

# THE IMPACT OF POINT SOURCES IN ROXBURY

PM<sub>2.5</sub> LEVELS ARE  
**240%**  
OVER WORLD HEALTH  
ORGANIZATION LIMIT  
ACCORDING TO OUR SENSORS

## WHAT ARE POINT SOURCES?

POINT SOURCES ARE IDENTIFIABLE SINGLE LOCATIONS THAT EMIT LARGE AMOUNTS OF POLLUTANTS

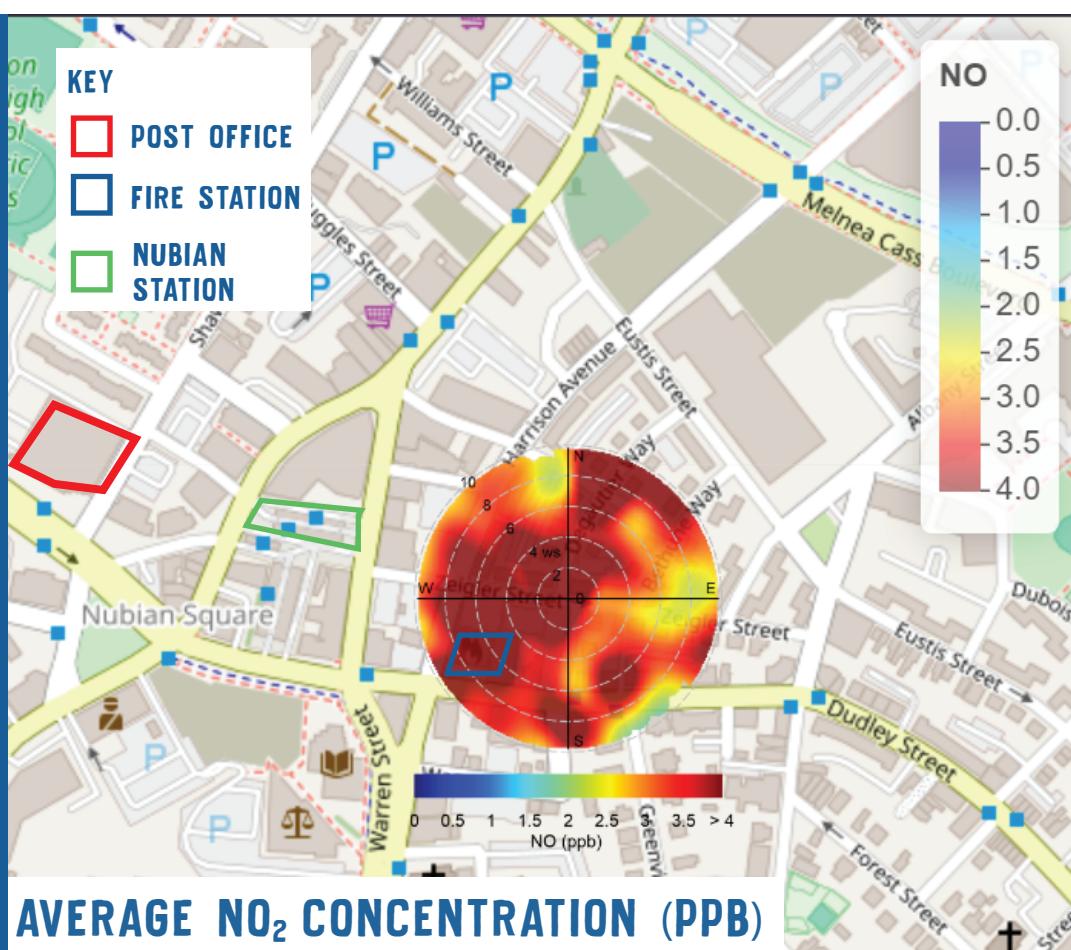
POINT SOURCES ARE OFTEN PLACED IN VULNERABLE AREAS AND CAN AFFECT THE HEALTH OF COMMUNITIES

POINT SOURCES CAN BE DIFFICULT TO LOCATE VIA DATA DUE TO THEIR HIGH IMPACT OVER SMALL AREAS, WHICH CAN MAKE GETTING SUPPORT FOR MITIGATION DIFFICULT

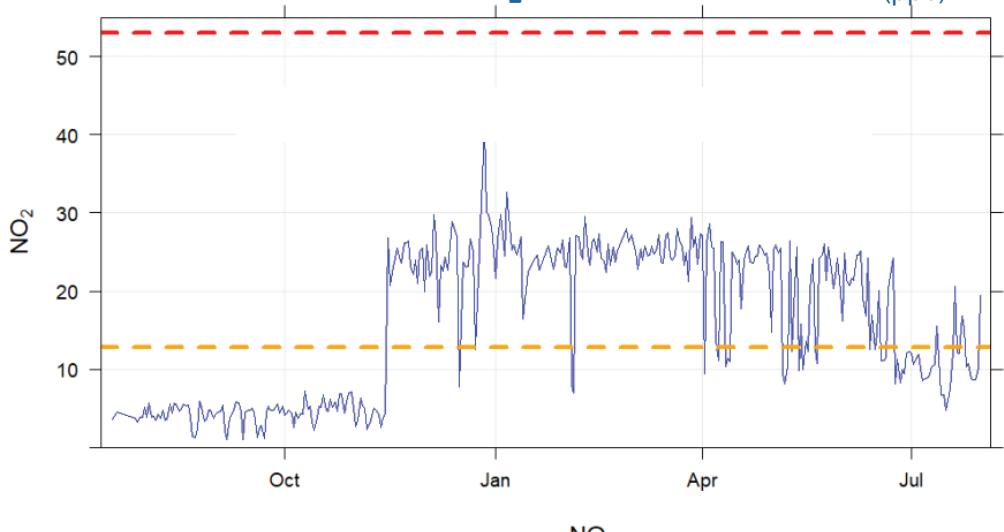
## POINT SOURCES IN ROXBURY

IN ROXBURY, FIRE STATION 14 AND THE ROXBURY POST OFFICE ARE POINT SOURCES WHICH CONTAIN FLEETS OF DIESEL VEHICLES

THESE POINT SOURCES PRIMARILY EMIT PM<sub>1</sub>, WHICH THE EPA HAS NOT SET LIMITS FOR, SO WE ILLUSTRATE THE EFFECTS USING OTHER POLLUTANTS ASSOCIATED WITH DIESEL VEHICLES



### MEDIAN DAILY NO<sub>2</sub> CONCENTRATION (ppb)



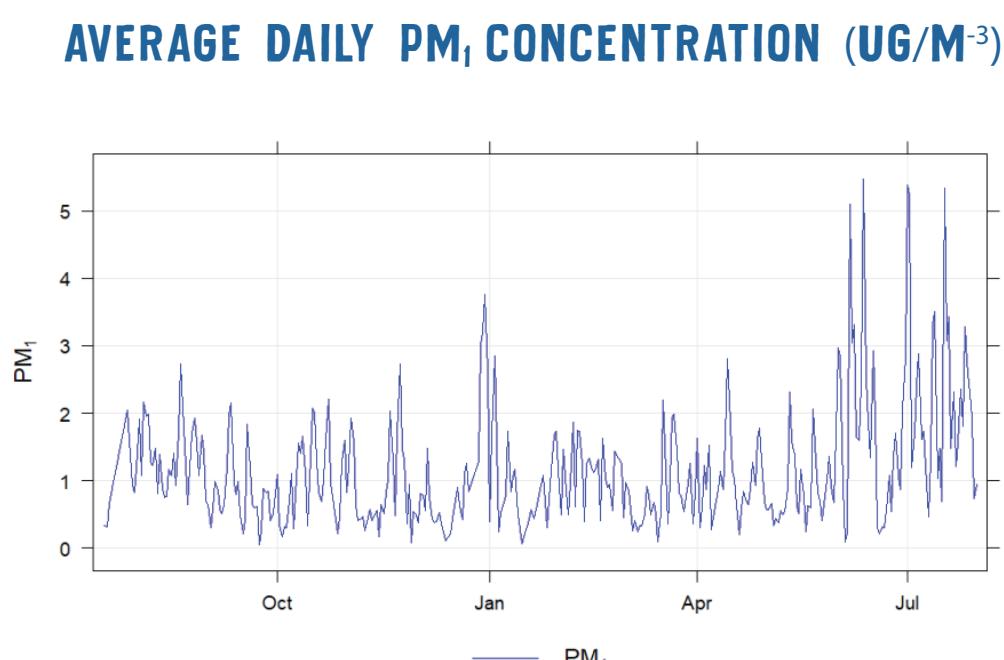
## NO<sub>2</sub> IN ROXBURY

THE GRAPH TO THE LEFT SHOWS THE MEDIAN DAILY NITROGEN DIOXIDE (NO<sub>2</sub>) CONCENTRATION IN ROXBURY

THE CONCENTRATION EXCEEDS THE WORLD HEALTH ORGANIZATION LIMIT FOR HEALTHY AIR BUT NOT THE EPA'S LEGAL LIMIT

THIS MAKES MITIGATION DIFFICULT AS NO LAWS HAVE BEEN BROKEN WHILE THE AIR QUALITY MAY STILL BE DANGEROUS

# THE CASE FOR PM<sub>1</sub> LEGISLATION



## PM<sub>1</sub> IN ROXBURY

PM<sub>1</sub>, A SUBSET OF PM<sub>2.5</sub>, MEASURES PARTICULATE POLLUTANTS SMALLER THAN 1 MICRON\*

WHILE THERE ARE NO STANDARDS FOR PM<sub>1</sub>, THE EPA LIMIT FOR PM<sub>2.5</sub> IS APPROXIMATELY 9UG/M<sup>3</sup>, AND THE WHO RECOMMENDED LIMIT IS 5UG/M<sup>3</sup>.

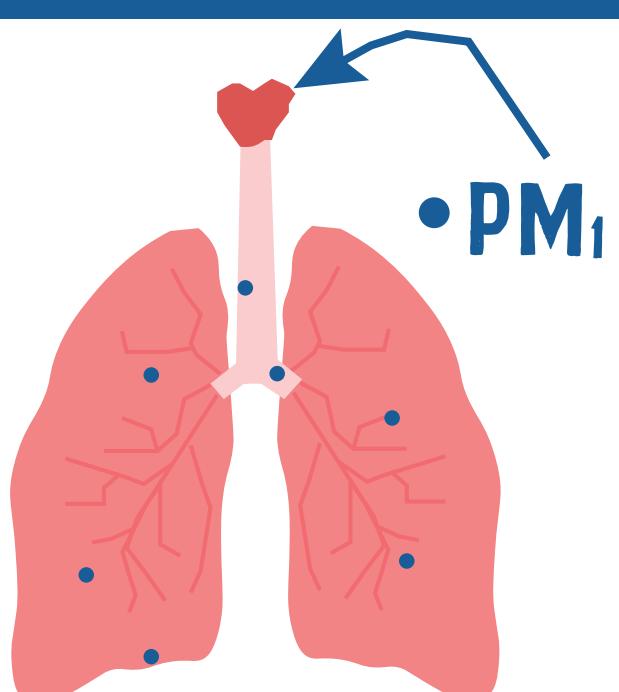
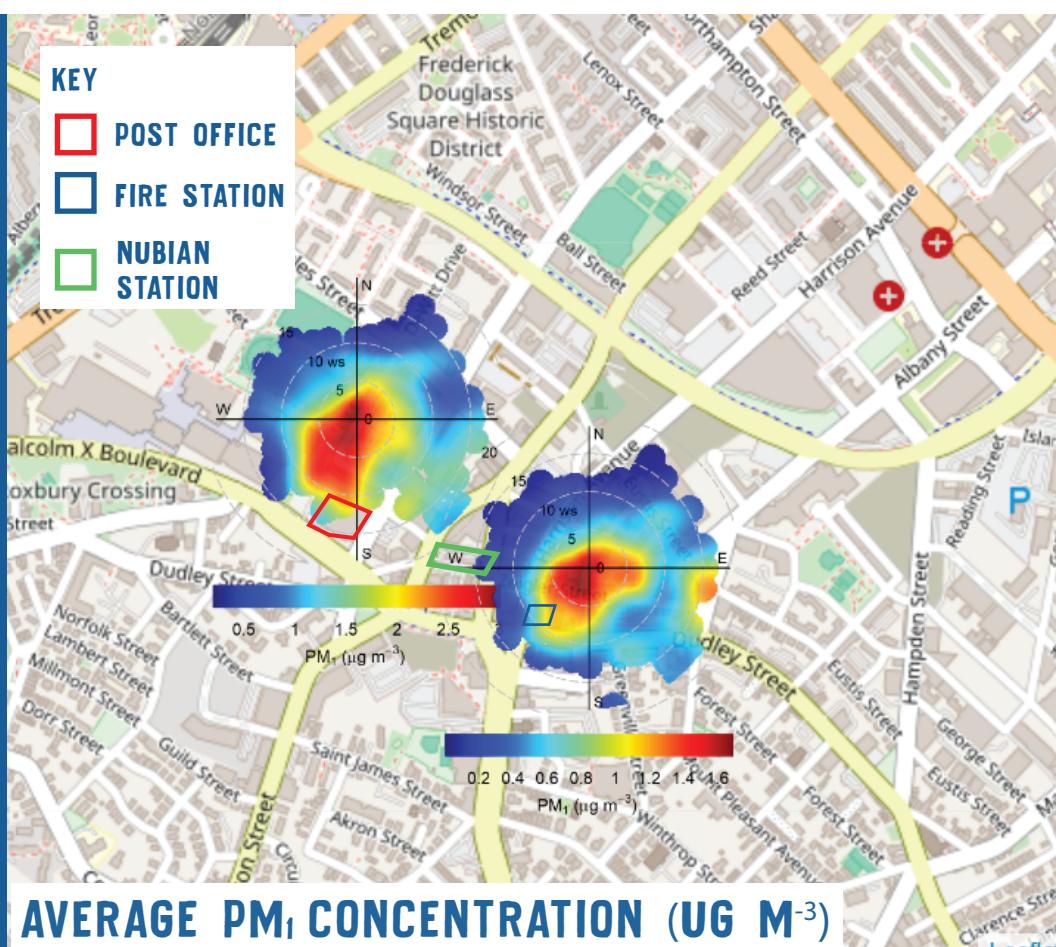
IF WE EXTEND THIS LIMIT TO PM<sub>1</sub>, WE SEE THAT THE DAILY AVERAGE DOES NOT ROUTINELY EXCEED THE LIMITS. THE DAILY MAXIMUM DOES, HOWEVER.

## LACK OF REGULATION

HOWEVER, PM<sub>2.5</sub> LIMITS ARE NOT REPRESENTATIVE OF PROTECTIONS AGAINST DIESEL POLLUTION, BECAUSE 90% OF DIESEL PARTICULATE MATTER IS PM<sub>1</sub>\*\*

WITHOUT REGULATIONS IT IS DIFFICULT TO EVEN LABEL AREAS AS HIGHLY POLLUTED, LET ALONE BEGIN TO PROTECT THEM

THIS LEAVES THE COMMUNITY VULNERABLE TO DANGEROUS LEVELS OF PM<sub>1</sub>



## HEALTH EFFECTS AND WHAT WE CAN DO

ACCORDING TO IQ AIR, PM<sub>1</sub> CAUSES DAMAGE TO THE HEART, LUNGS, AND OTHER ORGANS IN THE BODY, AND CARRIES CARCINOGENS.

ITS SMALL SIZE MAKES IT ABLE TO MORE EASILY PENETRATE INTO THE BLOOD STREAM\*

IF YOU ARE LOOKING FOR WAYS TO SUPPORT CALLING FOR CHANGE CONSIDER CONTACTING ACE\*