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**Quarterly Progress Report**

Project Title: Measuring Temporal and Spatial Exposure of Urban Cyclists to Air Pollutants Using an Instrumented Bike

Project Number: GT-01-09

Principal Investigator(s) *(name and email):* Kari Watkins, kari.watkins@ce.gatech.edu

Period Covered: \_Mar 16, 2018\_\_\_\_\_\_\_\_\_ through \_\_\_ Jun 15, 2018\_\_\_\_\_\_\_

Project Period of Performance: \_ Jan 1, 2018\_\_\_\_ through \_ Dec 31, 2018\_\_

Reports should not exceed three pages. Completed progress reports should be submitted electronically to CARTEEH and to the applicant’s institutional CARTEEH lead.

**Progress in Previous Quarter**

Throughout this period, weekly meetings were held to discuss project progress by all team member. Regular attendees include all members of the project team, the two PIs (Kari Watkins and Chris LeDantec), a PhD student (April Gadsby), and two undergrad researchers (Katelyn Schaffer in April, Kanaad Deodhar in May / June). No presentations or speaking engagements or academic papers or reports have been produced to date.

*Task 1: Synopsis of current research in the area and a tabular list of published reports and journal papers with relevant details from the studies.*

Tabular list and synopsis of prior research are complete.

*Task 2: GIS map including cyclist trace data from multiple data sources and regional background concentration data.*

We have been able to collect Ride Report and Relay Bikeshare data and have created a map of the most prominent cyclist routes for air quality data collection. Regional background concentration data stations were identified to continue obtaining data for comparison.

*Task 3: GRIMM spectrometer data matched to other sensor data from the bicycle trajectories.*

The process of calibrating the Purple Air sensors to the GRIMM spectrometer has been ongoing throughout the summer. In addition, we are in the process of assessing if the placement of the sensors on the bicycles and the types of bicycles impact the readings. We have a team of undergrads working on a summer data science program who have been helping with this task.

*Task 4: Mapping of pollutant exposure levels by time and route*

No work to date.

*Task 5: Final report in CARTEEH format, poster and presentation summarizing research results*

No work to date.

**Budget, Timeline, and Issues Encountered**

Project is progressing as scheduled and within budget. No obstacles have been encountered to date.

**Planned Activities for Upcoming Quarter**

*Task 1 -* This task is complete.

*Task 2 –* This task is complete

*Task 3 –* Calibration against the GRIMM and additional calibration will be ongoing throughout the summer.

**Other Information Not Addressed Above**

None.