

# Climate Change and Toxic Hazards: Before, During, and After the Storm

## Part II: During the Storm

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# Independent Monitors Found Benzene Levels After Harvey Six Times Higher Than Guidelines

After an oil tank in Houston's Manchester neighborhood caved in, private monitors found levels that far exceeded California's health guidelines

By Lisa Song and Al Shaw, ProPublica, and Kiah Collier, The Texas Tribune, September 14, 2017

## High Levels of Carcinogen Found in Houston Area After Harvey



An aerial view of the Valero Houston Refinery is seen in Houston, Texas, U.S. August 31, 2017. REUTERS/Adrees Latif Published Credit: adrees latif/Reuters PHOTO: ADREES LATIF/REUTERS

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## After Oil Refinery Is Damaged by Harvey, Benzene Is Detected in Houston Area

City and EPA investigate potentially dangerous plume after Valero Energy Partners reported leak tied to hurricane

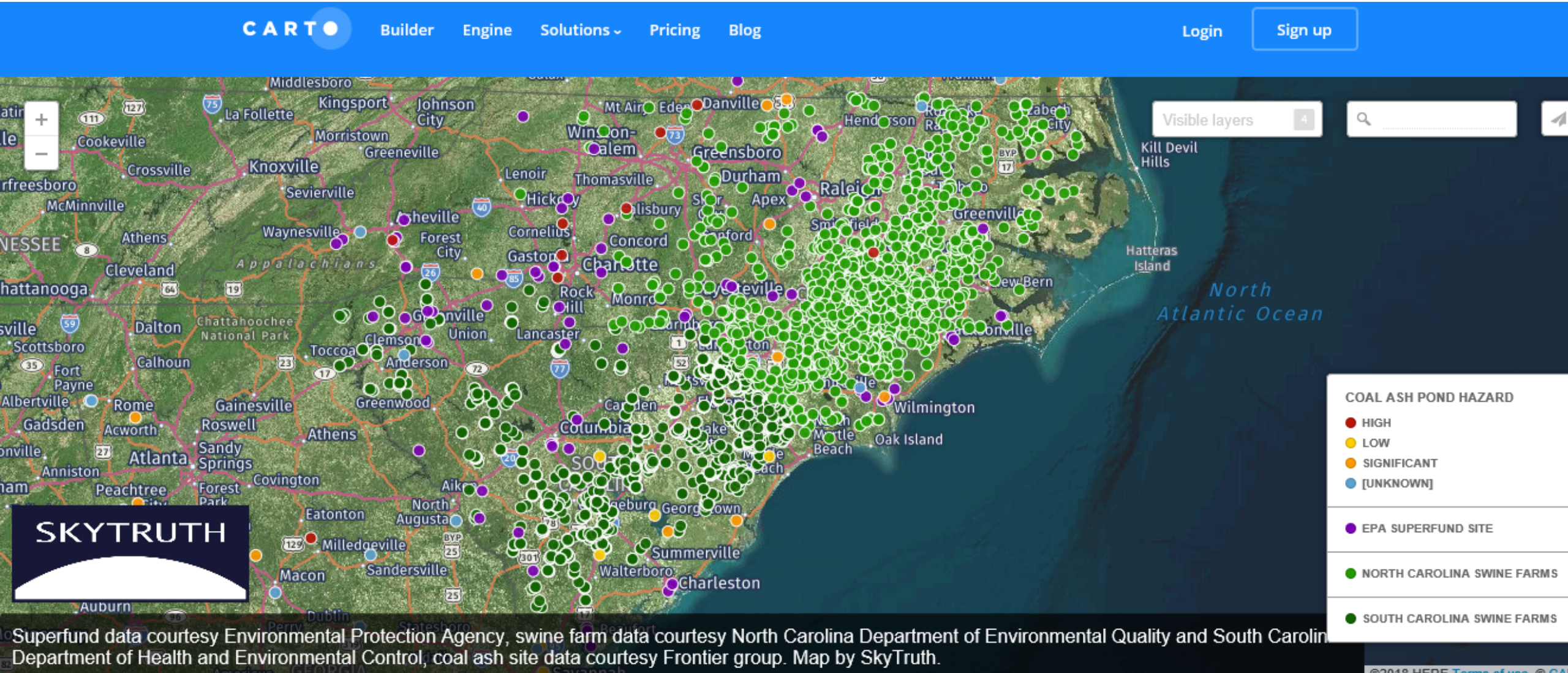
## High levels of chemicals found in air around Houston refinery after EPA told residents not to worry

The revelations came after an environmental group conducted its own testing.

MARK HAND  SEP 15, 2017, 11:29 AM



# Hurricane Florence Risk Sites



[https://skytruth-org.carto.com/viz/ddfae580-b63a-4ade-9315-5bd1dfc24c00/public\\_map](https://skytruth-org.carto.com/viz/ddfae580-b63a-4ade-9315-5bd1dfc24c00/public_map)



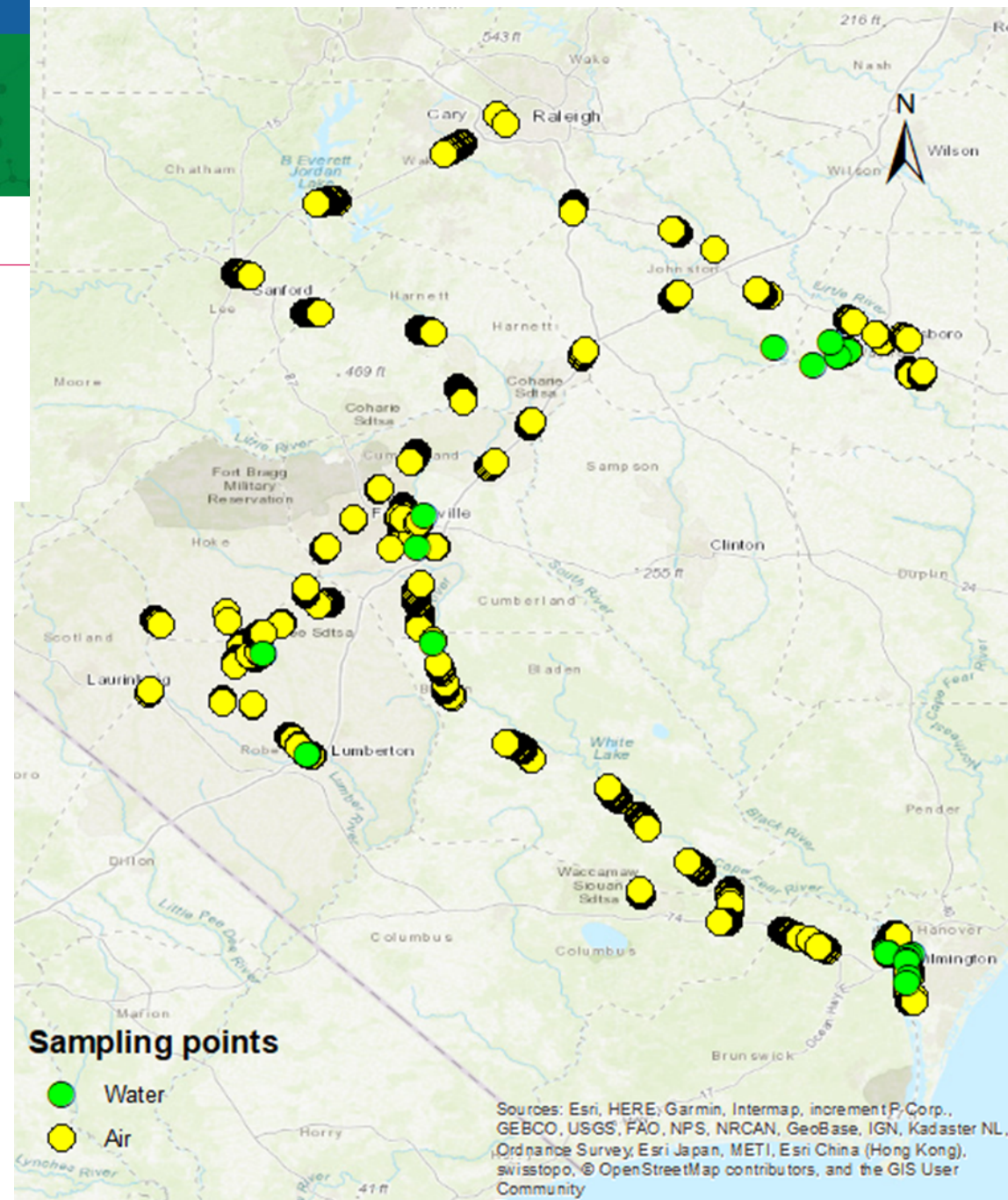
## Researchers respond quickly after Hurricane Florence

*After Hurricane Florence devastated southeastern North Carolina, NIEHS grantees hit the ground running to test for contaminants.*

BY SARA AMOLEGBE

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# Air

Ambient Benzene Concentration  $\mu\text{g}/\text{m}^3$

- 0.00 - 0.33
- 0.34 - 0.63
- 0.64 - 1.27
- 1.28 - 2.36
- 2.37 - 10.99

- C Water samples
- Limited Access
- Highway
- Major Road
- Local Road
- Minor Road
- Other Road
- Ramp
- - - Ferry
- Pedestrian Way

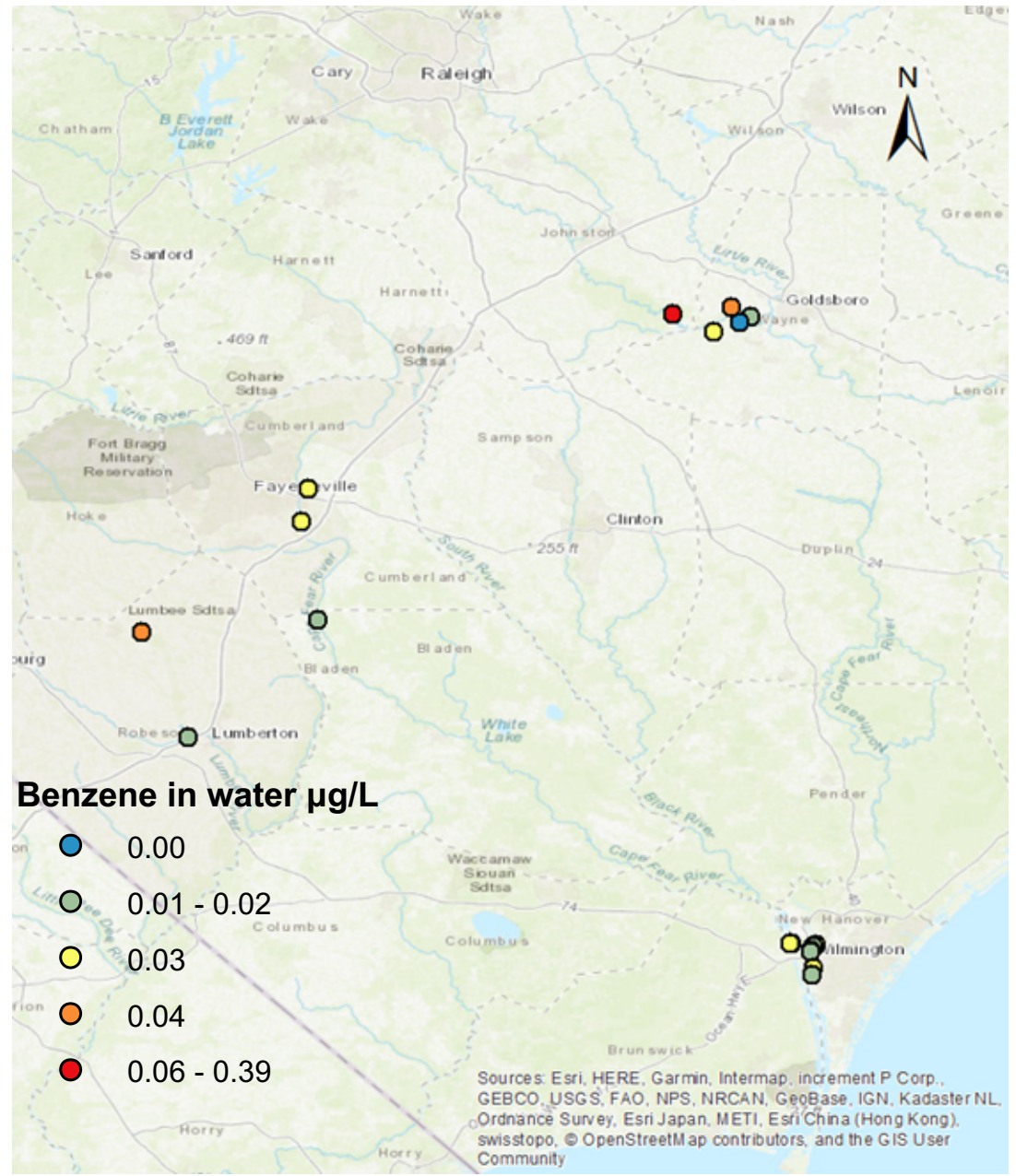


Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

# Water

Benzene in water  $\mu\text{g}/\text{L}$

- 0.00
- 0.01 - 0.02
- 0.03
- 0.04
- 0.06 - 0.39



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community





NASA/USGS Photo



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