

Reducing Outdoor Contaminants in Indoor Spaces

2016 April-June Compendium of Events, News, Resources, Funding Opportunities, and R&D Results for ROCIS Stakeholders

The themes for this edition of Tom Phillips' Compendium include, but are not limited to environmental health, energy efficiency, and environmental justice. Sign up [here](#) for upcoming compendiums, ROCIS event updates and briefs, and to [learn more](#) about the ROCIS stakeholder air quality initiative involving low cost monitoring and interventions.

In this compendium ...

EVENTS – REGIONAL AUDIENCE

- ✓ **Jun. 10, 2016.** [Health & Shale Gas Development: State of the Science](#). Pittsburgh, PA.
- ✓ **Jun. 13-14, 2016.** [2016 Northeast Energy Efficiency Summit](#). Bretton Woods, NH.
- ✓ Every third Thursday. GHFI's [Baby Safety Shower](#). Baltimore, MD.
- ✓ **Jun. and beyond:** [Green Building Alliance](#) Green Building & Healthy Materials Seminars.
- ✓ **Jun. and beyond, webinars.** [Residential Energy Efficiency Webinars](#). Penn Energy Codes.

EVENTS – NATIONAL AUDIENCE

- ✓ **Quarterly** [Federal Committee on IAQ Conference Call](#).
- ✓ **Jun. 9, 2016 webinar.** [Asthma Management in Schools](#). EPA.
- ✓ **Jun. 12-17, 2016.** [Health Equity Leadership Institute 2016](#). Madison, WI.
- ✓ **Jun. 13-14, 2016.** [NAPHN 2016 Conference & Expo: Decarbonize Our Future Today](#). New York, NY.
- ✓ **Jun. 13-16, 2016.** [NEHA 2016 AEC and HUD Healthy Homes Conference](#). San Antonio, Texas.
- ✓ **Jun. 14 and beyond, webinars.** [Commercial Building Envelope Technology Webinar Series](#). DOE.
- ✓ **Jun. 16, 2016 webinar.** [Energy Savings Plus Health Guidelines](#).
- ✓ **Jun. 19-23, 2016.** [2016 Council of State and Territorial Epidemiologists Annual Conference](#). Anchorage, AK.
- ✓ **Jun. 21, 2016.** [AIA+2030 Session 3 – Accentuate the Positive: Climate Responsive Design](#). Pittsburgh.
- ✓ **Jun. 23, 2016.** [The Race to Zero Energy: Reaching 2030 Goals – Technologies & Products](#). Pittsburgh.
- ✓ **Jun. 30, 2016.** [Climate Change and Health](#) webinar. NIEHS.
- ✓ **Jun. 28 - Jul. 2, 2016.** [Student Climate & Conservation Congress](#). Shepherdstown, WV.
- ✓ **Jul. 3-8, 2016.** [Indoor Air 2016](#). Ghent, Belgium.
- ✓ **Aug. 21-26, 2016.** [2016 ACEEE Summer Study on Energy Efficiency in Buildings](#). Pacific Grove, CA.
- ✓ **Sep. 8-9, 2016.** [2016 Transportation and Communities Summit](#). Portland State University, OR.
- ✓ **Sep. 13-15, 2016.** [Living Product Expo: Crafting the Future of Materials](#).
- ✓ **Sep. 21-25, 2016.** [Annual North American Passive House Conference](#). Philadelphia, PA.
- ✓ **Oct. 5-7, 2016.** [GreenBuild 2016](#). USGBC. Los Angeles, CA.
- ✓ **Oct. 9-13, 2016.** [International Society of Exposure Science \(ISES\) 2016: Interdisciplinary Approaches for Health and the Environment](#). Utrecht, Netherlands.
- ✓ **Oct. 29 - Nov. 2, 2016.** [American Public Health Association Annual Meeting & Exposition](#).
- ✓ **Dec. 5-8, 2016.** [NIEHS Environmental Health Science FEST](#). Research Triangle Park, NC. [RSVP](#).
- ✓ **Feb. 23-25, 2017.** [CitiSci2016](#). Raleigh, NC. The second international conference on citizen science.

Reducing Outdoor Contaminants in Indoor Spaces

REGIONAL NEWS

HEALTH

- ✓ [Summit Highlights Poor Control of Asthma in Pittsburgh.](#)
- ✓ [How Prevalent and Severe Is Asthma Among Pittsburgh Schoolchildren?](#)
- ✓ [High Rate of Pittsburgh-area Children Don't Get Proper Asthma Treatment.](#)
- ✓ [A Home Air Quality Monitor That Can Be Checked Out From The Library.](#)

SUSTAINABILITY

- ✓ [Pittsburgh Buildings On Track To Reach Sustainability Goals Early.](#)
- ✓ [Protecting Our Health through Energy Efficiency and Building Upgrades.](#)
- ✓ [GBA's Pittsburgh 2030 District Honored with Western Pennsylvania Environmental Award.](#)
- ✓ [Passive Strategies a Critical Component in the Race to Zero Energy.](#)

AIR POLLUTION

- ✓ [Lancaster County PA: Dogged by Some of the Worst Soot and Smog Pollution in U.S.](#)

FOSSIL FUELS

- ✓ [Is There A Link Between Fracking and Earthquakes?](#)
- ✓ [PA Court Hears Dispute Over Oil and Gas Well Permit Policies.](#)
- ✓ [Cracker Plant in Beaver Co. Expected to Drive Real Estate Market and Jobs.](#)

OTHER NEWS

IEQ

- ✓ [Building Performance Institute \(BPI\) Introduces the Healthy Home Evaluator Credential.](#)
- ✓ [2016 Residential IAQ and Ventilation Standard Published by ASHRAE.](#)
- ✓ [Lumber Liquidators Pays \\$2.5 Million to Settle California Clean Air Claims.](#)
- ✓ [New CDC Vital Signs Report: Legionnaires' Disease on the Rise.](#)
- ✓ [NYC Publishes Cooling Tower Rules for Inspection and Maintenance.](#)

ASTHMA

- ✓ [Social Bond for Childhood Asthma Home Intervention grant awarded to Alameda Co., CA.](#)
- ✓ [New NIH Asthma Intervention Research Programs.](#)

ENVIRONMENTAL HEALTH

- ✓ [Air Pollution is a Real Heartbreaker.](#)
- ✓ [City, County and PSU Partner on Toxic Air Research in Portland, OR.](#)
- ✓ [Endocrine disruptor exposure from consumer products: The HERMOSA Study.](#)
- ✓ [Agricultural Compounds in Drinking Water Linked to Birth Defects.](#)
- ✓ [Do You Think Before You Breathe? Drexel Survey Finds Broad Misperceptions About Impact of Cleaner Indoor Air.](#)
- ✓ [The Complex Relationship Between Heat and Ozone: Increased Ozone Alerts in Coming Decades.](#)
- ✓ [Southern California's Reduction in Smog Linked to Major Improvement in Children's Respiratory Health.](#)
- ✓ [A Broad Universe of "Emerging Contaminants" in Drinking Water is Going Unregulated.](#)

Reducing Outdoor Contaminants in Indoor Spaces

OTHER NEWS continued

AQ

- ✓ [Busy Streets Are Bad For Cyclists' Lungs, Portland Study Says.](#)
- ✓ [Particulate Filters for Mercedes Diesels to Come to Gasoline Vehicles Too.](#)

ENERGY EFFICIENCY AND GREEN BUILDINGS

- ✓ [Washington State Law Expands Weatherization Plus Health to Entire State.](#)
- ✓ [Seeking Proof that Energy Efficiency Creates Jobs?](#)
- ✓ [UCLA Luskin Center Study Shows Low-income Californians Benefit from Cap-and-Trade.](#)
- ✓ [DOE Invests \\$14 Million to Increase Efficiency of Nation's Homes and Buildings.](#)

LAND USE PLANNING

- ✓ [Our Health is a Function of Where We Live.](#)

CITIZEN SCIENCE

- ✓ [San Ysidro Residents Brace for a Busier Border, Conduct Own Pollutant Monitoring.](#)

ENVIRONMENTAL JUSTICE

- ✓ [EPA's Newest Environmental Justice Strategy Available for Public Review.](#)
- ✓ [New Study Cross-Links Pollution Extremes to Race & Socio-Economic Status.](#)
- ✓ [Facilitating Change for Environmental Justice through Community Empowerment and Advocacy.](#)
- ✓ [New NIH-EPA Research Centers to Study Environmental Health Disparities.](#)

FOSSIL FUELS

- ✓ [Hidden, Abandoned, Dangerous: Old Gas and Oil Wells In Neighborhoods.](#)
- ✓ [Physicians Group Calls for Ban on Fracking.](#)
- ✓ [U.S. Adds Man-made Earthquakes to Seismic Risk Map.](#)
- ✓ [Fracking Firm Hit With Damages for Ground Water Contamination.](#)
- ✓ [Baykeeper Refutes Developer's Claim that Coal Export Won't Harm the Bay.](#)

RESOURCES

IEQ

- ✓ [2016 Northeast Indoor Air Quality & Energy Conference.](#)

ENVIRONMENTAL HEALTH

- ✓ [Outdoor Pollutant Intrusion in Homes: Which Intervention Strategies Work?](#)
- ✓ [Healthy Home Interventions: Success Stories.](#)
- ✓ [Weatherization and Health: Ventilation Intervention Studies.](#)
- ✓ [Toxic Metals in Urban Air.](#)
- ✓ [Improving Indoor Climates in Retrofitted Buildings.](#)
- ✓ [Schools of the Future: Towards Zero Emission with High Performance Indoor Environment.](#)
- ✓ [Better Buildings Summit 2016.](#)
- ✓ [Increasing Energy Efficiency in Small Multifamily Properties in the Northeast.](#)
- ✓ [EPA P3 Student Project Grants Awarded, 2016.](#)

Reducing Outdoor Contaminants in Indoor Spaces

RESOURCES continued

FOSSIL FUELS

- ✓ [No Coal in Oakland.](#)

FUNDING OPPORTUNITIES

- ✓ [Healthy Housing and Neighborhoods Initiative.](#)

RESEARCH AND DEMONSTRATION

IEQ

- ✓ [Ventilation, IAQ and Filtration in a Net Zero Energy House.](#)

ENVIRONMENTAL HEALTH

- ✓ [Multi-Ethnic Study of Atherosclerosis and Air Pollution \(MESA Air\) Study.](#)
- ✓ [Associations between Traffic Noise, Particulate Air Pollution, Hypertension, and Isolated Systolic Hypertension in Adults: The KORA Study.](#)
- ✓ [Impacts of Climate-induced Changes in Extreme Events on Ozone and Particulate Matter Air Quality.](#)
- ✓ [Simulating the Extent of TCE Contamination in Antrim County, Michigan Using Publicly Available Data \(2016 NGWA Groundwater Summit\).](#)
- ✓ [Quantile Regression Analysis of the Distributional Effects of Air Pollution on Blood Pressure, Heart Rate Variability, Blood Lipids, and Biomarkers of Inflammation in Elderly American Men: The Normative Aging Study.](#)
- ✓ [Critical Review of Health Impacts of Wildfire Smoke Exposure.](#)
- ✓ [Long-term Exposure to Air Pollution and Development of Cardiovascular Disease.](#)
- ✓ [Contamination in North Dakota Linked to Fracking Spills.](#)
- ✓ [Early Exposure to Traffic-Related Air Pollution.](#)
- ✓ [Urban Dust Microbiome: Impact on Later Atopy and Wheezing.](#)
- ✓ [A Difference-in-Differences Approach to Assess the Effect of a Heat Action Plan on Heat-Related Mortality, and Differences in Effectiveness According to Gender, Age, and Socioeconomic Status \(Montreal, Quebec\).](#)
- ✓ [Estimating Causal Effects of Local Air Pollution on Daily Deaths: Effect of Low Levels.](#)
- ✓ [Nano-Scale Particulate Matter from Urban Traffic Rapidly Induces Oxidative Stress and Inflammation in Olfactory Epithelium with Concomitant Effects on Brain.](#)
- ✓ [Long-term Exposure to Traffic-related Air Pollution and Progression of Carotid Artery Atherosclerosis: A Prospective Cohort Study.](#)
- ✓ [Effects of Complete Streets on Travel Behavior and Exposure to Vehicular Emissions.](#)
- ✓ [Short-term Exposure to Traffic-related Air Pollution and Daily Mortality in London, UK.](#)
- ✓ [Air Pollution Exposure Model for Individuals \(EMI\) in Health Studies: Evaluation for Ambient PM2.5 in Central North Carolina.](#)
- ✓ [Differences in Ambient Polycyclic Aromatic Hydrocarbon Concentrations between Streets and Alleys in New York City: Open Space vs. Semi-Closed Space.](#)
- ✓ [Time Trends of Polycyclic Aromatic Hydrocarbon Exposure in New York City from 2001 to 2012: Assessed by Repeat Air and Urine Samples.](#)
- ✓ [Moving to a Highly Walkable Neighborhood and Incidence of Hypertension: A Propensity-Score Matched Cohort Study.](#)
- ✓ [Effects of Ambient Air Pollution Exposure on Olfaction: A Review.](#)

Reducing Outdoor Contaminants in Indoor Spaces

RESEARCH AND DEMONSTRATION ENVIRONMENTAL HEALTH continued

- ✓ [Intrauterine Inflammation and Maternal Exposure to Ambient PM_{2.5} during Preconception and Specific Periods of Pregnancy: The Boston Birth Cohort.](#)
- ✓ [Hair and Nails as Noninvasive Biomarkers of Human Exposure to Brominated and Organophosphate Flame Retardants.](#)
- ✓ [A Community-Based Approach to Developing a Mobile Device for Measuring Ambient Air Exposure, Location, and Respiratory Health.](#)
- ✓ [Wearable Wristbands Detect Flame Retardants.](#)

ASTHMA

- ✓ [Overcoming Medicaid Reimbursement Barriers to Funding School Nursing Services for Low-Income Children With Asthma.](#)
- ✓ [Reducing Childhood Asthma Triggers in Public Housing: Implementation and Outcomes from an East Harlem Community Health Worker Program.](#)
- ✓ [A Common 16p11.2 Inversion Underlies the Joint Susceptibility to Asthma and Obesity.](#)

ENERGY EFFICIENCY

- ✓ [Holistic Approach to Achieving Low-energy, High-rise Residential Buildings.](#)
- ✓ [US Power Plant Carbon Standards and Clean Air and Health Co-benefits.](#)

ABSTRACTS for the above items

EVENTS – REGIONAL AUDIENCE

Jun. 10, 2016. [Health & Shale Gas Development: State of the Science.](#) Pittsburgh, PA. This conference for healthcare providers and community members will discuss unconventional gas development, its related health effects, and the critical roles of interdisciplinary and interagency activities. Presentations will be posted on the Southwestern PA Environmental Health Project website.

Jun. 13-14, 2016. [2016 Northeast Energy Efficiency Summit.](#) Bretton Woods, NH.

Every third Thursday. [Baby Safety Shower.](#) Baltimore, MD. GHHI will be on hand at the monthly event to deliver information about **lead-safe practices and asthma action plans** to mothers of babies and toddlers less than 18 months of age.

Jun. and beyond: Various Green Building and Healthy Materials Seminars and Webinars, hosted by the [Green Building Alliance](#) of Pittsburgh (GBA) and others. Notable events include the 2030 Race to Zero Energy monthly series and the Inspire Speakers series.

Jun. and beyond, webinars. [Residential Energy Efficiency Webinars.](#) Penn Energy Codes.

Reducing Outdoor Contaminants in Indoor Spaces

EVENTS – NATIONAL AUDIENCE

Quarterly [Federal Committee on IAQ Conference Call](#). The June 8th agenda included presentations on the GBA Pittsburgh IAQ and energy efficiency efforts and the HUD's Smoke Free Public Housing. Minutes of past conference calls are archived.

Jun. 9, 2016 webinar. [Asthma Management in Schools](#). EPA. Previous webinars are also available online.

Jun. 12-17, 2016. [Health Equity Leadership Institute 2016](#). Madison, WI.

Jun. 13-14, 2016. [NAPHN 2016 Conference & Expo: Decarbonize Our Future Today](#). New York, NY.

Jun. 13-16, 2016. [NEHA 2016 AEC and HUD Healthy Homes Conference](#). San Antonio, Texas.

Jun. 14 and beyond, webinars. [Commercial Building Envelope Technology Webinar Series](#). DOE. June 14, Tools and Whole Building Envelopes.

Jun. 16, 2016 webinar. [Energy Savings Plus Health Guidelines](#). Bringing energy efficiency and indoor air quality to your school through EPA's Guidelines. Topics include the Guidelines and its checklist and spreadsheet, plus best practices, and a case study on improving IAQ and occupant health.

Jun. 19-23, 2016. [2016 Council of State and Territorial Epidemiologists Annual Conference](#). Anchorage, AK.

Jun. 21, 2016. [AIA+2030 Session 3 – Accentuate the Positive: Climate Responsive Design](#). Pittsburgh.

Jun. 23, 2016. [The Race to Zero Energy: Reaching 2030 Goals Session 2 – Technologies and Products](#). Pittsburgh.

Jun. 30, 2016. [Climate Change and Health](#) webinar. NIEHS.

Jun. 28 - Jul. 2, 2016. [Student Climate & Conservation Congress](#). Shepherdstown, WV.

Jul. 3-8, 2016. [Indoor Air 2016](#). Ghent, Belgium. The premier international scientific conference on IEQ. Short courses and social media discussions will be included.

Aug. 21-26, 2016. [2016 ACEEE Summer Study on Energy Efficiency in Buildings](#). Pacific Grove, CA.

Aug. 25-26, 2016. [Advancing the Science of Community Engaged Research](#). Washington, D.C.

Sep. 8-9, 2016. [2016 Transportation and Communities Summit](#). Portland State University, Portland, OR.

Sep. 13-15, 2016. [Living Product Expo: Crafting the Future of Materials](#). Pittsburg, PA.

Sep. 21-25, 2016. [Annual North American Passive House Conference](#). Philadelphia, PA.

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

Reducing Outdoor Contaminants in Indoor Spaces

EVENTS – NATIONAL AUDIENCE continued

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

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

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

Feb. 23-25, 2017. [CitiSci2016](#). Raleigh, NC. The second international conference on citizen science.

REGIONAL NEWS

HEALTH

[Summit Highlights Poor Control of Asthma in Pittsburgh](#). Experts cite need for health education. The conference, "The Air We Breathe: A Regional Summit on Asthma in our Community," convened about 100 attendees to hear both local and national experts discuss the most current findings on asthma causes, treatment and prevention. The conference also spotlighted the Breathmobile, a mobile asthma clinic that is coming to Pittsburgh. Other areas explored by the conference included air pollution, specifically from wood smoke. The [Breathe Project](#) was one of the sponsors. May 16, 2016.

[How Prevalent and Severe Is Asthma Among Pittsburgh Schoolchildren?](#) Allegheny Health Network recently [released the results](#) of Dr. Deborah Gentile's study on the [asthma prevalence](#), risk and severity for schoolchildren in several Pittsburgh-area school districts. May 17, 2016 interview.

[High Rate of Pittsburgh-area Children Don't Get Proper Asthma Treatment](#). May 6, 2016.

[A Home Air Quality Monitor That Can Be Checked Out From The Library](#). Case studies from Speck particle counters in Pittsburgh homes and a Salt Lake City school are mentioned. Student and family empowerment was increased. CMU plans to also put data from other sensor makes online, do a comparison performance test of various monitor makes, and publish the results. May 24, 2016.

SUSTAINABILITY

[Pittsburgh Buildings On Track To Reach Sustainability Goals Early](#). Building owners in downtown Pittsburgh and Oakland are ahead of sustainability goals set as part of the [Pittsburgh 2030 District initiative](#). Apr. 29, 2016 interview.

[Protecting Our Health through Energy Efficiency and Building Upgrades: EPA IAQ & School Upgrade Guidelines](#). Schools implementing the Guide are already seeing benefits. ENERGY STAR partner [North Penn School District](#) (NPSD) in Lansdale, Pa. used the Guide during a recent elementary school renovation and as a reference for ongoing daily maintenance operations. As a result, NPSD continues to achieve positive outcomes through occupant education, energy audits, monitoring of energy savings, and generation of data for evaluation and tracking. Apr. 2016.

Reducing Outdoor Contaminants in Indoor Spaces

REGIONAL NEWS SUSTAINABILITY continued

[GBA's Pittsburgh 2030 District Honored with Western Pennsylvania Environmental Award.](#) Jun. 1, 2016.

[Passive Strategies a Critical Component in the Race to Zero Energy.](#) May 20, 2016.

AIR POLLUTION

[Lancaster County PA: Dogged by Some of the Worst Soot and Smog Pollution in U.S.](#) Lancaster County surpassed Pittsburgh-Allegheny County as the worst in the state. The Pittsburgh area had been ranked worst in Pennsylvania since the American Lung Association annual reports started in 2000. Perplexing to analysts was why there were far more spikes of high readings of soot in the air monitor at Intercourse, downwind of the one in Lancaster city. Apr. 25, 2016.

FOSSIL FUELS

[Is There A Link Between Fracking and Earthquakes?](#) Multiple minor earthquakes in an area west of New Castle, PA were below a magnitude that humans can feel. Should we be concerned? Are the quakes triggered by fracking? [Michael Brudzinski](#), a geology professor at Miami University in Ohio, and [Andrew Nyblade](#), a geosciences professor at Penn State University, discuss these issues. May 3, 2016 interview.

[PA Court Hears Dispute Over Oil and Gas Well Permit Policies.](#) The judges signaled that they are still wrestling with the main argument: whether the [2013 Supreme Court decision](#) to strike down sections of the state's updated oil and gas law also crippled DEP's ability to consider the impact of proposed wells on features like public parks, critical species and scenic rivers. The Pennsylvania Legislature is poised to let an array of new shale gas drilling regulations take effect in a deal that will cancel revised rules for the state's traditional drilling industry. A coalition of six environmental groups said if the state adopts Senate Bill 279 it will make Pennsylvania "the only state in the nation to abandon oil and gas regulations after they've been fully developed and vetted." Jun. 9, 2016.

[Cracker Plant in Beaver Co. Expected to Drive Real Estate Market and Jobs.](#) In January 2015, the landowner began demolishing the former smelter site, with Shell footing the bill. The energy giant has committed \$80 million to deal with environmental contamination inherited from Horsehead and its predecessors; \$60 million to shuffle roadways; and \$69 million for the Center Township Water Authority to relocate its water intake site and build a new water treatment plant. Several environmental groups took issue with the air pollution that the cracker has in store for the region. Jun. 7, 2016.

OTHER NEWS

IEQ

[Building Performance Institute \(BPI\) Introduces the Healthy Home Evaluator Credential.](#) The credential is designed for the nation's home performance, weatherization and healthy housing workforce, with the goal of breaking the link between unhealthy housing and unhealthy families through home performance interventions. Developed in partnership with the Green & Healthy Homes Initiative (GHHI), the credential builds upon the BPI Building Analyst or Energy Auditor certifications to verify the competencies required to conduct healthy home environmental risk assessments. Mar. 8, 2016.

Reducing Outdoor Contaminants in Indoor Spaces

OTHER NEWS IEQ continued

[2016 Residential IAQ and Ventilation Standard Published by ASHRAE](#). Multifamily units (four stories or more) in all types of buildings are now covered in the scope of this standard. The 2016 standard also includes a method of claiming an infiltration credit for horizontally-attached units. Another major change in the standard provides a means of determining equivalency for a variety of ventilation scheduling strategies, including targets for short-term exposures. Apr. 1, 2016.

[Lumber Liquidators Pays \\$2.5 Million to Settle California Clean Air Claims](#). Hardwood flooring retailer Lumber Liquidators Inc. has paid the California Air Resources Board (ARB) \$2.5 million to settle ARB claims that Lumber Liquidators sold, supplied, or offered for sale in California composite wood products that ARB testing showed exceeded state formaldehyde limits, and that Lumber Liquidators failed to take reasonable prudent precautions to ensure those products met such limits designed to protect public health. Lumber Liquidators also agreed to conduct regular audits of existing and new suppliers and to randomly test composite core samples in accordance with ARB's standard operating procedure for preparing finished goods samples for testing. Mar. 22, 2016.

[New CDC Vital Signs Report: Legionnaires' Disease on the Rise](#). The number of people with Legionnaires' disease grew by nearly **four times** from 2000–2014. Legionnaires' disease is deadly for about **10%** of people who get it. CDC investigations show almost all outbreaks were caused by problems preventable with more effective water management. CDC has a useful toolkit and information for taking preventive action. Jun. 6, 2016.

[NYC Publishes Cooling Tower Rules for Inspection and Maintenance](#). The [rules](#) take effect in early June. A general guide to complying with the regulations, with frequently asked questions, can be found [here](#). The regulations require building owners to develop and use a cooling tower Maintenance Program and Plan (MPP) in line with ASHRAE 188-2015 and the specific requirements of Chapter 8. May 9, 2016.

ASTHMA

[Social Bond for Childhood Asthma Home Intervention grant awarded to Alameda Co., CA](#). In a Pay for Success project, private funders and investors pay for social services up front, working with counties, states, and service providers to reach target outcomes. Sep. 1, 2016.

[New NIH Asthma Intervention Research Programs](#).

- NIAID-supported investigators in Boston are assessing whether a school-based program aimed at reducing children's exposure to mouse allergen, mold, and air pollutants will decrease the burden of asthma among urban schoolchildren.
- NIEHS scientists are studying the complex relationship between the environment, the immune system, and asthma. Specifically, the scientists want to identify triggers of asthma attacks, what conditions may cause asthma, and the biological mechanisms involved. This strategy will inform future treatment and prevention efforts and has already produced some exciting results.
- Other NIEHS projects are currently working with families to improve air quality at home through strategies such as air filters and greener cleaning products. Apr. 25, 2016.

Reducing Outdoor Contaminants in Indoor Spaces

OTHER NEWS continued

ENVIRONMENTAL HEALTH

[Air Pollution is a Real Heartbreaker](#). The ten-year MESA Study by the University of Washington [published in The Lancet](#), links living with air pollution to serious heart disease. This study provides the strongest evidence yet that air pollution can and does contribute to cardiovascular disease. The results define the relationship between air pollutants and the progression of coronary artery disease over time. Indoor and personal exposures were modeled; some personal monitoring was conducted (see Kaufman et al. 2012 and other journal articles in the R&D section below). May 26, 2016.

[City, County and PSU Partner on Toxic Air Research in Portland, OR](#). In response to community concerns about dangerous airborne metals, researchers will sample air, soil, moss, and potentially, indoor surfaces for metals. They will also monitor to estimate emission levels and analyze the variation of pollutants to explore the potential of multiple sources affecting an individual location. Apr. 27, 2016.

Endocrine disruptor exposure from consumer products is shown in teenage girls. The [HERMOSA Study](#) demonstrated exposure reductions for some phthalates, parabens, and phenols after Latina teens in the Salinas, CA area switched to alternative cosmetics and personal care products for three days. Biomonitoring California conducted the laboratory analyses for this study. The journal article is free: [Harley, et al., 2016](#). May 23, 2016.

[Agricultural Compounds in Drinking Water Linked to Birth Defects](#). Apr. 21, 2016.

[Do You Think Before You Breathe? Drexel Survey Finds Broad Misperceptions About Impact of Cleaner Indoor Air](#). Dec. 8, 2015.

[The Complex Relationship Between Heat and Ozone: Increased Ozone Alerts in Coming Decades](#). California, the Southwest, and the Northeast would be the most affected with each possibly experiencing up to nine additional days of dangerous ozone levels, with much of the rest of the country experiencing an average increase of 2.3 days. Apr. 21, 2016.

[Southern California's Reduction in Smog Linked to Major Improvement in Children's Respiratory Health](#). A twenty-year study of southern California children found that the children now have significantly fewer respiratory symptoms as a result of improved air quality. Average outdoor PM2.5 levels dropped by 47 % from 1992 to 2011 in the study region. Average outdoor nitrogen dioxide levels decreased by 49 % in the same period. Substantial decreases of bronchitic symptoms in children with asthma and of bronchitic symptoms in kids without asthma occurred. The finding expands on the [landmark USC Children's Health Study](#), which a year ago reported that kids' lungs had grown stronger over the past twenty years as pollution levels in the Los Angeles Basin declined. Apr. 12, 2016.

[A Broad Universe of "Emerging Contaminants" in Drinking Water is Going Unregulated](#). In the drinking water of a large part of North Carolina, researchers have identified troubling levels of 1,4-dioxane, a likely human carcinogen and a byproduct of plastics manufacturing that can be found in paint strippers, varnishes, detergents, shampoos and cosmetics. Researchers are evaluating point-of-use devices, such as pitcher and refrigerator filters, and have identified a new adsorbent that is quite effective for 1,4-dioxane removal. [Inhalation exposure](#) can also occur when using tap water contaminated with [1,4-dioxane](#) to cook or shower. Jun. 10, 2016.

Reducing Outdoor Contaminants in Indoor Spaces

OTHER NEWS continued

AQ

[Busy Streets Are Bad For Cyclists' Lungs, Portland Study Says](#). A new [study](#) conducted in Portland neighborhoods confirmed that the more traffic there is on a street, the more air pollution cyclists are breathing. Researchers checked cyclists' breath for VOCs before and after a ride and compared that to results from other cyclists taking other routes. [Webinar, dissertation etc. are available](#). May 5, 2016.

[Particulate Filters for Mercedes Diesels to Come to Gasoline Vehicles Too](#). May 31, 2016.

ENERGY EFFICIENCY AND GREEN BUILDINGS

Washington State Law Expands Weatherization Plus Health to Entire State. In 2015, Washington passed [House Bill 1720](#), which allows federal low income weatherization assistance programs (WAP) to use grant awards and matching funds for healthy housing improvements. The state began implementing this [Weatherization Plus Health](#) program statewide this year, with \$4.3 million per year to match local funding ([WDOC, 2015](#); [Furze 2015 presentation](#)). The state has recently proposed to allow up to 25% of federal LIHEAP funds to be used for further weatherization. Apr. 2016.

[Seeking Proof that Energy Efficiency Creates Jobs?](#) Ask the U.S. Department of Energy. May 25, 2016.

[UCLA Luskin Center Study Shows Low-income Californians Benefit from Cap-and-Trade](#). Apr. 5, 2016.

[DOE Invests \\$14 Million to Increase Efficiency of Nation's Homes and Buildings](#). Under its [Building America program](#), the Energy Department will make eight awards for up to \$5.5 million for industry partners to create healthier, more comfortable homes. Partners will pilot several innovative approaches: low-cost construction methods; highly-efficient integrated heating, cooling, and ventilation systems; indoor air quality (IAQ) solutions for healthier homes; and software that will remotely identify homes that can benefit most from energy efficiency retrofits. They will also demonstrate zero energy-ready homes for the affordable housing market. May 9, 2016.

LAND USE PLANNING

[Our Health is a Function of Where We Live](#) (Comment). Goenka and Andersen, 2016. See also: link to article on [14-city cross-sectional study on physical activity](#).

CITIZEN SCIENCE

[San Ysidro Residents Brace for a Busier Border, Conduct Own Pollutant Monitoring](#). The border expansion has heightened health concerns among San Ysidro, CA residents, and calls for an air pollution study of the community have gone unheeded, activists say. Residents led by Casa Familiar, have obtained funding from CalEPA to do their own air-pollution study. Apr. 25, 2016.

ENVIRONMENTAL JUSTICE

[EPA's Newest Environmental Justice Strategy Available for Public Review](#). One of the EJ2020 plan's goals is to deepen environmental justice practice in EPA's programs to improve the health and environment of overburdened communities. **Comments are due July 7.**

Reducing Outdoor Contaminants in Indoor Spaces

OTHER NEWS ENVIRONMENTAL JUSTICE continued

[New Study Cross-Links Pollution Extremes to Race & Socio-Economic Status](#). The study focused on the industrial facilities responsible for one billion chemical releases in the U.S. in 2007. An interdisciplinary research team identified that a class of “super polluters”—the worst of the worst—contribute disproportionately to pollution affecting minority and low-income communities. Their findings suggest that selective enforcement, rather than sweeping initiatives, could lead to the greatest environmental gains at potentially reduced costs. Jan. 26, 2016.

[Facilitating Change for Environmental Justice through Community Empowerment and Advocacy](#). UPROSE promotes the sustainability of Sunset Park – an ethnically and economically diverse neighborhood in Brooklyn. It empowers younger generations, enhances environmental amenities, and addresses social inequities. Youth projects have focused on community action to address lead paint, traffic-related air pollution, and climate justice and adaptation to prevent toxic contamination during storm surges. Youths conducted air quality monitoring in the community. May 8, 2016.

[New NIH-EPA Research Centers to Study Environmental Health Disparities](#). Five new research centers will examine a range of stressors on health, including air, water, and ground pollution as well as environmental conditions such as substandard housing, poor diet, and adverse social dynamics. Community partners will collaborate with scientists to define research questions, recruit study participants, and collect data. Additionally, partners will help translate research results into strategies to address existing health issues and prevent harmful exposures. May 3, 2016.

FOSSIL FUELS

[Hidden, Abandoned, Dangerous: Old Gas and Oil Wells In Neighborhoods](#). Most states have no requirement for homeowners to be notified about abandoned oil and gas wells on their properties. Across the U.S., from Pennsylvania to California, there are millions of abandoned wells with locations either unmapped or poorly mapped. In Alberta, Canada, it's a different story. May 30, 2016.

[Physicians Group Calls for Ban on Fracking](#). Physicians for Social Responsibility's national board of directors called for a ban on hydraulic fracturing (fracking). The newly adopted position cites the extensive leaks of methane, a powerful accelerator of climate change. It acknowledges that a transition is needed to end fracking and calls on the gas and oil industries to shoulder responsibility for, among other things, water testing, public disclosure on chemicals used, and the costs of managing health-threatening practices. May 24, 2016.

[U.S. Adds Man-made Earthquakes to Seismic Risk Map](#). The U.S. Geological Survey's change follows a rise in temblors linked to wastewater disposal wells, the agency said. Mar. 28, 2016.

[Fracking Firm Hit With Damages for Ground Water Contamination](#). A federal jury ruled that Cabot Oil & Gas Co. must pay more than \$4.2 million in damages to two families in northeastern Pennsylvania who said the company's fracking operations contaminated their ground water since 2008. Mar. 11, 2016.

[Baykeeper Refutes Developer's Claim that Coal Export Won't Harm the Bay](#). Can ten million tons of Utah coal per year be brought by train and shipped from Oakland to Asia, without polluting neighborhoods, and the San Francisco Bay? Baykeeper refutes the developer's claims, explaining how much harm coal export would create for San Francisco Bay, the Bay area, and the global climate. Apr. 4, 2016.

Reducing Outdoor Contaminants in Indoor Spaces

RESOURCES

IEQ

[2016 Northeast Indoor Air Quality & Energy Conference](#), program and contacts. Topics addressed included radon, mold, high performance buildings, ventilation system commissioning, and maintenance. Maine IAQ Council, Portland, ME.

ENVIRONMENTAL HEALTH

Outdoor Pollutant Intrusion in Homes: Which Intervention Strategies Work? [2016 ACI National Home Performance Conference \(ACI 2016\)](#), Austin, TX, Apr. 4-7. Preliminary results from the ROCIS Low Cost Particle Monitoring Project were presented by Linda Wigington. Rich Corsi (UT Austin) presented the latest findings on indoor ozone, its particulate by products, and its removal. Brett Singer (LBNL) reviewed the infiltration of particles and summarized the results from their recent study on HVAC air filtration effectiveness in a test home. Tom Phillips reviewed the demonstrated effectiveness of various intervention strategies and moderated the session. (Session 7, #W50, free site registration required)

[Healthy Home Interventions: Success Stories](#). GHHI, 2016. Case studies from various states, showing how asthma, mold, pest, lead, and energy problems were solved.

Weatherization and Health: ventilation intervention studies. The [Health V study](#) looked at IEQ and mechanical ventilation strategies in weatherized homes (University of Illinois, HUD, and NCHH). IAQ and health improved when weatherization was accompanied by an ASHRAE residential ventilation standard and the 2010 ASHRAE standard has greater improvements in certain outcomes, compared to the 1989 standard. The final report is expected in mid 2016. [Venting for Health](#), a related study in New York City, is looking at the effects of improved ventilation and air shaft sealing and air shaft ventilation in multifamily buildings; the results are expected soon.

[Toxic Metals in Urban Air](#). The Portland State University studies will provide in-depth testing of six sites identified by prior research and in discussion with public health agencies and neighborhood organizations. This project will provide timely research for public health and other officials to consider whether or how to adjust policies, regulations, and/or monitoring activities.

[Improving Indoor Climates in Retrofitted Buildings](#). The EU-funded [CETIEB](#) (Cost-Effective Tools for Better Indoor Environment in Retrofitted Energy Efficient Buildings). The project developed and evaluated a number of cost-effective, easy-to-use monitoring and equipment control systems, e.g., sensors for VOCs, light, temperature and energy fluxes, CO₂, UV, and air velocity. A Passive Plaster System was developed to reduce indoor temperature and humidity variations and through photo-catalytic activity remove indoor air pollutants. A project summary and guidelines are available and have been disseminated to the public.

[Schools of the Future: Towards Zero Emission with High Performance Indoor Environment](#). This EU FP-7 project demonstrated the enhanced energy and indoor environment performance of 4 buildings in 4 countries and climates. This was achieved by holistic retrofit of the building envelope and systems along with the integration of renewables and building management systems. Best practice guidelines, an interactive design tool, classroom lectures, and training material for pupils, teachers and technical service personnel are available.

Reducing Outdoor Contaminants in Indoor Spaces

RESOURCES ENVIRONMENTAL HEALTH continued

[Better Buildings Summit 2016](#). Searchable list of presentations on energy efficiency, financing, market value, health, non-energy benefits, due diligence, etc. for various building sectors. U.S. DOE.

[Increasing Energy Efficiency in Small Multifamily Properties in the Northeast](#). Northeast Energy Efficiency Partnerships, 2014.

[EPA P3 Student Project Grants Awarded, 2016](#). FY 2015-16 research topics include wearable air quality sensors, air filtration in zero energy homes, personal sensors for home system controls, and water quality monitoring at fracking sites. EPA People, Prosperity and the Planet (P3). Mar. 28, 2016.

FOSSIL FUELS

[No Coal in Oakland](#). Analysis and news on health, environmental justice, and environmental impacts of proposed coals trains and shipping terminal in Northern California. Legislation and citizen activities are covered too.

FUNDING OPPORTUNITIES

[Healthy Housing and Neighborhoods Initiative](#). The Kresge Foundation. Ongoing grant applications. Other initiatives, such as Climate Resilience and Urban Opportunity, will periodically issue RFPs.

RESEARCH AND DEMONSTRATION

IEQ

[Ventilation, IAQ and Filtration in a Net Zero Energy House](#). Persily et al., 2016.

ENVIRONMENTAL HEALTH

[Multi-Ethnic Study of Atherosclerosis and Air Pollution \(MESA Air\) Study](#), University of Washington. This 10-year study is examining the relationship between air pollution exposures and the progression of cardiovascular disease over time. It is looking at people in six states, representing diverse areas of the country. Below are examples of study articles that are pertinent to ROCIS stakeholders:

[Modeling the Residential Infiltration of Outdoor PM2.5 in the Multi-Ethnic Study of Atherosclerosis and Air Pollution \(MESA Air\)](#). Allen et al., 2012.

[A National Prediction Model for PM2.5 Component Exposures and Measurement Error–Corrected Health Effect Inference](#). Bergen et al., 2013.

[Prospective study of particulate air pollution exposures, subclinical atherosclerosis, and clinical cardiovascular disease: The Multi-Ethnic Study of Atherosclerosis and Air Pollution \(MESA Air\)](#). Kaufman et al., 2012.

[Satellite-Based NO2 and Model Validation in a National Prediction Model Based on Universal Kriging and Land-Use Regression](#). Young et al., 2016.

Reducing Outdoor Contaminants in Indoor Spaces

RESEARCH AND DEMONSTRATION ENVIRONMENTAL HEALTH continued

[Exposure to Traffic-Related Air Pollution in Relation to Progression in Physical Disability among Older Adults](#). Weuve et al., 2016.

[Association of Geography and Ambient Air Pollution with Urine Metal Concentrations in Six US Cities: The Multi-Ethnic Study of Atherosclerosis](#). Pang et al., 2016.

[Prediction of Fine Particulate Matter Chemical Components with a Spatio-temporal Model for the Multi-Ethnic Study of Atherosclerosis Cohort](#). Kim et al., 2016.

[Association Between Air Pollution and Coronary Artery Calcification Within Six Metropolitan Areas in the USA \(the Multi-Ethnic Study of Atherosclerosis and Air Pollution\): a Longitudinal Cohort Study](#). Kaufman et al., 2016. (see also: editorial in Lancet).

[Associations between Traffic Noise, Particulate Air Pollution, Hypertension, and Isolated Systolic Hypertension in Adults: The KORA Study](#). Babisch et al., 2014.

[Impacts of Climate-induced Changes in Extreme Events on Ozone and Particulate Matter Air Quality](#). S. Wu, Michigan Technical University. In progress.

[Simulating the Extent of TCE Contamination in Antrim County, Michigan Using Publicly Available Data \(2016 NGWA Groundwater Summit\)](#). Miller and Gierke, 2016.

[Quantile Regression Analysis of the Distributional Effects of Air Pollution on Blood Pressure, Heart Rate Variability, Blood Lipids, and Biomarkers of Inflammation in Elderly American Men: The Normative Aging Study](#). Bind et al., 2016.

[Critical Review of Health Impacts of Wildfire Smoke Exposure](#). Reid et al., 2016.

[Long-term Exposure to Air Pollution and Development of Cardiovascular Disease](#). EPA's Long-term Exposure to Air Pollution and Development of Cardiovascular Disease Request. Applications due Aug. 2, 2016.

[Contamination in North Dakota Linked to Fracking Spills](#). Accidental wastewater spills from unconventional oil production in North Dakota have caused widespread water and soil contamination, a new Duke University study finds. Apr. 27, 2016.

[Early Exposure to Traffic-Related Air Pollution](#), Respiratory Symptoms at 4 Years of Age, and Potential Effect Modification by Parental Allergy, Stressful Family Events, and Gender: A Prospective Follow-up Study of the PARIS Birth Cohort. Ranci re et al., in press.

[Urban Dust Microbiome: Impact on Later Atopy and Wheezing](#). Tischer et al., in press.

[A Difference-in-Differences Approach to Assess the Effect of a Heat Action Plan on Heat-Related Mortality, and Differences in Effectiveness According to Gender, Age, and Socioeconomic Status \(Montreal, Quebec\)](#). Benmarhnia et al., in press.

Reducing Outdoor Contaminants in Indoor Spaces

RESEARCH AND DEMONSTRATION ENVIRONMENTAL HEALTH continued

[Estimating Causal Effects of Local Air Pollution on Daily Deaths: Effect of Low Levels](#). Schwartz et al., in press.

[Nano-Scale Particulate Matter from Urban Traffic Rapidly Induces Oxidative Stress and Inflammation in Olfactory Epithelium with Concomitant Effects on Brain](#). Cheng et al., in press.

[Long-term Exposure to Traffic-related Air Pollution and Progression of Carotid Artery Atherosclerosis: A Prospective Cohort Study](#). Gan et al., 2014.

[Effects of Complete Streets on Travel Behavior and Exposure to Vehicular Emissions](#). Zhu, 2016. Researchers investigated the volume of motorized vehicles, cyclists, and pedestrians as well as exposures to fine (PM_{2.5}) and ultrafine particles (UFP) among drivers, cyclists, and pedestrians before and after two complete street retrofit projects. They also conducted a neighborhood survey in adjacent area before and after the retrofit. Webinar, journal articles, and final report are available. Funded by the California Air Resources Board.

[Short-term Exposure to Traffic-related Air Pollution and Daily Mortality in London, UK](#). Atkinson et al., 2016.

[Air Pollution Exposure Model for Individuals \(EMI\) in Health Studies: Evaluation for Ambient PM_{2.5} in Central North Carolina](#). Breen et al., 2015.

[Differences in Ambient Polycyclic Aromatic Hydrocarbon Concentrations between Streets and Alleys in New York City: Open Space vs. Semi-Closed Space](#). Lovinsky-Desir et al., 2016.

[Time Trends of Polycyclic Aromatic Hydrocarbon Exposure in New York City from 2001 to 2012: Assessed by Repeat Air and Urine Samples](#). Jung et al., 2014. See also: links at Similar Articles.

[Moving to a Highly Walkable Neighborhood and Incidence of Hypertension: A Propensity-Score Matched Cohort Study](#). Chiu et al., 2016.

[Effects of Ambient Air Pollution Exposure on Olfaction: A Review](#). Ajmani et al., 2016.

[Intrauterine Inflammation and Maternal Exposure to Ambient PM_{2.5} during Preconception and Specific Periods of Pregnancy: The Boston Birth Cohort](#). Nachman et al., 2016.

[Hair and Nails as Noninvasive Biomarkers of Human Exposure to Brominated and Organophosphate Flame Retardants](#). Liu et al., 2016.

[A Community-Based Approach to Developing a Mobile Device for Measuring Ambient Air Exposure, Location, and Respiratory Health](#). Rohlman et al., 2015. A 2014 [presentation](#) available.

Reducing Outdoor Contaminants in Indoor Spaces

RESEARCH AND DEMONSTRATION ENVIRONMENTAL HEALTH continued

[Wearable Wristbands Detect Flame Retardants](#). Simple, silicone wristbands that absorb chemicals found in the everyday environment were developed by researchers from Oregon State University. These wristbands can detect more than 40 different flame retardants including PBDEs, some of the replacement flame retardants, and other endocrine disruptors. The wristbands have been used in a study of children's exposures and a study of adult's exposures. The [Environmental Defense Fund](#) conducted a pilot study using the wristbands and has started a chemical detection initiative to make the invisible world of chemicals, visible. [OSU](#) is developing a program to make wristbands available to the public. A [2014 presentation](#) is available. Jun. 1, 2016.

ASTHMA

[Overcoming Medicaid Reimbursement Barriers to Funding School Nursing Services for Low-Income Children With Asthma](#). Malcarney et al., 2016.

[Reducing Childhood Asthma Triggers in Public Housing: Implementation and Outcomes from an East Harlem Community Health Worker Program](#). Lopez et al., 2015.

[A Common 16p11.2 Inversion Underlies the Joint Susceptibility to Asthma and Obesity](#). Gonzalez et al., 2014.

ENERGY EFFICIENCY

[Holistic Approach to Achieving Low-energy, High-rise Residential Buildings](#). Cianfrone et al., 2016.

[US Power Plant Carbon Standards and Clean Air and Health Co-benefits](#). Driscoll, et al., 2016. See related papers also.

That's it for the April-June 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 meetings and webinars. Audio and video recordings from the Feb. 26, ROCIS Stakeholder meeting are posted [here](#).

Cheers,
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