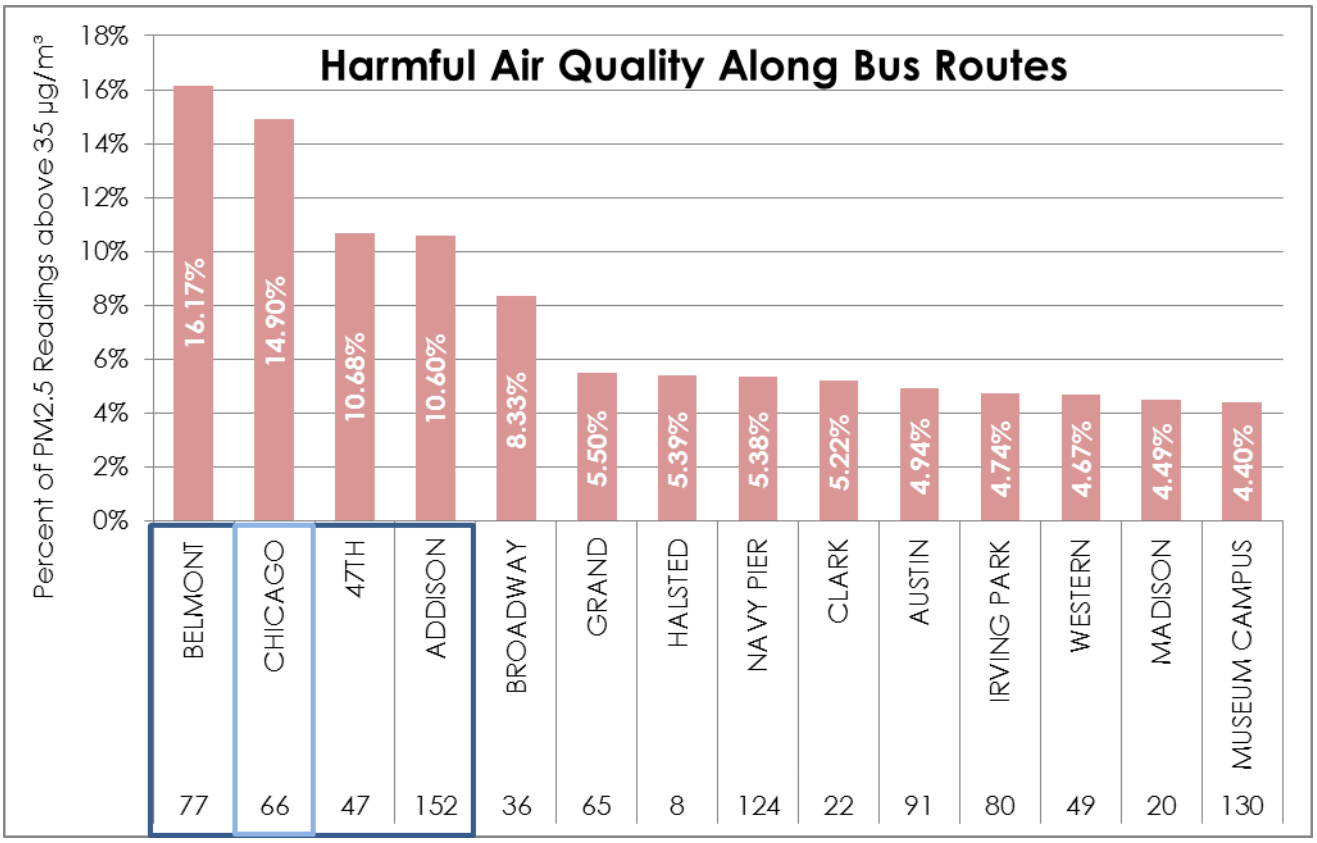
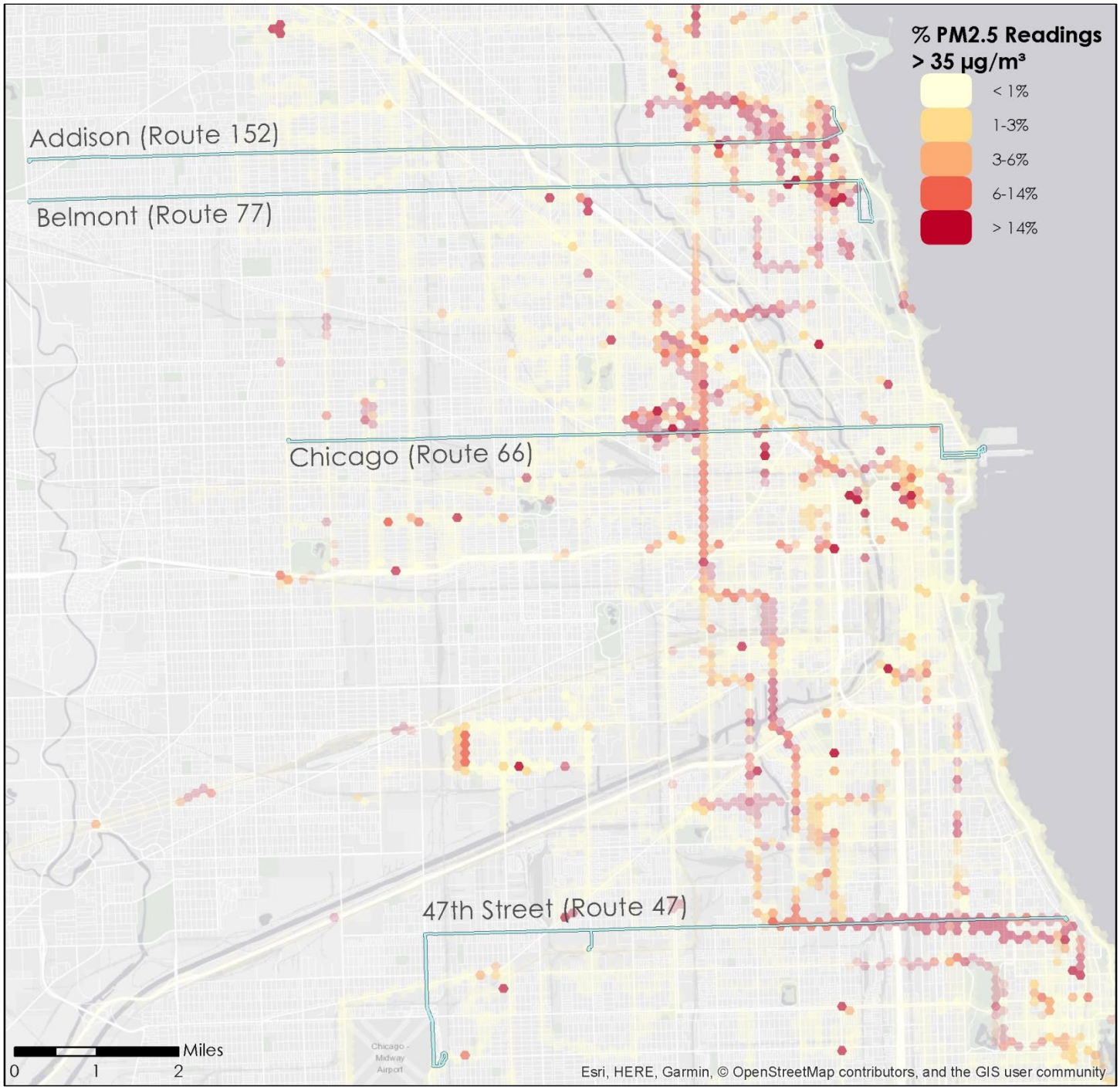
Particulate Matter Concentrations along CTA Bus Routes
April 30, 2019

- According to air-quality data collected by ELPC over the summers of 2017 and 2018 (airqualitychicago.org), greater than 3% of $PM_{2.5}$ readings were in harmful levels (>35 µg/m³) along 29 CTA bus routes.
- A few routes stand out – greater than 10% of readings along buses 77, 66, 47, and 152 were in the harmful range.



CTA plans to operate new electric buses on Chicago Ave route #66, including the installation of two overhead fast chargers at each of the terminals of this route (Navy Pier and Chicago/Austin). By mid-2020 CTA expects 25 total e-buses to be service. As full electrification progresses on route #66 (~40 buses at peak), CTA should also consider incorporating e-bus service on routes 77, 47 and 152, where the reduction of diesel emissions would help improve areas particularly burdened by high $PM_{2.5}$ concentrations.

As the following map illustrates, ELPC's data collection and the distribution of harmful readings is not equal along the individual bus routes. Most of the $PM_{2.5}$ readings collected along routes 77, 47, and 152 for example, lie along their eastern ends, where air quality tends to be relatively poor. Harmful readings along route 66 are more evenly distributed along its length, but cluster somewhat near the central portion of the route, where we have found dense pockets of poor air quality.


% PM2.5 Readings
> 35 µg/m³
< 1%
1-3%
3-6%
6-14%
> 14%
Addison (Route 152)
Belmont (Route 77)
Chicago (Route 66)
47th Street (Route 47)
Chicago - Midway Airport
Miles
0
1
2
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