

# QUARTERLY PROGRESS REPORT

January 31, 2021 to April 30, 2021

**PROJECT TITLE: Environmental Impacts of Reclaimed Asphalt Pavement (RAP)**

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**CO-PRINCIPAL INVESTIGATOR: Timothy Townsend**

**AFFILIATION: Professor, University of Florida  
Department of Environmental Engineering Sciences**

**COMPLETION DATE: April 30<sup>th</sup>, 2021    PHONE NUMBER: 941-716-4431**

**PROJECT WEB SITE: <https://faculty.eng.ufl.edu/timothy-townsend/research/florida-solid-waste-issues/understanding-the-environmental-impacts-of-reclaimed-asphalt-pavement/>**

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## **Work accomplished during this reporting period:**

The research team has finalized the analytical method on the Gas Chromatograph/Mass Spectrometer (GC/MS) for analysis of 43 PAH compounds. Calibration curves and standard solutions are completed and ready for use in sample analysis.

The first sample set was collected from a RAP stockpile located in Gainesville, Fl and physically characterized. Preliminary samples were leached via EPA method 1314: Liquid-Solid Partitioning as a Function of Liquid-Solid Ratio Using an Up-Flow Percolation Column Procedure; a custom fabricated stainless-steel column was utilized. Preliminary leachate samples were successfully extracted using EPA method 3510c: Separatory Funnel Liquid-Liquid Extraction and analyzed on the GC/MS instrument. Optimizations for the instrument and extraction methods were finalized.

## **Work planned for the next reporting period:**

The team will continue sampling and will run full scale leaching/extraction on collected samples. A total PAH analysis method will be developed. There is no planned TAG meeting for the upcoming quarter.

**Metrics:**

Name	Rank	Department	Professor	Institution
Ashley Lin	Master's Student	Environmental Engineering	Dr. Townsend	University of Florida

**TAG Meeting:** A kick off TAG meeting was held on April 6<sup>th</sup>, 2021. The slides for the meeting will be posted on the project website.

**Invited TAG members include:**

- Howard Marks, National Asphalt Pavement Association (NAPA)
- Chad Spreadbury, Jones Edmunds
- Kim Walker, Florida Department of Environmental Protection (FDEP)
- Roger Brewer, Hawaii Department of Health (HDOH)
- Tim Ruelke, Florida Department of Transportation (FDOT)
- Wilbur Mayorga, Miami Dade County Department of Environmental Resources Management (DERM)
- Jim Musselman, National Center for Asphalt Technology (NCAT)