

## Progress Report - Campus Sustainability Fund

Thank you for submitting a Progress Report for your Campus Sustainability Fund grant! We look forward to hearing about the advancements of your project.

Progress Reports are due on the 1st of every December, March, May, and August for the duration of the project.

Please be aware of the responses minimums and maximums for each question. While this form does not enforce our minimums, we strongly encourage following them. Should we feel that not sufficient information is provided, the Committee might request a new submission.

Should your project not yet have progress to report in some areas, you may type "No progress to report." However, this will be vetted by Committee Members. If you have no progress to report, that should be made evident in meetings with the Committee Member who is your direct contact.

Should your project already be completed, please note in your responses to "Next Steps" and "Progress Support" that neither questions are applicable considering your project's timeline.

Uploading photos is required for Progress Reports - if you have no photos to share because your project has not yet begun, please omit.

Email \*

chrislim@arizona.edu

Project Manager Name \*

Who is submitting this Progress Report?

Chris Lim

Project Name \*

The University of Arizona Air Pollution Sensor Network

**Project Subaccount Number \***

22.04

**Project Summary Snapshot \***

Please copy and paste the "Summary Snapshot" you provided in your project application. Responses are limited to 800 characters (~60-100 words).

Low-cost air pollution sensors will be installed across the UA campus. The collected data will be used to create machine learning-based models to predict and visualize real-time air pollution levels across the entire campus. The data and visualizations will be shared online so that community members can see and better understand air quality patterns and their personal exposures.

**Project Accomplishments: Quantitative \***

Please describe what aspects of the project have been accomplished so far or what things have become solidified within your project plan. Have you received FM quotes? Be as descriptive and specific as possible and report the metrics we requested you to track, along with any others you'd like to include. Responses must be 500 characters at minimum and no longer than 2,000 characters, spaces included. Example: Held 4 public meetings totaling 130 attendees, installed 14 sensors at X,Y, and Z locations, hired 3 interns; Transitioned 300 square feet of dirt into usable garden space and signed on 14 community garden volunteers.

We have contacted FM to obtain quotes and are waiting to hear back. We have created a list of candidate sites for sensor installations across campus. The site locations list contains a mix of near-road and greenspaces as well as a mix of public locations and inaccessible locations. We have calibrated one batch of air pollution sensors at the Pima County regulatory monitoring site and have begun to calibrate the next batch. Calibration is needed to adjust for variability between-unit instruments.

### Project Accomplishments: Qualitative \*

Please describe qualitative accomplishments. Do you have a schedule of events you can share? What connections/contacts have been made? Be as descriptive and specific as possible. What has the impact on students/campus been so far? Responses must be 500 characters at minimum and no longer than 2,000 characters, spaces included. Example: Talked with Seis Catering to discuss cost and availability. Marketed the event through putting flyers in the following buildings: X, Y, Z. Project Manager has experienced substantial public speaking experience through talking at STEM Seminar.

We have held meetings with CJ to discuss the project steps and potential candidate sites. We have also had meetings with Pima County Department of Environmental Quality officials to discuss this project and how it would fit in with Pima-wide efforts for low-cost sensor monitoring. We have begun training by the Secondary Project Manager (Tina Fingesi) to improve her R coding skills. Project manager (Lim) has begun the analysis of calibration data before sensor installation and the creation of an online dashboard.

### Next Steps \*

Please detail the next steps for your project, numbering each step. (ie, 1. Connect with X Department to collaborate on the event, 2. Contact the catering options to confirm pricing, 3. Interview candidates for internship). Responses must be 500 characters at minimum and no longer than 2,000 characters, spaces included.

1. We will purchase PurpleAir sensors using the Sustainability Fund. Calibration was done using sensors we already had on hand.
2. We will finalize sensor location installation sites after further consultation with FM.
3. We will either put an ad or recruit a student researcher to help with sensor installation and measurements.
4. We will continue sensor calibration at PDEQ sites.
5. We will apply for the annual fund to expand the scope of the project, including the incorporation of other 'smart city' components and data.

### Challenges Faced \*

Please identify and describe any obstacles/roadblocks you or your team have experienced, and detail how you've managed them/ will manage them. Should your project already be completed, please note what challenges you faced and what you would do differently. Responses must be 500 characters at minimum and no longer than 2,000 characters, spaces included.

As this project is very early in the stages, we have not faced any substantial challenges. The bottleneck has been waiting for the FM and getting the sensors installed.

### Project Support \*

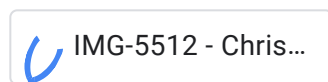
Can the CSF support you in addressing any roadblocks you've encountered? How else can the CSF support your project? Responses must be 500 characters at minimum and no longer than 2,000 characters, spaces included.

Once we have sensors installed and a dashboard prototype ready, we will need help with spreading the word about the project. Help with dissemination over social media and/or connecting with university officials would be needed.

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### Photos

Please upload or provide link (below) to relevant photos. Providing photos to your project is required.



### Photo Link

Please copy hyperlinks to photos here should you not be able to individually upload photos

N/A

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### Media/Links

Please include links to any media coverage or events information (e.g. news, social media, websites, interviews, etc.)

N/A

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This form was created inside of University of Arizona.

Google Forms