



Air Sensors International Conference 2021 Virtual Series Indoor Ventilation & Health Effects

Challenge: Cleaner Indoor Air During Wildfires

March 4, 2021

Red Salmon Complex fire, CA, 2020





The Challenge - Shared Vision by Partnering Organizations

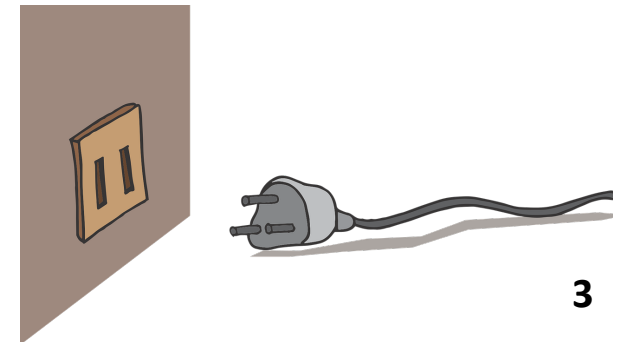
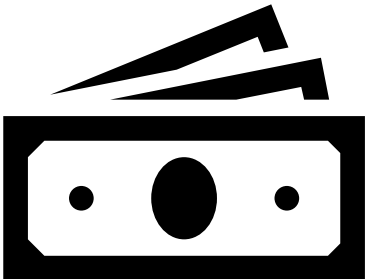
- Encourage the development of new, effective, low-cost approaches to clean fine particulate matter (PM_{2.5}) from indoor air, particularly high concentrations due to smoke events or high pollution episodes
- Approaches that provide cooling and can operate during a power outage are desirable





Better Solutions are Needed

- Current air cleaning technologies have limitations including:
 - High purchase, operation, and maintenance cost (Including cost for consumables, e.g., filters)
 - Unable to effectively cool the air
 - Can be noisy, which discourages use
 - Are dependent upon electrical power
 - During periods of power outages due to public safety power shut-offs or other causes
- These limitations inhibit widespread adoption of these cleaners

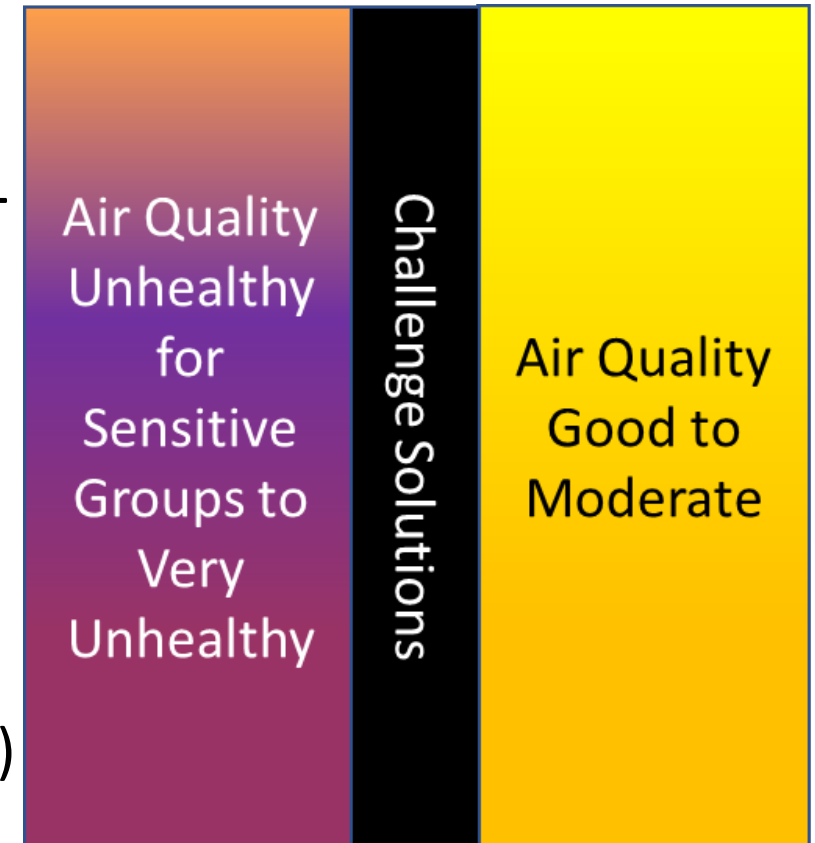




Challenge: Specifications to be Achieved

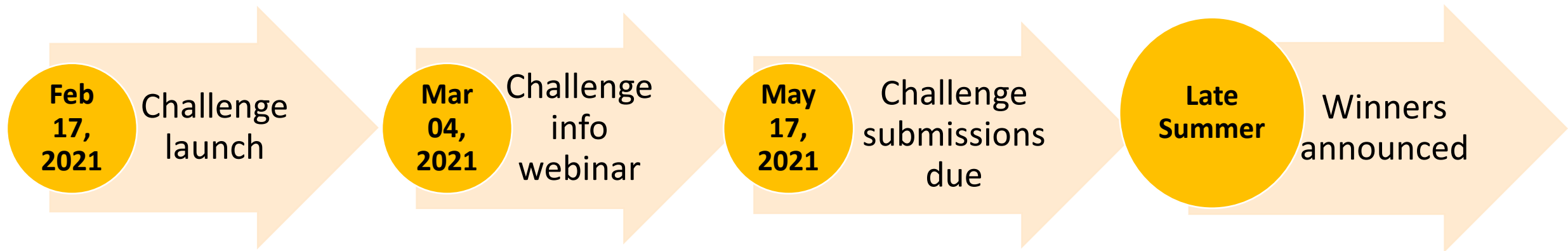
“Must Have” Criteria – PM_{2.5} Reduction

- In a room of at least 150 square feet with eight-foot ceilings and PM_{2.5} concentrations ranging from 35 – 300 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$):
 - The solution should achieve greater than 80% reduction within one hour and maintain performance under real-world conditions
 - For example, maintains indoor reductions over sustained periods of time (a few weeks) during high outdoor concentrations
 - If the solution is novel
 - Indoor air improvements may be more modest or take longer to achieve





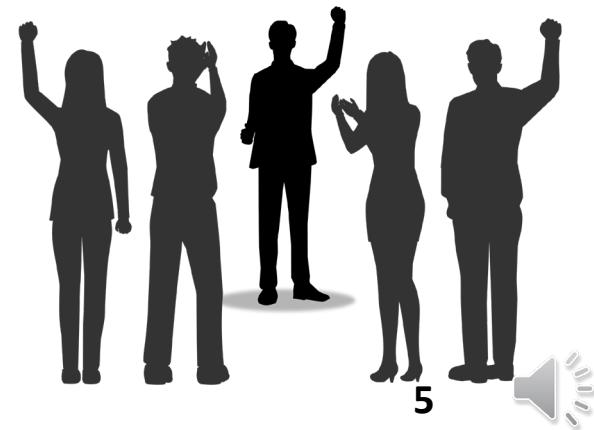
Schedule and Awards



Up to five finalists to receive awards of up to \$10,000 each from a total award pool of \$50,000

Information on Challenge and Launch Webinar Slides:

<https://www.epa.gov/air-research/cleaner-indoor-air-during-wildfires-challenge>





Questions?

Website for the Challenge:

<https://innocentive.wazoku.com/#/challenge/6798f18f0fc24bdfb2ada12e7cec946c>

Technical questions:

Use the "Messages" tab in the InnoCentive platform (this will appear after you accept the Challenge Specific Agreement)

Questions related to the platform use:

support@wazoku.com

Social media:

#CleanerIndoorAirChallenge



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Challenge.gov

Here, members of the public compete to help the U.S. government solve problems big and small. Browse through challenges and submit your ideas for a chance to win.



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U.S. Environmental Protection Agency

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Seeking innovative solutions for
reducing indoor air pollution due to
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