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## Reducing Outdoor Contaminants in Indoor Spaces

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### **2016 September Compendium of Events, News, Resources, Funding Opportunities/Jobs, and R&D Results for ROCIS Stakeholders**

The themes for this edition of Tom Phillips' Compendium include, but are not limited to IAQ, environmental health, energy efficiency, green buildings, land use and transportation planning, and pollutant sensors. Sign up [here](#) for upcoming compendiums, ROCIS event updates and briefs.

ROCIS is conducting a stakeholder air quality initiative involving low cost monitoring and interventions. The next cohort of the Low Cost Monitoring Project is from October 5 through November 3, 2016. Learn more [here](#).

*In this compendium, an index and abstracts...*

#### **EVENTS – REGIONAL AUDIENCE**

- ✓ **Sep. 20 and beyond, webinars, and meetings.** [Residential Energy Efficiency Webinars](#).
- ✓ **Oct. 6, 2016.** [Creating Healthy Communities](#). Pittsburgh, PA.
- ✓ **Oct. 18-19, 2016.** [P4: People, Planet, Place and Performance](#). Pittsburgh, PA.
- ✓ **Oct. 25-27, 2016.** [BPI Healthy Homes Evaluator \(HHE\) Micro-credential Class](#). Pittsburgh, PA.
- ✓ **Dec. 1, 2016.** [Passive House at Home and Around the World](#). GBA Pittsburgh.

#### **EVENTS – NATIONAL AUDIENCE**

- ✓ **Sep. 29 and beyond, webinars.** [DOE Better Buildings Residential Network](#).
- ✓ **Sep. 29, 2016** webinar. [Shared Mobility and the Transformation of Public Transit](#).
- ✓ **Oct. 3-4, 2016.** [National Association of Realtors Green Designation Training](#). Burbank, CA.
- ✓ **Oct. 5, 2016.** [Multifamily Building Enclosure Airtightness Training](#).
- ✓ **Oct. 5-7, 2016.** [Green Build 2016](#). USGBC. Los Angeles, CA.
- ✓ **Oct. 6, 2016.** [Achieving Airtightness: Why and How](#). London, UK.
- ✓ **Oct. 6, 2016.** [Avoiding Interstitial Condensation in Retrofits | Hygrothermal Assessment at Its Best!](#)
- ✓ **Oct. 7, 2016.** [Healthy Buildings: The Role of Products](#). Bristol, UK.
- ✓ **Oct. 9-13, 2016.** [International Society of Exposure Science \(ISES\) 2016: Interdisciplinary Approaches for Health and the Environment](#). Utrecht, Netherlands.
- ✓ **Oct. 12 and beyond, quarterly webinar.** [Federal Committee on IAQ, Conference Call](#).
- ✓ **Oct. 13-14, 2016.** [ASSESS \(Air Sensors Everywhere -- Small Sensor\) Symposium 2016](#). York, UK.
- ✓ **Oct. 19, 2016.** [Lessons of Climate Resilience in New York City](#). Columbia University. New York. NY.
- ✓ **Oct. 19, 2016.** [The 2016 Urban Green Conference](#). New York. NY.
- ✓ **Oct. 20-21, 2016.** [Healthy Buildings Summit 2016. Seven Springs \(Champion\), PA](#).
- ✓ **Oct. 20-22, 2016.** [2016 Behavior, Energy & Climate Change Conference](#). Baltimore, MD.
- ✓ **Oct. 25-27, 2016.** [Green the Church: Global Leadership Summit](#). Baltimore, MD.
- ✓ **Oct. 29 - Nov. 2, 2016.** [American Public Health Association Annual Meeting & Exposition](#). Denver, CO.
- ✓ **Oct. 30 - Nov. 1, 2016.** [IEEE Sensors 2016](#). Orlando, FL.
- ✓ **Nov. 4-5, 2016.** [2016 NW Green](#) and [2016 Green Building Slam](#), Seattle, WA.
- ✓ **Nov. 7 and beyond, 2016.** [Help Build What's Next](#). Five major cities across the US.
- ✓ **Nov. 21, 2016.** [Nanoremediation for Soil and Groundwater Cleanup — Possibilities and Future Trends](#). Frankfurt-am-Main, Germany.
- ✓ **Dec. 5-8, 2016.** [NIEHS Environmental Health Science FEST](#). Research Triangle Park, NC.
- ✓ **Dec. 6-9, 2016.** [WAO International Scientific Conference 2016](#). Jerusalem, Israel.
- ✓ **Dec. 9, 2016 seminar.** [Climate Change and Human Health: Reflections on Research and Remaining Challenges](#). Carnegie Mellon University, Pittsburgh, PA.

## Reducing Outdoor Contaminants in Indoor Spaces

---

### INDEX EVENTS – NATIONAL AUDIENCE (continued)

- ✓ Dec. 19-21, 2016. [Clean Air Through Energy Efficiency Conference \(CATEE\)](#). San Antonio, TX.
- ✓ Mar. 7, 2017. [Ecobuild 2017 – Future Materials and Processes](#). London, UK.
- ✓ Mar. 19-22, 2017. [2017 HPC National Home Performance Conference](#). Nashville, TN.
- ✓ May 9-11, 2017. [National Adaptation Forum: Action Today for a Better Tomorrow](#). St. Paul, MN.
- ✓ May 10-11, 2017. [Beyond NZEB Retrofit of Existing Buildings](#). Matera, Italy.
- ✓ May 17-20, 2017. [CitSci2017](#). Saint Paul, MN.
- ✓ Jun. 5-9, 2017. [ECCA 2017, European Climate Change Adaptation Conference: Our Climate Ready Future](#). Glasgow, UK.
- ✓ Dec. 5-7, 2017. [2017 National Brownfields Training Conference](#). Pittsburgh, PA.

### REGIONAL NEWS

#### ENVIRONMENTAL HEALTH

- ✓ [EPA Provides Update on Contamination Plumes in York](#). Sep. 27, 2016.
- ✓ [Residents In Burlington County Oppose Proposed Hazardous Waste Treatment Plant In PA](#). Sep. 21, 2016.
- ✓ [Allegheny County to Consider Requiring Lead Tests for Children](#). Sep. 14, 2016.

#### GREEN BUILDING

- ✓ [Pittsburgh Recognized as Biophilic City](#). Sep. 17, 2016.

#### SENSORS AND CITIZEN SCIENCE

- ✓ [New Smell PGH App Launch on September 29](#). Sep. 22, 2016.
- ✓ [Teacher Training on IAQ Monitoring and Outdoor Environmental Methods](#). Aug. 2016.

#### FOSSIL FUELS

- ✓ [News and Studies on Fracking and Other Air Quality Issues in SWPA](#). Aug. 2016.
- ✓ [Migraines, Fatigue, and Chronic Rhinosinusitis Spike Near Fracking Sites](#).

### OTHER NEWS

#### IEQ

- ✓ [Maryland NICU Still Taking Action After \*Pseudomonas\* Exposure](#). Aug. 18, 2016.

#### ENVIRONMENTAL HEALTH

- ✓ [Newborn Gut Microbiome Predicts Later Allergy and Asthma](#). Sep. 12, 2016.
- ✓ [\\$90 Billion Whistleblower Suit Filed Against Four of the Largest Chemical Companies](#). Sep. 16, 2016.
- ✓ [Air Pollution Is Linked to a Diabetes Marker](#). Sep. 21, 2016.
- ✓ [Healthy, Safe Housing Linked to Healthier, Longer Lives: HUD Develops Healthy Community Tools](#).
- ✓ [WHO Releases Estimates on Air Pollution Exposure and Health Impact](#). Sep. 27, 2016.

#### ENERGY EFFICIENCY AND GREEN BUILDINGS

- ✓ [Reaping the Non-Energy Benefits of Energy Efficiency and Weatherization Programs](#). Sep. 19, 2016.
- ✓ [Build It Green Wins Research Grant to Advance Multifamily Zero Net Energy](#). Aug. 31, 2016.
- ✓ [Is Rooftop Solar Worth It? Complaints Rise in California](#). Sep. 27, 2016.
- ✓ [Building Products Matter Even More Than We Thought](#). Sep. 7, 2016.
- ✓ [Black History and Culture in a Green Building](#). The new [National Museum of African American History and Culture](#). Sep. 21, 2016.

#### CLIMATE CHANGE

- ✓ [375 Top Scientists Warn of 'Real, Serious, Immediate' Climate Threat](#). Sep. 21, 2016.
- ✓ [Health Risks From Wildfires in U.S. West to Increase Under Climate Change](#). Aug. 2016.
- ✓ [Teaching Middle-Schoolers Climate Change Without Terrifying Them. A Recent Study](#). Sep. 27, 2016.
- ✓ [10 Years In, Has California's Climate Law Really Lowered Emissions?](#) Sep. 26, 2016.

#### FOSSIL FUELS

## Reducing Outdoor Contaminants in Indoor Spaces

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### INDEX OTHER NEWS (continued)

#### FOSSIL FUELS

- ✓ [US Appeals Court Hears Argument in Clean Power Plan Case](#). Sep. 27, 2016.
- ✓ [U.S. Shale Gas has Global Market, But Local Problems](#). Sep. 27, 2016.
- ✓ [Shale Gas Surge Triggers U.S. Petrochemical Expansion](#). Sep. 14, 2016.
- ✓ [Colorado Voters Won't Get To Decide On New Fracking Rules](#). Aug. 29, 2016.
- ✓ [Louisiana Parish Hit by Third Oil Spill in Ten Days](#). Aug. 3, 2016.
- ✓ [California, Cummins to Develop Natural Gas Heavy-Duty Engine](#). Sep. 20, 2016.
- ✓ [California Today: Clearing the Air, Without Fossil Fuels](#). Sep. 20, 2016.

#### SENSORS AND CITIZEN SCIENCE

- ✓ [San Ysidro Port of Entry to Track Air Pollution with 13 Monitors](#). Aug. 27, 2016.

#### ENVIRONMENTAL JUSTICE

- ✓ [Adverse Childhood Experiences, Social Determinants of Health: Guidance and Support for Pediatricians](#). 2015.
- ✓ [Cap-and-Trade Program Isn't Working for Many Poor Californians](#). Sep. 21, 2016.
- ✓ [EPA Launches EJSCREEN User Impact Survey!](#) Sep. 27, 2016.
- ✓ [Designing Our Future: Engaging Students - Plan with an Environmental Justice Mindset](#). Sep. 20, 2016.

#### LAND USE AND TRANSPORTATION PLANNING

- ✓ [Cities Can Avoid 20% of Premature Deaths with Better Urban and Transport Planning](#). Jun. 28, 2016.
- ✓ [Barcelona and Clinton Global Initiative to Optimize the New Health-Based Urban Design Model: Superblock](#). Sep. 28, 2016.

### RESOURCES

#### IEQ

- ✓ [Health Effects of Modern Airtight Housing](#). Glasgow, UK.
- ✓ [Adaptation and Resilience in Built Environment: Informing Future Research Investments](#).
- ✓ [Building America Webinar: Score with Indoor Air Quality](#). webinar
- ✓ [UKIEG 2016, Health and Wellbeing Throughout the Life Course](#).

#### ENVIRONMENTAL HEALTH

- ✓ [Health Risks of Indoor Exposure to Particulate Matter: Workshop Summary](#).
- ✓ [Great Lakes Regional Asthma Summit: Sustainable Funding for In-Home Asthma Interventions](#).
- ✓ [The Rise of the Microbiome: The Relatively Short Road from Hunch to Hype to Hope](#).
- ✓ [Toxic Air Pollution Particles Found in Human Brains](#).
- ✓ [Online Mapping Tool TOXMAP Now Includes Native Lands. TOXMAP](#).

#### CLIMATE CHANGE

- ✓ [Slashing Emissions from Fossil Fuels Burned in Buildings](#).

#### GREEN AND HEALTHY BUILDINGS

- ✓ [Toward Safe and Natural High Performance Building Enclosures](#).
- ✓ [A Path Forward: Sustainable Financing for Asthma Education and Home Environmental Trigger Remediation in California](#).
- ✓ [Deep Energy Retrofit Forum](#),
- ✓ [EEBA Excellence in Building Conference & Expo](#).

#### ENVIRONMENTAL JUSTICE

- ✓ [Highlighted Best Practices and Insights From Community Health Worker \(CHW\) Literature Review](#).
- ✓ [A Preliminary Environmental Equity Assessment of California's Cap-and-Trade Program](#).
- ✓ [YES: Mentoring Future Green Leaders in Detroit](#).
- ✓ [Input Needed to Shape Environmental Justice Near Ports](#).

# Reducing Outdoor Contaminants in Indoor Spaces

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## INDEX RESOURCES (continued)

### SENSORS

- ✓ [The hackAIR project: Collective Awareness of Air Quality.](#)
- ✓ [Should We Go To the Crowd First? Lessons from Running Crowd Contests in Life Sciences: How and Why Crowd Contests for Algorithm Development Work.](#)
- ✓ [The 'Human Sensor' Making Manchester's Air Pollution Visible.](#)

### LAND USE AND TRANSPORTATION PLANNING

- ✓ [Livable Transit Corridors: Methods, Metrics, and Strategies.](#)
- ✓ [U.S. DOT Releases First National Transit Map.](#)

## FUNDING OPPORTUNITIES AND JOBS

- ✓ [Help Wanted: Must Have Gumption \(GTECH seeks new CEO\).](#)
- ✓ [Living Product Challenge Manager, Pittsburgh, PA.](#)
- ✓ [Air Sensor Demonstration Grants for Communities.](#)
- ✓ [Environmental Exposures and Health: Exploration of Non-Traditional Settings.](#)
- ✓ [Research to Action: Assessing and Addressing Community Exposures to Environmental Contaminants](#)
- ✓ [Spatial Uncertainty: Data, Modeling, and Communication.](#)
- ✓ [Reducing Health Disparities among Minority and Underserved Children.](#)
- ✓ [Advancing Basic Behavioral and Social Research on Resilience](#)

## RESEARCH AND DEMONSTRATION

### IEQ

- ✓ [EU Project “School of the Future”— Refurbishment of School Buildings Toward Zero Emission with High-Performance Indoor Environment.](#) Erhorn-Kluttig et al., 2016.

### ENVIRONMENTAL HEALTH

- ✓ [Neonatal Gut Microbiota Associates with Childhood Multisensitized Atopy and T cell Differentiation.](#) Fujimura et al., 2016.
- ✓ [Joint Effects of Pregnancy, Sociocultural, and Environmental Factors on Early Life Gut Microbiome Structure and Diversity.](#) Levin et al., 2016.

### CLIMATE CHANGE

- ✓ [Particulate Air Pollution from Wildfires in the Western US Under Climate Change.](#) Liu et al., 2016.
- ✓ [Exposure to Wildfire-specific Fine Particulate Matter and Risk of Hospital Admissions in Urban and Rural Counties in the Western US 2004-2009.](#) Liu et al., 2016
- ✓ [A Systematic Review of the Physical Health Impacts from Non-occupational Exposure to Wildfire Smoke.](#) Liu et al., 2015.

### SENSORS

- ✓ [Laboratory Assessment of Low-cost PM Monitors.](#) Manikonda et al., 2016.

## ABSTRACTS for the above items

## EVENTS – REGIONAL AUDIENCE

**Sep. 20 and beyond, webinars, and meetings.** [Residential Energy Efficiency Webinars.](#) Penn Energy Codes. For example: **Sep. 22**, What still needs work to improve the efficiency, comfort, durability, health, and safety of new homes in PA; **Nov. 16**, Important air barrier details; **Dec. 8**, Going beyond code.

## Reducing Outdoor Contaminants in Indoor Spaces

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### EVENTS – REGIONAL AUDIENCE (continued)

**Oct. 6, 2016.** [Creating Healthy Communities](#). Pittsburgh, PA. Women for a Healthy Environment. A summit addressing how our environment impacts public health. National experts will discuss the scientific, medical, political and community-based approaches to creating healthier communities across the country. Local experts will highlight multiple health topics as they relate to our homes, schools, and communities, and encourage champions for positive health impacts in the region. ***ROCIS is on the agenda.***

**Oct. 18-19, 2016.** [P4: People, Planet, Place and Performance](#). Pittsburgh, PA. The City of Pittsburgh and The Heinz Endowments are spearheading a major effort to forge a new model of urban growth and development that is innovative, inclusive, and sustainable.

**Oct. 25-27, 2016.** [BPI Healthy Homes Evaluator \(HHE\) Micro-credential Class](#). DEAWP (Diagnostic Energy Auditors of Western PA). The HHE assesses home-based environmental health and safety hazards and provides a prioritized list of recommendations to address those hazards. The HHE credential is a critical building block and a core principal of building science-based work for home performance contractors and Weatherization Assistance Programs (WAP). Help break the link between unhealthy homes and unhealthy families. Pittsburgh, PA.

**Dec. 1, 2016.** [Passive House at Home and Around the World](#). GBA Pittsburgh. Tomás O’Leary, Passive House Academy, will give a brief overview of the origins of Passive House and share some colorful case studies from different applications (both residential and commercial) from around the world. He’ll also give some insight into considerations for our specific region, including multifamily project applications. Registration requested. Free to CMU students and faculty; registration requested. CMU, Pittsburgh, PA.

### EVENTS – NATIONAL AUDIENCE

**Sep. 29 and beyond, webinars.** [DOE Better Buildings Residential Network](#). Sep. 29, ACEEE Summer Study Session Highlights; Oct. 27, Energy Efficiency in Relation to Other Program and City Goals.

**Sep. 29, 2016** webinar. [Shared Mobility and the Transformation of Public Transit](#). Transit Cooperative Research Program. The new report examines the relationship between public transportation, including paratransit and demand-responsive services, and shared modes, including bikesharing, carsharing, microtransit, and ridesourcing services.

**Oct. 3-4, 2016.** [National Association of Realtors Green Designation Training](#). Burbank, CA.

**Oct. 5, 2016.** [Multifamily Building Enclosure Airtightness Training](#). 475 Building Materials Supply, Portland, OR.

**Oct. 5-7, 2016.** [GreenBuild 2016](#). USGBC. Los Angeles, CA.

**Oct. 6, 2016.** [Achieving Airtightness: Why and How](#). The need for joined up thinking for joined up building! Green Register. A half-day seminar exploring the theory and practice of achieving higher levels of airtightness - how to ‘build tight and ventilate right.’ A practical demonstration and hands-on experience are included. Repeated elsewhere on Oct. 13 and Nov. 10. London, UK.

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## Reducing Outdoor Contaminants in Indoor Spaces

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### EVENTS – NATIONAL AUDIENCE (continued)

**Oct. 6, 2016.** [Avoiding Interstitial Condensation in Retrofits | Hygrothermal Assessment At Its Best!](#) Green Register. Joseph Little of Dublin School of Architecture will discuss his research findings that are of importance to architects, building fabric consultants, local authority heritage, conservation officers, and home owners, and to the craftworkers and their suppliers who seek to conserve, repair, and retrofit traditional buildings, e.g., in energy efficient retrofits of solid wall buildings. London, UK.

**Oct. 7, 2016.** [Healthy Buildings: The Role of Products](#). Green Register. This seminar will introduce the work of [UK Indoor Environments Group](#) and provide an overview of recent research into this complex subject. Research conducted on the continent has resulted in the development of [Sentinel Haus Institut](#) in Freiburg, a new resource for information on products and a certification system for Healthy Homes. Topics include the latest research on moisture control needs in home retrofits, and the manufacturers' and architects' viewpoints on how they are addressing these issues. Bristol, UK.

**Oct. 9-13, 2016.** [International Society of Exposure Science \(ISES\) 2016: Interdisciplinary Approaches for Health and the Environment](#). This multidisciplinary meeting includes topics such as pollutant exposure, dose, health risk assessment, policy, emerging chemicals, and science education. Utrecht, Netherlands.

**Oct. 12 and beyond, quarterly webinar.** [Federal Committee on IAQ, Conference Call](#). Agency updates and special presentations. Oct. 12 presentations: *Towards Healthy Schools: Reducing Risks to Children*, Dr. Claire Barnett Healthy Schools Network, and *Well Living Lab*, Dr. Nicholas Clements, Delos Labs. Previous webinars and presentations are also available.

**Oct. 13-14, 2016.** [ASSESS \(Air Sensors Everywhere -- Small Sensor\) Symposium 2016](#). This inaugural symposium on small air sensors will bring together air pollution sensor developers, users, engineers, and advocates. The main objective of this meeting is to discern and disseminate some of the successes – and failures – of small sensor use in our communities. York, UK.

**Oct. 19, 2016.** [Lessons Of Climate Resilience In New York City](#). Columbia University. Discussion of how NYC—and other cities like it—can take steps to become stronger and more resilient in the face of climate change. New York. NY.

**Oct. 19, 2016.** [The 2016 Urban Green Conference](#). The Urban Green Council will host a half-day discussion of what it will take for owners, tenants, and designers to bring our commercial spaces to 2050. New York. NY.

**Oct. 20-21, 2016.** [Healthy Buildings Summit 2016](#). This event will focus on building science issues that affect IEQ, mold, and disaster restoration. The intersection of weatherization and IEQ will be examined as well as assessment, protocol and response action development. Terry Brennan is the keynote speaker. ***ROCIS with insights from the Low Cost Monitoring Project is on the agenda, Thursday afternoon.*** Seven Springs (Champion), PA.

**Oct. 20-22, 2016.** [2016 Behavior, Energy & Climate Change Conference](#). ACEEE and partners. This is the premier event focused on understanding individual and organizational behavior and decision-making related to energy usage, greenhouse gas emissions, climate change, and sustainability. Baltimore, MD.

## Reducing Outdoor Contaminants in Indoor Spaces

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### EVENTS – NATIONAL AUDIENCE (continued)

**Oct. 25-27, 2016.** [Green the Church: Global Leadership Summit](#). Baltimore, MD.

**Oct. 29 - Nov. 2, 2016.** [American Public Health Association Annual Meeting & Exposition](#). Denver, CO.

**Oct. 30 - Nov. 1, 2016.** [IEEE Sensors 2016](#). An international forum for research scientists, engineers, and practitioners to present their latest findings, ideas, and applications in the areas of sensors and sensing technology. Topics of interest include chemical and gas sensors and IAQ. Orlando, FL.

**Nov. 4-5, 2016.** [2016 NW Green](#) and [2016 Green Building Slam](#), NW Eco Building Guild. Keynote talks by [sustainable business and community](#) expert and author [John Abrams](#) of South Mountain Company, and by author, architect, cyclist [Paul Fallon](#) of Architecture by Moonlight. Green building projects will be featured. Seattle, WA.

**Nov. 7 and beyond, 2016.** [Help Build What's Next](#). Built Positive. These workshops are for thought leaders in the built environment who want to take their practice to the next level. The workshop will help participants identify new opportunities to add value to their projects while bringing project values to life. Design methodologies, material health programs, product and systems innovations, and a new definition of waste will be explored interactively. **Five major cities across the US.**

**Nov. 21, 2016.** [Nanoremediation for Soil and Groundwater Cleanup — Possibilities and Future Trends](#). The EU-funded NANOREM project conference will present the most recent developments and opportunities for soil and groundwater remediation by use of different nanoparticles, including results from pilot studies. Frankfurt-am-Main, Germany.

**Dec. 5-8, 2016.** [NIEHS Environmental Health Science FEST](#). Research Triangle Park, NC. [RSVP](#).

**Dec. 6-9, 2016.** [WAO International Scientific Conference 2016](#). World Allergy Organization. This forum seeks to provide the most useful combination of latest research, review of current theory and practice, and hands-on, problem-based learning. [Session topics](#) include air pollution, the microbiome, climate change, and other environmental factors in allergies and asthma. Jerusalem, Israel.

**Dec. 9, 2016 seminar.** [Climate Change and Human Health: Reflections on Research and Remaining Challenges](#). [Michelle Bell](#), a leading air pollution and health researcher from Yale University, will discuss research on some of the pathways through which climate change could impact human health, and how they can exacerbate existing conditions. This seminar will also present the challenges associated with research on the human health consequences of climate change and potential paths forward. **Carnegie Mellon University, Pittsburgh, PA.**

**Dec. 19-21, 2016.** [Clean Air Through Energy Efficiency Conference \(CATEE\)](#). Texas A&M University. Share information and practices to help communities reduce the energy and water intensity of the built environment, learn from examples, and seek alternative renewable energy sources – and reduce related emissions. San Antonio, TX.

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## Reducing Outdoor Contaminants in Indoor Spaces

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### EVENTS – NATIONAL AUDIENCE (continued)

**Mar. 7, 2017.** [Ecobuild 2017 – Future Materials and Processes](#). This is the UK's largest and number one event dedicated to creating a more sustainable and resilient built environment. The conference and seminar program will debate key sustainability issues and showcase best practice. Regeneration is the focus, including topics such as sustainable communities and healthy places, efficiency and performance, enabling growth, and tackling the UK housing crisis. London, UK.

**Mar. 19-22, 2017.** [2017 HPC National Home Performance Conference](#). Home Performance Coalition (formerly Affordable Comfort Inc.). Learn the most current building science and technical information, strategies to run a home performance business or program efficiently, and key updates on policy, financing, and new technologies to stay ahead of the curve. Nashville, TN.

**May 9-11, 2017.** [National Adaptation Forum: Action Today for a Better Tomorrow](#). Formal trainings, facilitated practitioner presentations, and informal exchange of information. The goal is engage multiple perspectives, across sectors, geographies, or stakeholders. **Session proposals due Sep. 30.** St. Paul, MN.

**May 10-11, 2017.** [Beyond NZEB Retrofit of Existing Buildings](#). AiCARR. IEQ, energy efficiency, and resource efficiency in Mediterranean climates is the focus of this EU-sponsored meeting. **Abstracts due Oct. 31.** Matera, Italy.

**May 17-20, 2017.** [CitSci2017](#). International conference on citizen science. Saint Paul, MN.

**Jun. 5-9, 2017.** [ECCA 2017, European Climate Change Adaptation Conference: Our Climate Ready Future](#). The meeting will bring together the people from all sectors who deliver action on the ground – from business, industry, NGOs, local government, and communities – to share knowledge, ideas, and experience with researchers and policymakers. Glasgow, UK.

**Dec. 5-7, 2017.** [2017 National Brownfields Training Conference](#). U.S. EPA and ICMA. **Pittsburgh, PA.**

### REGIONAL NEWS

#### ENVIRONMENTAL HEALTH

[EPA Provides Update on Contamination Plumes in York](#). EPA held a public information meeting to provide updated details about their efforts and their findings on a large contamination plume in York. The contamination is attributed to the presence of PCE from dry cleaning processes in the 1930s, 1940s and 1950s. For private water wells in the plume, the users were switched to the city water supply or provided with all-house filter systems. Mitigation systems were also installed if vapor intrusion was detected in the building. Future articles will discuss other contamination sites. Sep. 27, 2016.

[Residents In Burlington County Oppose Proposed Hazardous Waste Treatment Plant In PA.](#)

Environmental groups fear a spill could contaminate the Delaware River, affecting millions of New Jersey and Pennsylvania residents. The facility builder, Elcon Recycling Services of Israel, has been cited for numerous environmental violations and had its bids rejected in three areas of Italy. Sep. 21, 2016.



## Reducing Outdoor Contaminants in Indoor Spaces

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### REGIONAL NEWS ENVIRONMENTAL HEALTH (continued)

[Allegheny County to Consider Requiring Lead Tests for Children](#). The Allegheny County Health Dept. is drafting regulations that would require testing of all young children for lead poisoning, in line with the American Academy of Pediatrics recommendations. The testing will help address shortcomings in the childhood lead poisoning database. This comes as the county prepares to step up its underfunded housing lead remediation program using \$3.68M from two HUD grants. The money will fund lead inspection and remediation work on 200+ houses over the three years of the grant. Sep. 14, 2016.

### GREEN BUILDING

[Pittsburgh Recognized as Biophilic City](#). Pittsburgh has joined a network of cities committed to putting nature at the heart of growth, development, maintenance, and infrastructure projects. Pittsburgh's commitments include: to eliminate the use of all pesticides, fungicides, and herbicides; to increase the city's tree canopy from 42 percent to 60 percent by 2030; to pursue when possible the daylighting of streams in stormwater management efforts; and to develop more greenways. Sep. 17, 2016.

### SENSORS AND CITIZEN SCIENCE

[New Smell PGH App Launch on September 29](#). **This mobile phone app to track outdoor odors was created by Carnegie Mellon University's [CREATE Lab](#) in collaboration with many Pittsburgh partners.** It crowdsources smell reports so that air pollution across Pittsburgh can be tracked and visualized through our experiences with poor odors. The app is easy to install and it only takes seconds to submit a smell report to Allegheny Co. Health Department. **Be part of cleaning up the air in our neighborhoods and communities.** Sep. 22, 2016.

[Teacher Training on IAQ Monitoring and Outdoor Environmental Methods](#). On July 21 and 22, IU1 in California, PA kicked off the first Nearby Nature Professional Development with 6 teachers from surrounding school districts. Teachers learned how to incorporate CMU/CREATE IEQ monitoring and other technologies in order to get students exploring their indoor and outdoor environments. Problem-based learning was used to increase awareness and engagement of students. Aug. 2016.

### FOSSIL FUELS

[News and Studies on Fracking and Other Air Quality Issues in SWPA](#). The SWPA Environmental Health Project has released a **report on expert opinions for setback distances from fracking sites**. Eight-nine percent of the participants agreed that the minimum safe distance is 1/4 mile, and that additional protections are needed for vulnerable groups. The project has also responded to an ATDSR report on **PM emissions from a compressor station** in Susquehanna County, where EPA and WHO standards for PM2.5 were exceeded. Aug. 2016.

[Migraines, Fatigue, and Chronic Rhinosinusitis Spike Near Fracking Sites](#). The researchers used publicly available data to estimate participants' exposure to fracking wells. Their models accounted for the size and number of wells, as well as the distance between wells and people's homes. While no single health condition was associated with proximity to active wells, those who met criteria for two or more of the health conditions were nearly twice as likely as others to live closer to more or larger wells. Researchers do not yet know why people in close proximity to these larger wells are more likely to be sick.

### OTHER NEWS

#### IEQ

[Maryland NICU Still Taking Action After \*Pseudomonas\* Exposure](#). The bacteria is especially dangerous to those with a compromised immune system, causing urinary tract or bloodstream infections. It enters through catheters, ventilators, or central lines. The CDC [estimates](#) that 51,000 healthcare-associated *P aeruginosa* infections occur in the U.S. annually. Thirteen percent of those are multidrug-resistant. Some 400 people die from *P aeruginosa* infections each year. *Pseudomonas* was found in one patient care area outside the NICU, which led to disinfection and plumbing treatment in the unit, as well as new water filtration in the NICU and hospital-wide water treatment. Aug. 18, 2016.

#### ENVIRONMENTAL HEALTH

[Newborn Gut Microbiome Predicts Later Allergy and Asthma](#). In the first study of both bacterial and fungal diversity in the neonatal gut, researchers found babies with one type of microbial mix were high risk: **they were three times more likely to develop allergies (age 2) and asthma (age 4)**. In addition, the guts of neonates with healthy microbiomes contained a wide range of molecules that can reduce inflammation; these compounds were absent in the guts of the high-risk babies. A companion paper detailed for the first time how numerous socioeconomic, environmental, and demographic factors intersect to influence microbiome composition in children, without reference to particular disease risk factors. Air filters and central air conditioning factors were significant but so far have had little effect overall. Sep. 12, 2016.

[\\$90 Billion Whistleblower Suit Filed Against Four of the Nation's Largest Chemical Companies](#). Four chemical companies have been accused of selling billions of dollars' worth of harmful isocyanate [chemicals](#) but intentionally concealing their dangers to consumers and the U.S. EPA. The lawsuit was [originally filed](#) under seal in federal court in Northern California. Sep. 16, 2016.

[Air Pollution Is Linked to a Diabetes Marker](#). Exposure to air pollution (outdoor PM and NO<sub>2</sub> near their homes), may increase glucose intolerance, a precursor of diabetes. German researchers found the effect particularly strong in people who are already considered prediabetic because of abnormally high blood sugar levels. The underlying mechanism is not well understood. Sep. 21, 2016.

[Healthy, Safe Housing Linked to Healthier, Longer Lives: HUD Develops Healthy Community Tools](#). The amount of time and money invested in housing is why it is a strong social determinant of health, one of the environmental and societal factors that affect how healthy a person is. Millions of US homes do not meet standards for healthy, safe homes, and housing affordability has also become a major problem. In order to prioritize investments and evaluate progress in community health goals, [HUD](#) has developed a Healthy Communities Index (HCI) and a Healthy Communities Assessment Tool (HCAT). (Third in a series on the role of social determinants of health).

[WHO Releases Estimates on Air Pollution Exposure and Health Impact](#). A new WHO air quality model confirms that 92 percent of the world's population lives in places where air quality levels exceed WHO limits. Information is presented via interactive maps, highlighting areas that exceed WHO limits. It also represents the most detailed outdoor (or ambient) air pollution-related health data, by country, ever reported by WHO. The model is based on data derived from satellite measurements, air transport models, and ground station monitors for more than 3,000 locations, both rural and urban. Sep. 27, 2016.

### OTHER NEWS (continued)

#### ENERGY EFFICIENCY AND GREEN BUILDINGS

[Reaping the Non-Energy Benefits of Energy Efficiency and Weatherization Programs](#). GHFI presented a review of the literature at the 2016 ACEEE Summer on how home-based energy efficiency and health interventions can confer positive economic, health, and environmental non-energy benefits at the individual and community level, thereby leading to significant savings while improving the quality of life and resiliency of low-income households. The paper closes with policy recommendations that leverage the Clean Power Plan and the Patient Protection and Affordable Care Act (ACA) to unlock the broader savings of non-energy benefits that arise from smart energy efficient investments. Sep. 19, 2016.

[Build It Green Wins Research Grant to Advance Multifamily Zero Net Energy](#). The California Energy Commission (CEC) has awarded Build It Green (BIG) a research grant to overcome key technical and economic challenges to developing zero net energy (ZNE) multifamily buildings, in order to accelerate ZNE's adoption among multifamily developers. BIG and its research partners will optimize approaches that produce as much energy as they consume—through the use of on-site renewable energy and breakthrough all-electric technologies for water heating and HVAC. Four affordable housing ZNE demonstration projects in California will offer opportunities to investigate these approaches in-depth and create comfortable and healthy homes for low-income residents. Aug. 31, 2016.

[Is Rooftop Solar Worth It? Complaints Rise in California](#). Some have reported their energy bills going up despite being led to believe the opposite would happen. Financing arrangements have made it harder to sell or refinance homes. The industry is growing rapidly, and real estate and mortgage industry representatives have pushed Sacramento to rein it in. A new state law will improve consumer protection. Sep. 27, 2016.

[Building Products Matter Even More Than We Thought](#). Selection of materials is critical because the manufacture of those materials releases a big plume of greenhouse gases and other pollutants. It can be decades before the emissions from building operations catches up, especially if it's an energy-efficient project (see [Building Materials and the Time Value of Carbon](#)), and we don't have that kind of time. We need to develop a framework that addresses these environmental hazards in the context of a holistic assessment of life-cycle impacts. Sep. 7, 2016.

[Black History and Culture in a Green Building](#). The new [National Museum of African American History and Culture](#) is expected to achieve LEED Gold certification. It has energy efficient lighting throughout, and very efficient mechanical system. Materials were carefully chosen for low environmental impact, recycled content, and low volatile organic compounds. The distinctive bronze-clad aluminum panels of the "corona" facade act to help passively cool the main exterior area under the panels. Sep. 21, 2016.

#### CLIMATE CHANGE

[375 Top Scientists Warn of 'Real, Serious, Immediate' Climate Threat](#). The scientists released an open letter regarding climate change to emphasize that the evidence is clear beyond a reasonable doubt: humans are causing climate change, contrary to statements during the Presidential campaign. Walking away from the Paris agreement could create a political tipping point that would delay effective climate action and weaken US leadership, economically, politically, and morally. Sep. 21, 2016.

## Reducing Outdoor Contaminants in Indoor Spaces

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### OTHER NEWS CLIMATE CHANGE (continued)

[Health Risks From Wildfires in U.S. West to Increase Under Climate Change](#). A surge in major wildfire events in the western United States as a consequence of climate change will expose tens of millions of Americans to high levels of air pollution in the coming decades, according to a new Yale-led study conducted with collaborators from Harvard. The researchers estimated that by mid-century more than 82 million people will experience “smoke waves,” or consecutive days with high air pollution related to fires, especially in northern California, western Oregon, and the Great Plains. Aug. 2016.

[Teaching Middle-Schoolers Climate Change Without Terrifying Them. A Recent Study](#) found that half of U.S. science teachers spend less than two hours on climate change each year. A Florida teacher tries to balance the fear that comes with taking climate science seriously, and measured optimism. She draws on examples of past environmental to show what collective action can accomplish. **The students have analyzed potential solutions to climate change and instigated energy efficiency improvements at their school. The operative phrase is "do something."** Sep. 27, 2016.

[10 Years In, Has California’s Climate Law Really Lowered Emissions?](#) As of 2014, [total emissions were down](#) nearly 10 percent from their peak in 2004, but for a complex web of reasons. A California scientist says that the 2-year old cap and trade program “doesn’t really account for a whole lot of emissions reductions.” In a draft concept paper looking at different scenarios to meet 2030 goals, the California Air Resources Board determined that existing measures won’t be enough to do the job. Sep. 26, 2016.

### FOSSIL FUELS

[US Appeals Court Hears Argument in Clean Power Plan Case](#). Lawyers for a coalition of states and businesses reliant on fossil fuels made their case to a federal appeals court that President Obama's plan to curtail climate-warming greenhouse gases is an unlawful power grab. Sep. 27, 2016.

[U.S. Shale Gas has Global Market, But Local Problems](#). The Northeast is producing huge amounts of fuel from shale formations that will require major expansion of gas pipeline system. Environmentalists have vowed to halt pipelines. Sep. 27, 2016.

[Shale Gas Surge Triggers U.S. Petrochemical Expansion](#). The upsurge in U.S. shale gas production has triggered waves of expansion projects for manufacturers of petrochemicals, plastics, and fertilizer that are expected to create thousands of long-term jobs and many new revenue sources. It also may change some trade patterns. Some 268 petrochemical and fertilizer plant projects linked to shale gas, with an estimated investment of \$170 billion, are in various stages of study or construction. Sep. 14, 2016.

[Colorado Voters Won’t Get To Decide On New Fracking Rules](#). After [celebrating](#) a last-ditch effort earlier this month to put fracking regulations on the November ballot, Colorado environmental groups were dealt a blow on Monday when Secretary of State Wayne Williams ruled not enough of the submitted signatures were valid. Aug. 29, 2016.

[Louisiana Parish Hit by Third Oil Spill in Ten Days](#). An estimated 4,200 gallons of crude oil was discharged from a well owned by the Texas Petroleum Investment Company into the mouth of the Mississippi River, [according to the U.S. Coast Guard](#). The Coast Guard and other state agencies are now responding to the third oil spill in two weeks. Local parishes have filed lawsuits for damages done by oil and gas companies to the coast resulting in land loss. Aug. 3, 2016.

### **OTHER NEWS FOSSIL FUELS (continued)**

[California, Cummins to Develop Natural Gas Heavy-Duty Engine](#). The California Energy Commission approved a \$1 million grant to develop a 12-liter natural gas engine for heavy-duty vehicles that produces near-zero nitrogen oxide tailpipe emissions. Sep. 20, 2016.

[California Today: Clearing the Air, Without Fossil Fuels](#). Los Angeles, cloaked in some of the nation's dirtiest air, thinks it's time to make a clean break. Backed by the mayor, the City Council last week ordered the municipal power utility to enlist a group of experts to chart a course toward eliminating fossil fuels from its slate of energy sources. Sep. 20, 2016.

### **SENSORS AND CITIZEN SCIENCE**

[San Ysidro Port of Entry to Track Air Pollution With 13 Monitors](#). The first in a network of low-cost air-quality monitors to study cross-border air pollution impacts was unveiled Saturday at the nation's busiest border crossing in San Diego. More than 50,000 vehicles pass through the San Ysidro's port of entry each day, and now the border crossing will have the first of thirteen air monitors to help track changes in air quality and also to inform state efforts to identify communities that are disproportionately affected by pollution. Aug. 27, 2016.

### **ENVIRONMENTAL JUSTICE**

[Adverse Childhood Experiences, Social Determinants of Health: Guidance and Support for Pediatricians](#). Block, 2015. Plenary talk at 2015 American Academy of Pediatrics Conference. Now is an important opportunity for pediatricians and others providing health care to infants and children to assess the level of adversity and toxic stress experienced by their patients. The [AAP provides tools](#) for understanding and communicating the importance of a child's ecology as an important determinant of future health.

[Cap-and-Trade Program Isn't Working for Many Poor Californians](#). Cap and trade has long been criticized for its inability to benefit communities most impacted by toxic air emissions. Assembly Bill 32 set out with the grand promise of tackling climate change and cleaning the air, while maintaining a booming economy. The ARB is legally bound to ensure that disadvantaged communities benefit from state climate policies, but its proposals would enshrine the current system for the next decade – another decade in which children from low-income, predominately African American and Latino communities will grow up with air that doesn't allow them to reach their full potential. Sep. 21, 2016.

[EPA Launches EJSCREEN User Impact Survey!](#) The information collected will be used to catalogue the diverse ways people are using EJSCREEN to support their analysis of environmental justice concerns in their personal and professional lives. Survey responses will also help EPA to identify opportunities to continue developing and improving this tool. Sep. 27, 2016.

[Designing Our Future: Engaging Students On How to Plan with an Environmental Justice Mindset](#). North Carolina State University's Department of Landscape Architecture is training students on how to incorporate EJ in urban planning and design. Sep. 20, 2016.

### OTHER NEWS (continued)

#### LAND USE AND TRANSPORTATION PLANNING

[Cities Can Avoid 20 percent of Premature Deaths With Better Urban and Transport Planning](#). The researchers estimated that annually almost 20 percent of natural all-cause mortality (i.e. almost 3,000 deaths) in Barcelona could be postponed each year if international recommendations for performance of **physical activity, exposure to air pollution, noise, heat, and access to green space** were complied with. Compliance was estimated to increase the average life expectancy by 360 days and result in economic savings of 9.3 billion € per year. Jun. 28, 2016.

[Barcelona and Clinton Global Initiative to Optimize the New Health-Based Urban Design Model: Superblock](#). The Superblock concept seeks to revolutionize the way cities are designed, by putting people at the center and using health and wellbeing as the driving forces for urban design. The model shifts prioritization from motorized transport, by creating citizen spaces, improving public and active transport, and reallocating space previously used by cars for green areas and community use. The Superblock will help Barcelona to reach its Mobility Plan objectives, including the reduction of motorized trips by 21 percent and compliance with European Union environmental quality parameters for NOx and PM10 and greenhouse gases. Sep. 28, 2016.

#### RESOURCES

##### IEQ

[Health Effects of Modern Airtight Housing](#). Sep. 21, 2016. This symposium, the first of three networking events, presented a host of distinguished speakers from the areas of IAQ and environmental health. **It culminated with a discussion on future directions and research needs.** This network aims to bridge the gap between the professions in IAQ, health, sustainability, and the built environment fields. [More information](#) on the network, planned events, and resources is available. Glasgow, UK.

[Adaptation and Resilience in the Built Environment: Informing Future Research Council Investments](#). Sep. 28, 2016. London, UK. EPSRC and the ARCC network invited researchers to identify emerging challenges and priorities in built environment research in order to inform **future funding investments**. The focus was on research related to buildings (domestic and non-domestic, urban, suburban and rural) and **their interactions with occupants, the surrounding curtilage, form, supporting services, and environment**.

[Building America Webinar: Score with Indoor Air Quality](#). Sep. 28, 2016 (archive). Brett Singer of LBNL presents on the development of an indoor air quality (IAQ) scoring system and the planned elements of **a national new-home study**. The study will collect baseline data on mechanical equipment relevant to IAQ and characterize IAQ in new homes in varied climates. The IAQ score will be an asset rating that considers features of the home that make it easier for the occupants to achieve good indoor air quality.

[UKIEG 2016, Health and Wellbeing Throughout the Life Course](#): the Role of Residential and Learning Environments. Jun. 2016, Coventry, UK. UKIEG 2016. This networking event included expert presentations and posters on IEQ, health, and wellbeing in residential and educational environments. Topics included thermal comfort and overheating, low impact buildings, post occupancy reviews, and case studies. [Keynote presentations](#) focused on **IEQ design guides for schools** and on **healthy, affordable homes for the elderly**.

### OTHER NEWS (continued)

#### ENVIRONMENTAL HEALTH

[Health Risks of Indoor Exposure to Particulate Matter: Workshop Summary](#). NASEM, 2016. Understanding the major features and subtleties of indoor exposures to particles of outdoor origin can improve our understanding of the exposure–response relationship on which ambient air pollutant standards are based. The EPA’s Indoor Environments Division commissioned the National Academies of Sciences, Engineering, and Medicine to hold a [2-day workshop](#) in 2016. **Participants examined the issue of indoor exposure to PM considering both the health risks and possible intervention strategies.** This report summarizes the presentations and discussions from the workshop.

[Great Lakes Regional Asthma Summit: Sustainable Funding for In-Home Asthma Interventions](#).

Jun. 8-9, 2016. Chicago, IL. This summit brought together approximately 100 key stakeholders in public health, housing, environmental protection, and healthcare financing to support and identify sustainable funding for home-based asthma interventions. A call for action was issued to prioritize next steps towards achieving sustainable financing for in-home asthma interventions.

[The Rise of the Microbiome: The Relatively Short Road From Hunch to Hype to Hope](#). Medscape slide show, Sep.12, 2016. The speed of discovery in revealing the hidden world in our gut has been staggering. See highlights of how we got here, why we need healthy skepticism, and where we might be going next.

[Toxic Air Pollution Particles Found in Human Brains](#). Researchers examined brain tissue from 37 people in Manchester, in the UK, and Mexico, aged between 3 and 92. ‘Abundant’ magnetite particles were found, suggesting links to Alzheimer’s disease. The rounded nanospheres of magnetite indicate that they were formed as molten droplets of material from combustion sources, such as car exhausts, industrial processes, and power stations. High concentrations of magnetite were also found near the roadside in Lancaster, and high concentrations of metals from catalytic converters were found in the brain tissues. Sep. 5, 2016.

[Online Mapping Tool TOXMAP Now Includes Native Lands](#). [TOXMAP](#), an online GIS mapping tool, now includes a Native Lands map layer. It helps users explore data from the EPA's Toxics Release Inventory (TRI) and Superfund Programs. Users create nationwide, regional, or local area maps showing where TRI chemicals are released and identify the releasing facilities. Maps also can show locations of Superfund sites on the National Priorities List, listing all chemical contaminants present at these sites. Jul. 2016.

#### CLIMATE CHANGE

[Slashing Emissions from Fossil Fuels Burned in Buildings](#). NRDC, Sep. 20, 2016. The “decarbonization” of America’s buildings is critical to reducing carbon emissions by at least [80 percent below 1990 levels by 2050](#), especially in regions with cleaner electricity sources. Today’s emissions from fossil fuels burned in buildings would represent almost 80 percent of the *entire* energy sector’s 2050 “carbon budget”. These emissions are a roadblock to reaching our 2050 climate targets, [according to long-term climate mitigation analyses](#). California and U.S. policymakers must act now to develop more aggressive low-carbon building policies, because buildings and energy infrastructure are long-term investments and economic and technical issues must be addressed.

## Reducing Outdoor Contaminants in Indoor Spaces

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### OTHER NEWS (continued)

#### GREEN AND HEALTHY BUILDINGS

[Toward Safe and Natural High Performance Building Enclosures](#). 475 High Performance Building Supply, 2016. Webinar on how to achieve higher performance, greater sustainability, resilience, and building health **without foam insulation and with good air sealing**: practical examples and details. Related presentations include [straw bale homes in Vermont](#) and [foam-free, WUFI-verified, and OSB-free high performance](#).

[A Path Forward: Sustainable Financing for Asthma Education and Home Environmental Trigger Remediation in California](#). Lamb, 2015. Regional Asthma Management and Prevention (RAMP) Program. This policy brief is a call to action and leadership for the California Department of Health Care Services, Medi-Cal managed care organizations, foundations, community benefit programs, and social impact investors to seize these opportunities that will improve the lives of millions of people with asthma.

[Deep Energy Retrofit Forum](#), Sep. 15-16, 2016. Washington, D.C. International Energy Agency, Energy in Buildings and Communities, Annex 61; ASHRAE, NAS, GSA, and others. Topics include case studies, tools, and R&D on achieving 50 percent or more reductions in energy use in government and public buildings during major renovations. Bundling of efficiency measures, quality control, and public-private financing are also addressed. Additional publications and presentations from studies in the US and abroad are available at the [Annex 61 website](#).

[EEBA Excellence in Building Conference & Expo](#). Sep. 27-29, 2016. Energy & Environmental Building Alliance. Presentations from building science experts, designers, and builders that represent the cutting edge of residential and multifamily design and construction. Frisco, TX.

#### ENVIRONMENTAL JUSTICE

[Highlighted Best Practices and Insights From Community Health Worker \(CHW\) Literature Review](#). Maine Center for Disease Control and Prevention, et al., 2016. This review highlights approaches used among CHW interventions that demonstrated effectiveness in terms of improving service quality, cost-savings, and/or improving health and quality of life. Important elements for replication and the range of outcomes are only starting to emerge, e.g., culturally tailored approaches and the central importance of home visiting and other face-to-face interactions.

[A Preliminary Environmental Equity Assessment Of California's Cap-and-Trade Program](#). Cushing et al., 2016. The brief assesses inequalities in the location of GHG-emitting facilities and in the amount of GHGs and PM10 emitted by facilities regulated under cap-and-trade. The neighborhoods near the top-emitting facilities that increased emissions were poorer and had a higher share of people of color than neighborhoods near top-emitting facilities that decreased their emissions.

[YES: Mentoring Future Green Leaders in Detroit](#). The Youth Energy Squad (YES) director and **CMU alumnus Bryan Lewis** is making sure Detroit children are part of the sustainability conversation. The organization engages youth in community-based projects in sustainability, social justice, recycling, energy, water, food justice, and agriculture. Lewis and his team of 12 [AmeriCorps](#) members work with teachers and students in more than 56 schools in the Detroit area. Sep. 6, 2016.



## Reducing Outdoor Contaminants in Indoor Spaces

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### OTHER NEWS ENVIRONMENTAL JUSTICE (continued)

[Input Needed to Shape Environmental Justice Near Ports](#). EPA's Near-Port Community Capacity Building Project has collaboratively developed three draft tools to support effective stakeholder engagement between near-port communities and port facilities. EPA is seeking all public feedback. Aug. 30, 2016.

### SENSORS

[The hackAIR project: Collective Awareness of Air Quality](#). This EU-funded project is developing an [open technology platform](#) for citizen observatories on air quality. Outdoor PM will be estimated by [image analysis, low cost sensor, and low-tech air filter & pump methods](#). The hackAIR platform will be pilot tested in Norway and Germany starting in September 2017 in order to validate the service platform, [citizen engagement](#), and individual and collective awareness about air quality in Europe, thereby encouraging changes in behavior towards air quality improvements. It will operate until December 2018.

[Should We Go To the Crowd First? Lessons from Running Crowd Contests in Life Sciences: How and Why Crowd Contests for Algorithm Development Work](#). Sep. 30, 2016 workshop and webinar. NIH, Bethesda, MD. [Dr. Karim Lakhani](#) of Harvard University will discuss how crowd-driven solutions for algorithmic challenges in computational biology, image analysis, and space sciences routinely outperform internally developed solutions from elite organizations.

[The 'Human Sensor' Making Manchester's Air Pollution Visible](#). The hi-tech illuminated costumes worn by media artist Kasia Molga reveal changes in urban air pollution and bring together art and science. A pocket-sized aerosol monitor linked to a GPS watch and a tiny computer allows pollution data collected in the street to communicate with LED lights embedded in the artists' capes and masks. The data cannot yet be broadcast in real time but information collected a few hours previously is used. Jul. 28, 2016.

### LAND USE AND TRANSPORTATION PLANNING

[Livable Transit Corridors: Methods, Metrics, and Strategies](#). Transportation Research Board, Transit Cooperative Research Program (TCRP), 2016. [Research Report 187](#). The report presents practical planning and implementation strategies to enhance livability in transit corridors. This Handbook provides a resource for planning practitioners, policy makers, and other stakeholders to measure, understand, and improve transit corridor livability.

[U.S. DOT Releases First National Transit Map](#). The [National Transit Map](#), an open data compilation of stops, routes, and schedules from 84 percent of the top 25 urban transit agencies, and 74 percent of the top 50. By [identifying gaps in transit service and access](#), the project supports the DOT's Ladders of Opportunity initiative, to improve transportation connections to jobs. Sep. 5, 2016.

### FUNDING OPPORTUNITIES AND JOBS

[Help Wanted: Must Have Gumption \(GTECH seeks new CEO\)](#). The Pittsburgh-based non-profit Growth Through Energy & Community Health mobilizes residents, local policy-makers, and like-minded organizations to transform vacant spaces into thriving places everyone can enjoy. GTECH is seeking to cultivate new energy and leadership for the next chapter of organizational growth. Several new projects are planned for next year. After 10 years of building the program, founder Andrew Butcher will be moving on. Sep. 13, 2016.

## Reducing Outdoor Contaminants in Indoor Spaces

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### FUNDING OPPORTUNITIES AND JOBS (continued)

[Living Product Challenge Manager, Pittsburgh, PA](#). The International Living Future Institute (ILFI) seeks a talented, high energy Living Product Challenge (LPC) manager. The LPC manager will be responsible for the growth and development of the Living Product Challenge and Declare program, and linkages with the Living Building Challenge. The LPC manager will also be the key point person for launching a new Living Future “Hub” in Pittsburgh and supporting the growth of all Living Future Programs in the Mid-Atlantic and Northeast Regions. Applications open until filled.

[Air Sensor Demonstration Grants for Communities](#). **EPA is challenging communities across the country to collect data using hundreds of air quality sensors as part of the Smart City Air Challenge.** The agency is offering up to \$40K apiece to two communities to help them develop and implement plans for collecting and sharing data from air quality sensors. Deadline: Oct. 28, 2016.

[Environmental Exposures and Health: Exploration of Non-Traditional Settings](#). Also [here](#). NIEHS. Encourages interdisciplinary research aimed at promoting health, preventing and limiting symptoms and disease, and reducing health disparities across the lifespan for those living or spending time in non-traditional settings (i.e., playgrounds and nursing homes). Deadlines: Oct. 5, 2016, Oct. 16, 2016.

[Research to Action: Assessing and Addressing Community Exposures to Environmental Contaminants](#) NIEHS. Encourages applications using community-engaged research methods to investigate the potential health risks of environmental exposures to the community and to implement an environmental public health action plan based on research findings. Deadlines: Oct. 5, 2016, Feb. 5, 2017.

[Spatial Uncertainty: Data, Modeling, and Communication](#). NIEHS. Supports innovative research that identifies sources of spatial uncertainty in public health data, incorporates the inaccuracy or instability into statistical methods, and develops novel tools to visualize the nature and consequences of spatial uncertainty. Deadline: Oct. 5, 2016.

[Reducing Health Disparities Among Minority and Underserved Children](#). NIEHS. Encourages research that targets the reduction of health disparities among children. Specific targeted areas of research include biobehavioral studies that incorporate multiple factors that influence child health disparities, studies that target the specific health promotion needs of children with a known health condition and/or disability, and studies that test and evaluate the comparative effectiveness of health promotion interventions conducted in traditional and non-traditional settings. Deadline: Oct. 16, 2016.

[Advancing Basic Behavioral and Social Research on Resilience](#): An Integrative Science Approach. NIEHS. To elucidate mechanisms and processes of resilience within a general framework that emphasizes its dynamics and interactions across both time and scale, multiple contexts, multiple outcomes, and multiple time frames. Deadlines: Nov.1, 2016 (letter of intent); Dec. 1, 2016 (application).

### RESEARCH AND DEMONSTRATION

IEQ

[EU Project “School of the Future”— Refurbishment of School Buildings Toward Zero Emission with High-Performance Indoor Environment](#). ASHRAE 2016 Winter Conference (preprint). Erhorn-Kluttig et al., 2016.

### RESEARCH AND DEMONSTRATION (continued)

#### ENVIRONMENTAL HEALTH

[Neonatal Gut Microbiota Associates with Childhood Multisensitized Atopy and T cell Differentiation.](#) Fujimura et al., 2016.

[Joint Effects of Pregnancy, Sociocultural, and Environmental Factors on Early Life Gut Microbiome Structure and Diversity.](#) Levin et al., 2016.

#### CLIMATE CHANGE

[Particulate Air Pollution from Wildfires in the Western US Under Climate Change.](#) Liu et al., 2016.  
See also: [Future Hospital Admission Increases Estimated](#) (2016 abstract).

[Exposure to Wildfire-specific Fine Particulate Matter and Risk of Hospital Admissions in Urban and Rural Counties in the Western US 2004-2009.](#) Liu et al., 2016 (accepted).

[A Systematic Review of the Physical Health Impacts from Non-occupational Exposure to Wildfire Smoke.](#) Liu et al., 2015.

#### SENSORS

[Laboratory Assessment of Low-cost PM Monitors.](#) Manikonda et al., 2016.

### ***That's it for the September Compendium!***

Please send us event information, news, resources, research results for upcoming compendiums. Visit the [ROCIS website](#) for current and past compendiums, as well as the ROCIS white papers, archives from past events, and upcoming webinars. Audio and video recordings from the Feb. 26, ROCIS Stakeholder meeting on the Low Cost Monitoring Project are posted [here](#).

Cheers,  
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