

EPA's Small Business Innovation Research (SBIR) Program

April Richards, Program Manager

EPA SBIR 2022-2023 Informational Webinar

June 1, 2022



Welcome to the EPA SBIR Webinar!

- All participants microphones are muted, no need to unmute
- If you have any questions or concerns, please use the chat
- Slides and Q&A will be posted on our website after the webinar

Federal SBIR Program

- Set-aside program for small businesses to engage in federal R&D
- Goal is commercialization
- 11 agencies participate
- Budget = 3.2% of Agency's Extramural R&D Budget
- Approximately \$3.2 Billion across federal government
- Information at www.SBIR.gov



Mission

EPA:

Protect human health and
the environment



SBIR:

Seed technology innovations to
meet Agency's mission



EPA SBIR Funding

- Budget: ~\$5.0 M
- One funding cycle per year
 - Phase I proof of concept = \$100,000 for 6 months
 - Phase II development & commercialization = \$400,000 for 2 years
 - Commercialization Option = \$100,000 supplement to match 3rd party investment
- Projects awarded as contracts

EPA SBIR Program

- Applying...
 - Have fairly specific topics – proposals should be responsive
- Funded...
 - Provide companies with EPA technical connection
 - Provide commercialization support
 - Communicate successful projects
- Help to protect the planet

Planned Solicitation Opening: June 15, 2022

(closes in August)



Information at: <https://www.epa.gov/sbir/sbir-funding-opportunities>

Apply at: FedConnect

Subscribe to SBIR listserv:
<https://www.epa.gov/sbir/sbir-listserv>

EPA SBIR Topics



Solicitation- Broad Focus Areas

- Clean and Safe Water
- Air Quality & Climate
- Homeland Security
- Sustainable Materials/Circular Economy
- Safer Chemicals
- Risk Assessment



Topics

CLEAN AND SAFE WATER

- Decentralized wastewater treatment (septic system) technologies for non-potable reuse
- Technologies to process, sort and identify microplastics
- In-stream aquatic trash capture technologies
- Sensors to detect high priority contaminants of emerging concern (inc. PFAS)

AIR QUALITY & CLIMATE

- Ambient air monitoring technology for air toxics
- Continuous Emission Monitoring System for metal HAPs
- Air monitoring technology for methane emissions from fugitive sources
- Technologies that reduce exposure to radon in buildings
- Technologies for improved recovery of refrigerant from air conditioning (AC) and refrigeration equipment

HOMELAND SECURITY

- Innovative technology solutions that build community resilience to disasters
- Miniaturized oil spill droplet size sensor for emergency response underwater vehicles

CIRCULAR ECONOMY/SUSTAINABLE MATERIALS

- Innovative technologies that help consumers prevent food waste in the acquisition, preparation, and storage of food
- Innovative technologies or materials that will improve the U.S. recycling system
- Innovative reduction, reuse, and recycling solutions to advance plastic circularity

SAFER CHEMICALS

- PCB-free color
- Rubber anti-degradant technologies that do not contain 6PPD-quinone
- Innovative enhanced efficiency fertilizers

RISK ASSESSMENT

- Software tools and machine-learning applications for systematic review in science assessment for chemical evaluation

Solicitation is official word....



Clean and Safe Water

- Decentralized wastewater treatment (septic system) technologies for intentional non-potable reuse
- Technologies to process, sort and identify microplastics
- In-stream aquatic trash capture technologies
- Sensors to detect high priority contaminants of emerging concern (inc. PFAS)



Air Quality & Climate

- Ambient air monitoring technology for air toxics
- Continuous Emission Monitoring System for metal HAPs
- Air monitoring technology for methane emissions from fugitive sources
- Technologies that reduce exposure to radon in buildings
- Technologies for improved recovery of refrigerant from air conditioning (AC) and refrigeration equipment



Homeland Security

- Innovative technology solutions that build community resilience to disasters
- Miniaturized oil spill droplet size sensor for emergency response underwater vehicles



Circular Economy/Sustainable Materials

- Innovative technologies that help consumers prevent food waste in the acquisition, preparation, and storage of food
- Innovative technologies or materials that will improve the U.S. recycling system
- Innovative reduction, reuse, and recycling solutions to advance plastic circularity



Safer Chemicals

- PCB-free color
- Rubber anti-degradant technologies for tires and other rubber products that are lower concern for human health and the environment
- Innovative enhanced efficiency fertilizers

Risk Assessment

- Software tools and machine-learning applications for systematic review in science assessment for chemical evaluation



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How to Apply



Selecting a Research Topic

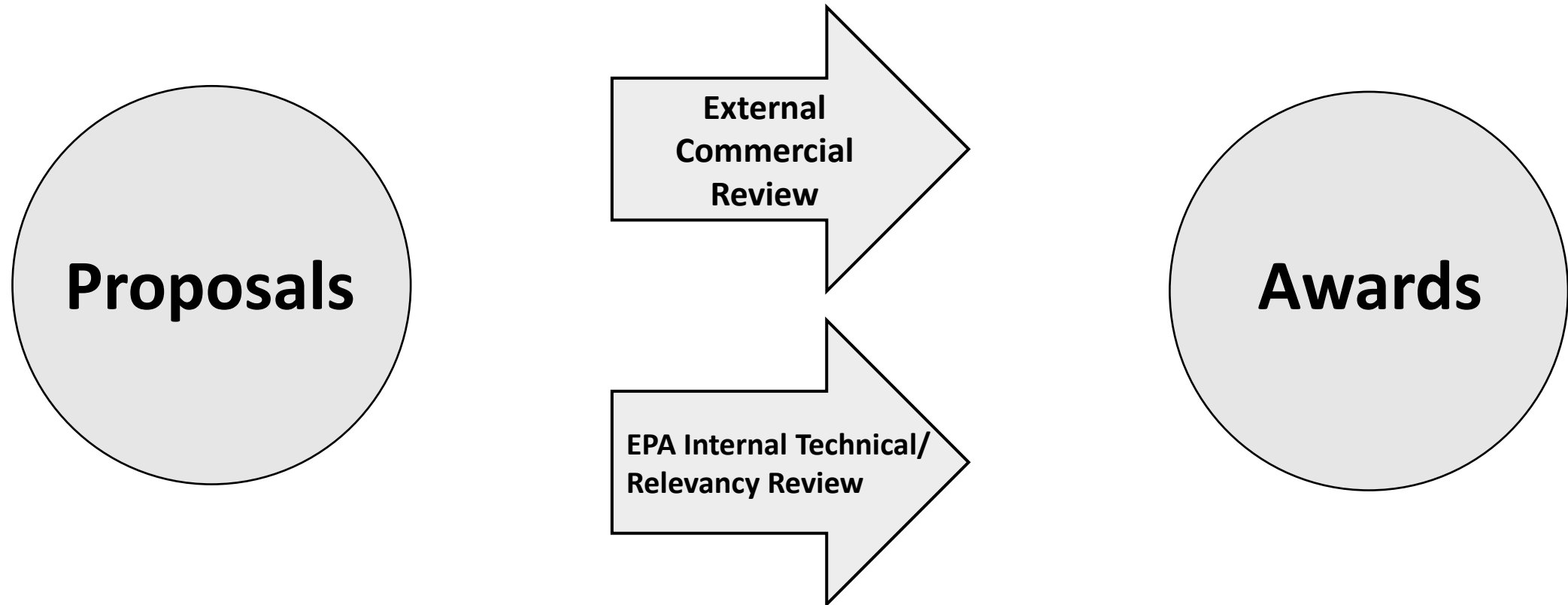
- It is the responsibility of the company to select the most appropriate topic
- EPA budget is modest, so program is competitive
- Proposals must be responsive to specific topics
- Program manager can provide general advice on your proposed technology



Anticipated Schedule

- Phase I:
 - Solicitation Opens: June 2022
 - Solicitation Closes: August 2022
 - Estimated start date: December 2022
- Phase II:
 - Solicitation Opens: end of Phase I (June 2023)
 - Solicitation Closes: ~45 days later (July 2023)
 - Estimated award date: October 2023

Proposal Evaluation & Selection



Proposal Evaluation

- **Commercial Criteria**
 - Innovation/IP
 - Market Opportunity
 - Company/Team (Commercial)
 - Commercialization Approach
- **Technical Criteria**
 - Technical Approach
 - Company/Team (Technical)
- **Relevancy Criteria**
 - Impact/Relevance to topic

Solicitation is official word....

Apply Via FedConnect

- Using FedConnect
- Please start early to register your company
- Register at: <https://www.fedconnect.net/FedConnect/>



Required Registrations

- [SBA Company Registry](#): Register at SBIR.gov to obtain an “SBC Control ID”. See solicitation for instructions on how to register and how to **indicate proof of registration** in your proposal.
- [System for Award Management \(SAM\)](#): Applicants must complete and maintain an active SAM registration, **which requires renewal at least annually**. The renewal process may require as much time as the initial registration.
- [Unique Entity Identifier Number \(UEI\)](#): As of April 4, 2022, the federal government has stopped using DUNS numbers to identify entities. All small businesses are now required to use the UEI assigned by the System for Award Management (SAM.gov). All current SAM.gov registrants have been assigned their UEI and can view them on SAM.gov. Click [here](#) for more info.
- [FedConnect](#): FedConnect is a web portal that connects agencies and vendors and is the platform EPA uses for posting solicitation and proposal submission. Companies must be registered with FedConnect to submit a proposal.

Contracting Office

Matt Huber, SBIR Contracting Officer

- TIPS:
 - Offerors need to be registered in SAM, FedConnect, and as a Small Business Concern with the SBA – This should be your first step
 - Please read the first two pages of the Solicitation carefully
 - Please utilize the last page of the Solicitation to perform a self-check to ensure proposal is conforming
- FedConnect:
 - You will find the Solicitation posted to FedConnect; Proposals must be submitted via the response button. **Note:** Questions or proposals submitted via messages will not receive a response.
 - **Only contract related questions** submitted to me, via email at huber.matthew@epa.gov may receive a response.
- SAM:
 - Ensure you complete your registration in its entirety
 - Ensure you elect both Contracts and Grants (THIS IS A CONTRACT)
 - Ensure you keep your SAM renewal up to date

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Fraud Waste & Abuse



Fraud Waste & Abuse

- SBIR Convictions & Settlements: <https://www.sbir.gov/fraud-waste-abuse>
- SBA tutorial: <https://www.sbir.gov/tutorials/fraud-waste-abuse/tutorial-1>
 - Covers 4 main types of fraud:
 1. Misrepresentations to obtain SBIR funding (e.g., falsified letters of reference, identifying ineligible principal investigators)
 2. Misrepresentation of expended funds
 3. Misuse of award funds (e.g., using the funds to pay for purchases other than the funded research)
 4. Duplication of funds (receiving multiple SBIR awards to conduct the same research)

Report Fraud, Waste, and Abuse to the OIG



IG Hotline

202-566-2476

888-546-8740

OIG_Hotline@epa.gov

<https://www.epa.gov/office-inspector-general>

Nic Evans

Environmental SBIR Funding



National Science Foundation (NSF)



National Institute of Environmental Health Sciences (NIEHS)



Department of Energy (DOE)



United States Department of Agriculture (USDA)



National Oceanic and Atmospheric Administration (NOAA)

Environmental SBIR Funding- More Information

- **NSF** – “Almost all areas of technology” (<https://seedfund.nsf.gov/>)
- **NIEHS/Superfund Research Program (SRP)** - Hazardous Substances Remediation and Site Characterization
(<https://www.niehs.nih.gov/research/supported/centers/srp/funding/hwaerp/index.cfm>)
- **DOE** – (<https://science.osti.gov/sbir/Funding-Opportunities/FY-2023>)
 - Office of Biological and Environmental Research
 - Environmental Focus Area: Scientific Instrumentation to Characterize Water, Soil, and the Atmosphere
 - Next Topics Issued: July 11, 2022
 - Office of Fossil Energy and Carbon Management
 - Environmental Focus Area: Carbon Capture and Removal
 - Next topics issued: November 7, 2022

Environmental SBIR Funding- More Information

- **USDA** – (<https://www.nifa.usda.gov/grants/programs/small-business-innovation-research-program-sbir>)
 - Forests
 - Conservation of Natural Resources
 - Aquaculture
 - Biofuels and Biobased Products
- **NOAA** – Climate, weather, oceans and coasts (including clean water (oceans, Great Lakes) and air) (<https://techpartnerships.noaa.gov/sbir/>)

Take Home Messages

- Make sure your technology fits one of the specified topic areas
- Read solicitation carefully
- Start your registrations early
- Develop a strong, readable proposal
- Address all review criteria
- Please do not wait until the last minute--submit your proposal before the deadline



EPA SBIR

Success Stories



Microvi Biotech Inc: Hayward, CA

- Developed an innovative process, Provi™, that uses microorganisms to remove phosphorus and ammonia from municipal wastewater and recover phosphorus as a valuable by-product.
- This technology is more energy-efficient and less expensive than conventional methods.
- Received third-party investment through collaboration projects with Scottish Water and Thames Water Utilities Ltd., in the United Kingdom.
- Awarded the 2020 Institute of Water Scottish Region Innovation Award



Ecovative Design, LLC: Green Island, NY

- Developed mushroom-based materials for various uses including packaging, construction materials, and furniture
- Bio-fabrication using mycelium grown on natural/waste products
- Commercial success:
 - Clients include Ikea, Dell and Crate & Barrel
 - Raised over \$110 million in capital in 2021
 - Launched spinoff, MyForest Foods, to produce gourmet mycelia for whole-food, meat-free ingredients
 - Launched the Fashion for Good Cooperative to partner with leading brands to develop sustainable products using mycelium materials



ASAT, Inc:

Cottage Grove, OR

- Developed the ASAT Integrated Stove, an affordable and clean-burning biomass stove for heating and cooking
- Partnership with the Gates-funded Global Good organization to send samples worldwide
- SBIR funding has allowed ASAT to succeed in making international sales
 - ASAT products are in over 30 countries
 - Refocusing on US market
- Awarded 2020 Tibbetts Award to recognize success, measurable impact and excellence within the SBIR program



AquaRealTime, Inc.:

Boulder, CO

- Developed AlgaeTracker™, an early detection system for water contamination (including harmful algal blooms (HABs))
 - Reduces closures, expenses and health hazards leveraging Internet of Things (IOT) sensors and data analytics
- Network of floating HABs sensor buoys
- SBIR funding allowed AquaRealTime to pilot AlgaeTracker™ across the US
- Currently sell data to multiple government clients





For More Information

EPA SBIR Program Manager:

April Richards richards.april@epa.gov

Website: www.epa.gov/sbir

Listserv: <https://www.epa.gov/sbir/sbir-listserv>

Program Overview:

<https://www.epa.gov/sbir/sbir-program-overview>

SBA SBIR website: www.SBIR.gov



QUESTIONS?

Please submit questions in the chat.
We will address as many as time
allows.

The presentation slides and Q&A will
be posted on our website.