



Benzene Monitoring

October 2023



From Sept. 27 - Oct. 25, 2023,
we measured benzene:

- average: **1.42** $\mu\text{g}/\text{m}^3$
 - lowest: **0.72** $\mu\text{g}/\text{m}^3$
 - highest: **7.81** $\mu\text{g}/\text{m}^3$
- $\mu\text{g}/\text{m}^3$ is said:
"micro-grams per cubic meter"

In Oct. 2022, Hilco measured
fenceline benzene:

- average: **1.59** $\mu\text{g}/\text{m}^3$
- lowest: **0.62** $\mu\text{g}/\text{m}^3$
- highest: **11.0** $\mu\text{g}/\text{m}^3$

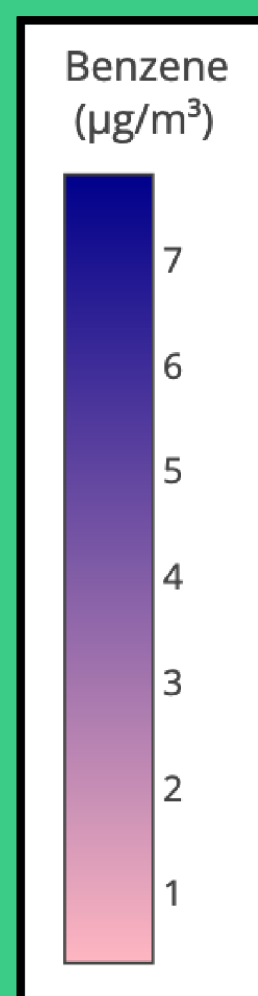
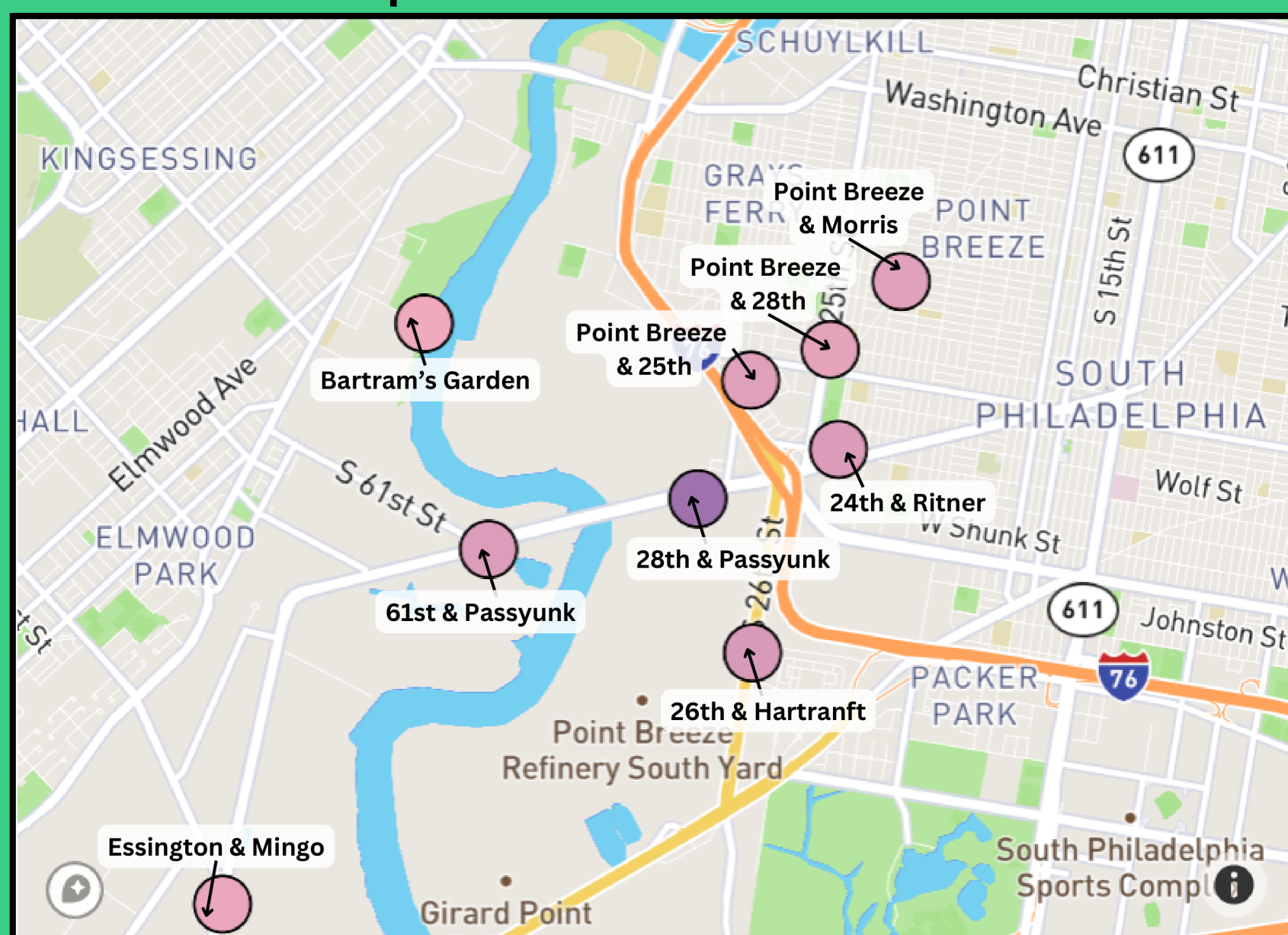
What is Benzene?

- Benzene is harmful because it can cause cancer.
- Benzene is an invisible gas that comes from car exhaust, cigarette smoke, gas stations, and forest fires.
- We are concerned about benzene in Philadelphia because of emissions from the former refinery site and pollution from car traffic.

How is Benzene Measured?

- "Concentration" means the amount of something in the air. We measured concentration with micrograms (shown with the symbol μg) per cubic meter (m^3) of space.
- Outdoor benzene concentrations are not regulated in the United States, so we are comparing our data to Europe's annual average standard for outdoor benzene. We want our year-long average benzene concentration to be **below** $5 \mu\text{g}/\text{m}^3$

September 27 - October 25



This map shows the average benzene concentration at each site between September 27th and October 25th. Darker colors indicate higher benzene concentrations.

- The site with the highest average concentration was 28th & Passyunk, which was more than 5 for one week.
- The site with the lowest average concentration was Bartram's Garden.
- Most sites had benzene concentrations **below** the European annual standard of $5 \mu\text{g}/\text{m}^3$.

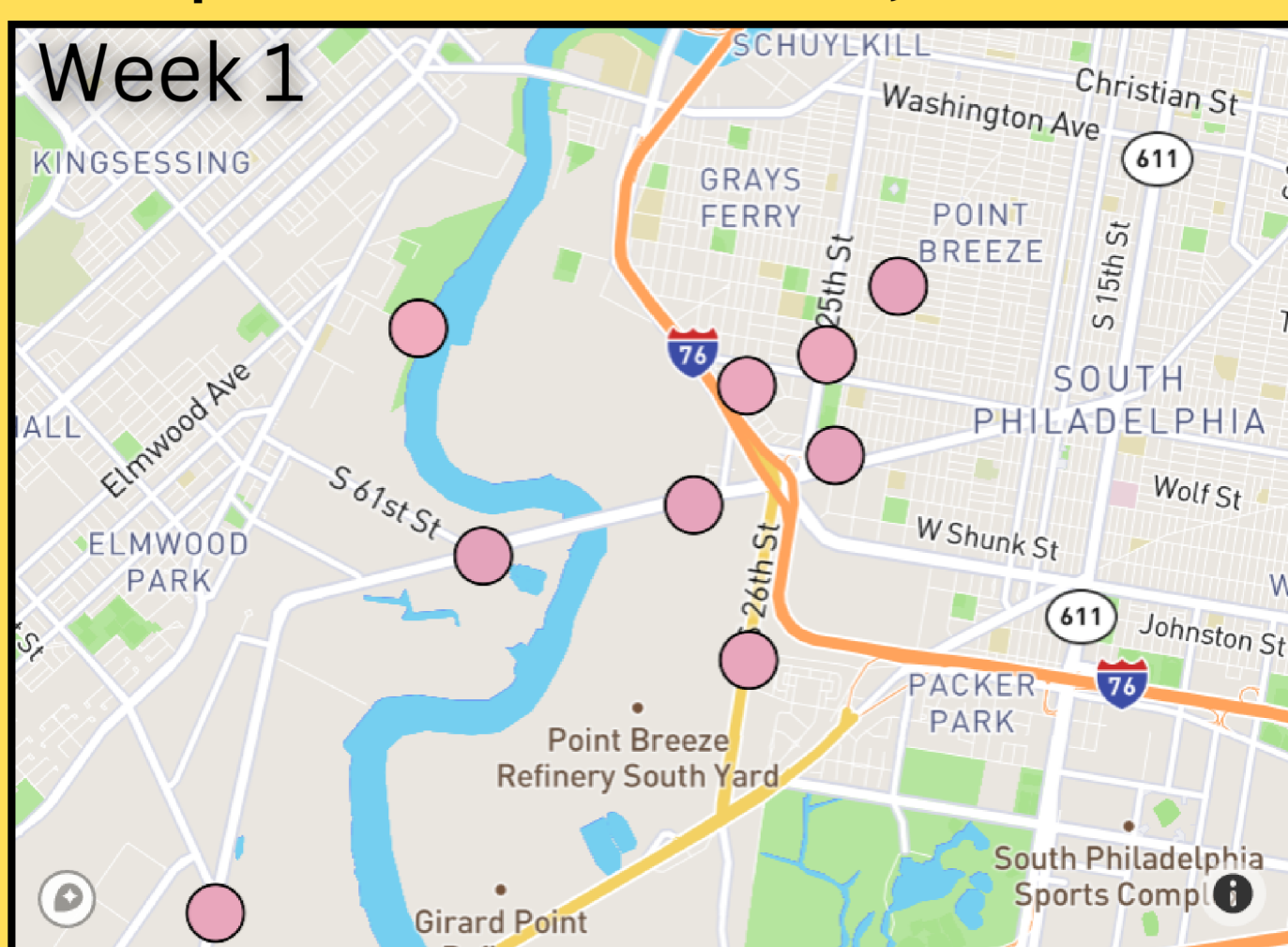


Benzene Results October 2023

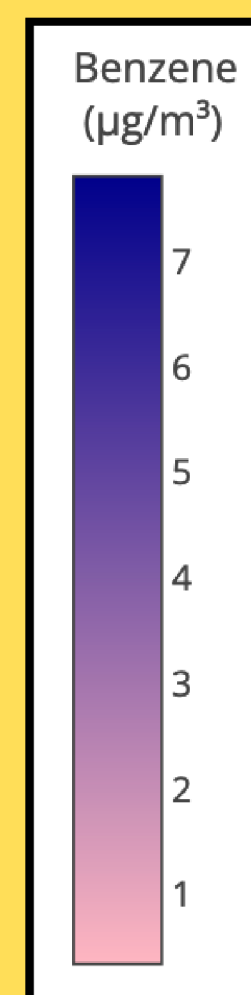
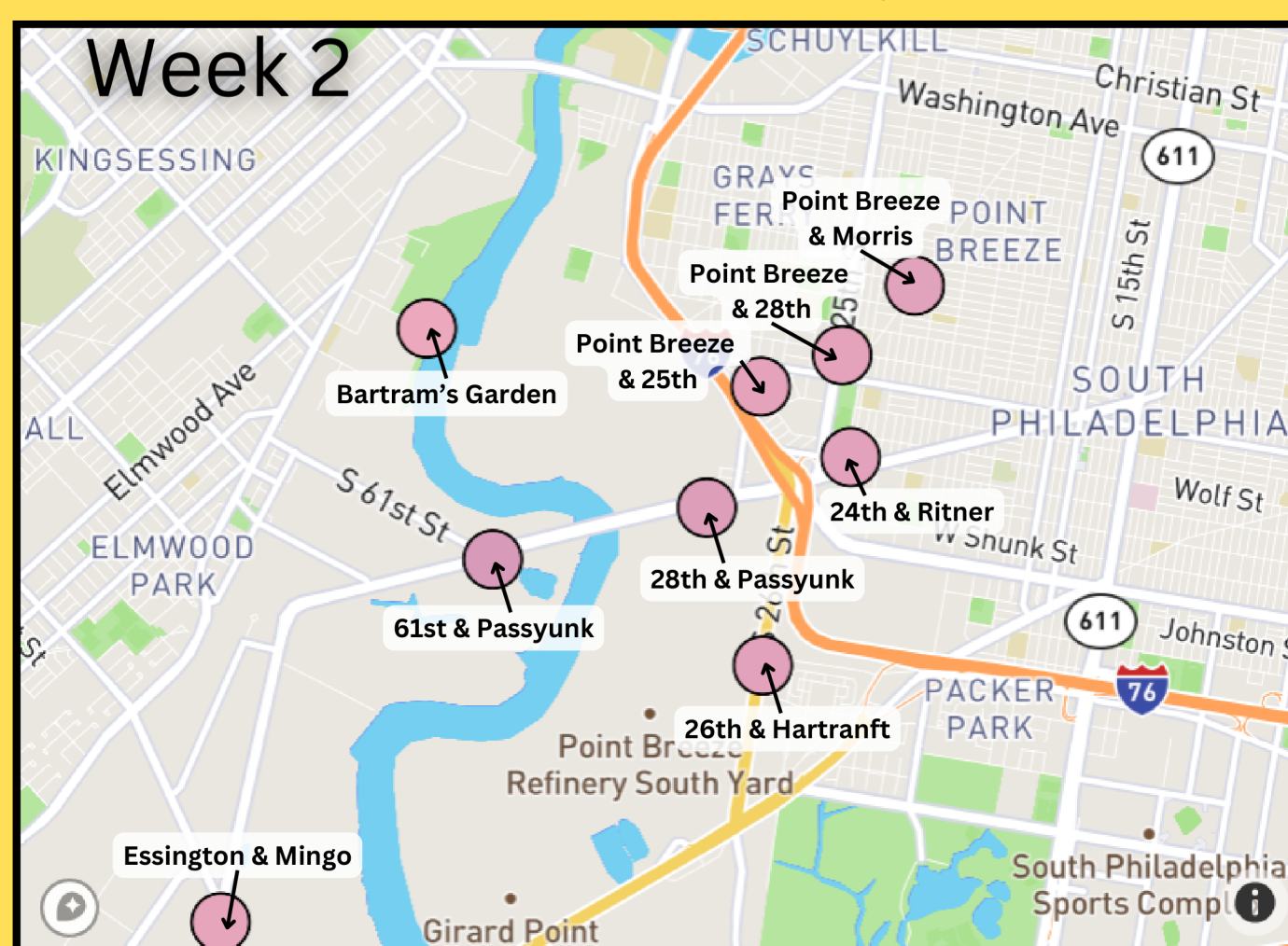


Benzene concentrations at each site, during each week

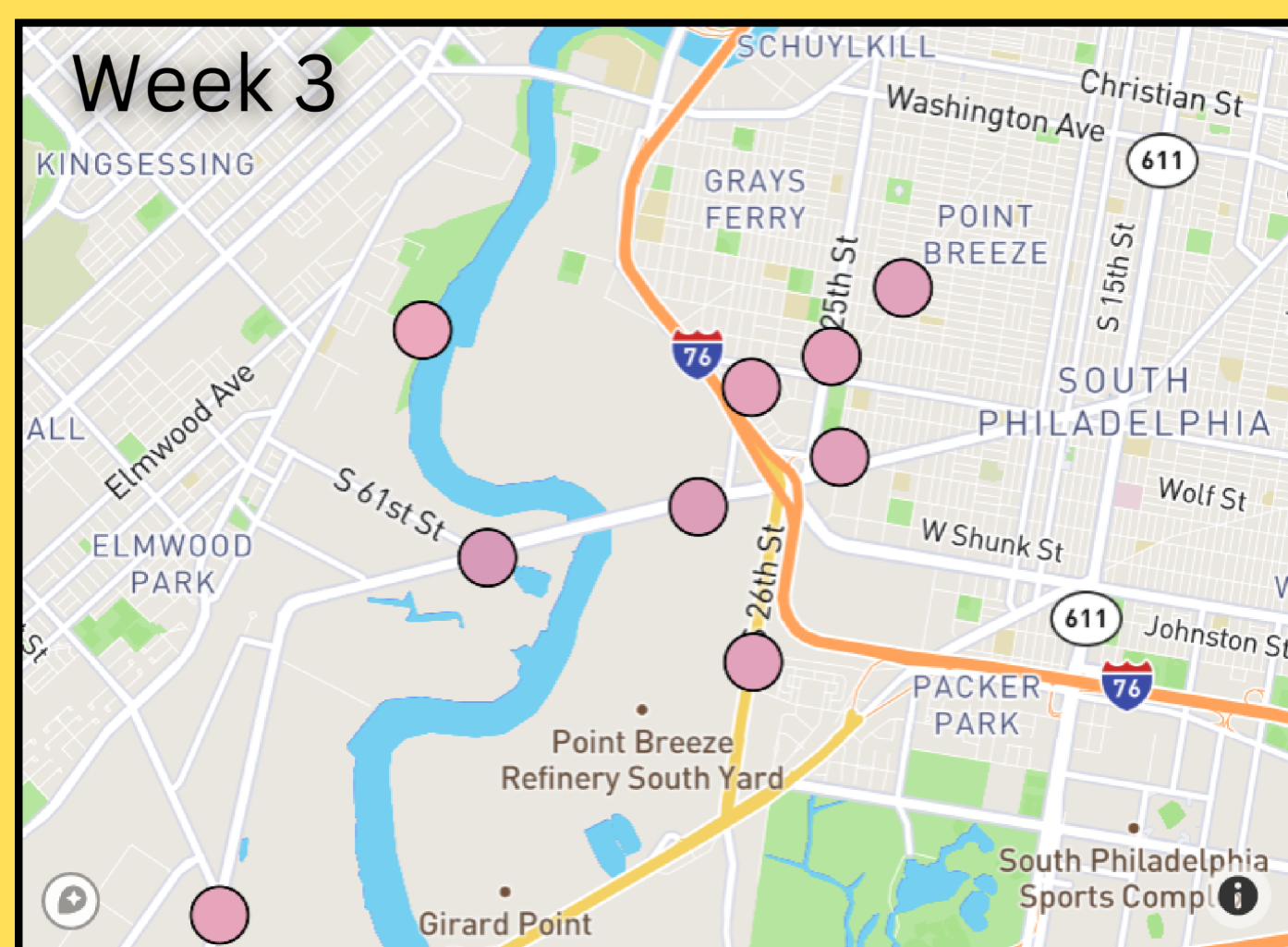
September 27 - October 4, 2023



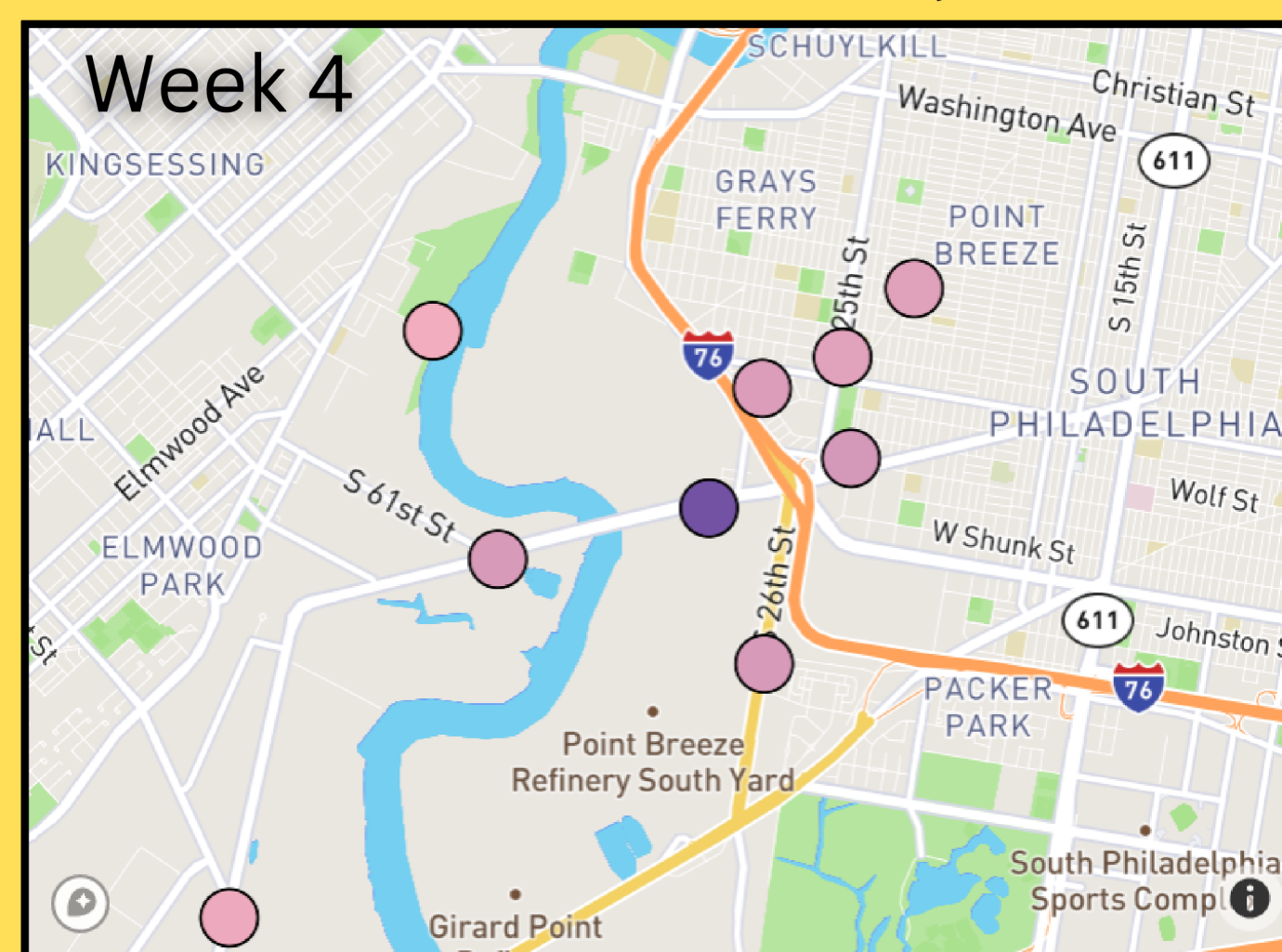
October 4 - October 11, 2023



October 11 - October 18, 2023



October 18 - October 25, 2023



Lighter pink means **less benzene** (lower concentrations), while darker purple means **more benzene** (higher concentrations).

Most of the sites had benzene concentrations below $2 \mu\text{g}/\text{m}^3$ in October, so most of them are in the light pink range.

We leave air monitors at each site for one week. You can interpret the results shown here as the average concentration at that site over the period of time in the title.

Contact us:
thriveair@gmail.com

Dr. Sheila Tripathy
(978) 821-0657

Benzene isn't the only chemical we measured in the air. To see the results for other pollutants and for more information about the study, visit our website at:

THRIVEairphilly.com

