



Air Quality Sensors Grants Under the Inflation Reduction Act of 2022

Program Guidance for Air Pollution Control Agencies

United States Environmental Protection Agency
Office of Air and Radiation

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Summary

Program Guidance for Air Quality Sensors Grants under the Inflation Reduction Act of 2022 (IRA)

Section 60105(c) of the Inflation Reduction Act (IRA) provides funding for “grants and other activities authorized under subsections (a) through (c) of section 103 and section 105 of the Clean Air Act to deploy, integrate, and operate air quality sensors in low-income and disadvantaged communities.”

The EPA has elected to use \$1,982,000 of the funds available from this provision to issue grants non-competitively to eligible air pollution control agencies. Eligible agencies for this grant opportunity include air pollution control agencies currently involved in air monitoring activities and that regularly receive CAA section 103 or 105 grants, either annually or every few years. These grants will be issued under Clean Air Act (CAA) section 103, and the funds may be used for air quality sensor-related activities authorized under CAA section 103. No cost share is required.

The term “grant” in this guidance refers to both grants and cooperative agreements, as defined by [2 CFR 200.1](#). Eligible state, local, Tribal, and territorial entities will receive a grant or cooperative agreement depending on whether the EPA will be substantially involved in the project(s) funded by the assistance agreement.

These grants may include any cost category (e.g., personnel, supplies, contractual) provided:

- 1) the costs are eligible under both CAA section 103 and IRA section 60105(c) for the deployment, integration, and operation of air quality sensors in low-income and disadvantaged communities;
- 2) the costs are reasonable¹; and
- 3) the costs are incurred directly or indirectly to carry out the activities included in the work plan.

Applicants should consult [EPA’s How to Develop a Budget](#) website for assistance with developing their budget.

The EPA encourages eligible state, local, Tribal, and territorial air agencies to submit grant applications as soon as possible and no later than April 8, 2024.

¹ A cost is reasonable if, in its nature and amount, it does not exceed that which would be incurred by a prudent person under the circumstances prevailing at the time the decision was made to incur the cost. Refer to [2 CFR 200.404](#) for additional details.

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I. Overview

In August 2022, Congress passed the Inflation Reduction Act (IRA), which provided funding for various air monitoring activities, including funds to be used to deploy, integrate, and operate air quality sensors in low-income and disadvantaged communities. Air sensors that are portable, lower in cost, and generally easier to operate than regulatory-grade air monitors are widely used in the United States to understand air quality conditions. This class of technologies has a wide range of uses, including but not limited to: enhancing public awareness and education, providing screening level analysis to identify where further investigation may be warranted, supplementing regulatory monitoring, understanding local sources of air pollution, and more².

The non-competitive grants to be awarded to air pollution control agencies under this funding opportunity are expected to include activities that will result in more air quality sensor data in and around low-income and disadvantaged communities.

²<https://www.epa.gov/air-sensor-toolbox>

II. Assistance Listing

The EPA will award these grants under assistance listing 66.034 – Surveys, Studies, Research, Investigations, Demonstrations, and Special Purpose Activities Relating to the Clean Air Act.

III. Statutory Authority

Section 60105(c) of the Inflation Reduction Act provides funding for “grants and other activities authorized under subsections (a) through (c) of section 103 and section 105 of the Clean Air Act to deploy, integrate, and operate air quality sensors in low-income and disadvantaged communities.”

The statutory authority for awarding these grants is Clean Air Act section 103, which authorizes “the coordination and acceleration of, research, investigations, experiments, demonstrations, surveys, and studies relating to the causes, effects (including health and welfare effects), extent, prevention, and control of air pollution.” IRA section 60105(c) specifies that these grants are intended to include activities supporting the deployment, integration, and operation of air sensors in low-income and disadvantaged communities, all of which are activities consistent with the EPA’s CAA section 103 authority. The EPA will adhere to the goals of IRA section 60105(c) by awarding grants that focus on the use of air sensors in low income and disadvantaged communities and will not fund projects focused on the research, development, demonstration, or evaluation of air sensors.

Because this funding comes from a different appropriation, the EPA must award these grants separately from other CAA section 103 and/or 105 grants that the eligible agencies may typically receive from the EPA (i.e., annual state and tribal assistance grants). However, similar to the way annual state and Tribal assistance grants are allocated, these IRA air monitoring grants will be distributed to the ten EPA Regional Offices who will make awards to individual air agencies in their Region.

IV. Cost Sharing

These grants will be issued under Clean Air Act (CAA) section 103. No cost share is required by CAA section 103.

V. Justice40 Initiative and Advancing Environmental Justice

The goal of the [Justice40 Initiative](#) is to ensure that “...40 percent of the overall benefits of certain Federal investments flow to disadvantaged communities that are marginalized, underserved, and overburdened by pollution.” This grant program is considered a “covered program” under the [Justice40 Initiative](#). The EPA is committed to meeting the objectives of the Justice40 Initiative set forth in Executive Order 14008. In addition, the EPA is committed to accelerating environmental justice in communities overburdened by pollution through its IRA investments, including through this grant program.

Additionally, this program is responsive to the Administration’s call for agencies to advance environmental justice in [Executive Order 14096: Revitalizing Our Nation's Commitment to Environmental Justice for All](#). Environmental Justice is the just treatment and meaningful involvement of all people regardless of income, race, color, national origin, Tribal affiliation, or disability in agency decision making and other Federal activities that affect human health and the environment so that people:

- a) are fully protected from disproportionate and adverse human health and environmental effects (including risks) and hazards, including those related to climate change, the cumulative impacts of environmental and other burdens, and the legacy of racism or other structural or systemic barriers; and
- b) have equitable access to a healthy, sustainable, and resilient environment in which to live, play, work, learn, grow, worship, and engage in cultural and subsistence practices with respect to the development, implementation, and enforcement of environmental laws, regulations, policies, and investments.

Disadvantaged communities suffer from the disproportionate and adverse environmental, human health, climate-related, and other cumulative impacts, and their adverse economic consequences. These disproportionate and adverse impacts may include:

- Differential proximity and exposure to environmental hazards;
- Greater susceptibility to adverse effects from environmental hazards (due to genetic predisposition, age, chronic medical conditions, lack of health care access, or poor nutrition);
- Unique environmental exposures because of practices linked to cultural background or socioeconomic status (e.g., subsistence fishing or farming);
- Cumulative effects from multiple chemical and non-chemical stressors;
- Reduced ability to effectively participate in decision-making processes due to language barriers, inability to access traditional communication channels, or limited capacity to access technical and legal resources; and
- Degraded physical infrastructure, such as poor housing, poorly maintained public buildings (e.g., schools), or lack of access to transportation.

Section 60105(c) of IRA directs the EPA to “deploy, integrate, and operate air quality sensors in low-income and disadvantaged communities.” For the purposes of this guidance, the EPA defines disadvantaged communities as any community that meets at least one of the following criteria:

- Any census tract that is identified as disadvantaged in Climate and Economic Justice Screening Tool (CEJST)³;
- Any census block group that is at or above the 90th percentile for any of EJScreen’s Supplemental Indexes when compared to the nation or state⁴; and/or,
- Any geographic area within Tribal lands as included in EJScreen⁵.

IRA funding from section 60105 (c) is covered by the Justice40 initiative. Therefore, workplans should address how the overall outcomes of the workplan support Justice 40 goals and the IRA provision.

³ <https://screeningtool.geoplatform.gov>

⁴ EJScreen is the EPA's environmental justice mapping and screening tool that uses national datasets for environmental and socioeconomic indicators to show how a selected area compares to the state, EPA region, or the nation. EJScreen operates at a finer geographic scale of Census block groups than the CEJST, allowing EJScreen [Supplemental Indexes](#) to identify smaller areas that may be disadvantaged within a larger non-disadvantaged area. To identify areas in EJScreen that meet one of the above definitions of a low-income or disadvantaged community, applicants should use the “Supplemental Indices” option under the tool’s map layers.

⁵ The Tribal Lands category in EJScreen to use for this purpose includes Alaska Native Allotments (EPA Metadata Record), Alaska Native Villages (EPA Metadata Record), American Indian Reservations (EPA Metadata Record), American Indian Off-reservation Trust Lands (EPA Metadata Record), and Oklahoma Tribal Statistical Areas (EPA Metadata Record).

VI. [Eligible Entities](#)

Eligible entities for the purpose of this funding opportunity are air pollution control agencies currently involved in air monitoring activities that regularly receive CAA section 103 or 105 grants either annually or every few years. “Air pollution control agencies” as defined by section 302 of the Clean Air Act who are eligible to apply for IRA Air Sensor grants include air agencies of states (including the District of Columbia, American Samoa, Commonwealth of the Northern Marianas, Guam, Puerto Rico, and the U.S. Virgin Islands), local governments, and federally recognized Tribes. These funds are one-time funds, and air agencies should have plans to sustain the work after the period of performance of these grants.

Any subawards must be consistent with the definition of that term in 2 CFR 200.1 and comply with the [EPA’s Subaward Policy](#). The pass-through entity that administers the grant will be accountable to the EPA for proper expenditure of the funds and reporting and will be the point of contact for the project. As provided in 2 CFR 200.332, subrecipients are accountable to the pass-through entity for proper use of the EPA funding. For-profit organizations are not eligible for subawards under this grant program but may receive procurement contracts. Any contracts for services or products funded with the EPA financial assistance must be awarded under the competitive procurement procedures of 2 CFR Part 200 and/or 2 CFR Part 1500, as applicable. The regulations at 2 CFR 1500.10 contain limitations on the extent to which the EPA funds may be used to compensate individual consultants. Refer to the [Best Practice Guide for Procuring Services, Supplies, and Equipment Under EPA Assistance Agreements](#) for guidance on competitive procurement requirements and consultant compensation. Do not name a procurement

contractor (including a consultant) as a “partner” or otherwise in your application unless the contractor has been selected in compliance with competitive procurement requirements.

VII. Allocation of IRA Air Sensors Grant Funds

In August 2023, the EPA conducted an air monitoring needs assessment of eligible entities to better understand the air quality sensor-related needs of eligible air agencies and to inform the allocation of these IRA funds.

Needs Assessment Background

Eligible state, local, and Tribal air monitoring agencies were invited to inform the EPA of air monitoring needs and associated details related to several categories. The EPA collected needs related to air quality sensors including details about the total expected cost of addressing the needs, pollutant of focus, geographic location, purpose, etc.

Overall, approximately half of the agencies who responded to the needs assessment submitted air quality sensor-related needs. The total of the air quality sensor related needs of eligible agencies far exceeded the funds available under this IRA monitoring provision. Air sensor needs of the responding agencies varied and included activities such as the acquisition of air quality sensors for deployment directly in communities, development of training and communications materials to be used with communities, and many other kinds of sensor-based projects.

Allocation Approach

The available IRA air quality sensor funds (\$1,982,000)⁶ will be allocated to the EPA Regions based on two factors. First, \$1M of the available funding will be allocated to the EPA Regions proportional to the number of eligible air agencies within each Region. The remaining funds (\$982,000) will be allocated to each of the EPA Regions proportional to the percent of the country’s population living in disadvantaged census block groups as defined by the EPA’s IRA disadvantaged communities map⁷.

This two-factor approach ensures both a broad geographic distribution of air sensor funding across the country with additional funds provided to areas with the highest populations of low-income and disadvantaged communities. The planned allocation across the EPA Regions is provided in the table below. It is expected that the minimum award under this provision will be \$20,000, but the EPA Regions have discretion regarding final grant distributions. The total awards and final allocation may differ slightly from the planned allocation upon implementation.

EPA Region	Air Sensors Allocation [60105(c)]
1	\$84,634
2	\$127,873
3	\$115,179
4	\$361,317
5	\$237,855
6	\$213,907
7	\$91,725
8	\$121,186

EPA Region	Air Sensors Allocation [60105(c)]
9	\$480,035
10	\$148,289
TOTAL	\$1,982,000

⁶The EPA is using the additional ~\$1M of funding from this provision to develop sensor loan programs, air quality sensor workshops, and for the EPA’s administrative costs.

⁷ <https://www.epa.gov/environmentaljustice/inflation-reduction-act-disadvantaged-communities-map>

VIII. Application Package and Submission Information

Applicants must apply electronically through [Grants.gov](https://www.grants.gov) for IRA Air Sensor grants based on the Grants.gov instructions in this guidance. The following forms are required for each application and will be accessible through the funding announcement in Grants.gov. Applicants may work with their EPA Region prior to submitting applications via Grants.gov; the EPA Regional Offices will provide “please apply” letters, application instructions, and other information. Eligible air agencies must have both an active SAM.gov and Grants.gov account. Applicants should ensure as soon as possible that their accounts are active. Click this [link](#) for additional information about registering in SAM.gov and Grants.gov.

- Cover Page- The EPA has provided an example cover page template with the posting for this opportunity on Grants.gov. The example template is optional. The EPA will not penalize or withhold a benefit from an applicant who provides information in another format.
- Standard Form 424, *Application for Federal Assistance*. Please note that the organizational Unique Entity Identifier (UEI) must be included on the SF-424
- Standard Form 424A, *Budget Information for Non-Construction Programs*
- EPA Form 4700-4, *Pre-Award Compliance Review Report* (see [EPA Tips for Completing Form 4700-4](#))
- EPA Form 5700-54, *Key Contacts Form*
- Grants.gov Lobbying Form – for any grant over \$100,000
- Project Narrative Attachment Form, *Project Narrative* – see Section V. Work Plan Contents below
- Budget narrative (Detail budget) – Applicants should consult with “[Interim General Budget Development Guidance for Applicants and Recipients of EPA Financial Assistance](#)” for assistance with developing their budget.

Use “Other Attachments” Form for any additional supporting documents.

The EPA encourages eligible state, local, Tribal, and territorial air agencies to submit grant applications as soon as possible and no later than April 8, 2024.

IX. Work Plan Contents

As required under 40 CFR 107(b) for state and local air agencies and 40 CFR 507(b) for Tribal air agencies, all work plans must specify:

- a. Components (i.e., activities) to be funded under the grant;
- b. The estimated work years and the estimated funding amounts for each work plan component;
- c. The work plan commitments for each work plan component and a time frame for their accomplishment;
- d. A performance evaluation process and reporting schedule; and,
- e. The roles and responsibilities of the recipient and the EPA in carrying out the work plan commitments.

Eligible Activities

IRA section 60105(c) specifies that these grants are for the deployment, integration, and operation of air sensors in low-income and disadvantaged communities and all grants must fund activities resulting in the deployment of air sensors in low-income and disadvantaged communities. Therefore, the EPA will not fund air sensors projects focused on the research, development, demonstration, or evaluation of air sensors. Within reason, this funding may be used to continue work that began under another federally funded air sensors project, assuming that there is no duplication of work, and proposed costs must follow the Basic Considerations of the Uniform Grant Guidance (see [2 CFR 200.403 through 411](#)). Any staffing and contracting costs included in the workplan must support the activities outlined in the workplan only.

To provide timely air quality information in communities, applicants should use commercially available air sensor technology to monitor air pollutants. Examples of eligible activities for the 60105(c) Air Sensors provision include the following, but are not limited to:

- Air quality sensors directly deployed by air agencies in/near low-income and disadvantaged communities.
- Developing and/or operating sensor loan programs to deploy sensors in low-income and disadvantaged communities.
- Deploying and/or operating air quality sensors in low-income and disadvantaged communities via partnerships with community groups.
- Quality assurance and/or quality control documentation and activities related to the deployed air sensors.
- Air quality sensor related data plans and licenses, including sensing as a service.
- Developing training and outreach materials for air quality sensors and associated data.

Applicants should include those activities they chose to undertake in their work plan and provide associated outputs and outcomes for each activity. Grantees will be expected to submit semi-annual progress reports to the EPA on progress in meeting the agreed-upon outputs and outcomes.

Prior to naming a contractor (including consultants) or subrecipient in your application as a “partner,” please carefully review [EPA’s Best Practice Guide for Procuring Services, Supplies, and Equipment Under EPA Assistance Agreements, EPA’s Subaward Policy, and EPA’s Subaward Policy Frequent Questions](#). As provided in [2 CFR 200.317](#), with limited exceptions, states follow the same policies and procedures they follow for procurements financed with non-Federal funds. All other grantees must compete contracts for services and products, including consultant contracts, and conduct cost and price analyses, to the extent required by the procurement provisions of the regulations at 2 CFR Part 200. Applicants are not required to identify subrecipients and/or contractors (including consultants) in their grant application. However, if they do, the fact that an applicant selected for award has named a specific subrecipient, contractor, or consultant in the application that the EPA selects for funding does not relieve the applicant of its obligations to comply with subaward and/or competitive procurement requirements as described in the referenced guidances. **Please note that applicants may not award sole source contracts to consulting, engineering, or other firms assisting applicants with the application solely based on the firm's role in preparing the application or based on an assertion that the individual or firm has “unique qualifications.”**

The EPA expects recipients of funding to comply with competitive procurement contracting requirements in 2 CFR Parts 200 and 1500 as well as the EPA’s rule on Participation by Disadvantaged Business Enterprises in EPA Programs in 40 CFR Part 33. **The Agency does not accept justifications for sole source contracts for services or products available in the commercial marketplace such as consulting, data analysis, or project management.**

For additional guidance, applicants should review the [EPA’s Best Practice Guide for Procuring Services, Supplies, and Equipment Under EPA Assistance Agreements, EPA’s Subaward Policy, and EPA’s Subaward Policy Frequent Questions](#).

Period of Performance

The maximum period of performance for these grants is up to five years. The period of performance should be based on the time required to accomplish the workplan components.

Environmental Results and Strategic Plan Information

Pursuant to Section 6.a. of EPA Order 5700.7A1, “Environmental Results under EPA Assistance Agreements,” the EPA must link proposed assistance agreements with the Agency’s Strategic Plan. The EPA also requires that grant applicants and recipients adequately describe environmental outputs and outcomes to be achieved under assistance agreements (see [EPA Order 5700.7A1, Environmental Results under Assistance Agreements](#)). Applicants must include specific statements describing the environmental results of the proposed project in terms of well-defined outputs and, to the maximum extent practicable, well-defined outcomes that will demonstrate how the project will contribute to the Strategic Plan goals listed below.

Strategic Plan Linkage

The activities to be funded under this announcement support the EPA’s Fiscal Year (FY) 2022-2026 Strategic Plan. Awards made under this announcement will support Goal 4: Ensure Clean and Healthy Air for All Communities, Objective 4.1: Improve Air Quality and Reduce Localized Pollution and Health Impacts. For more information see [EPA’s FY 2022 - FY 2026 EPA Strategic Plan](#).

Outputs

The term “output” means an environmental activity, effort, and/or associated work product related to an environmental goal and objective that will be produced or provided over a period of time or by a specified date. Outputs may be quantitative or qualitative but must be measurable during an assistance agreement funding period.

Applicants should identify outputs in their work plan associated with the eligible activities they choose to undertake. Expected outputs from the projects to be funded under this announcement include, but are not limited to:

- Deployment of air quality sensors in/near low-income or disadvantaged communities;
- Near real-time air quality data availability for low-income or disadvantaged communities;
- Development of trainings and outreach materials;
- Assessments of community-based air quality concerns;
- Development of quality assurance/quality control documentation to guide air quality sensor usage.

Outcomes

The term “outcome” means the result, effect or consequence that will occur from carrying out an environmental program or activity that is related to an environmental or programmatic goal or objective. Outcomes may be environmental, behavioral, health-related, or programmatic in nature, but must also be quantitative. They may not necessarily be achievable within an assistance agreement funding period.

Applicants should identify outcomes in their work plan associated with the eligible activities they chose to undertake. Expected outcomes from the projects to be funded under this announcement may include, but are not limited to:

- Number of staff, community groups, etc. trained to use air quality sensors and/or associated data;
- Increased community awareness and education;
- Increased access to information so that community members can understand air quality in their community;
- Informed policy and decision making by local/state agencies;
- Increased number of citizens with access to local scale air quality data;
- Increased number sensors deployed in low-income and disadvantaged communities;
- Identification of communities experiencing air quality issues where data was previously unavailable.

X. Reporting Requirements

Semi-annual progress reports and a detailed final report will be required. Semi-annual progress reports should summarize technical progress, planned activities for the next six months, and expenditures. The final report shall be submitted to the EPA within 120 calendar days of the completion of the period of performance. The final report must include a summary of the project or activity, advances achieved, and costs of the project or activity. In addition, the final report shall discuss the problems, successes, and lessons learned from the project or activity that could help overcome structural, organizational, or technical obstacles to implementing a similar project elsewhere. The schedule for submission of semi-annual reports will be established by the EPA, after the grants are awarded. Award recipients may be provided with additional information and guidance on reporting performance measures and project progress after award.

Performance Measures. The applicant should also develop performance measures for key outputs and outcomes they expect to achieve through the proposed activities and describe them in their application. These performance measures will be the mechanism to track progress concerning successful processes as well as output and outcome strategies and will provide the basis for gaining insights and developing lessons to inform future recipients. It is expected that the description of performance measures will directly relate to the project outcomes and outputs (see previous section). The description of the performance measures will directly relate to the project's planned outputs and outcomes, including but not limited to:

- Overseeing subrecipients, and/or contractors and vendors;
- Tracking and reporting project progress on expenditures and purchases; and
- Tracking, measuring, and reporting accomplishments and proposed timelines/milestones.

The following are questions to consider when developing output and outcome measures of quantitative and qualitative results:

- What are the measurable short-term and longer-term results the project will achieve?
- How does the plan measure progress in achieving the expected results (including outputs and outcomes) and how will the approach use resources effectively and efficiently?
- What are the expected locations of the outputs and outcomes?

XI. Grant Terms and Conditions

Air agencies should be aware that the [EPA's General Grants Terms and Conditions](#) will apply to these awards. Additional program-specific terms and conditions may also apply. For questions regarding this guidance document and the development of workplans, please contact the following, based on the EPA Region:

EPA Region	Point(s) of Contact	Contact Information
1	Jennifer Brady	617-918-1698; brady.jenniferL@epa.gov
2	Emmet Keveney	212-637-3459; Keveney.Emmet@epa.gov
3	Krista Gonzalez	215-814-3300; gonzalez.krista@epa.gov

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	AJ McCullough	215-814-2093; Mccullough.amanda@epa.gov
4	Janine Morris Todd Rinck	404-562-9480; morris.janine@epa.gov 404-562-9062; Rinck.Todd@epa.gov
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