RIAG Statement No. 2

STATE OF RHODE ISLAND ENERGY FACILITY SITING BOARD

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In Re: Sea 3 Providence, LLC d/b/a Sea 3 Providence (Rail Service Incorporation Project 25 Fields Point Drive and Seaview Drive Providence, Rhode Island

Docket No. SB-2021-03

Pre-Filed Testimony of

Julian Drix

On Behalf of the

Attorney General of the State of Rhode Island

Topics:

Community Health Impacts of Liquid Propane Gas Storage and Rail Transport

Date Filed: November 12, 2021

DIRECT TESTIMONY OF JULIAN DRIX

1 2	Q:	Can you please state your name?
2 3 4	A:	My name is Julian Drix.
5	Q:	Where do you work and what position do you currently hold?
6 7	A:	I am the Chief of Equity Policy Advancement and Acting Co-Director of the Health Equity
8		Institute at the Rhode Island Department of Health (RIDOH).
9 10	Q:	Did you hold any other positions at RIDOH prior to that?
11	A:	From June 2014 to May 2020, I was the Asthma Program Manager at RIDOH. I have
12		served as the COVID-19 Coordinated Response Lead for Central Falls and Pawtucket since
13		June 2020.
14 15 16	Q:	What is your educational background?
17	A:	I received a master's degree in Public Health from the Johns Hopkins Bloomberg School
18		of Public Health, where I also received a Bloomberg American Health Initiative Fellowship
19		and a Graduate Certification in Environmental and Occupational Health.
20 21 22 23	Q:	Outside of your employment with RIDOH, do you hold any other positions within the Providence Community?
24	A:	I serve as Vice Chair of the Providence Sustainability Commission and am an appointed
25		member of the Providence Harbor Management Commission and the Providence COVID-
26		19 Recovery and Resilience Task Force.
27 28 29 30 31 32 33	Q:	Are you familiar with the pending Petition before the Energy Facility Siting Board seeking a Declaratory Order stating that Sea 3 Providence LLC's proposed expansion and addition of rail service does not constitute an alteration to its facility and therefore does not require review or permitting from the Energy Facility Siting Board?
34		A: Yes, I have reviewed the filings in this docket, including Sea 3 Providence's Petition.

O:

Are you familiar with any issues currently affecting the health of individuals in the Port of Providence?

A: Through my personal graduate research, my appointed roles on municipal commissions,
and my employment with the Rhode Island Department of Health, I am intimately familiar
with the Port of Providence, the industrial activities taking place there, and the health
concerns resulting from the concentration of heavy industry and freight transportation in
the port area.

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Q: Can you briefly describe the nature and characteristics of the Port of Providence?

A: The Port of Providence is a deep-water bulk commodity port with import, export, storage 12 and processing facilities for petroleum products, scrap metal, chemicals, asphalt, cement, 13 road salt, hazardous materials and waste, liquified natural gas (LNG) and propane (LPG). 14 ProvPort is the southern portion of the Port of Providence in Fields Point while the overall 15 Port of Providence includes privately owned and operated facilities and nearby commercial 16 and industrial facilities that are not marine dependent. The adjacent residential home to 17 neighborhoods of Washington Park and South Providence are also home to numerous 18 educational and healthcare institutions, which are located in close proximity to the 19 industrial activities in the Port area and its related multimodal freight transportation routes 20 21 which include I-95, I-195, Route 10, Route 146, rail lines, pipelines, and marine corridors.

22 23

24 25 **O**:

In those residential areas surrounding the industrial areas in the Port of Providence, are you aware of the demographics?

According the EPA's EJSCREEN environmental justice screening tool, there are 26 A: 27 approximately 15,000 people within a half mile of the Port of Providence, 74% are people of color, 61% are low-income families, and 18% are linguistically isolated as limited 28 29 English-speaking households. More specifically to the area around Sea 3 Providence, there are 4900 people who live within ³/₄ mile of the Sea 3 Providence facility. The impacted 30 population is an environmental justice community, with a majority of residents being 31 people of color and low income, ranking in the highest 20% compared to the rest of the 32 33 state.

- The following chart includes the raw percentages and percentiles (ranked low to high, 1-99%) for communities that are a half mile, ³/₄ mile, and 1 mile radius from the Sea 3 Providence facility:
- 3 4

	¹ / ₂ mile radius	³ / ₄ mile radius	1 mile radius
Population	1,969	4,900	9,596
% people of color	57%	55%	48%
(state percentile)	(82 nd percentile)	(81 st percentile)	(79 th percentile)
% low income	53%	58%	43%
(state percentile)	(85 th percentile)	(88 th percentile)	(77 th percentile)
% linguistically isolated (state percentile)	11%	11%	10%
	(79 th percentile)	(80 th percentile)	(79 th percentile)

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Q: And practically speaking, what issues face the Port of Providence residents as a result of the conditions within that environmental justice community?

8
9 A: The environmental justice communities near the Sea 3 Providence facility in the Port of
10 Providence already experience a disproportionate burden of a variety of environmental
11 hazards.

12

According to EPA's EJSCREEN environmental justice screening tool, the neighboring communities have elevated exposure to ozone, diesel particulate matter, air toxics cancer risk, respiratory hazards, high risk chemical facilities, hazardous waste, and wastewater discharges. On each of these environmental indicators, the impacted community ranks in the top 20-25% of the state, while for certain indicators (high risk chemical facilities and hazardous waste) it is in the highest 1-2% of the state with a higher risk level than 98-99% of the entire state.

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The following chart summarized the environmental burden risks for select indicators at ¹/₂
 mile, ³/₄ mile and 1 mile radius distance from the Sea 3 Providence facility.

	¹ / ₂ mile radius	³ / ₄ mile radius	1 mile radius
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Population	1,969	4900	9,596
Diesel Particulate Matter	75 th percentile	75 th percentile	74 th percentile
Air Toxics Cancer Risk	75 th percentile	75 th percentile	75 th percentile
Respiratory Hazard	81 st percentile	80 th percentile	79 th percentile
RMP (High Risk Chemical Facility)	99 th percentile	98 th percentile	97 th percentile
Hazardous Waste	98 th percentile	99 th percentile	88 th percentile

Q: And with respect to all of these hazards being in such close proximity, are you familiar with the idea of "cumulative impacts"? If so, can you briefly describe its applicability?

- 7 A: Yes, essentially, "cumulative impacts" account for the combined effects of all 8 environmental impacts over time (both exposures and associated health effects), in addition 9 to social and economic factors impacting the health of a community (racial and 10 socioeconomic factors) and the presence of sensitive populations (children, people with 11 asthma or other conditions rendering them more sensitive to environmental exposures).
- 12

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Q: And to your knowledge do current regulatory structures and reviews from local, state and federal agencies account for cumulative impacts when considering approvals or permitting for new operations in an industrial area such as the Port of Providence?

- A: Current regulatory structures and agency reviews of industrial impacts in the Port of Providence do not adequately account for the cumulative effects of pollution. Each pollutant and each regulatory review for new permits are examined individually, without full consideration of the combined cumulative impacts of all existing sources or the differential impacts of exposures on sensitive populations.
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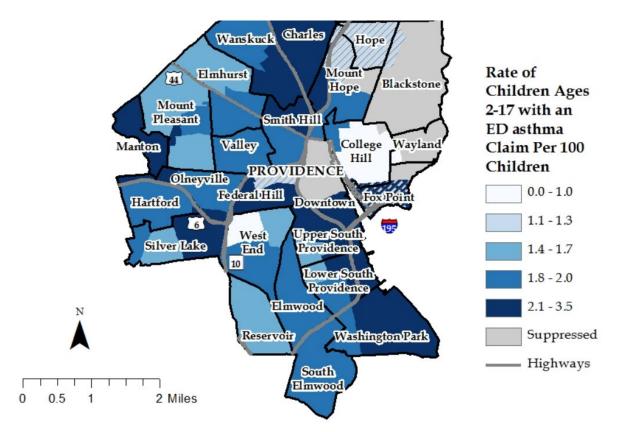
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Q: Given your background as the Asthma Program Manager for the at RIDOH, do you have an understanding of the effects of poor air quality on those with asthma?

A: People with asthma are more susceptible to the impacts of poor air quality and are more
 likely to experience asthma exacerbations and higher risks of hospitalization. This is
 especially relevant here, as according to the most recent data from the Centers for Disease
 Control and Prevention (CDC), in 2019 Rhode Island had the fourth-highest prevalence of

1		adults with asthma in the country, with 11.2% ¹ of adults currently experiencing asthma.
2		CDC's childhood asthma data for states is less recent, but as of 2017 Rhode Island had the
3		fourth highest estimated prevalence of children with asthma at 10.3%, as one of only four
4		states and two territories with childhood asthma prevalence higher than 9.9%.
5		
6 7	Q:	Are there any areas of the City of Providence where asthma is more concentrated?
8	A:	In 2019 RIDOH conducted a geospatial analysis of pediatric Medicaid claims data for
9		children ages 2-17 to identify geographic "hot spots" for asthma within the state. The
10		results for Providence are shown in the map below.
11		
12		The census tracts covering the Port of Providence in Upper and Lower South Providence
13		and Washington Park are in the highest quintile statewide for pediatric emergency
14		department visits for asthma.
15		
16		Census tract 440007000600, which includes the northern half of the Port of Providence,
17		interstate I-95, and a section of the rail line servicing the Port of Providence, had the highest
18		rate of pediatric Medicaid asthma emergency department visits in the entire state.
19		

¹ <u>https://www.cdc.gov/asthma/most_recent_data_states.htm</u>



Q: Do you have any understanding of what might cause such high rates of asthma in those areas?

5 The diagnosis of asthma is tied to numerous causal factors, and once someone has asthma A: it can be exacerbated by a variety of triggers. Air pollution is a factor that is known to both 6 7 cause asthma and put people with asthma at higher risk of severe exacerbations requiring hospitalization. Numerous studies show that prenatal and early childhood exposure to air 8 pollution from heavily trafficked roadways, truck traffic, large ports and rail yards are 9 10 causally associated with significant health and neurological impacts in childhood and throughout the life course including elevated risks of developing asthma, cancer, 11 12 cardiovascular disease, and premature mortality. These health risks are associated with the combined cumulative impacts of industrial point sources and truck, rail and marine mobile 13 14 sources located together in multimodal port complexes.

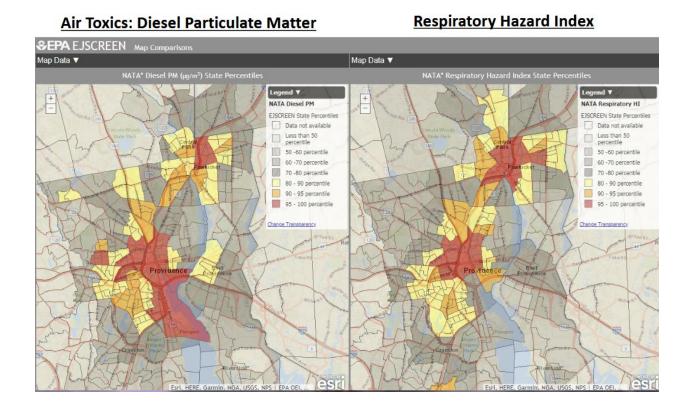
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While Port of Providence is not as large as other ports in the United States such as those in Los Angeles/Long Beach or New York City, it is by far the largest concentration of industrial and associated freight transportation diesel emissions in Rhode Island.

Q: How does truck and vehicle exhaust contribute to the air quality problems in the Port of Providence?

A: The maps below from EPA's EJSCREEN tool show the EPA National Air Toxics Assessment (NATA) estimated levels for diesel particulate matter and a combined NATA respiratory hazard index. The area around the Port of Providence and interstate highway corridors In Providence are in the top 5% statewide for estimated levels of particulate matter emitted from diesel engines.

14 The respiratory hazard index along I-95 and the freight rail lines in Providence, Pawtucket 15 and Central Falls are the highest in the state.



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In February 2019, RI Department of Environmental Management (RIDEM) published the findings from an air quality study along Interstate I-95 in the Providence Metropolitan

Area, including study locations at the Providence Community Health Center site on Allens 1 2 Ave and along Niagara St next to I-95 and the rail line servicing the Port of Providence. 3 The study confirmed higher levels of air pollution downwind from the highway, with elevated levels of Black Carbon (from diesel), fine particulate matter, and Volatile Organic 4 5 Compounds (VOCs) including known carcinogens benzene and 1,3-butadiene. The study results, such as the charts below, showed that downwind air pollution was highest in 6 locations closest to the highway and during weekday rush hour traffic. The study 7 8 recommended that "future land use planning should consider the proximity of facilities 9 associated with considerable truck traffic, as well as stationary sources of pollutants, to neighborhoods and other sensitive receptors."² 10

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12 13 14

Q: If Sea 3 Providence expands their operations as proposed, what do you believe the impact to the community in the Port of Providence area will be?

15 A: I believe, based upon my education and training as well as my understanding of the current 16 industry and pollution in the Port of Providence, that the proposed expansion of Sea 3 Providence's operations will materially add to the cumulative impacts in the Port of 17 Providence and can increase the risk of health impacts in the surrounding community. Any 18 increase in the quantity of trucks, trains, or ships would add additional diesel air pollution 19 to a community that is already overburdened and has a higher level of respiratory disease 20 vulnerability The existing elevated levels of pollution in the Port of Providence make it 21 such that additional VOCs and diesel particulate matter from rail, marine, and truck sources 22 have a greater impact on the public than if these increases took place in a less polluted 23 community with a lower respiratory disease burden. 24

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Given the existing environmental conditions and nearby sensitive populations, I believe that the Sea 3 Providence expansion poses the risk of compounding cumulative impacts and resulting in significant impacts to the health and welfare of the people living in the surrounding communities.

³¹

² <u>http://www.dem.ri.gov/programs/air/documents/air-mobile95-report.pdf</u>

l	Q:	Does this conclude your testimony?

CERTIFICATION

I hereby acknowledge under oath that the foregoing testimony is true and correct to the best of my knowledge, and that this declaration has been executed on this 12th day of November 2021 in Providence, RI.

By:

Name: Julian Drix

Title: Acting Co-Director, Chief of Equity Policy Advancement, Health Equity Institute

CURRICULUM VITAE - JULIAN DRIX, MPH

Julian.Drix@health.ri.gov | 401-307-3447 | Providence, RI

EDUCATION

Johns Hopkins Bloomberg School of Public Health

Master of Public Health, December 2019 Fellow, Bloomberg American Health Initiative

Brown University, Providence RI, May 2008

Bachelor of Arts, with Honors - Africana Studies, May 2008

CERTIFICATION

COVID-19 Contract Tracing

Johns Hopkins University, May 2020

Environmental and Occupational Health

Johns Hopkins Bloomberg School of Public Health, May 2019

FELLOWSHIPS

Bloomberg Fellowship

Johns Hopkins Bloomberg American Health Initiative, 2017-2020

Emerging Leader in Public Health

Kresge Foundation, 2017-2019

AWARDS

40 Under 40 in Public Health de Beaumont Foundation, 2019 Traeger Award for top influencers in local government Engaging Local Government Leaders (ELGL), 2019 National Environmental Leadership Award in Asthma Management Environmental Protection Agency (EPA), 2019 McKinley Ragland Legacy Award

Brown University Department of Africana Studies, 2008

EMPLOYMENT

Rhode Island Department of Health *Chief of Equity Policy Advancement:* August 2021 - present *Health Equity Institute Acting Co-Director:* July 2020 - present *COVID-19 Coordinated Response Lead:* June 2020 - present *Asthma Program Manager:* June 2014 - May 2020
Environmental Justice League of Rhode Island *Co-Director:* January 2013 – June 2014 *Programs Manager:* January 2011-December 2012
Alliance for Climate Education *Educator:* July 2009 – December 2010
Brown University, Department of Africana Studies *Archivist, Rites and Reason Theatre:* January 2007 – June 2008

BOARDS AND COMMISSIONS

City of Providence COVID-19 Recovery and Resiliency Task Force
Mayoral Appointment: July 2021 - present
Rhode Island Statewide Planning Technical Committee
Rhode Island Department of Health Director designee: August 2019 - present
Providence Harbor Management Commission
Mayoral Appointment Commissioner: October 2019 - present
Providence Sustainability Commission
City Council Appointment - Vice-Chair: September 2019 - present
American Public Health Association (APHA)
Governing Councilor, Environment Section: November 2018 - November 2020
Rhode Island Nursing Institute Middle College Charter High School
Board of Directors: September 2015 – September 2017
Environmental Justice League of Rhode Island
Board of Directors: January 2015 – May 2017
Providence Youth Services YMCA
Board of Directors: October 2011 – December 2013

PUBLICATIONS

Port of Providence: Health, Climate Change & Environmental Justice at an Urban Deepwater Port Capstone Thesis, Johns Hopkins Bloomberg School of Public Health, December 2019 Carbon Traitors: Green Deserts, Green Capitalism and Brazilian Battlegrounds on the Frontiers of CO2lonialism

Honors Thesis, Brown University, April 2008

GRANTS

- Centers for Disease Control and Prevention (CDC), National Initiative to Address COVID-19 Health Disparities Among Populations at High-Risk and Underserved, Including Racial and Ethnic Minority Populations and Rural Communities.
 - Rhode Island Department of Health, Health Equity Institute: \$19,682,213. 2021-2022
- Centers for Disease Control and Prevention (CDC), A Comprehensive Public Health Approach to Asthma Control Through Evidence-Based Interventions.

Rhode Island Asthma Control Program: \$2,500,000. 2019-2024.

- Kresge Foundation. Emerging Leaders in Public Health Action Learning Resource Grant. Social Justice Strategies for Health Equity: \$125,000. 2017-2019.
- Bloomberg American Health Initiative. Action Award: \$3,500. 2018.
- Centers for Disease Control and Prevention (CDC), Comprehensive Asthma Control Through Evidence-based Strategies and Public Health – Health Care Collaboration. *Rhode Island Asthma Control Program*: \$2,500,000. 2014-2019.
- US Environmental Protection Agency, Environmental Justice Collaborative Problem Solving.

Asthma Hotspot Action Plan: \$120,000. 2016-2018.

US Environmental Protection Agency, Environmental Education Model Grant.

Community Environmental College: \$150,000. 2014-2016.

Threshold Foundation

- Youth Climate Leadership: \$30,000. 2014.
- Rhode Island Foundation, Strategy Grant

Community Environmental College: \$60,000. 2013-2014. US Environmental Protection Agency, Environmental Education Model Grant ECO Youth: Multimedia Community Educators: \$38,860. 2012-2013.

LECTURES, PRESENTATIONS, WEBINARS, AND CONFERENCE PANELS

- *Using Data to Improve Health Equity*. Rhode Island Library Association Conference: Well and Connected, Libraries and Healthy Communities. Virtual. June 4, 2021
- *The importance of place: how ports shape health (in)equity and environmental (in)justice in the context of climate change.* Panel 4117.0: Climate Changes Health: Examining Co-Benefits While Cultivating Resilience and Equity. American Public Health Association (APHA) 2020 Annual Meeting, Virtual conference. October 27, 2020.
- Port of Providence: Health, Climate Change and Environmental Justice. Brown University Warren Alpert Medical School. September 28, 2020
- Health Equity and Social Justice at the Rhode Island Department of Health. Panel: Turning Social Justice Concepts into Action to Improve Community Health. NACCHO 360: Raising the Reach of Public Health, Annual Meeting of the National Association of County and City Health Officials. Virtual, July 9, 2020.
- Communicating Critical Messages During Challenging Times. Webinar panel, Kresge Foundation Emerging Leaders in Public Health. July 1, 2020.
- Port of Providence: Health, Climate Change and Environmental Justice at an Urban Deepwater Port. City of Providence Harbor Management Commission. March 10, 2020.
- Port of Providence: Health, Climate Change and Environmental Justice at an Urban Deepwater Port. City of Providence Environmental Sustainability Task Force. December 17, 2019.
- Using Data to Improve Asthma control: Asthma Quality Measures Webinar. Center for Medicare & Medicaid Services (CMS). November 21, 2019.
- Climate Justice Considerations of Resilience Theory. Presenter and Panel Moderator: Environmental Justice Perspectives on Climate Resilience. American Public Health Association (APHA) 2019 Annual Meeting, Philadelphia PA. November 5, 2019.
- Lecture: Medicaid Asthma Hotspots A deep dive into neighborhood context and social determinants. PHP 2023 Maternal and Child Health, Brown University School of Public Health, Patrick Vivier MD MPH. October 30, 2019
- Housing, Asthma and Health Equity. FDIC Economic Inclusion Summit. Rhode Island Foundation. September 25, 2019
- High-Risk Pediatric Asthma: Best Practices for guidelines-based care. Primary Care Provider Advisory Council, Rhode Island Department of Health. Providence, RI. October 16, 2019
- Medicaid Asthma Hotspots: Environmental Determinants in Rhode Island. Making Waves: Intentional Disruption to Advance Health Equity. 2019 CityMatCH Maternal and Child Health Leadership Conference. Providence, RI. September 25, 2019
- Asthma Hotspots: Planning for Health Equity. State Planning Council, Technical Advisory Committee. Providence, RI. August 2, 2019
- Freight & Asthma in Providence RI. Community Champions for Clean Transportation panel. Presenter and Panel Moderator: Northeast Diesel Collaborative Partnership Meeting, US EPA Region 1. Providence, RI. July 11, 2019

- Asthma Data for Climate Justice: How Community-Led Processes Bridge Climate, Health and Equity. Asthma Regional Council Summit: "Climate Change, Respiratory Health, and Equity." Boylston, MA. May 14, 2019.
- Air Pollution and Respiratory Disease in Rhode Island. Panel: Reducing Ambient Air Pollution in the United States, Primary Air Care Symposium. Johns Hopkins Bloomberg School of Public Health. April 19, 2019.
- *Guest lecture: Port of Providence Towards a Baseline Health Impact Assessment*. Senior Capstone Class, Department of Environmental and Natural Resource Economics. University of Rhode Island. Kingston, RI. February 22, 2019.
- Asthma, Air Quality, and Your Neighborhood. City of Providence Health Equity Zone. Providence, RI. February 13, 2019.
- *Effective Advocacy for Lung Health Equity.* American Lung Association Lung Force Expo. Providence, RI. January 29, 2019.
- *The Environment and Our Health: introduction to keynote Ana Diez Roux*. Bloomberg American Health Summit. Washington D.C., November 29, 2018.
- Mobilizing for Change: Lessons from Rhode Island Department of Health's Transformative Change. Kresge Foundation Emerging Leaders in Public Health Final Convening. Chapel Hill, North Carolina. October 15, 2018.
- *Rhode Island's HARP: Economic Evaluation of the Home Asthma Response Program.* CDC National Asthma Control Program: Economic Evaluation Webinar. October 3, 2018.
- A Deeper Dive into Rhode Island: Process and lessons learned. Asthma Regional Council, New England Asthma Programs Strategy Session. Manchester, NH. September 28, 2018.
- Health Impact Assessment Case Study: Port of Providence. Roger Williams University School of Continuing Studies. Providence, RI. September 27, 2018.
- *High-Risk Pediatric Asthma: Best practices for guidelines-based care.* Patient Centered Medical Home Kids: Best Practices Committee. Warwick RI, August 21, 2018.
- Ignite Talk! Rhode Island Department of Health. Kresge Foundation at North American City and County Health Officials Annual Meeting. New Orleans, July 10, 2018.
- *Rhode Island's Story: Sustaining and Growing the HARP Intervention*. Asthma Regional Council Summit. Hooksett NH, June 1, 2018.
- *Rhode Island's Story HARP: Home Asthma Response Program.* Center for Health Care Strategies: Exploring Pathways to Reimbursement for In-Home Asthma Interventions. Webinar, May 3, 2018.
- *Health Equity and Housing*. Rhode Island Commission for Human Rights: Fair Housing Month Event. Rhode Island Foundation, April 25, 2018.
- Rhode Island Department of Health: Kresge Foundation Emerging Leaders in Public Health. CityMatCH: Webinar, March 28, 2018
- Controlling Asthma: RI's Road to Benefit Change Approval and Implementation. Florida Asthma LAN, October 10, 2017.
- HARP: Home Asthma Response Program. Green and Healthy Homes Initiative: Innovative Funding Sources. Webinar, March 9, 2017.
- Asthma and School Facilities. Fix Our Schools Now Coalition: Forum on the Condition of RI Public School Buildings. Providence Career and Technical Academy, February 27, 2017.
- *Guest lecture: Policy, Culture and Discourse that Shape Health and Healthcare.* Community Dimensions of Public Health, Brown University, Providence RI. December 16, 2016.

- Developing Rhode Island's 6/18 Asthma Business Case. Panel: "State Approaches to Developing and Making the 6/18 Business Case." CDC/Centers for Disease Control and Prevention: 6/18 Convening, Decatur, GA. December 8, 2016.
- *The Role of the Asthma Educator*. American Lung Association, Asthma Educator Institute. Thundermist Health Center, Warwick RI, October 28, 2016.
- *Rhode Island's Home Asthma Response Program*. Green and Healthy Homes Initiative, Pay for Success Cross-site Webinar, August 12, 2016.
- Building Integrated Asthma and Housing Services in RI. Regional Asthma Management Program Healthy Housing Learning Collaborative Webinar, August 3, 2016.
- *Pediatric Asthma*. Pediatric Patient Centered Medical Home Initiative: Practice Transformation Committee. July 21, 2016.
- Asthma in Rhode Island. Panel: "The 6|18 Initiative: Accelerating Evidence into Action." ASTHO: 2016 Senior Deputies Annual Meeting, Providence, RI. July 14, 2016.
- *Your Role as an Asthma Educator: Professional Issues/Practices*. Asthma Educator Institute Preparatory Course for Asthma Educator Certification. RI Department of Administration. October 23, 2015.
- *Implementing Asthma Care Guidelines*. Rhode Island Chronic Care Collaborative, Chronic Disease Webinar Series. Rhode Island Department of Health, Providence RI. October 22, 2015.
- *Engaging the Health Care System in Rhode Island*. Panel: "Health care system strategies." CDC/Centers for Disease Control and Prevention: 2015 National Asthma Grantees' Meeting, "Collaborating for Comprehensive Asthma Care." Atlanta, GA. June 19, 2015.
- Asthma Resources for School Nurse Teachers. 2015 School Nurse Conference, Warwick RI. May 20, 2015.
- RI Asthma Control Program: Comprehensive Asthma Care. Panel: Respiratory Health. RI Care Transformation Collaborative: Nurse Care Managers conference, Brown University Alpert Medical School, Providence RI. May 5, 2015.
- *Climate Justice Movement Building and the Peoples Climate March*. New England Environmental Justice Forum, Hartford CT. October 18, 2014.
- Air Pollution, Asthma, and Environmental Racism. LIFE Conference, Rhode Island College, Providence RI. April 19, 2014
- *Environmental Justice Approaches to Climate Change*. Summit on Climate Change Impacts and Solutions in Rhode Island, University of Rhode Island, Kingston RI. March 19, 2014.
- *Environmental Justice in Rhode Island*. Morgan Stone Day Celebration of Diversity and Multiculturalism, Lincoln School for Girls, Providence, RI. January 30, 2014
- *Environmental Racism and Justice*. Diversity, Access and Inclusion South East Environmental Action League. New Bedford, MA. November 19, 2013.
- Air Pollution, Asthma, and Environmental Racism. Bioneers by the Bay: Connecting for Change, Bristol Community College, New Bedford, MA. October 26, 2013.
- What is Fracking? What everyone should know in this new era of natural gas. Classical High School. March 12, 2013.
- ECO Youth for Environmental Justice. Rachel Carson Lecture Series, Brown University, Providence, RI. November 15, 2012
- Asthma and Air Pollution. New England Environmental Justice Forum, Clarke University, Worcester, MA. June 9, 2012

Climate Change Adaptation. English for Action, Providence, RI., November 17, 2011.

- Green DRIVE Bus and Diesel Air Pollution. Pecha Kucha, Pawtucket, RI. April 27, 2011
- Introduction to Energy Systems and Climate Change. English for Action, Providence RI. March 21, 2011
- Climate Justice Action. 1000 Cancuns for Climate Justice, Providence RI. December 7, 2010.
- *Generation, Now is the Time.* Bioneers by the Bay: Connecting for Change, Zeiterion Theatre, New Bedford, MA. October 22-25, 2009.
- Creative Actions for Climate Justice. College of the Atlantic, April 25-26, 2009.
- The Next Frontier: Unconventional Natural Gas. Wesleyan University, April 23, 2009.
- Natural Gas Drilling in the Marcellus Shale. NYU, April 20, 2009.
- Panel: Overview to False Solutions to Climate Change. Powershift '09: Repowering, Reclaiming, Our Future, DC Convention Center, Washington DC. February 27-March 3, 2009.
- Natural Gas Fracking, the next generation of fossil fuels. Powershift '09: Repowering, Reclaiming, Our Future, DC Convention Center, Washington DC. February 27-March 3, 2009.
- *Climate Justice Opportunities: Community Responses to Climate Change*. Advancing Climate Justice: Transforming the Economy, Public Health & Our Environment, Fordham University, New York, NY. January 29-30, 2009.
- Social Power Structure and Disaster Relief Access. Looking the Storm in the Eye, Providence, RI. March 31 - April 6, 2008
- Carbon Trading: A Critical Conversation on Climate Change, Privatization and Power (panel with author Larry Lohmann), University of Arizona, Tucson, AZ. February 27, 2008.
- *Fossil Fuels and Climate Justice in the United States.* Escola do Movimento Sem Terra, Rio Grande do Sul, Brazil. January 23, 2008.
- Carbon Trading and Green Neocolonialism. United States Social Forum, Atlanta, GA. June 2007.
- *Rising Tide Climate Action Tour: The Root Causes of Climate Change*. Multiple locations, April June, 2007.
- *Rising tides of Latin American solidarity in the face of global climate change*. 4th Annual Latin American Solidarity Coalition Conference: "Alternatives to Empire", University of Illinois (UIC), Chicago, IL. April 13-15, 2007.