

Northeastern University

Social Science Environmental Health Research Institute

SSEHRI 6th Annual Report

Director's Message

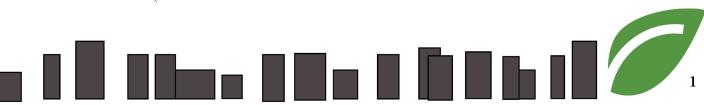
It's been an exceptional year for us with new members, new grants, extensive publications, important conferences, continually expanding outreach, and growing policy influence. This Annual Report will give you a detailed presentation of the many projects SSEHRI members are engaged in. Melanie Smith joins us as Grants Administrator, coming from several years working at NEU's College of Engineering, including the PROTECT Superfund Research Program's Training Core. Melanie is also continuing her studies in the MA Sociology program here at Northeastern. Stephanie Knutson left us for a position at MIT, and fortunately many of us still keep in touch with her through her continuing work in the Environmental Data and Governance Initiative (EDGI).

Our grants success this year has been very impressive. Sara Wylie received a \$1,500 pilot project grant "Developing community based visceral data performances for cross disciplinary collaboration on environmental justice in Chelsea, MA," from the Harvard/Boston University center CRESSH Center (Center for Research on



UWIN Research Project, Waterfront in Chelsea, MA
Photo taken by David Ortiz

Environmental and Social Stressors in Housing Across the Life Course). Sara Wylie and her colleague Seth Cooper at NEU's College of Computing and Information Science received a half-million dollar grant from NSF on "Small: Data-Driven Retention in Crowdsourced Image Analysis and Mapping." Laura Senier and Sharon Harlan received a Northeastern Tier 1 grant for \$50,000 on "Public Health and the Right to Affordable Water." Phil Brown and his co-PI Alissa Cordner (Whitman College) received a half-million dollar grant from NSF on "The New Chemical Class Activism: Mobilization Around Per- and Polyfluorinated Compounds," and with Laurel Schaider (multiple PI from Silent Spring Institute) and Courtney Carignan (Co-I from Michigan State University) a \$2.6M grant



6th Annual Report

from NIEHS' Research to Action on "Assessment of pediatric immunotoxicity, public education, and capacity-building in communities impacted by PFAS-contaminated drinking water." Lauren Richter won funding from the Switzer Foundation to fund a postdoc position joint with SSEHRI and Silent Spring Institute. Stephanie Clark was awarded the Ford Foundations Predoctoral Fellowship. Tibrine DaFonseca won an NSF Graduate Research Fellowship for her research which examines the experiences of mixed-status immigrant families with the health care system in Boston. Our past SSEHRI members have also done wonderfully. including former postdoc, Jennifer Carrera, now assistant professor at Michigan State University, who won a K-01 award from NIEHS for "Engaging Community in the Development of Low-Cost Technologies for Environmental Monitoring to Promote Environmental Health Literacy in a Low-Trust Setting."



Jennie Ohayon and Elicia Cousins with Robert Bullard at American Association of Geographers conference in April 2018

This year we also welcomed postdoc Andrea Hindman (joint with Silent Spring Institute) as well as two new Sociology doctoral students, Jesse Card and Grace Poudrier, to the Training Program team. We are very proud of our many current and past SSEHRI members working with EDGI, the Environmental Data and Governance Initiative.

SSEHRI Members

Cole Alder (Sociology and Environmental Studies BA Student)
Elizabeth Boxer (Environmental Studies BA Student)
Taylor Braswell (Sociology PhD Student)
Phil Brown (Prof. of Sociology and Health Sciences)
Jesse Card (Sociology PhD Student)
Stephanie Clark (Sociology PhD Student)
Lauren Contorno (Sociology PhD Student)
Alissa Cordner (Asst. Prof. of Sociology - Whitman College)
Elicia Cousins (Sociology PhD Student)
Tibrine Da Fonseca (Sociology PhD Student)
Vanessa De La Rosa (Research Scientist, Silent Spring
Institute)
Rachel Domond (Sociology BA Student)
Loretta Fernandez (Asst. Prof. of Civil and Environmental
Engineering)

Kelsi Furman (Marine & Environmental Science PhD Student)

Sharon Harlan (Prof. of Health Sciences and Sociology)
Andrea Hindman (Postdoctoral Research Assistant)
Clare Malone (Sociology and Cultural
Anthropology BA Student)

Susan Mello (Asst. Prof. of Communication Studies) **Fatuma Mohammad** (International Affairs BA Student)

Yvette Niwa (Environmental Studies and International Affairs BA Student)

Kiera O'Donnell (Marine and Environmental Science PhD Student)

Dietmar Offenhuber (Asst. Prof. of Art + Design)

Jennifer Ohayon (Postdoctoral Research Associate)
Grace Poudrier (Sociology PhD Student)

Mia Renauld (Sociology PhD Student)

Lauren Richter (Research Fellow, Silent Spring Institute & NU) **Ron Sandler** (Professor of Philosophy and Religious Studies)

Mariana Sarango (Population Health PhD Student) Steven Scyphers (Asst. Prof. of Marine and

Environmental Sciences)

Laura Senier (Asst. Prof. of Sociology and Health Sciences)
Sara Shostak (Assoc. Prof. of Sociology - Brandeis University)
Melanie Smith (Grants Administrator & Sociology MA Student)

Jennie Stephens (Dean's Professor of Sustainability Science and Policy)

Boris Templeton (Sociology PhD Student) **Christine Vatovec** (Asst. Prof. of Environment and Natural

Christine Vatovec (Asst. Prof. of Environment and Natura Resources and Medicine - University of Vermont)

Lourdes Vera (Sociology PhD Student)

Elisabeth Wilder (Sociology PhD Student)

Sara Wylie (Asst. Prof. of Sociology/

Anthropology and Health Sciences)

Emily Zimmerman (Asst. Prof.

of Communication Sciences & Disorders)

The EDGI team, Sara Wylie, Phil Brown, Lourdes Vera, Lauren Richter, Jennie Ohayon, Vanessa De La Rosa, Andrea Hindman, Alissa Cordner, and Stephanie Knutson, all work to support this project which runs data rescue events to save federal environmental data (dozens of these, including one on our campus), monitors government websites for changes and deletions, interviews current and past EPA and other federal staff, and develops models for future democratic governance. We played a major role in writing successful proposals for the David and Lucile Packard Foundation (\$500,000) and the Doris Duke Charitable Foundation (\$200,000), which have enabled us to hire many people to boost our already intense work. We've published two articles in the American Journal of Public Health, an article in *Mobilization*, op-eds, and have several articles under review in academic journals. Please visit EDGI's website at envirodatagov.org.

We collaborated on the annual Local Environmental Action conference with Toxics Action Center held at Northeastern University in March, 2018. In administrative news, Sharon Harlan was chosen as the Interim Chair for the Health Sciences Department here at Northeastern University. We're very pleased to have brought in numerous affiliate members last year, several of whom are involved in publications, grant proposals, and mentoring of SSEHRI students. It will be a busy year for us starting new funded projects and writing major renewals for our Training Program and our PROTECT Superfund Center.

It's a delight to work with all these creative and intelligent people, and I invite you to read further about our work.

Phil Brown SSEHRI Director

Phil Brown



SSEHRI collaboration with Toxics Action Center on the 2018 Local Environmental Action conference at Northeastern University

SSEHRI's Primary Projects

Barriers in Translating Genomic Research into State Public Health Programs (National Human Genome Research Institute, PI – Laura Senier) – The Senier lab wrapped up work on this five-year grant during the 2017-2018 academic year. The goal of this grant was to identify facilitating factors and barriers that state health agencies have encountered in integrating genomics into their chronic disease prevention programming. With assistance from Rachael Lee (a Northeastern graduate student), Catherine Tan (a postdoctoral research associate), and Leandra Smollin (a collaborator at SUNY-Potsdam), the team completed work on two papers and initiated a third. A paper published in Genetics in Medicine compared three states' genomics programs and identified things that state health agencies can do to mitigate or forestall health inequalities by educating providers and the public about genomics, and by lowering barriers in access to clinical genetic services. A second

paper, published in *Social Science & Medicine*, provided an in-depth examination of Michigan's genomics program—the oldest and most robust in the nation. The paper explains how staffers in the Michigan genomics program paired sensemaking frames with hard metrics about the public health burden of hereditary diseases, and thus persuaded their colleagues to invest scarce resources in genomics initiatives. In addition, Laura Senier made presentations of the team's findings at the National Cancer Institute, the Berman Institute for Bioethics at Johns Hopkins University, the University of Texas Health Science Center, and the Centers for Disease Control and Prevention

Measuring Emissions from Oil and Gas Operations (JPB Foundation Fellowship/Harvard School of Public Health (HSPH), PI – Sara Wylie) - The Wylie Research Lab continues using and developing community-friendly, low cost materials and methods to monitor hydrogen sulfide (H2S), sulfur dioxide

Development of Low Cost Approaches to

(SO2), and volatile organic compounds (VOC) emissions near oil and gas facilities. This past year, the interdisciplinary team included Lourdes Vera

(PhD student, Sociology), Mia Renauld (PhD student, Sociology), Taylor Braswell (PhD student, Sociology), Garance Malivel (Master's Student, Environmental Studies York University), Kelsey Ranjbar (Northeastern Graduate and Master's Student, Environmental Studies UC Berkeley), Dr. Drew Michanowicz (exposure scientist and post-doc at HSPH), Northeastern undergraduates Erik Hanley (Health Sciences), Larissa Aiko Morikawa (Health Sciences), and Rebecca (Bex) Elliott (Health Sciences), Kaline Langley (Biology/Journalism) in collaboration with Priscilla Villa from the organization Earthworks.

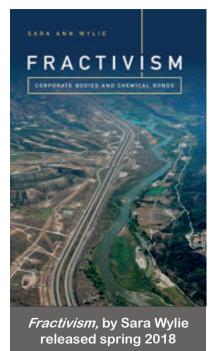
This year we continued validation tests for an inexpensive, Do-it-Yourself tool consisting of a photopaper strip coated with silver gelatin that corrodes when exposed to toxic sulfuric gases such as H2S or sulfur dioxide SO2, which are emitted during oil and gas development. These tests were conducted at a sewage treatment plant. We also continued work with Karnes Area Resident's for the Environment (KARE) community organization in Karnes County Texas pursuing another round of air monitoring work (January-February 2018) and community based data analysis lead by Lourdes Vera (Summer 2018).

Our report "Hazards in the Air" with Earthworks was translated into Spanish and featured prominently in Telemundo coverage of air quality concerns for Hispanic communities living in close proximity to oil and gas production.

With support from the Heinz Foundation, we expanded our air monitoring work to Saskatchewan Canada in collaboration with the Price of Oil News consortium. This award-winning network of print and TV news in Canada is lead by Patti Sonntag

the former managing editor of *The New York Times*. With the news team we conducted monitoring with the photographic paper tool in 5 locations, the results will be covered in a set of news stories in October 2018. With the support of Northeastern's Institute on Research and Experiential Learning we returned to share the results with the community members who participated in the monitoring in June 2018. Garance Malivel will be continuing to work with community members in Saskatchewan this fall.

Additionally, in partnership with GreenRoots and Laura Perovich at MIT, Emily Schactele (Northeastern



Undergraduate Health Sciences), Garance Malivel, and Xavier Mojica (Chelsea resident and Tufts undergraduate) the Wylie lab has been working to analyze and draw attention Clean Water Act violations by the seven oil storage facilities that boarder Chelsea Creek. This project is supported by CRESSH and RIELS. This fall we are creating a community performance about the violations to explore how bringing this data into the public domain changes public perception.



PFAS Project - Per- and Polyfluoroalkyl
Substances Lab (NSF, PI - Phil Brown and co-lead
by Alissa Cordner, Whitman College) - We are in the
final year of our grant on "Perflourinated Chemicals:
The Social Discovery of a Class of Emerging
Contaminants," and its supplement for Research
Experience for Undergraduates (NSF: PI - Phil
Brown, Co-PI Alissa Cordner) - We recently applied
for an NIEHS conference grant to hold a second
national conference June 20-11, 2018. In addition
to Brown and Cordner, members of this lab group
include Northeastern undergraduates and recent

Our Mission

The mission of the Social Science Environmental Health Research Institute (SSEHRI) is to conduct social science-oriented research, teaching, community engagement, and policy work in the area of environmental health. With 4 core faculty, 10 affiliated faculty at Northeastern University, Whitman College and Brandeis University, 2 post-docs, 14 graduate students, and 4 undergraduates, SSEHRI is a hub for collaborative environmental health learning and interest at NU. The Institute trains graduate students and postdocs for community based participatory research aimed at transforming and improving environmental health. At the same time, it provides faculty with a resource to further their existing efforts in those approaches. Integrating environmental health science, sociology, science and technology studies, and community organizations, SSEHRI aims to develop novel approaches to studying environmental health questions, communication of environmental health data and conceptualization of environmental health in multiple realms - socially, politically, and scientifically. SSEHRI has multiple grants from NIEHS, EPA, NIH, NSF, and the JPB Foundation.

graduates: Cole Adler, Yvette Niwa, Liz Boxer, and Clare Malone; graduate students: Elicia Cousins and Tibrine Da Fonseca; SSEHRI-Silent Spring post-doc Jennie Ohayon, and Silent Spring researcher Vanessa De La Rosa.

We continue to update our joint interactive map with the Environmental Working Group, featuring U.S. EPA data on PFAS exposure in water alongside our own comprehensive data set of water contamination sites tracking old and new sites of discovery. Our "Contamination Site Database," the only database



of its kind, continues to capture information on the sources and levels of PFAS contamination, dates of discovery, and state and local government responses, among other variables. The number of sites on the databased has increased to 80. The strength of this resource led us to receive a new NSF grant "The New Chemical Class Activism: Mobilization Around Per- and Polyfluorinated Compounds." (PI Phil Brown, Co-PI Alissa Cordner). We helped our community partners Testing for Peace and Toxics Action Center get a grant from the Seacoast Women's Giving Circle to test water in Portsmouth NH. With those and other community partners, including Silent Spring, we received a 5-year NIEHS R01 Research to Action grant "Assessment of pediatric immunotoxicity, public education, and capacity-building in communities impacted by PFAS-contaminated drinking water" (Phil Brown and Laurel Schaider-Silent Spring Multiple PIs; Courtney Carignan - Michigan State University Co-I). This grant will examine PFAS effects on children's responses to DTAP vaccines, provide water testing, and establish a we-based resource for affected people all over the US to input their blood or water exposures and understand them against various benchmarks.

Lauren Richter defended her dissertation: "Unseen Science: The Social Re-Discovery of Per- and Polyfluorinated Compounds," and gained funding from the Switzer Foundation to support a post-doc position jointly at Silent Spring Institute and SSEHRI. She will work on the new grants and with Laurel Schaider (Silent Spring) on the University of Rhode Island STEEP Superfund Research Program, which focuses on PFASs. Lab members are currently preparing articles on: retailer and manufacturer response to PFAS consumer pressure, community litigation strategies, PFAS-related local activism, the history of the PFAS chemical class, and the social and scientific discovery of PFASs as a ubiquitous contaminant.

Social Equity and Environmental Justice in Urban Water Systems (Sustainability Research Network, Urban Water Innovation Network (UWIN): Transitioning Toward Sustainable Urban *Water Systems)* (NSF, Northeastern PI – Sharon Harlan) - The Social Equity and Environmental Justice lab group collaborates with the Urban Water Innovation Network (UWIN), a coalition of academic institutions and key partners across the United States focused on research, engagement, and educational programs to address challenges that threaten urban water systems. Our lab group is dedicated to research and engagement that helps environmental justice communities articulate local water problems and a vision for water solutions that is consistent with inclusive, equitable, and sustainable urban development.

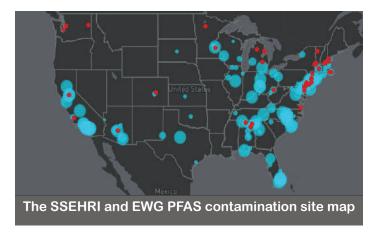
Members of our lab are graduate students Mariana Sarango (Population Health), Stephanie Clark, Lauren Contorno, Nickolas Faynshteyn, and Elisabeth Wilder (Sociology), Kelsey Furman and Kiera McDonnell (Marine and Environmental Science) and undergraduate ROUTES co-op students, Rachel Domond and Fatuma Mohammed. Postdoctoral Fellow Jessica Bolson, Florida International University, also collaborates with us. The lab group this year was dedicated to completing,

coding, and analyzing interviews with 45 leaders of community organizations in Baltimore, Boston, Denver, Detroit, Los Angeles, Miami, Phoenix, Portland (OR), and Tucson. Students worked many extra hours learning and using computer software for textual data analysis and meeting in small groups, where we distilled narrative themes of social inequities and environmental injustices related to local water, origins of inequities, perceived barriers to sustainability, and visions of sustainable urban water systems that benefit and serve all communities equitably. We found that contamination, floods, unaffordability of water services, and access to water for recreation were recurring themes of inequality with well-defined causes of structural racism and regulatory failures. Community leaders define future sustainable urban water as systems that provide equitable benefits to vulnerable groups and civic involvement in decision-making that is based on better science and management from the water industry.

Two PhD dissertations, a Masters paper, and two journal articles on water-related themes are in process. Mariana Sarango and Elisabeth Wilder presented findings from the community interviews



Miami Beach officials installed massive pumps to address flooding, pictured here at Flooded Alton Road Ninth Street. But scientists now say pumping storm water is dumping water laced with high amounts of human waste into the bay." Hector Gabino, El Nuevo Herald https://www.miamiherald.com/news/local/environment/article77978817.html.



at the annual meetings of the American Association of Geographers in New Orleans, the American Sociological Association in Philadelphia, and UWIN at Colorado State University. In keeping with our commitment to engagement, we released a report on our findings, led by Lauren Contorno, which invites audience participation in an online forum to provide feedback, network, and brainstorm directions for future collaborative work with each other, researchers, and water professionals. In addition, the public opinion survey, Survey of Water Indicators and Socioeconomics of Households (SWISSH) was completed with 9,278 responses. Students have also developed individual waterrelated projects, which will be incorporated into a lab jointly run by Sharon Harlan and Laura Senier in the coming year.

Transdisciplinary Training at the Intersection of Environmental Health and Social Science (NIEHS T32, Northeastern PI – Phil Brown, Silent Spring PI - Julia Brody) – The T32 Training Grant currently funds 4 pre-doc and 2 post-doc trainees. In addition to working with our various lab groups and participating in training sessions, these trainees also have the opportunity to work on their own independent projects. Our current post-doc trainees include Andrea Hindman, who joined in the spring of 2018. Andrea is working with Silent Spring to develop guidance on mechanisms of breast cancer susceptibility under the direction of Ruthann Rudel

and Julia Brody. Andrea is also working on a project at Northeastern with Sharon Harlan and Laura Senier investigating the mediation of adolescent mental health outcomes. Jennie Ohayon is working with Phil Brown on a project analyzing community, state, and industry responses to site contamination by per- and poly-fluorinated chemicals and collaborates with Phil and Julia Brody on effective and ethical approaches to report back personal exposure data to study participants. Current pre-doc trainees include Jesse Card and Grace Poudrier, who joined in the fall of 2018, as well as Lauren Contorno, who is working with Sharon Harlan's UWIN group and writing her dissertation research on "transition towns" (communities experiencing fossil fuel plant closures), and Lourdes Vera, who works with Prof. Sara Wylie's lab group on civic science approaches to testing for hydrogen sulfide and other corrosives in areas affected by oil and gas extraction. Past trainees include, Vanessa De La Rosa, who finished her appointment as a post-doc in June of 2018. Vanessa is now a researcher at the Silent Spring Institute. Stephanie Clark, who finished her appointment in August of 2018, recently received



a Ford Fellowship. Stephanie, along with Phil Brown, Emily Zimmerman, and collaborators from Physicians for Social Responsibility, published a book chapter on medical professionals environmental health knowledge for in Finn and O'Fallon, *Environmental Health Literacy*, and is starting her dissertation work on that subject; Elicia Cousins, who also completed her appointment in August of 2018, collaborated on two papers relating to report-back of environmental health data to research participants, and continues her work in Japan with outdoor evacuation retreats for mothers and children from Fukushima.

Other SSEHRI Grants

Combating Everyday Chemical Exposures through Hands-on Environmental Health Curriculum, a Mobile App, and Peer-to-Peer Mentoring (Toxics Use Reduction Institute, PI - Jennifer Liss Ohayon) - In partnership with the Massachusetts Breast Cancer Coalition, Jennifer Liss Ohayon led a project to reduce high school students' exposures to common endocrine-disrupting and asthmaassociated chemicals. The project team went into

classrooms at high schools across MA to help students conduct and analyze projects to assess common chemical exposures in their homes and use Silent Spring's environmental health app Detox Me to adopt strategies to reduce these exposures. Over 140 students participated in the two-class program at 6 high schools, and another approximately 150 students were reached through lecture hall presentations at two additional schools. In collaboration with UC Berkeley's Center for Environmental Research and Children's Health, the project also created a peer-to-peer mentoring program that connects high school students to youth who have participated in significant human biomonitoring research (research that measures chemical levels in the body) and successfully reduced their harmful exposures.

Data Sharing and Privacy Protection in Digital- Age Environmental Health Studies (NIH, Co-PI – Phil Brown) – Evaluates privacy risks and develops solutions for environmental health studies through optimizing procedures to redact or mask data to improve privacy while retaining scientific utility for data sharing.

Hazards SEES Enhancing Emergency
Preparedness for Critical Infrastructure Failure
During Extreme Heat Events (NSF, Co-I –
Sharon Harlan) - This project is assessing the
human, environmental, and technological impacts
of independent and concurrent heat wave and
electrical grid failure (blackout) events in Atlanta,
GA, Detroit, MI, and Phoenix, AZ. Researchers at
Arizona State University are analyzing household
surveys and indoor temperature data loggers to
determine how people use air conditioning and the
social mechanisms that lead to vulnerability when
heat emergencies occur.

Public Health and the Right to Affordable Water (Northeastern University TIER 1, Co-PIs – Sharon Harlan, Martha Davis, Laura Senier) - This a collaborative project among the Department of Health Sciences, the School of Law, and the Department of Sociology & Anthropology. Mariana Sarango, Population Health PhD candidate, is key personnel and this study will be part of her dissertation. There are two objectives for this project: 1) investigate the pathways through which unaffordable water bills can affect health in households that have had to reduce water use or have had their water service shut off; 2) evaluate the effectiveness of the Boston Payment Assistance Plan operated by the Boston Water and Sewer Commission.

The Impact of Proposition 65 on Chemical Exposures Relevant to Breast Cancer (California Breast Cancer Research Program, Co-I - Jennifer Liss Ohayon) - In partnership with collaborators from UC-Berkeley and Silent Spring Institute,

Jennifer Liss Ohayon is an investigator on a new grant that evaluates the effectiveness of California's Safe Drinking Water and Toxic Enforcement Act of 1986 (commonly known as Proposition 65) in reducing exposure to breast carcinogens and endocrine disrupting chemicals.

This project is analyzing how Proposition 65 has changed product formulations and industrial releases of chemicals, public knowledge about environmental health, and the chemical body burdens of Californians.



Puerto Rico Testsite for Exploring Contamination Threats (PROTECT) Program (NIEHS Superfund Research Program) (NIEHS) - Investigates preterm births in communities surrounding toxic waste and Superfund sites in Puerto Rico. Phil Brown is part of the Community Engagement Core and Research Translation Core of this multi-project, multi-institution collaboration.

Center for Research on Early Childhood Exposure and Development in Puerto Rico (NIEHS and EPA) - This multi project program builds on the PROTECT cohort, following 600 children born to PROTECT mothers, examining environmental chemicals and neurological outcomes, as well as asthma and other respiratory conditions resulting from air pollution. Phil Brown is Co-Director of the Community Outreach and Translation Core.

Research Opportunities for Undergraduates: Training in Environmental Health Science (ROUTES) (NIEHS) - The ROUTES program is designed to increase the number of undergraduate underrepresented minority (URM) students participating in environmental health (EH) research, training them in interdisciplinary settings and continuing onto graduate studies and lifelong EH research careers. ROUTES engages and prepares URM students for EH research careers through hands-on research experience, research community engagement, training, mentoring, and support. Faculty Mentors include Phil Brown, who has supervised 4 ROUTES students in SSEHRI, and Sharon Harlan, who supervised 2 ROUTES students in the UWIN project.

Select SSEHRI Presentations

- Taylor Harris Braswell. Sacrifice Zones in Transit: Environmental Justice in US Pipeline Communities. Rural Sociological Society's Annual Meeting Portland, OR. 2018.
- **Phil Brown**. Developing Report-back for participants using Focus Groups and a Community Advisory Board. Northeast Regional Superfund Research Program Conference. Woods Hole Oceanographic Institute. March 26, 2018.
- Stephanie Clark-Reyna. 2018. A Systematic Review of Sociological and Public Health Literature on Air Pollution in Hispanic Communities in the United States between 2007-2017. American Association of Geographers Annual Meeting, New Orleans, Louisiana. April 2018.
- Lauren Contorno. Obstacles, Tensions, and Tradeoffs in Energy Transition Planning: a Comparative Case Study of Somerset and Holyoke, MA. International Sociological Association World Congress of Sociology 2018.
- Elicia Cousins. Data for whom, by whom? Exploring federal environmental data accuracy, accessibility, and accountability. Poster. Conference on Climate Change and Design in Boston, Boston Civic Media, December 7th, 2017.
- Sharon Harlan. Social Equity, Environmental Justice, and Societal Ethics. Sustainability Research Network Awardees Conference, National Science Foundation. Alexandria, VA. June 5-6, 2018.
- Lauren Richter. Institutional Failure and Contested Illness in Environmental Justice Communities. Human Ecology Forum. College of the Atlantic, Bar Harbor. 2018.
- Mariana Sarango. Narratives of Water Injustice Across U.S. Urban Areas. American Association of Geographers Annual Meeting, New Orleans, LA. April 10, 2018
- Laura Senier. Blending Insights from Public Health & Implementation Science to Mitigate Disparities in Screening for Hereditary Cancer Syndromes. Keynote presentation at the National Cancer Institute Cancer Prevention Fellowship Fall Symposium. Bethesda, MD. September 2017.
- Lourdes Vera. Using Indexical Design and Counter-Mapping to Collaboratively Ground the Hazards of Oil and Gas Extraction. Society for Social Studies of Science Conference. Boston, MA, September 2017.
- Elisabeth Wilder. Community Perspectives on Water System Sustainability. American Association of Geographers Annual Conference in New Orleans, LA, April 10, 2018. Community Engagement. American Sociological Association Annual Meeting, Montreal, QC, Canada. August 2017. Boston, MA. April 2017.
- Sara Wylie. Boundary Spanning: Advances in Socio-Environmental Systems Research. An International Symposium. National Socio-Environmental Synthesis Center (SESYNC). Anapolis, MD June 11-13, 2018.

SSEHRI Publications 2017-2018

• Biehl, P.F., S. Crate, M. Gardezi, L. Hamilton, **S.L. Harlan**, C. Hritz, B. Hubbell, T.A. Kohler, N. Peterson, J. Silva. (2018) "Innovative Tools, Methods, and Analysis: Social Science Perspectives on Climate Change." White Paper, U.S. Global Change Research Program (USGCRP), Washington, D.C.

- **Braswell, Taylor Harris**. In Press. "Fresh food, new faces: community gardening as ecological gentrification in St. Louis, Missouri." Agriculture and Human Values.
- Brody, Julia, **Phil Brown**, and Rachel A. Morello-Frosch, "Returning Chemical Exposure Results to Individuals and Communities." In press in Symma Finn and Liam O'Fallon, eds. Environmental Health Literacy. Springer.
- Brown, Phil, Stephanie Clark, Emily Zimmerman, Mark Miller, and Maria Valenti, "Health Professionals' Environmental Health Literacy." In press in Symma Finn and Liam O'Fallon, eds. Environmental Health Literacy. Springer.
- **Brown, Phil**, Carmen Milagros Velez Vega, Colleen B. Murphy Vellena, Michael Welton, Hector Torres, Zaira Rosario, Akram Alshawabkeh, Jose Cordero, Ingrid Padilla, and John Meeker "The Hurricanes and the Environmental Justice Island: Irma and Maria on Puerto Rico" Environmental Justice 2018 11(4):148-153.
- Carrera, Jennifer, and **Phil Brown,** "Toxicity: Health and the Environment" In The Cambridge Handbook of Environmental Sociology Edited by Katharine Legun, Julie Keller, Michael Bell, and Michael Carolan. In press.
- Carrera, Jennifer, **Phil Brown**, Julia Green Brody, and Rachel Morello-Frosch, "Research Altruism: Why People Agree to Research Participation in Biomonitoring and Household Exposure Studies" Social Science & Medicine. 2018 196: 175-181.
- Chan, Anita, Lindsey Dillon, Rebecca Lave, Becky Mansfield, Michelle Murphy, Nick Shapiro, **Sara Wylie**. (submitted by invitation) "Situating Data in a Trumpian Era: The Environmental Data and Governance Initiative" Annals of the Association of American Geographers. Annals Special Issue 2019, "Environmental Governance in a Populist/Authoritarian Era."
- Cordero, José F., John D. Meeker, Rita Loch-Caruso, Roger Giese, Ingrid Padilla, Dorothy Vesper, David Kaeli, Thomas Sheahan, **Phil Brown**, Carmen M. Vélez-Vega, and Akram N. Alshawabkeh "Team Science Applied to Environmental Health Research: Karst Hydrogeology and Preterm Birth in Puerto Rico" Pp. 17-25 in W. White, J. Herman, E. Herman, and M. Rutigliano (eds) Karst Groundwater Contamination and Public Health. 2018. NY: Springer.
- **Cordner, Alissa**, and **Phil Brown** "Science, Expertise, and Environmental Justice" In Michael Mascarenhas, ed., Lessons in Environmental Justice. From Civil Rights to Black Lives and Idle No More. In press.
- Dillon, L., Sellers, C., Underhill, V., Shapiro, N., **Ohayon, J.** L., Sullivan, M., **Brown, P.**, Harrison, J., **Wylie, S**. and "EPA Under Siege" Writing Group. (2018). The Environmental Protection Agency in the Early Trump Administration: Prelude to Regulatory Capture. American journal of public health, 108(S2), S89-S94.
- Doyle, Debra Lochner, Mindy Clyne, Juan L. Rodriguez, Deborah L. Cragun, **Laura Senier**, Georgia Hurst, Kee Chan, and David A. Chambers. 2018. Proposed outcome measures for state public health genomics programs. Genetics in Medicine.
- Fredrickson, Leif, Chris Sellers, Lindsey Dillion, **Jennifer Ohayon**, Nicholas Shapiro, Marianne Sullivan, Stephen Bocking, **Phil Brown**, **Vanessa De La Rosa**, Jill Harrison, Sara Johns, Katherine Kulik, Rebecca Lave, Michelle Murphy, Liza Piper, **Lauren Richter**, and **Sara Wylie**. 2018. History of US Presidential Assaults on Environmental Protection. 2018. American Journal of Public Health. 108(S2): S95-S103.
- **Harlan, S.L.**, *P. Chakalian, J. Declet-Barreto, D.M. Hondula, G.D. Jenerette (in press) "Pathways to Climate Justice in a Desert Metropolis." In People and Climate Change: Vulnerability, Adaptation, and Social Justice, L.M. Reves and J. Rigg (eds.) Oxford University Press.
- **Ohayon**, **J.L**. (2017). [Review of a book A World to Live In: An Ecologist's Vision for a Plundered Planet, by G.M. Woodwell]. The Northeastern Geographer, V.9.
- **Ohayon, J.L**., Fredrickson, L., & Sellers, C. (2018, May 22). Would firing Scott Pruitt save the EPA? The Washington Post. Retrieved from https://www.washingtonpost.com/news/made-by-history/wp/2018/05/22/would-firing-scott-pruitt-save-the-epa/

• **Ohayon, J.L.**, and Polsky, C., (2018, May 10). Cancer warnings for coffee may be overkill, but Proposition 65 is not. The Los Angeles Times. Retrieved from http://www.latimes.com/opinion/op-ed/la-oe-ohayon-polsky-coffee-cancer-warnings-20180510-story.html

- Perovich, Laura, **Jennifer Ohayon**, **Elicia Cousins**, Rachel Morello-Frosch, **Phil Brown**, Gary Adamkiewicz, Julia Green Brody. 2018. "Reporting to parents on children's exposures to asthma triggers in low-income and public housing: environmental literacy, individual action, and public health benefits." Environmental Health 17: 48.
- Perovich, Laura, **Sara Wylie** and Roseann Bongiovanni. "Pokémon Go, pH, and projectors: applying transformation design and participatory action research to an environmental justice collaboration in Chelsea, MA". Forthcoming. Cogent Arts & Humanities
- Prener, Christopher G., **Taylor Harris Braswell**, and Daniel J. Monti. In Press. "St. Louis's 'urban prairie': Vacant land and the potential for revitalization." Journal of Urban Affairs special issue on shrinking cities.
- Richter, Lauren, Alissa Cordner, and Phil Brown. Non-Stick Science: Sixty Years of Research and (In)Action on Perfluorinated Compounds. Social Studies of Science. (forthcoming).
- **Richter, Lauren**. 2018. Constructing Insignificance? Applying Critical Race Theory to Institutional Failure in Environmental Justice Communities. Environmental Sociology. 4(1).
- Sarango, Mariana, Hohl C, Gonzalez N, Palmeros A, Powell ML, Hirschi M. In Press. Strategies to Build a Patient-Centered Medical Home for Multiply-Diagnosed People Living with HIV/AIDS who are Experiencing Homelessness and Unstably-Housed. American Journal of Public Health.
- Senier, Laura, Leandra Smollin, Rachael Lee, Lauren Nicoll, Michael Shields, and Catherine Tan. 2018. Navigating the evidentiary turn in public health: sensemaking strategies to integrate genomics into state-level chronic disease prevention programs. Social Science & Medicine 211: 207-215.
- Senier, Laura, Catherine Tan, Leandra Smollin, and Rachael Lee. 2018 (e-pub ahead of print). Understanding the potential of state-based public health genomics programs to mitigate disparities in access to clinical genetic services. Genetics in Medicine doi: https://doi.org/10.1038/s41436-018-0056-y.
- Senier, Laura, Rachael Lee, and Lauren Nicoll. 2017. The strategic defense of physician autonomy: state public health agencies as countervailing powers. Social Science & Medicine 186: 113-121.
- Quigley, Dianne, Alana Levine, David Sonnenfeld, **Phil Brown**, Qing Tian and Xiaofan Wei. "Ethical Challenges for Field Practices in Environmental Research" Science and Engineering Ethics Published online 1/3/2018.
- Wilder, Elisabeth and Phil Brown. In Press. Environmental Factors in Health: The Politics of Exposure. The International Handbook on Environmental Sociology. Edited by David Pellow, Beth Caniglia, Andrew Jorgenson, Stephanie Malin, and Lori Peek. New York: Springer Publishing.
- Wylie, Sara, Elisabeth Wilder, Lourdes Vera, Deborah Thomas, and Megan McLaughlin. "Materializing exposure: Developing an indexical method to visualize health hazards related to fossil fuel extraction." Engaging Science, Technology, and Society 3 (2017): 426-463.
- York, A.M., K. Kane, C.M. Clark, L.E. Gentile, A. Wutich, **S.L. Harlan** (2017) "What Determines Public Support for Graduated Development Impact Fees?" State and Local Government Review 49 (1): 15-26.
- **Zimmerman, Emily**, Catherine Borkowski, **Stephanie Clark**, and **Phil Brown**, "Educating Speech-Language Pathologists Working in Early Intervention on Environmental Health." BMC Medical Education 2018 18:155.

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