CENTER FOR DATA INSIGHTS AND INNOVATION
CALIFORNIA HEALTH & HUMAN SERVICES AGENCY

View xForm - Project Application v6

This form is for new projects that have not been previously approved by CPHS.

Data entry
- Submitted 09/04/2025 7:32 PM ET by Charlene Sacramento

New Submission Study Personnel

NEW CONTACT INSTRUCTIONS

October 2025 cycle.

_____New HSC Project_____

09/05/2025 • Sussan Atifeh • Internal

Researchers from CDPH and Sequoia Foundation have submitted this HCS project. This randomized controlled trial investigates whether installing air monitors in low-income households can encourage behaviors that reduce indoor air pollution. Participants are assigned to either a simplified or comprehensive intervention group, both receiving education and completing surveys, while only the comprehensive group receives real-time feedback and coaching based on monitor readings. Indoor and outdoor monitors collect data on particulate matter, gases, and VOCs, supplemented by in-home assessments and passive chemical sampling. No state-held datasets are used; all data is collected directly from participants and their environments. Findings will inform potential public health interventions and HUD (Housing and Urban Development) program strategies.

----Co-PI and some research staff are from CDPH. CDPH's Environmental Health Laboratory in Richmond is the designated site for analyzing the sorbent tubes used to measure indoor air pollutants. CDPH staff do not have access to PID.

State data: No request for state data
Linkage: No
Project's stie: Sequoia Foundation – A DSL from Sequoia Foundation is attached.
Funding : Federally funded by: The U.S. Department of Housing and Urban Development (HUD) and National Institutes of Health (NIH)

09/05/2025 • Sussan Atifeh • Internal

If personnel are not found by their email address while trying to complete the following questions, you can add them in the system with the link below. Click on the "New Contact Form" and complete it. Within a few minutes of

completing the form, you will receive an email notifying you of the availability of the new contact. You should then be able to add them in the subsequent questions.

User had the option to start a different form here.

PRINCIPAL INVESTIGATOR (PI)

Enter the Principal Investigator's email address.

Kimberly Berger, MPH, PhD

Email: kimberly@sequoiafoundation.org **Business:** (310) 977-1054

Choose the institution with which the PI is affiliated (not the location at which the research is being conducted).

Sequoia Foundation

Enter the city in which the PI's institution is located.
Berkeley

Enter the state in which the PI's institution is located.

Start typing in the state name to select the name from the list.

California

Attach a copy of the PI's Curriculum Vitae.

Kimberly Berger_Curriculum Vitae 08.07.25.docx PI Curriculum Vitae

CO-PRINCIPAL INVESTIGATOR (CO-PI)

Enter the Co-PI's email address by clicking on the "Add Contact" button.

If there are multiple co-principal investigators, repeat this action for all Co-PIs. If there are no Co-PIs for this project, skip this question.

Rosemary Castorina, PhD MPH

Email: rosemary.castorina@cdph.ca.gov **Business:** (510) 220-4332

Attach a copy of each Co-PI's Curriculum Vitae.

Castorina CV _June 2025.docx Co-PI Curriculum Vitae

ADMINISTRATIVE CONTACT

Enter the email address(es) for the administrative contact(s). If you are the administrative contact, enter your email address, and enter anyone else you want listed as an administrative contact.

Charlene Sacramento

Email: Charlene.Sacramento@cdph.ca.gov **Business:** (510) 620-3646

RESPONSIBLE OFFICIAL (RO)

Enter the RO's email address.

*The RO **cannot** be the same person as the PI or Co-PI. The RO must have supervisory authority, in the administrative structure of the institution, over the PI.*

Jeff W Sanchez, B.A.

Email: jeff@sequoiafoundation.org **Business:** (510) 704-8624

OTHER RESEARCH STAFF

Enter the email address for any other research staff by clicking the "Add Contact" button.

Repeat this action for all other research staff not previously provided on this screen that should receive notifications about this project. If there are no additional research staff, skip this question.

Zhong-Min Wang, Ph.D.

Email: zhong-min.wang@cdph.ca.gov **Business:** (510) 620-2823

Ping Wang, PhD

Email: ping.wang@cdph.ca.gov **Business:** (510) 620-2900

Kazukiyo Kumagai, Ph.D

Email: kazukiyo.kumagai@cdph.ca.gov **Business:** (415) 812-1180

Hannah Wohl Sanchez, BS

Email: hannah@sequoiafoundation.org **Business:** (510) 612-8643

Check for PI same as RO (internal only question) *(Internal)*

False

Project Information

SUBMITTER

Application completed by:

Charlene Sacramento
Email: Charlene.Sacramento@cdph.ca.gov **Business:** (510) 620-3646

PREVIOUSLY APPROVED EXEMPTION

Is there a previously-approved exemption from CPHS for this project?

No

PROJECT TITLE

Enter the project title (please capitalize each word in your title).

Evaluating the Effectiveness of Air Quality Monitoring and Health Education on Reducing Indoor Pollution Exposure in Low-Income Housing Communities

PROJECT SITE

Indicate the primary site at which the research will be conducted.

Sequoia Foundation

STUDY PROCEDURES

Indicate the study procedures involved in this research. Check all that apply.

Recruitment-Participant
Surveys

TYPE OF RESEARCH REQUEST

Indicate which of the following applies to this research. Check all that apply.

*Death Data Only refers to health-related studies requesting existing mortality data from **within** the California Human Health Services Agency (CHHSA)*

*SB-13 (Information Practices Act) refers to health-related studies requesting existing data from **outside** the CHHSA (e.g. California Department of Corrections and Rehabilitation [CDCR], California Department of Education [CDE], etc.) **OR** studies requesting data **within** the CHHSA that are not state funded or involving state staff.*

Common Rule/Human Subjects refers to health-related studies that involve direct or indirect interaction with human subjects (e.g. recruitment, interviews, etc.)

*Common Rule Only refers to health-related studies requesting existing data from **within** the CHHSA (e.g. Office of Statewide Health Planning and Development [OSHPD], California Department of Public Health [CDPH], etc)*

Common rule/Human subjects

PROJECT TYPE DETAILS

Indicate which, if any, apply to this research. Check all that apply.

If the research does not involve any of following, choose "None of the above."

Minimal Risk
Consent form

VULNERABLE POPULATIONS

Indicate which vulnerable populations, if any, will be involved with this research. Check all that apply.

If vulnerable populations are not part of the research, choose "Not applicable."
Note regarding minors: in the United States, a minor is under 18 years of age. If research is conducted outside the United States, a minor is under the age of majority in the countries where research is to be conducted.

Economically or Educationally Disadvantaged Persons

FUNDING

Is this research funded?

Yes

Indicate the funding source for this project.
Federally funded

Enter name of federally-funded source.
U.S. Department of Housing and Urban Development and National Institutes of Health

EXPEDITED REVIEW CONSIDERATION

Please check the criteria below that you think your project meets to qualify for an expedited review. If none of these expedited criteria are appropriate for your project, choose 'not applicable'; your protocol will be reviewed by the full committee. Note that CPHS will make the final determination of whether the project meets the criteria for expedited review.

Protected Health Information/Personally Identifiable Data (PHI/PID) is defined as information in any format that identifies the individual, including demographic information collected from an individual that can reasonably be used to identify the individual. Additionally, PHI is information created or received by a healthcare provider, health plan, employer, or health care clearinghouse; and relates to the past, present, or future physical or mental health or condition of an individual, including any of the 18 HIPAA identifiers.

Note: Please be aware that individual participants may be identifiable by combining other items in the data even when none of the 18 HIPAA identifiers are present. Thus, a study may still contain PID even after removing or never acquiring the identifiers, and the investigator may still need to provide complete answers for the data security questions in the protocol.

***The Departments within the California Health and Human Services Agency (CHHSA) are: Aging, Alcohol and Drug Programs, Child Support Services, Community Services and Development, Developmental Services, Emergency Medical Services Authority, Health Care Services, Mental Health, Public Health, Rehabilitation, Social Services and Statewide Health Planning and Development.*

Not applicable

ANTICIPATED PROJECT START DATE

Projects cannot begin before they have been reviewed. The earliest possible start date is always the date of the next public meeting at which the project will be heard.

For a list of public meeting dates, see the CPHS website

10/03/2025

ANTICIPATED PROJECT END DATE

03/31/2028

Project Details

PURPOSE

Include a brief statement, less than 500 words, describing the research project. Be sure to address the background for the project, including relevant literature, the major research questions to be addressed, and the expected end product (e.g., article, report or other publications). Include the location(s) where the project will take place. The summary should be understandable to the general public.

Indoor air pollution is a substantial contributor to risk and morbidity of asthma and cardiovascular disease (CVD) which were responsible for 3,602 and 926,203 deaths in the United States in 2022, respectively. Most research and regulation of air pollution in the U.S. has focused on outdoor sources. Indoor air is estimated to contain twice the concentration of many pollutants as outdoor air and warrants a separate research focus.

Feasible interventions in residential space can be implemented to reduce exposure to indoor air pollutants. The greatest individual sources of pollutants, and thus the most important to target, are tobacco smoke and cooking. A key intervention opportunity is home ventilation.

We propose the first study on real-time feedback of multiple key air contaminant levels plus strategic health education as a motivator for residents to measurably reduce their indoor pollution exposure. Ours will be the first study to use in-home air monitors to track multiple pollutants: we will have precise measurements of PM10, PM2.5, NO2, CO2, and TVOC with high temporal resolution, as well as individual VOC constituents. We have designed a two-armed randomized control trial that will evaluate two approaches to improving indoor air. The simplified intervention will provide residents with an information session on indoor air pollution sources, how to reduce contaminants in the home, and the health benefits of doing so. The more comprehensive intervention will, in addition to the same information session, install an air monitor in the kitchen area that will give live feedback on pollutant levels in the home and will be paired with coaching on what to do when hazardous levels are reached. Our analyses will quantify the effectiveness of each planned intervention in reducing indoor exposures and will evaluate the superiority of either approach.

Findings from our study could be used by programs conducting housing interventions to reduce tenant risk for asthma, CVD, and other illnesses by implementing a wider program designed to reduce indoor air pollution using our methods. Programs would have the ability to project expected results using the findings from this study using our health hazard reduction assessment.

MAJOR RESEARCH QUESTION

What is the major research question to be addressed in this project?

This project will study the effectiveness of an intervention involving real-time feedback of multiple key air contaminant levels plus strategic health education as a motivator for residents to measurably reduce their indoor pollution exposure. We hypothesize that air monitor feedback + education will be more effective than education alone at decreasing pollutant concentrations, and that both will result in toxicologically meaningful decreases. Our study is intentionally designed to mimic a low-cost HUD-led pilot intervention, with consideration of field complexities and community needs. This project's ultimate goal is to provide HUD with an economically viable, data-driven framework for reducing harmful indoor air exposures and enhancing resident health.

STUDY PROCEDURES

Describe in detail all procedures for this research. Do not attach grant applications or similar documents. Information in this application must be sufficient to fully explain the procedures without such documents

We propose a two-armed, cross-over randomized controlled trial to determine the effects of in-home air monitor installation on behavioral mitigation of several indoor air contaminants. We will install air monitors near the kitchen stoves of low-income tenants to measure particulate matter (PM)10, PM2.5, PM1, nitrogen oxides (NOx), carbon dioxide (CO2), and TVOC in the home for 14 control days and 60 intervention days. Our exposures of interest are PM10, PM2.5, PM1, NOx, and TVOC, with CO2 acting as a proxy for ventilation. All participants will have a monitor installed for two weeks before their intervention to gather a baseline reading.

Monitors will have the capability to display their readings, but this capability will be turned off. At the end of the control period, participants assigned to the comprehensive intervention group will receive an information session on indoor air pollution and reduction techniques, have the display function on their monitor turned on to receive real-time feedback of pollutant concentrations, and receive coaching on what actions to take if displayed air quality reaches certain levels. Those assigned to the simplified intervention group will receive the same initial information session but will not have their monitor's display function turned on and will not receive coaching. To determine the effectiveness of each intervention in reducing indoor air pollution, we will quantify change in contaminant concentrations between control and intervention periods within each group. We will then compare intervention-induced change between groups to assess relative effectiveness. We will also measure attenuation of any effect across the intervention periods and explore change in self-reported mitigation behaviors such as using ventilation while cooking or refraining from smoking indoors. We will use these findings to estimate the potential health hazard reduction if either intervention were implemented by HUD programs statewide using a systematic review and meta-analysis. Installation of outdoor monitors at residences will enable inclusion of environmental measurements in our modeling.

See recruitment and informed consent sections for those procedures. Participants will be randomized on a rolling basis to one of two intervention groups. Once a participant is enrolled, we will schedule the first study visit.

Control period. This will be the first and possibly only study visit at participants' homes. In this visit, we will install the indoor and outdoor monitors (unless an outdoor one is already installed at the location), install passive VOC samplers in a subset of homes, and conduct an in-home assessment with the participant.

Outdoor air monitor installation. For each building with enrolled participants, study staff will install one solar-powered AirGradient OpenAir air monitor in an outdoor location. The monitors have measurement capabilities for PM10, PM2.5, PM1, NOx, CO2, TVOC, temperature, and humidity. The outdoor location will be chosen after consultation with each building's manager if it is a multi-dwelling building, or with the participant if it is a single-family home. Placement will be noninvasive and monitors will be secured against theft or tampering. Examples of monitor placement are rooftops, nearby infrastructure, or affixed to a balcony.

Indoor air monitor installation and data collection. Study staff will ask participants if they would like to continue with indoor monitor installation. If they do, we will install an AirGradient ONE monitor into each participant's home. This monitor has the same capabilities as the outdoor monitor and can additionally display a series of LED lights ranging from green to purple with worsening PM2.5. All monitors will have the LED display function turned off for the initial control period; monitors will not display colors corresponding to measurements. Before installation, we will ensure the monitor is functional and is cellularly relaying information to our remote database. We will install the monitor near the stove because it is the most spatially consistent source of reducible air pollution. Ideal placement is less than two feet from the edge of the range and 4-7 feet from the floor to most closely capture resident exposure while cooking, as well as not directly adjacent to a window or door that opens outside. However, installation will be flexible to accommodate locations of furniture, outlets, windows, etc., as well as disability needs (e.g., height specifications). After installation, the distance between the monitor and the floor, stove, and nearest window or door will be measured, and the placement will be photographed with permission. Every monitor will cellularly transmit detected concentrations of pollutants at five-minute intervals to a remote database. Participants will be told that the device is measuring indoor air pollution but will not be told about possible sources or reduction methods. Participants will be asked to continue as normal for two weeks until the next visit.

VOC passive samplers. To identify the most significant VOC contributors to the TVOC measurements, we will deploy passive VOC samplers in a subset of 50 participant homes during control periods. We will measure up to 20 VOCs such as: benzene, toluene, ethylbenzene, xylenes (BTEX), C6–C12 hydrocarbons, benzenes derivatives, and tetrachloroethylene. Passive sampling methods using thermal desorption tubes are widely used for cost-effectively measuring individual VOCs in the air for a period up to 14 days. VOCs will be collected passively on Tenax-TA-loaded stainless steel sorbent tubes (C1-AAXX-5003, Markes International, UK, or equivalent.) To sample VOCs, one cap closer to the line on the tube will be removed and placed vertically at the sampling location for 2 weeks. After sampling, the lock will be placed back on the tube and shipped to the CDPH Environmental Health Laboratory in Richmond, CA under iced condition. To analyze the sorbent tubes, caps on both ends of the tube will be removed, and loaded on a thermal desorber (TD, TD100-xr, Markes International, UK, or equivalent).

In-home assessment. We will then walk through parts of participants' homes with them to gather the following information: placement and installation

details of indoor and outdoor air monitors (distance from stove, height from floor or ground, use of extension cords, type of outlet, proximity to windows and doors, and photographic documentation); dwelling characteristics (type of dwelling, ownership, number of floors, presence of basement or attached garage); flooring materials in the kitchen, main living spaces, bedrooms, bathrooms, and hallways, and presence of rugs; kitchen location and design (closed, open, semi-open) and photographs of kitchen layout; number, type, functionality, and weather stripping of exterior doors and windows on the same floor as the kitchen; distances between stove and nearest door or window, ceiling height, and kitchen dimensions; stove and oven configuration, fuel type, functionality, make and model, and photographs; presence, type, functionality, venting, and make/model of exhaust fans, including toilet paper suction test; presence and type of heating and cooling systems (furnace, boiler, wall heater, fireplaces, heated floors, water heater, air conditioning units) and whether they vent to the outside, with photographs when possible; presence, type, and venting of clothes dryers; presence and make/model of small appliances such as humidifiers, air purifiers, and vacuums, with photographs; observed odors (tobacco, cannabis, fragrance, candles, incense, cleaning chemicals, or other); and level of visible dust.

Before commencing the assessment, participants will be asked if they would like to continue. We will advise participants that they do not have to provide us with any information they don't want us to have, and that we don't have to go anywhere in the house they don't want us to go to. Before taking each photograph we will check with participants to see if it is okay. The assessment will be done by trained staff through an internal survey hosted on Zoho Survey (see Internet Accessibility section for security details on Zoho Survey).

Intervention period. After completion of the two-week control period, we will contact participants and ask them to fill out a questionnaire and watch a short educational video on indoor air pollution. Comprehensive intervention participants will be additionally asked to watch a short video on how the air monitor works.

Simplified intervention activities.

Baseline questionnaire. Participants will fill out an online questionnaire to collect the following information: frequency of cooking with small electric appliances, stove top, and oven; frequency of smelling gas and experiencing symptoms (headache, dizziness, nausea) while cooking; presence and use of an exhaust fan, other fans, and windows or doors while cooking; frequency of smoking or vaping inside and outside the home and noticing smoke indoors; presence and use of gas heating, furnace filters, fireplaces, and ovens for heating; presence and use of air conditioning, furnace or AC filters, and gas dryers; use of candles, incense, or herb bundles; presence of pets; pesticide use; painting inside the home; frequency of air freshener or scented product use; cleaning practices (vacuuming, sweeping, mopping) and filter changes; window and door opening habits; presence and use of an air purifier and its settings; household composition and demographics

(number of residents, age, race/ethnicity, gender, income, education); household health conditions (lung and heart); and country of birth. At the beginning of the questionnaire, participants will be asked if they would like to continue, and if so they will be told they don't have to answer any questions they don't want to. This survey will be hosted on Zoho Survey.

Educational video. Participants will then be asked to watch an educational video, which will be a narrated PowerPoint presentation. It will last around ten minutes and will cover: definitions, sources, and components of indoor air pollution; how indoor air pollution can affect human health; and strategies to lower air pollution in the home. The session will be accessible to a sixth grade reading level. A printed infographic summarizing the material will have been mailed to the participant to keep.

Comprehensive intervention only activities. Participants in the comprehensive intervention arm will be asked to fill out the same questionnaire and watch the same educational video on indoor air pollution. They will have their air monitor's LED display function turned on.

Air monitor description and coaching. We will then ask these participants to watch a 5-minute video on how to use and interpret their air monitor. This will provide instruction on what the monitor's displayed colors mean (they correspond to concentrations of PM2.5) and what actions should be taken when certain colors appear (e.g., open a window or door, smoke outside, put out candle). The presentation explains that the monitor measures and displays particulate matter levels only, not gases or other chemicals, and notes that high humidity can cause the monitor to overestimate particulate matter. Participants will be encouraged to reference the sticker we will have mailed them for the monitor, which summarizes what to when the monitor displays different colors.

Data monitoring. We will be monitoring data being collected each week and will have automated alerts set up to tell us if a monitor stops transmitting data. If that happens, we will contact the participant to troubleshoot the problem. If needed, we will send study staff to the participant's home to fix the problem. We will also have an automated alert that will tell us if PM2.5 levels reach 500 $\mu g/m^3$ as this may indicate a dangerous situation. If that happens we will contact the participant by phone or email to make sure they are safe and to ask about the incident.

Follow-up and completion of study. After 60 days of data collection following the start of the intervention period for each participant, we will disable the monitor's cellular communication and cease collecting data. We will contact the participant to request they fill out the follow-up questionnaire online, inform them that the study has concluded, and initiate results return if requested. We will also schedule removal or movement of the monitor if requested; this would be the final study visit. For those in the simplified intervention, we will offer to turn on the LED display function and provide the air monitor coaching from the comprehensive intervention. If we cannot reach participants by phone, we will follow up by email and/or physical mail.

Follow-up questionnaire. Our follow-up questionnaire will repeat relevant

questions to determine if participant cooking habits, pollution mitigation behaviors, or other sources of indoor air pollution have changed. For process evaluation, we will additionally ask participants which components of the intervention they most engaged with, the acceptability of each component, whether they feel the intervention motivated change in pollution reduction behaviors, any perceived benefits or harms from the study, and any points of improvement or feedback. At the beginning of the questionnaire, participants will be asked if they would like to continue, and if so they will be told they don't have to answer any questions they don't want to. This survey will be hosted on Zoho Survey.

Results return. We will then ask if participants would like a summary of their air monitor results. If yes, we will mail a copy of their results alongside air quality standards and comparison to others in the study in an accessible format with explanations.

Please upload here any tables or charts related to your study procedures and any materials (such as surveys or interview questions) that will be presented to participants.

Air Smart study in-home assessment.pdf	Instruments
Air monitor instructions video slides.pptx	Other Documents
Factsheet.jpg	Other Documents
Indoor air pollution video slides.pptx	Other Documents
Monitor sticker.pdf	Other Documents
Results return cover letter.docx	Other Documents
Results return.docx	Other Documents
Script for air monitor instructions video.docx	Other Documents
Script for indoor air pollution video.docx	Other Documents
Air Smart study eligibility survey.pdf	Questionnaires
Air Smart study follow-up questionnaire.pdf	Questionnaires
Air Smart study questionnaire.pdf	Questionnaires

Deleted Attachments: 7 (Most Recent: Script for air monitor instructions video.docx on 09/04/2025 6:44 PM ET)

RECORDING

Will audio or video recording occur?

No

DECEPTION

Will deception be used in this study?

No

CALIFORNIA HEALTH AND HUMAN SERVICES AGENCY (CHHSA) DEPARTMENTS LIST

Indicate any of the following CHHSA department(s)' involvement in providing research staff, funding and/or patients from State mental hospitals for this project.

CDPH: Department of Public Health

Study Population

POPULATION DESCRIPTION

Provide a full description of how human subjects will be involved in the research. Address characteristics of subjects such as: age; sex; ethnicity; and number of participants. Include requested participant number.

Our study population is comprised of low-income (0-50% of local area median income [AMI]) tenants who reside full time in one residential unit, with the majority to be enrolled in the Oakland area and a smaller subset in Los Angeles. We have chosen a community partner in the Oakland area, Higher Ground, because this area has some of the highest concentrations of air pollution in the state, as well as higher than average incidences of related health conditions, while also comprising a large, diverse population. All participants will be age 18 or over. We expect participants to be majority Black and Latino based on the geographic region and income limitations, but race and ethnicity are not eligibility criteria. Sex is also not a criterion, though we expect most participants to be female as participants must be responsible for cooking at least 50% of the home meals.

About 390 people will be recruited, with a goal of 330 completing the study (300 in the Oakland area and 30 in Los Angeles). Recruitment will be led by the community partner Higher Ground and Sequoia Foundation, using flyers at community events and social media posts in English, Spanish, and Cantonese. Eligibility screening will confirm age, residence, income, cooking responsibility, and language. Participants will undergo home visits for installation of indoor and outdoor air monitors and an in-home assessment. The control period will then begin where we will measure indoor air pollution for two weeks. Participants will then respond to the baseline questionnaire, watch an educational video on indoor air pollution, and half the participants will also watch a video on how the air monitor works. Then the 60 day intervention period will begin. Participants will have been randomized into two intervention arms: (1) information session only, or (2) information session plus real-time monitor feedback and coaching. At the end of the 60 day intervention period we will cease data collection and administer a follow-up survey. If elected, participants will receive their study results a few weeks later. Compensation totals $200 per person, distributed in three payments ($50 at first visit, $50 after the control period, $100 after the intervention). The expected participant time commitment is about 1.5–1.75 hours over a 74-day involvement period. Please see Study Procedures for full procedures.

RATIONALE

What is the rationale for studying the requested group(s) of participants?

Our study is intentionally designed to mimic a low-cost HUD-led intervention which would be aimed at low-income, public housing residents. Our Oakland community-based partner, Higher Ground, will ensure this study is conducted within, and in partnership with, low-income communities representative of potential HUD housing tenants. We are engaging these communities because they are most impacted by poor indoor air quality and its associated health conditions and will thus see the greatest benefit from a reduction in exposure.

RECRUITMENT DETAILS

Describe how potential subjects will be identified for recruitment. Examples include: class rosters; group membership; individuals answering an advertisement; organization position titles (e.g., presidents, web designers, etc.). How will potential participants learn about the research and how will they be recruited (e.g., flyer, email, web posting, telephone, etc.)?

Important to remember: subjects cannot be contacted before IRB approval.

All recruitment in the Oakland area will be conducted by our community partner, Higher Ground. Their mission as a non-profit is to provide services to increase the intellectual development of children through workforce development, social emotional learning, after-school enrichment, technical assistance, service-learning, and school/community-based partnership development for youth. They primarily serve the Black community in Oakland. They will recruit with flyers at in-person events and with Instagram posts. In-person event types will include school events, community health fairs, volunteer days, and holiday celebrations. Recruitment in Los Angeles will be conducted by Sequoia Foundation's community engagement team, who will recruit by flyering at events and through emailing local community organizations. See attached for in-person talking point guidelines that will be given to recruitment staff.

Flyers and Instagram posts will clearly state this is a research study, explain the study's purpose, and advertise $200 and a free air monitor in compensation for completing the study. Flyers and posts provide multiple means of contact (the study's email address and the online eligibility screener) and will be in English, Spanish, and Cantonese which are the working languages of the vast majority of our potential participants. All recruitment materials will be translated after the English versions are approved by CPHS.

Outdoor monitors do not need to be directly adjacent to a participant's home. We will have fewer outdoor monitors than indoor ones in this study. This, once a participant who lives in a multi-dwelling building is enrolled, we will contact the building manager to ask if we can post a recruitment flyer in the entryway of the building. This will maximize the use of each outdoor air monitor.

Attach copies of all recruitment materials.

Recruitment email.docx	Recruitment Materials
Recruitment flyer.pdf	Recruitment Materials
Recruitment Social Media Post.docx	Recruitment Materials
Tabling Recruitment Talking Points.docx	Recruitment Materials

Deleted Attachments: 1 (Most Recent: Recruitment social media post.png on 09/04/2025 5:45 PM ET)

SCREENING

Will subjects be screened prior to entry into the research?

Yes

Please address the criteria for exclusion and inclusion in the research during the screening process. Provide reasons for not including women or minorities. Provide justification for including vulnerable populations such as children or prisoners. Please also provide a statement regarding what will happen to the information collected about the individual should they not enter into the study.
Participants will be directed by recruitment materials to an online eligibility screener. Eligibility requirements are: age 18 and over; lives in Alameda, Contra Costa, San Francisco, or Los Angeles counties; less than 50% Area Median Income (AMI); not planning to move in the next three months; does at least 50% of the cooking in their household; and can communicate in English, Spanish, or Cantonese. To determine who is under 50% AMI, we will ask how many people are in their household and use survey logic based on their response and the county they live in the generate the appropriate AMI. We will then ask if their household income is less than this amount. If an individual chooses not to enter into the study, their information will be destroyed within one month.

COMPENSATION

Will subjects be compensated for participating in the study?

Yes

Compensation type
Cash

Explain the amount and schedule of compensation that will be paid for participation in the study. Include provisions for prorating payment. The amount should not be coercive.
Subjects will receive $50 after the first study visit, $50 after the completion of the control period, and $100 after completion of the intervention period. We plan to ask eligible participants if they would prefer to receive compensation by Venmo, Cashapp, or mailed check at the end of the eligibility survey, after which we will collect Venmo or Cashapp usernames in the survey if they opt for one of those options.

STUDY DURATION

Estimate the probable duration of the entire study. This estimate should include the total time each subject is to be involved and the duration of each data collection about the subject.

E.G., This is a two-year study. Participants will be interviewed three times per year; each interview will last approximately two hours. Total approximate time commitment for participants is 12 hours.

This is a three-year study. The duration of air quality data collection will comprise of a 14-day control period and 60-day intervention period.

Subject participation will involve:

Beginning of Control Period - A visit from study staff to install indoor and outdoor air monitors and do the in-home assessment. This will take one hour.

Beginning of Intervention Period - All participants complete an online baseline questionnaire, which will take 20 minutes. Additionally, participants will receive either a simplified intervention (information session only, 10 minutes) or a comprehensive intervention (information and air quality monitor coaching, 15 minutes).

The total approximate time commitment for participants is 1.5-1.75 hours.

Risks and Benefits

RISK DESCRIPTION

Provide a description of possible risks to participants: physical, psychological, social, economic, loss of data security, and/or loss of confidentiality. Describe and justify whether the research is minimal risk or greater than minimal risk.

The study poses minimal risk to participants. There is a potential risk from loss of confidentiality of records, although this is expected to be very low since a variety of efforts will be put into place to prevent this.

MEDICAL SERVICE RISKS

Describe how medical services will be provided if subjects suffer adverse mental or physical effects as result of research activity. If no services provided, state that clearly.

No medical services will be provided if subjects suffer adverse mental or physical effects as a result of research activity. However, research staff may assist with locating resources for medical services as needed.

INTERNATIONAL RESEARCH

Will this research occur outside of the United States or U.S. territories?

Check with client to see if they consider territories to be outside the U.S. or not, as this can vary between institutions.

No

LESS RISKY METHODS

Describe any less risky methods and why they are not being used.

We are not aware of any less risky methods.

BENEFITS

Describe the benefits, if any, to the subjects or to society that will be realized as a result of this project. Discuss the benefits that may accrue directly to the subjects as well as to society. If there is no direct benefit anticipated for the subjects, state that clearly.

Participants may directly benefit from real-time indoor air quality monitoring and education provided by the study. We believe our project will empower residents to have agency over their exposures and health, a critical element to the success of any widespread intervention.

This project's ultimate goal is to provide HUD with an economically viable, data-driven framework for reducing harmful indoor air exposures and enhancing resident health. Findings from our study could be used by programs conducting housing interventions to reduce tenant risk for asthma, CVD, and other illnesses by implementing a wider program designed to reduce indoor air pollution using our methods. Programs would have the ability to project expected results using the findings from this study using our health hazard reduction assessment.

JUSTIFICATION OF RISKS

Explain why study risks are reasonable in relation to the potential benefits to subjects and to society.

The potential benefit to subjects and knowledge to be gained outweigh the minimal study risks to subjects.

Adminstrative Safeguards

PERSONALLY IDENTIFIABLE DATA (PID) INSTRUCTIONS

Protected Health Information/Personally Identifiable Data (PHI/PID) is defined as information in any format that identifies the individual, including demographic information collected from an individual that can reasonably be used to identify the individual. Additionally, PHI is information created or received by a healthcare provider, health plan, employer, or health care clearinghouse; and relates to the past, present, or future physical or mental health or condition of an individual, including any of the 18 HIPAA identifiers.

Note: Please be aware that individual participants may be identifiable by combining other items in the data even when none of the 18 HIPAA identifiers are present. Thus, a study may still contain PID even after removing or never acquiring the identifiers, and the investigator may still need to provide complete answers for the data security questions in the protocol.

If the researcher demonstrates that he or she is unable to comply with any of the requirements below, he or she may request an exception from these requirements. The researcher should indicate any measures that will be taken to address this requirement. The exception request should be made in the text box of the corresponding requirement. An exception will only be granted if the researcher can demonstrate that adequate alternative measures have been taken to minimize risks so as to justify the exception.

HIPAA IDENTIFIERS

Please identify which HIPAA Identifiers you plan to request as part of your submission.

Name
Address (all geographic subdivisions smaller than state, including street address, city county, and zip code)
Telephone numbers
Email address
Any other characteristic that could uniquely identify the individual

TRAINING PROCEDURES

Describe the procedures for training all research staff who have access to PID on privacy and security. Indicate if staff are required to sign a confidentiality statement related to general use, security, and privacy.

Sequoia Foundation staff who will have access to PID are required to maintain active certification in either the Collaborative Institutional Training Initiative (CITI) human subjects research training or the Human Research Protection Foundational Training provided by the U.S. Department of Health and Human Service's Office for Human Research Protections.

CDPH research staff with will not have data access to PID, but will still be trained in the importance of confidentiality and are required to sign a Department Security and Confidentiality statement. Staff members at CDPH must complete an annual Information Privacy and Security Training as mandated by CDPH. In addition, research staff complete the web-based Human Research Protection Foundational Training provided by the U.S. Department of Health and Human Service's Office for Human Research Protections.

STAFF VETTING PROCEDURES

Describe procedures, either background check or thorough reference check, for vetting staff who will have access to PID.

Sequoia Foundation staff with access to PID have been vetted through background and reference checks.

CDPH research staff have been vetted through background and reference checks, and have worked with CDPH data for more than 5 years.

SUPPORT LETTER

Obtain and submit a department support/data release letter.

This is a statement from the state agency or department you are receiving data from. It must be on that agency's/department's letterhead and should include both

1) *that the release of the desired data is legal and*

2) *that the entity is willing to release the desired data to you, the researcher. If you are not receiving data, this letter should indicate that you are supported.*

***For VSAC requests, if you do not have a Departmental Letter of Support (LOS)/Data Release, you may upload a copy of the Data Request Form (application) from the department to secure a review for the upcoming cycle. The protocol will not be approved until the LOS is uploaded to the protocol.*

Please also review the CPHS Statement for Birth and Death Data.

Support Letter Placeholder.docx Department Letter of Support

PREVENTING RE-USE AND UNAUTHORIZED ACCESS

Explain how you will ensure that data will not be reused or provided to any unauthorized person or entity.

Unauthorized means that the person or entity does not have a need to access the data for purposes of the research project approved by CPHS.

All information gathered for this study will be used only for the research described in the research plan by specific team members with a need for the data. Data will not be reused or provided to any persons outside of the research team. The investigators will comply with current CDPH standards for returning and/or destroying data upon completion of this study and subsequent related research, and will certify this via letter to CPHS.

CONFIDENTIALITY OF PUBLISHED DATA

Indicate whether information will be published that could possibly be used to identify an individual subject.

No names or identifiable characteristics of the subjects will be published or released. We will follow CDPH and HHS Agency privacy guidelines for tabulated data.

DATA REQUEST JUSTIFICATION

Provide adequate justifications for the quantity of the data, the years and the variables being requested. Have you requested no more than the minimum necessary data to perform the research?

We are collecting the minimum data necessary to perform this research. The numbers of subjects to be studied meet minimal statistical power requirements.

LIMITATIONS TO DATA ACCESS

Indicate if access to data is limited only to those with a need to know for purposes of implementing or evaluating the research.

Only Sequoia Foundation staff directly involved with the study will have access to other study data. No individual identifiers will be used in any reports or publications resulting from this study. All analyses and reports generated from these data will be reported only in the aggregate.

Access to the hardware, software, and referenced data within CDPH local area network are granted to authorized CDPH users only. CDPH users consist of both state and contract employees. Access to the referenced data within the CDPH network is limited to those listed in the section, Access to Data. Each request adheres to CDPH Information Security Office standards. An application is submitted by management for all new CDPH users. Each CDPH user must have a secured password to enter the CDPH Intranet which is protected by a firewall.

PROTECTION AGAINST SMALL CELL SIZES AND ASSOCIATED PROBLEMS

Describe appropriate and sufficient methods to protect the identity of individual subjects when small cells or small numbers and/or data linkage to another data set are involved in the research project.

The investigators will comply with the standards of de-identification of individual subjects established in 45 CFR 164.514(a) and 164.514(b) of the HIPAA privacy regulations, such that cell sizes less than five, whether actual or implied, and rates of either 100 or zero percent, will not be reported in the findings, listings, or information resulting from this study.

LINKAGES

Will the data set be linked with any other data sets?

No

DESTRUCTION OF PID VERIFICATION

Indicate that you will provide CPHS with a letter certifying that PID has been destroyed and/or returned to the data source once research is concluded.

Yes

DATA SECURITY LETTER

Upload a certification/statement from the Chief Information Officer, Privacy Officer, Security Officer or equivalent position of the researcher's institution that CPHS Data Security Standards are met.

- *Data security letters cannot be signed by the Principal Investigator or Responsible Official.*
- *The data security letter must be on your institution's letterhead.*
- *Example of data security letter*

Security form lettter 082825_Signed.pdf Data Security Letter

Physical Safeguards

DATA PROTECTION

Indicate that research records and physical samples will be protected through the use of locked cabinets and locked rooms; PID in paper form will not be left unattended unless locked in a file cabinet, file room, desk, or office.

Yes

DATA DESTRUCTION

Will data/samples will be destroyed or returned as soon as it is no longer needed for the research project.

Yes

RETAINED DATA

Will the retained data/samples have personal identifiers or be de-identified?

data will contain personal identifiers

DESTRUCTION METHODS

Describe how you will ensure the PID in paper form is disposed of through confidential means, such as cross cut shredding or pulverizing.

Data in paper form will be disposed of through confidential means including crosscut shredding or pulverizing.

FAXING

Describe how you will ensure that faxes with PID are not left unattended and fax machines are in secure areas.

No PID will be faxed for this study. If any data will be faxed, the sender will notify the recipient before sending the fax, and confirm receipt immediately after sending to ensure faxes are not left unattended.

MAILING

Indicate whether mailings of PID are sealed and secured from inappropriate viewing; and whether mailings of 500 or more individually identifiable records of PID in a single package, and all mailings of PID to vendors/contractors/co-researchers, are sent using a tracked mailing method, which includes verification of delivery and receipt, such as UPS, U.S. Express Mail, or Federal Express, or by bonded courier.

Files with PID will be encrypted, password protected, and mailed in sealed and secure packaging and transported by trackable secure carrier only.

ELECTRONIC STORAGE

State whether PID in paper or electronic form, e.g., stored on laptop computers and portable electronic storage media (e.g., USB drives and CDs), will ever be left unattended in cars or other unsecured locations.

Data in paper and electronic form will never be left unattended in cars or other unsecured locations. Laptop computers and portable electronic storage media (e.g., USB drives and CDs) will be encrypted.

PHYSICAL STORAGE

Describe whether facilities, which store PID in paper or electronic form, have controlled access procedures, and 24 hour guard or monitored alarm service.

The Sequoia Foundation office in Berkeley has a 24-hour monitored alarm system and the office is only accessible by key.

Only personnel with appropriate security badges have access to CDPH facilities. All cubicles and offices have lockable cabinets, each with its own unique key. The main entrances to the buildings are monitored by guards 24 hours a day and all entrances are equipped with an alarm service.

SERVER SECURITY

Provide a description of whether all servers containing unencrypted PID are housed in a secure room with controlled access procedures.

Servers will not be used at Sequoia Foundation. Only a local access desktop will be used at Sequoia Foundation.

The CDPH Richmond campus houses both the secured Richmond Server Room as well as the computers used to access the referenced data. The Richmond Server Room and computers used to store referenced data are suitably protected from physical intrusion, theft, fire, flood and other hazards. Only authorized personnel are granted access to server rooms.

STORING IDENTIFIERS

Indicate whether identifiers will be stored separately from analysis data.

Data sets used for analysis will be devoid of personal identifiers.

DISK STORAGE

State whether all disks with PID will be destroyed.

Any back-up CDs or DVDs containing data will be physically destroyed when no longer needed for this project.

Electronic Safeguard

COMPUTER ACCESS OVERVIEW

State whether all computer access will be protected through the use of encryption, passwords, and other protections.

All computers are password protected and encrypted, and located in secured and locked facilities.

FIPS 140-2 COMPLIANCE: WORKSTATIONS

Indicate whether all workstations that contain PID have full disc encryption that uses FIPS 140-2 compliant software. If not, explain why not and what encryption will be used.

The workstation at Sequoia Foundation is protected with FIPS 140-2 compliant full disk encryption using ESET. ESET Full Disk Encryption is FIPS 140-2 validated with 256-bit AES encryption.

All CDPH desktop computers are protected with full disk encryption using the Symantec Endpoint Encryption architecture which incorporates full 256-bit level cyphers to prevent password cracking and has been FIPS 140-2 certified since 2005.

FIPS 140-2 COMPLIANCE: LAPTOPS

Indicate if all laptops that contain PID have full disc encryption that uses FIPS 140-2 compliant software. If not, explain why not and what encryption will be used.

Although laptop computers will not be used in this study, all CDPH laptop computers are protected with full disk encryption using the Symantec Endpoint Encryption architecture which incorporates full 256-bit level cyphers to prevent password cracking and has been FIPS 140-2 certified since 2005.

FIPS 140-2 COMPLIANCE: REMOVABLE MEDIA DEVICES

Indicate if PID on removable media devices (e.g. USB thumb drives, CD/DVD, smartphones, backup recordings) are encrypted with software that is FIPS 140-2 compliant.

CDPH's standards mandate that only encrypted USB flash drives, such as Kingston Data Traveler 5000 or Iron key Enterprise models may be used to host confidential files on removable media. Both are fully hardware encrypted and FIPS compliant.

SECURITY PATCHES

Indicate if all workstations, laptops and other systems that process and/or store PID have security patches applied in a reasonable time frame.

The Sequoia Foundation workstation will be regularly updated with security patches released by Microsoft on at least a monthly basis and will have automatic anti-virus updates scheduled at least daily.

CDPH laptops and desktop workstations are regularly updated with security patches released by Microsoft on a monthly basis, and automatically undergo a full system scan by our Symantec Endpoint Protection antivirus system every week on Wednesdays.

PASSWORD CONTROLS

Indicate if sufficiently strong password controls are in place to protect PID stored on workstations, laptops, servers, and removable media.

Access to the Sequoia Foundation workstation is granted to authorized users only using a password that is at least eight numeric and alphabetic characters and different from the previous four passwords. The workstation will be locked for at least 30 minutes after no more than six invalid access attempts or until the administrator enables the user account. Users must re-enter their password if the session has been idle for more than 15 minutes. Passwords are masked and not visible when entered, and must be changed every 60 days.

Access to the CDPH intranet and workstations are granted to authorized users only using a password that must be least 8 characters long and have 3 characters from the following four groups - lower case numeric characters, upper case numeric characters, numbers, and symbols. Passwords are masked and not visible when entered, and must be changed every 60 days.

ELECTRONIC SECURITY CONTROLS

Indicate if sufficient system security controls are in place for automatic screen timeout, automated audit trails, intrusion detection, anti-virus, and periodic system security/log reviews.

Sequoia Foundation utilizes the following electronic security controls:

Automated audit trails and periodic system security/log reviews: Audit trails (active system tracking logs) will be enabled on the workstation (e.g. user account activity, email applications, firewall logs, antivirus logs, etc.). The security officer will review audit events/logs on a regular basis and there will be automatic notification of unusual system activities. Audit trail logs will be retained for 12 months.

Intrusion protection: All traffic will be monitored by the use of an Intrusion Detection System (IDS) and/or Intrusion Prevention System (IPS). All IDS/IPS system(s) will be kept up-to-date with the latest available attack signatures. File Integrity Monitoring software will be deployed on the workstation and will be configured to monitor all critical files, including system files, application files, log files, stored encryption keys, etc.

Anti-virus: The workstation will have up to date, actively running anti-virus software along with gateway anti-virus protection.

At CDPH, password protected screen savers with automatic screen timeout are used. CDPH Firewalls are configured to log all reports daily, weekly, and monthly so that network activity can be analyzed. Logs are examined on a weekly basis to determine if attacks have been detected by the firewall monitoring software.

FIPS 140-2 COMPLIANCE: ELECTRONIC TRANSMISSION

Explain whether all transmissions of electronic PID outside the secure internal network (e.g., emails, website access, and file transfer) are encrypted using software which is compliant with FIPS 140-2.

Transmission of CDPH data to and from outside entities requires the use of the Secure File Transfer Protocol (SFTP) for direct server-to-server communication, and the Voltage Encrypted email system for exchange of data over email.

INTERNET ACCESSIBILITY

Note if PID in an electronic form will be accessible to the internet.

Data will not be accessible to the Internet. PID collected through Zoho Survey will be accessible via encrypted internet connections. Zoho Survey uses end-to-end encryption with FIPS 140-2 compliant protocols for data transmission and storage. Data are hosted on secure servers with restricted access and monitoring.

The PID collected through the survey will include: county of residence, household income category, participant age, race/ethnicity, education, first and last name, email address, phone number, country of birth, yes/no responses to two groups of health conditions, and optional Venmo or CashApp username for compensation. In addition, photographs of household appliances (e.g., oven) may be collected during the in-home assessment.

All data will be encrypted in transit and at rest, accessible only to authorized study staff.

DISPOSING OF PID

When disposing of electronic PID, indicate whether sufficiently secure wiping, degaussing, or physical destruction will be used.

Sequoia Foundation will dispose of all media marked as confidential or containing customer information in a secure manner. All paper, CDs, and DVDs, are destroyed through an outside document shredder. Locked containers are kept at the main office until pick up is scheduled with a document shredder company. Functional hard drives shall be deleted using a secure delete utility program. Hard drives that contain sensitive information are marked for destruction. Hard drives to be destroyed are kept in locked containers until we either rent a Degausser or alternatively can be sent for shredding to a document destruction service.

CDPH uses secure wiping, degaussing, and physical destruction methods when disposing of electronic data containing confidential, personal, or sensitive information. Prior to disposal of any computer or computer media, the data residing on any drives must be cleared and sanitized to eliminate the magnetically recorded data on all drive platters. The most simple degaussing techniques are not sufficient; only CDPH Information Security Office (ISO)approved degaussing equipment may be used and a minimum of three wipes must be performed. If the wiping process is not effective, the disk drive must be removed from the device and physically modified or destroyed in such a way as to make the data unrecoverable.

Conflict of Interest Information

CONFLICT OF INTEREST (COI) INSTRUCTIONS

A COI is defined as any financial or other relationships of the researcher(s) or the institution that could be perceived as affecting the objective conduct of the research, including the interpretation and publication of the findings. Researchers must disclose any COI, including perceived COI.

Financial relationships to be disclosed include but are not limited to the following:

- **Present or anticipated ownership of stock, stock options, or other financial obligations of the source of funding.**
- **Receipt or expectation of payment of any sort in connection with papers, symposia, consulting, editing, etc. from the source of funding.**
- **The sale or licensing or anticipated sale or licensing of medical or other products or intellectual property, such as patents, copyrights, or trade secrets to the source of funding or other entities.**
- **Any past, present or anticipated receipt of money or other valuable consideration from the source of research funding by the researcher(s), the family of the researcher(s), the research institution, or by an institution in which the researcher(s) or the family of the researcher(s) has an interest as owner, creditor, or officer.**

DISCLOSURES

Does any member of the study team, members' spouses, or members' dependent children have any significant financial interests related to the work to be conducted as part of the above-referenced project?

No

Informed Consent Procedures

INFORMED CONSENT PROCEDURES

Provide a description of procedures to be used in obtaining and documenting informed consent from participants.

See instructions and examples on CPHS website.

Informed consent will be obtained from eligible, screened subjects online/over the phone prior to participation. Consent forms will be translated to other languages and a translator will be on the phone during the consent process. Once participants are screened and found eligible, we will follow up with them by phone or email to schedule a time to obtain informed consent virtually. During this meeting, we will send them a link to the informed consent form and participant bill of rights, which will be hosted on Zoho Survey, and walk them through it verbally over the phone (see attached script). If the person agrees to participate, they will then sign the form online, print their full name, and the date. We will log the date and the name of the staff member(s) on the phone. Signed forms will be downloaded and kept on a secure drive, after which the form will be deleted from Zoho. A copy will be sent to participants.

All participant facing materials, including the informed consent form, recruitment materials, questionnaires, and educational materials will be translated into Spanish and Cantonese after the English versions are approved by CPHS.

CONSENT FORMS

Attach copies of consent forms and any other documents or oral scripts used to inform potential research subjects about the study. See examples of consent and assent forms on the CPHS website.

Be sure to include a concise explanation of key information for participants at the beginning of your consent form, as shown in the examples on the website. Also attach the Participant's Bill of Rights (download the revised version from the same CPHS website). CPHS may approve the use of a consent procedure which does not include, or which alters, some or all of the elements of informed consent. If a waiver or alteration of informed consent is being requested, attach a document that explains how all of the criteria below will be satisfied.

Informed consent form.docx	Consent Form
Informed consent phone script.docx	Consent Form

Deleted Attachments: 2 (Most Recent: Informed consent form.docx on 09/04/2025 6:53 PM ET)

HIPAA Determination

HIPAA INSTRUCTIONS

To determine if this project is covered by HIPAA, answer the following questions.

COVERED ENTITY

Will health information be obtained from a covered entity, known as a clearinghouse, such as Blue Cross, that processes or facilitates processing health data from another entity, including but not limited to state databases?

No

HEALTHCARE PROVISIONS

Will the study involve the provision of healthcare by a covered entity, such as the UCD Medical Center?

No

OTHER HIPAA CRITERIA

Will the study involve other HIPAA criteria not listed above?

No

Cover Letter and PI Signature for PI Submission

BUDGET

Does this project have a budget?

Yes

Attach a copy of your project budget here

HUD Study Budget.xlsx	Project Budget
NIH Budget.docx	Project Budget

Deleted Attachments: 1 (Most Recent: HUD Study NIH Budget.docx on 09/04/2025 5:47 PM ET)

COVER LETTER

Attach a copy of your project cover letter.

Cover letter must have the requesting institution's letterhead.

SF Cover Letter_8-28-25_Signed.pdf Cover Letter

In order for the PI to review and sign this form, you will need to click "Next" and on the next page, click "Submit." At that point the PI will receive notification that will need to review the application and if they request changes, they will return the form to you and you will receive an email notification.

PI Signature for Coordinator Submission (Initial) - Submitted 09/04/2025 7:34 PM ET by Kimberly Berger, MPH, PhD

PI Review

Please click "Next" and "Submit" in order to submit this application, regardless of whether or not it is ready for review. If you indicated it is ready for review, it will go to the Responsible Official for review and signature, and if not, it will be returned to the individual who completed the form for changes.

Is this application ready to be reviewed by the IRB? If not, choose no to have the application sent back to the coordinator for revisions.

Yes

To sign this form, enter your IRBManager password. By signing this form, you are indicating that the information within this application is accurate and reflects the proposed research and that you attest to the conflict of interest disclosures for all study team members.

Signed Thursday, September 4, 2025 7:33:56 PM ET by Kimberly Berger, MPH, PhD

Responsible Official Signature
- Submitted 09/05/2025 12:39 PM ET by Jeff W Sanchez, B.A.

Responsible Official Signature

After reviewing this application, is it ready for submission to the CPHS IRB?

Yes, ready for submission to IRB.

Enter your password to sign this protocol. By signing this protocol, you are attesting that the information within is accurate and reflects the details of the proposed research project.

Signed Friday, September 5, 2025 12:38:57 PM ET by Jeff W Sanchez, B.A.

After choosing whether or not the submission is ready for CPHS IRB review, please click "next" and "submit" (on the next screen) to move the form forward to the CPHS IRB or back to the Researcher.

Notify IRB for Pre-Screening
- Submitted 09/05/2025 3:38 PM ET by Sussan Atifeh

Internal IRB Screening

CPHS Office: The questions on this page will appear every time the project is resubmitted to the CPHS IRB (even after review). Once the project has been reviewed by a committee member, unless researcher has changed questions on the form that impact the level of review, you do not need to update the questions here. If the changes made are not clear and require additional clarification change the 'ready for review' to 'no' and require changes. When you change the answer back to yes, it will remember your previous answers.

Is this study ready to be reviewed by the CPHS panel?

Yes

Choose the IRB committee to review this study (this defaults to CPHS)

CPHS

Level of Review Determination (once the level of review is assigned for this project, do not change this answer unless the reviewer/committee has decided that the study requires a different level of review)

Full Board Minimal Risk

Please provide a rationale for your level of review preliminary determination
Researchers from CDPH and Sequoia Foundation have submitted this HCS project. This randomized controlled trial investigates whether installing air monitors in low-income households can encourage behaviors that reduce indoor air pollution. Participants are assigned to either a simplified or comprehensive intervention group, both receiving education and completing surveys, while only the comprehensive group receives real-time feedback and coaching based on monitor readings. Indoor and outdoor monitors collect data on particulate matter, gases, and VOCs, supplemented by in-home assessments and passive chemical sampling. No state-held datasets are used; all data is collected directly from participants and their environments. Findings will inform potential public health interventions and HUD (Housing and Urban Development) program strategies.

----Co-PI and some research staff are from CDPH. CDPH's Environmental Health Laboratory in Richmond is the designated site for analyzing the sorbent tubes used to measure indoor air pollutants. CDPH staff do not have access to PID.

State data: No request for state data
Linkage: No
Project's stie: Sequoia Foundation – A DSL from Sequoia Foundation is attached.
Funding : Federally funded by: The U.S. Department of Housing and Urban Development (HUD) and National Institutes of Health (NIH)

Choose the CPHS Chair
Catherine Hess, PhD

Select the vice chair of the committee
Larry Dickey, MD, MPH, MSW

Assign to Cycle

October

Assign to cycle year
2025

Load into IRBManager (Initial Submission)
- Submitted 09/05/2025 3:38 PM ET by The System

Chair Review and Full Board Set-Up

Full Board Set Up

Project number

2025-133

The office will complete the questions on this page and submit the form after the teleconference with the chairs regarding this project is completed.

Confirmation of level of review

No answer provided.

Provide the rationale for the level of review determination
No answer provided.