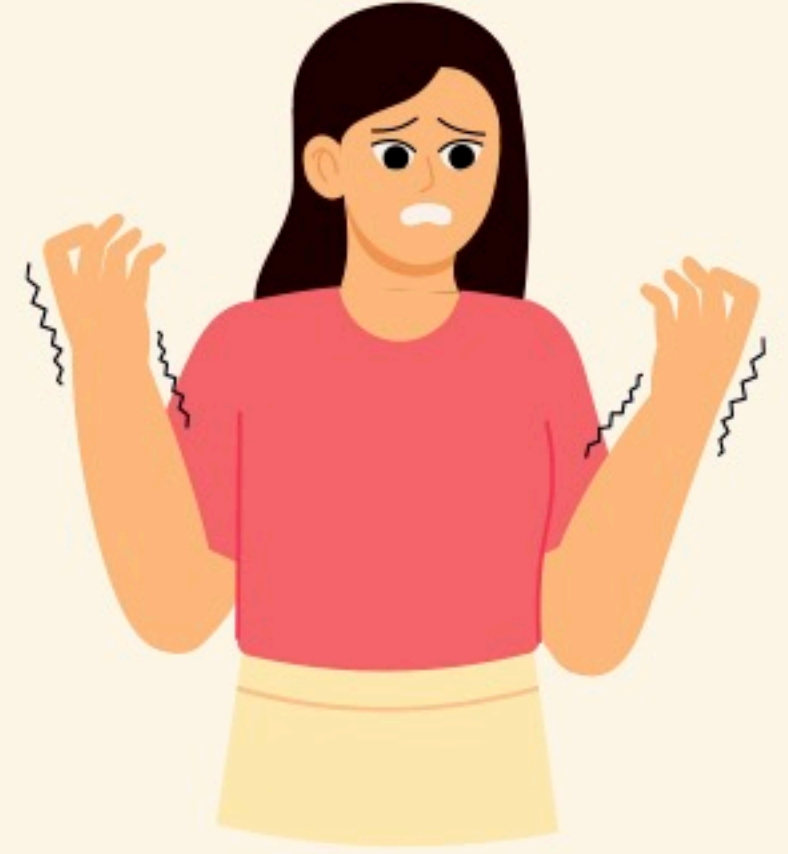
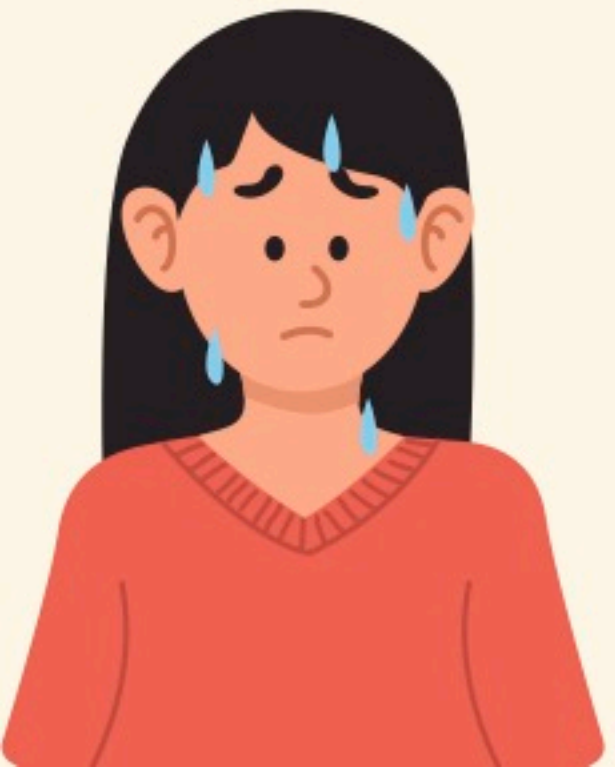




**IT'S GETTING  
HOT IN HERE...  
LITERALLY!!!!**





*Meet Victoria, a double major in Human Health and Environmental Science, at Georgia State University Student Commuting in downtown Atlanta.*

*She walks 10 mins to campus every morning, but recently, she has felt as if she has to adapt. Something is different, but for some reason, she can't put her finger on it.*

*Here are a few things she noticed*

*Its 7am on Friday but it feels like 95 degrees.*

*Her backpack is filled with more sanitary products than books.*

*She has to use her inhaler more often than not.*

*Why?*





# Victoria's Backpack Freshmen Year vs Senior Year

*Ipad*

*WaterBottle*



*3 water bottles*

*Deodorant*

*Mask*

*Inhaler*

*Wet Wipes*

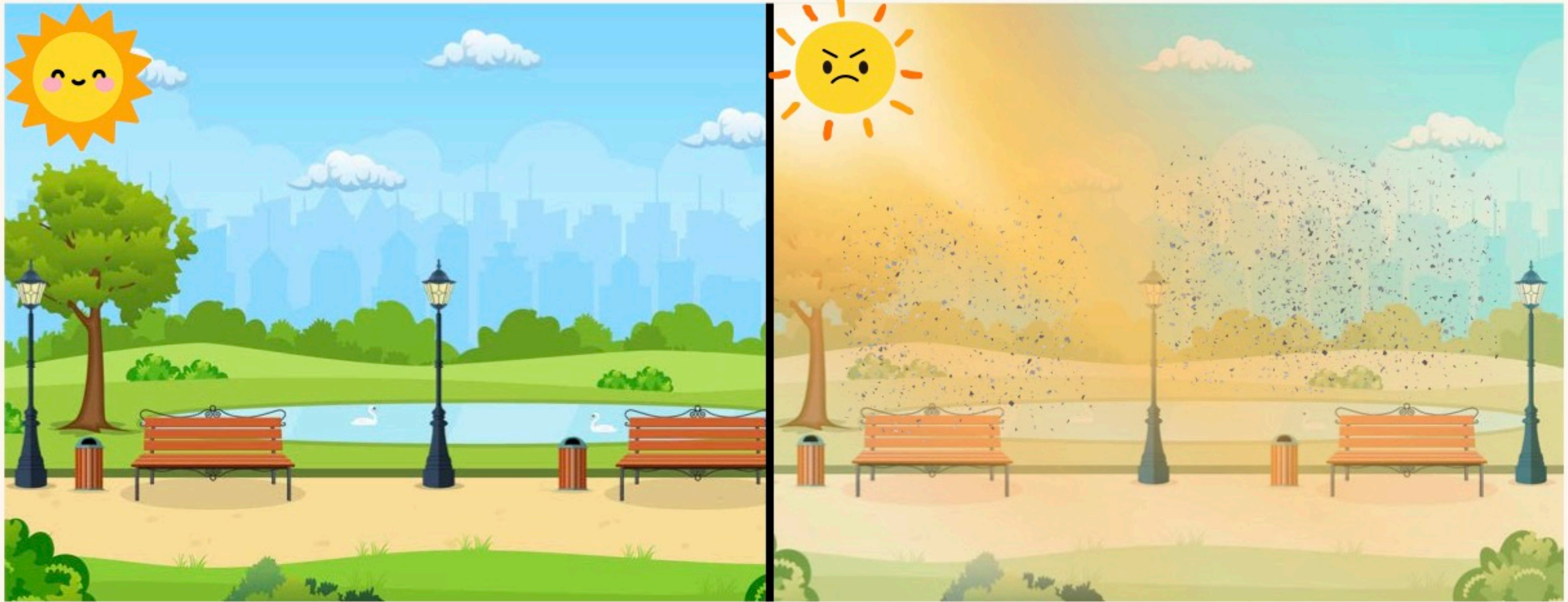
*Ipad*

*Fan*





## *Victoria's Favorite Park in 2008 vs July 2023*



*When Victoria was a kid she would walk through the park with her friends.*

*This is what her favorite park looked like during the July 2023 Post-Canadian Wildfire*

*A Code Orange Alert was issued because the air quality index (AQI) was between 101 and 150. Meaning that people, like Victoria, with asthma were at risk.*



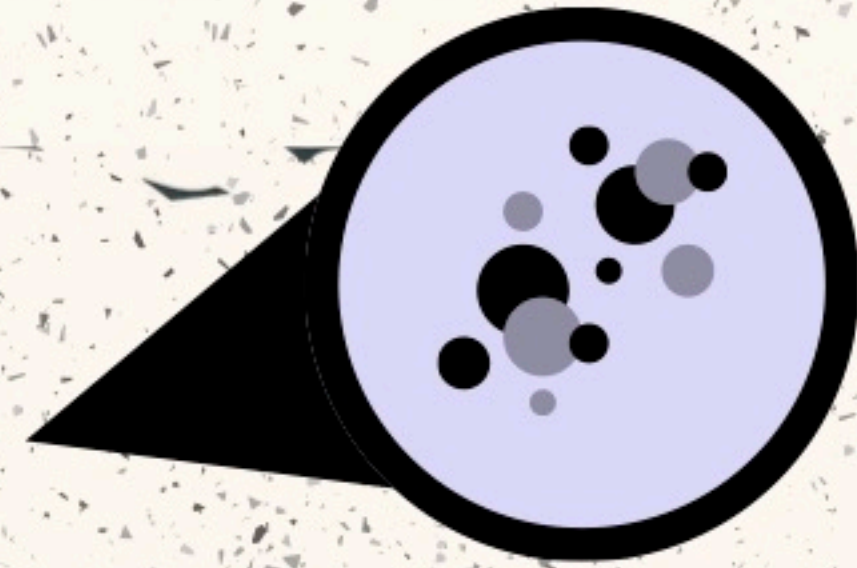
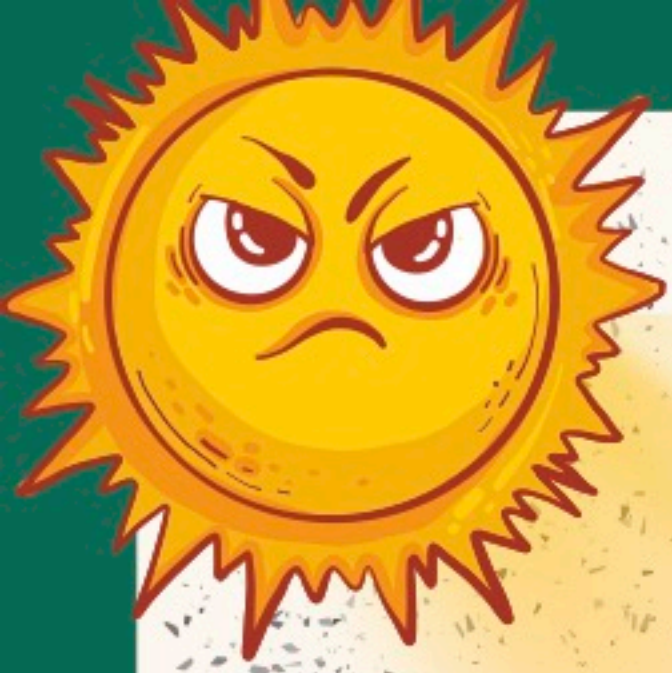


Tropospheric  $\text{O}_3$  is formed through the chemical reaction of nitrous oxides ( $\text{NO}_x$ ), released from motor emissions volatile organic compounds (VOCs), perpetuated by sunlight. Metropolitan Atlanta was ranked 67th in the nation for nation's worst ozone pollution.

$\text{PM}_{2.5}$  are small-diameter air pollutants that can be absorbed into the bloodstream when inhaled. In metropolitan Atlanta, they typically increase in the morning and spike again at night. Metropolitan Atlanta was ranked 124th in the nation for nation's worst  $\text{PM}_{2.5}$  pollution.







- *Increased heat degrades ATL's Air Quality*
- *"With a 10 degree rise in temperature, the chemical reaction that creates ozone doubles" (Luvall), worsening Smog*
- *HMP are disproportionately being affected by extreme heat, as their communities tend to align with where there is red, indicating higher temperatures*





## Human Health Impacts

- **Ozone ( $O_3$ )**
  - Exacerbates respiratory conditions such as asthma, reduced lung function, and can lead to permanent lung damage/disease
- **$PM_{2.5}$** 
  - Can penetrate deep into the lungs and bloodstream, causing cardiovascular diseases, strokes, respiratory infections, and even premature death
- **Combined exposure to  $O_3$  and  $PM_{2.5}$  has synergistic effects, increasing mortality from cardiovascular and respiratory diseases.**







## Impacts on HMP\*

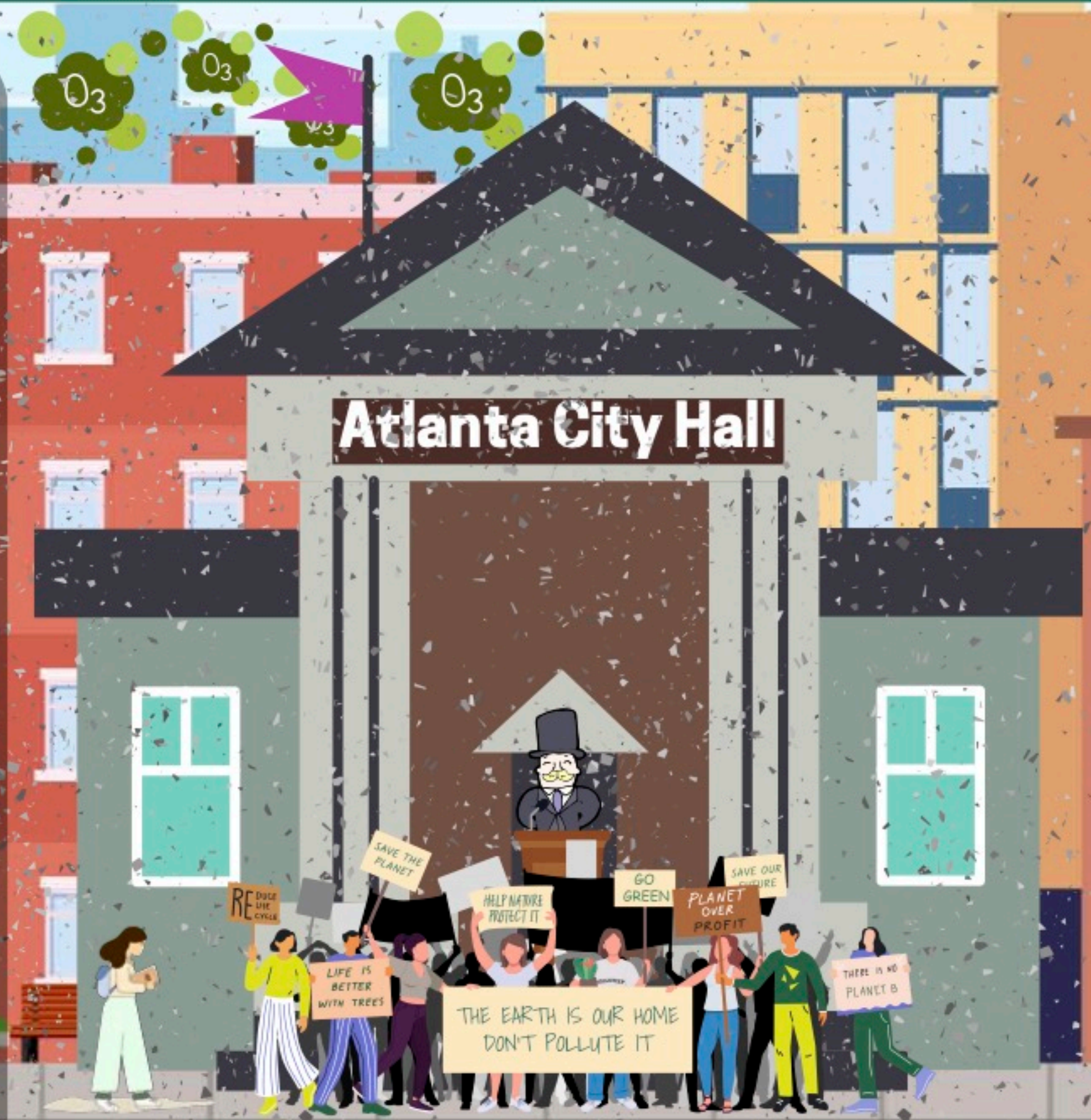
*\*HMP-Historically Marginalized Populations\**

- *Communities of color/ lower socioeconomic statuses often face higher exposure to air pollution*
  - *Proximity to industrial areas and busy roadways*
- *Black and Latino pop. have higher rates of mortality linked to PM<sub>2.5</sub> compared to other racial groups*
  - *Stems from inequities in housing, healthcare accessibility, and economic resources*



## *O<sub>3</sub> Environmental Policies*

- Policies (ex. Clean Air Act) have improved air quality, but recent PM<sub>2.5</sub> limits emphasize the need for continued reductions in air pollution sources.*
- Atlanta could include expanding urban greenery and adopting stricter emissions standards for vehicles and industries.*





*As Victoria walks home she wonders: Is this the new normal? The heat, the haze, the heaviness in her lungs—it all feels impossible to escape.*

*Victoria can't seem to adapt. She is in a constant state of questioning, noticing, and trying to understand. With every water bottle she fills up and every harsh breath there is a story of resilience and a call for change.*





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## ***Los Angeles: Clean Air action Plan(CAAP)***

***CAAP targeted emissions from ports and cars.***  
***they updated trucks and expanded the use of***  
***renewable diesel.***

***Result: Diesel PM down by 91% NOX fell 74% SOx***  
***down 98%***

