

## Introduction

Rhode Island has the **highest adult asthma rate** in the U.S. (12.6%)<sup>1</sup>, with significant racial disparities: 28.4% of Black and 14% of Latinx residents (ages 5-64) have asthma, compared to 9.4% of white Rhode Islanders.<sup>2</sup> In Providence, this burden is concentrated in South Providence and Washington Park. These neighborhoods located near the **industrial port** are disproportionately **low-income, minority, and linguistically isolated**.<sup>3</sup> Alongside elevated rates of PM, NO<sub>2</sub>, and ozone, residents experience ongoing threats to their quality of life through the production of **noxious odors**.

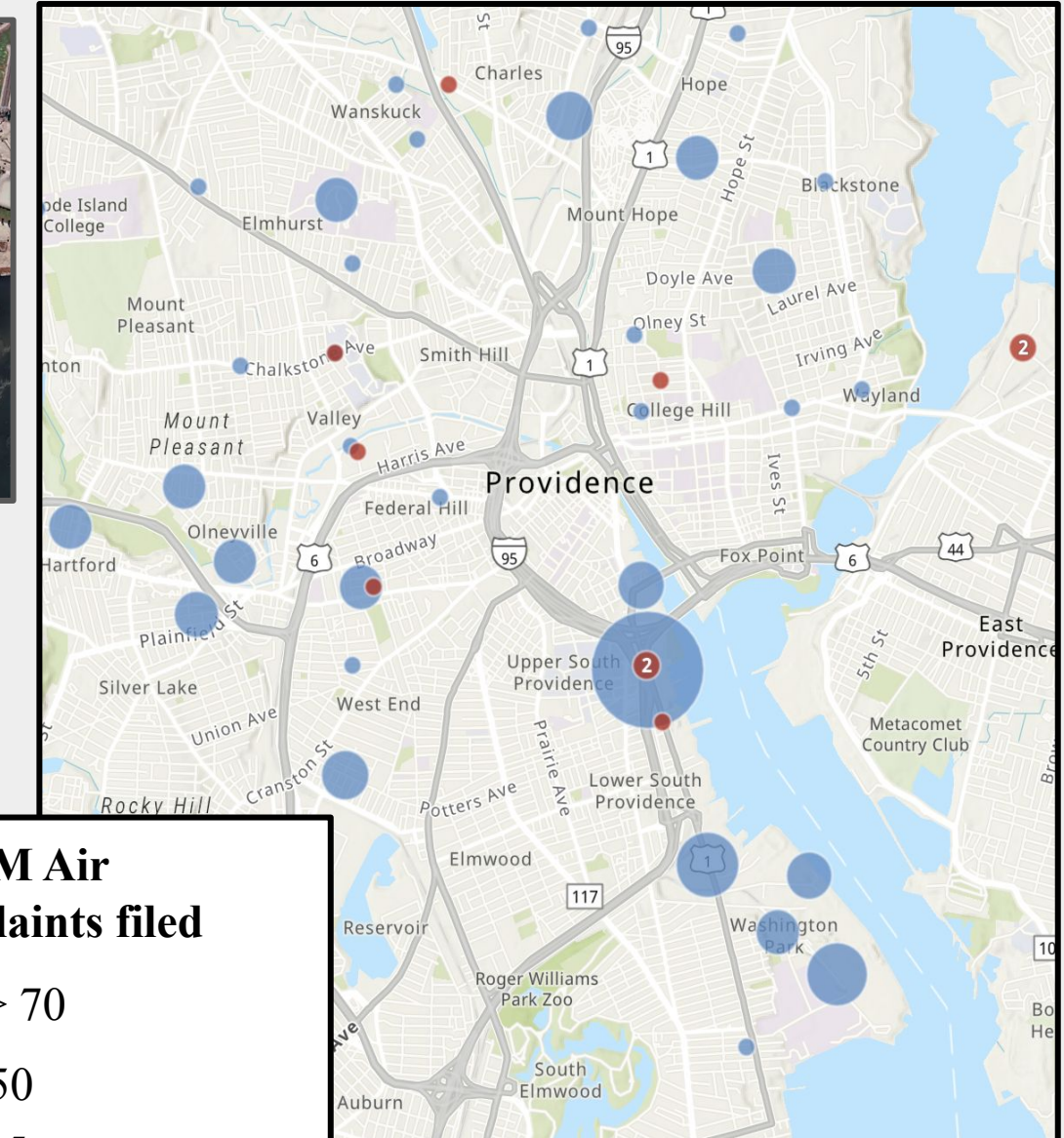
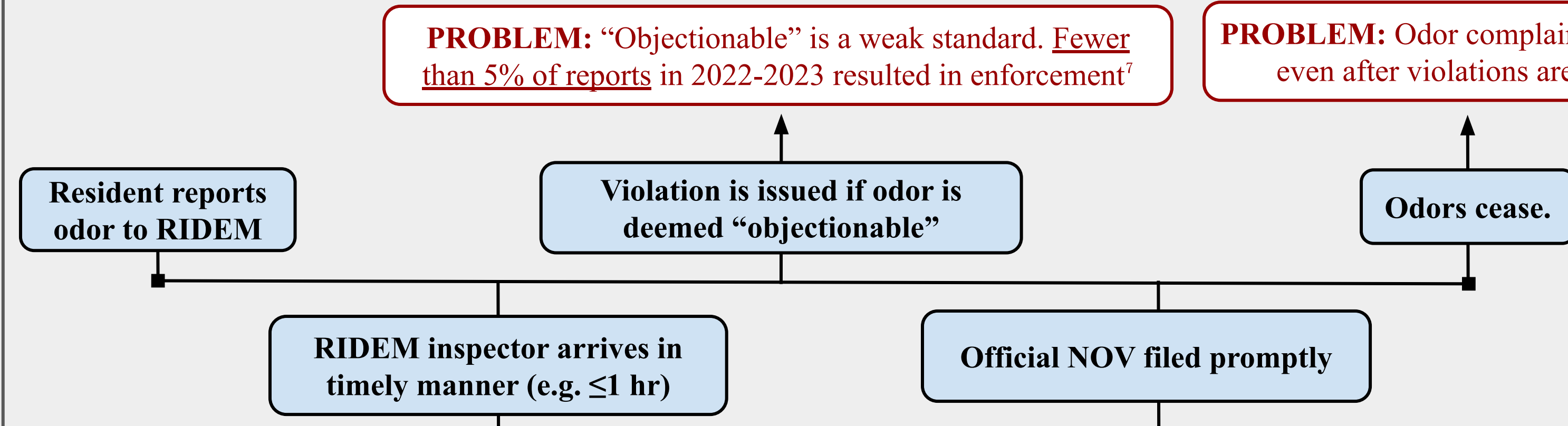


Fig 1. Ratio of official air-pollution complaints logged by RIDEM compared to penalty actions

Unlike federally regulated criteria pollutants, odors fall under state jurisdiction. In Rhode Island, odor standards are vaguely defined and weakly enforced, leaving communities with few avenues for redress. This project aims to address this regulatory gap by elevating the voices of community members.

## The Regulatory Process & Flaws

*250-RICR-120-05-17: "No person shall emit or cause to be emitted into the atmosphere any air contaminant or combination of air contaminants which creates an objectionable odor beyond the property line of said person."*<sup>6</sup>



**PROBLEM:** ~1/3 of SmellMyCity reports are made when no inspector is on duty

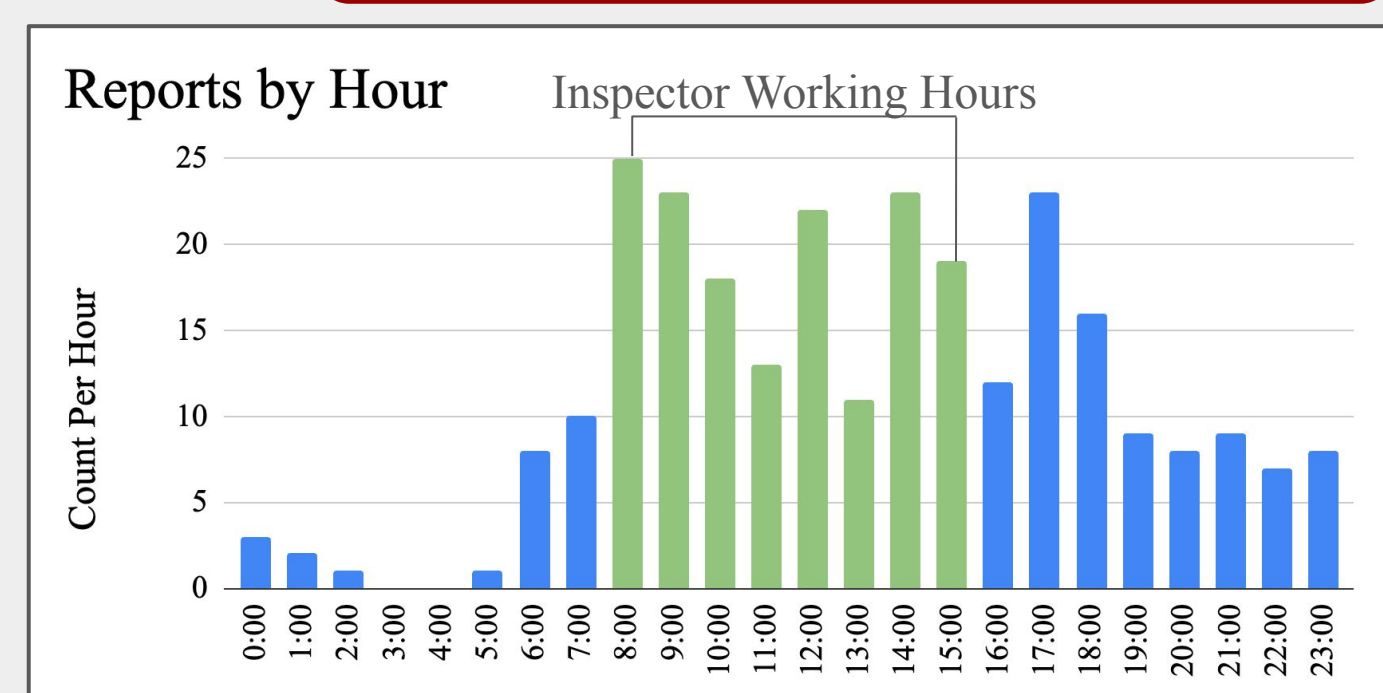


Fig 4. A significant amount of SmellMyCity cases take place when no inspector is on duty

**PROBLEM:** NOV's issued between 2021-2024 occurred after months of ongoing reports

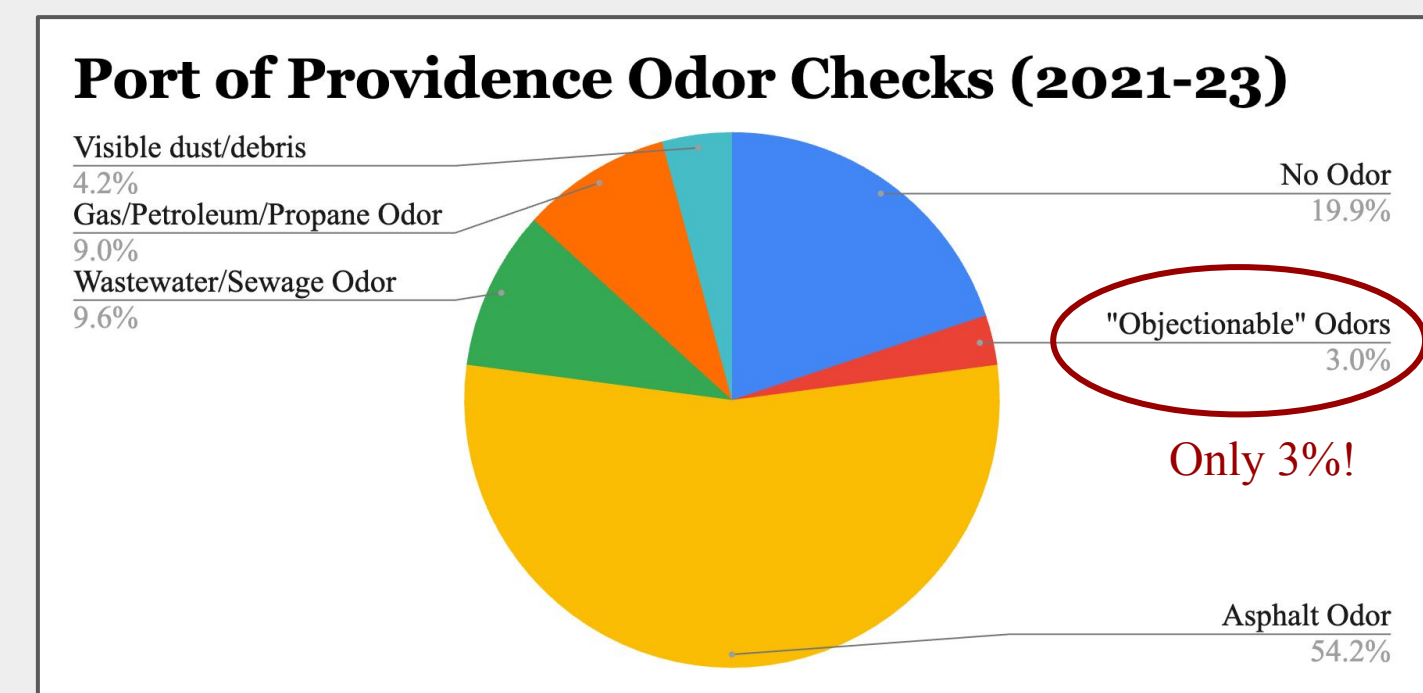
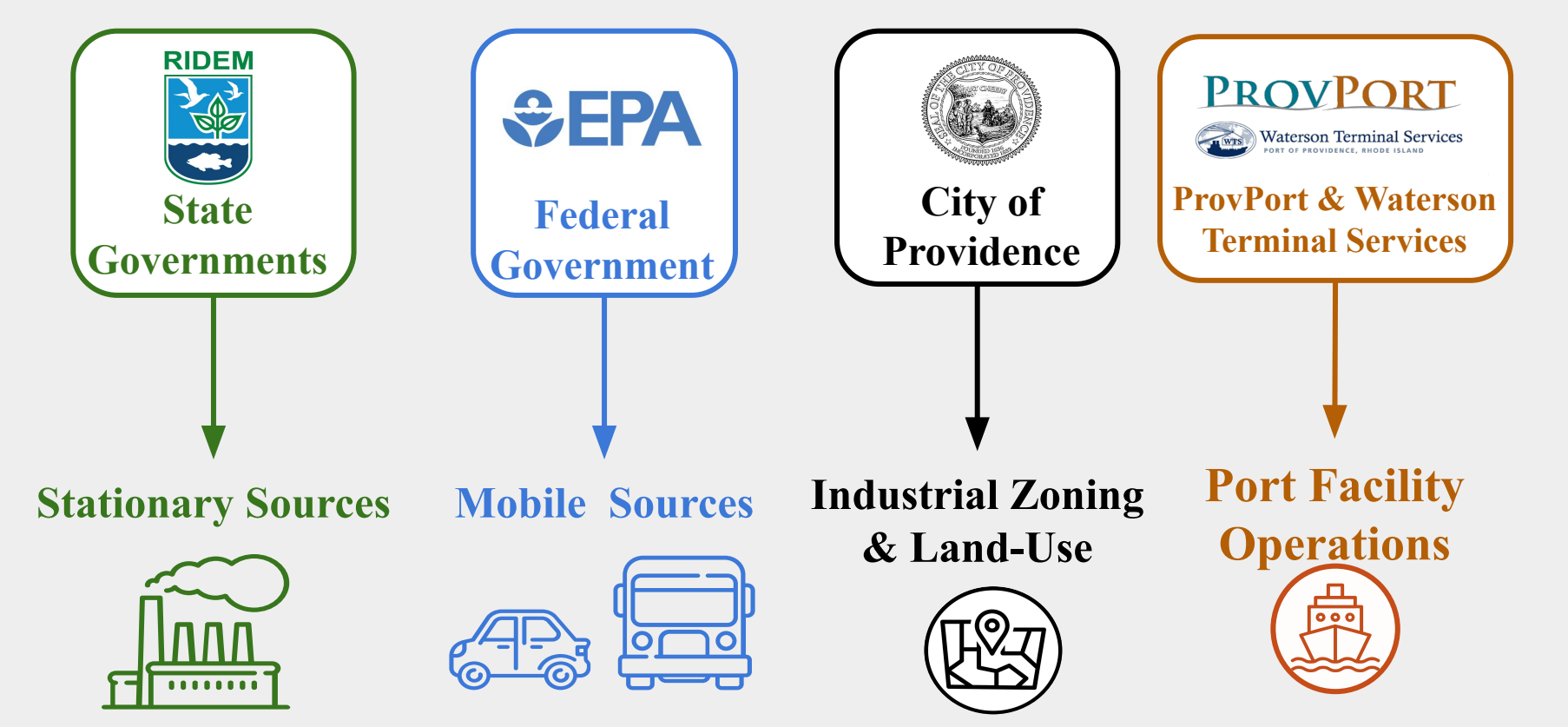


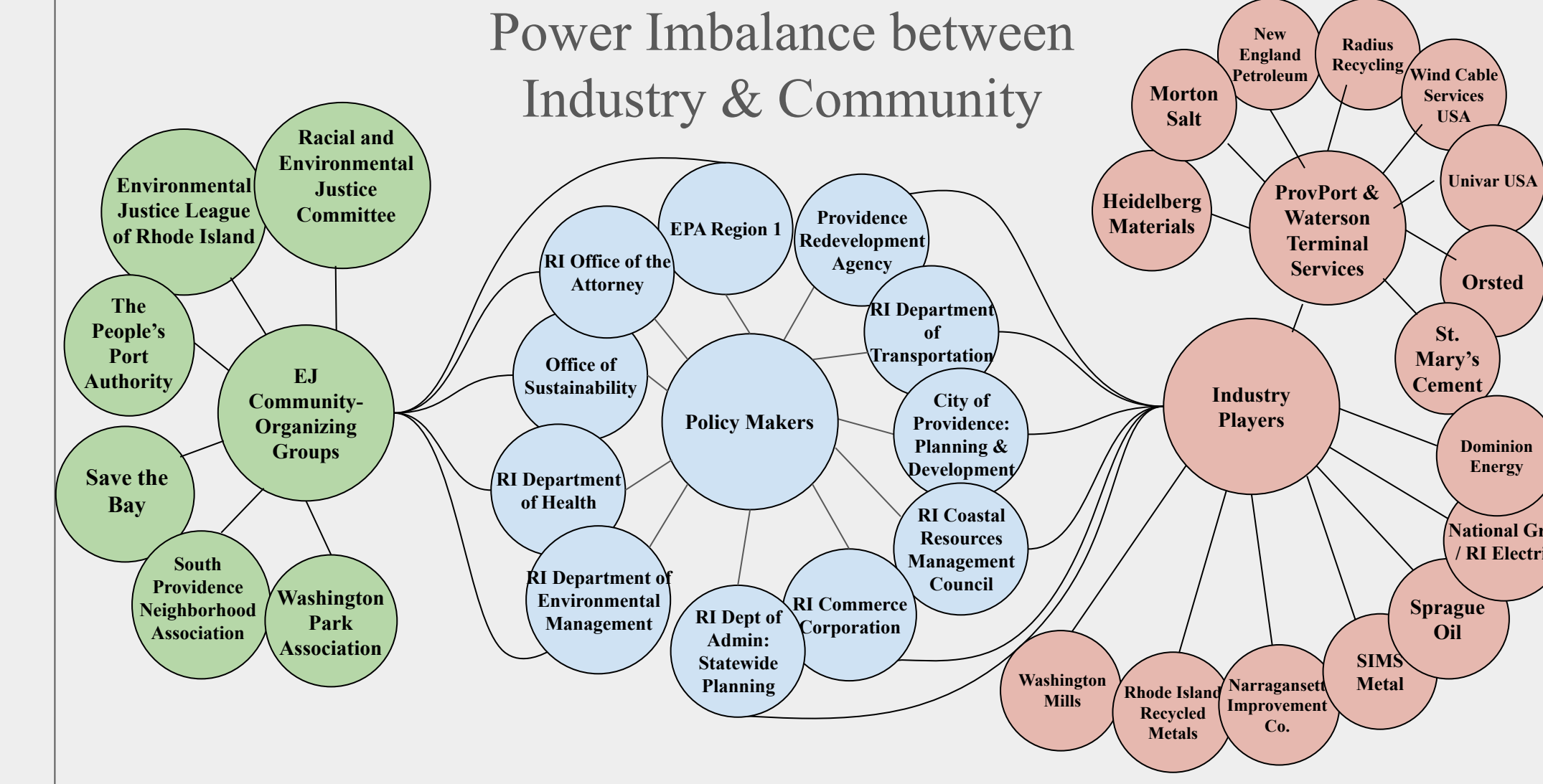
Fig 5. RIDEM Port-monitoring study odor detection breakdown<sup>7</sup>

## Barriers to Accountability

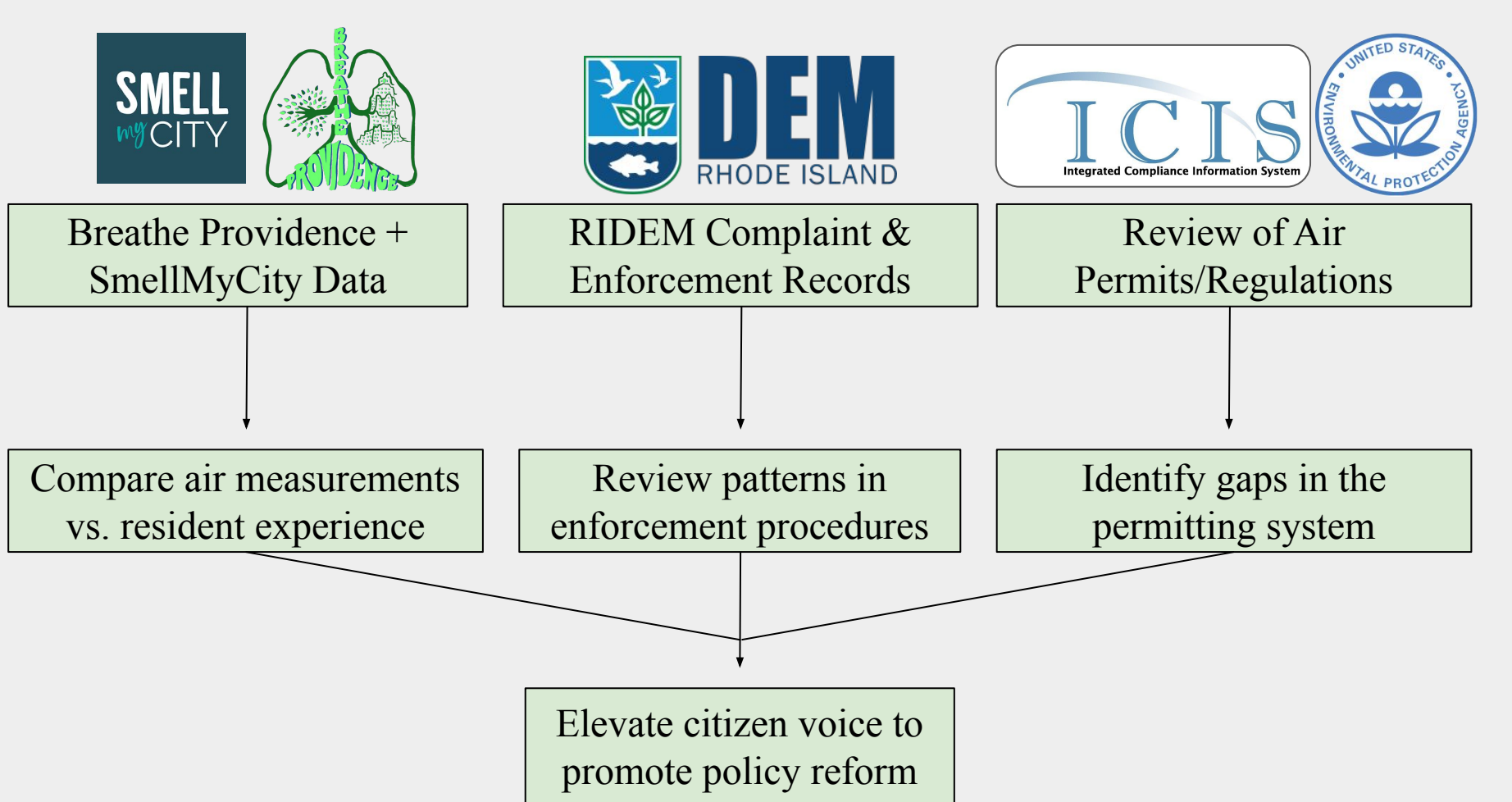
Regulatory Fragmentation at the Port



Power Imbalance between Industry & Community

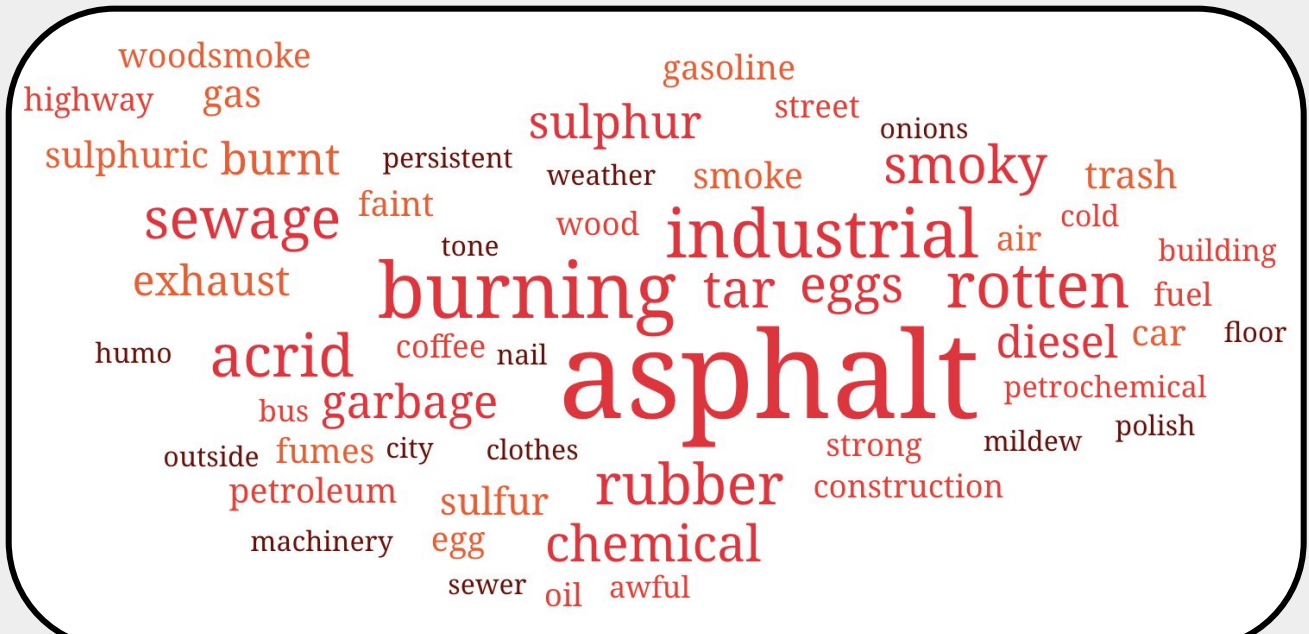


## Methods



## Case Study: Smell My City

Asphalt is the **most common SmellMyCity descriptor** by residents



There are two companies storing liquid asphalt in the Port area. The two are located closely to one another on Allens Ave., making it difficult for inspectors to distinguish the origin of "objectionable" asphalt odors.

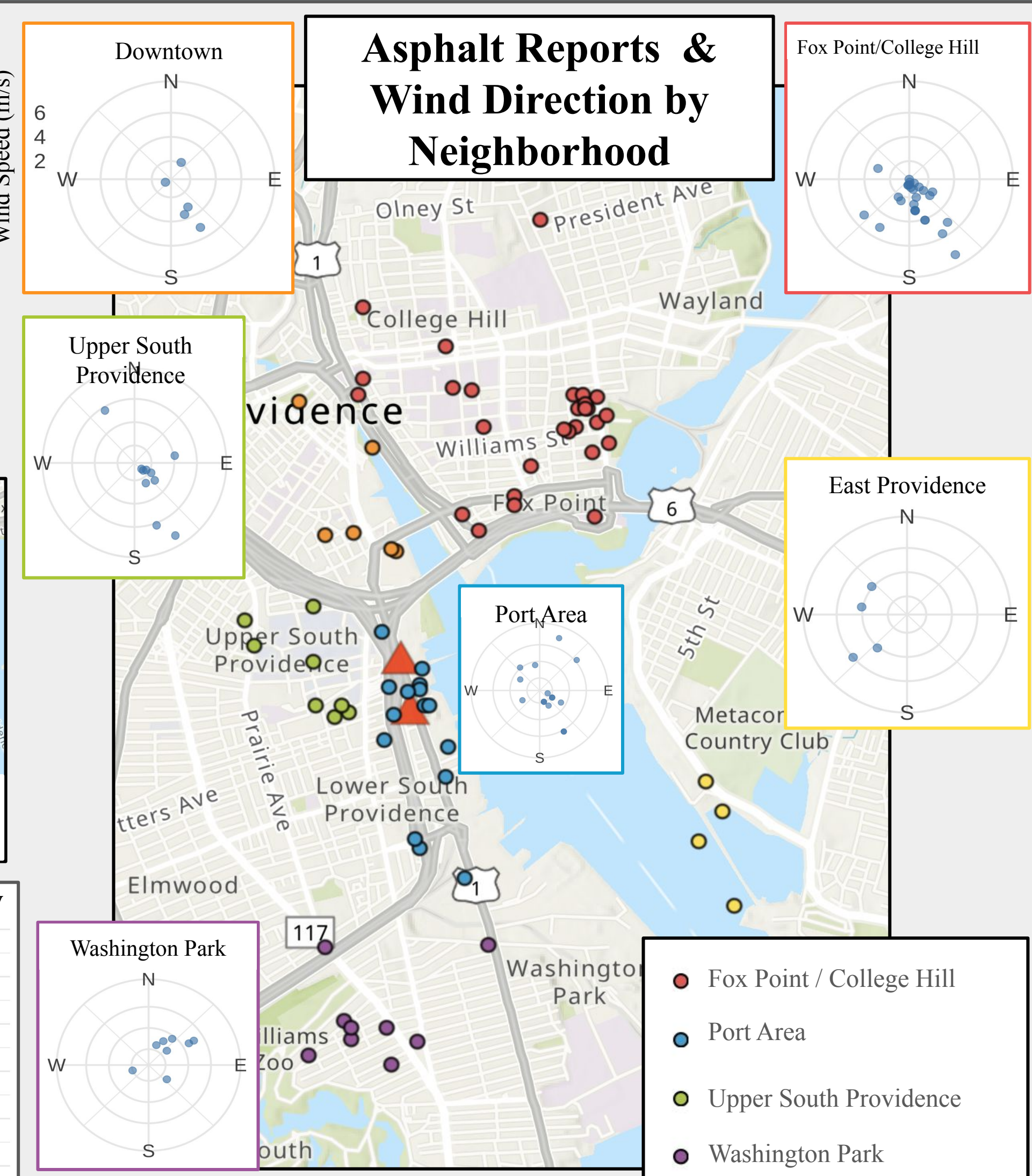


Fig 7. Wind directions at time of asphalt-smell report point back to Allens Ave. asphalt plants

Timeline of Asphalt Odor Reporting on SmellMyCity

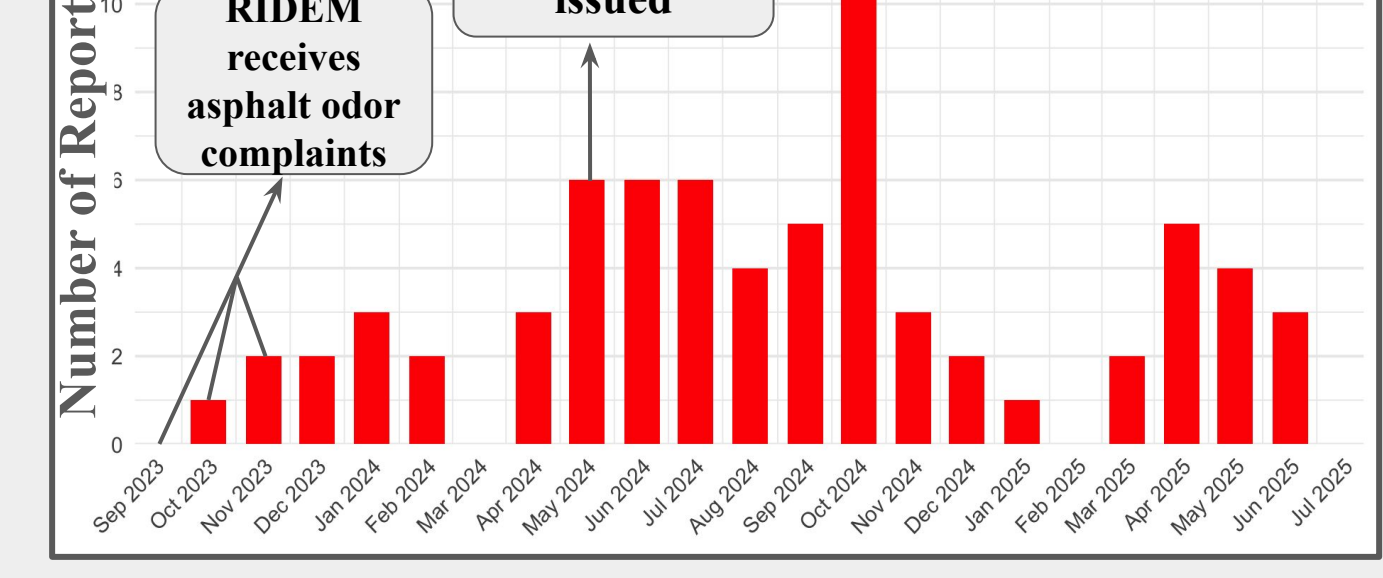
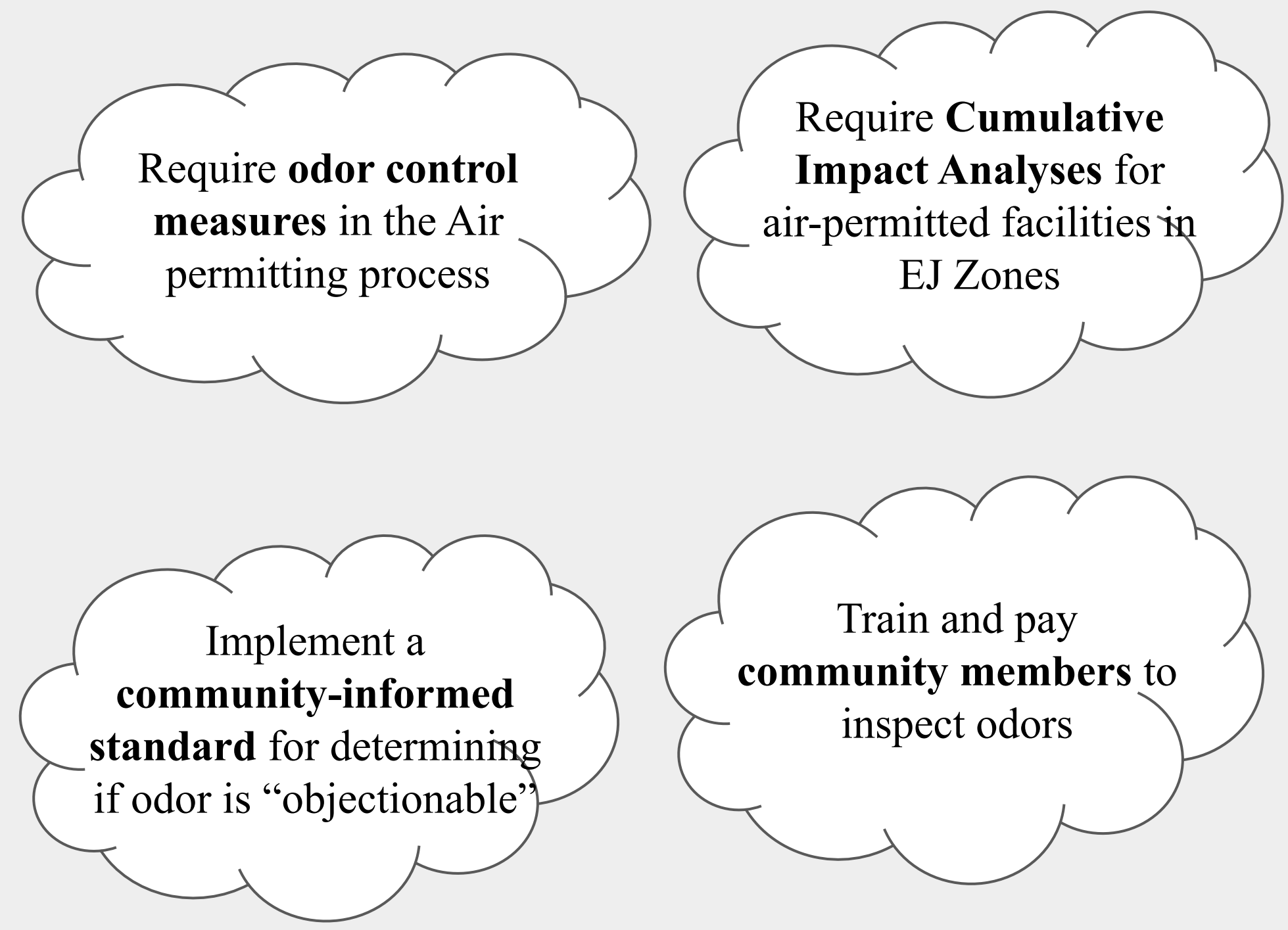


Fig 6. Asphalt-related odor reports increase following the issuance of "Odors" violation to asphalt plant

## Recommendations



## Acknowledgements

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Citations

- [https://www.edc.gov/asthma/most\\_recent\\_data\\_states.htm](https://www.edc.gov/asthma/most_recent_data_states.htm)
- <https://health.rhodeisland.gov/data/asthma-data>
- <https://www.atsdr.cdc.gov/place-health/php/svi/svi-interactive-map.html>
- <https://www.provport.com/>
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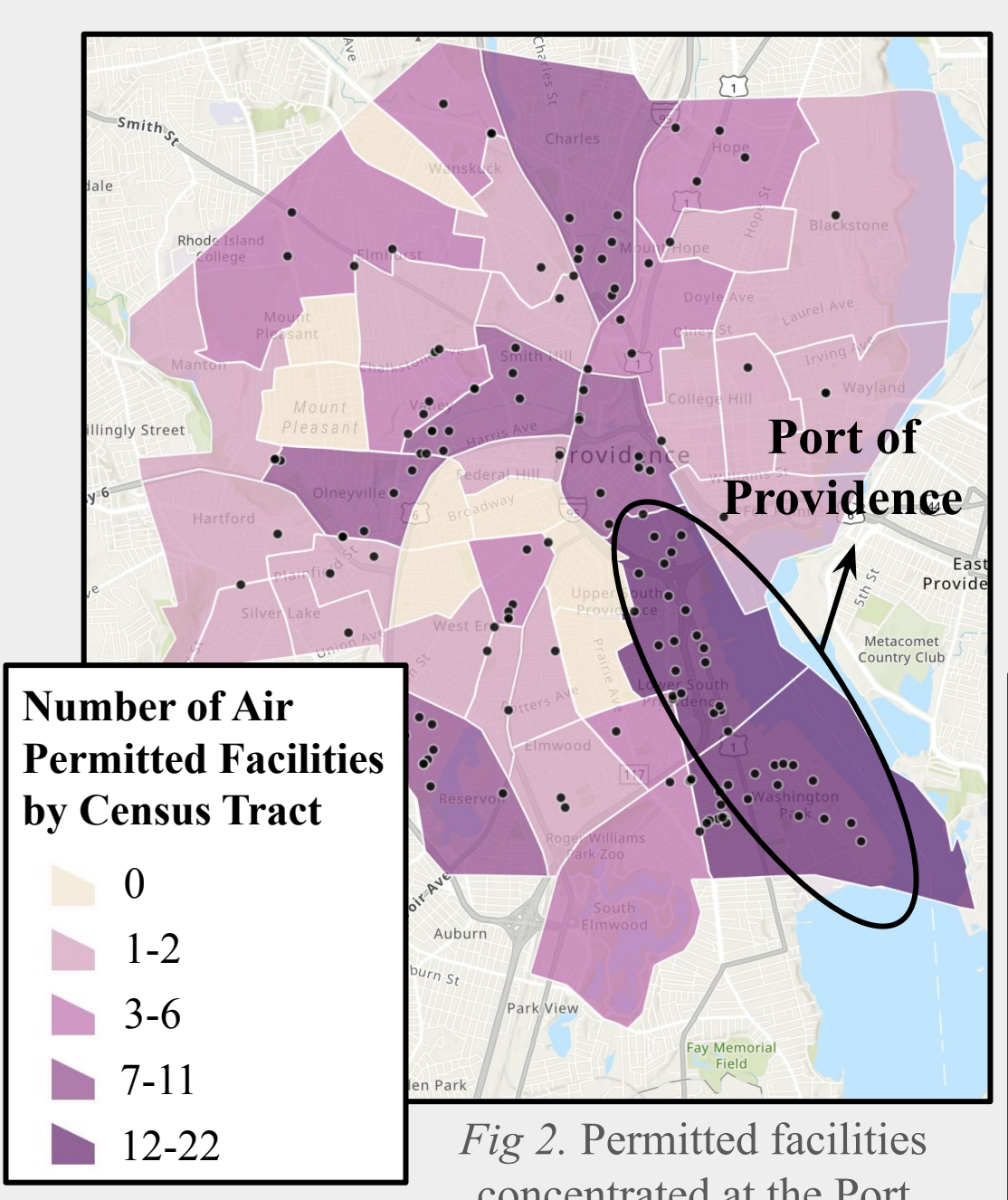


Fig 2. Permitted facilities concentrated at the Port

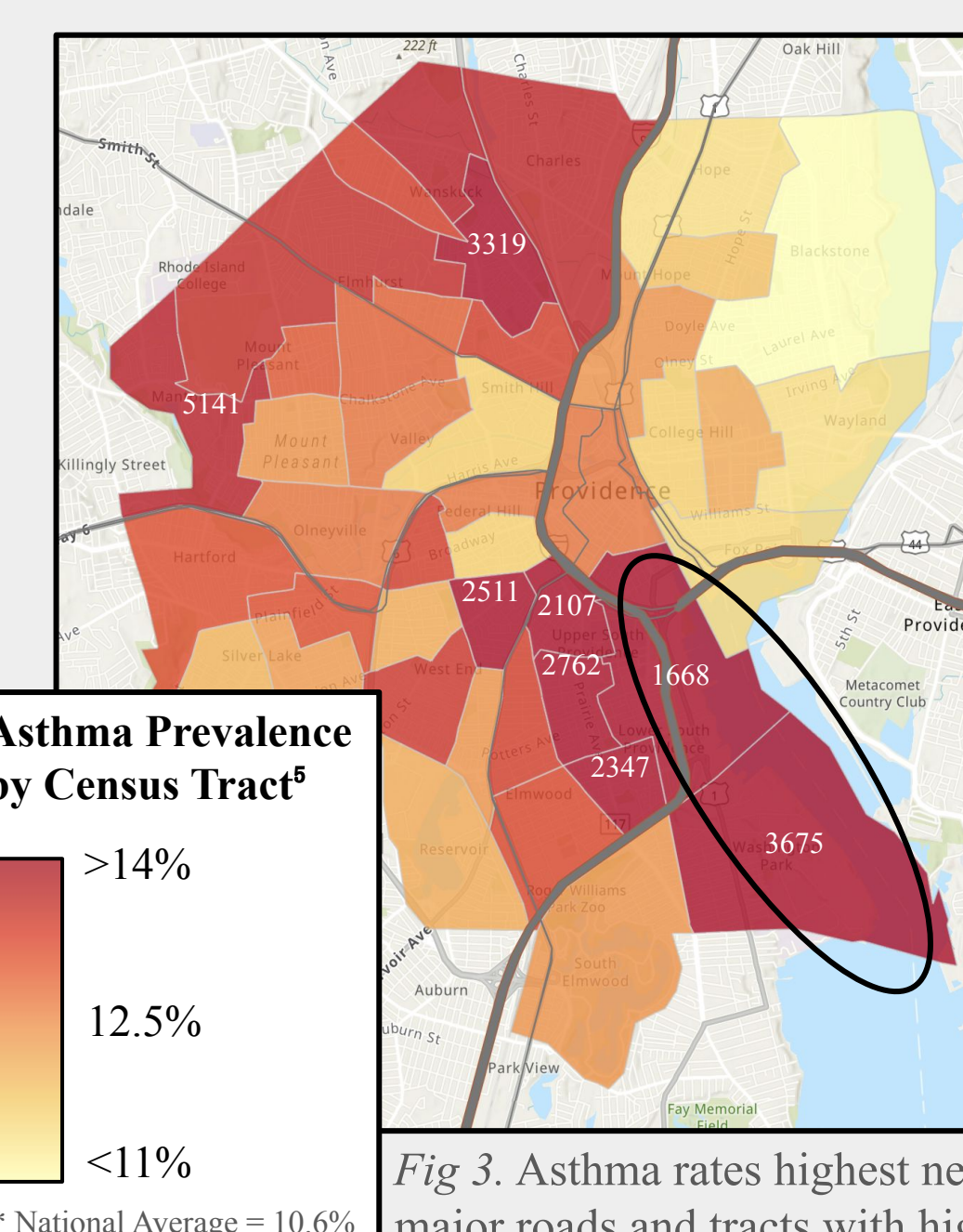


Fig 3. Asthma rates highest near major roads and tracts with high # of air permits