
Reducing Outdoor Contaminants in Indoor Spaces

2016 October-November 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 air quality, green buildings, environmental health, energy efficiency, sustainable development, fossil fuels, IEQ, climate change, environmental justice, 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 December 9 through January 5, 2017. Learn more [here](#).

Have a happy and safe holiday, and watch out for the [Thanksgiving Effect on asthma and allergies!](#)

In this compendium, an index and abstracts...

EVENTS – REGIONAL AUDIENCE

- ✓ Nov. 29, 2016. [Breakfast with WPPSEF](#).
- ✓ Dec. 8 and beyond, webinars, and meetings. [Residential Energy Efficiency Webinars](#).
- ✓ Dec. 1, 2016. [Passive House at Home and Around the World](#). GBA Pittsburgh. CMU, Pittsburgh, PA.
- ✓ Dec. 9, 2016 Seminar. [Climate Change and Human Health](#). CMU, Pittsburgh, PA.
- ✓ Dec. 9, 2016. [Sustainable SITES Initiative Seminar & Workshop](#). [USGBC Central Pennsylvania](#).
- ✓ Jan. 20, 2016. [Coffee, Tea, You, and Me](#). Pittsburgh, PA.
- ✓ Feb. 9, 2017. [Inspirational Stories Creating a Sustainable, Vibrant, Healthy, & Just Region](#). Pgh., PA.

EVENTS – NATIONAL AUDIENCE

- ✓ Nov. 21, 2016. [Nanoremediation for Soil and Groundwater Cleanup — Possibilities and Future Trends](#). Frankfurt-am-Main, Germany.
- ✓ Nov. 30 and beyond, 2016 webinar. [Help Build What's Next](#).
- ✓ Dec. 1 and beyond, webinars. [DOE Better Buildings Residential Network](#). [America's Next Top Energy Model: Tools and Best Practices](#).
- ✓ Dec. 4-8, 2016. [Thermal Performance of the Exterior Envelopes of Whole Buildings XIII International Conference](#). Clearwater, FL.
- ✓ Dec. 5-8, 2016. [NIEHS Environmental Health Science FEST](#). Research Triangle Park, NC. [RSVP](#).
- ✓ Dec. 6-9, 2016. [WAO International Scientific Conference 2016](#). Jerusalem, Israel.
- ✓ Dec. 9, 2016 seminar. [Climate Change and Human Health](#). CMU, Pittsburgh, PA.
- ✓ Dec. 15, 2016. [18th Annual Whittenberger Symposium](#). Harvard University, Boston, MA.
- ✓ Dec. 15, 2016, Abstracts due. [Passive Low Energy Architecture 2017](#). Edinburgh, Scotland.
- ✓ Dec. 19-21, 2016. [Clean Air Through Energy Efficiency Conference \(CATEE\)](#). San Antonio, TX.
- ✓ Jan. 24-26, 2017. [NCSE 2017: Integrating Environment and Health](#). Washington, DC.
- ✓ Feb. 1, 2017 and beyond, quarterly webinar. [Federal Committee on IAQ, Conference Call](#).
- ✓ Mar. 7, 2017. [Ecobuild 2017 – Future Materials and Processes](#). London, UK.
- ✓ Mar. 19-22, 2017. [2017 HPC National Home Performance Conference](#). Nashville, TN.
- ✓ Apr. 5-7 2017. [2017 Children's Environmental Health Translational Research Conference: New Challenges](#). Arlington, VA.
- ✓ 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.

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EVENTS – NATIONAL AUDIENCE (Continued)

- ✓ **May 15-17, 2017.** [Better Buildings Summit](#). Washington, D.C.
- ✓ **May 17-20, 2017.** [CitSci2017](#). International conference on citizen science. Saint Paul, MN.
- ✓ **Jun. 5-8, 2017.** [Air & Waste Mgt. Assoc. 2017: Bridging Environment, Health, & Energy](#). Pgh., PA.
- ✓ **Jun. 5-9, 2017.** [ECCA 2017, European Climate Change Adaptation Conference: Our Climate Ready Future](#). Glasgow, UK.
- ✓ **Oct. 4-7, 2017.** [N. American Passive House Network 2017: Passive House + Renewables](#). Oakland, CA.
- ✓ **Dec. 5-7, 2017.** [2017 National Brownfields Training Conference](#). U.S. EPA and ICMA. Pittsburgh, PA.

REGIONAL NEWS

AIR QUALITY

- ✓ [Pitt Study Shows Buses Main Source of Diesel Pollution](#). Nov. 16, 2016.
- ✓ [Pittsburgh Air Pollution News & Information in the GASP Hotline](#). Also [Smell Pgh. App](#). Nov. 18, 2016.
- ✓ [A Major Source Permit That Has Major Problems](#). Nov. 14, 2016.
- ✓ [Asbestos Problems in Allegheny County](#). Sep. 2016.

GREEN BUILDING

- ✓ [Chartiers Valley Schools Chart New Territory for School Design and Construction](#). Nov. 11, 2016.
- ✓ [Pittsburgh 2030 District Reaches One Hundred Property Partners Milestone](#). Nov. 7, 2016.

SUSTAINABLE DEVELOPMENT

- ✓ **Mayor Peduto Unveils P4 Tool to 'Level the Development Playing Field' in Pittsburgh**. Oct. 11, 2016.

FOSSIL FUELS

- ✓ [In Pittsburgh's Neighborhoods, a Natural Gas Leak Every 2 Miles](#). Nov. 16, 2016.
- ✓ [Study IDs Old Gas Wells as Key Source of Leaks from Abandoned PA Wells](#). Nov. 14, 2016.

OTHER NEWS

IEQ

- ✓ [Denver Passes Big Bond Issue to Cool and Repair Schools](#). Nov. 8, 2016.
- ✓ [Clean, Fresh Air: Getting What We Need](#). Nov. 2016.
- ✓ [Bromine-containing Dyes Dwarf Flame Retardants in House Dust](#). Nov. 11, 2016.
- ✓ [Tips for Child Care Providers and Everyone](#). Oct. 14, 2016.
- ✓ [BPI's Healthy Home Evaluator \(HHE\) Certification to Help Families Nationwide](#).
- ✓ [Why Students and Staff are Breathing Easier at a Few South Bay Schools](#). Oct. 29, 2016.

ENVIRONMENTAL HEALTH

- ✓ [Now More Than Ever](#). Nov. 14, 2016.
- ✓ [Where There's Smoke](#). Sep. 2016.
- ✓ [Climate Talks Should Consider 'Immediate' Health Burden of Air Pollution](#). Nov. 14, 2016.
- ✓ [Valley Fever Awareness](#). Nov. 16, 2016.

ENERGY EFFICIENCY AND GREEN BUILDINGS

- ✓ GreenBuild 2016: Field Notes. [Day 1](#) and [Day 2](#). Oct. 5-6, 2016.

CLIMATE CHANGE

- ✓ [New Report from EU on Scaling Up Deep Energy Renovation](#). Nov. 16, 2016.
- ✓ [C40 launches GPC Interactive Dashboard to Explore Cities' GHG Emissions](#). Oct. 07, 2016.
- ✓ [35 Finalists Chosen for Fourth-Annual C40 Cities Awards](#). Sep. 20, 2016.
- ✓ [Local Leadership: High Hopes in a Time of High Anxiety](#). Nov. 15, 2016.
- ✓ [DOE Announces New Better Buildings Zero Energy Districts Accelerator](#). Nov. 16, 2016.

FOSSIL FUELS

- ✓ [Decommissioning Fossil Fuel Power Plants Between Now & 2030 Essential for Europe's Low Carbon Future](#). Oct. 7, 2016.

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OTHER NEWS (Continued)

ENVIRONMENTAL JUSTICE

- ✓ ["Blueprint for a Healthier America" Calls for High-Impact Policies for Next Administration and Congress](#). Oct. 19, 2016.
- ✓ [Largest Green Wall in Seattle Takes Shape in Georgetown](#). Oct. 25, 2016.

LAND USE AND TRANSPORTATION PLANNING

- ✓ [U.N. Report: Walking and Cycling Infrastructure Is Urgent Health and Climate Priority](#). Oct. 20, 2016.

RESOURCES

IEQ

- ✓ [Environmental Health at Home and in the Nursery](#). Winnebeck, 2013.
- ✓ [Pollution Prevention through Child Care Provider Engagement](#). *Clean and Healthy New York*, 2015.

ENVIRONMENTAL HEALTH

- ✓ [ISEE 2016: Old and New Risks: Challenges for Environmental Epidemiology](#).
- ✓ [Air Quality Flag Program](#).
- ✓ [Biomonitoring California Program](#).
- ✓ [Asthma Research Summaries](#).

GREEN AND HEALTHY BUILDINGS

- ✓ [Cannabis Sustainability Symposium 2016](#).
- ✓ [Moving to the Head of Class: An Energy Efficiency Resource Guide for Pennsylvania Schools](#).
- ✓ [NAPHN16 Conference & Expo Presentations](#).

SENSORS

- ✓ [Personal Environmental Exposure Measurements: Making Sense & Making Use of Emerging Capabilities](#).

FUNDING OPPORTUNITIES AND JOBS

- ✓ [Asthma and Allergic Diseases Research Grants](#). NIH. Due Apr. 3, 2017.
- ✓ [Moving to the Head of the Class Awards](#). Due Mar. 3, 2017.
- ✓ [Community-Focused Pollution Prevention Grants in New York State](#).
- ✓ [Anticipating Environmental, Health Impacts & Behavioral Drivers of Deep Decarbonization](#). Due Feb.10, 2017.
- ✓ **Additional jobs and funding:** posted in Green Building Alliance monthly newsletters.

RESEARCH AND DEMONSTRATION

IEQ

- ✓ [Public Health Stops at the School House Door](#). Paulson and Barnett, 2016.
- ✓ [Indoor Environmental Control Practices and Asthma Management](#). Matsui et al., 2016.
- ✓ Selected items from [Indoor Air, December 2016](#).

ENVIRONMENTAL HEALTH

- ✓ [Acute Impact of Hourly Ambient Air Pollution on Preterm Birth](#). Li et al., 2016.
- ✓ [A National Cohort Study of Effects of PM_{2.5} and Ozone at Low Concentrations on Mortality in the Continental United States](#). Di et al., 2016 Abstract.
- ✓ [School Siting Near Industrial Chemical Facilities: Findings from the U.S. Chemical Safety Board's Investigation of the West Fertilizer Explosion](#). Tinnery 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.
- ✓ [Reducing Phthalate, Paraben, and Phenol Exposure from Personal Care Products in Adolescent Girls: Findings from the HERMOSA Intervention Study](#). Harley et al., 2016.

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RESEARCH AND DEMONSTRATION

ENVIRONMENTAL HEALTH (Continued)

- ✓ [Occupational Exposure to Endocrine-Disrupting Chemicals and Birth Weight and Length of Gestation: A European Meta-Analysis](#). Birks et al., 2016.
- ✓ [Asthma Exacerbations and Traffic: Examining Relationships Using Link-based Traffic Metrics and a Comprehensive Patient Database](#). Lindgren et al., 2016.
- ✓ [Delivering Opportunity: How Electric Buses and Trucks Can Create Jobs and Improve Public Health in California](#). Union of Concerned Scientists, 2016.
- ✓ [Air Toxics Community Studies, 2016 National Ambient Air Monitoring Conference](#), St. Louis, MO.
- ✓ See also: [Posters](#) on wood smoke, PM, ozone, and VOC monitoring.

CLIMATE CHANGE

- ✓ [Advantages of a City-scale Emission Inventory for Urban Air Quality Research and Policy: The Case of Nanjing, a Typical Industrial City in the Yangtze River Delta, China](#). Zhao et al., 2015.
- ✓ [Comparing City-scale Greenhouse Gas \(GHG\) Emission Accounting Methods: Implementation, Approximations, and Policy Relevance](#). Chavez, 2012.
- ✓ [Urbanization and the Carbon Cycle: Current Capabilities and Research Outlook from the Natural Sciences Perspective](#). Hutyra et al., 2014.

ENVIRONMENTAL JUSTICE

- ✓ [Effects of Local Health Interventions on Inequality in Life Expectancy: New Publicly Available Data](#). Chetty et al., 2016.

SENSORS

- ✓ [Sensors and Other Emerging Technologies, 2016 National Ambient Air Monitoring Conference](#), St. Louis, MO.
- ✓ [Community Air Sensor Network \(CAIRSENSE\) Project: Evaluation of Low-cost Sensor Performance in a Suburban Environment in the Southeastern United States](#). Jiao et al., 2016.

ABSTRACTS for the above items

EVENTS – REGIONAL AUDIENCE

Nov. 29, 2016. [Breakfast with WPPSEF](#). Join the West Penn Power Sustainable Energy Fund (WPPSEF) and GBA to learn about WPPSEF's work and see if your project is eligible for funding. **Pittsburgh, PA.**

Dec. 8 and beyond, webinars, and meetings. [Residential Energy Efficiency Webinars](#). Penn Energy Codes. For example: **Dec. 8**, Going Beyond Code – Above Code Programs and the Future of Energy Efficient Housing.

Dec. 1, 2016. [Passive House at Home and Around the World](#). GBA Pittsburgh. Michael McCarthy, 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.

Dec. 9, 2016 Seminar. [Climate Change and Human Health](#): Reflections on Research and Remaining Challenges. [Michelle Bell](#), Yale University. Dr. Bell is a leading research on air pollution epidemiology, including IAQ, outdoor pollution, and wildfire smoke. This seminar will present research on some ways climate change could impact human health, and the challenges associated with research on the human health consequences of climate change and potential paths forward. CMU, Pittsburgh, PA.

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EVENTS – REGIONAL AUDIENCE (Continued)

Dec. 9, 2016. [Sustainable SITES Initiative Seminar & Workshop](#). [USGBC Central Pennsylvania](#). SITES is a comprehensive rating and certification system for developing sustainable landscapes, based on the understanding that land development can be planned, designed, and maintained to protect and enhance ecosystem benefits. Case studies will be presented, and brainstorming will be done for a current development plan. Pequea, PA.

Jan. 20, 2016. [Coffee, Tea, You, and Me](#). Join the Green Building Alliance (GBA) Executive Director, Aurora Sharrard, for Friday morning coffee, tea, and stimulating conversation about the world of healthy and high-performing buildings. Use these bi-monthly chats with Aurora to ask questions, share ideas, and discuss new and innovative solutions for the built environment. Pittsburgh, PA.

Feb. 9, 2017. [Inspirational Stories About Creating a Sustainable, Vibrant, Healthy, and Just Region](#). GBA Hear stories at this annual event from citizens who are working to create sustainable, vibrant, healthy, and just places for us all to live, work, learn, and play. This Moth-style and TED-like event will dare us to dream big about what is possible for our communities, projects, and places. Pittsburgh, PA.

EVENTS – NATIONAL AUDIENCE

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.

Nov. 30 and beyond, 2016 webinar. [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. Building Green, Google, et al.

Dec. 1 and beyond, webinars. [DOE Better Buildings Residential Network](#). [America's Next Top Energy Model: Tools and Best Practices](#), and more.

Dec. 4-8, 2016. [Thermal Performance of the Exterior Envelopes of Whole Buildings XIII International Conference](#). The conference is attended by international experts in building science to discuss their work achievements, interest and awareness of buildings issues, and provides solutions to some of our major building problems. Topics include air barriers, insulation, thermal mass, mold, heat, moisture, performance, cost, and R&D plans. Clearwater, FL.

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.

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EVENTS – NATIONAL AUDIENCE (Continued)

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 ways climate change could impact human health. 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. 15, 2016. [18th Annual Whittenberger Symposium](#). Social determinants, chemical health outcome disparities, and exposure disparities in public housing. Dept. of Environmental Health, Harvard University, Boston, MA.

Dec. 15, 2016, Abstracts due. [Passive Low Energy Architecture 2017](#), July 3-5, 2017. ‘Design to Thrive – Foundations for a Better Future’ recognizes the enormity of the local and global challenges we face in building and refurbishing our buildings, cities and societies to both to minimize climate emissions and to adapt effectively to climate change impacts. Keynote speakers are world leading figures who will address the key issues addressing sustainable and resilient built environment. Edinburgh, Scotland.

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.

Jan. 24-26, 2017. [NCSE 2017: Integrating Environment and Health](#). 17th National Conference and Global Forum for Science, Policy, and the Environment. A diverse groups of individuals and experts – including researchers, educators, students, policy-makers, and entrepreneurs – will explore specific issues and develop recommendations on actionable items. Topics include environmental health, climate change, food systems, ecosystems, education, and engagement. Washington, DC.

Feb. 1, 2017. beyond, quarterly webinar. [Federal Committee on IAQ, Conference Call](#). Agency updates and special presentations. Previous webinars and presentations are also available.

Mar. 7, 2017. [Ecobuild 2017 – Future Materials and Processes](#). This is the UK's largest and primary 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.

Apr. 5-7 2017. [2017 Children's Environmental Health Translational Research Conference: New Challenges](#). CEHN 2017 will highlight cutting edge science in the fields of epidemiology, cell and molecular biology, genetics, toxicology and other pediatric environmental health disciplines, with special focus on emerging/new issues or children’s health challenges. Arlington, VA.

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EVENTS – NATIONAL AUDIENCE (Continued)

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. 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. Matera, Italy.

May 15-17, 2017. [Better Buildings Summit](#). More than 900 participants will engage in dialogue focused on sharing proven approaches. Speakers from all building sectors share how they draw on energy efficiency technologies, business practices, and partnerships to save money on utility bills, create new jobs, and improve their organization's competitiveness. Washington, D.C.

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

Jun. 5-8, 2017. [Air and Waste Management Association 2017: Bridging Environment, Health, and Energy](#). Examine how leaders in industry, government, academia, and citizen groups work together to improve community health and protect the environment. The Pittsburgh area is a great example of the amazing improvements in environmental quality and health that can occur when these groups are bridged together. Pittsburgh, PA.

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.

Oct. 4-7, 2017. [North American Passive House Network 2017: Passive House + Renewables](#). Share the latest developments in Passive House design, methodology, technology, and project delivery. Topics include economics, resilience, quality control, and policy. Passive House addresses buildings of every imaginable use, located in every imaginable climate, economically achieving the required deep levels of energy efficiency, while providing outstanding occupant comfort, safety, and health. Oakland, CA.

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

REGIONAL NEWS

AIR QUALITY

[Pitt Study Shows Buses Main Source of Diesel Pollution](#). Pitt researchers monitored diesel pollution levels over two years across Downtown Pittsburgh, looking at spatial and time of day variation in pollution. Jane Clougherty, the lead researcher, said that although the results pointed to buses as a contributor to the diesel pollution, the value of buses should not be dismissed. These vehicles reduce the number of cars on the road, which could lead to an overall reduction in emissions. The Port Authority is also investing in “an aggressive bus-replacement schedule.” Clougherty's team at Pitt and the Allegheny County Health Department are looking into policy interventions to reduce pollution, such as changing bus routes or bus stop configurations. More information: [Executive Summary: Health Department article](#). Nov. 16, 2016.

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REGIONAL NEWS AIR QUALITY (Continued)

[Pittsburgh Air Pollution News and Information in the GASP Hotline](#). Almost [one third of major sources](#) lack a current operating permit for air pollution. Other topics include the health effects and regulations for wood burning, the lack of enforcement for school bus idling regulations and contracts, and the [Smell PGH app](#). Nov. 18, 2016.

[A Major Source Permit That Has Major Problems](#). GASP raised several concerns in its comments on the draft Title V Operating Permit for the ATI Allegheny Ludlum steel mill in Brackenridge. This major source of air pollution has never had a Title V permit in the fifteen years that ACHD has had the authority to issue them. Nov. 14, 2016.

[Asbestos Problems in Allegheny County](#). Many renovations and demolitions are done correctly, but the Health Department has identified large numbers of activities being performed without proper surveys or notification. Asbestos is found in schools, homes, and buildings across the county. Proper removal of asbestos is critical, considering the serious health effects asbestos poses to the public. Sep. 2016.

GREEN BUILDING

[Chartiers Valley Schools Chart New Territory for School Design and Construction](#). At a recent [Green and Healthy Schools Academy](#) event, school district representatives, the facility designer, and Academy members spoke about what makes the new Chartiers Valley Middle and High Schools project innovative and unique, and why all schools should be considering this type of approach. These projects could become some of the most influential school buildings the Pittsburgh region has yet seen. CVSD's new building process is innovative due to two different but related approaches. The first was a set of guiding principles the CVSD school community agreed upon, which became the compass for setting priorities and making decisions. The second was the truly integrative design process these buildings went through. Two advisory teams Each team discussed what 21st century learning should look like, visited innovative schools around the country, and explored the types of learning spaces that work best. Nov. 11, 2016.

[Pittsburgh 2030 District Reaches One Hundred Property Partners Milestone](#). The Pittsburgh 2030 District hit [another](#) major milestone on October 21, adding [YWCA Greater Pittsburgh](#) as its 100th Property Partner. Besides committing its headquarters located on Wood Street in Downtown Pittsburgh, the YWCA also plans to implement lessons learned through participation at locations in Homewood-Brushton and Allison Park. Nov. 7, 2016.

SUSTAINABLE DEVELOPMENT

Mayor Peduto Unveils P4 Tool to 'Level the Development Playing Field' in Pittsburgh. Peduto unveiled the [P4 Performance Measures](#) tool that is expected to level the development playing field. Starting in early 2017, a 12-point set of criteria created with input from hundreds of regional stakeholders will guide decision-making on [city](#) and philanthropic contracts and investments. This tool assigns numerical values to gauge a project's likely effects on areas such as housing, rainwater, air quality, energy, innovation, and community. The second [P4 Summit](#) was held recently. Oct. 11, 2016.

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REGIONAL NEWS (Continued)

FOSSIL FUELS

[In Pittsburgh's Neighborhoods, a Natural Gas Leak Every 2 Miles](#). When a Google Street View car carrying a methane-sniffing sensor drove around half a dozen Pittsburgh neighborhoods over the past year, it picked up 200 indications of gas leaking from old Peoples Natural Gas pipelines. The results are shown in an [interactive map](#). This work is the culmination of a climate action partnership between Peoples, Google, and the Environmental Defense Fund that has already mapped gas leaks in 10 other cities. Pittsburgh and several other cities with older infrastructure had a leak for every two miles surveyed. See related articles also. Nov. 16, 2016.

[Study IDs Old Gas Wells as Key Source of Leaks from Abandoned PA Wells](#). Certain types of Pennsylvania's scores of abandoned oil and gas wells are associated with higher emissions of the greenhouse gas methane, according to [a study published Monday](#) that could help government agencies prioritize efforts to plug the biggest leaks. The study of 88 wells across Western Pennsylvania revealed that high-emitting wells tend to be natural gas wells that are either unplugged or that are plugged but vented in coal-rich areas. Researchers also estimated that PA has between 470,000 and 750,000 plugged and unplugged abandoned wells. Nov. 14, 2016.

OTHER NEWS

IEQ

[Denver Passes Big Bond Issue to Cool and Repair Schools](#). A [survey](#) conducted in September found that building temperatures reached as high as 94 degrees, with a total of 50 schools above Denver Public Schools' comfort goal of 79 degrees. \$70 million of the \$5,628 M bond is for cooling schools: \$44 million on **automated nighttime air flushing** for the 79 schools without full air conditioning, \$5 million for repairing broken cooling systems, and \$21 million on AC for the district's 18 hottest school buildings. Schools without AC have a large majority of students from low-income households. The school district found that **test scores of summer students were better when AC was present**. Of the school administrators at the 79 schools without full air conditioning, 83 percent said the temperature inside their buildings during the hottest periods was **uncomfortable and impacted instruction**. Nov. 8, 2016.

[Clean, Fresh Air: Getting What We Need](#). Human health probably benefits from more fresh air than current ventilation standards require. But pulling in outdoor air can mean pulling in pollution. Indoor and outdoor pollution, ventilation standards, natural ventilation, air quality sensors, and air cleaning are discussed. Pittsburgh's [PNC Tower office building](#) is featured. Nov. 2016.

[Bromine-containing Dyes Dwarf Flame Retardants in House Dust](#). [Researchers](#) found hundreds of new compounds in house dust, using a novel method to sift through the thousands of compounds in the complex mixture to identify and prioritize compounds for hazard assessment. Brominated flame retardants, known endocrine disruptors and neurotoxins, were dwarfed by the class of **brominated azo dyes**. High concentrations of the dyes were also found in cloth samples from shirts and pants, suggesting that the fabric may be the dominant source of brominated compounds in house dust. The team also found significant mutagenicity in cell assays of both the dust samples and of a chemical used to make dyes and found in the house dust. **See Also:** Related Article links on house dust toxins. Nov. 11, 2016.

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OTHER NEWS IEQ (Continued)

[Tips for Child Care Providers and Everyone](#). Clean and Healthy New York is sending a series of tips to the child care providers they have trained on how to reduce exposures of children, pregnant women, and care providers to persistent pollutants. The tips are useful for everyone. Oct. 14, 2016.

[BPI's Healthy Home Evaluator \(HHE\) Certification to Help Families Nationwide](#). The Building Performance Institute launched the national certification program for HHEs. The HHE assesses the risk of key home-based health hazards including asthma triggers, moisture and mold, VOCs, lead-based paint, asbestos, radon, carbon monoxide leaks, fire, trip, and fall hazards and pest management issues. A 2014 nationwide survey showed increasing demand for healthy home assessments, particularly in the area of asthma prevention. Thirteen states have reported that some Medicaid reimbursement is in place for home-based asthma education. As of September 2016, Missouri has determined that the HHE meets the requirements for healthy home assessment reimbursement under Medicaid.

[Why Students and Staff are Breathing Easier at a Few South Bay Schools](#). Heavy-duty air filters were recently installed there and at two Harbor Gateway schools directly exposed to heavy emissions from Port of Los Angeles truck traffic. Halliburton Energy Services paid \$180,600 for the filters as part of a civil settlement with the EPA for violating the Clean Air Act. **Similar civil settlements are likely to follow**, as state and federal air regulators work to get trucking operators to comply with environmental regulations designed to clean the air of metallic particles, soot, black carbon, nitrogen oxides and other hazardous chemicals. Oct. 29, 2016.

ENVIRONMENTAL HEALTH

[Now More Than Ever](#). Clean and Healthy New York plans to launch a national campaign to reduce toxics in children's products: Getting Ready for Baby. Future efforts include a focus on reducing toxics in food, from production to table. Nov. 14, 2016.

[Where There's Smoke](#). Yale analysis of climate change and wildfire in Alaska delivers a smoking gun to the state's land managers. Sep. 2016.

[Climate Talks Should Consider 'Immediate' Health Burden of Air Pollution](#). In an [editorial](#) published November 14, 2016 in *STAT*, [David Hunter](#), Vincent L. Gregory Professor in Cancer Prevention at Harvard T.H. Chan School of Public Health, and [Francesca Dominici](#), professor of biostatistics and senior associate dean for research, call for actions that would mitigate climate change in the future—and alleviate the immediate health burdens from air pollution. Nov. 14, 2016.

[Valley Fever Awareness](#). An awareness campaign has started in Kern Co., CA to prevent this debilitating, flu-like disease caused by a soil fungus and [found in several states](#). [Arizona](#) also has an aggressive awareness campaign. Nov. 16, 2016.

ENERGY EFFICIENCY AND GREEN BUILDINGS

GreenBuild 2016: Field Notes. Aurora Sharrard of GBA shares highlights from the national USGBC conference, for [Day 1](#) and [Day 2](#). Topics include high performance buildings, cognitive function, climate change sustainable development, life cycle assessment, biophilia, energy and water data collection from HUD multifamily homes, and USGBC-LA's [Building Resilience for Facilities Primer](#). Oct. 5-6, 2016.

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OTHER NEWS (Continued)

CLIMATE CHANGE

[New Report from EU on Scaling Up Deep Energy Renovation](#). The Buildings Performance Institute Europe and the Industrial Innovation for Competitiveness ([i24c](#)) initiative explored how Europe can rapidly ramp up the innovation and competitiveness of the construction sector to scale up the depth and rate of energy renovation. The [report](#) showcases several European projects in housing renovation that have demonstrated that innovation in all aspects of the process – products, services, business models and policy – offers **great opportunities to reduce the cost and increase the pace of deep energy renovation, while boosting economic growth, creating jobs and reducing emissions**. The report suggests policy recommendations at the EU, national, and local levels. Nov. 16, 2016.

[C40 launches GPC Interactive Dashboard to Explore Cities' GHG Emissions](#). The [GPC Interactive Dashboard](#) is an exciting new tool that allows users to explore and compare the greenhouse gas (GHG) emissions of C40 member cities reported through the [Global Protocol for Community-scale GHG Emission Inventories \(GPC\)](#). Oct. 07, 2016.

[35 Finalists Chosen for Fourth-Annual C40 Cities Awards](#). C40 announced the 35 finalists competing in ten urban climate action categories for the fourth-annual [C40 Cities Awards](#), sponsored by Bloomberg Philanthropies and BYD. **Several North American cities made the cut**. The winners will be announced on December 1, 2016. Sep. 20, 2016.

[Local Leadership: High Hopes in a Time of High Anxiety](#). At the [Urban Sustainability Directors Network 2016](#) conference, numerous North American cities shared their experiences in making progress toward cleaner, healthier, safer, fairer, and more livable cities. **Three promising, game-changing trends** were on vivid display: 1) Getting serious and systematic about social equity; 2) Accelerating the transition to clean energy (including [getting to zero net carbon in buildings](#)); and 3) Getting stronger and more resilient in the face of climate impacts. Nov. 15, 2016.

[DOE Announces New Better Buildings Zero Energy Districts Accelerator](#). DOE and the [National League of Cities](#) launched the [Better Buildings Zero Energy Districts Accelerator](#) to move the building market toward adopting sustainable practices to achieve zero energy use in buildings. By 2030, 60% of the world's buildings will be newly built or reconstructed to support the growing population, **creating an opportunity to develop communities that are more sustainable and use less energy**. The following cities will implement a detailed master energy plan, business, and governance model within three years and share lessons learned: Denver, Huntington Beach, St. Paul, Fresno, and Buffalo. Additional partners are the Rocky Mountain Institute, National League of Cities, USGBC, and EcoDistrict. Nov. 16, 2016.

FOSSIL FUELS

[Decommissioning Fossil Fuel Power Plants Between Now & 2030 Essential for Europe's Low Carbon Future](#). While the EU has made considerable progress in improving energy efficiency and using renewable energy sources, a well-planned transition out of carbon-intensive power generation is needed to meet the long-term aim of creating a low-carbon society. The EEA report '[Transforming the EU power sector: avoiding a carbon lock-in](#)' calls on the EU to **seize the opportunity to 'decarbonise' the energy generating sector**, replacing ageing and end-of-life coal-fired plants with renewable energy sources where possible between now and 2030. Oct. 7, 2016.

Reducing Outdoor Contaminants in Indoor Spaces

OTHER NEWS (Continued)

ENVIRONMENTAL JUSTICE

["Blueprint for a Healthier America"](#). The Trust for America's Health released [Blueprint for a Healthier America 2016: Policy Priorities for the Next Administration and Congress](#) which calls for a new approach to health – prioritizing improving health and addressing major epidemics in the United States. “It’s time for a sea change from our current sick care system to a true health system, where we focus on preventing disease and improving quality of life ... **we highlight high-impact policies that could help spare millions of Americans** from preventable health problems and save billions in avoidable healthcare costs – if we make them a priority.” Besides the usual public health issues, the report also addresses environmental justice, schools, and climate change. Oct. 19, 2016.

[Largest Green Wall in Seattle Takes Shape in Georgetown](#). A community-led air quality project is “one of many first steps” to fight industrial pollution: toxic dust from a recycling facility. Almost all of Georgetown, and the Duwamish River Valley in South Seattle, is zoned industrial; the Duwamish River itself is now a multimillion-dollar [Superfund site](#) whose resident fish are too toxic to consume, and the slim rectangle of family homes in the Georgetown neighborhood are flanked by industrial facilities and freight-train tracks and diesel trucks that regularly cough out all sorts of fumes and particulates. This past weekend, right in front of the recycling facility, community and youth groups put the finishing touches on South Seattle’s very first “green wall”. Oct. 25, 2016.

LAND USE AND TRANSPORTATION PLANNING

[U.N. Report: Walking and Cycling Infrastructure Is Urgent Health and Climate Priority](#). The global fleet of **private cars is projected to triple by 2050**. This will result in a staggering increase in road fatalities globally, and the increase in carbon-polluting cars will restrict the world's ability to limit the global average temperature rise to less than 2°C. The UN Environment is urging countries to: draft and implement national and local policies for Non-motorized Transport (NMT); **increase spending on walking and cycling infrastructure to at least 20% of transport budgets**; ask NMT users where they walk and ride - especially vulnerable users, and actively champion NMT. Oct. 20, 2016.

RESOURCES

IEQ

[Environmental Health at Home and in the Nursery](#). Winnebeck, 2013. New York State Pollution Prevention Institute, Rochester Institute of Technology. Presentation and references on sources of toxics in the nursery and home, health effects, and **how to reduce exposures**.

[Pollution Prevention Through Child Care Provider Engagement](#). [Clean and Healthy New York](#), 2015. Several groups partnered to educate child care providers in the Southern Tier of NY State in concrete pollution prevention strategies. They modified the Eco-Healthy Child Care curriculum to include information about NY State regulations and infused a focus on persistent toxic chemicals. **Over 500 providers in 300 facilities have been trained so far**, and [tools](#) such as checklists, prevention tips, recipes, a [Healthy Homecoming House Party kits](#) for new parents were developed. The program goals were to build a broad network of trained providers and integrate pollution prevention into the ongoing training of providers. Successes and lessons learned are documented in a [2015 report](#).

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RESOURCES (Continued)

ENVIRONMENTAL HEALTH

[ISEE 2016: Old and New Risks: Challenges for Environmental Epidemiology](#). Searchable conference abstracts on various topics.

[Air Quality Flag Program](#). EPA provides classroom materials to alert schools and other organizations to the local air quality forecast and helps you take action to protect your health. Each day your organization raises a flag that corresponds to how clean or polluted the air is. The color of the flag matches [EPA's Air Quality Index \(AQI\)](#): green, yellow, orange, red, and purple.

[Biomonitoring California Program](#). A state program with quarterly meetings for [updates on studies](#) of such topics as exposures and health effects of [persistent organic pollutants in teachers](#), diesel exposure, furniture foam replacement, and environmental justice. Pollutants are also selected for future biomonitoring.

[Asthma Research Summaries](#). Asthma Community Network. Summaries of seminal studies and listings of new research.

GREEN AND HEALTHY BUILDINGS

[Cannabis Sustainability Symposium 2016](#). Top experts from across the country met to present on the industry's key environmental challenges, including energy efficiency, water management, waste minimization, and sustainable design. **New opportunities to further sustainability initiatives in 2017 and beyond were also discussed.** [Denver and Boulder, CO](#) have studied peak power use in cultivation facilities.

[Moving to the Head of Class: An Energy Efficiency Resource Guide for Pennsylvania Schools](#). Keystone Energy Efficiency Alliance Energy Education Fund, 2013. This guide will help schools to start benchmarking energy consumption, operate facilities more efficiently, and ultimately, redirect money from energy bills to the primary mission of schools: education.

[NAPHN16 Conference & Expo Presentations](#). Selected presentations on "passive house" topics such as retrofits, large building air sealing, ventilation, resilience, cost and performance. [Highlights and program listings](#) are available.

SENSORS

[Personal Environmental Exposure Measurements: Making Sense and Making Use of Emerging Capabilities](#). National Acad. of Science workshop webcast and materials, Nov. 16-17, 2016. This workshop explored the implications of citizen access to individual-level environmental exposure data. The workshop brought together environmental health researchers, social scientists, business and consumer representatives, science policy experts, and other professionals at the forefront of emerging technologies, ethics, science communication, and public engagement. Workshop participants provided overviews of the trends, tests, technologies, and other emerging capabilities that enable access to individual-level environmental exposure data, and discussed their **implications for risk communication, public engagement, decision making, among other key considerations for both scientists and citizens.**

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FUNDING OPPORTUNITIES AND JOBS

[Asthma and Allergic Diseases Research Grants](#). NIH. The program will support centers that integrate clinical and basic research to conduct studies on the mechanisms underlying the onset and progression of diseases of interest, including asthma, rhinitis (allergic and non-allergic), chronic rhinosinusitis, atopic dermatitis, food allergy, and drug allergy. Due Apr. 3, 2017.

[Moving to the Head of the Class Awards](#). Keystone Energy Efficiency Alliance. K-12 schools in Pennsylvania can get prizes and recognition for all of the work they have already done to save energy and money. Due Mar. 3, 2017.

[Community-Focused Pollution Prevention Grants in New York State](#). NY State Pollution Prevention. **Each fall, proposals are solicited** from community organizations, municipal departments and other public sector and not-for-profit entities for projects that raise awareness and understanding of pollution prevention practices and lead to implementation at the local level. Examples of previous projects include preventing exposures in homes and nurseries, building retrofits, and environmental education.

[Anticipating the Environmental and Health Impacts and Behavioral Drivers of Deep Decarbonization](#). EPA STAR Grant. \$6 M among 10 awards. Due Feb.10, 2017.

Additional jobs and funding: posted in Green Building Alliance monthly newsletters.

RESEARCH AND DEMONSTRATION

IEQ

[Public Health Stops at the School House Door](#). Paulson and Barnett, 2016. See Also: links to 2015 [national workshop](#) summaries and recommendations.

[Indoor Environmental Control Practices and Asthma Management](#). Matsui et al., 2016.

Selected items from [Indoor Air, December 2016](#):

Indoor inhalation intake fractions of fine particulate matter: review of influencing factors. Hodas et al.

Characterizing the bacterial communities in retail stores in the United States. Hoisington et al.

Rapid assemblage of diverse environmental fungal communities on public restroom floors. Fouquier et al.

Allergy and respiratory health effects of dampness and dampness-related agents in schools and homes: a cross-sectional study in Danish pupils. Holst et al.

Higher measured moisture in California homes with qualitative evidence of dampness, Macher et al.

Reducing Outdoor Contaminants in Indoor Spaces

RESEARCH AND DEMONSTRATION IEQ (Continued)

Selected items from [Indoor Air, December 2016 \(continued\)](#):

A method to measure the gas-phase SVOC concentration adjacent to material surfaces. Wu et al.

Dermal uptake directly from air under transient conditions: advances in modeling and comparisons with experimental results for human subjects. Morrison et al.

Contribution of human-related sources to indoor volatile organic compounds in a university classroom. Liu et al.

Secondary organic aerosol formation initiated by α -terpineol ozonolysis in indoor air. Yang and Waring.

Particulate reactive oxygen species on total suspended particles – measurements in residences in Austin, Texas. Khurshid et al.

ACCEPTED ARTICLES

Experimental analysis of the air velocity and contaminant dispersion of human exhalation flows. Berlanga, et al.

Model framework for integrating multiple exposure pathways to chemicals in household cleaning products. Shin et al.

Adolescent lung function associated with incense burning and the other environmental exposures at home. Chen et al.

Dermal uptake of phthalates from clothing: comparison of model to human participant results. Morrison et al.

EARLY VIEW

Development of a method to relate the moisture content of a building material to its water activity. Macher et al.

Indoor birch pollen concentrations differ with ventilation scheme, room location, and meteorological factors. Menzel et al.

High temporal variability in airborne bacterial diversity and abundance inside single-family residences. Emerson et al.

VOC exposures in California early childhood education environments. Hoang et al.

Particulate matter from indoor environments of classroom induced higher cytotoxicity and leakiness in human microvascular endothelial cells in comparison with those collected from corridor. Chua et al.

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RESEARCH AND DEMONSTRATION (Continued)

ENVIRONMENTAL HEALTH

[Acute Impact of Hourly Ambient Air Pollution on Preterm Birth](#). Li et al., 2016.

[A National Cohort Study of Effects of PM_{2.5} and Ozone at Low Concentrations on Mortality in the Continental United States](#). Di et al., 2016 Abstract.

[School Siting Near Industrial Chemical Facilities: Findings from the U.S. Chemical Safety Board's Investigation of the West Fertilizer Explosion](#). Tinnery 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.

[Reducing Phthalate, Paraben, and Phenol Exposure from Personal Care Products in Adolescent Girls: Findings from the HERMOSA Intervention Study](#). Harley et al., 2016.

[Occupational Exposure to Endocrine-Disrupting Chemicals and Birth Weight and Length of Gestation: A European Meta-Analysis](#). Birks et al., 2016.

[Asthma Exacerbations and Traffic: Examining Relationships Using Link-based Traffic Metrics and a Comprehensive Patient Database](#). Lindgren et al., 2016.

[Delivering Opportunity: How Electric Buses and Trucks Can Create Jobs and Improve Public Health in California](#). Union of Concerned Scientists, 2016.

[Air Toxics Community Studies, 2016 National Ambient Air Monitoring Conference](#), St. Louis, MO. See also: [Posters](#) on wood smoke, PM, ozone, and VOC monitoring.

CLIMATE CHANGE

[Advantages of a City-scale Emission Inventory for Urban Air Quality Research and Policy: The Case of Nanjing, a Typical Industrial City in the Yangtze River Delta, China](#). Zhao et al., 2015.

[Comparing City-scale Greenhouse Gas \(GHG\) Emission Accounting Methods: Implementation, Approximations, and Policy Relevance](#). Chavez, 2012.

[Urbanization and the Carbon Cycle: Current Capabilities and Research Outlook From the Natural Sciences Perspective](#). Hutrya et al., 2014.

ENVIRONMENTAL JUSTICE

[Effects of Local Health Interventions on Inequality in Life Expectancy: New Publicly Available Data](#). Chetty et al., 2016.

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RESEARCH AND DEMONSTRATION (Continued)

SENSORS

[Sensors and Other Emerging Technologies, 2016 National Ambient Air Monitoring Conference](#), St. Louis, MO. Presentations on **outdoor field testing of gas and PM sensors** by EPA and Sonoma Technology, plus lessons learned in citizen science projects (equipment selection, messaging, data interpretation).

[Community Air Sensor Network \(CAIRSENSE\) Project: Evaluation of Low-cost Sensor Performance in a Suburban Environment in the Southeastern United States](#). Jiao et al., 2016.

That's it for the October-November Compendium!

Got news? Please send us pertinent info on events, news, resources, funding opportunities, and R&D items 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.

Cheers,
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