

# AQRP Monthly Technical Report

<b>PROJECT TITLE</b>	Texas Urban Vegetation BVOC Emission Source Inventory	<b>PROJECT #</b>	20-007
<b>PROJECT PARTICIPANTS</b>	Ramboll Alex Guenther Wildland Solutions Chris Geron	<b>DATE SUBMITTED</b>	10/9/2020
<b>REPORTING PERIOD</b>	<b>From:</b> September 1, 2020 <b>To:</b> September 30, 2020	<b>REPORT #</b>	3

A Financial Status Report (FSR) and Invoice will be submitted separately from each of the Project Participants reflecting charges for this Reporting Period. I understand that the FSR and Invoice are due to the AQRP by the 15<sup>th</sup> of the month following the reporting period shown above.

---

## Detailed Accomplishments by Task for reporting period

*Task 1: High Resolution (8-day, 10-m) LAI and Vegetation Cover Fraction for Urban Texas*  
Completed processing of Sentinel 10-m resolution 4-band data for 2019 for Houston, Austin and San Antonio using the ESA SNAP tool to generate Leaf Area Index (LAI) and Vegetation Cover Fraction (VCF) distributions. Finished quality checking and processing the data using ARCGIS to integrate and interpolate the data. Python programs for ARCGIS procedures were created and described.

*Task 2. BVOC Emitting Tree Distributions for Three Major Texas Urban Areas*  
Developed and applied approach for quantifying urban ecoregion distributions. Compiled and integrated urban street tree inventory data and finalized approach for quantifying tree species composition for other ecoregions. Applied approach and compared techniques for areas in Houston and Austin.

*Task 3. MEGAN and BEIS input data, processors and results*  
Task 3 has not yet been initiated.

## Preliminary Analysis

None.

## Data Collected

None.

**Identify Any Problems or Issues Encountered and Proposed Solutions or Adjustments**

None.

**Goals and Anticipated Issues for the Succeeding Reporting Period**

Continue developing fine spatial resolution time-varying LAI, total vegetation cover and the relative abundance of high BVOC-emitting trees and other vegetation cover types for three Texas urban areas: San Antonio, Austin and Houston.

**Detailed Analysis of the Progress of the Task Order to Date**

None.

**Do you have any publications related to this project currently under development? If so, please provide a working title, and the journals you plan to submit to.**

Yes       No

**Do you have any publications related to this project currently under review by a journal? If so, what is the working title and the journal name? Have you sent a copy of the article to your AQRP Project Manager and your TCEQ Liaison?**

Yes       No

**Do you have any bibliographic publications (ie: publications that cite the project) related to this project that have been published? If so, please list the reference information. List all items for the lifetime of the project.**

Yes       No

**Do you have any presentations related to this project currently under development? If so, please provide working title, and the conference you plan to present it (this does not include presentations for the AQRP Workshop).**

Yes       No

**Do you have any presentations related to this project that have been published? If so, please list reference information. List all items for the lifetime of the project.**

Yes       No

**Have any personnel changes occurred that were not listed in the original proposal? If so, please include a detailed description of the personnel change(s) below.**

Yes       No

**Are any delays expected in the progress of the research? If so, please include a detailed description of the potential delay below.**

Yes       No

**Describe any possible concerns/issues (technical or non-technical) that AQRP should be made aware of.**

None.

**Are you anticipating using all the available funds allocated to this project by the end date? If not, why and approximately what is the amount to be returned?**

Yes       No

---

Submitted to AQRP by      Tejas Shah

Principal Investigator      Tejas Shah