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If you haven't requested a device but are interested in doing so, please complete a device request form from learnlafayette.com. If you have additional questions or would like to learn more about LEARN, please email katy.dupre@cgifederal.com.

Project One-Pager

Who?

We are looking for a few good volunteers to help collect air quality data for the LEARN project. Read on if you are interested in installing an air quality sensor where you live!

Participants should have:

1. Access to an electrical outlet within 3 feet of device placement (or connection to an extension cord).
2. A Wi-Fi Connection within range.
3. 10-45 minutes to complete set-up. The entire set-up process takes between 10-45 minutes, depending on how you choose to position your device. The Wi-Fi set-up process *may* take up to 45 minutes to connect but you are not expected to monitor the Wi-Fi set-up process; simply check periodically to make sure it eventually connects.

What?

Air quality sensors are being deployed in Lafayette as part of the Lafayette Engagement and Research Network (LEARN) project. The LEARN Collaborative is a joint partnership between the Lafayette Consolidated Government (LCG), the University of Louisiana at Lafayette (UL), Lafayette Public School System (LPSS), and CGI. Additional supporting partners of LEARN include the Lafayette Economic Development Authority (LEDA) and One Acadiana (regional chamber of commerce). LEARN is focused on understanding how smart community technology can be used to help local governments better manage resources, improve planning, make more informed decisions and improve citizens' quality of life.

Why?

Traditional air quality monitoring requires expensive scientific equipment operated by skilled technicians. As a result, most regions and cities have a limited number of monitoring stations; Lafayette Parish has only one station. This makes it difficult to understand how air quality varies at neighborhood scales. In contrast, low-cost air quality sensors are available for as little as \$100, which allows for many sensors to be deployed across a city. The LEARN project will deploy over 250 air quality sensors throughout Lafayette, including UL's campus, at LPSS schools, and at the homes of citizen scientists. These sensors will continuously collect data about ground-level ozone concentration, as well as temperature and humidity.

Where?

The sensors can be installed anywhere where you are legally allowed to install them (preferably out of direct sunlight).

How?

If you are interested in hosting a LEARN air quality sensor, please contact us by visiting <https://learnlafayette.com> and clicking the "Request an Air Quality Sensor Device" tab on the homepage.

Where Do I Place the Device? How Do I Position the Device?

Small Things

1. The device was designed to withstand the elements, to a degree. It was designed and built to get wet during rainstorms; however it was not built for the internal sensors to sit in water.
2. The device is not required to be mounted; it can be placed on a table or other piece of elevated furniture as long as it has protected coverage (i.e. covered patio).
3. If mounted, the fans (holes with silver grids) need to be placed facing downward.
4. If mounted to a pole or other support structure, it should be secured with the provided cable tie.
5. If not mounted, the fans (holes with silver grids) should be facing outward while placed on a table, so that the fans are not touching the table. This option requires a covered, protected area.
6. The device requires electricity, so you'll need to place it near an outlet or use an extension cord. It comes equipped with a 3 foot cord.

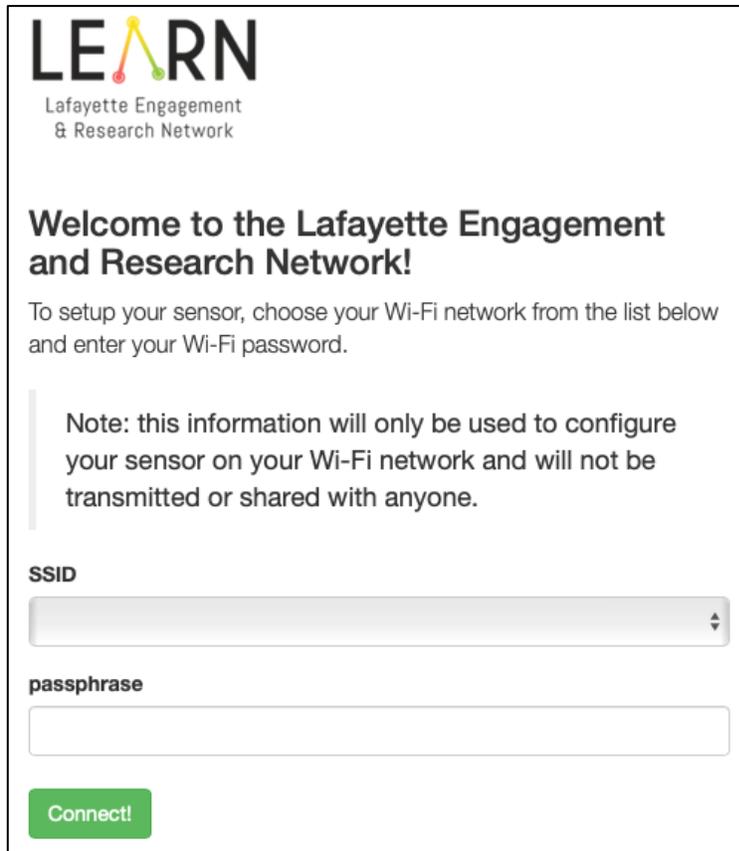


Large Things

1. These need to be mounted, elevated, and secured with a cable tie.
2. The fans need to be facing downwards.
3. These will also require electricity and Wi-Fi connection.
4. Ideally, they would be protected from extreme elements but they were built to withstand them.

Wi-Fi Configuration instructions

1. Plug in the sensor to a power outlet.
2. From your smart phone, tablet, or computer, select the Wi-Fi network named **LEaRN Setup** (note, it may take several minutes for the sensor to boot up and advertise the network. If it still doesn't boot up after about 30 minutes, unplug and re-plug the device.)
3. Agree to End User Legal Agreement
4. Once you connect to the **LEaRN Setup** Wi-Fi network, you will be presented with the setup screen:



The screenshot shows a web interface for the LEARN network. At the top left is the LEARN logo with the text 'Lafayette Engagement & Research Network'. Below the logo is a heading: 'Welcome to the Lafayette Engagement and Research Network!'. Underneath is a paragraph: 'To setup your sensor, choose your Wi-Fi network from the list below and enter your Wi-Fi password.' A note in a light gray box states: 'Note: this information will only be used to configure your sensor on your Wi-Fi network and will not be transmitted or shared with anyone.' Below the note are two input fields: 'SSID' with a dropdown arrow and 'passphrase' with a text box. At the bottom left is a green 'Connect!' button.

5. Choose the name of your Wi-Fi network from the **SSID** dropdown menu
6. Enter the password for your Wi-Fi network into the **passphrase** field
7. Click **Connect!**

Once you click connect, the sensor should connect to this network and begin transmitting data within a few minutes. You can verify that your sensor is working by locating it on the LEARN dashboard: <https://dash.learnlafayette.com/>. Please refer to the "How to Use This Dashboard" section below to verify your device is connected properly.

How to Use the Dashboard and View the Data

Getting to the Dashboard:

Visit <https://dash.learnlafayette.com/> . This is the LEaRN dashboard, which lets us visualize the data our sensors collect.

Identify Where Devices are geographically located in Acadiana:

The dashboard allows users to view the geographic location of all LEaRN air quality devices around Acadiana. You might be interested in knowing where devices can be found, or if a device is in a specific area of interests (near public schools, high traffic areas, or your neighborhood, for instance).

1. If you want to view where all devices are located, simply use the zoom feature to get a better idea of where these devices are strategically placed across the area.
2. Click on any device icon on the map to view graphing options.

Graph Data for Specific Devices:

You can also visualize and graphically represent air quality information in near real-time, as well as historically over-time. If you're interested in graphing these data, follow the steps below.

1. Using the search box located at the top of the device list, type in the name of your device. You may also use the map feature to select a device.
2. Select the device you'd like to view information for.
3. After selecting a device, choose the data point (or sensor metric) you'd like to explore.
4. Click "graph" for the chosen data point and scroll down to the bottom portion of the dashboard. This is where data from that device is graphed and displayed.

You might want to start by exploring information being captured by the device you just set up! You also might be interested in exploring other devices, in which case feel free to click on and view data for any of the devices listed.

These are the **graph features** available for each visualization:

- Hover over specific points on the graph to view more detail
- Change Time Frame via date range function. (Note: Data only go back to when the sensor was activated. For instance, if the sensor was activated on May 1, 2019, data will only go back to May 1, 2019.)

Image A

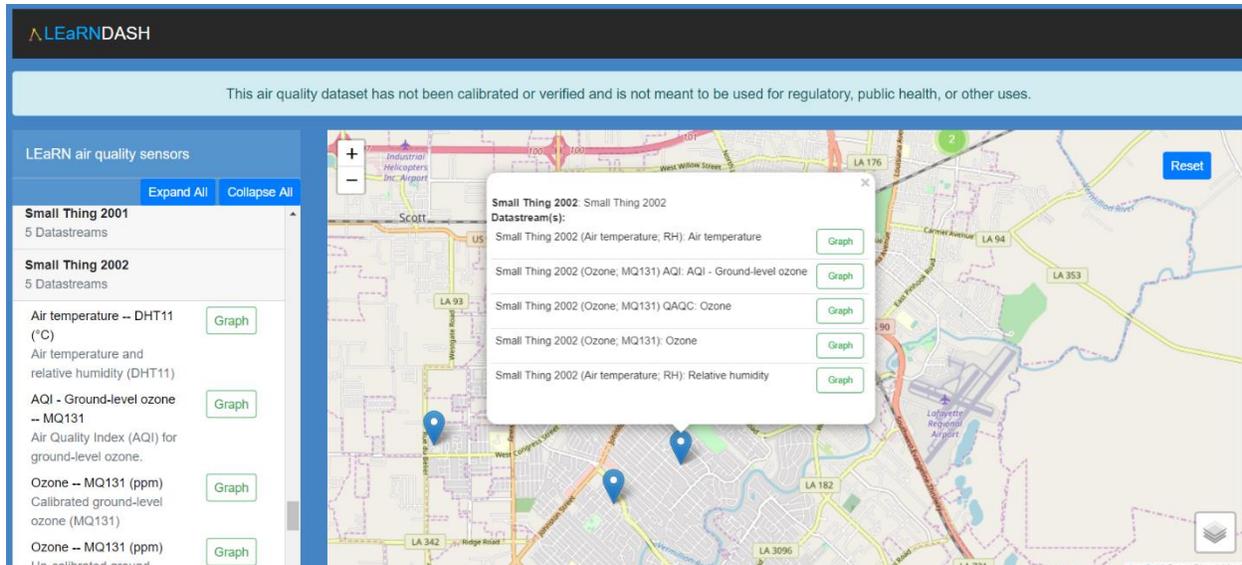


Image A “Select a Device to Graph” – this image captures the left panel sensor list, as well as the map’s zoom function. This is how you select a device to graph.

Image B

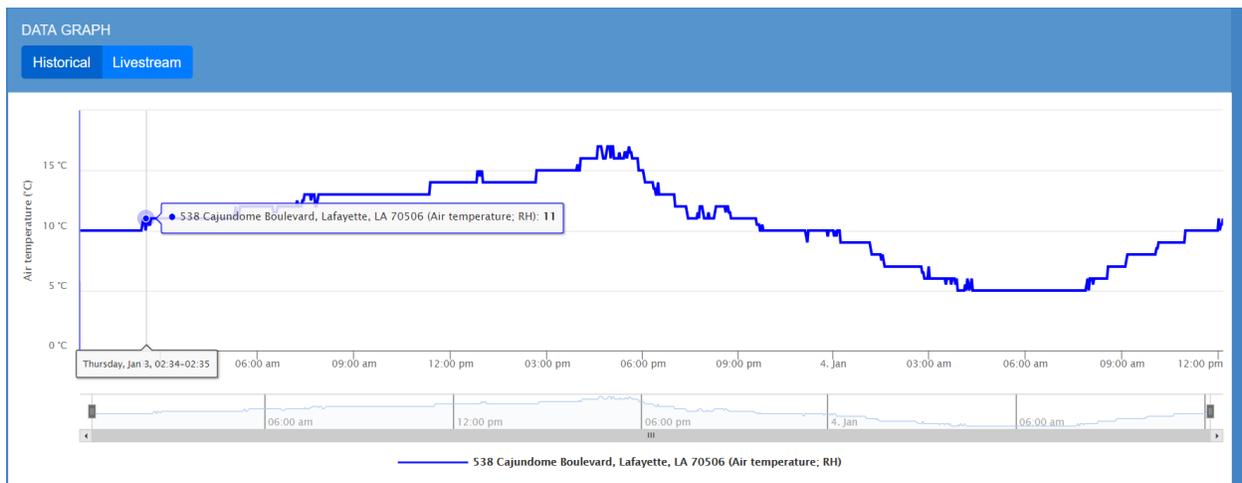


Image B “Graphing Data” – this image captures the lower portion of the dashboard where the device's data points are graphed.

FAQs – LEARN Air Quality Sensors

The purpose of this page is to provide a list of FAQs relevant to private property owners, private residents, or any other non-public entity willing to place a device on private property.

1. **Where will sensors be located?**

Our goal is to place sensors in a variety of areas including: residential, commercial, industrial, at schools, in parks, along roadways, in forests, along waterways. This way we can get a good picture of how air quality varies with land use and neighborhood.

2. **What are the responsibilities of the sensor owner?**

(a) To site the sensor according to our siting guidelines; and (b) to make sure that the sensor continues to have power and network access.

3. **Who do I contact for device repair or technical assistance?**

If you have technical questions or general project questions, please contact katy.dupre@cgifederal.com so we can provide you with helpful resources.

4. **Can someone access and/or manipulate my data? Is the data secure?**

Each sensor communicates data to the cloud-based LEARN servers. Neither the LEARN servers, nor any other devices on the Internet are able to initiate access to the sensors or the data contained on them.

The data are transmitted securely to cloud-based servers operated by CGI.

5. **Who sees the data?**

Air Quality data will be publicly available for anyone to view. The location of each device will also be publicly available; however, no personal identifiers will be collected or publicly displayed. The location is determined by the information you provide to us; the sensors do not have GPS capability.

6. **Can the data be used for regulatory or investigatory purposes?**

No – the quality of data collected does not meet the legal threshold required in a court of law.

7. **What will LCG/CGI/UL/LPSS do with the data? The federal government?**

Neither LCG/CGI/UL/LPSS have specific plans for using the data. The data are available for anyone in the community to use. The Federal Government has no plans to use the data. The data will not and cannot be used for regulatory purposes.

8. **How long will I need to have this device on my property?**

The device is yours for approximately one year, however, the Ozone sensors have a limited lifespan of 6-12 months, after which time the data quality degrades and is no longer comparable to reference data collected by LDEQ. The air temperature, relative humidity sensors, and particle counters (if equipped) should continue to function for several years. LEARN will reach out periodically with project updates, including return instructions when the time calls for device upgrades or returns.

If you choose to move your device to a new location, please visit learnlafayette.com and complete a "change of address" form with the new address.

9. When/how frequently does it capture data? What triggers the device to start capturing data?

The software on the sensors automatically captures data roughly once per minute, and attempts to transmit any new data every 15 seconds.

10. Specifically, what does the device capture and record? What does it not capture?

The LEARN sensors capture data on: ground-level ozone, particulate matter (1 micron, 2.5 micron, and 10 micron; if equipped with a particle counter; not all sensors are), and air temperature and relative humidity. The device does not capture and cannot differentiate between types of smoke.

11. Can it hear what I'm saying? Does it capture image or video? Does it have GPS?

LEARN sensors do NOT have microphones or audio recording capabilities.

LEARN sensors do NOT have cameras or imagery/video recording capabilities

LEARN sensors do NOT have a GPS receiver or transmitter. Location information is "hard-coded" based solely on where you tell us you plan to place your sensor.

12. What is the purpose of the device?

To collect air quality, air temperature, and relative humidity data using low-cost sensors.

13. What is the purpose of the data?

The data are for informational purposes. The sensors we are using are not of sufficient quality to allow the data to be used for regulatory purposes. However, the data from LEARN sensors will be calibrated against regulatory-quality data collected by Louisiana Department of Environmental Quality. Having data from many low-cost sensors can be useful for "filling in the map", giving us a better sense of how air quality varies across Lafayette Parish.

14. What is the purpose of understanding air quality data?

Lafayette, like many communities, has a limited number of regulator air quality monitoring stations, in fact we only have one. It is difficult, using only one station, to understand the air pollutants that Lafayette citizens are exposed to in various times and places. Having more air quality data can help us to, for example, better understand how incidents of asthma attacks might relate to elevated pollution levels in different neighborhood.

15. What is the purpose of the project?

To test how community members can work together to build and deploy low-cost air quality sensors and make the data available to the public for free.

EULA Key Points

When you set-up your device at home, you'll be prompted to sign an End User Legal Agreement (EULA). This document serves as an abridged version of the full EULA with general summaries. The definitions of key terms are included in the full EULA during Wi-Fi set-up. Please refer to those definitions to ensure complete understanding of this EULA.

Project Scope

License and Rights – This is a voluntary agreement and you will not receive compensation for participating.

Restrictions – CGI is the owner of the LEARN System and all its components.

Enforcement of Restrictions – You are required to report any violations to the listed restrictions.

Support, Upgrades and Updates – CGI is the owner of the LEARN System and may perform operational updates

Performance of the System

General – The project is the purpose of the System Services. There are no other purposes for the System Services.

Right to Make Changes to the CGI System – CGI is the owner of, and may make changes, to the LEARN system.

Your Responsibilities

Access to and Use of System – You cannot use the System Services for anything other than their stated purpose.

Compliance with Laws – You are required to comply with data privacy laws and regulations.

Proprietary Rights

CGI Ownership – CGI is the owner of the LEARN System and its Services.

Grant of Rights to CGI – You grant CGI authority to use the data collected from your device within the Project scope and you do not have rights to the collected data or information.

Nondisclosure

Confidential Information – If it's confidential information, it belongs to CGI.

Standard of Care - If it's confidential information, it belongs to CGI.

Compelled Disclosure – You will notify CGI of any legal requests made from outside parties for Confidential Information. You will provide reasonable cooperation and every effort with CGI in resisting or limiting the disclosure of Confidential Information upon outside requests.

Client Data – Your GPS location will be publicly available but no other personal identifiers will be public. CGI, LCG, and ULL may use your data in the aggregate and the aggregated data may be used for commercial purposes. CGI may not use your data to collect additional data on your identity or permit any third party access to your data, except for permitted uses listed.

Relief – Money is not enough if you breach confidentiality and CGI can seek injunctive relief.