




# IRON LUNGS

In June of 2023, Montreal was covered in a cloud of apocalyptic smog. Sun rays were distorted and dissipated, coloring the obstructed sky with a menacing hue.

The 2023 forest fires were not in Montreal.

PM2.5 particles, which emanate from forest fires, soar into the atmosphere and travel for miles. When encountering life, their journey is often unobstructed, as their small size allows them to infiltrate into the most intricate systems of biology. In humans, they travel effortlessly into the respiratory and blood systems.

The threat of urban fire has been tamed, but this newest emergency, inevitably seizing Montreal every summer now, only grows. Within the network of fire brigades, 5 dead stations are brought back to life to tackle this crisis.

-  Intervention radius 5 km
-  Abandoned fire station
-  Active fire station

## TOXINS

ALTITUDE

## EFFECTS

PM10, NO<sub>2</sub>, SO<sub>2</sub>, CO

0 - 500 m

Respiratory irritation,  
inflammation, exacerbation  
of asthma and lung diseases,  
increased cardiovascular  
risks, poisoning

PM2.5, COV, SOA, CO

500 m - 3 km

Deep lung penetration and  
inflammation, cardiovascular  
and respiratory diseases,  
headaches and irritations

PM2.5, Black Carbon, O<sub>3</sub>, CO

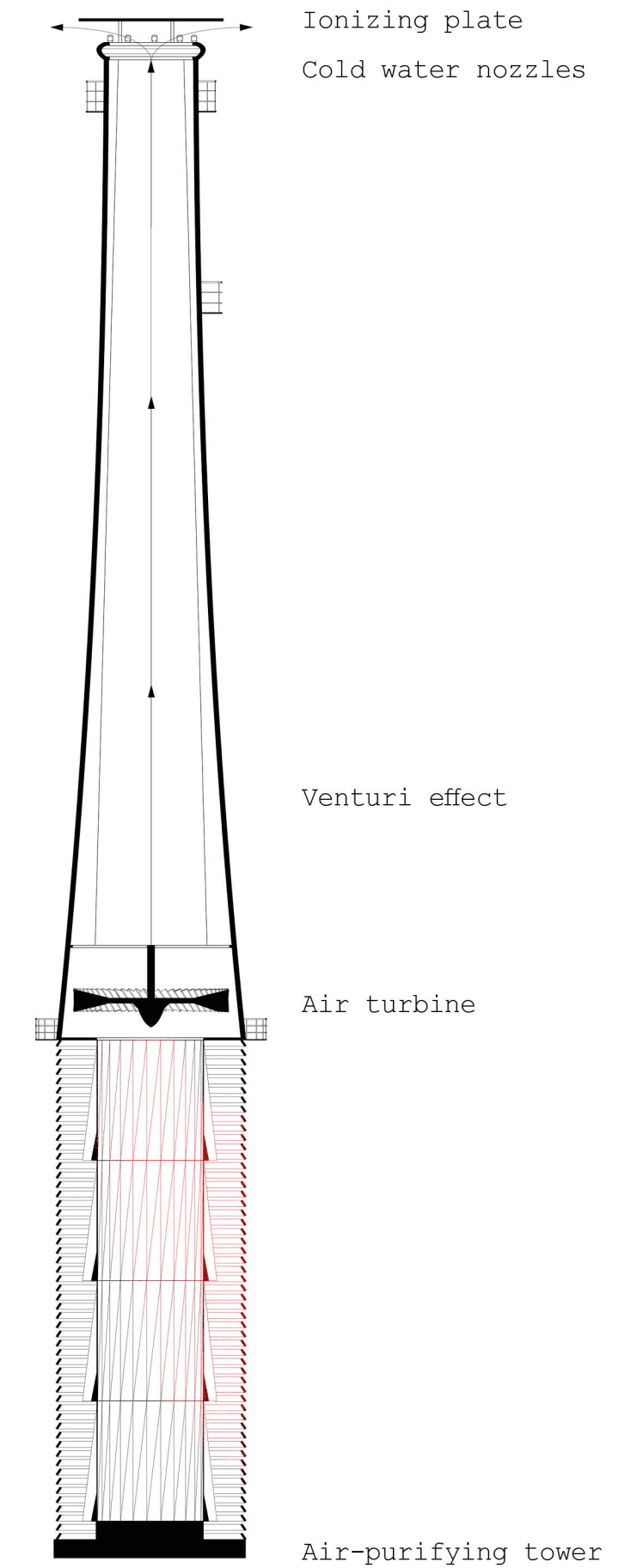
3 km - 8 km

Neurological issues,  
respiratory distress,  
increased risk of long-term  
cardiovascular diseases

respiratory system



Herring Gull  
Age : 4 y/o  
Height : 18''  
Weight : 1 lb



Male Human  
Age : 42 y/o  
Height : 5'9''  
Weight : 154 lbs



## *FIRE BURNING, FAR AWAY FROM MY ITCHING EYES*

The abandoned fire stations, all built following a similar plan, unadapted to contemporary firefighting devices, are converted into centers for emergency air-purifying. Hose drying towers give their place to large scale passive air-purifiers.

Alongside a geometry which fortifies the Venturi effect to pull the contaminated air up into large filters, an ionizing crown and cold water nozzles ensure that the clean air falls back down to human elevation.

The tower is designed to harness all capacities for energy within its geometry, making its function entirely self-sufficient.