

# Exhibit 7



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July 15, 2016

Dear Ms. Caulton-Harris:

Here is the consolidated document which we have prepared to help you make your decision about whether to hold a site assignment hearing about Palmer renewable Energy's suitability for our city.

The document consists of:

Massachusetts Environmental Energy Alliance comments on the draft air permit for Palmer Renewable Energy, prepared by Mary Booth, PhD | Director, Partnership for Policy Integrity

Air Quality Map for May, 2016 and Memo, Mary Booth

Health Impacts of Biomass, prepared by Sarita Hudson, Manager, Pioneer Valley Asthma Coalition

Springfield Biomass Climate Impacts, prepared by the Environmental Justice Committee of Arise for Social Justice

Comment on a recent decision by the Supreme Judicial Court, prepared by Veronica Eady, Vice President and Massachusetts Director of the Conservation Law Foundation

A letter from Kirstie Pecci, Staff Attorney at MassPIRG and Patrick J. Markey, Partner at Markey Barrett P.C., outlining the legal rights of Boards of Health to hold site assignment hearings. (Separate cover.)

Please let me know when you intend to make a decision about the site assignment hearing, and thank you for your consideration of this matter.

Yours truly,

Michaelann Bewsee  
Director

# Massachusetts Environmental Energy Alliance

Marc Simpson  
Air Quality Permit Chief  
Department of Environmental Protection  
436 Dwight St.  
Springfield, MA 01103

## Comments on draft air permit for Palmer Renewable Energy, April, 2011

April 29, 2011

Dear Mr. Simpson,

Thank you for the opportunity to comment on the draft air permit for the Palmer Renewable Energy facility in Springfield, MA. Despite some improvements made in the emissions profile of this facility since the project description included in the Notice of Project Change in September, 2010 (upon which we commented) there are still several substantial problems with this permit. The biggest problem, of course, is that the permit is being issued at all, since putting a large pollution emitter in an urban area with some of the worst health problems in the State does not represent sound public policy. If built, the PRE plant will be either the first or second largest particle pollution emitter in Hampden, Hampshire, and Franklin Counties. Mobile source emissions of nitrogen oxides and diesel-related toxics from wood procurement and delivery to the facility project will add about as much more pollutants to the air as will stack emissions. We therefore strongly urge DEP to not grant this permit.

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### **The amount of wood stipulated in the permit is not correct**

The permit states that the facility will burn 432,160 tons of wood a year at a moisture content of between 30% and 50%.

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In the course of reviewing several air permits for biomass power plants around the country, we have never found a “green” wood source reported as having 30% moisture content. If Palmer is planning on burning significant amounts of pallets, then this material might be around 30% moisture content, but in general, the main wood sources at the plant will be closer to 45% or even 50% moisture content, particularly since the facility will be spraying water on the woodpile to reduce dust. To the extent that the PRE wood use estimates depend on estimating a lower moisture content for wood than is actually the case, they will underestimate the actual tons of wood required to run the plant.

The amount of wood estimated to be used does not appear to take into account full operation of the plant. This contrasts with the approach by DEP in the Russell Biomass air permit. That permit states:

#### **IV. Source Emissions**

The potential emissions from either boiler design are based on the worst case emissions from the boiler burning: 1) clean wood fuel only for 8,760 hours and 2) burning clean wood fuel for 8,360 hours with B100 biodiesel being co-fired for up to 400 hours each year. The duct burner is also assumed to be burning B100 for 8,760 hours.

For whatever reason, the Palmer application has been permitted to go forward with calculation of fuel use on something less than a “potential to use” basis. DEP should be consistent in how these estimates are made. In any case, if DEP is serious about limiting the amount of wood used by the facility, then the permit should include some penalty to the facility if that amount is exceeded. Otherwise, the number stated appears to be nothing more than pandering to the fuzzy math of the developer.

#### **The amount of greenhouse gases emitted by the facility is greater than stated in the permit**

DEP’s “Background information and technical support document for 310 CMR 7.71” states, “Stationary emission facilities which emit more than 5,000 tpy of CO<sub>2</sub>e GHGs shall report all direct emissions”, including fugitive emissions and emissions from stacks, processes, vents, and motor vehicles”. Starting in 2010, the policy required emissions of methane and other greenhouse gases to be included.

We would thus expect to see, among other things including mobile sources, the methane emissions from the facility’s wood chip pile estimated in total greenhouse gas emissions from the facility. Ample documentation exists to indicate that wood chip piles can be a significant source of methane as well as other toxic gases. In fact, a quick check of news reports reveals that spontaneous combustion, fires, and explosions are not uncommon at biomass facilities. DEP should consider how not only to assess greenhouse gas emissions from the fuel pile, but also mitigate these risks.

#### **Estimate of carbon monoxide emissions does not appear to be supported by the analysis**

The section on control of carbon monoxide emissions appears to still contain some contradictions.

The permit states:

Based on the above technical feasibility analysis for CO controls, PRE proposes to use good combustion practices and an oxidation catalyst within the HRSCR to

achieve a **75-80% reduction of CO** for an emission rate of 0.114 lb/MMBtu based on a 1-hour block average, 0.07 lb/MMBtu based on a 4-hour block average, 0.0365 lb/MMBtu based on a 12 consecutive month annual average, and 81.4 tons in any 12 consecutive month period. The 4-hour averaging period is necessary due to variations in the fuel moistures which can vary from 30% to 50%. The sudden increases in fuel moisture can cause higher CO emissions that can result in 1-hour or longer average spikes from the boiler above the **normal operating condition** where the boiler is at an **uncontrolled emission rate of 0.25 lb/MMBtu**.

From this it sounds like the highest degree of control that can be expected is 80%. But the section also states that "normal operating condition" is an uncontrolled rate of 0.25 lb/MMBtu. Controlling 80% of 0.25 lb/MMBtu means that 20% is emitted, or 0.05 lb/mmbtu CO, not 0.0365 lb/mmbtu, as the permit states.

Indeed, this mathematical conclusion is supported by the write-up on CO in the Notice of Project Change, which states:

PRE also proposes to utilize an oxidation catalyst within the HRSCR to achieve approximately 70-80% reduction of CO to an emission rate of 0.07 lb/MMBtu on a 4 hour average and 0.13 lb/MMBTU on a 1-hr average basis, and 0.0446 lb/MMBTU on an annual average basis. This results in a lower annual potential to emit than the Russell project, and is thus an improvement on BACT for CO. The longer averaging period is necessary due to variations in fuel moisture that can result in 1-hr or longer average spikes from the boiler well above the normal operating condition where the boiler is guaranteed at 0.25 lb/MMBTU. Sudden increases in fuel moisture will result in higher CO emissions. PRE will be green wood, with a moisture content range of 30-50%, with an average of about 40%. CEMS data from an existing green wood fired plant in West Bridgewater, NH is provided in Appendix C. These data show the boiler emissions vary over a one month period, on a 1-hr average from 0.14 to 0.65 lb/MMBTU, even while the monthly average emission rate is only 0.22 lb/MMBTU. On a 4-hr average basis, all but one period are below 0.35 lb/MMBTU.

In order to mitigate these spikes PRE will design for an **80% CO removal efficiency**, in effect doubling the amount of catalyst initially proposed. This is a higher removal efficiency than any other existing or proposed project. It is expected that this catalyst should result in a maximum 1-hr average of 0.13 lb/MMBTU, and a 4-hr average of 0.07 lb/MMBTU, and an annual average of 0.00446 lb/MMBTU to limit annual emissions to 99.5 tpy. For example, at the **normal operating condition of 0.25 lb/MMBTU, the actual emission rate should be 0.05 lb/MMBTU**, which averaged with one hour of operation at 0.13 lb/MMBTU results in a 4-hr average of 0.07 lb/MMBTU. In order to determine the final emission limit, PRE proposes a one year optimization period to measure actual performance. As indicated in Table 4-2, this is the lowest of any proposed permit for, or permitted wood-fired boiler and is considered to be BACT for CO.

It is not clear why, in the application, the applicant promised 80% control which would then result in an "actual emission rate of 0.05 lb/mmbtu", and this then translated to an annual average of 0.00446 lb/mmbtu. Evidently someone came to their senses in the course of reviewing the application and

concluded that the actual permit emission limit would be 0.0365, more than an order of magnitude greater than the 0.00446 lb/mmbtu promised in the application. This new rate is still inexplicably lower than the 0.05 lb/mmbtu rate implied by 80% control of 0.25 lb/mmbtu uncontrolled. Other estimations of emissions in the permit are consistent with removal efficiencies promised for various pollutants, but there does appear to be a whiff of magical thinking around the estimates of CO emissions.

The proponent's and DEP's lack of confidence in the CO emission rate is demonstrated by the provision in the permit that

PRE has also proposed that they will conduct a 1-year optimization period that will measure the actual CO emission performance to determine final 1-hour and 4-hour average emission rates which will be no less stringent than the proposed BACT emission rate.

A CO emission rate of 0.05 lb/mmbtu, as appears to be supported by the applicant's own statements, would result in a potential to emit of 111 tons of CO a year, comfortably over the major source threshold. Given the inconsistencies in the estimates of CO emissions, and the fact that the level of CO control proposed by the applicant appears to be unprecedented for biomass facilities in the US and relies on a unique and largely unproven combination of controls, this plant should be treated as a major source for carbon monoxide.

It is also important to note that an uncontrolled rate of 0.25 lb/mmbtu for CO is not supported by EPA's AP-42 emission factors. The AP-42 emission factor for biomass CO is 0.60 lb/mmbtu. The applicant does not provide any justification for assuming an uncontrolled rate of CO emissions that is less than one half the AP-42 emissions value. All these factors, taken together, give reason to question the degree of control of CO, particularly in a stoker boiler.

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### **Particulate emissions are unacceptably high**

Particulate levels in the Springfield area are already high. The PRE plant, if built, will likely be either the first or second largest particle emitter in Hampden, Hampshire, and Franklin Counties. Even the 147 MW Mount Tom coal plant emits less total particulate matter than the PRE plant will emit, because its emission rate, as demonstrated by stack tests, is 0.0059 lb/mmbtu, about 30% the 0.019 lb/mmbtu rate permitted at the PRE plant.

The permit states that the filterable rate is the same as the filterable rate in the Russell Biomass permit. Given that the residents of Springfield already have the highest rates in the State for asthma, it is difficult to understand why the State would not permit this new facility at the maximum control efficiency possible. It is inexcusable that a coal plant more than three times the capacity of the PRE plant would emit less particulate matter overall. Were the PRE plant considered a major source for hazardous air pollutants, it would be held to a standard of 0.0011 lb/mmbtu under EPA's MACT rule, about an order of magnitude less than the 0.012 lb/mmbtu than the plant will be permitted.

Despite the developer's claims that emission rates have been reduced since early incarnations of this air permit, the reduction in PM emissions comes from condensable PM, not filterable. The filterable PM rate of 0.012 lb/mmbtu has remained constant over the most recent submissions by the developer. There is nothing to stop DEP from requiring a tighter emissions filterable PM limit such as that currently shown at the Mount Tom coal plant, or better yet, the one required for major sources

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under EPA's MACT rule. If the agency is serious about reducing emissions from this plant, that is what it will require.

### **PM emissions will put the region out of attainment with EPA's new PM NAAQS**

In the interests of expediency, we are including a section of the letter we submitted on the Notice of Project Change, regarding particulate emissions:

*It is also important to note that Massachusetts Secretary of the Environment Robert Gollege, along with other officials from New England states, weighed in with EPA on the PM standard. Gollege et al urged EPA to set the 24-hour PM standard at 35 ug/m3, stating*

*Based on the weight of evidence of health effects findings and regional demographic and monitoring data, the Northeast states believe that a 24-hr PM<sub>2.5</sub> standard of 30 ug/m<sup>3</sup> (98<sup>th</sup> percentile form) and an annual PM<sub>2.5</sub> standard of 12 ug/m<sup>3</sup> are necessary to protect public health across the region. These levels are within the range offered in the EPA Staff Paper. A requirement to reduce current emissions of PM<sub>2.5</sub> and its precursors to meet a 12/30 ug/m<sup>3</sup> standard would result in 84 percent of the region's population directly benefiting from improved air quality, include about five times more people in susceptible subgroups than at current standard levels.*

*Gradient's risk assessment in the NPC states:*

*For our HRA, Gradient compared the cumulative impacts (maximum modeled PRE Project-related concentrations plus monitored background levels) of the criteria air pollutants with the current health-protective NAAQS to assess the likelihood of potential health effects associated with PRE Project criteria air pollutant stack emissions.<sup>3</sup> The results, as shown in Table 2, indicate that cumulative impacts are well below the health-protective NAAQS for the criteria air pollutants of concern, which include SO<sub>2</sub>, CO, NO<sub>2</sub>, PM, and lead.*

*Given that Massachusetts is already on record stating that the current PM<sub>2.5</sub> standards of 35/15 ug/m<sup>3</sup> are not sufficiently protective, the above claim by Gradient does not mean much. In fact, since EPA is currently re-assessing the PM<sub>2.5</sub> standards in light of the flawed 2006 standard, it is quite likely that the new 24-hour standard will be set at 30 ug/m<sup>3</sup> in the relatively near future.*

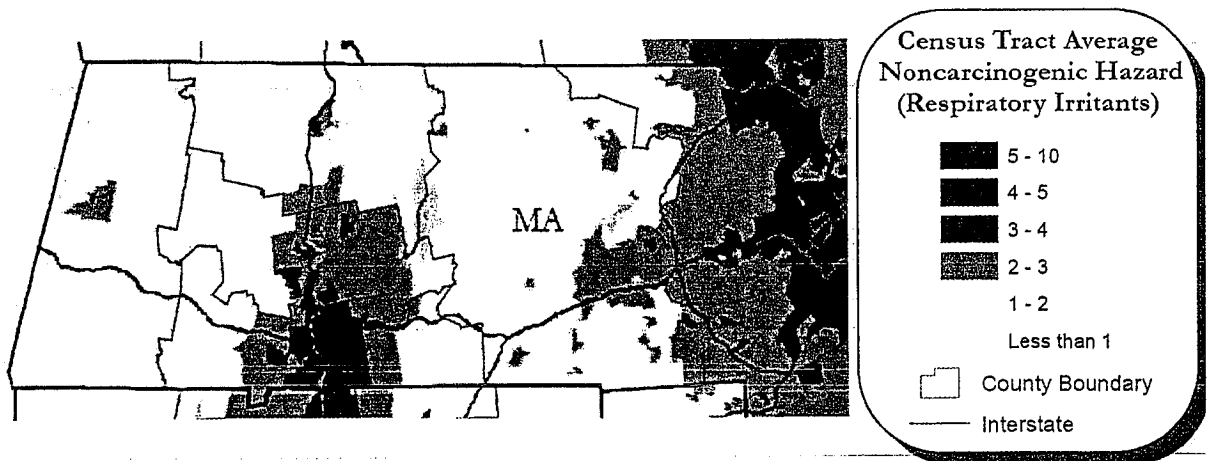
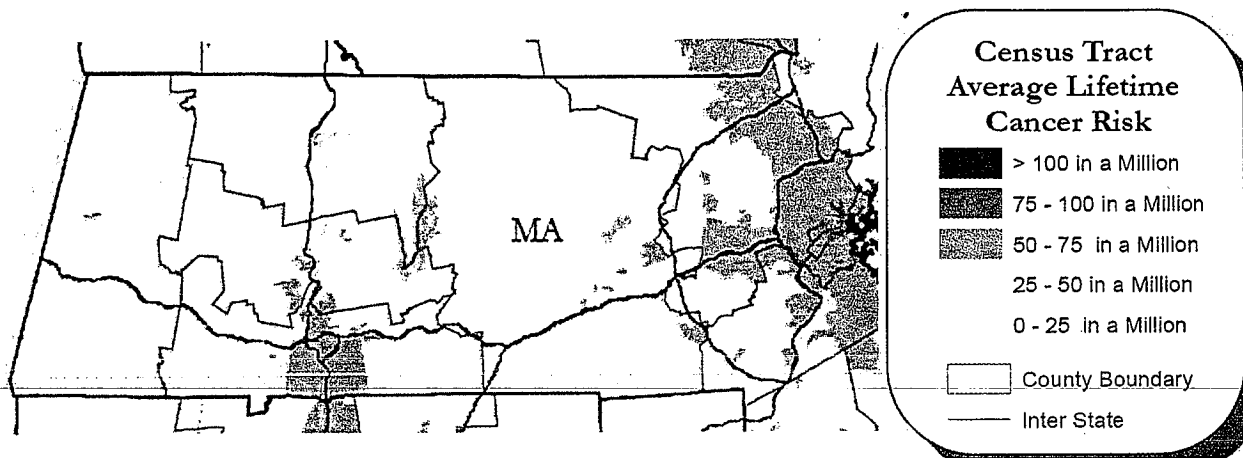
These statements are still valid. Modeling of particulate matter emissions on air quality conducted for this latest incarnation of the plant indicate that PM<sub>10</sub> will be at 29.9 ug/m<sup>3</sup> if the plant is built. This average concentration in no way reflects the concentrations that will occur during spikes of high PM loading, such as have occurred several times in 2011 already. Even relatively short periods of high PM concentrations are associated with increased hospital admissions for respiratory illness, asthma, and mortality. Given that the State is on record with the opinion that the current NAAQS for PM is inadequate to protect health, permitting this plant in an area acknowledged to have severely elevated asthma rates already constitutes a kind of deliberate negligence.

**The plant will emit air toxics into an already dangerously polluted atmosphere**

EPA recently issued the National Air Toxics Assessment (NATA). Regarding levels of air toxics in New England, the assessment states:

The 2005 National Air Toxics Assessment estimated that state average risk values of five air toxics: acetaldehyde, benzene, carbon tetrachloride, formaldehyde, and polycyclic organic matter (POM) exceeded health benchmarks in every state in New England, and state average risk values of five air toxics: 1, 3-butadiene, acrolein, arsenic compounds, chromium compounds and naphthalene exceeded health benchmarks in at least one state in New England. Diesel particulate matter is also an air toxic of concern since the estimated ambient concentrations are high in most of the New England states. Most of these chemicals are carcinogens and may also cause other health effects, such as exacerbation of asthma.

Maps of cancer risk and respiratory risk are included in the assessment, and clearly conclude that the Springfield region is one of the most polluted areas in the state, and even in the Nation.



DEP's own data from the Westover site in Chicopee were included in the Notice of Project Change for the PRE plant. The following table demonstrates that air toxics are already far in excess of the



health standards for air toxics set by DEP. All the air toxics in the table would be emitted by the PRE plant, with total air toxics emissions of over 13 tons per year.

	Levels of toxics (ug/m3) measured at Westover	Threshold Exposure Limit (TEL) - 24-hr standard	Allowable Ambient Limit (AAL) - annual standard	% of TEL	% of AAL
Arsenic	0.00107	0.0005	0.0002	214%	535%
Lead	0.00298	0.14	0.07	2%	4%
Cadmium	0.0081	0.003	0.001	270%	810%
Manganese	0.00128	No limit set	No limit set		
Formaldehyde	2.15	0.33	0.08	652%	2688%
Acetaldehyde	1.23	2	0.5	62%	246%
Benzene	0.862	1.74	0.12	50%	718%
Ethylbenzene	282	300	300	94%	94%
Styrene	0.248	200	2	0%	12%
Xylene	0.268	11.8	11.8	2%	2%

It is amazing that although DEP collects data on air toxics at the Westover site in Chicopee, and EPA uses these data in the national assessment, the PRE air permit can still model toxic emissions from the plant as if they are being emitted into a pristine atmosphere.

For instance, the following statements appear in the air permit:

The metal HAP removal efficiency of 99% or greater also meets the April 2007 MassDEP Best Available Control Technology Guidance – Biomass-Fired Electric Generating Units – Table 2 and **the metal HAP emission rates do not exceed any of the applicable MA AALs or TELs.**

and,

**The organic HAP emission rates do not exceed any of the applicable MA AALs or TELs.**

This kind of reasoning makes rational people think their environmental protection agency has gone off the rails. Such a statement would never fly were it applied to criteria pollutants. When evaluating criteria pollutants, we assess what background concentrations are, and add the amount that would be emitted by the facility, to assess a cumulative exposure. When it comes to air toxics, however, it doesn't seem to matter that existing air concentrations are hundreds to thousands of percent in excess of the health thresholds set by DEP. The agency still models emissions as if the air has zero concentrations for pollutants. We want to know: how bad would air toxic concentrations have to be

before DEP would actually evaluate the cumulative exposure? And is DEP discounting the very data the agency is collecting and sending to EPA? Is DEP discounting the federal agency's assessment that Springfield, MA, has some of the highest toxic exposures in the Nation?

The MA DEP sets the TELs and AALs to estimate individual cancer risk from exposure to pollutants. However, this does not take into account the cumulative exposure to multiple toxics. The precautionary principle would dictate that adding a large source of particulate matter and air toxics in an area that already has such compromised air quality is not wise. Adding to the health burden of the region, this plant will contribute many tons of NOx and VOCs and CO in an area already out of attainment with EPA's ozone NAAQS. This facility will be either the largest or second largest particle emitter in the four counties of western Massachusetts, will contribute tons of toxics, all in an area that has compromised health. There is ample reason for the State to deny this permit.

Thank you for the opportunity to comment,

Mary S. Booth, PhD.

Note, April 29:

I wrote this letter April 5 and had hoped to have the opportunity to revise it pending new information from DEP on the actual operation and efficiency of the PRE boiler. I still do not have the information on what the boiler *manufacturer's* assumptions are about the moisture content of the wood to be used as fuel. These assumptions are critical to estimating the efficiency of the boiler, which is in turn important because it partially determines the amount of wood burned to generate a particular amount of power. In turn, the amount of wood burned is important because partly determines emissions.

I am not confident that anyone - including DEP - has a handle on what I would consider foundational principles of how the PRE plant will operate, and whether the developer's assertions regarding operations and emissions are reliable. It is troublesome that DEP continues to accept and not question the modeling presented by the developer; modeling that depends on assertions about wood moisture content that are not defensible.

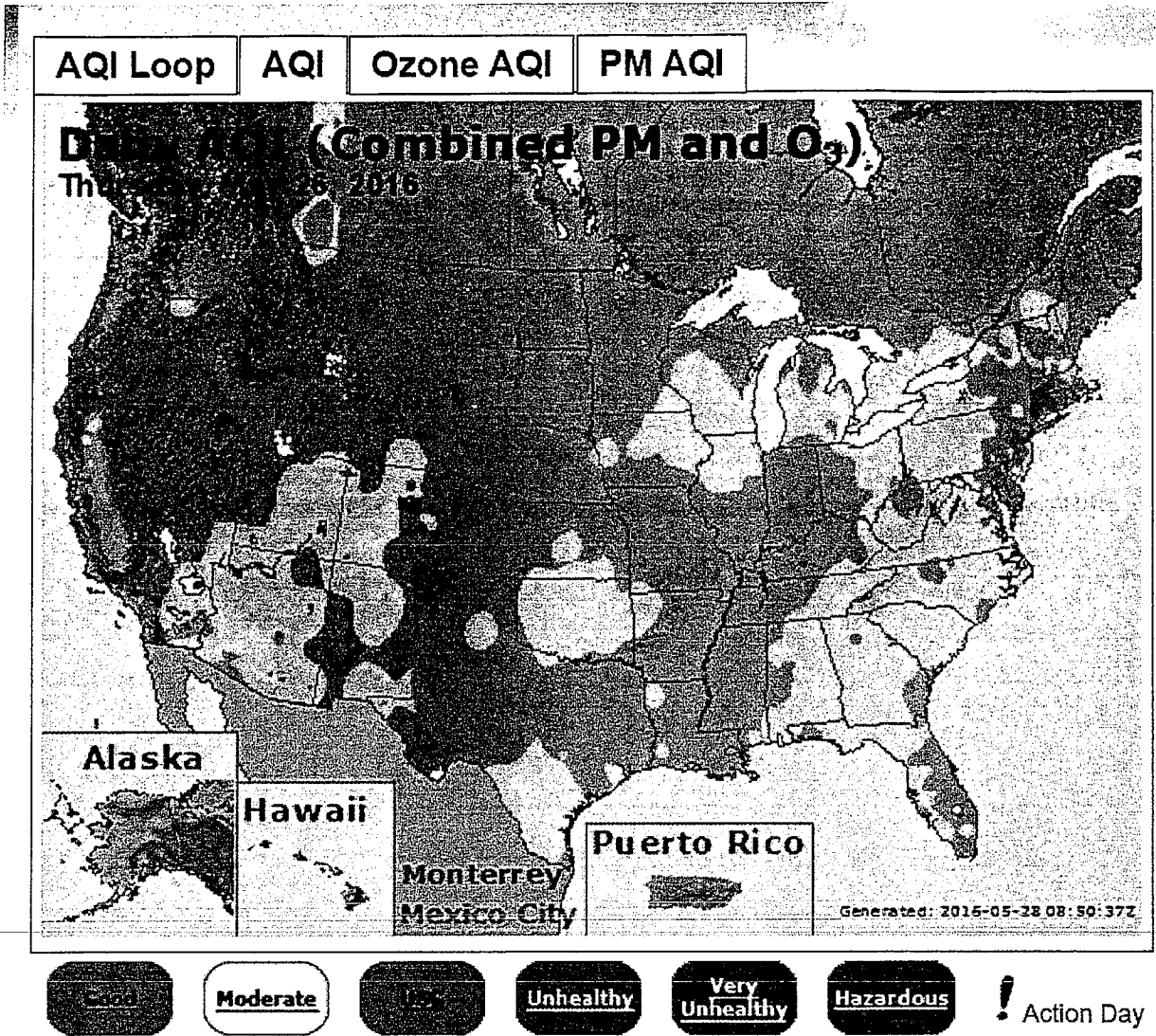
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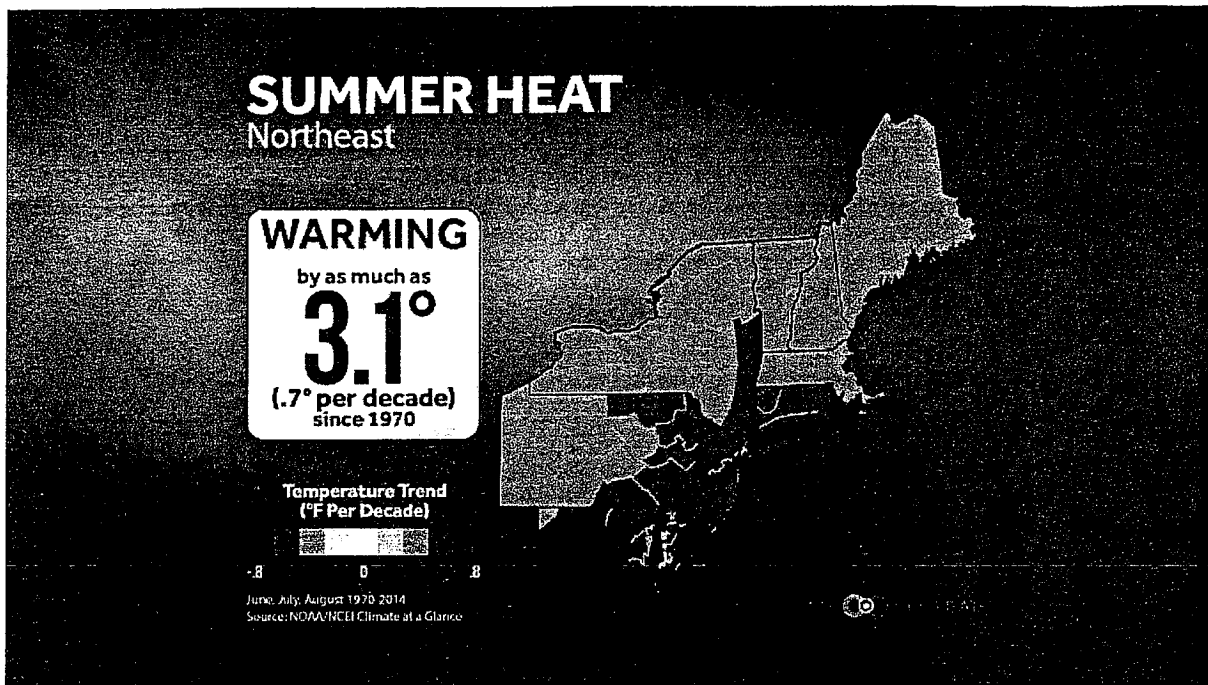
### **Air quality map from May – shades of things to come?**

Memo from Mary Booth, PFPI, July 13, 2016  
mbooth@pfpi.net

This summer temperatures have been fairly moderate, which has helped keep ozone in check. However, there were a few days in May when regional ozone levels spiked to dangerous levels, as shown in this map for May 26.



We can expect the frequency of bad air quality days to increase in the future, because summers are getting warmer.



(from <http://www.climatecentral.org/gallery/maps/summer-temperature-trends>)

This information should be taken into account when considering the siting of a large, polluting facility like a powerplant.



**Partners for a Healthier  
Community, Inc.**



**A Health Impact Assessment of the Proposed Biomass Plant is Needed**

Increased air pollution from the proposed biomass plant has the potential to negatively impact Springfield residents who are already experiencing significant health disparities. Air pollution from both biomass incineration and near roadway air pollution from truck traffic to and from the plant has been shown to have negative health impacts.

A **Health Impact Assessment** is needed to assess the potential health effects of the proposed biomass plant and make recommendations for responses to mitigate negative effects to ensure positive health. In particular, a Health Impact Assessment would help quantify impacts on populations already overburdened with disparities. A Health Impact Assessment considers both the social determinants of health as well as current levels of health and activity. It has a broader

scope and considers existing health conditions and disparities, focusing on those sub-populations who are most vulnerable (see Human Impact Partners, *Frequently Asked Questions about Integrating Health Impact Assessment into Environmental Impact Assessment*).

**Palmer Renewable Energy's Health Risk Assessment did not capture the health impacts on the Springfield population.**

- It was not conducted as a Health Impact Assessment. It did not assess existing health disparities in Springfield, its status as an "Environmental Justice" community, and the impacts of increased pollution the plant would have on these already disproportionately impacted populations.
- The PRE assessment also did not assess the health impacts of the increased volume of transportation and subsequent reduction in air quality and increase in noise and traffic collisions. At the beginning of the Health Risk Assessment, PRE explains that the increases in air pollution of different types are "tiny", and that a concentration of 1 ug/m<sup>3</sup> corresponds to a weight of a substance floating in the air that is about one-billionth of the weight of the air surrounding it. Yet an epidemiological study found that a 1 ug/m<sup>3</sup> change in PM<sub>2.5</sub> predicts a 1.4% change in non-injury mortality. (Jerrett M et al. 2005.) ***This means that a "tiny" increase in particulate matter increases the death rate.***

A 2012 Review of Air Quality Impact Assessments for the City of Springfield by Environmental Health & Engineering noted that there are important gaps in the PRE assessment including: the impact on existing health disparities, the impact of traffic based pollution from vehicles to the plant, as well as questions about baseline air quality, baseline observations and strategies for monitoring air quality. A Health Impact Assessment is needed to address these gaps.

Below we provide evidence for the need of a health impact assessment because of the potential negative impact of the biomass plant. The sections correspond to the following:

- Air pollution negatively impacts health
- Biomass air pollution (pollution from burning wood) is recognized to have negative health effects
- Cancer is an impact of concern from biomass
- Air pollution in Springfield is already of concern because of the effect of being in a valley
- The increase in air pollution from the biomass plant is a concern because particulate pollution at any level results in health problems
- The increase in air pollution has the potential to exacerbate existing health disparities
- Biomass air pollution contributes to the risk of climate change and the potential negative impacts that are anticipated for the Springfield community and the world overall
- The plant would be introduced into a state designated environmental justice community where residents already experience disproportionately negative health impacts and that care must be taken when considering new environmental exposures

- Springfield has high levels of existing risks for cancer and particulate matter that would potentially increase with a biomass plant

### **Air Pollution Impact on Health**

Air pollution is a major health danger for children and adults. Springfield struggles with high levels of outdoor air pollution with most years experiencing some exceedances for ozone and fine particulate matter (PM<sub>2.5</sub>) based on data from the EPA Air Quality Index (EPA AirData). This is likely due to several factors, including the I-91 interstate that runs along the city and over some neighborhoods, several point sources, including factories and power plants, and the fact that the city is in a valley and that pollution travels from other sources and settles. Ozone, PM<sub>2.5</sub> and outdoor air pollution have been shown to lead to morbidity for several chronic diseases including asthma, chronic obstructive pulmonary disease (COPD), cardiovascular disease, with recent studies also suggesting an association with diabetes (Anderson 2012, Brook 2004, Ko 2009, Rajagopalan 2012).

In addition, air pollution affects the development of lungs and is linked to low birth weight and pre-term birth and susceptibility to infections. According to the EPA, fine particle pollution causes early death (both short-term and long-term exposure) and may cause reproductive and developmental harm (U.S. Environmental Protection Agency, *Integrated Science Assessment for Particulate Matter*, December 2009 EPA 600/R-08/139F). In 2013 the World Health Organization concluded that outdoor air pollution is carcinogenic to humans (<http://www.euro.who.int/en/health-topics/environment-and-health/urban-health/news/news/2013/10/outdoor-air-pollution-a-leading-environmental-cause-of-cancer-deaths>).

### **Health Effects Specifically Related to Biomass**

Even though burning wood for fuel is a time-honored tradition, increasingly there is a consensus around the negative health impacts of incineration. The key pollutants from biomass or wood incineration systems are: particulate matter, carbon monoxide, polycyclic aromatic hydrocarbons (PAHs), and heavy metal from contamination or treatment of wood. Fine particulate (pm 2.5) have the greatest risk though all particulates can have a systemic impact. (Hoppins & Jacobs, *Emissions and Health Effects of Wood Biomass Combustion*, 2013). The process is explained below:

Both ultrafine and PM 2.5 particles tend to deposit in the deep lung (alveolar regions), where they penetrate the blood stream and can have systemic biological effects.  
(Hoppins & Jacobs)

particulate pollution, one recent study of emissions from institutional and commercial wood biomass combustion units (2.8–16.4 MW) found that heavy metals and trace elements, which occur naturally in wood fuel, showed a tendency to concentrate in fine particles (Sippula et al. 2009 ). (Hoppins & Jacobs)

### **Valley Effect**

Springfield already experiences poor air quality due to its location in the Connecticut River Valley. The topography makes it more likely that pollutants are caught in the valley and can lead to high pollution events. (Hoppin & Jacobs). Temperature inversions which are common in the Northeast can also trap and concentrate air pollution. This process is explained below:

[C]ommunities located within geographic zones such as valleys, mountainous terrain, or river basins, or where temperature inversions are common, may experience higher levels of exposure because of meteorological and topographical features which allow pollutants to concentrate. The resulting public health impact will be greater among communities in these regions, especially among those with greater population densities. (Hoppins & Jacobs)

### **Particulate Pollution at Any Level Results in Health Problems**

The EPA has strengthened its standards for pm 2.5 in 2013. In part the improvement in outdoor particulate pollution is due to these new standards which have lowered particulate pollution as well as the closing of the Mt Tom power plant and the switch of some local power plants from coal to natural gas fuel. Even though these decreases are significant, they are not enough. Studies have not found a “no-risk” level for particulates:

The US EPA lowered the annual PM2.5 standard to in 2013, but studies have observed premature mortality at much lower levels (Crouse et al. 2012 ; Krewski et al. 2009 ). Numerous epidemiological studies examining the relationship between increase in PM 2.5 pollution and the most serious adverse health outcomes such as premature death or hospitalizations associated with heart or pulmonary conditions have not been able to identify a level of “no risk” (i.e., a no-threshold model) (Pope and Dockery 2006 ; Brook et al. 2010 ). **This implies that health protection is expected to improve with reductions in air pollution at any level.** (Hoppins & Jacobs, emphasis added).

## Potential Exacerbation of Existing Health disparities in Springfield

Springfield is already burdened with a high level of health disparities. The Biomass plant has the potential to negatively impact residents who already suffer poor health outcomes.

Chronic illness, such as preexisting respiratory disease, puts people at greater risk of adverse outcomes associated with exposure to fine particulate exposure. In addition, some populations are more susceptible to health effects because of their age or condition. For example, pregnant women, infants, children, the elderly, and individuals already burdened by significant environmental, social and economic stressors are more likely to be adversely affected by exposure to air pollution (Hoppin & Jacobs).

The following data show how Springfield residents already experience large health disparities when compared to the state. Residents are disproportionately impacted by high rates of asthma, stroke, chronic obstructive pulmonary disease (COPD), obesity, hypertension, childhood lead poisoning, and diabetes.

- **Respiratory Disease**

- **Asthma** – An estimated 18% of Springfield residents have asthma, which is 60% higher than the state prevalence (MDPH, Behavioral Risk Factor Surveillance Survey [BRFSS] 2012). Residents experience high morbidity due to asthma with ER visit rates 3 times higher than that of the state and more than double the national rate (Table 1). Schoolchildren have an asthma prevalence of close to 18.6%, compared to 12.4% statewide and 8.6% nationwide (MDPH 2013-2014).
- **COPD** – Springfield residents experience this disease that typically affects older adults at an ER visit rate double that of the state (Table 1).

- **Stroke and Hypertension** – Springfield residents experience over double the rate of hypertension emergency room visits than the state. Springfield hospitalization rates for stroke are 15% higher than the state (Table 1).

Neighborhood	Emergency Room Visit Rates**			Hospitalization Rates***
	Asthma	Hypertension	COPD	Stroke
<i>Springfield</i>	1593	301	1976	281
<i>Massachusetts</i>	586	131	894	246

\*\* 2009-2011 Emergency Room Visit Dataset, MDPH; Age-adjusted per 100,000

\*\*\* 2009-2011 Inpatient Hospitalization Discharge Dataset, MDPH; Age-



adjusted per 100,000

When examining through a lens of race and ethnicity, Springfield Black and Latino residents experience disproportionately poorer health outcomes. Latinos are more than 3 times as likely to end up in the ER for asthma and Blacks are twice as likely than Whites in Springfield. Similarly, Hispanics and Blacks are twice as likely to be hospitalized for cardiovascular diseases. Communities of color face even greater risk from the addition of pollution from the biomass plant and related traffic.

### **Biomass and Climate Change Health Impacts**

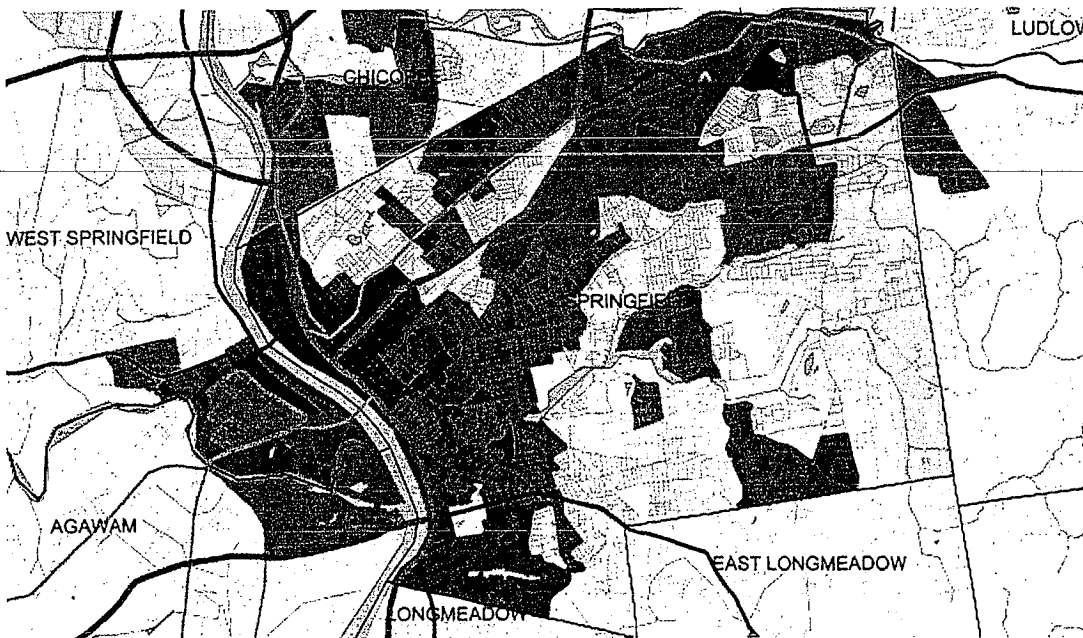
The likely impacts of climate change are expected to increase the health disparities in Springfield. Increases in temperature, increased precipitation and flooding may create even greater disparities and negatively impact individuals with pre-existing conditions and other vulnerable populations as follows:

- Increases in temperature and heat waves– Individuals with diabetes, obese individuals, children, elderly, hypertension, stroke, and depression are all at risk for negative effects of increases in temperature (Kovatz 2008). In some cases, such as children and older adults, bodies have a difficult time adjusting to the increased temperature, particularly in the absence of air conditioning. Elderly adults in assisted living institutions have been found to be at particular risk. Heat stress can also increase strain on the cardiovascular system which would negatively impact those with existing cardiac disease (e.g. stroke). Also, some common medications may prevent the body from adjusting to increased heat (e.g. diuretics used to treat hypertension). The increase in temperature may also increase ozone pollution levels which would potentially adversely affect all residents but particularly vulnerable populations which include the elderly, children, and individuals with asthma, COPD, stroke, and diabetes (Eze 2014)(Anderson 2012; Brooke 2004).
- Flooding or extreme weather conditions would have the potential to destroy or cause damage to houses – Damage sustained from these conditions would lead to exposure to hazards in the home, including lead, asbestos and mold. Disrepair could also create opportunity for pest infestation, which is a trigger for asthma morbidity, in addition to mold exposure. It is estimated that 21% of asthma cases can be attributable to mold and moisture exposure in housing and buildings (Mudarri & Fisk 2007).
- Extreme weather events Such events may negatively impact mental health due to the stress and strain of homelessness, loss of property, etc.
- Rising temperatures, increased precipitation and flooding, and extreme weather events that will likely occur as a result of climate change may negatively affect the health of a large number of at-risk Springfield residents, including those with asthma, COPD, stroke, hypertension, diabetes, obesity, depression.
- ***These negative effects may exacerbate large existing health disparities if measures are not taken to increase resiliency of the city and its residents.***

Introduction of a biomass incinerator into this precarious situation will add another burden of pollution to an already stressed community.

### Springfield's Environmental Justice Community Status

In addition to the health disparities, the potential environmental and health impacts on Environmental Justice communities with the introduction of a biomass incinerator should be considered. Environmental Justice communities are those identified as having vulnerable populations that often experience disproportionate exposure to environmental hazards. The state of Massachusetts' Executive Office of Energy and Environmental Affairs established an EJ policy that aims to reduce potential added environmental burdens on Environmental Justice communities in Massachusetts, specifically focusing on neighborhoods that have a large percentage of low-income, minority racial/ethnic populations, immigrant, or non-English speaking populations.<sup>187</sup> Based on these measures, much of Springfield is designated as Environmental Justice community. The map below shows the Massachusetts Executive Office of Energy and Environmental Affairs mapping of environmental justice communities in Springfield based on low income. It shows that the area near the planned biomass plant includes both low income and minority populations.



Environmental Justice Populations  
 Minority  
 Income  
 English Isolation  
 Minority and Income  
 Minority and English Isolation  
 Income and English Isolation  
 Minority, Income and English Isolation

2000 Census Tracts

Neighboring States

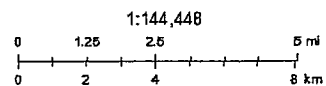
Scale

## Springfield MA NATA Cancer Risk



July 13, 2016

- |                         |                         |                         |                     |
|-------------------------|-------------------------|-------------------------|---------------------|
| +                       | Digitized Point         | [Light Gray Box]        | 60 -70 percentile   |
| EJSCREEN_Indexes        |                         | [Medium-Light Gray Box] | 70 -80 percentile   |
| [White Box]             | Data not available      | [Medium Gray Box]       | 80 - 90 percentile  |
| [Light Gray Box]        | Less than 50 percentile | [Dark Gray Box]         | 90 - 95 percentile  |
| [Medium-Light Gray Box] | 50 -60 percentile       | [Darkest Gray Box]      | 95 - 100 percentile |



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), Swire, © OpenStreetMap contributors, and the GIS User Community  
EPA OEL OEL

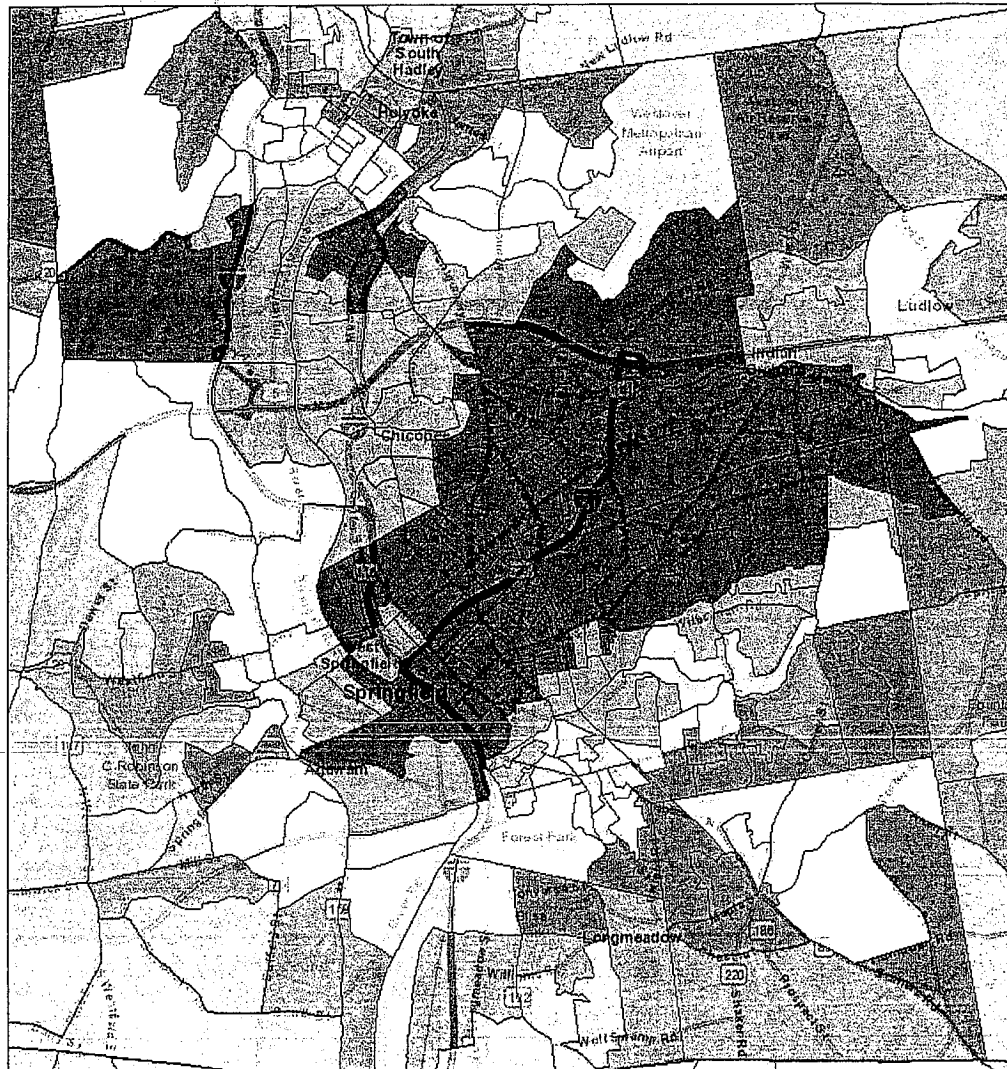
EJSCREEN2016

<https://ejscreen.epa.gov/mapper/index.html?wherestr=springfield%2C+ma>

In fact, Springfield residents are particularly vulnerable to any increase in particulate matter, (PM 2.5). According to the EPA's EJSCREEN environmental justice mapping and screening tool, compared to the state and the country, residents in Springfield already experience disproportionate exposure to PM 2.5 because of their status as an environmental justice community. Any increase in PM 2.5, has the potential to increase already serious health disparities and worsen the environmental impact on already vulnerable populations.

Springfield is also vulnerable because of the number of industrial sites in the area. The map below shows that Springfield has more facilities with Risk Management Plans (potential chemical accident management plans) than 95% of the rest of the country.

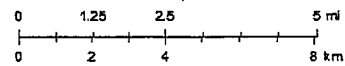
Springfield MA RMP Proximity



July 13, 2016

1:144,448

- |                          |                     |
|--------------------------|---------------------|
| <b>+</b> Digitized Point | 60 -70 percentile   |
| <b>EJSCREEN_indexes</b>  | 70 -80 percentile   |
| Data not available       | 80 - 90 percentile  |
| Less than 50 percentile  | 90 - 95 percentile  |
| 50 -60 percentile        | 95 - 100 percentile |



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), Swisstopo, © OpenStreetMap contributors, and the GIS User Community  
EPA OEL, OEL

EJSCREEN 2016

Source: <https://ejscreen.epa.gov/mapper/index.html?wherestr=springfield%2C+ma>

The health impacts of biomass have not been considered in developing policy on the siting and regulation of biomass energy (Hoppin & Jacobs). A health impact assessment process, with an equity lens, as a way of understanding the current research and projections about impacts of biomass plant on Springfield's vulnerable populations is needed to fully understand the potential health outcomes. As noted before, the Health Risk Assessment done by PRE did not use existing methods to model change in asthma hospitalization and ED use or cancer risk. The MA DPH stated in a letter to PRE that their methods of comparison to benchmarks were unsatisfactory. A comprehensive HIA could incorporate more accurate methods of comparison.

The proceedings of the UMass Lowell 2011 Symposium on Wood Biomass for Heat & Power: Addressing Public Health Impacts concludes with a framework that states the need to *"Prioritize public health in wood biomass decision-making across the Northeast"* and to *"Promote a better understanding and consideration of the impacts of wood biomass on susceptible and vulnerable populations, as well as measures to prevent or reduce hazardous exposures to reduce disproportionate health effects."* A site assignment review is an opportunity to implement these goals in Springfield.

Public health concerns from the proposed biomass plant have not been fully addressed in the approval process. We urge the City of Springfield Board of Health to institute a site assignment review and Health Impact Assessment to protect the health and well-being of Springfield residents, and, in particular, its most vulnerable residents.

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**THE PROPOSED BIOMASS FACILITY WILL ACCELERATE CLIMATE CHANGE**

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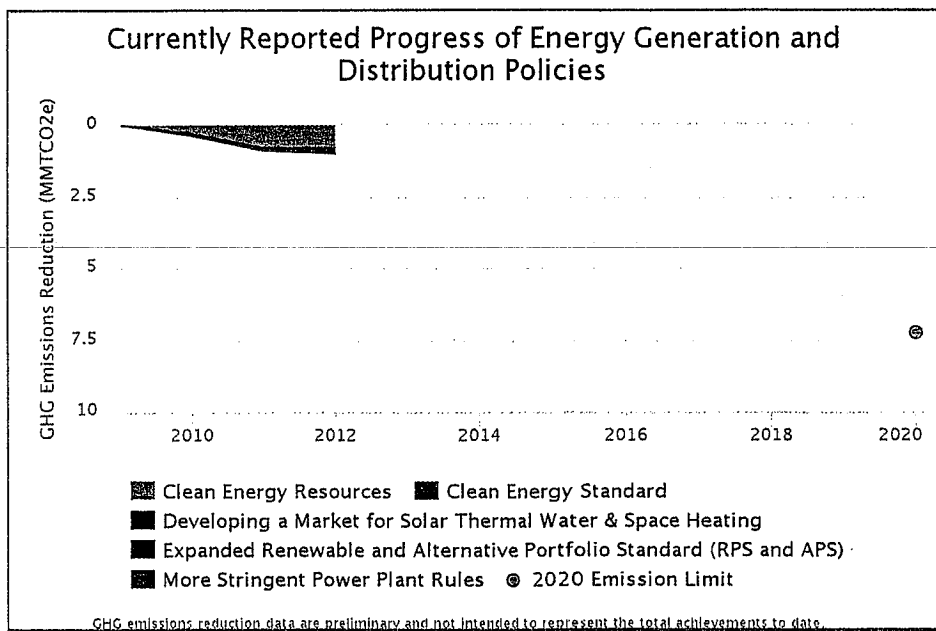
The Commonwealth of Massachusetts in 2008 enacted the Global Warming Solutions Act (GWSA), one of the first and most important state laws to reduce greenhouse gas (GHG) emissions in the United States. Unfortunately, the GHG emissions associated with the proposed biomass facility, both from the combustion of biomass fuel and petroleum-powered vehicles that will harvest and deliver it, will actually increase GHG emissions, which is counter to the intent and legal requirements of the GWSA.

This section summarizes the incompatibilities of the proposed Springfield biomass facility with the GWSA and related state, regional, and local climate change plans.

### 1. The Proposed Biomass Facility is Inconsistent with the GHG Reduction Requirements of the GWSA

Any project that increases GHG emissions in Massachusetts—even if the emissions are within the Department of Environmental Protection’s regulatory limits—will impede the state’s legal obligation to comply with the GWSA’s requirement to reduce GHG emissions 25% by 2020 and 80% by 2050 (from 1990 baseline levels).

- As of the most recent reporting available from MA DEP (2012), statewide GHG emissions from energy generation and distribution are down only 1.5 million metric tons of carbon equivalent emissions (MMTCO<sub>2</sub>e) from the 1990 baseline (see graphic). Therefore, an additional 6 MMTCO<sub>2</sub>e of GHG reductions must be achieved from this sector economy in the next three-and-a-half years to meet its share (7.5 MMTCO<sub>2</sub>e) of the statutorily required total 25% total statewide GHG reduction and which the Massachusetts SJC affirmed in its May 17, 2016 decision. The DEP is now developing regulations to comply with the SJC’s decision and achieve the GHG reductions required by the GWSA.



- It can take up to 30 years for a biomass facility to achieve the “break even” point when the amount of carbon released through burning of biomass fuels is offset by the carbon sequestration that occurs during the growth of the trees and vegetation that will ultimately be burned by the facility. Thus, the proposed biomass facility will make little or no contribution to the immediate GHG reductions that are needed by 2020 to meet the requirements of the GWSA—and indeed may actually increase carbon emissions in the short term, depending on speed with which

Source: Massachusetts Department of Environmental Protection GWSA Reporting  
[www.mass.gov/eea/air-water-climate-change/climate-change/massachusetts-global-warming-solutions-act](http://www.mass.gov/eea/air-water-climate-change/climate-change/massachusetts-global-warming-solutions-act)

the areas that will supply the fuel to the facility are reforested (Manomet Center for Conservation Sciences, Biomass Sustainability and Carbon Study, prepared for MA DOER 2010 <[www.mass.gov/eea/docs/doer/renewables/biomass/manomet-biomass-report-full-hirez.pdf](http://www.mass.gov/eea/docs/doer/renewables/biomass/manomet-biomass-report-full-hirez.pdf)>).

- Under DEP regulations effective August 17, 2012 that define “renewable” sources of energy (22 CMR 14.00 <[www.mass.gov/courts/docs/lawlib/220-229cmr/225cmr14.pdf](http://www.mass.gov/courts/docs/lawlib/220-229cmr/225cmr14.pdf)>), a biomass facility shall not receive full credit as a renewable energy source (for which renewable energy credits are awarded) unless the plant achieves at least 60% efficiency. The proposed biomass plant has an efficiency rating of 27.8% (DEP Conditional Approval Letter, June 30, 2011 <[www.mass.gov/eea/docs/dep/public/hearings/precpa-en.doc](http://www.mass.gov/eea/docs/dep/public/hearings/precpa-en.doc)>) and therefore may be included in the Massachusetts Renewable Energy Portfolio. Even if the facility achieves the 33% efficiency within five years through the optimization of the fuel mix, as the proponent claims is possible in their response to public comments (June 30, 2011 <[www.mass.gov/eea/docs/dep/public/hearings/prertc.pdf](http://www.mass.gov/eea/docs/dep/public/hearings/prertc.pdf)>), the facility will still not be considered a renewable energy source by the DEP. Biomass facilities that do not qualify as “renewable” will no longer qualify for ratepayer-funded incentives, which increases the financial uncertainty of their success.

## **2. The Proposed Biomass Facility is not Consistent with Recommendations of the 2011 Massachusetts Climate Adaptation Plan**

This 2011 plan recommends the expansion of the Commonwealth’s renewable energy portfolio through increased wind and solar energy generation capacity. Biomass expansion is not included or mentioned in any of the plan’s short or long term recommendations.

<[www.mass.gov/eea/docs/eea/energy/cca/eea-climate-adaptation-report.pdf](http://www.mass.gov/eea/docs/eea/energy/cca/eea-climate-adaptation-report.pdf)>

## **3. The Proposed Biomass Facility is not Consistent with the 2012 Pioneer Valley Climate Action Plan**

According to this plan, there were no new biomass, wind or hydro projects in Hampden or Hampshire Counties from 2008 to 2012. This plan notes that there is increasing uncertainty about the environmental benefits and economic feasibility of biomass facilities in general. The plan cites a possible explanation given in 2012 by (then) Secretary Richard K. Sullivan, Secretary of the Massachusetts Executive Office of Energy and Environmental Affairs that new research on energy generation from biomass “runs counter to previous and commonly-held views of biomass as ‘carbon neutral’”; the plan concludes that more research on biomass is needed.

<[www.pvpc.org/plans/climate-action-and-clean-energy-plan](http://www.pvpc.org/plans/climate-action-and-clean-energy-plan)>

This plan notes that of the 181 kWh/year of “clean” energy capacity added in the Pioneer Valley between 2008 and 2012, only 1% was generated by biomass. The plan’s carbon reduction recommendations mention biomass just once, calling for increased investment in biomass facilities, but as part of a broader effort that focuses first on conservation and also includes solar, wind, and hydro.

## **4. The Proposed Biomass Facility is not consistent with the proposed scope of the Springfield Climate Justice Plan to be completed in 2016-17**

The City in 2015 began the process of producing its own climate justice plan and will complete this work in the coming 18 months with funds from the U.S. Department of Housing and Urban Development’s National Disaster Resilience Competition awarded in January 2016. Broad goals of this plan include helping the City achieve its proportional fair share of GHG reductions to

comply with the GWSA and mitigating the disproportionate health and economic burdens that the City's elderly, low-income residents, and residents of color are already experiencing from climate-related impacts, including asthma heat stroke, high energy costs for cooling. (See page 49 (pdf page 55) of the City's October 27, 2015 National Disaster Resilience Competition application to HUD <[www.springfield-ma.gov/planning/fileadmin/community\\_dev/DR/NDRC\\_Phase\\_II\\_Complete\\_Application\\_public.pdf](http://www.springfield-ma.gov/planning/fileadmin/community_dev/DR/NDRC_Phase_II_Complete_Application_public.pdf)>

Therefore, the addition of another source of GHG emissions in close proximity to disadvantaged residents of Springfield is not consistent with the goals of this City-led process. Already, Springfield is home to two of the state's top GHG polluters: #17 Berkshire Power (which recently paid \$8.5 million in civil and criminal fines to end an investigation into tampering with air pollution monitoring equipment and falsified air quality reports) and #25 Solutia of Indian Orchard Neighborhood (MA DEP GHG Emissions Inventory 2012 (<[www.mass.gov/eea/docs/dep/air/priorities/app05pnt.pdf](http://www.mass.gov/eea/docs/dep/air/priorities/app05pnt.pdf)>))

"There is a new and critically important legal context stemming from the state Supreme Judicial Court's decision in Kain, et al. v. Department of Environmental Protection, decided on May 17 of this year. The Kain decision requires that DEP issue regulations that ratchet down greenhouse gases annually, as a roadmap to reaching Massachusetts' ambitious goal under the state Global Warming Solutions Act of reducing greenhouse gas emissions 25 percent by 2020. Given that New England's electricity grid operator, ISO New England, announced last month that greenhouse gases in Massachusetts had in fact increased by five percent over the previous year, the new regulations are likely to have consequences for electricity generation, one of the highest emitting greenhouse gas sectors. With these significant questions about the the impacts of green house gas-emitting power plants and the new regulations yet to be released, this permit should be very carefully considered and stayed until the new regulations are put in place."



56 Mass.App.Ct. 820  
Appeals Court of Massachusetts,  
Worcester.

LEOMINSTER MATERIALS CORPORATION  
v.  
TOWN OF LANCASTER.

No. 01-P-187.

|  
Argued Sept. 9, 2002.

|  
Decided Dec. 20, 2002.

|  
Further Appellate Review Denied Feb. 27, 2003.

Concrete company appealed from decision of the town board of health which prohibited company from operating proposed concrete and rock-crushing plant pending further proceedings to determine whether the operation was a noisome trade. Town moved for summary judgment on the ground that the action was premature. The Superior Court Department, Worcester County, John S. McCann, J., granted town's motion. Company appealed. The Appeals Court, Doerfer, J., held that appeal was premature, as town had not prohibited company from operating but rather only asserted jurisdiction over the plant site pursuant to noisome trade statute.

Affirmed.

West Headnotes (8)

[1] **Health**

↳ Duties and Liabilities

**Municipal Corporations**

↳ Public Health

**Nuisance**

↳ Acts Authorized or Prohibited by Public Authority

A town, acting through its board of health, has the statutory power to prohibit certain noisome activities within its borders or to confine them to places assigned for such purposes. M.G.L.A. c. 111, § 143.

Cases that cite this headnote

[2] **Municipal Corporations**

↳ Public Peace and Order

A town may designate a particular place or places where a noisome trade may be carried on. M.G.L.A. c. 111, § 143.

Cases that cite this headnote

[3] **Nuisance**

↳ Summary Remedies

When a town acts under statute regarding a noisome trade, it is exercising summary powers and its orders must be obeyed pending the outcome of the appeal process. M.G.L.A. c. 111, §§ 143, 147.

Cases that cite this headnote

[4] **Nuisance**

↳ Actions

When a town prohibits or limits a noisome trade, the character of the trade or activity in question, which is the predicate for the order of a board of health, is an issue to be determined at trial. M.G.L.A. c. 111, § 143.

Cases that cite this headnote

[5] **Health**

↳ Unsafe or Unhealthful Premises

Concrete company's appeal of interlocutory order by town's board of health, which prohibited company from building and operating concrete and rock-crushing facility pending administrative review, was premature, as order merely asserted jurisdiction over the siting of company's operations pursuant to noisome trade statute; order did not prejudice company's substantial rights, and order did not determine that company was a noisome business or forbid it to operate anywhere in the town. M.G.L.A. c. 111, §§ 143, 147.

Cases that cite this headnote

[6] **Administrative Law and Procedure**

↔ Persons Aggrieved or Affected

Judicial review of administrative action is available only to those who are aggrieved in a legal sense and can show that their substantial rights have been prejudiced.

Cases that cite this headnote

[7] **Declaratory Judgment**

↔ Existence and Effect in General

The rationale against interlocutory review of an administrative action is particularly cogent when a proceeding is still in its earliest stages and the party seeking declaratory relief has access to additional administrative procedures which may correct or render moot any alleged error.

Cases that cite this headnote

[8] **Administrative Law and Procedure**

↔ Dismissal

**Administrative Law and Procedure**

↔ Finality; Ripeness

When damages for past conduct are sought which cannot be awarded by an administrative agency, dismissal of an interlocutory appeal from that agency's decision may give rise to serious problems in the application of the statute of limitations; in such cases the proper course may be to stay the action instead of dismissing it.

Cases that cite this headnote

**Attorneys and Law Firms**

\*\*146 \*\*820 Roger J. Brunelle, Worcester, for the plaintiff.

Carol E. Kamm for the defendant.

Present: JACOBS, DOERFER, & COHEN, JJ.

**Opinion**

DOERFER, J.

Leominster Materials Corporation (LMC) proposed to build a bituminous concrete (asphalt) plant and stone crushing facility on the land it leased in the town of Lancaster (town). The board of health of the town (board), by a letter to LMC dated July 10, 1997, determined that the activity proposed by LMC "may be a 'noisome trade' [ 1 ] as that term is \*821 used in G.L. c. 111, § 143."<sup>2</sup> It further ordered: "Therefore, the Board of Health requires that you submit a site assignment application to the Board prior to constructing or operating the proposed plant. Thereafter, the Board will conduct a public hearing in accordance with G.L. c. 111, [§] 143."

<sup>1</sup> "Noisome" derives from Middle English "noiesom" or "noysome," from "noy," harm, short for "anoy," from Old French, from "anoier," to annoy. Usage: "Noisome, Noxious. These words have to a great extent been interchanged; but there is a tendency to make a distinction between them, applying *noxious* to things that inflict evil directly; as, a noxious plant, noxious practices, etc., and *noisome* to things that operate with a remoter influence; as, noisome vapors, a noisome pestilence, etc. Noisome has the additional sense of disgusting. A garden may be free from noxious weeds or animals; but, if recently covered with manure, it may be filled with a noisome smell." Webster's Revised Unabridged Dictionary of the English Language 979 (1913).

Strictly speaking, the board may have employed the term "noisome" more broadly than it is used in G.L. c. 111, § 143, which refers to "noisome and injurious odors." The drift of the board's preliminary determination that the character of the proposed business fell within its jurisdiction under this statute was clear.

<sup>2</sup> The town had held a public hearing on the question.

On July 14, 1997, LMC filed a complaint (subsequently amended) in which it claimed a right under G.L. c. 111, § 147, to have a jury annul the determination of the board that the plant "may be a 'noisome trade'" and vacate the board's order prohibiting LMC from operating its plant pending further proceedings. It also sought damages sustained as a result of being "deprived of its right to operate its plant for the period of this appeal" by the

\*\*147 order in question.<sup>3</sup> At no time did LMC file an application for a site assignment with the board or take any other action at the administrative level.

3 Monetary damages or costs are provided for under G.L. c. 111, § 150: "If the order is affirmed by the verdict, the board shall recover costs to the use of the town; if it is annulled and the petitioner has not been specially authorized by said board to exercise such trade or employment during the proceedings, he shall recover damages and costs against the town; if it is annulled and the petitioner has been specially authorized as aforesaid, or if it is altered, he shall not recover damages, and the court may render judgment for costs in its discretion."

The town moved for summary judgment on the ground that LMC's action was premature.<sup>4</sup> A judge of the Superior Court allowed the town's motion on this ground. LMC's motion for reconsideration was denied after a hearing. This appeal followed. We affirm.

4 The other grounds for the motion are immaterial and not discussed here.

[1] *The statutory scheme.* A town, acting through its board of health, has the statutory power to prohibit certain noisome \*822 activities within its borders or to confine them to places assigned for such purposes. General Laws c. 111, § 143, states in pertinent part:

"No trade or employment which may result in a nuisance or be harmful to the inhabitants, injurious to their estates, dangerous to the public health, or may be attended by noisome and injurious odors shall be established in a city or town except in such a location as may be assigned by the board of health thereof after a public hearing has been held thereon, subject to the provisions of [G.L. c. 40A] and such board of health may prohibit the exercise thereof within the limits of the city or town or in places not so assigned, in any event. Such assignments shall be entered in the records of the city or town, and may be revoked when the board shall think proper."<sup>5</sup>

5 Section 143 continues: "The department of environmental protection shall advise, upon request, the board of health of a city or town previous to the assignment of places for the exercise of any trade or employment referred to in this section, and any person, including persons in control of any public

land, aggrieved by the action of the board of health in assigning certain places for the exercise of any trade or employment referred to in this section may, within sixty days, appeal from the assignment of the board of health to the department and said department may, after a hearing rescind, modify or amend such assignment."

[2] The statute has been construed to authorize a town to forbid the exercise of a particular noisome trade anywhere in the town. *Taunton v. Taylor*, 116 Mass. 254, 260 (1874).<sup>6</sup> *Revere v. Blaustein*, 315 Mass. 93, 95, 51 N.E.2d 772 (1943). A town may also designate a particular place or places where such a trade may be carried on. *Revere v. Riseman*, 280 Mass. 76, 82, 181 N.E. 716 (1932).

6 Construing Gen. Sts. (1860) c. 26, §§ 52, 60, an earlier version of the statute.

[3] [4] When a town acts under this statute, it is exercising summary powers and its orders must be obeyed<sup>7</sup> pending the outcome of the appeal process specified in G.L. c. 111, § 147. See *Taunton v. Taylor*, *supra*. The character of the trade or activity in question, \*823 which is the predicate for the order of a board of health, is an issue to be determined at trial. *Ibid*.

7 General Laws c. 111, § 148, provides: "Such trade or employment shall not be exercised contrary to the order while such proceedings are pending, unless specially authorized by the board; and if so specially authorized all further proceedings by the board shall be stayed while such proceedings are pending. Upon any violation of the order, unless specially authorized as aforesaid, the proceedings shall forthwith be dismissed."

*Accrual of a right to bring action under G.L. c. 111, § 147.* By its terms, G.L. c. 111, § 147, gives a right to bring an action to anyone who is "aggrieved by an order made under" § 143.<sup>8</sup> Furthermore, the action must be brought "within three days of service of the order upon [the aggrieved party]."<sup>9</sup> *Ibid*.

8 "Whoever is aggrieved by an order made under Section one hundred and forty-three ... may, within three days after service of the order upon him, give written notice of appeal to the board ... and file a petition for a jury in the superior court in the county where the premises affected are located, and, after notice to the board ... may have a trial in the same

manner as other civil cases are tried by jury....” G.L. c. 111, § 147.

9 We do not pause to consider whether formal “service” of an order was made since the action was brought within three days of the action complained of.

[5] LMC claims to be aggrieved because it was ordered,<sup>10</sup> in substance, not to build or operate during the time that the board would have a request for a site assignment under review.<sup>11</sup> The board's order was, however, merely interlocutory and not a final determination that LMC was forbidden to operate anywhere or only at certain places in the town.<sup>12</sup> The order preserved the status quo for a time during which the board could complete its \*824 consideration<sup>13</sup> of where, if anywhere, LMC could start to operate its business.<sup>14</sup>

10 An order was made in this case. The town ordered LMC not to construct or operate the proposed plant until it had filed an application for a site assignment and such an assignment had been made. The fact that the order was expressed in a sentence that did not use the imperative to describe what LMC shall not do, is immaterial. LMC was clearly forbidden by the town to build or operate its plant until a site application had been filed (and approved) for such operation.

11 It does not matter that there is no specific statutory mechanism for the board to manage an application for a site assignment. The board was free to adopt a reasonable process for considering LMC's request to be assigned a site for its operations. See *Coonamessett Inn v. Chief of Falmouth Fire Dept.*, 16 Mass.App.Ct. 632, 635–637, 454 N.E.2d 914 (1983). The town was no doubt operating by analogy to other environmental regulatory schemes which specifically provide for a site assignment process. See, e.g., G.L. c. 111, § 150A (site assignment process for solid waste sites in a town), discussed in *Wood Waste of Boston, Inc. v. Board of Health of Everett*, 52 Mass.App.Ct. 330, 333–334, 753 N.E.2d 833 (2001).

12 The town's reliance on *American Friends Serv. Comm. v. Commissioner of the Dept. of Env'tl. Protection*, 30 Mass.App.Ct. 457, 569 N.E.2d 833 (1991), is misplaced. That case held only that there is no right of appeal (to the Department of Environmental Protection) of a determination by a board of health that a certain activity is *not* harmful. *Id.* at 460, 569 N.E.2d 833. It did not address the issue in this case: whether a decision of a board of health can

be reviewed upon an assertion of jurisdiction by a board that a business may be a noisome trade, but where no final decision has been made to circumscribe or eliminate the locations where the business may operate in the town.

13 We are not presented with a situation in which the board unreasonably delayed consideration of an applicant's application for assignment of a site. See *Trust Ins. Co. v. Commissioner of Ins. (No. 1)*, 48 Mass.App.Ct. 617, 624–625, 724 N.E.2d 710 (2000).

14 We note from the summary judgment record that LMC had not begun construction or operation of its asphalt and stone crushing business and must have reasonably understood that the character of its proposed operations would attract scrutiny by the board.

[6] [7] The concept of being “aggrieved” to the point of being entitled to judicial review does not extend to interlocutory orders of this kind. Judicial review of \*\*149 administrative action is available only to those who are aggrieved in a “legal sense” and can show that their “substantial rights” have been “prejudiced.” *Duato v. Commissioner of Pub. Welfare*, 359 Mass. 635, 637–638, 270 N.E.2d 782 (1971). “The rationale against interlocutory review ... is ‘particularly cogent’ when a proceeding is still in ‘its earliest stage[s],’ *Assuncao's Case*, 372 Mass. 6, 9, 359 N.E.2d 1304 (1977), and the party seeking declaratory relief has access to additional administrative procedures which may correct or render moot any alleged error.” *McKenney v. Commission on Judicial Conduct*, 380 Mass. 263, 266, 402 N.E.2d 1356 (1980).<sup>15</sup>

15 In another context, we have said: “An appeal from an interlocutory order is an imposition on the time and resources of the parties and the judiciary because the questions formed as a consequence of the interlocutory order may vanish or change as a result of the administrative agency's action after remand.” *Federman v. Board of Appeals of Marblehead*, 35 Mass.App.Ct. 727, 729, 626 N.E.2d 8 (1994).

Furthermore, we are not prepared to say that judicial review under this statute is governed by cases decided under the Administrative Procedure Act, G.L. c. 30A, given the unusual grant of a right to a jury trial, the broad powers of a jury in such cases, the right to damages, and the short statute of limitations. But the policy behind the doctrines of exhaustion of administrative remedies

and ripeness apply here. See *East Chop Tennis Club v. Massachusetts Commn. Against Discrimination*, 364 Mass. 444, 448–452, 305 N.E.2d 507 (1973); *J. & J. Enterprises, Inc. v. Martignetti*, 369 Mass. 535, 539–541, 341 N.E.2d 645 (1976). See also *East Longmeadow v. State Advisory Commn.*, 17 Mass.App.Ct. 939, 941, 457 N.E.2d 636 (1983) (“On this record, ... resort to the courts has been premature”).

The consequence of a finding by the board that the business \*825 to be conducted by LMC “may be a ‘noisome trade’ ” is no more than an assertion of jurisdiction by the board over the siting of LMC’s operations. LMC has not shown that its substantial rights have been prejudiced by being required to submit to a deliberative process by which the board can determine where, if at all, its business should be located in the town. Until the board considers the matter and forbids or circumscribes the proposed operations, LMC has not been harmed in a legal sense, is not aggrieved, and has no right to judicial review pursuant to G.L. c. 111, § 147. If the board had considered an application for a site assignment and had acted, LMC would then have had an opportunity<sup>16</sup> to persuade a jury that it is not a noisome business or, if it failed in that regard, to persuade the jury to exercise its powers under G.L. c. 111, § 149.<sup>17</sup>

<sup>16</sup> Just prior to oral argument, the town moved to dismiss the appeal on the grounds that the controversy was moot, because (1) LMC’s building permit was revoked shortly after this action was commenced (and LMC eventually abandoned its appeal of that action), and (2) LMC subsequently disposed of its interest in the land in question. LMC opposed dismissal for mootness, claiming that it

could prove and recover damages if it prevailed in this appeal, even though its original site was no longer available for the proposed business. No conclusion about whether this appeal is moot can be made without resolving the factual and legal issues raised by LMC’s claim that it would be entitled to damages if it prevailed in this appeal. Having resolved the appeal on the merits adversely to LMC, there is no need to analyze the mootness issue further.

<sup>17</sup> The statutory authority of the jury is broad: “The verdict may alter, affirm or annul the order, and ... shall have the authority and effect of a valid order of the board, and may also be enforced by the court in equity.” G.L. c. 111, § 149.

[8] To the extent that LMC was concerned about the short statute of limitations, it could have requested a stay and completed the administrative process. “[W]here damages for past conduct are \*\*150 sought which cannot be awarded by the agency, dismissal may give rise to serious problems in the application of the statute of limitations. In such cases the proper course may be to stay the action instead of dismissing it. *Carnation Co. v. Pacific Westbound Conference*, 383 U.S. 213, 222–223, 86 S.Ct. 781, 15 L.Ed.2d 709 (1966). Cf. *United States v. Michigan Nat’l Corp.*, 419 U.S. 1, 5–6, 95 S.Ct. 10, 42 L.Ed.2d 1 (1974); \*826 *Ricci v. Chicago Mercantile Exch.*, 409 U.S. 289, 302–306, 93 S.Ct. 573, 34 L.Ed.2d 525 (1973).” *J. & J. Enterprises, Inc. v. Martignetti*, 369 Mass. 535, 540, 341 N.E.2d 645 (1976).

*Judgment affirmed.*

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