

# 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>	5/13/2021
<b>REPORTING PERIOD</b>	<b>From:</b> April 1, 2021 <b>To:</b> April 30, 2021	<b>REPORT #</b>	10

A Financial Status Report (FSR) and Invoice will be submitted separately from each of the Project Participants reflecting charges for this Reporting Period. No activity was conducted by Wildland Solutions in April, so this report doesn't indicate any work performed by them. 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*

No work was performed on Task 1 during April 2021.

*Task 2. BVOC Emitting Tree Distributions for Three Major Texas Urban Areas*

No work was performed on Task 2 during April 2021.

*Task 3. MEGAN and BEIS input data, processors and results*

Ramboll worked on updating MEGAN source code to use CAMx meteorological data and add the option of using either monthly, 10 day or 8 day LAI data. We downloaded global LAI data for 2019 from ESA's Copernicus Global Landcover database and transformed to 8 day LAI data. We also worked on programming new MEGAN emission factor processor approach.

*Task 4: Project Reporting and Presentation*

Developed March MTR and FSR and submitted to AQRP.

## Preliminary Analysis

None.

## Data Collected

None.

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

Due to personal reasons, Mr. Chris Geron is unable to work on updating BELD biogenic emissions landcover database. Ramboll and Dr. Guenther will work together to update the BELD landcover database.

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

Continue developing the relative abundance of high BVOC-emitting trees and other vegetation cover types for three Texas urban areas: San Antonio, Austin and Houston. Continue working on integrating urban vegetation cover data in an appropriate format for input to the MEGAN and BEIS biogenic emission models. Continue working on updating the MEGAN EFP and source code.

**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