-fourth-graders>

**For more information about this project please contact Dr. Adrienne Katner, (504)568-5942 or [akatn1@lsuhsc.edu](mailto:akatn1@lsuhsc.edu).**



Amy Stelly of Claiborne Avenue Alliance finds respite underneath her hat from the intense sun and media attention. (May 13, 2019)  
Source: Adrienne Katner



## LSU School of Public Health Field-Tests Water Filters with Virginia Tech Engineering Students



Virginia Tech Engineers [from left to right: rig designer Jeannie Purchase, M.S. and her mighty minions: graduate student Rusty Rouillier, and undergraduates Jesika McDaniel, Paighton Vanzant, Ailene Edwards, and Sarah Loomis building a rig to withstand hurricane force winds (and test water filters)]. (May 23, 2019)  
Source: Adrienne Katner

Dr. Adrienne Katner, Assistant Professor at **LSU School of Public Health** (LSU-SPH) recently initiated a project to field-test water filters for the **U.S. Department of Housing and Urban Development (HUD)**. LSU-SPH partnered with **Virginia Tech** to set up rigs designed by **Drs. Marc Edwards' and Kelsey Pieper's** doctoral engineering student **Jeannie Purchase, M.S.** The rigs were engineered to field-test water filters that are certified to remove lead. Water filters only need to pass testing under controlled laboratory conditions to be certified. HUD funded Virginia Tech and LSU-SPH to test water filters under normal conditions (in New Orleans, LA), as well as under atypical conditions (like the presence of high iron, manganese and/or lead). Filters will be tested this summer in areas with poor water quality, including Enterprise, LA and Macon County, North Carolina. Homes that are at high risk for having lead in their drinking water are being targeted. Lead in drinking water is typically associated with the presence of lead service lines (or whips) which can be found in older homes built prior to 1986 (when lead whips were banned).



"Adrienne, get out of the way!" LSU-SPH's Aubrey Gilliland (left) doing what the LSU team did best- taking pictures. Right: Virginia Tech's rig designer and chief whip, Jeannie Purchase, M.S. (May 24, 2019)  
Source: Adrienne Katner



"It's complicated": Rig almost done. (May 24, 2019)  
Source: Adrienne Katner

The rigs are designed to test filters past their lifetimes. Due to the risk this might pose to home occupants, rig testing is only being conducted in unoccupied homes. Filters are also being tested in occupied homes, though only up to the manufacturer-reported lifetime of the filter. This weekend, Dr. Katner and researchers **Aubrey Gilliland**, MPH of LSU-SPH and Jeannie Purchase, MS of VA Tech visited homes to install and test the easiest to use and best performing water filters (as identified by Virginia Tech under laboratory conditions) in high-risk occupied homes. The researchers are also surveying residents about their knowledge of lead and water filters; and about barriers they've encountered that might prevent them from adopting and appropriately maintaining water filters. The results of this project will

be used to inform health officials on the efficacy of water filters to reduce lead exposures under varying water quality and filter use conditions. Results will also shed light on approaches for overcoming knowledge, behavior and access barriers to water filter adoption in hard to reach rural and non-English speaking communities.

Project partners also include **co-PI Dr. Kelsey Pieper**, formerly of Virginia Tech and now at **Northeastern University**; **Dr. Susanne Straif-Bourgeois** of LSU-SPH's Epidemiology Program; and community partners **Beth Butler** and **Marie Hurt** of **A Community Voice (ACV)** and **Southern United Neighborhoods (SUN)** who are overseeing community outreach in New Orleans and among non-English speaking Latin American and Hispanic communities; **Wilma Subra**, and **Mary Lee** and **Michael Orr** of **Louisiana Environmental Action Network (LEAN)** who will be overseeing community outreach in Enterprise and in other rural areas of Louisiana with drinking water quality issues; and **Kyle Jennings** of the **Macon County Public Health in North Carolina (NC)**, who will be overseeing outreach to private well owners in rural NC.

For more information about this project please contact Dr. Adrienne Katner, (504)568-5942 or [akatn1@lsuhsc.edu](mailto:akatn1@lsuhsc.edu).



*Virginia Tech engineering students smile after a successful rig test in front of antiquated safety signage (from left to right: Rusty Rouillier, Sarah Loomis, Ailene Edwards, Jesika McDaniel, Paighton Vanzant and Jeannie Purchase, M.S.). (May 24, 2019)*

*Source: Adrienne Katner*