# Needham Board of Health

## Revised AGENDA

**Thursday June 14, 2018**
**7:00 – 8:30 p.m.**

**Multipurpose Room – Center at the Heights**
**300 Hillside Avenue, Needham MA 02494**

- **7:00 to 7:05 – Welcome & Review of Minutes (May 11th)**
- **7:05 to 7:35 – Staff Reports (May)**
- **7:35 to 7:50 – Review & Discussion – Streetlight Replacement & Health Impact**
- **7:50 to 8:00 – Review & Discussion – Radio Frequencies & Health Impact**
- **8:00 to 8:10 – Review & Discussion – Recreational Marijuana & Health Impact**
- **8:10 to 8:25 – Continued Discussion: Goal Setting for FY 2019 and FY 2020**
- **8:25 to 8:30 – MA Sierra Club and the Health Effects of Natural Gas**
- **8:30 – Other Items**
- **Next Meeting (tentatively Friday July 20th 7:00 – 9:00 a.m.)**
- **Adjournment**

**(Please note that all times are approximate)**

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Needham Board of Health

Meeting Minutes

May 11, 2018

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| Board: | Edward Cosgrove, PhD, Vice Chair<br>Stephen Epstein, MD, MPP, Chair; and<br>Dr. Kathleen Ward Brown, ScD, Member |
| Staff: | Timothy Muir McDonald, Director, Tara Gurge, Assistant Director, Diana Acosta, Maryanne Dinell, Catherine Delano, Carol Read, Tiffany Zike |
| Convene: | 7:05 am, Public Services Building, 500 Dedham Ave., Needham, MA 02492 |

Dr. Stephen Epstein, Chair of the Board of Health, called the meeting to order at 7:05 am

**Approve Minutes**
Dr. Cosgrove made a motion to approve the previous meeting minutes. Dr. Brown seconded the motion. Upon motion duly made and seconded, the minutes of the April 13 meeting were approved. The motion was carried. The vote was unanimous.

**Staff Reports**

**Regional Substance Abuse Coordinator Report—Ms. Carol Read**
Representative Denise Garlick has submitted house Bill 4470, *An Act for Prevention and Access to Appropriate Care and Treatment of Addiction,* which includes a request for a permanent Promote Prevent Commission. The Commission released a report in May which promotes mental, emotional, and behavioral health.

Ms. Read worked with Bill Brooks, Police Chief in Norwood, on the Substance Abuse Prevention Collaborative (SAPC) regional bi-annual town alcohol licensee compliance check program. A meeting with police chiefs, public health directors, and prevention program managers from Dedham, Needham, Norwood and Westwood was held in May. The police chiefs reviewed the protocol and agreed to conduct bi-annual compliance checks in each town.

Ms. Read then discussed the Alcohol Edu which is administered in high school health classes in Dedham, Norwood, Needham, and Westwood. The online curriculum presents the impacts of alcohol on youth and identifies refusal skills for teens. There is also a 20 minute parent component which includes communication techniques for parents. The SAPC grant funds the AlcoholEdu curriculum.

**Assistant Director Report—Ms. Tara Gurge**
Ms. Gurge stated that a few body works practitioner permit applications are still coming in. When Public Health, along with the state inspector and local police, did spot checks of Needham body works establishments we found a few practitioners without permits and are getting them on board.

Ms. Acosta is working on permits for the Farmer's Market which opens May 27th. Tom Gehman, the market manager, is getting more vendors.

Ms. Gurge noted that the Cappella Restaurant build-out has had another setback. Pre-operation inspections are still pending.

Ms. Gurge reported that Homewood Suites (in the industrial area) now has the kitchen and retail store complete and the permits have been issued. Ms. Gurge said that their pool has no Certified Pool Operator (CPO) and she had to explain to the management that borrowing one from Brookline was not acceptable. CPOs are required to monitor the pool, keep and maintain pool chemical logs, and take chemical readings 4 times a day. Homewood Suites is training their staff engineer as the CPO.

Ms. Gurge then reviewed Residence Inn which is closing their pool when the maintenance manager/CPO is not there, per pool variance requirements. The hotel owners have changed and the one maintenance person/CPO is only there once a week. Ms. Acosta said that they are trying to share CPOs but that is not acceptable. Ms. Gurge will check back to make sure the new CPO is on site and trained.

Dr. Epstein asked how the CPO versus lifeguards works. Ms. Gurge said that if there are no lifeguards the CPO has to be on site and accessible during the entire week. Ms. Gurge said that Residence Inn will hire lifeguards for the weekends, since their maintenance manager (current CPO) will not be there on weekends. (They currently have a variance to have no lifeguards on site.)

**Environmental Health Agent Report—Ms. Diana Acosta**

Ms. Acosta said that the town now has designated parking areas for each approved mobile food truck. Ms. Acosta reported that: one new food truck, Bowl Boys, has been permitted; Roadworthy Barbecue, a past vendor, passed their food truck inspection; Curbside Caps will not be returning this year; and the Chicken and Rice Guys truck was inspected on May 9th and met all the requirements.

Ms. Acosta noted that each truck is scheduled on certain days and times on either A Street or Fourth Avenue in the designated parking areas for mobile food trucks. Ms. Acosta said that overall the food truck process is going well.

Dr. Cosgrove asked about Purple Carrot. Purple Carrot is a vegetarian version of the delivery service Blue Apron. Ms. Gurge noted that two years ago the State said no permit was required because Purple Carrot was only a marketing site demonstrating meals for photography purposes. Dr. Cosgrove asked her to check again because it looked like a food delivery operation. Ms. Gurge said that she would check and report back to the Board.

Ms. Acosta visited the Presbyterian Church of Needham where a woman wants to prepare a vegan delivery kit, under the name alFreshCo. Ms. Acosta noted that the church does not have a proper food preparation sink. Ms. Acosta said that if they are able to address this issue then she will consider permitting. She will follow up with the MA Dept. of Public Health and report back to alFreshCo's owner.

Dr. Epstein asked about any follow-up on last month's resident smoking complaint. Ms. Gurge noted that she and Ms. Acosta would be happy to go to the site to witness the offense if the complainant calls again. Ms. Gurge said there were no follow-up complaints this month.

**Traveling Meals Coordinator Report—Ms. Maryanne Dinell**

Ms. Dinell reported that the volunteer appreciation lunch was very nice. Ms. Dinell noted there has been an uptick in meal requests.

Ms. Dinell noted that during the week of May 9th, Roche Bros-Sudbury Farms and Trader Joe's donated large brown paper bags for delivering meals when the hospital mis-ordered them

The job opening for the Summer Traveling Meals Program has been posted and there were six applicants. Offer letters went out to the applicants with previous experience with the program.

Ms. Dinell reported that the Traveling Meals program was featured on Needham Cable and that the Monday volunteers presented the program as a very positive and valued Town service. In answer to a question from Dr. Epstein, Mr. McDonald said that the cable show aired after the uptick so the increase cannot be attributed to the publicity.

**Program Director for Drug Free Community Grant Report—Ms. Catherine Delano**

Ms. Delano reported that a letter was submitted to HR in April to hire the diversion coordinator. The candidate appears to be a good fit and has verbally accepted the position.

Ms. Delano, Mr. McDonald, and Ms. Read met with Needham High School Administration where the administration agreed to implement the MetroWest Health Survey for 6th graders.

Ms. Delano noted that at the National DEA Drug Take Back day, Needham collected about 44 pounds of medication, which is on par with last October's collection day.

Ms. Karen Mullen, who directs SALSA, met with the High School Principal and a student regarding the student's concerns about vaping in the classroom and bathrooms. The student suggested changes to which the Principal and the School Resource Officer were receptive. They will have a follow-up meeting.

Ms. Delano is in discussion with the coalition and school administration to pilot a program for Needham seniors in January 2019. The program will focus on independence in college ("Independence 101" is the working title) and will include substance use prevention, harm reduction, mental health, and wellbeing issues. This is in the beginning phases.

Ms. Delano and her team have been working on policies and procedures for the substance use prevention team.

Mr. McDonald said that Mrs. Lois Sokol has approached him and Ms. Delano to make a presentation to the Rotary club on opioids. She will be in touch with some ideas about dates and a more specific title.

Dr. Epstein noted that there is much more focus on vaping at the federal level so that focus will filter down. He said that Juul is the major brand, it is much smaller now, vapor more translucent so that you can vape in class without being noticed. The package now lists nicotine with some of the ingredients but not all, and the packaging does not say anything about the addictive nature of nicotine. Dr. Epstein added an agenda item for the June AMA meeting to put pressure on the FDA to further regulate the product; a hearing will occur at FDA at some point. Ms. Delano mentioned that some students complain about vaping in class and in the bathrooms on a fairly regular basis. When asked what the coalition is doing, Ms. Delano stated that students from the coalition have met with school administration; the

coalition provided a presentation on vaping to parents in March; and the coalition continues to discuss how to educate and positively impact the Needham community about this issue.

Dr. Epstein noted that one of the Juul cartridges is 5% nicotine by weight, which is equivalent to 1 pack of cigarettes. With the opioid crisis and people more attuned to the addiction issues in general, Dr. Epstein thought maybe we would get more traction. Ms. Delano noted that students have stated that they believe there is no nicotine and no carcinogens and therefore nothing really bad is in them. Students question why adults are concerned. Ms. Delano said that the Coalition would welcome any suggestions from the Board of Health about educational opportunities for the community. Dr. Epstein said we could consider writing as a region or as a Town to the FDA, especially since Needham is known as one of the leaders in Tobacco 21

Ms. Read noted that e-cigarettes are also included in the Tobacco 21 bill which will likely pass in the Senate after passing in the House of Representatives.

According to Ms. Read, Needham, as the first town in the country to raise the minimum purchase age to 21years, has been the leader in Massachusetts in limiting access and availability to tobacco and e-cigarette products to youth. Needham's quarterly compliance checks, store protocol inspections, and licensee training is a comprehensive approach that has resulted in Needham having the lowest youth and adult smoking rates in Massachusetts.

Dr. Epstein asked if we could treat tobacco the same as interstate alcohol sales. Mr. McDonald had checked with the Attorney General's office several years ago and they could not address it then but it is being considered now. Dr. Epstein asked Mr. McDonald to follow up with the Attorney General's office.

Dr. Epstein noted that the FDA has jurisdiction on the issue. Tobacco packaging requires the nicotine content and asked if as a town or region we can require nicotine content on individual cartridges or a package as a whole.

**Public Health Nurse Report—Ms. Tiffany Zike**

Ms. Zike reported 5 cases of varicella two of which appeared to be chicken pox. It was noted that no investigation into the cases is needed per state regulations. Ms. Zike said that the flu is decreasing significantly. There were two Hepatitis B cases and 2 Hepatitis C cases, all in people over the age of 65. One case of Norovirus was reported. It occurred in a 48 year old who ate oysters at a conference that was catered by Legal Seafood. The state was notified of the conference so that they could contact any other members of the conference who may present with the same symptoms. There was one TB contact investigation with a person who was at a New York City museum. Ms. Zike is monitoring that case and so far no other cases have been reported.

**Project Updates**

Food Code Adoption Update: the new 2013 regulations in effect as of July 1, 2018.

Ms. Gurge noted that all the training has been done. Ms. Gurge and Ms. Acosta have been getting good feedback. Pamela Ross-Kung, a consultant, is working on the second phase of the risk. Ms. Ross-Kung is

confident about the school and supermarket surveys and is going to a training on full service restaurants. Ms. Acosta will contact Ms. Ross-Kung at the end of May about where she is on the full service restaurants.

Mr. McDonald noted there is a demonstration of the new food inspection software the week of May 19th. Lisa Berger will be meeting with IT for Needham; this looks very promising. Mr. McDonald got signoff from IT on the concept. The meeting will iron out the details. Town IT is working with the school IT to refurbish their iPads over the summer. Ms. Gurge and Ms. Acosta will use the hand me down iPads to see if the inspection software works.

Mr. McDonald mentioned that Debra Bailin, Economic Development Director in Needham, reached out to Public Health about reciprocity with other towns, specifically with the permitting of food trucks. In conducting a recent food truck plan review, there was some discrepancy about the requirement of having a food handler vs. food manager certification and discovery that the food safety standards differ between Norwood and Needham. There may be some concern with specific food safety standards across abutting towns especially in regards to food truck permitting requirements, which is why Ms. Gurge will need to contact neighboring towns to verify their current standards.

Dr. Epstein mentioned there might be other ways to cover the reciprocity among the towns and suggested a standard where the four town health departments agree on some common elements, pass those as a group, and only inspect on the differences. Ms. Gurge said that she is open to new strategies and compliance ideas, but she wants to make sure the permitting process is working.

**Rosemary Update**

Mr. McDonald reported that the target date for completion August 12th. We may move at the end of August or in early September. Moving later will allow the carpet to off-gas, etc. It will be a good place to work, with more space for regional meetings, Board meetings, and other large groups.

**Compliance Tobacco Checks**

Ms. Gurge reported another successful round of tobacco compliance checks. We worked with a couple of students, including one underage and one 21 year-old. We did the reviews at 6 pm on Mondays. Ms. Acosta sent a letter to the paper congratulating the establishments as recommended by the Board.

**Trash Hauler Regulations: Dr. Stephen Epstein officially opened the Public Hearing.**

We sent out the notifications to all haulers with the regulation changes and have not heard from anyone. We have one resident comment. We are doing a long term phase in. We need to educate both residents and haulers towards the January 2019 rollout of the new regulations.

**Board questions and comments:**

Dr. Brown inquired if we have information on which haulers currently provide recycling services on their trucks. Ms. Gurge said that bigger companies offer recycling and this is verified during annual truck

inspections. Ms. Gurge reported that she has been asking smaller companies if we go this route how would they manage the recycling piece. If they do not have recycling on the same truck they will have to split between their trucks and contract out the recycling service since it will be a requirement as of January 1, 2019.

Ms. Carolyn Dann stated that she works for the Massachusetts Department of Environmental Protection (Mass DEP) and that they have been looking into new regulations as an agency for a number of years. There have been waste bans since 1990 in all communities with the local the Boards of Health regulating the haulers. In response to interest from several communities, DEP created a template with standard language and worked with both haulers and Boards of Health. Ms. Dann noted that DEP realized that Boards of Health were not on the street during trash collection and that the haulers who were on the street could not always enforce regulations. DEP thus designed this set of regulations as a partnership; the authority resides with the Boards of Health but the haulers are obligated to provide trash and recycling services as most municipalities have been required to do for many years. She also noted that it is especially important for communities who have pay-to-throw as it closes a loophole in recycling. To date, haulers have been allowed to offer the cheaper service with just trash removal to apartment dwellers and private homes without recycling. This is not in compliance with the waste bans and so the new DEP regulations make it clear that is not an option anymore. Ms. Dann said that she worked with Ms. Gurge and Mr. Smith, the superintendent of the recycling and solid waste division (RTS), to fit within Needham's regulations. It will take time to roll out and there will be an education phase, an implementation phase and, a phase where the haulers will provide documentation on their tonnage of waste versus recycling. In 2019 Needham will require the tonnage numbers on both trash and recycling. Mr. Greg Smith said that this is the rationale behind the regulation and noted that he has been trying to address the lack of compliance with waste bans in commercial trash collection since he became a superintendent. Mr. Smith said that he worked with Ms. Dann, Ms. Gurge, and Ms. Acosta on a new DPW survey to provide missing information from the haulers such as collection information and numbers of households served by each operation. Mr. Smith noted that the regulations may help DPW to assist with what he and his staff may want to do at the transfer station in the longer term.

Mr. McDonald, Ms. Gurge, and Ms. Acosta have done the following outreach: sent an email to all haulers; posted for public comment; sent copies of new regulations and the surveys and; followed up with email and phone calls to make sure email was received. Ms. Gurge and Mr. McDonald noted that no comments have been received from any of the haulers.

One resident in attendance at the meeting commented that, in the many years she has lived in Needham she has not seen trash bins all over the place. But, within the last two years, new people in town are asking for trash pickup and barrels are out every day. The resident asked if we regulate when the trash pick-up occurs and when barrels are out.

Ms. Dann stated that she was not aware of many good examples in other towns unless there is municipal trash service where they contract for a specific day. It is curbside everywhere for everyone town wide. This regulation primarily affects the people who do not use the transfer station and condo and apartment complexes with a lot of barrels.

Dr. Epstein stated other concerns regarding the time of day, for example no pickup before 7 am. If the truck is turning into every driveway or putting barrels back to the house from the curb there is more noise and more air pollution.

Dr. Cosgrove suggested that we might regulate how long the barrels can be out on the street, such as out by 7 pm the night before and back to the house by 7 pm the day of pickup.

It is hard to manage the pickup times without town wide municipal pickup. Dr. Epstein stated that it is difficult to regulate the different days for the private haulers.

Dr. Brown stated that her hauler charges extra to keep the barrels at the house because it slows them down.

Mr. Smith said that with bundle requirement will even the playing field so that the commercial vendors will cost more and more people may choose the transfer station. We would like to see patronage increase. Mr. Smith noted that the trash from more haulers would be welcome as it is a revenue stream; the recycling is not.

The hearing on trash haulers was closed at 8:31 am.

***Dr. Cosgrove moved to accept the Trash Hauler regulations. Dr. Brown seconded the motion. There was unanimous approval of the new Trash Hauler regulations.***

**Public Safety communication systems**

Mr. McDonald provided a brief overview of recent events in Needham relating to the installation of new public safety communications equipment. As part of the proposed construction of new public safety buildings, the communications systems used by the Town's Police and Fire/EMS were assessed and recommendations were made for an improved system that incorporated updated technology. One part of that proposed update was the construction of monopoles on two or three Town parcels.

In particular there was a request submitted from the Select Board to the Planning Board asking the Planning Board to re-zone the parcel containing the Birds Hill Water tank to allow for the possible future construction of a monopole with a microwave radio communications dish. A significant amount of public attention was focused upon this proposal and upon the communications equipment overall, with some residents at two Board of Selectmen meetings (in Town Hall and in the Center at the Heights) expressing concern about perceived health impacts from radio frequencies/electronic-magnetic fields (RF/EMF).

Dr. Cosgrove attended one of the Select Board's meetings, and noted that many questions were asked and comments were made that did not acknowledge that RF/EMF already exists in Needham. What was proposed was an update and upgrade, not a whole new system. Drs. Brown and Epstein noted that residents and neighbors had approached them with questions and concerns about the project and about RF/EMF in general.

In the recent past as part of the Eversource Utility Redundancy project and as part of the Verizon Small Cell Site project, the Board of Health has examined the available scientific literature about radio frequencies and electronic-magnetic fields, especially any conclusions about the possible health impacts. Dr. Epstein noted that in the past the Board found that in a residential setting with a modest setback of 10 yards or more both horizontally and vertically from the emissions source, radio frequencies have no documented impact on health. They are classified as non-ionizing radiation.

Mr. McDonald noted the Public Health Division staff members could develop a policy statement for the Board's review or the Board and the Public Health staff could focus upon community education. Dr. Brown said that, in reviewing a broad review of the scientific literature about RF/EMF and cancer, she found that there is not much shown and there is no consensus within the research. An education campaign may not convince those residents with concerns, so a policy statement is a better idea. Dr. Cosgrove suggested putting together a statement relative to police and fire communication along with additional literature for interested residents. A Board of Health statement could note that it is not hazardous in the context of that specific installation and refrain from making a broader comment about RF/EMF.

Mr. McDonald noted one of the challenges is the Select Board and the architects working on the public safety buildings project have gone back to the drawing board on siting new towers so it will be a challenge for the Board of Health to address the health and safety of a particular siting choice.

Dr. Epstein suggests a different strategy. Every time an individual infrastructure project arises, members of the public state they have read papers that address health impacts. He suggested that the Board of Health and the Public Health Division reach out to the community and state that the Board is reviewing all literature related to radio frequencies and anyone in town who is an expert in the health impacts should send literature citations and their background information to us. The Board will review the literature and schedule an open hearing. Once the Board has reviewed everything, it can form an opinion of the body of information. This might limit some of the confusion that can occur in public meetings where some individuals who are not experts in the area cite literature that is out on the internet in a general way, and not peer reviewed in a scientific journal.

Dr. Cosgrove agreed with Dr. Epstein's proposal, noting that it helps the Board to obtain a comprehensive viewpoint. Dr. Epstein added that the Board's longer term goal is to develop a uniform strategy for all frequency exposure as the sources grow.

An overall strategy will help set a baseline for the cumulative exposure Town-wide and will allow the Board to compare current levels to those recommended by the World Health Organization. Dr. Epstein suggested a two-pronged approach: 1) the Board of Health gathers community information and input; and 2) the Board will review site specific projects as needed. As a follow-up, the Board of Health will work towards developing a more comprehensive policy. Dr. Epstein believes that such a plan will allow the Board to ask pertinent questions during all future requests for more towers and that will allow the Board to consider the overall community exposure as a part of its review.

Mr. McDonald said that the Public Health Division does not have enough in-house expertise to comprehensively study the issue, noting that he would need to go the Town Manager and ultimately the Finance Committee to ask for a reserve fund transfer to retain a consultant. Mr. McDonald thought that perhaps the Public Health Division could retain a consultant in June and have that consultant work on an assessment from July through September 2018; this would coincide with the request for public input. If pursued, then such a plan would include a public hearing and a written policy by mid-to-late fall.

Dr. Epstein indicated that requesting a reserve fund transfer should not be a problem. This topic will come up again in the future so it would be prudent to develop a thoughtful plan in advance. He added that if the Board of Health is asked to weigh in on such projects, then the Board needs to bring in expertise to have the best available information to inform its decisions.

Dr. Brown said that having baseline data about community exposure to RF/EMF would be very useful as the Town discusses the possible health impacts of the public safety communications towers.

**Recreational Marijuana**

Dr. Epstein noted that the Board of Health has been asked to testify at Town Meeting as a proponent for Articles 43 and 44. He reminded the Board and the staff that when medical marijuana zoning was approved at the 2015 Annual Town Meeting it designated districts that were commercial or industrial and not residential. When Sira Naturals applied to the Town to open a Registered Marijuana Dispensary, its proposed site (and the two others that were proposed simultaneously) was in a commercially zoned district and the Board supported that site.

A year later at the 2016 Town Meeting the Planning Board submitted a warrant article to change the zoning from commercial to mixed use. Town Meeting approved that request, which opened up the possibility of a marijuana store in relatively close proximity to residential parcels. Dr. Epstein believes that the Planning Board may not maintain buffer zones and setup distances, and believes that the Board of Health should approach this issue from a public health perspective.

To date, the Board is quite comfortable with the operation of SIRA Naturals and its medical marijuana dispensary. Inspections have gone well and Sira has been relatively prompt in submitting required paperwork. State law allows Sira Naturals the option to change its medical store into a recreational site and that may cause challenges if a recreational store operates in close proximity to housing. The Select Board will note that there is an agreement with Sira not to pursue a recreational license on that site, but that agreement is not legally binding (according to MMA lawyers) and, in fact, recently Sira applied to the State to convert some or all of their medical stores into recreational stores.

As a planning tool, the Board should assume that both the zoning and the general by-laws fail, though it will be easier to get the simple majority required for the general by-law than to get the two-thirds majority required to pass a zoning by-law. Dr. Epstein believes that the Board should go on record now before any of the site is sold and building occurs in that zone; that to preserve health and well-being, the Board of Health will require a 500 foot setback between a recreational marijuana establishment and a residential parcel. Dr. Epstein is looking at other towns with recreational marijuana uses and believes that other towns use 1000 foot buffer zones. Dr. Epstein noted that the Town's GIS staff needs to start looking at 1000 foot buffer zone for all potential recreational marijuana sites. His suggestion would be 1000 feet away from where children congregate or 500 feet away from a residential parcel the greater thereof. This would mean many sites in Needham would not be available and the Board will need the GIS folk to determine any available sites.

When presenting to Town Meeting, Dr. Epstein indicated that he would highlight two issues:

1. Impaired Driving; for which there is no solution
2. Youth Access; in other areas (tobacco and alcohol) there exists best practices from CDC that suggest where buffer zones exist there is reduction in youth access to marijuana.

Youth access especially is a health issue that the Board of Health can regulate. The adolescent brain does not fully develop until age 25, and with the demonstrated effects marijuana has on the developing brain preventing access is good public health. Dr. Epstein noted that it is important the Board keeps the

discussion to the one issue that is a health issue – the youth access issue and how does the community control youth access. Dr. Cosgrove noted that Belmont went to age 21 to purchase tobacco products based on the issue of brain development.

Dr. Epstein noted that a member of the public was in the audience and had a question. He asked for the gentleman to please introduce himself.

Bruce Greenfield moved to Needham 3 years ago from Ohio, and his question was about the medical marijuana store. He indicated that he doesn't believe the land near Sira Naturals is all that attractive to developers. Mr. McDonald noted that the Planning Board's stated goal was to encourage a 250 unit complex with first floor restaurant or retail space. To accommodate that type of development, at least two parcels would need to be combined and one developer would need to buy the second lot. Such a purchase has not yet occurred.

Mr. Greenfield noted that at Sira Naturals' other dispensary locations in Cambridge and Somerville, the company allows discounts for seniors and veterans, but the Needham Board of Health does not allow these discounts. Mr. Greenfield asked why the Board wouldn't let seniors and veterans get the discount on their meds.

Dr. Epstein responded to the gentleman's question and noted that Sira Naturals has agreed that anyone demonstrating financial hardship will be provided with free marijuana and for anyone whose physical infirmity does not allow them to get to Sira's location at 37 Franklin Street, Sira will provide free delivery to those customers. Those stipulations allowed them to be in Needham. The Board of Health treats the dispensary as a pharmacy and treats these medicines as a drug and regulates Sira accordingly.

Mr. Greenfield conceded that, if the Board treats a medical dispensary as a pharmacy, then he understands why discounts are not provided to veterans or seniors, though he might not agree with that policy. Dr. Epstein queried why a veteran should receive a discount as they would not for Lipitor or another medication at a regular pharmacy. Mr. McDonald mentioned that the CEO of Sira was at the March meeting and proposed discounts for those two groups. The Board asked for specifics, material arrived on May 10th and will be presented at the next meeting. Mr. Greenfield said he would probably attend the next meeting if it was on the agenda, and he would be happy to provide any community input or be part of a working group on the subject.

Mr. McDonald noted that the existing moratorium on recreational marijuana which lasts until the end of 2018 provides the Board of Health and the Public Health Division with additional time to develop recreational marijuana regulations. He indicated that the subject matter is complicated and needs to be well planned and vetted, so it is not too early to be in the discussion phase if the Board wants to meet a December 2018 deadline which coincides with the end of the 2018 moratorium.

Ms. Read asked for clarification. Would the Board of Health propose a separate regulation for recreational marijuana for cultivation and sale which would include guidance on siting, proximity and outlet density similar to the guidance included in the Board's tobacco regulations? Dr. Epstein will advocate for 1,000 feet because every town he has looked at nationwide uses this number. Ms. Read noted that the Needham Board of Health would be providing real leadership for other Boards of Health across the Commonwealth if these regulations were set up. Some communities cannot pursue an "opt

out" because those votes are failing with their residents. If the Needham Board of Health can make regulations it is really significant.

Dr. Epstein noted that regardless of what Town Meeting does, the Board can go back to the fact that Needham residents had a referendum on this issue (medical marijuana) and voted it down. The Board can make the argument that it is working in concert with the citizens wishes.

Dr. Cosgrove added that this argument will not put the Board of Health into conflict with the Select Board's desire to keep the medical marijuana dispensary where it is, but added that medical dispensaries are strictly regulated by the State. Mr. McDonald noted there are key differences between medical and recreational marijuana stores, especially in the context of security, external displays, and advertising, as well as the by-appointment nature of Needham's medical marijuana dispensaries.

Dr. Epstein indicated that he is concerned because during Sira's March presentation where the company requested two-for-one discounts, for example, that appears to him as though the company is already acting as if it is recreational when it is still a regulated medical dispensary.

Ms. Gurge provided additional context about Sira Naturals, and noted that she had not heard from the interim set-up Sira manager. As a result, the paperwork which the Board requested in March was not provided until May 10.

Ms. Read added that during the inspection she attended, the building's security was not up to Chief Schlitter's requirements. In the information packet dropped off this week, Sira Naturals had provided the updated security information. Ms. Gurge will plan to conduct a follow-up site visit. She will attempt to coordinate this meeting so that staff and Board members can attend.

**June Meeting Goals**

Mr. McDonald noted that it is nearly time to develop a new, two-year set of goals for the Board of Health. This has been an agenda item the past few months to keep the topic fresh in everyone's mind, but it will need a more robust discussion in June. The objective is to adopt a set of goals for fiscal years 2019 and 2020 when the Board convenes in either July or September.

Mr. McDonald promised to provide a status report to the Board about how the Public Health Division and the Board of Health are doing on the current goals at the June meeting. One point that Mr. McDonald noted was that the Public Health Division needs a better way to collect data and to inform program decisions with more efficiency. He said that the Division is trying to do more electronically with inspections or applications. Mr. McDonald asked the Board to email other ideas or suggestions for goals and objectives.

**The next two Board of Health meetings will be held on:**

- **June 14, 2018, from 7:00 to 9:00 PM**
- **July 20, 2018, from 7:00 to 9:00 AM.**

- **There will be no meeting in August.**

***Dr. Epstein asked for a motion to adjourn. Dr. Cosgrove made a motion to adjourn, Dr. Brown seconded. The vote was unanimous. Meeting adjourned at 9:10.***

Respectfully Submitted, Faith Crisley, Recording Secretary

**Needham Public Health Department**
Catherine Delano, Senior Substance Use Prevention Program Coordinator
May 2018 Monthly Report

## Section 1: Highlights

- Action team meetings
- Hired Youth Diversion Coordinator
- Assisted Youth and Family Services with SAAP students weekly
- Met with Rachel Greenberg about continuing and finishing Needham Housing Needs Assessment
- Hosted focus groups for Needham Housing Needs Assessment
- Participated in SAPC leadership meeting
- Worked with school to solidify details for student workshop in 2019
- Hosted quarterly SPAN meeting
- Participated in Quality Improvement training for the Division of Public Health

## Section 2: Goals

- Find a central location for the Division to work
- Build SPAN capacity/community recognition
- Build youth coalition capacity
- Conduct youth focus groups
- Finalize details of Alcohol Compliance checks for Director of HHS
- Finalize details for Youth Diversion Program by early summer 2018

# Needham Public Health Department

May 2018

Substance Abuse Prevention & Education
Needham Coalition for Youth Substance Abuse Prevention ~ NCYSAP
Karen Mullen, Project Coordinator/Capacity Building

**Section 1: Activities**

| *Activity* | *Notes* |
|---|---|
| **Meetings:** | |
| SPAN Steering Committee Meeting | Discussed and planned upcoming SPAN meeting agenda topics. |
| Marijuana Action Team Meeting | Continued planning for NHS student conference - objectives, messaging, timing, agenda, potential speakers & workshops. Objective- For seniors to leave high school with a "tool kit" of life skills they can use to understand their personal needs and plan for the future. Focus: health and wellness of mind and body. |
| Prevention Team Meeting | Met with Tim to review and edit department mission and objectives for prevention team. |
| Meeting w/Aaron Sicotte (NHS Principal) and Keith Ford (NHS Vice Principal) | Discussed NHS Student Conference date. Team recommended Jan 2019. Team will reconvene 6/12 for a final confirmation of date. |
| SPAN Meeting | Action Teams reported accomplishments for the year |
| Meeting with NHS GBP students regarding student conference | Attended NHS student final presentation that recommended student life skills conference partnering with SPAN coalition. |
| SALSA rehearsal meetings | Rehearsed SALSA students for Pollard trip on 5/16/18. |
| SALSA Leadership Team Meeting | Students voted on 2 new leadership team members, discussed club's annual accomplishments, strengths and opportunities for next year. |
| Meeting with Emily Sanders | Discussed Photo Voice project and suggested ways to recruit Needham High School students for project. |
| **Events:** | |
| Department Training (2) | 5/22 (Communication) and 5/29 (Quality Improvement) |
| Ray of Hope Award Ceremony- Conner Jahn | Recommended Conner Jahn for award based on SALSA work. Conner was chosen as Ray of Hope winner for May. Taped Needham Channel spot for news highlighting Conner's 3 years of leadership with SALSA (Students Advocating Life without Substance Abuse) |
| SALSA field trips to Pollard (2) | Coordinated and chaperoned 2 SALSA field trips to teach 8th grade Health classes (5/16 and 5/17). Approx. 60 Pollard middle school 8th graders learned refusals skills. |
| | |

| *Activity* | *Notes* |
|---|---|
| **Administration:** | Prepare Monthly Report, time sheets |
| | SALSA Administration- Update New member contact information, update community service learning hours for volunteers, submit CSL hours to Admin. in 30 hour increments for students. |
| | |
| **Project Management:** | |
| | SPAN/NHS Sr. Conference- Solicit support and input from stakeholders, incorporate recommendations into conference outline. Present findings and updates to MJ Action Team. Communicate updates to department. |
| | MJ Action Team Follow-up- Meeting prep, student reminders and class dismissals, post meeting follow-up (book space for next meeting). |
| | SALSA at Pollard 5/16 & 5/17- Confirm dates with Pollard, Recruit students for both dates, prepare/submit field trip request to NHS Admin, Prepare/submit transportation requests, Prepare/communicate Field Trip Permission forms for students, confirm & communicate rehearsal space for both dates, chaperon SALSA students to 3 Pollard Health class presentations, post photos on SALSA Facebook/Instagram pages, ensure pizza invoices are paid. |
| | SALSA Membership Event- Identified SALSA leaders to attend NHS Step Up Night for rising Freshman, man the SALSA table, answer questions about club for students and parents, recruit new SALSA members. |

**Needham Health Department**
Monica De Winter, Program Support Assistant
Karen Shannon, Program Support Assistant
**May 2018 Monthly** Report

**Section 1: Summary**

In the month of May we held the quarterly SPAN coalition meeting, as well as Needham Parents Care, Prescription Action Team and Marijuana Action Team meetings.

**Section 2: Activities**

| *Activity* | *Notes* |
|---|---|
| Data input | Entered accomplishments and outputs to REACH software. |
| Prepared minutes/email correspondence | For Needham Parent Care, quarterly SPAN coalition meeting and Prescription Drug Action Team. Updated distribution SPAN list. |
| Prepare agenda | SPAN Steering Committee meeting and May SPAN meeting |
| Prepare PowerPoint slides for SPAN meeting | Karen Shannon presented at May SPAN meeting on past year's accomplishments |
| Solutions Team: New Employee Mentoring Program | Karen attended meeting |
| May is Mental Health Awareness month | 5/10 created a tweet and FB post "Today is National Children's Mental Health Awareness Day" |
| National Prevention Week is May 13-19 | 5/14 created and sent out tweet re: prevention |
| NPC Monthly Messaging on Technology Safety | Created article for NPC group's monthly parent messages. It is ready for distribution for summer months. |
| Prescription Drug – NHS Poster Campaign | Posters created by NHS students were delivered, approved and distributed through NHS |

**Section 3: Meetings & Conferences**

| *Title* | *Description* | *Attendance* |
|---|---|---|
| SAPST - Substance Abuse Prevention Skills Training | At EDC in Waltham. Hosted by MassTAPP trainers. Karen Shannon attended 5/1 through 5/4/18 | 26 |
| NHS Principal's Coffee | Karen Shannon attended which Aaron Sicotte updated parents on Senior end of year activities and potential for change for safer series of events. | 12 |
| Conference call with Karen Mullen | Monica and Karen discussed "If They Had Known" panel planning for Fall 2018 | 3 |
| Marijuana Action Team meeting, 5/3 | Monica attended. Discussed the current vaping issue at NHS & the legal consequences. Karen M. and Ryan O'Leary update on Diversion Program plus opportunities for Needham teens. | 4 |
| Prevention Team Meeting, 5/8 | Catherine, Karen S., Karen M., and Monica met to share updates | 4 |
| Meeting with Assistant Principal of NHS | Discussed ways for NHS and SPAN to build on partnership. Meeting included Keith Ford, Catherine and Karen S. | 3 |
| NPC meeting, 5/10 | Needham Parents Care discussed the year's successes and challenges and ongoing work. | 7 |
| Prescription Drug Action Team meeting, 5/11 | Discussed NHS posters, Walgreens kiosk, and follow up education from HIPS exhibit. | 3 |

| | | |
|---|---|---|
| New Employee Mentoring mtg, 5/15 | Karen Shannon attended. | 5 |
| SPAN Steering Committee mtg, 5/16 | The focus of this meeting is to review and reflect on SPAN's progress and accomplishments for the year and plan for coalition mtg. | 9 |
| "Impacts of Marijuana Tools for Municipalities to Address Health, Social and Legal Issues" forum | Monica attended in Canton with panel of speakers from law, science/health and public safety | 75 |
| SPAN Meeting, 5/22 | Accomplishments and updates from SALSA, NPC and intro. PhotoVoice and new Youth Leader for YMCA | 22 |
| John Wortman talk, 5/22 | Conflict Resolution – HHS staff meeting | 15 |
| "Our Kids and Drugs Misuse" forum | Monica attended Massachusetts Health Council Spring Conference At Bentley College. Keynote: Michael Boticelli | 150 |

# Needham Public Health Division

**Accreditation Update**

May 31, 2018
Lynn Schoeff

| Activity | Notes |
|---|---|
| Staff training | • Continued the orientation to public health accreditation at the April staff meeting. Focus was on Domain 2 (Investigate health problems and environmental health hazards) and on Domain 9 (Evaluate and continuously improve processes, programs, and interventions).<br>• Established training log to record all staff continuing education activity.<br>• Established log of conference presentations made by NPHD staff members. |
| Policies and procedures | Continued progress on policies and procedures (see attached page). Two Environmental Health Policies were finalized and signed and placed in the NPHD Policy and Procedure Manual. |
| Roadmap to Accreditation (required for NACCHO grant) | The Roadmap to Accreditation was submitted to NACCHO on May 30. We hope to submit a Letter of Intent to the Public Health Accreditation Board in mid-2019. |
| Quality Improvement (staff training required for NACCHO grant) | On May 29, all staff attended a training session on Quality Improvement in Public Health where they were introduced to QI concepts and tools. |
| Division "self-assessment" for accreditation (required for NACCHO grant) | Completed the self-assessments to determine Needham's readiness for accreditation. The self-assessment, submitted on May 25, provides clear direction for our accreditation and quality improvement work. |
| Community Health Assessment | Lynn and Rachael Greenberg have begun work toward the Community Health Assessment (pre-requisite for applying for accreditation):<br>• Reviewing the BID-N Community Health Needs Assessment to use as starting point;<br>• Incorporating the Senior Housing and Transit assessment;<br>• Incorporating the Needham Housing Authority assessment;<br>• Augmenting with additional focused surveys and focus groups. |
| NACCHO grant management (Accreditation Support Initiative | Participated in two NACCHO organized peer-sharing conference calls with other grantees. Submitted final report and invoice on May 31. |

Other activities this month:

- Lynn worked with Katy Colthart, Acting Director of Youth and Family Services, to finalize a crisis response policy.
- Lynn is providing consultation to Rachael Greenberg during development of the senior home assessment program (funded by MetroWest Health Care Foundation).

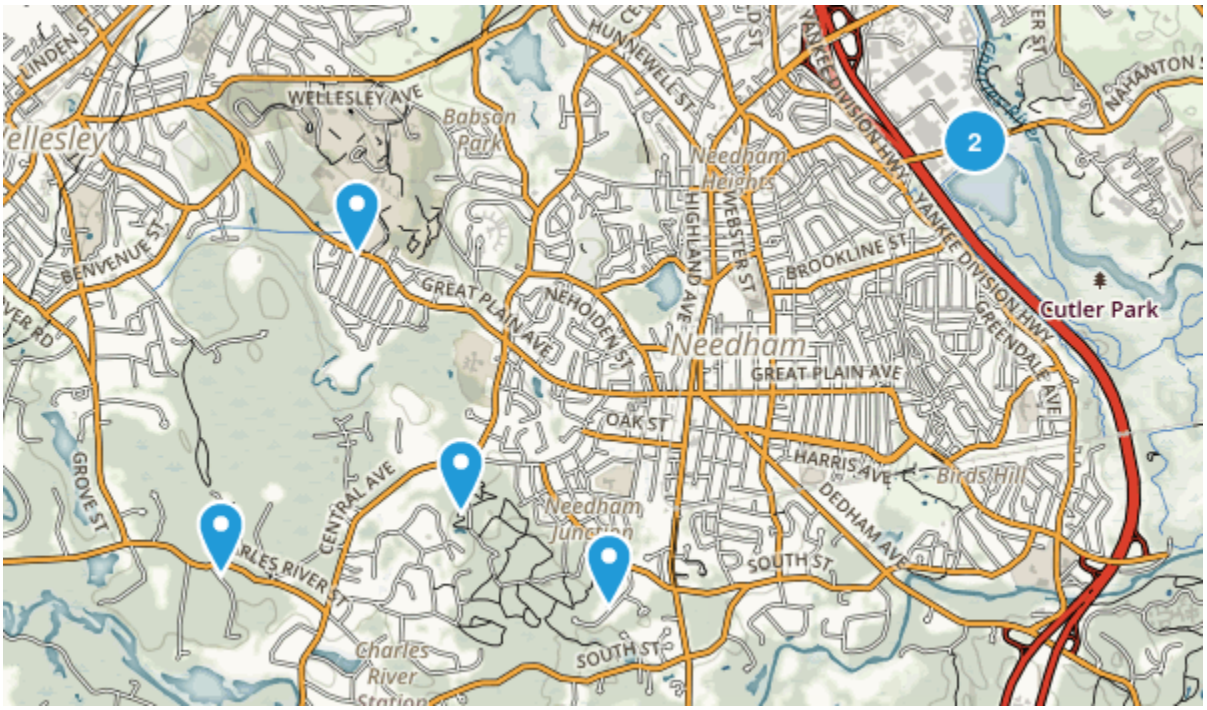
# Needham Public Health Division

| | Unit | Policy Name | Policy Number | Draft | Final Draft | Final Final | Signed |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| 1 | ADM | Policy on Policies | HHS-PH-ADM-100 | 2/15/2017 | 9/29/2017 | 12/20/2017 | |
| 2 | ADM | Recommendation to Hire | HHS-PH-ADM-101 | 6/15/2017 | 6/15/2017 | 12/20/2017 | |
| 3 | ADM | Payroll | HHS-PH-ADM-102 | 10/27/2017 | 10/27/2017 | 12/20/2017 | |
| 4 | ADM | Legal Notice | HHS-PH-ADM-103 | 1/12/2017 | 1/18/2017 | 12/22/2017 | |
| 5 | ADM | Contract | HHS-PH-ADM-104 | 3/23/2017 | 3/23/2017 | 12/21/2017 | |
| 6 | ADM | Snow Policy | HHS-PH-ADM-105 | 2/8/2017 | 12/4/2017 | 12/20/2017 | |
| 7 | ADM | Work-related Travel | HHS-PH-ADM-106 | 12/4/2017 | 12/4/2017 | | |
| 8 | ADM | BOH agenda | HHS-PH-ADM-107 | 10/27/2017 | 10/27/2017 | 12/21/2017 | |
| 9 | ADM | BOH Meeting Packets | HHS-PH-ADM-108 | 10/27/2017 | 10/27/2017 | 12/21/2017 | |
| 10 | ADM | BOH minutes | HHS-PH-ADM-109 | 10/27/2017 | 10/27/2017 | 12/21/2017 | |
| 11 | ADM | Closing old files | HHS-PH-ADM-110 | 8/7/2017 | 8/7/2017 | | |
| 12 | ADM | Staff Continuing Education | HHS-PH-ADM-111 | 1/22/2018 | | | |
| 13 | EH | Food Permit | HHS-PH-EH-100 | 1/5/2017 | 12/22/2017 | 12/22/2017 | |
| 14 | EH | Food Code Enforcement | HHS-PH-EH-101 | 8/14/2017 | 8/14/2017 | 12/22/2017 | |
| 15 | EH | Mobile Food Vendors | HHS-PH-EH-102 | 11/6/2017 | | | |
| 16 | EH | Residential Kitchen Permits | HHS-PH-EH-103 | 11/27/2017 | 12/5/2017 | 12/22/2017 | |
| 17 | EH | Farmers Market | HHS-PH-EH-104 | 10/18/2017 | 1/29/2018 | 4/9/2018 | |
| 18 | EH | Temporary Food Event Permit | HHS-PH-EH-105 | 10/19/2017 | 12/22/2017 | 12/29/2017 | |
| 19 | EH | Housing-Occupant Complaints | HHS-PH-EH-106 | 1/7/2017 | 11/8/2017 | 12/22/2017 | |
| 20 | EH | Condemning a House | HHS-PH-EH-107 | 10/18/2017 | 12/22/2017 | | |
| 21 | EH | Synthetic Turf | HHS-PH-EH-108 | 12/28/2016 | 1/30/2018 | | |
| 22 | EH | Bed Bug Protocol | HHS-PH-EH-109 | 1/9/2017 | 12/22/2017 | 12/28/2017 | |
| 23 | EH | Off-Street Drainage Bonds | HHS-PH-EH-110 | 8/14/2017 | 1/29/2018 | 1/29/2018 | |
| 24 | EH | Foodborne Illness | HHS-PH-EH-111 | 11/28/2017 | 12/5/2017 | 12/22/2017 | |
| 25 | EH | Tobacco Sales Permit | HHS-PH-EH-112 | 11/28/2017 | 11/28/2017 | | |
| 26 | EH | Tobacco Compliance Checks | HHS-PH-EH-113 | 10/24/2017 | 11/7/2017 | 12/22/2017 | |
| 27 | EH | Asbestos | HHS-PH-EH-114 | 11/27/2017 | | | |
| 28 | EH | Pools | HHS-PH-EH-115 | 10/31/2017 | | | |
| 29 | EH | Food Sampling | HHS-PH-EH-116 | 12/11/2017 | | | |
| 30 | EH | Hotel Inspections | HHS-PH-EH-117 | 1/8/2018 | 1/18/2018 | | |
| 31 | EH | Lead & Copper | HHS-PH-EH-119 | 4/17/2018 | 5/25/2018 | 5/29/2018 | **5/30/18** |
| 32 | EH | Grease Traps | HHS-PH-EH-120 | 5/18/2018 | | 5/30/2018 | **5/30/18** |
| 33 | PHN | Anaphylactic Protocol | HHS-PH-PHN-100 | 3/22/2017 | 9/25/2017 | 12/26/2017 | |
| 34 | PHN | Rabies response | HHS-PH-PHN-102 | | 8/14/2017 | 12/26/2017 | |
| 35 | PHN | Recreational Camps | HHS-PH-PHN-103 | 9/19/2017 | 10/17/2017 | 12/26/2017 | |
| 36 | PHN | Senior Home Safety Assess | HHS-PH-PHN-104 | 8/14/2017 | 10/17/2017 | 12/26/2017 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 37 | PHN | Tanning facility license | HHS-PH-PHN-105 | 9/19/2017 | 11/8/2017 | 12/26/2017 | |
| 38 | PRV | SPAN Coalition Meetings | HHS-PH-PRV-100 | 10/17/2017 | 10/17/2017 | 3/27/2018 | |
| 39 | PRV | Database for Prevention | HHS-PH-PRV-101 | 12/28/2017 | 1/19/2018 | | |
| 40 | PRV | Hidden in Plain Sight | HHS-PH-PRV-102 | 12/28/2017 | 3/27/2018 | | |
| 41 | PRV | Team meetings | HHS-PH-PRV-103 | 12/28/2017 | | | |
| 42 | PRV | Steering Committee | HHS-PH-PRV-104 | 12/28/2017 | | | |
| 43 | PRV | Community Crisis Intervention | HHS-PH-PRV-105 | 12/11/2017 | 12/28/2017 | | |
| 44 | PRV | Posting in newspaper | HHS-PH-PRV-XXX | 12/28/2017 | | | |
| 45 | PRV | High School Poster Project | HHS-PH-PRV-106 | 1/18/2018 | 4/2/2018 | | |
| 46 | PRV | Drug Take Back Days | HHS-PH-PRV-107 | 1/18/2018 | 3/27/2018 | | |
| 47 | TM | Volunteer Guidelines | HHS-PH-TM-100 | 12/28/2016 | 9/20/2017 | 12/28/2017 | |
| 48 | TM | Packer procedures | HHS-PH-TM-101 | 9/20/2017 | 9/25/2017 | 12/28/2017 | |
| 49 | TM | Daily labels | HHS-PH-TM-102 | 9/20/2017 | 9/20/2017 | 12/28/2017 | |
| 50 | TM | Allergies & Special Diets | HHS-PH-TM-103 | 9/25/2017 | 9/28/2017 | 12/28/2017 | |
| 51 | TM | Driver procedures | HHS-PH-TM-104 | 9/20/2017 | 12/28/2017 | 12/29/2017 | |
| 52 | TM | Safety Checks | HHS-PH-TM-105 | 9/14/2017 | 9/19/2017 | 12/28/2017 | |
| 53 | TM | Snow Emergency | HHS-PH-TM-106 | 12/28/2016 | 5/26/2017 | 12/28/2017 | |
| 54 | EH.PHN | Hoarding Response | HHS-PH-ADM-100 | 3/15/18 | | | |

# Needham Public Health Division

# Road Map to Accreditation




**May 31, 2018**

Revised May 31, 2018
Lynn Schoeff

The Needham Public Health Division is working toward national accreditation from the Public Health Accreditation Board (PHAB). The preparation for accreditation is long and labor intensive but will, in the long run, enhance the performance and quality of services provided by the department.

Accreditation provides local health departments with the opportunity to strive for a set of quality standards with the goal of continuously improving department capacity, quality, and accountability. Achieving accreditation recognizes a public health department's successful completion of an intensive application and assessment process to ensure it meets PHAB standards.

## Background

Why Pursue Accreditation?

Seeking voluntary accreditation through PHAB will enhance the Needham Public Health Division's ability to:

- Effectively and efficiently meet community needs with high quality essential services;
- Improve operational processes and protocols in the process of meeting requirements;
- Enhance management processes and develop leadership within the health department;
- Adopt quality improvement practices;
- Adopt performance management practices;
- Better understand and build on the health department's strengths and address areas in need of improvement;
- Improve competitiveness for funding;
- Strengthen relationships with community stakeholders and policy makers;
- Enhance the department's status both locally and nationally.

The Challenges to Pursuing Accreditation

Public Health accreditation was developed for much larger health departments (unlike in Massachusetts, most health departments in the US are county-based and have significantly greater scope, resources, and responsibilities). Most of the 150 health departments that have achieved accreditation did so by fully engaging staff members and by assembling "accreditation teams" to meet the Standards and Measures established by PHAB.

The health departments that are most likely to succeed in this process are those that have already embraced and incorporated Quality Improvement and Performance Management into department operations.

The process can take several years, even for large and well-resourced local health departments. Some communities in Massachusetts have spent five or more years working toward accreditation.

Needham's Road to Accreditation

Health departments typically divide the work toward accreditation into phases, although there are several ways to organize this thinking. We have chosen the following:

I. Pre-application preparedness
II. Organizational readiness
III. Quality improvement and performance management
IV. Document organization
V. Application pre-requisites
VI. Application
VII. Accreditation requirements
VIII. Site visit

It should be noted that the process is not necessarily linear. Some of the work can be accomplished quickly with moderate effort while some standards and measures require adopting new ways of working and thinking and significant time commitments from staff members.

| PHASE | ACTIVITY | DUE DATE and COMPLETION | |
|---|---|---|---|
| **I. Pre-application Preparedness** | During this initial phase the Needham Director of Health and Human Services and the Accreditation Coordinator will become thoroughly familiar with PHAB, the 12 Domains of Accreditation, Standards and Measures, application pre-requisites, and the resources necessary to achieve accreditation | **April 2018** | |
| | • Accreditation Coordinator and HHS Director review PHAB Standards and Measures | Jan 2017 | Jan 2017 |
| | • Orientation for staff and Board of Health | Jan 2017 | Jan 2017 |
| | • Assess Needham's readiness to undertake accreditation | Jan 2017 | Jan 2017 |
| | • Prioritize accreditation tasks | Feb 2018 | Apr 2018 |
| | • Join state and national accreditation networks | Jan 2018 | Jan 2018 |
| | • Develop an internal communication plan regarding progress toward accreditation | Mar 2018 | Mar 2018 |
| | • Complete formal readiness assessments using NACCHO and PHAB tools | Apr 2018 | May 2018 |
| | • Complete Roadmap to Accreditation | May 2018 | May 2018 |
| **II. Accreditation Organizational Readiness** | During this phase we will conduct organizational self-assessments of system readiness (using PHAB Standards and Measures) and of performance management readiness (using the Turning Point Performance Management Self-Assessment tool). | **September 2018** | |
| | • Establish Accreditation Team | Sep 2017 | Dec 2017 |
| | • Elaborate on and develop a plan to address deficiencies discovered in self-assessments | Jun 2018 | |
| | • Initial identification of documentation available for each domain | Jan 2017 | Jan 2017 |
| | • Conduct performance management self-assessment | Aug 2018 | |
| | • Identify strengths and weaknesses in performance management | Sep 2018 | |

| | | | |
|---|---|---|---|
| **III. Quality Improvement and Performance Management** | During this phase Needham will train staff on Quality Improvement and Performance Management; will identify projects that will benefit from QI, will develop a comprehensive QI plan in the context of Performance Management program. | **November 2018** | |
| | • Identify a Quality Improvement Team | May 2018 | |
| | • Train staff on QI concepts and tools | May 2018 | |
| | • Establish a QI tracking system | Jun 2018 | |
| | • Develop QI plan | Jun 2018 | |
| | • Begin QI project | Jun 2018 | |
| | • Train staff on Performance Management | Sep 2018 | |
| | • Establish Performance Management system incorporating QI | Nov 2018 | |
| **IV. Document Organization** | This phase includes assigning Domain Leaders[1] to identify existing documentation to meet PHAB requirements and documentation gaps. A documentation management system will organize, track, and facilitate PHAB submissions. | **September 2018** | |
| | • Develop documentation management system including tracking system with expiration alerts. | Jul 2018 | |
| | • Assign staff members as Domain Leaders | Jul 2018 | |
| | • Identify existing documentation | Aug 2018 | |
| | • Identify documentation gaps | Aug 2018 | |
| | • Develop plan to produce required documents | Sep 2018 | |
| | • Assign staff to tasks | Oct 2018 | |
| **V. Application Pre-requisites** | Needham produces the three pre-requisites for accreditation: Community Health Assessment (CHA); Community Health Improvement Plan (CHIP); Department Strategic Plan | **February 2019** | |
| | • Evaluate Beth Israel Deaconess Needham (BID-N) Community Health Needs Assessment for use in CHA | May 2018 | May 2018 |
| | • Develop plan to augment BID-N assessment | Jun-Jul 2018 | |
| | • Engage community members | Jul-Aug 2018 | |
| | • Develop Community Health Assessment Addendum | Aug-Oct 2018 | |
| | • Gather additional data (survey, focus groups, etc.) | Sep-Oct 2018 | |
| | • Draft Community Health Assessment | Oct 2018 | |
| | • Finalize Community Health Assessment | Nov 2018 | |
| | • Continue the CHA process into the CHIP | Jan 2019 | |
| | • Finalize Division Strategic Plan | Mar 2019 | |
| **VI. Application** | Having accomplished the pre-requisites, Needham will submit the Letter of Intent to PHAB | **April 2019** | |
| | • Submit Letter of Intent | Apr 2019 | |
| | • Submit PHAB fee | Apr 2019 | |
| | • Submit pre-requisites | Apr 2019 | |
| **VII. Meeting Accreditation** | During this phase Needham will provide PHAB with all required documentation and respond to PHAB requests. Needham will also participate in all necessary training and orientation meetings. | **March 2020** | |

[1] Larger local health departments establish Domain Workgroups to work with Domain Leaders. Given the size of the Needham Public Health Division staff, workgroups are unfeasible.

| | | | |
|---|---|---|---|
| **Requirements** | • Accreditation Coordinator will attend necessary meetings and orientations at PHAB. | Jun 2019 | |
| | • Assure that all required documentation meets PHAB requirements and date restrictions. | Apr '19 – Mar 2020 | |
| | • Submit required documentation. | Apr '19 – Mar 2020 | |
| **VIII. Site Visit Preparation** | A site visit team will be established and prepared during this phase. | **May 2020 or as determined by PHAB** | |
| | • Identify members of the site-visit preparation team including the Director of HHS. | May 2019 | |
| | • Solicit consultation from accredited local health departments. | May 2020 | |
| | • Conduct a mock site-visit | Apr 2020 | |

| **Pre-Application**<br><br>(April 2018) | **Organizational Readiness**<br><br>(Sept. 2018) | **QI and Performance Management Plans**<br>(Nov. 2018) | **Document Organization**<br><br>(Sept. 2018) | **Application Pre-requisites**<br><br>(Feb. 2019) | **Application**<br><br>(April 2019) | **Accreditation Requirements**<br><br>(March 2020) | **Site Visit** | **Post Site Visit** |
|---|---|---|---|---|---|---|---|---|
| Review Standards & Measures | Establish PHAB Team | Identify QI Team | Develop & implement doc management system | Evaluate value of BID-N Community Health Needs Assessment | Submit statement of intent | Attend necessary meetings at PHAB | Form site visit prep group | Announce accreditation decision |
| Orient staff and Board | Plan to address deficiencies | Train staff on QI | Assign Domain Leaders | Plan to augment BID-N assessment | Submit pre-requisites | Identify required documents | Solicit TA from accredited LHDs | Celebrate with staff and community |
| Assess readiness | Conduct self-assess against Standards & Measures | Establish QI tracking system | Identify existing documents | Engage community members | Pay fees | Assure timeframe for documents | Conduct mock site visit | Establish system for continued doc management |
| Prioritize tasks | Self-assessment on Performance Management | Develop QI plan | Identify and plan to address document gaps | Develop CHA addendum | | Submit required documents | | Assure ongoing performance management and QI program |
| Join networks | Identify PM strengths and weaknesses | Begin QI project | Assign staff to PHAB tasks | Gather more data | | | | |
| Link with other LHDs | | Train staff on PM | | Write CHA | | | | |
| Internal Comm Plan | | Establish PM system | | Develop CHIP | | | | |
| Roadmap | | | | Finalize Strategic Plan | | | | |

**Needham Public Health Division**

**May 2018**

**Assist. Health Dir. - Tara Gurge**
**Health Agents - Diana Acosta and Brian Flynn**

## Activities

| *Activity* | *Notes* |
|---|---|
| Animal Permit Applications –(New and Renewal) | **4 – Animal Permit renewal applications received.**<br>**<u>Update</u> -New Animal Permit insp. pending @ #32 Barber Rd. with ACO Parsons.** |
| Bodyworks | **0 - Routine inspections conducted.** |
| Bodyworks Establishment Appln Reviews (On-going/New) | **2 – Bodyworks establishment permit applications received from:**<br>- **<u>360 Degrees of Fitness and Wellness</u> – Armani Madoshus (owner). Waiting to receive rest of paperwork for review/approval.**<br>- **<u>Needham Wellness Ctr.</u> - Gregg Reese (owner) – Permit application review in process.** |
| Bodywork Practitioner Appln Reviews (On-going/New) | **2 – Bodyworks Practitioner permit applications received from:**<br>- **<u>Amy B. "Sunny" Connor</u> – To practice Reiki at 360 Degrees of Fitness and Wellness . Still waiting to receive a copy of her CPR Certification. (Also – A massage permit was recently issued by the state.)**<br>- **<u>Gregg Reese</u> – To practice Reiki at Needham Wellness Ctr. Permit application was recently submitted for review. (In process.)** |
| Demo Reviews/ Approvals | **9 - Demolition sign-offs:**<br>• 61 Stevens Road<br>• 13 Bradford Street<br>• 71 Fair Oaks Park<br>• 810 Great Plain Ave<br>• 189 B Street<br>• 242 Washington Ave<br>• 1077 Central Ave<br>• 6 Pinewood Road<br>• 61 Stevens Road |
| Emergency/Fire Dept. Call | **0 – Emergency calls received from Fire Dept.** |
| Food – Complaint / Follow-up | **1 – Food Complaint received for:**<br>- <u>Café Fresh Bagel</u> - Customer called about another teenage customer bringing in her dog into Café Fresh Bagel and having the dog on the table. Customer alerted staff who spoke to the manager who "did not want to deal with it". The customer also heard the teenager say that if someone asked about the dog, it was her emotional support animal. Customer sent in pictures of the dog with its front paws on the table.<br><br>**1 – Follow-up Inspections conducted at:**<br>- <u>Café Fresh Bagel</u>- Spoke to manager about the dog on the table. Manager claims it was very busy when he was told about the dog and by the time he went out to the table, the customer with the dog was gone. The table was cleaned and sanitized after that customer |

| | |
|---|---|
| | left. Manager was reminded that he can ask if a person's dog is a service animal and they can be asked to leave if the dog is not a service animal or is causing a disruption in the restaurant. |
| Food – Needham Farmers Market Insp. (Farmers Market Opening of Season was on Sunday, May 27th at Needham Town Common. Diana and Stephanie (new summer intern) to conduct weekly FM inspections throughout the season.) | **6 – Needham Farmers Market Permit Issued:**<br>- Everything Jalapeno and Not<br>- Maanraj, A Liquid Yoga Co<br>- Ackerman Maple Farm<br>- Boston Sword & Tuna<br>- Liberty Artisanal Bakery<br>- Chestnut Farms |
| Food – Temporary Food Event Permits (Including Needham's Annual NBA Street Fair – Scheduled to take place on Sat., June 2nd. Brian is scheduled to conduct inspections.) | **39 – Temporary Food Permits issued to:**<br>• Gari - Needham Street Fair<br>• Needham High BBQ<br>• Broadmeadow PTC - Parent Teacher Basketball Game<br>• Landmark - Memorial Day Tournament<br>• 2 kidneys 1 heart event<br>• Sam's Hot Dogs @ Broadmeadow Picnic<br>• Sam's Hot Dogs @ Temple Beth Shalom<br>• Great Hall Concert Series<br>• Boy Scouts @ Powers Hall<br>• Car Show @ High School<br>• Memorial day event by Landmark News Group @ DeFazio Field<br>• Masala Art @ Street Fair<br>• BID @ Relay for Life @ Newman<br>• Saint Joseph Elementary - 5th grade party<br>• Saint Joseph Elementary - Field Day<br>• Hillside PTC Movie night @ Hillside<br>• Park & Rec - Tennis Program<br>• Park & Rec - Cricketeers Program<br>• Park & Rec - Art Program<br>• Park & Rec - Sport Specialties Program<br>• Broadmeadow Elementary - 5th Grade Class Day<br>• Hearth Pizzeria - Touch A Truck<br>• Hearth Pizzeria -Street Fair<br>• Broadmeadow PTC - Playground Picnic<br>• Needham Diversity Initiative<br>• Hills Home Market – Needham Street Fair<br>• The James - Street Fair<br>• Dedham Savings - Street Fair<br>• House of Pizza - Playground Picnic<br>• Abbott's Custard - Street Fair<br>• All Purpose Bakery - DeFazio Pavilion - Memorial Day Soccer Tournament<br>• AKBTC - Geared Up for Kids @ PTC Parking Lot<br>• Sheprd Inc - Street Fair<br>• Mitchell PTC - Springfest<br>• Mitchell PTC - 5th Grade Day<br>• Busy Bee Jumpers |

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|---|---|
| Food – Plan Reviews/Follow-ups | **3 – Food Permit Plan Reviews conducted for:**<br>- Cappella (Former Petit Robert space) – Waiting to schedule a pre-operation inspection (Pending.)<br>- Tumeric Boston, Inc. (#1180 Great Plain Ave.) – Plan Review packet received. Waiting for additional documents to be sent over for review (On-going).<br>- Al-Fresh Co. – Vegan meal box kits plan review still in process. |
| Food – Pre-operation walk-through inspections/ Permits issued | **5 – Pre-operation/walk-through inspections conducted for:**<br>- #200 First Ave. (Homewood Suites) – Walked through kitchen and retail store areas for final pre-operation inspections. Permits issued.(x2).<br>- French Press – Conducted final inspection of renovated kitchen area on site. Kitchen area able to operate.<br>- Al Fresh Co. – Vegan meal kit business wanting to operate out of Needham Presbyterian Church. Conducted walkthrough and establishment did not pass due to food prep sink being directly plumbed in. Need to ensure sink is indirectly drained. Owner is working on getting estimates from licensed plumbers. (On-going)<br>- Ben & Jerry's Catering Commissary **-** Initial walk through conducted. Waiting on equipment to be installed in space. Approved where hand sink is to be installed on site. |
| Food – New Permits Issued | **2 – New Food Permits issued for:**<br>- **Homewood Suites - For Kitchen and Retail Store.** |
| Food - Mobile Food Trucks/Permits issued | **5 – Truck Inspections Conducted/Permits issued for:**<br>- BowlBoys – Truck inspected. Need to re-verify sanitizer concentration. Waiting for location and days they will be operating before permit is issued. (Follow-up pending.)<br>- Chicken and Rice Guys – Passed inspection; Permit issued.<br>- Roadworthy- Passed inspection; Permit issued<br>- Cod Squad - Passed inspection; Permit issued<br>- Superstar Ice Cream- Passed inspection; received paperwork from police department; permit issued – awaiting pick up. |
| Housing – Complaints/ Follow-ups | **1/1 – Housing Complaints/Follow-ups.**<br>- #26 Highland Circle - Inspection conducted with Building Department to see if apartment met minimum living standards. Apartment is located in a building that is only commercially zoned, not residential. Fire alarms were not working and there were no CO alarms present in apartment. Also need to unblock second means of egress on site (couch was blocking it). Order letter issued to landlord. Working with Jessica Moss (CATH social worker) and also occupant's son (landlord) to move dad into an assisted living facility. (In process.) |
| Nuisance – Complaints/ Follow-ups | **4/4 – Nuisance Complaints/Follow-ups conducted for:**<br>- **A-Z Preschool**- Owner of preschool complained that rats have been running around outside of the day care, even when children are present. Wanted neighbors at 56 Kearny Street to get pest control as she suspected this was where the source of rodents. Diana conducted a walk through and saw there were some burrows on 56 Kearny's side but also many burrows in the pre-school's dumpster area and suspected some harborage areas under the stairs. Tara and Diana got in contact with that landlord to ensure pest control was conducted on site. The landlord sent in a letter stating they had started pest control but also that the preschool was found to have some of the responsibility as well. Pest harborage was found in one of the trees next to the preschool and the preschool has also agreed to increase their pest control to reduce the rodent population in the area. (Will continue to monitor.)<br>- **#48 Savoy Road**- Neighbor reported that his backyard abutter has a compost pile held up with jeep doors and is giving off bad odors. Tara and Diana were granted permission to conduct a walkthrough of the site. Witnessed that there were Jeep doors holding the compost pile but did not observe any pests or offending odors. The compost area/enclosure does not meet the definition of the Town Selectmen's "junk bylaw" so it cannot be considered a public nuisance. The complainant also reported that his neighbor has done open burning in the backyard before. Diana sent an email outlining all the relevant regulations for the homeowner to reference and reminded him if he witnesses open burning, to contact the Fire Department immediately, to confirm he has a valid permit.<br>- **#38 River Park** – Bulk items such as a mattress were left on the front yard. Tara and Diana conducted a site visit and spoke to the homeowner. Homeowner had already arranged for a |

| | |
|---|---|
| | trash hauler to pick up the items later that week. She called to confirm the items have been picked up a few days later.<br>- **#324 Greendale Ave- (On-going) – UPDATE**: Tara and Diana had conducted a site visit and noticed that a lot of items have been removed from the exterior of the property since March when comparing pictures of previous site visits. Many items were scattered around the driveway and front yard. Diana is working with the homeowner and has gotten confirmation from both her and J.C. Timmerman that the family has gone through multiple dumpsters and is actively cleaning the area. A follow-up site visit was conducted and some progress had been made. The family is still working on cleaning up the area. (Will continue to conduct weekly site visits to verify progress.) |
| Pool Plan Reviews/ Follow-ups | **6 – Pool Plan Reviews/Follow-ups conducted for:**<br>- Rosemary Town Pools –Tim, Diana and I in process of attending weekly progress meetings. In process of working on specific pool permit requirements (i.e. Pool Rules, signage, etc.) Pool opening is delayed to August 6th. (On-going.)<br>- Second Ave. Residences Pool - Approved proposed pool design layout plan. In process of working with owner on specific pool permit requirements (i.e. signage, etc.) (On-going.)<br>- Mill Creek Residences Pool on Greendale Ave. - In process of working with owner on specific pool permit requirements (i.e. lifeguard chair, etc.). Signage was confirmed. Once hire a Cert. Pool Operator, will submit certifications and remainder of documents. (On-going.)<br>- Residence Inn – Request made to upgrade pool sanitation system to a chlorine generating system. Plans to be submitted for review. **UPDATE**: New Cert. Pool Operator to start 6/4. (Paperwork review still In process.)<br>- YMCA Pool – Working with Cert. Pool operator on setting up follow-up inspection to review updates to pool. New CO2 system to be installed. (Final insp. pending.)<br>- Homewood Suites – A follow-up pre-operation pool inspection conducted. **UPDATE**: Items still pending on site (i.e. final signage, etc.). Need to return for re-insp. before we can issue permit to open. (Final insp. pending.) |
| Pool - Complaints/Follow-ups | **0 – Complaints received.** |
| Pool –Pre-operation Seasonal Inspections/Permits Issued | **4 – Seasonal Pool inspections conducted/Permits issued at:**<br>- **Rosemary Ridge Condos**<br>- **Needham Pool and Racquet Club (x2)**<br>- **Charles River Landing**<br>**1 – Pre-operation follow-up inspection conducted at:**<br>- **Homewood Suites – Follow-up inspection conducted. (Final insp. pending.)** |
| Pool – Permit Renewal Applications | **2 – Additional Seasonal Pool Permit renewal application received for:**<br>- **Needham Pool and Racquet Club**<br>- **Rosemary Ridge Condos** |
| Planning Board/Special Permit plan reviews | **0 – Special Permit Plan Review conducted** |
| Septic Abandonment Forms | **0 – Septic Abandonment Forms received.** |
| Septic Construction Permit/Trench permit | **1 – Septic Construction/Trench Permits issued for:**<br>- **#100 Windsor Rd.** |
| Septic – Plan Review | **1 – Septic Plan received for review:**<br>- **#267 Cartwright Rd. – Updated septic upgrade plan submitted for review. Wants to add 2 additional bedrooms to the existing approved plan. Updated approval letter sent. (Installation pending.)** |
| Septic – Installation inspections | **1 – Septic Installation inspection conducted at:**<br>- **#29 Pine St. – Final septic system upgrade installation inspection conducted to check that** |

| | |
|---|---|
| | **lot was loamed and properly seeded. (Needs to re-seed prior to signing off.)** |
| Septic Installer Permit Renewal application received/Permit issued | **1 – Septic installer permit renewal application received and exam taken for:**<br>- **<u>Robert Vey</u> - B.I.G. Septic. He renewed his septic installer license.** |
| Subdivision Reviews | **0 – Subdivision reviews conducted** |
| Tobacco Complaints | **0 – Tobacco smoke complaint/ 1 Follow-up:** |
| Tobacco Insp. (Routine) | **0 – Routine Tobacco inspections conducted.** |
| Waste/Trash Hauler Renewals/Permits Issued | **4 – Permits issued.**<br>- Zaccaria Trucking<br>- Wellesley Trucking<br>- Orifice<br>- J.C. Timmerman |
| Well – Plan Reviews/Approval to Drill Letter | **0 – Well Approval to Drill letters issued.** |
| Planning/Special Permit reviews | **6 – Special Permit Reviews conducted for:**<br>- **<u>#88 and 66 Chestnut, 89 School, 0 Chestnut St.</u> – Major Project Site Plan Special Permit Amendment 2018-03.**<br>- **<u>Major Project Site Plan Special Permit Amendment 2018-05</u> – No comment memo sent.**<br>- **<u>Major Project Site Plan Special Permit Amendment 1998-06</u> – No comment memo sent.**<br>- **<u>Major Project Site Plan Special Permit Amendment 2018-02</u> – No comment memo sent.**<br>- **<u>#28 Glen Gary Road , SPMP 2018-05, Temp Police & Fire headquarters at Hillside School</u>**<br>- **<u>#707 Highland and 257 Webster 4 Fire Station 2</u> - Major Project Site Plan Special Permit Amendment 2018-04 project.** |
| Zoning Board of Appeals Project reviews | **2 – Zoning Board of Appeal reviews conducted for:**<br>- **<u>#145 Rosemary Street and #123 Elmwood Rd. reviews</u> – No comment memo sent.**<br>- **Tim and I needed to clarify and restate our identified conditions corresponding to the ZBA Comprehensive Permit for the new apartment complex located at #700 Greendale, Moderna Needham.** |

## Yearly

| *Category* | *Jul* | *Au* | *S* | *O* | *N* | *D* | *J* | *F* | *M* | *A* | *Ma* | *Ju* | ***FY' 18*** | ***FY' 17*** | FY' 16 | *Notes/Follow-Up* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Biotech | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | Biotech registrations |
| Bodywork | 3 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 5 | 1 | 0 | 0 | 14 | 6 | 11 | Bodywork Estab. Insp. |
| Bodywork | 1 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 4 | 3 | Bodywork Estab. Permits |
| Bodywork | 3 | 0 | 1 | 0 | 0 | 17 | 0 | 0 | 1 | 1 | 0 | 0 | 22 | 13 | 10 | Bodywork Pract. Permits |
| Bottling | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | Bottling Permit insp. |
| Demo | 9 | 10 | 12 | 16 | 7 | 9 | 7 | 6 | 3 | 9 | 9 | 0 | 97 | 112 | 110 | Demo reviews |
| Domestic Animal Permits/ Insp. | 0/0 | 0/0 | 0 | 0 | 0 | 0 | 0 | 1/1 | 0/1 | 0 | 0 | 0/0 | 1/2 | 17/ 16 | 16 | Animal permits/ Inspections |
| Food Service | 11 | 12 | 19 | 22 | 19 | 14 | 20 | 18 | 21 | 32 | 16 | 0 | 204 | 198 | 209 | Routine insp. |
| Food Service | 1 | 0 | 10 | 4 | 1 | 2 | 4 | 1 | 1 | 1 | 5 | 0 | 29 | 37 | 35 | Pre-oper. Insp. |
| Retail | 3 | 3 | 10 | 6 | 7 | 3 | 0 | 9 | 5 | 8 | 3 | 0 | 57 | 69 | 71 | Routine insp. |
| Resid. kitchen | 0 | 0 | 1 | 2 | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 8 | 7 | 11 | Routine insp. |
| Mobile | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 3 | 5 | 0 | 11 | 15 | 9 | Routine insp. |
| Food Service | 6 | 3 | 3 | 11 | 6 | 7 | 8 | 0 | 3 | 5 | 1 | 0 | 49 | 51 | 50 | Re-insp. |
| Food Service/ Retail | 1 | 0 | 3 | 2 | 1 | 132 | 3 | 0 | 1 | 0 | 2 | 0 | 145 | 177 | 176 | Annual/ Seasonal permits |
| Food Service | 8/4 | 11/ 4 | 12/0 | 18/9 | 17/ 0 | 20/0 | 5/1 | 5/0 | 10/ 0 | 9/0 | 39/ 10 | 0/0 | 154 /28 | 158/ 62 | 107 /54 | Temp. food permits/ Temp. food insp. |
| Food Service | 0/ 40 | 0/ 24 | 2/24 | 0/12 | 0 | 0 | 0 | 0 | 1/0 | 4 | 6/8 | 0/0 | 13/ 108 | 7/ 33 | 9/ 16 | Farmers Market permits/ Market insp. |
| Food Service | 1/1 | 2/2 | 2/2 | 4/4 | 3/3 | 2/2 | 1/1 | 1/1 | 1/1 | 2/3 | 1/1 | 0/0 | 19/ 20 | 13/ 17 | 21/ 21 | New Compl/ Follow-ups |
| Food Service | 5 | 5 | 6 | 2 | 4 | 4 | 1 | 2 | 4 | 5 | 3 | 0 | 41 | 33 | 32 | Plan Reviews |
| Food Service | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | Admin. Hearings |
| Grease/ Septage Haulers | 1 | 0 | 0 | 0 | 0 | 21 | 2 | 0 | 0 | 0 | 0 | 0 | 24 | 24 | 29 | Grease/ Septage Hauler permits |
| Housing | 0/0 | 0/0 | 7/0 | 0/0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0/0 | | 14/ | 7/4 | Annual |

| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (Chap II Housing) | | | | | | | | | | | | | | 14 | | routine insp./ Follow-up insp. |
| Housing | 7/7 | 2/2 | 2/2 | 3/3 | 1/2 | 0/1 | 2/2 | 0 | 0 | 1/1 | 1/1 | 0/0 | 19/ 21 | 7/ 11 | 18/ 37 | New Compl./ Follow-ups |
| Hotel | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 3/0 | 3/0 | 3/0 | Annual insp./Follow-ups |
| Nuisance | 5/5 | 6/6 | 0/0 | 4/4 | 3/3 | 4/4 | 2/2 | 2/2 | 4/4 | 2/2 | 4/4 | 0/0 | 36/ 36 | 30/ 45 | 44/ 50 | New Compl./ Follow-ups |
| Pools | 0/0 | 0/0 | 0/0 | 0/0 | 1/2 | 0 | 0 | 0/0 | 0 | 1/0 | 3/1 | 0 | 5/3 | 13/ 8 | 9/3 | Pool insp./follow-ups |
| Pools | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 3 | 0 | 11 | 9 | 9 | Pool permits |
| Pools | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 5 | 6 | 6 | 4 | 0 | 39 | 19 | 8 | Pool plan reviews |
| Pools | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 1 | 0 | 1 | 0 | 6 | 6 | 4 | Pool variances |
| Septic | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 5 | 18 | 8 | Septic Abandon Forms |
| Septic | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 9 | Addition to a home on a septic plan rev/approval |
| Septic | 4 | 0 | 0 | 0 | 5 | 1 | 1 | 0 | 0 | 5 | 1 | 0 | 17 | 43 | 23 | Install. Insp. |
| Septic | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | COC for repairs |
| Septic | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | COC for complete septic system |
| Septic | 5 | 4 | 4 | 6 | 5 | 4 | 3 | 5 | 4 | 4 | 3 | 0 | 47 | 62 | 61 | Info. requests |
| Septic | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 8 | Soil/Perc Test. |
| Septic | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 4 | 8 | 6 | Const. permits |
| Septic | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 0 | 1 | 0 | 1 | 0 | 9 | 11 | 9 | Installer permits |
| Septic | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 6 | 6 | Installer Tests |
| Septic | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 7 | 3 | Deed Restrict. |
| Septic | 1 | 2 | 1 | 1 | 1 | 0 | 2 | 3 | 4 | 4 | 1 | 0 | 20 | 14 | 14 | Plan reviews |
| Sharps permits/ Insp. | 0 | 0 | 0 | 0 | 0/5 | 8/2 | 0 | 1 | 0 | 0 | 0 | 0 | 9/7 | 9 | 10 | Disposal of Sharps permits/Insp. |
| Subdivision | 0/0 | 0/0 | 0/0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3/1 | 3/0 | Plan review-Insp. of lots /Bond Releases |
| Special Permit/ Zoning memos | 1 | 0 | 1 | 2 | 1 | 0 | 1 | 0 | 0 | 1 | 6 | 0 | 13 | 12 | 16 | Special Permit/ Zoning |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tobacco | 0 | 0 | 0 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 12 | 13 | Tobacco permits |
| Tobacco | 0/0 | 1/0 | 2/0 | 4/0 | 1/0 | 2/1 | 1/0 | 2/1 | 1/1 | 4/0 | 0/0 | 0/0 | 18/3 | 25/6 | 25/7 | Routine insp./ Follow-up insp. |
| Tobacco | 0 | 0 | 0 | 11 | 0 | 10 | 0 | 0 | 10 | 10 | 0 | 0 | 41 | 34 | 48 | Compliance checks |
| Tobacco | 0/0 | 0/0 | 0/0 | 1/1 | 0 | 0 | 0/0 | 0 | 1/1 | 1/1 | 0 | 0 | 3/3 | 2/2 | 4/4 | New compl./ Compl. follow-ups |
| Trash Haulers/ Medical Waste Haulers | 0/0 | 0/0 | 0/0 | 1 | 0 | 0/0 | 0/1 | 0 | 0 | 8/0 | 4/0 | 0 | 13/1 | 26/2 | 30/2 | Trash Hauler permits/ Medical Waste Hauler permits |
| Wells | 0 | 0 | 0 | 1/0 | 0/0 | 0 | 0/0 | 0 | 1/0 | 0/0 | 0 | 0 | 2/0 | 7/3 | 6/0 | Permission to drill letters/ Well permits |

## FY 18 Critical FBI Violations Chart (By Date)

| Restaurant | Insp. Date | Critical Violation | Description |
|---|---|---|---|
| Boony Bunz | 8/11/17 | - Cold Holding | - Need to ensure that prep refrigerator cold-holding unit temp. is maintained at 41 deg F or below. Had refrigerator prep unit serviced. Work order submitted for our file. |
| Dunkin Donuts (Highland Ave.) | 10/30/17 | - Handwash Facilities. | - Need to ensure that there is sufficient hot water, min. 110 deg. F, at front hand wash sink ASAP. Repair made. Follow-up site inspection conducted. |
| Farmhouse Restaurant | 1/9/18 | - Food Contact surfaces cleaning and sanitizing | - Ensure that dish machine reaches a min. temperature of 180 deg F or greater for final hot water sanitizing rinse. Had serviced. |

| | | | |
|---|---|---|---|
| | | | |
| Dunkin Donuts (Great Plain Ave.) | 1/17/2018 | - Handwash Facilities. | Need to ensure that there is sufficient hot water, min. 110 deg. F, at all sinks ASAP. Pilot light was out. Follow-up site inspection conducted and hot water was confirmed. |
| Town House of Pizza | 4/30/2018 | - Hot and Cold Holding<br>- Food and Food Protection | Need to ensure that prep. Refrigerator units are maintained at 41' F or below. Observed large prep 58'F/small prep 50'F.<br><br>-Service receipts were sent in for repairs done on 5/1/2018. |

**Needham Public Health Department**
**Rachael Greenberg, Public Health Associate**
**May 2018 Monthly Report**

## Safety at Home Program

The Town continues to move forward its Safety at Home Program, which will provide home safety visits to reduce falls among older adults in Needham.

Program activities completed in May 2018 include:

- Held staff training on May 1st, 2018, which taught staff about high-risk issues for older adults in the home, how to conduct the home assessments, and the program protocol
    - Outcomes reported on following page labeled "Safety at Home Training"
- Held biweekly team meetings
- Continued improvement on program protocol and forms
- Continued development of an evaluation plan
- Continued to identify and reach out to potential partners for cross-referrals
- Identified exercise component (Tai Chi) for pilot
- Developing year-round plan to offer Matter of Balance sessions to program participants (and Needham residents overall), in collaboration with Aging Services
- Confirmed supplies to be given to each participant who receives a home assessment
- Pilot home visits began with two pilot visits completed in May

## Housing Authority Assessment

The Town is continuing work began during Summer 2017 to identify assets and needs of residents of the Needham Housing Authority. Prior work included key informant interviews and limited focus groups. Currently, the Town is conducting additional focus groups to reach more residents, especially Russian- and Mandarin-speaking individuals. The Town will also disseminate a survey after the focus groups to obtain broader, quantifiable data.

Activities that occurred in May include:

- Finalized focus group guide and flyer
- Worked with translation service to translate flyer and setup interpretation services
- Collaborated with the Needham Housing Authority (e.g. confirmed focus group dates and locations, and Resident Coordinator distributed flyers)
- Continued conversation with survey design firm
- Purchased food and incentives for each focus group session
- Attended tenant meeting to promote focus groups
- Held six focus groups – two in English, two in Mandarin, and two in Russian
    - 14 English-speaking participants attended
    - 4 Mandarin-speaking individuals attended
    - No Russian-speaking individuals attended
        - The Town is planning to reach out to identified Russian-speaking leaders within the Housing Authority to conduct interviews, in lieu of focus groups, in order to engage this population
- Began analyzing data

**Accreditation**

- To assist with the Town's accreditation efforts, research continues to be conducted to begin work on a Community Health Assessment.
- Beth Israel Deaconess - Needham has agreed to partner with the Town on its 2019 Community Health Needs Assessment to reduce costs for both parties and leverage resources. Beth Israel's assessment will be used to inform the Town's Community Health Assessment.
- The Town is also exploring how to conduct a general adult health survey to inform the Community Health Assessment and the Town's work overall.

**Safety at Home Training**

**May 1, 2018**

Trainer: Jennifer Kaldenberg, DrPH, MSA, OTR/L, SCLV, FAOTA

Six attendees (two Social Workers, two Public Health Nurses, Program Coordinator, Traveling Meals Coordinator)

Results of Satisfaction Survey:

All participants selected “Strongly Agree” to all of the following questions:

- The information during the training was easy to understand.
- The trainer made me feel comfortable about asking questions.
- The training was a good way to learn how to conduct home assessments.
- I will use what I learned in the training.
- Overall, I’m very satisfied with the Safety at Home Program Training.

Strategies from the training that participants will use during home visits:

- Observation techniques
- Making sure to utilize different ways to make things work - “think out of the box” to help a client
- Determining priorities in assessment: understanding how someone functions in the home, their routine
- Practical tips (i.e. putting dark/light tape on strategic areas; lighting tips; grab bar placement, etc.)

Additional information that would be helpful:

- List of products for recommendation and occupational therapy referrals
- Once we begin implementing this program, it will be easier to know
- Visuals – before/after modifications

Other comments:

- Great job! Thanks.
- Thank you!

**Public Health Nurse Report FY2018**
**Donna Carmichael and Tiffany Zike**

| COMMUNICABLE DISEASES: | JUL | AUG | SEPT | OCT | NOV | DEC | JAN | FEB | MAR | Apr | MAY | JUN | T18 | T17 | T16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BABESIOSIS | | 1 | 2 | 1 | | | | | | | | | 4 | 2 | 0 |
| Borrelia Miyamota | | | | | | | | | | | | | 0 | 0 | 1 |
| CAMPYLOBACTER | 1 | 2 | 3 | | 1 | 1 | | 2 | | 1 | | | 11 | 7 | 9 |
| CRYPTOSPORIDIUM | | | 1 | | | | | | | | | | 1 | 0 | 0 |
| Cyclosporiasis | | 1 | | | | | | | | | | | 1 | 0 | 0 |
| Dengue | | | | | | | | | | | | | 0 | 1 | |
| E-Coli | | | | | | | | | | | | | 0 | 0 | 0 |
| EHRLICHIOSIS/ HGA | 1 | | | | | 1 | | | | | | | 2 | 2 | 2 |
| Enterovirus | | | | | 1 | | | | | | | | 1 | 1 | 3 |
| GIARDIASIS | | | | | | 1 | | | | | | | 1 | 2 | 1 |
| Haemophilus Influenza | | | | | | | | | | | 1 | | 1 | 1 | 0 |
| HEPATITIS B | 1 | 2 | | | | 1 | 1 | | | 2 | | | 7 | 8 | 5 |
| HEPATITIS C | | 1 | | 3 | | 1 | 2 | 1 | | 2 | 3 | | 13 | 21 | 12 |
| Influenza | 1 | | | | | 5 | 70 | 97 | 26 | 12 | | | 211 | 108 | 102 |
| Legionellosis | | 1 | | | | 1 | | | | | | | 2 | 0 | 0 |
| Listeriosis | | | | | | | | | | | | | 0 | 0 | 1 |
| LYME | 9 | 12 | 2 | 2 | 3 | 3 | 4 | 2 | 5 | 6 | 2 | | 50 | 44 | 58 |
| MEASLES | | | | | | | | | | | | | 0 | 0 | 0 |
| MENINGITIS | | | | | | | | | | | | | 0 | 0 | 0 |
| Meningitis(Aseptic) | | | 1 | | | | | | | | | | 1 | 2 | 0 |
| Mumps | | | | | | | | | | | | | 0 | 0 | 2 |
| Noro Virus | | | | | 1 | | | | 1 | 1 | | | 3 | 2 | 2 |
| PERTUSSIS | 1 | | | | | | | | | | | | 1 | 4 | 1 |
| SALMONELLA | 2 | | | | | | | | 1 | | | | 3 | 2 | 5 |
| SHIGA TOXIN | | | | | | | | | | | | | 0 | 1 | 0 |
| SHIGELLOSIS | | | | | | | | | | | | | 0 | 0 | 3 |
| STREP Group B | | 1 | | | | | | | | | | | 1 | 0 | 3 |
| STREP ( GAS) | | | 1 | | | | | | | | | | 1 | 0 | 1 |
| STREP PNEUMONIAE | | | 1 | | | | 2 | | | | | | 3 | 0 | 0 |
| TUBERCULOSIS | | | | | | | | | | | | | 0 | 0 | 0 |
| TULAREMIA | | | | | | | | | | | | | 0 | 1 | 0 |
| Latent TB- High Risk | | | | | | | | | | | | | 0 | 1 | 1 |
| Varicella | 1 | 1 | | 2 | | 2 | 1 | | | 5 | | | 12 | 10 | 9 |
| Vibrio | | | | | | | | | | | | | 0 | 1 | 1 |
| West Nile virus | | | | | | | | | | | | | 0 | 0 | 0 |
| Zika | | 1 | | | | | | | | | | | 1 | 1 | 0 |
| **TOTAL DISEASES** | 17 | 23 | 11 | 8 | 6 | 16 | 80 | 102 | 33 | 29 | 6 | 0 | 331 | 221 | 222 |
| Revoked Diseases Investigated | 1 | 3 | 2 | | | | | | | | | | 6 | 13 | 8 |
| Contact Investigation | | | | | | | | | | 2 | | | 2 | 1 | 0 |

# Public Health Nurse Report FY2018
## Donna Carmichael and Tiffany Zike

| ANIMAL TO HUMAN BITES | JUL | AUG | SEPT | OCT | NOV | DEC | JAN | FEB | MAR | Apr | MAY | JUN | T18 | T17 | T16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DOG | 8 | 3 | 4 | 5 | | 2 | 2 | 3 | 1 | 1 | 6 | | 35 | 15 | 8 |
| CAT | | | | | | | | | | | | | 0 | 0 | 2 |
| BAT | | 3 | | | | | 1 | | 2 | 1 | | | 7 | 5 | 5 |
| SKUNK | | | | | | | | | | | | | 0 | 0 | 1 |
| RACOON | | | | | | | | | | | | | 0 | 0 | 0 |
| other | | | | | | | | | | | 1 | | 1 | 1 | 0 |
| **TOTAL BITES** | 8 | 6 | 4 | 5 | 0 | 2 | 3 | 3 | 3 | 2 | 7 | 0 | 43 | 22 | 10 |

| IMMUNIZATIONS | July | Aug | Sept | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | June | FY18 | FY17 | FY16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B12 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | 22 | 22 | 23 |
| Flu (Seasonal) | 0 | 0 | 0 | 337 | 164 | 7 | 5 | 9 | 0 | 0 | 0 | | 522 | 674 | 816 |
| TDap | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 1 | 0 |
| Varicella | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | | 2 | 0 | 0 |
| **Consult** | 19 | 11 | 19 | 9 | 9 | 18 | 30 | 47 | 51 | 39 | 22 | 0 | 274 | 592 | 475 |
| Fire/Police | 8 | 3 | 0 | 0 | 3 | 6 | 4 | 10 | 5 | 5 | 3 | | 47 | 80 | 40 |
| Schools | 3 | 2 | 12 | 0 | 0 | 3 | 3 | 6 | 2 | 2 | 5 | | 38 | 106 | 88 |
| Town Agencies | 6 | 4 | 6 | 6 | 5 | 8 | 15 | 30 | 40 | 30 | 10 | | 160 | 246 | 216 |
| Community Agencies | 2 | 2 | 1 | 3 | 1 | 2 | 8 | 1 | 4 | 2 | 2 | | 28 | 160 | 139 |

| ASSISTANCE PROGRAMS | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | June | FY18 | FY17 | FY16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Food Pantry | 1 | 2 | 0 | 2 | 4 | 2 | 0 | 2 | 0 | 0 | 0 | | 13 | 20 | 21 |
| Food Stamps | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 4 | 6 |
| Friends | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 1-$300 |
| Gift of Warmth | 2 | 2 | 0 | 3 | 1 | 1 | 2 | 1 | 3 | 4 | 0 | | 19($6842) | 11 | 17 |
| Good Neighbor | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | | 5 $425/fam | 8 | 5 |
| Park & Rec | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | | 1 | 2 | 5 |
| RTS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Salvation Army | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Self Help | 0 | 2 | 1 | 2 | 3 | 8 | 6 | 3 | 2 | 3 | 2 | | 32 | 46 | 27 |
| Water Abatement | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 2 |

**Gift of Warmth Donations**

Gift Cards - I Family - 2 gift cards

**Public Health Nurse Report FY2018**
**Donna Carmichael and Tiffany Zike**

| WELLNESS PROGRAMS | July | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | June | FY18 | FY17 | FY16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Office Visits | 22 | 46 | 31 | 40 | 41 | 34 | 40 | 55 | 32 | 29 | 44 | | 414 | 481 | 447 |
| Safte Visits | 1 | 0 | 0 | 0 | 1 | 2 | 3 | 1 | 0 | 0 | 1 | | 9 | 7 | 10 |
| Clinics | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 31 |
| Housing Visit | 3 | 2 | 0 | 0 | 1 | 1 | 5 | 1 | 0 | 0 | 0 | | 13 | 6 | 8 |
| Housing Call | 12 | 10 | 2 | 1 | 14 | 10 | 25 | 10 | 15 | 8 | 1 | | 108 | 37 | 70 |
| Camps-summer | 3 | 8 | 8 | 0 | 0 | 0 | 0 | 0 | 11 | 11 | 7 | | 48 | 50 | 72 |
| Tanning Insp | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| Articles | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | | 3 | 3 | 2 |
| Presentations | 0 | 0 | 1 | 2 | 2 | 1 | 2 | 3 | 2 | 2 | 0 | | 15 | 0 | 2 |
| Cable | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 2 | 5 | 1 |

| EMPLOYEE WELLNESS | July | AUG | SEPT | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUNE | FY18 | *FY17* | FY16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BP/WELLNESS - DPW/RTS | 12 | 16 | 12 | 15 | 14 | 12 | 10 | 12 | 12 | 12 | 10 | | 137 | 169 | 120 |
| FLU VACCINE | 0 | 0 | 0 | 24 | 12 | 2 | 2 | 0 | 0 | 0 | 0 | | 40 | 48 | 87 |
| CPR/AED INSTRUCTION | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 31 | 26 |
| SMOKING Education | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 50 | | 54 | 14 | 9 |
| HEALTH ED Tick Borne | 100 | 20 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 132 | 90 | 67 |
| HEALTH ED Mosquito Borne | 100 | 20 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 132 | 80 | 80 |
| HEALTH ED FLU | 0 | 0 | 8 | 200 | 22 | 10 | 18 | 16 | 10 | 5 | 0 | | 289 | 160 | 327 |
| FIRST AIDE | 5 | 4 | 3 | 3 | 2 | 2 | 4 | 3 | 5 | 5 | 7 | | 43 | 61 | 34 |
| GENERAL HEALTH EDUCATION | 5 | 8 | 10 | 6 | 5 | 5 | 25 | 20 | 15 | 30 | 50 | | 179 | 258 | 188 |
| Police weights | 0 | 0 | 0 | 0 | 17 | 2 | 0 | 0 | 0 | 0 | 19 | | 38 | 43 | 33 |
| **TOTAL EMPLOYEE CONTACTS** | 222 | 68 | 58 | 248 | 72 | 33 | 59 | 52 | 42 | 54 | 136 | 0 | 1044 | 954 | 1028 |

**Public Health Nurse Report FY2018**
**Donna Carmichael and Tiffany Zike**

**MEETINGS, EVENTS, TRAININGS**

| *Title* | *Description/Highlights/Votes/Etc.* |
|---|---|
| Resume Reviews | Review resumes for Youth Services |
| CCIT | CCIT and HIPAA Meeting |
| | Monthly Meeting |
| Infection Control Meeting | Newton Wellesley Hospital annual Meeting |
| Emergency Planning | Generator Test - CATH |
| | Review of MRC with Neia Illingworth – x3 |
| | Fire Drill - CATH |
| DVAC Meeting | Monthly meeting<br>Intern orientation and review x 3 |
| CDC Coca Call | Commissioner Bharel's Webinar with Local Public Health |
| Webinars | Tickborne Disease |
| Staff Meeting | Monthly meeting with staff updates |
| Healthy Aging | Meetings x2 |
| Union Meeing | x1 |
| Presentations | Lunch and Learn - Health Effects of Medical Marijuana - CATH - 50 people |
| | Education Board at CATH – Marijuana |
| QI Training | Health Dept QI training for Accreditation |

**Emergency Planning:** LEPC, Region 4B, NC7

**Carol Read, M.Ed., CAGS, CPS** **May 2018**

**Substance Use Prevention and Education ~ Initiative Highlights**

Needham NPHD, Needham SPAN and Substance Abuse Prevention Collaborative (SAPC) grant* collaboration with the towns of Dedham, Needham, Norwood and Westwood**.**

**SAPC grant**

**Town coalition meetings:**
**Dedham Prevention** coalition: May 1st Dedham Town Hall 9:00am
**Impact Norwood** coalition: May 10th Norwood High School 3:00pm *Conflict CCIT training*
**Westwood Cares** coalition: May 31st Westwood High School 10:00am *Cancelled graduation*
**Needham SPAN** coalition: May 22nd 8:30am *Conflict MA Health Council Conference*

**SAPC program, capacity building and strategy implementation preparation:**
(1) SAPC FY18 budget amendment (spending review, fund allocation and approved program cost addition) BSAS review/approval and Virtual Gateway- EIM submission (2) AlcoholEdu parent course initiative- Revision of initially approved parent flyer (graphic design coordination, identification of town stakeholder outreach (3) SAPC Renewal Contract package FY19 & FY20, budget narrative written (5) Marijuana Informational forum May 17th Bank of Canton, public health and prevention collaboration: Braintree, Avon, Stoughton and Ashland (6) SAPC *PhotoVoice* stakeholder outreach (7) MDPH- BSAS SAPC program survey, data request on cluster town youth risk behavior surveys, survey frequency, survey tool, future administration and question content

**Dedham Community Forum**: May 2nd Caron Treatment Center- Regional Prevention team. *The Truth About Vaping*, community presentation. Traci Wojciechowski, LICSW, Regional Director Substance Abuse/Prevention. Presentation of: data on youth vaping, local, state and national, science and health impact of e0cigarrete devices, vap products and Juuling including identifiable contents of combustible products and health impacts on youth. CDC information disseminated.

**SAPC Leadership Team meeting:** May 7th. Review and discussion of action plan initiatives and upcoming prevention events: (1) SAPC FY18 budget amendment- *AlcoholEdu* program capacity building, June meetings with Health Educators (2) Parent initiative: *AlcoholEdu for High School*, parent course- regional launch, revised flyer development, content for messaging, distribution plan (electronic and hard copy) distribution (3) Regional Compliance Check program update, police schedule for May/June checks (4) NPN 2018 conference attendance consideration August 28-30, 2018 (5) PhotoVoice – Emily Sanders, BUSPH Youth Engagement coordinator, review youth recruitment outreach plan (6) MDPH – SAPC Renewal Contract package budget FY19 & FY20 discussion.

**SAPC Youth Engagement Intern**: May 3rd & 23rd (Conference call May 21st) Emily Sanders, BUSPH, MPH candidate. SAPC Youth Engagement intern, *Photo Voice* program planning including outreach to town specific contacts to speak in person to youth including lunch rooms, art classes, sports teams and parks and recreation counselors. Timeline review of each town's first youth meetings.

**BSAS SAPC Reporting**: May 7th SAPC Q 3 programmatic online report submitted. All Strategic Prevention Framework (SPF) efforts reported for cluster including prevention initiatives, outcomes and capacity building. MDPH-BSAS evaluator, Scott Formica, SSRE.

**Drug Free Communities (DFC) grant application**: May 10th Jessica Tracy. Final application component review with SAMHSA- ONDCP review team.

**Norfolk County Prevention Directors**: May 3rd, 8th 14th (meetings) May 11th & 14th (conference calls) Conference planning. Steph Patton, Stoughton, Easton coalition, Lyn Frano, Braintree and Amanda Decker, Avon and Jessica Kuhn, SAPC Stoughton (Walpole-Holbrook- Canton) Forum planning: May 17th *The Impacts of Marijuana: Tools for Municipalities to Address Heath, Social, and Legal Issues*. Presentations by: John Scheft, public safety, law enforcement implications, Chief John Carmichael, emerging trends, Cheryl Sbarra, Attorney MAHB, tools for boards of health and intersections with tobacco laws. Katherine Laughman, Municipal Law Kopleman & Paige, Jody Hensley and Dr. Amy Turncliff, youth health implications- adolescent brain development. Bank of Canton Corporate headquarters.

**Rotary Clubs of Massachusetts**: May 8th, 15th and 24th Conference Calls. Heidi Heilman, Edventi and Paul Sullivan, Newton Rotary. Public Health/Prevention facilitator planning for May 29th Rotary pilot project: World Café model presenting Edventi media, 5 videos on tobacco, marijuana, brain science of addiction, alcohol and opioids. Goals: Community conversations, sponsored by Massachusetts Rotarians, for adult residents to learn about the impact of alcohol, tobacco and marijuana on youth, the progression of substance dependence and addiction as a chronic, relapsing brain disease and local level public health policies to impact access and availability to substances. Dr. Amy Turncliff, Jody Hensley, M.Ed., Amanda Decker, CPS, Lyn Frano, CPS, Cory Mashburn, M.Ed., and Judy Margulies, Ph.D., Katie Sugarman, MPH and Bonnie White, MCPHS.

**Youth support- prevention capacity building:** May 11th Beth Pinals, Ph.D. Review of youth lead mental health promotion initiatives in Newton Public Schools, originated in Needham High School. Options for consideration to present in Dedham, Norwood and Westwood.

**Bank of Canton Corporate Center**: May 15th Paul Connelly, Facilities Manager. Conference planning site visit, review of facilities, technology capacity and in-kind donation constructs. Lyn Frano, Braintree and Amanda Decker, Avon. Impacts of Marijuana: Tools for Municipalities to Address Health, Social and Legal Issues. May 17th Public health educational forum, community stakholder strategies to impact access, availability of marijuana to youth.

**Massachusetts Health Council Spring Conference**: May 22nd *Our Kids and Drugs of Misuse*, Bentley University 9:30- 2:30pm. Keynote address: Michael Botticelli, Executive Director, Grayken Center for Addiction Medicine, Boston Medical Center. Presentations by: Nicole Harrington, Director of Pharmacy Services, CVS, Kevin O'Flaherty, Director of Advocacy Campaign for Tobacco- Free Kids, D.J. Wilson, Tobacco Control Director, MMA, Vaughan Rees, Director of the Center for Global Tobacco Control, Harvard, T.H. Chan School of Public Health, Jessica Neuwirth, Retail Marijuana Education & Youth Prevention, CO Department of Public Health and Jennifer Flanagan, MA Cannabis Control Commission.

**Rotary International:** May 29th Global Initiative pilot project: *Lets Talk About Addiction: To learn about the driving forces of addiction and what works to protect young people, families and communities from drug use and addiction.* **Rotary mission**: *Addiction, like polio, is a preventable global disease. Rotarians in clubs across the country are mobilizing to help address the epidemic. This program is the launch of a new initiative to unite the community, the public health sector and drug prevention specialists to raise awareness about what perpetuates addiction and about ways to be part of the solution.*
Dr. Bertha Madras, Harvard Medical School, Dr. Amy Turncliff and Dr. Antje Barraveld and Dr. Catherina Armstrong. Heidi Heilman, Edventi.

**Boston Children's Hospital SBIRT Research project**: May 31st Dr. Sharon Levy, Director Adolescent Substance Use and Addiction program, Dr. Elissa Weitzman and Eliza Nelson, Research Coordinator. Request for support for recruitment for school district participation (control and participatory) in the study: Evaluation of SBIRT in MA Public Schools. *To evaluate the impact of school SBIRIT on health and behavior outcomes among adolescents,* through two anonymous electronic youth surveys, base-line and post SBIRT, 3 months apart.

**NPHD programs meeting preparation outreach for research and resource gathering:**
(1) NPHD monthly report (2) CCIT quarterly Community Partners outreach, meeting confirmation, inquiry for additional NPS representative and incident data requests (3) Marijuana recreational use: local control information, data on youth use, access and availability, request from Town Meeting and Planning Board members.

***NPHD – SPAN initiatives:***

**Town Accountant**: May 1st SAPC financial reimbursement submission Virtual Gateway system (April 2018 expenses) Michelle Vaillancourt. and Dawn Stiller.

**NPHD Dawn Stiller:** May 1st Review of SAPC FY18 grant expense tracking sheet, preparation for FY18 budget amendment. Status of pending invoices, purchase orders and expenses.

**Community Crisis Intervention Team (CCIT):** May 9th Quarterly Community Partners meeting, BID Needham Kathy Davidson, CNO and Dr. Greg McSweeney and Needham Public Schools Nurse, NHS. Review of hospital ED data, police incident data and EMT incident data. Core Team members: Lt. Chris Baker, Eddie Sullivan, EMS Supervisor, Donna Carmichael and Tiffany Zike, Public Health nurses, Catherine Delano, MPH, Katy Colthart, LICSW and, Kerry Cusack, LICSW.

**Community Crisis Intervention Team (CCIT) Training**: May 10th Kathy Lalor, Community Counseling of Bristol County, and Technical Assistance provider of MDPH. Sequential intercept model for jail diversion, collaborative stakeholder response to support residents of all ages navigating: addiction, mental health crisis, domestic violence and Presentations: Taunton Police Chief Edward Walsh, and John Munis, Rhode Island Veterans Intercept Support Program. 1:30pm-3:30pm Taunton Galleria

**Needham Board of Health:** May 11th Directors Report, staff public health initiatives, resident support programs, prevention reporting and BOH discussion of sensitive use areas marijuana dispensaries. Presentation by: Carolyn Dan, Department of Environmental Protection and Ed Needham RTS Manager. PSAB 7:00am-9:00am.

**SAPC Renewal contract:** May 15th & 18th Tim McDonald & Dawn Stiller. Financial review of SAPC Leadership Team prevention goals, strategy approval of BSAS Contract Manager, funding allocations for staff salary, consultant fees and program costs.

**Mass. Municipal Association**: May 16th MA Selectmen's Associations Regional meeting. Legislative update, overview of MMA advocacy positions: Geoff Beckwith, Executive Director, Marijuana: Guidance for Municipalities Regarding Marijuana for Adult Use: David Lakeman, Director of Government Affairs, Cannabis Control Commission and Margaret J. Hurley, Municipal Law Unit Director, Office of the Attorney General. MGL Chapter 94G and 935 CMR 500 Adult Use Regulations.

**NPHD Staff training**: May 22nd Conflict resolution training facilitated by Jon Wortman. Understanding inherent response patterns, identifying behaviors and integrating enhanced communication and collaboration strategies with co-workers.

**Public Health Lunch and Learn planning:** May 23rd Donna Carmichael and Tiffany Zike. Review of health related marijuana as medicine information and resources for Public Health nurse initiative COA educational program. Resource review: physiological and physical impact of marijuana as medicine, peer reviewed articles published in: ASAM, AMA, Mass Medical and Dr. Bertha Madras, Professor Psychobiology, Harvard Medical School, McLean Hospital Director Laboratory of Addiction Neurobiology.

**NPHD Substance Prevention team:** May 29th Tim McDonald, facilitator. Review and discussion of 2016/2017 BOH – NPHD goals, revisions based on accomplishments, data trends and community conditions specifically related to alcohol, marijuana and tobacco.

**NPHD Staff meeting:** May 29th Quality Improvement (QI) training, Lynn Schoeff, Facilitator. Public Health accredidation initiative, Goals to understand: (1) basic principles of Quality Improvement (2) the phases of a Plan-Do-Study-Act cycle (3)Become familiar with some Quality Improvement tools such as the flow chart.

**Public Health Lunch and Learn:** May 30th Needham Council on Aging facilitated by Donna Carmichael and Tiffany Zike, Public Health Nurses. Review of health related marijuana as medicine information and resources for older adults. Information sharing on town of Needham protocols, By-laws and health regulations related to registered marijuana Dispensaries (RMD) and future recreational marijuana licensing.

**Community outreach and support**

**Resident Support**: Respond to calls or meeting requests related to mental health conditions and/or substance use disorder. Referral to counseling, assessment, treatment and recovery resources. 2 requests: F- 55yrs. Chronic alcohol, peer support meetings and MDPH Helpline consultation for Detox/Treatment | F-62 yrs. Grief resources; support groups and educational information on stages of grief.

May 28th– Town holiday- Memorial Day Respectfully submitted by Carol Read June 8, 2018

*SAPC technical assistance calls, coordinator meetings, and compliance related to the SAPC grant program are extensively documented in the BSAS-SAPC online quarterly reports.

# Needham Public Health Department

May, 2018  Monthly Report

Maryanne Dinell- Traveling Meals Program Coordinator

**Monthly**

| *Description* | *Reason* | *Notes/Follow-Up (ongoing, completed, etc.)* |
|---|---|---|
| Month of May,2018 | Residents of Needham, needing help with their daily meals. | 40 clients on the Traveling Meals Program<br><br>29 Springwell Elder Services, Waltham clients<br>11 private pay clients - Needham residents |
| | | |
| 656 2- meal packages were delivered in May, 2018 | 22 Clients receive meals 5 times a week<br>17 Clients receive meals 3 days a week<br>1 Client receives 7 meals within 5 day period | 476 meals delivered to Springwell Clients<br>180 meal delivered to private pay residents<br><br>Total #656 meals delivered @ 5.50 per meal =cost of $3608.00 |
| 4 new clients on the Program | 2 are Springwell consumers<br>2 Private Pay | 2 expected to be short term<br>2 long term |
| 3 Clients no longer need Program | 3 able to be on their own | able to drive, shop and prepare their own meals |
| | | |
| | | |
| | | |
| | | |

| *Category* | | *Jul* | *Aug* | *Sept* | *Oct* | *Nov* | *Dec* | *Jan* | *Feb* | *Mar* | *Apr* | *May* | *Jun* | *FY '17 Total* | *FY '18 Total* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Meal Delivery | | 653 | 718 | 644 | 619 | 577 | 674 | 601 | 605 | 687 | 669 | 656 | | 8460 | 7097 | |
| General Telephone Calls-received | | 35 | 30 | 36 | 35 | 60 | 74 | 102 | 45 | 49 | 51 | 45 | | 562 | 517 | |
| Assistance Calls-to Springwell | | 2 | 1 | 3 | 2 | 8 | 4 | 2 | 4 | 6 | 5 | 6 | | 40 | 43 | |
| Not at home at delivery | | 2 | 3 | 5 | 2 | 4 | 2 | 1 | 4 | 3 | 5 | 3 | | 36 | 34 | |
| 911 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 2 | 0 | |
| | | | | | | | | | | | | | | | | |

**Meetings, Events, and Trainings**

| *BI* | *Type* | *Description/Highlights/Votes/Etc.* | *Attendance* |
|---|---|---|---|
| Board of Health Meeting | | Monthly meeting held at PSAP | Staff and Board Members |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**Donations, Grants, and Other Funding** [List any donations received, grants funded, etc. over the past month.]

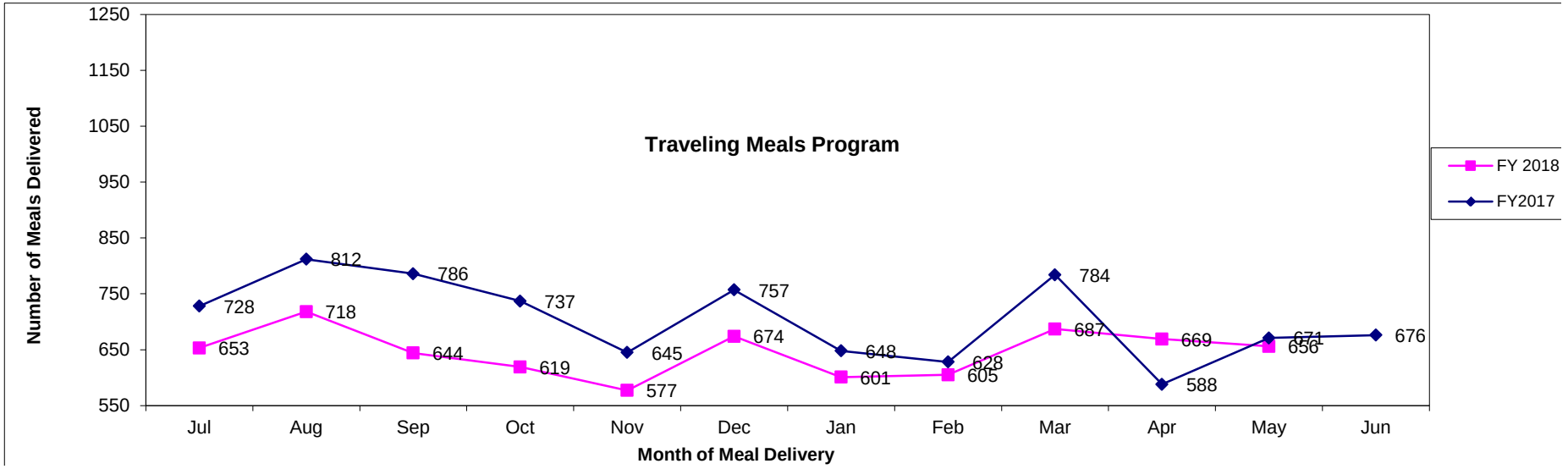
| *Description* | *Type (D,G,O)* | *Amount Given* | *Source* | *Notes* |
|---|---|---|---|---|
| | | | | |

# Traveling Meals Program

## May, 2018

| Projected-12 Mo. | |
|---|---|
| $ | 3,918.00 |
| # | 7,749 |

| Month | # Meals FY2017 | # Meals FY2018 | FY18 Cost | % Change # Meals |
|---|---|---|---|---|
| Jul | 728 | 653 | $3,591.50 | -10% |
| Aug | 812 | 718 | $3,949.00 | -12% |
| Sep | 786 | 644 | $3,542.00 | -18% |
| Oct | 737 | 619 | $3,404.50 | -16% |
| Nov | 645 | 577 | $3,173.50 | -11% |
| Dec | 757 | 674 | $3,707.00 | -11% |
| Jan | 648 | 601 | $3,305.50 | -7% |
| Feb | 628 | 605 | $3,327.50 | -4% |
| Mar | 784 | 687 | $3,778.50 | -12% |
| Apr | 588 | 669 | $3,679.50 | 14% |
| May | 671 | 656 | $3,608.00 | -2% |
| Jun | 676 | | | |
| Totals: | 8,460 | 7,103 | 39,066.50 | |



# needham led street light pilot program

**Enlighten** us with your opinion by participating in a brief survey on the Town's LED Street Light Pilot Program. The information collected will be used for future LED Street Light Conversion.

For More Information Please visit:
www.needhamma.gov/streetlight

# Process

- Initial Investigation
- Pilot & Survey
- MAPC Grant
- Analysis
- Funding Proposal
- Wellesley Variable
- Decisions

# Pilot/Survey

- Lowest Kelvin available & recommended by utility and installer during pilot – 3000K
- Selected two 3000 kelvin & one 4000 kelvin
- Installed in April – Pilot May – August
- All residents were notified with no complaints
  - Publicized pilot and survey, 54 people responded

| Location | Make | Model | Watts | Kelvins | Lumens |
|---|---|---|---|---|---|
| Stevens Rd. | Lumark | VRDN | 20W | 4000K | 1932 |
| Pinewood Rd. | Leotek | EC1 | 20W | 3000K | 2100 |
| Eaton Rd. | Cree | XSPR | 19W | 3000K | 1980 |
| Coolidge Ave. | Sylvania | Lumalux | 50W | 1900K | 4000 |

# Analysis

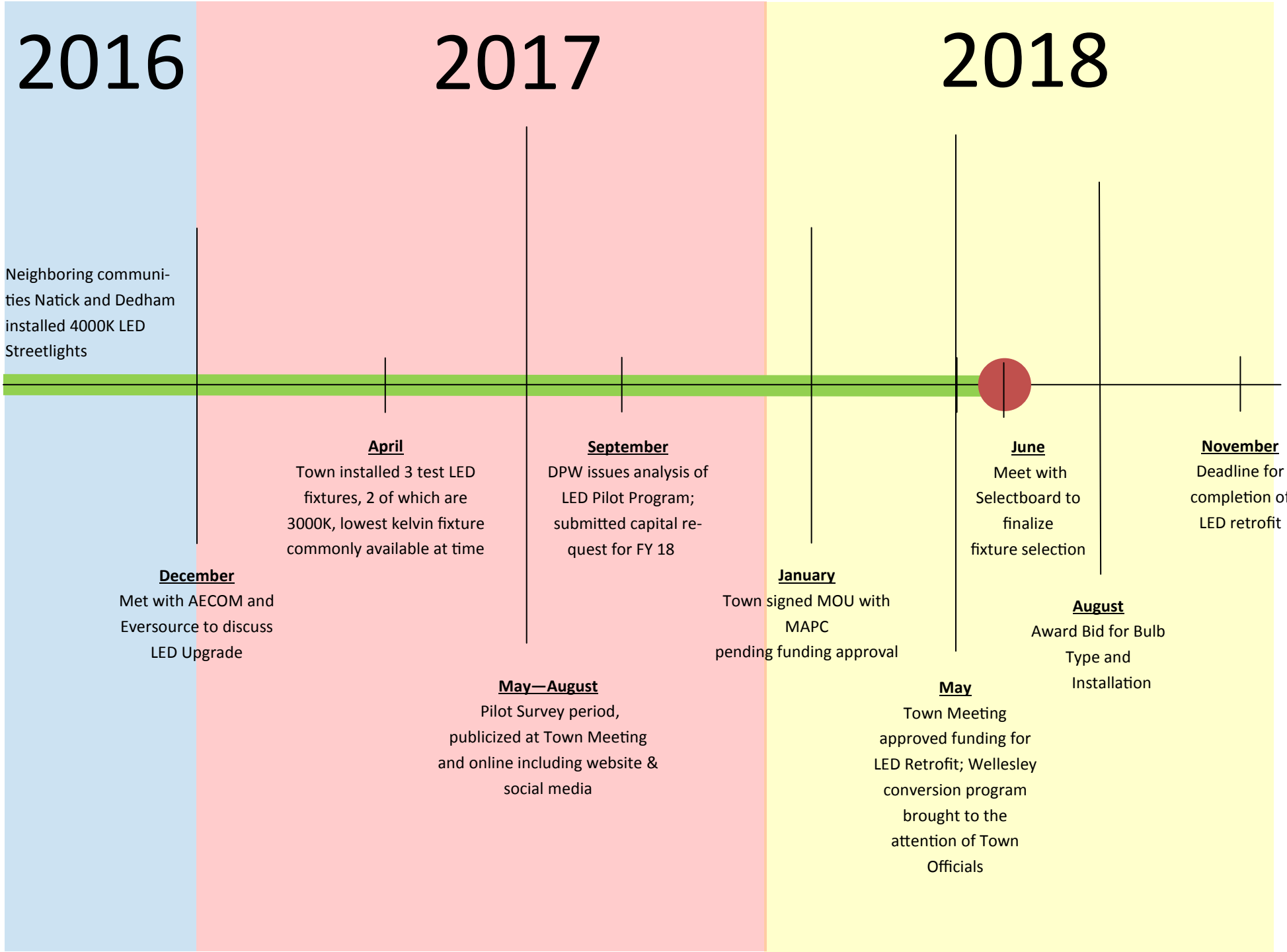
| *Total Survey Population (n = 35)* | | | | |
|---|---|---|---|---|
| **Location** | **Make/model** | **Average score (1 is most preferred)** | **% of times selected as 1st or 2nd favorite** | **% of times selected as unfavorable** |
| Pinewood Rd. | Leotek EC1 | 1.89 | 71.4% | 20% |
| Eaton Rd. | Cree XSPR | 2.31 | 60% | 37.1% |
| Coolidge Ave. | Sylvania Lumalux | 2.60 | 45.7% | 31.4% |
| Stevens Rd. | Lumark VRDN | 3.20 | 22.9% | 60% |
| | | | | |
| *Pilot Street Residents (n = 5)* | | | | |
| **Location** | **Make/model** | **Average score (1 is most preferred)** | **% of times selected as 1st or 2nd favorite** | **% of times selected as unfavorable** |
| Pinewood Rd. | Leotek EC1 | 1.60 | 100% | 25% |
| Eaton Rd. | Cree XSPR | 2.60 | 40% | 75% |
| Coolidge Ave. | Sylvania Lumalux | 2.80 | 40% | 50% |
| Stevens Rd. | Lumark VRDN | 3.00 | 20% | 75% |

# Wellesley Implementation

- Stronger survey results, mailed out to every resident
- Chose quality of life considerations over public safety and efficiency concerns – went with 2700k fixtures on non-main roads & 3000k fixtures on all other roads
- 2700k fixture uses 25% more energy than 3000k fixture
- Different bulb selection than in Needham
- Differences
  - Wellesley is not eligible for any utility incentives on purchasing bulbs
  - Needham pays for streetlights based on a tariff

# Options/Considerations

1. Stay with current Leotek EC-1 heads that were chosen by survey, install shields and dimming capacity (may also be used for water meter reads)
2. Explore option of installing combination 3000k and 2700k fixtures – reduce incentive & increased cost results in longer payback, may not be able to afford both shields and dimming
    a. Leotek EC-1 & select different 2700k fixture
    b. Find new make/model that comes in both temps


2016
2017
2018
Neighboring communities Natick and Dedham installed 4000K LED Streetlights
December
Met with AECOM and Eversource to discuss LED Upgrade
April
Town installed 3 test LED fixtures, 2 of which are 3000K, lowest kelvin fixture commonly available at time
May—August
Pilot Survey period, publicized at Town Meeting and online including website & social media
September
DPW issues analysis of LED Pilot Program; submitted capital request for FY 18
January
Town signed MOU with MAPC
pending funding approval
May
Town Meeting approved funding for LED Retrofit; Wellesley conversion program brought to the attention of Town Officials
June
Meet with Selectboard to finalize fixture selection
August
Award Bid for Bulb Type and Installation
November
Deadline for completion of LED retrofit

June 5, 2018

Dear Select Board Members and Ms. Fitzpatrick,

I am writing to share my concerns regarding the proposed purchase of the LeoTek 3000k LED Street Lights. I feel it would be a costly mistake for the town to invest in this technology without taking a more thorough look at the known health risks, the experiences of communities who have already installed LEDs, and the recent improvements to the technology.

The rapid improvements to LED technology are the result of market forces. LED manufacturers are investing in research and are producing LEDs now that are as efficient as the LeoTek 3000k, with less harmful blue light and glare. These products meet the ROI requirement outlined by Eversource in their MAPC administered grant. In fact, in a conversation with Patrick Roche of the MAPC, he directed me to the CREE 2700k RSW LED Street Light.

Below I expanded slightly on my concerns, including some links to reputable articles and a slide from a recent presentation by MIT Senior Research Support Associate, Tim Brothers. The slide clearly shows that the difference in blue light from a 2700k and a 3000k is quite significant. I hope you will consider this and the other concerns outlined in this letter as you make this important decision for our community. .

Sincerely,

Deb Schmill
38 Maple Street, Needham, 781-724-5653

**Concerns**

- **Health Risks**: Blue light affects levels of the sleep-inducing hormone melatonin. "Changes in sleep patterns can in turn shift the body's natural clock, known as its circadian rhythm. Recent studies have shown that shifts in this clock can have devastating health effects because it controls not only our wakefulness but also individual clocks that dictate function in the body's organs. In other words, stressors that affect our circadian clocks, such as blue-light exposure, can have much more serious consequences than originally thought." https://www.scientificamerican.com/article/q-a-why-is-blue-light-before-bedtime-bad-for-sleep/

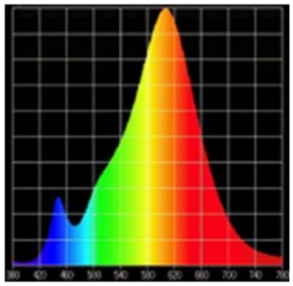
  Due to concerns about excessive blue light at night leading to elevated rates of various diseases including certain types of cancer, the American Medical Association has suggested an upper limit of 3000k for LEDs to put a cap on the worst of the impacts.

  Like humans, animals and plants have circadian rhythms, which are disrupted by blue light. The greater the blue light, the more harm is done to essential animal habitats and plants. This may lead to reduced pollination and a reduction in beneficial insect reproduction.

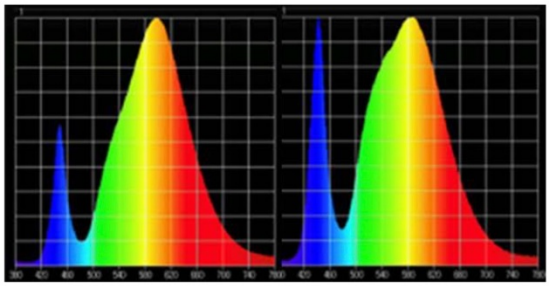
- **Brighter Lights:** 3000K lighting appears much more blinding to our eyes than warmer, lower color temperatures. I was struck by the glare of the LEDs in the pilot and how painful it was to look directly at them. I'm concerned that this will cause more of a safety threat than benefit.

- **Technology**: As mentioned above**,** LED technology is improving very quickly. Manufacturers are aware of the limitations of blue light and are creating warmer, higher efficiency bulbs. Large cities like LA and Monterey CA chose to install 2700K lights, while some towns in Canada have gone to 2200K. '

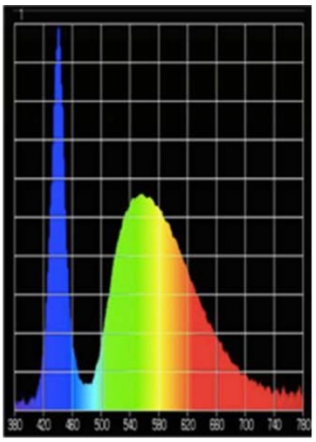
# Not all LEDs are the same!



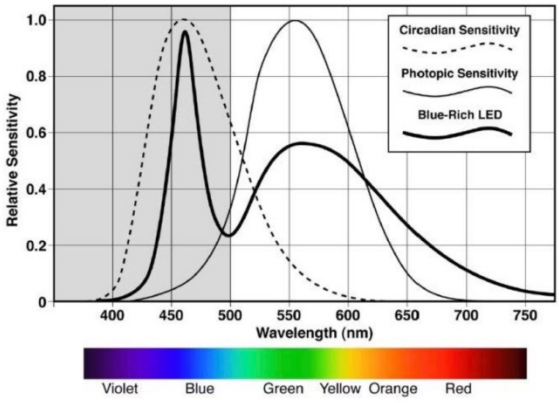
2700K

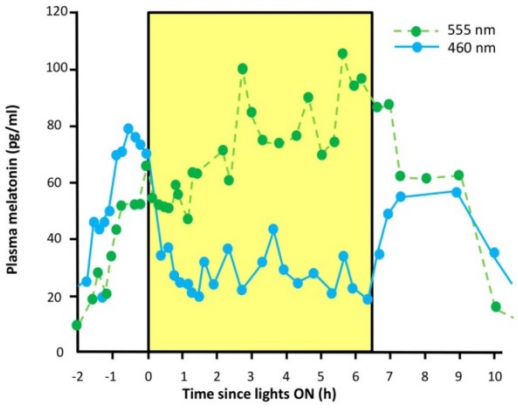


3000K



5000K




Tim Brothers, Senior Research Support Associate, MIT

REPORT OF THE COUNCIL ON SCIENCE AND PUBLIC HEALTH

CSAPH Report 2-A-16

Subject: Human and Environmental Effects of Light Emitting Diode (LED) Community Lighting

Presented by: Louis J. Kraus, MD, Chair

Referred to: Reference Committee E
(Theodore Zanker, MD, Chair)

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## INTRODUCTION

With the advent of highly efficient and bright light emitting diode (LED) lighting, strong economic arguments exist to overhaul the street lighting of U.S. roadways.[1-3] Valid and compelling reasons driving the conversion from conventional lighting include the inherent energy efficiency and longer lamp life of LED lighting, leading to savings in energy use and reduced operating costs, including taxes and maintenance, as well as lower air pollution burden from reduced reliance on fossil-based carbon fuels.

Not all LED light is optimal, however, when used as street lighting. Improper design of the lighting fixture can result in glare, creating a road hazard condition.[4,5] LED lighting also is available in various color correlated temperatures. Many early designs of white LED lighting generated a color spectrum with excessive blue wavelength. This feature further contributes to disability glare, i.e., visual impairment due to stray light, as blue wavelengths are associated with more scattering in the human eye, and sufficiently intense blue spectrum damages retinas.[6,7] The excessive blue spectrum also is environmentally disruptive for many nocturnal species. Accordingly, significant human and environmental concerns are associated with short wavelength (blue) LED emission. Currently, approximately 10% of existing U.S. street lighting has been converted to solid state LED technology, with efforts underway to accelerate this conversion. The Council is undertaking this report to assist in advising communities on selecting among LED lighting options in order to minimize potentially harmful human health and environmental effects.

## METHODS

English language reports published between 2005 and 2016 were selected from a search of the PubMed and Google Scholar databases using the MeSH terms "light," "lighting methods," "color," "photic stimulation," and "adverse effects," in combination with "circadian rhythm/physiology/radiation effects," "radiation dosage/effects," "sleep/physiology," "ecosystem," "environment," and "environmental monitoring." Additional searches using the text terms "LED" and "community," "street," and "roadway lighting" were conducted. Additional information and perspective were supplied by recognized experts in the field.

## ADVANTAGES AND DISADVANTAGES OF LED STREET LIGHTS

The main reason for converting to LED street lighting is energy efficiency; LED lighting can reduce energy consumption by up to 50% compared with conventional high pressure sodium (HPS)

lighting. LED lighting has no warm up requirement with a rapid "turn on and off" at full intensity. In the event of a power outage, LED lights can turn on instantly when power is restored, as opposed to sodium-based lighting requiring prolonged warm up periods. LED lighting also has the inherent capability to be dimmed or tuned, so that during off peak usage times (e.g., 1 to 5 AM), further energy savings can be achieved by reducing illumination levels. LED lighting also has a much longer lifetime (15 to 20 years, or 50,000 hours), reducing maintenance costs by decreasing the frequency of fixture or bulb replacement. That lifespan exceeds that of conventional HPS lighting by 2-4 times. Also, LED lighting has no mercury or lead, and does not release any toxic substances if damaged, unlike mercury or HPS lighting. The light output is very consistent across cold or warm temperature gradients. LED lights also do not require any internal reflectors or glass covers, allowing higher efficiency as well, if designed properly.[8,9]

Despite the benefits of LED lighting, some potential disadvantages are apparent. The initial cost is higher than conventional lighting; several years of energy savings may be required to recoup that initial expense.[10] The spectral characteristics of LED lighting also can be problematic. LED lighting is inherently narrow bandwidth, with "white" being obtained by adding phosphor coating layers to a high energy (such as blue) LED. These phosphor layers can wear with time leading to a higher spectral response than was designed or intended. Manufacturers address this problem with more resistant coatings, blocking filters, or use of lower color temperature LEDs. With proper design, higher spectral responses can be minimized. LED lighting does not tend to abruptly "burn out," rather it dims slowly over many years. An LED fixture generally needs to be replaced after it has dimmed by 30% from initial specifications, usually after about 15 to 20 years.[1,11]

Depending on the design, a large amount blue light is emitted from some LEDs that appear white to the naked eye. The excess blue and green emissions from some LEDs lead to increased light pollution, as these wavelengths scatter more within the eye and have detrimental environmental and glare effects. LED's light emissions are characterized by their correlated color temperature (CCT) index.[12,13] The first generation of LED outdoor lighting and units that are still widely being installed are "4000K" LED units. This nomenclature (Kelvin scale) reflects the equivalent color of a heated metal object to that temperature. The LEDs are cool to the touch and the nomenclature has nothing to do with the operating temperature of the LED itself. By comparison, the CCT associated with daylight light levels is equivalent to 6500K, and high pressure sodium lighting (the current standard) has a CCT of 2100K. Twenty-nine percent of the spectrum of 4000K LED lighting is emitted as blue light, which the human eye perceives as a harsh white color. Due to the point-source nature of LED lighting, studies have shown that this intense blue point source leads to discomfort and disability glare.[14]

More recently engineered LED lighting is now available at 3000K or lower. At 3000K, the human eye still perceives the light as "white," but it is slightly warmer in tone, and has about 21% of its emission in the blue-appearing part of the spectrum. This emission is still very blue for the nighttime environment, but is a significant improvement over the 4000K lighting because it reduces discomfort and disability glare. Because of different coatings, the energy efficiency of 3000K lighting is only 3% less than 4000K, but the light is more pleasing to humans and has less of an impact on wildlife.

*Glare*

Disability glare is defined by the Department of Transportation (DOT) as the following:

> "Disability glare occurs when the introduction of stray light into the eye reduces the ability to resolve spatial detail. It is an objective impairment in visual performance."

Classic models of this type of glare attribute the deleterious effects to intraocular light scatter in the eye. Scattering produces a veiling luminance over the retina, which effectively reduces the contrast of stimulus images formed on the retina. The disabling effect of the veiling luminance has serious implications for nighttime driving visibility.[15]

Although LED lighting is cost efficient and inherently directional, it paradoxically can lead to worse glare than conventional lighting. This glare can be greatly minimized by proper lighting design and engineering. Glare can be magnified by improper color temperature of the LED, such as blue-rich LED lighting. LEDs are very intense point sources that cause vision discomfort when viewed by the human eye, especially by older drivers. This effect is magnified by higher color temperature LEDs, because blue light scatters more within the human eye, leading to increased disability glare.[16]

In addition to disability glare and its impact on drivers, many residents are unhappy with bright LED lights. In many localities where 4000K and higher lighting has been installed, community complaints of glare and a "prison atmosphere" by the high intensity blue-rich lighting are common. Residents in Seattle, WA have demanded shielding, complaining they need heavy drapes to be comfortable in their own homes at night.[17] Residents in Davis, CA demanded and succeeded in getting a complete replacement of the originally installed 4000K LED lights with the 3000K version throughout the town at great expense.[18] In Cambridge, MA, 4000K lighting with dimming controls was installed to mitigate the harsh blue-rich lighting late at night. Even in places with a high level of ambient nighttime lighting, such as Queens in New York City, many complaints were made about the harshness and glare from 4000K lighting.[19] In contrast, 3000K lighting has been much better received by citizens in general.

*Unshielded LED Lighting*

Unshielded LED lighting causes significant discomfort from glare. A French government report published in 2013 stated that due to the point source nature of LED lighting, the luminance level of unshielded LED lighting is sufficiently high to cause visual discomfort regardless of the position, as long as it is in the field of vision. As the emission surfaces of LEDs are highly concentrated point sources, the luminance of each individual source easily exceeds the level of visual discomfort, in some cases by a factor of 1000.[17]

Discomfort and disability glare can decrease visual acuity, decreasing safety and creating a road hazard. Various testing measures have been devised to determine and quantify the level of glare and vision impairment by poorly designed LED lighting.[20] Lighting installations are typically tested by measuring foot-candles per square meter on the ground. This is useful for determining the efficiency and evenness of lighting installations. This method, however, does not take into account the human biological response to the point source. It is well known that unshielded light sources cause pupillary constriction, leading to worse nighttime vision between lighting fixtures and causing a "veil of illuminance" beyond the lighting fixture. This leads to worse vision than if the light never existed at all, defeating the purpose of the lighting fixture. Ideally LED lighting installations should be tested in real life scenarios with effects on visual acuity evaluated in order to ascertain the best designs for public safety.

*Proper Shielding*

With any LED lighting, proper attention should be paid to the design and engineering features. LED lighting is inherently a bright point source and can cause eye fatigue and disability glare if it is allowed to directly shine into human eyes from roadway lighting. This is mitigated by proper

design, shielding and installation ensuring that no light shines above 80 degrees from the horizontal. Proper shielding also should be used to prevent light trespass into homes alongside the road, a common cause of citizen complaints. Unlike current HPS street lighting, LEDs have the ability to be controlled electronically and dimmed from a central location. Providing this additional control increases the installation cost, but may be worthwhile because it increases long term energy savings and minimizes detrimental human and environmental lighting effects. In environmentally sensitive or rural areas where wildlife can be especially affected (e.g., near national parks or bio-rich zones where nocturnal animals need such protection), strong consideration should be made for lower emission LEDs (e.g., 3000K or lower lighting with effective shielding). Strong consideration also should be given to the use of filters to block blue wavelengths (as used in Hawaii), or to the use of inherent amber LEDs, such as those deployed in Quebec. Blue light scatters more widely (the reason the daytime sky is "blue"), and unshielded blue-rich lighting that travels along the horizontal plane increases glare and dramatically increases the nighttime sky glow caused by excessive light pollution.

## POTENTIAL HEALTH EFFECTS OF "WHITE" LED STREET LIGHTING

Much has been learned over the past decade about the potential adverse health effects of electric light exposure, particularly at night.[21-25] The core concern is disruption of circadian rhythmicity. With waning ambient light, and in the absence of electric lighting, humans begin the transition to nighttime physiology at about dusk; melatonin blood concentrations rise, body temperature drops, sleepiness grows, and hunger abates, along with several other responses.

A number of controlled laboratory studies have shown delays in the normal transition to nighttime physiology from evening exposure to tablet computer screens, backlit e-readers, and room light typical of residential settings.[26-28] These effects are wavelength and intensity dependent, implicating bright, short wavelength (blue) electric light sources as disrupting transition. These effects are not seen with dimmer, longer wavelength light (as from wood fires or low wattage incandescent bulbs). In human studies, a short-term detriment in sleep quality has been observed after exposure to short wavelength light before bedtime. Although data are still emerging, some evidence supports a long-term increase in the risk for cancer, diabetes, cardiovascular disease and obesity from chronic sleep disruption or shiftwork and associated with exposure to brighter light sources in the evening or night.[25,29]

Electric lights differ in terms of their circadian impact.[30] Understanding the neuroscience of circadian light perception can help optimize the design of electric lighting to minimize circadian disruption and improve visual effectiveness. White LED streetlights are currently being marketed to cities and towns throughout the country in the name of energy efficiency and long term cost savings, but such lights have a spectrum containing a strong spike at the wavelength that most effectively suppresses melatonin during the night. It is estimated that a "white" LED lamp is at least 5 times more powerful in influencing circadian physiology than a high pressure sodium light based on melatonin suppression.[31] Recent large surveys found that brighter residential nighttime lighting is associated with reduced sleep time, dissatisfaction with sleep quality, nighttime awakenings, excessive sleepiness, impaired daytime functioning, and obesity.[29,32] Thus, white LED street lighting patterns also could contribute to the risk of chronic disease in the populations of cities in which they have been installed. Measurements at street level from white LED street lamps are needed to more accurately assess the potential circadian impact of evening/nighttime exposure to these lights.

## ENVIRONMENTAL EFFECTS OF LED LIGHTING

The detrimental effects of inefficient lighting are not limited to humans; 60% of animals are nocturnal and are potentially adversely affected by exposure to nighttime electrical lighting. Many birds navigate by the moon and star reflections at night; excessive nighttime lighting can lead to reflections on glass high rise towers and other objects, leading to confusion, collisions and death.[33] Many insects need a dark environment to procreate, the most obvious example being lightning bugs that cannot "see" each other when light pollution is pronounced. Other environmentally beneficial insects are attracted to blue-rich lighting, circling under them until they are exhausted and die.[34,35] Unshielded lighting on beach areas has led to a massive drop in turtle populations as hatchlings are disoriented by electrical light and sky glow, preventing them from reaching the water safely.[35-37] Excessive outdoor lighting diverts the hatchlings inland to their demise. Even bridge lighting that is "too blue" has been shown to inhibit upstream migration of certain fish species such as salmon returning to spawn. One such overly lit bridge in Washington State now is shut off during salmon spawning season.

Recognizing the detrimental effects of light pollution on nocturnal species, U.S. national parks have adopted best lighting practices and now require minimal and shielded lighting. Light pollution along the borders of national parks leads to detrimental effects on the local bio-environment. For example, the glow of Miami, FL extends throughout the Everglades National Park. Proper shielding and proper color temperature of the lighting installations can greatly minimize these types of harmful effects on our environment.

## CONCLUSION

Current AMA Policy supports efforts to reduce light pollution. Specific to street lighting, Policy H-135.932 supports the implementation of technologies to reduce glare from roadway lighting. Thus, the Council recommends that communities considering conversion to energy efficient LED street lighting use lower CCT lights that will minimize potential health and environmental effects. The Council previously reviewed the adverse health effects of nighttime lighting, and concluded that pervasive use of nighttime lighting disrupts various biological processes, creating potentially harmful health effects related to disability glare and sleep disturbance.[25]

## RECOMMENDATIONS

The Council on Science and Public Health recommends that the following statements be adopted, and the remainder of the report filed.

1. That our American Medical Association (AMA) support the proper conversion to community-based Light Emitting Diode (LED) lighting, which reduces energy consumption and decreases the use of fossil fuels. (New HOD Policy)

2. That our AMA encourage minimizing and controlling blue-rich environmental lighting by using the lowest emission of blue light possible to reduce glare. (New HOD Policy)

3. That our AMA encourage the use of 3000K or lower lighting for outdoor installations such as roadways. All LED lighting should be properly shielded to minimize glare and detrimental human and environmental effects, and consideration should be given to utilize the ability of LED lighting to be dimmed for off-peak time periods. (New HOD Policy)

Fiscal Note: Less than $500

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Acknowledgement: The Council thanks George Brainard, PhD (Thomas Jefferson University); Richard Stevens, PhD (University Connecticut Health Center); and Mario Motta, MD (CSAPH, Tufts Medical School) for their contributions in preparing the initial draft of this report, and the commentary by Travis Longcore, PhD, on the ecological impact of nighttime electrical lighting.

# Board of Health



## Mission

The Needham Board of Health, founded in 1877, and its Public Health Division strive to prevent and control the spread of disease, to address environmental issues, to promote healthy lifestyles, and to protect the public health and social well-being of all Needham's residents, especially the most vulnerable.

## Goals FY 2017 and 2018

### Administrative

***Ensure the necessary infrastructure to effectively provide essential public health services.***

- Develop Public Health Division-wide communications strategy that incorporates a variety of methods (articles, videos, presentations to community groups, hosting of community forums) to ensure community outreach on pertinent public health issues.
- Pursue small grant funding opportunities to meet distinct community needs (similar to concussion education, and healthy aging initiatives).
- Enhance and refine financial tracking mechanisms to ensure complete and appropriate use of municipal, grant, and donated financial resources
- Develop processes and accrue resources to support the continual gathering of qualitative and quantitative data to inform the activities of the Public Health Division.
- Address the health and physical space challenges of the Public Health Division's office environment, and aggressively pursue an appropriate location for Public Health staff in the short, medium, and long-term.
- ***Long-term*** - Pursue Public Health Division accreditation and support the establishment of a culture of continuous quality improvement.

## Community Health

***Increase the quality, availability, and effectiveness of educational and community-based programs designed to prevent disease and injury, improve health, and enhance quality of life.***

- Support existing community initiatives that address public health concerns including senior nutrition, elder isolation, mental health promotion, and domestic violence awareness.
- Sustain multi-disciplinary work to assist families and community members in need of mental health, domestic violence, and substance use support through the Needham Community Crisis Intervention Team (CCIT).
- Emphasize the importance of affordable and accessible housing as a public health issue for all Needham's residents and especially for the Town's senior citizens.
- Advocate for resources to support and enhance Healthy Aging in the community, such as accessible senior housing and more frequent forms of town or community-run transportation programs.

## Emergency Management/Emergency Preparedness

***Improve the community's ability to prevent, prepare for, respond to, and recover from a major emergency.***

- Hire a part-time Emergency Management Coordinator to support achievement of Public Health Division and Town-wide emergency management goals.
- Revise and update Comprehensive Emergency Management Plan (CEMP), Hazard Vulnerability Analysis (HVA), and municipal safety and emergency guidelines.
- Establish a detailed calendar depicting assigned dates for training, exercises, and updates/revisions to existing emergency plans.
- Work towards full certification of the Needham Local Emergency Planning Committee (LEPC), and state and federal recognition as such.

## Environmental Health (EH)

***Promote health for all through a healthy environment***

- Hire additional staff to maintain EH Unit capacity for inspections, environmental health monitoring, training, and vendor and general public education.
- Prioritize positive communication and relationships with food service owners and staff and tobacco vendor owners and staff.
- Develop regular schedule for detailed review and revision of all regulations
    - Review and revise Tobacco regulations (2017).
    - Review and revise Trash Haulers regulations (2017).
    - Review and revise Private Well regulations (2017-2018).
- Identify best practices and optimal platforms for electronic inspection reporting capacity.

## Environmental Health (EH) continued

***Promote health for all through a healthy environment***

- ***Long-term*** - Research best practices and pursue regulatory standards for posting of calorie counts and nutritional information (FY 2018).
- ***Long-term*** - Develop and implement food establishment grading policies (FY 2020 approximately).

## Public Health Nursing

***Advance population health through quality community/ public health nursing education, research and service.***

- Prepare for 2017 staff transition.
- Examine community demographics and population needs to identify priorities for public health nursing staff capabilities.
- Review and assess Needham's public health nursing capabilities.
- Develop community outreach calendar of focused educational and training programs such as sunscreen, tick borne illnesses, and other timely public health nursing issues.

## Substance Use Prevention

***Reduce substance use and misuse to protect the health, safety, and quality of life for all, especially children.***

- Provide education and information to community about adverse health impacts of substance use and misuse for the youth, adult, and senior populations.
- Advocate for community level policy changes to impact access and availability of alcohol, akin to raising purchase age for tobacco and reducing sale outlet density.
- Expand community support for addressing alcohol compliance in the same fashion as tobacco compliance, with increased inspections (goal of semi-annual) and compliance checks (long-term goal of quarterly, interim goal of semi-annual).
- Increase awareness of proper prescription medication disposal options and secure storage practices within the Town of Needham.
- Research and develop regulations that will govern the use of recreational marijuana, and revise existing regulations that govern medical marijuana. The overall goal of such regulations should be to ensure the safe and sanitary operations of marijuana dispensaries and recreational marijuana establishments, while at the same time educating the community about the dangers of chronic use and general misuse of marijuana, and promoting a safe and healthy environment for all of Needham's residents.
- ***Long-term*** - Secure commitment for secondary safe and secure disposal locations for prescription medications, in addition to current mediation disposal kiosk at the Police Station and the pair of sharps disposal kiosks at the RTS (FY 2020 approximately).

**From:** T Stephen Jones [mailto:t.stephen.jones@gmail.com]
**Sent:** Thursday, June 14, 2018 3:07 PM
**To:** Timothy McDonald
**Cc:** Maritha Du; Grace Feilen; Michele Brooks
**Subject:** Materials for your Needham Board of Health meeting tonight

Tim it was a pleasure to speak to you today.

I am a retired public health physician who worked at the CDC in Atlanta for 25 years.

As a volunteer with the MA Sierra Club, I am working with Boards of Health in MA about the risks of methane "natural" gas
infrastructure in Massachusetts
.

We ask that the Needham Board of Health consider:

- the health risks of natural gas infrastructure (pipelines, compressors, and storage facilities) and home use of gas in Massachusetts *and*
- writing to the Governor asking him to require comprehensive health impact assessments be completed to evaluate those health risks before any new or expanded natural gas infrastructure projects are approved.

The human health risks of natural gas infrastructure include:

**1)**

**T**
**oxic contaminants in natural gas**

- **carcinogens like benzene,**

**formaldehyde**

- **heavy metals like lead and mercury**
- **radioactive elements like radon and radioactive lead**
- **the tiny particles that make asthma and lung disease worse**

**2) Damage caused by fires and explosions**

**3) Contribution to air pollution and lung disease from gas releases and burning natural gas indoors and anywhere**

So far **67** Boards have written to the Governor. Those 67 boards represent **2.2 million** citizens which is **33.7%** of the population of the Commonwealth (see pasted below). The Acton and Chelsea Boards met this week and are expected to send letters to the Governor.

I am attaching

- the letter sent in April 2017 by the Mass Association of Health Boards.
- a study of the impact of unventilated "natural" gas stoves on kids' chronic respiratory problems
- the 2017 policy of the Mass Medical Society which calls for Comprehensive Health Impact Assessments
- a short draft letter based on the Northampton letter to Governor Baker
- a longer draft letter to the Governor based on a letter from the Amherst Board.

-------- *Both*

*drafts are in Word so that it can be adapted for*

*your board if desired.*

I look forward to discussing this this important public health situation with the Needham Board of Health.

I will send a map of un-repaired gas leaks in Needham in a separate email.

Steve Jones

T. Stephen Jones
, MD

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t.stephen.jones@gmail.com

**Towns & Cities whose Board of Health has signed on to group letter or written own letter to Governor Baker about health risks of natural gas**

| Population represented by Boards that have sent letter to Governor | 2,203,597 | Mass. Population 6,547,629 | 33.7% | % Mass population represented by Boards sent letter |
|---|---|---|---|---|

| | Town/City | Population | Signed on or | | Town/City | Population | Signed on or |
|---|---|---|---|---|---|---|---|

| | | | wrote own letter | | | | wrote own letter |
|---|---|---|---|---|---|---|---|
| 1 | Abington | 15,985 | Signed on May 2017 | 36 | Holyoke | 39,880 | Signed on July 2017 |
| 2 | Adams | 5,515 | Signed on Jun 2017 | 37 | Lanesborough | 3,091 | Signed on Aug 2017 |
| 3 | Agawam | 28,438 | Own letter Jun 2018 | 38 | Lexington | 31,394 | Own letter Jun 2017 |
| 4 | Amherst | 37,819 | Own letter Oct 2017 | 39 | Ludlow | 21,103 | Signed on Apr 2017 |
| 5 | Arlington | 42,844 | Signed on May 2017 | 40 | Methuen | 47,255 | Signed on Sept 2017 |
| 6 | Ashburnham | 6,081 | Signed on Jun 2017 | 41 | Millis | 7,891 | Signed on Apr 2017 |
| 7 | Ashby | 3,074 | Signed on May 2017 | 42 | Milton | 27,003 | Own letter May 2018 |
| 8 | Ashfield | 1,737 | Signed on July 2017 | 43 | Natick | 32,786 | Own letter Sept 2017 |
| 9 | Athol | 8,265 | Signed on May 2017 | 44 | Newton | 85,146 | Own letter May 2017 |
| 10 | Attelboro | 43,493 | Signed on Apr 2018 | 45 | Norfolk | 11,227 | Signed on May 2017 |
| 11 | Bedford | 13,320 | Signed on Jun 2017 | 46 | North Adams | 13,708 | Own letter Mar 2018 |
| 12 | Bellingham | 16,332 | Signed on Apr 2017 | 47 | Norton | 19,031 | Signed on Apr 2017 |
| 13 | Billerica | 40,243 | Signed on Jun 2017 | 48 | Norwood | 28,602 | Signed on May 2017 |
| 14 | Boston | 617,594 | Own letter Jun 2017 | 49 | Northampton | 28,549 | Own letter Dec 2017 |
| 15 | Brookline | 58,732 | Own letter May 2018 | 50 | Pittsfield | 44,737 | own letter May 2018 |
| 16 | Buckland | 1,902 | Signed on May 2017 | 51 | Provincetown | 2,642 | Signed on May 2017 |
| 17 | Cambridge | 105,162 | Signed on Jan 2018 | 52 | Rehoboth | 11,608 | Signed on |
| 18 | Canton | 21,561 | Own letter Jan 2018 | 53 | Rockport | 6,952 | Signed on Jun 2017 |
| 19 | Carlisle | 4,852 | Signed on May 2017 | 54 | Saugus | 26,628 | Signed on 2017 |
| 20 | Chatham | 6,125 | Own letter Mar 2018 | 55 | Shelburne | 1,893 | Signed on Aug 2017 |
| 21 | Chicopee | 55,298 | Signed on Oct 2017 | 56 | Springfield | 153,060 | Signed on Apr 2018 |
| 22 | Chilmark | 866 | Signed on Apr 2017 | 57 | Stoughton | 26,962 | Signed on Oct 2017 |
| 23 | Cohasset | 7,542 | Signed on July 2017 | 58 | Stow | 6,590 | Signed on Apr 2017 |
| 24 | Concord | 17,668 | Signed on May | 59 | Townsend | 8,926 | Signed on |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | 2017 | | | | May 2017 |
| 25 | Conway | 1,897 | Signed on Apr 2017 | 60 | Uxbridge | 13,457 | Signed on Aug 2017 |
| 26 | Dalton | 6,756 | Own letter Oct 2017 | 61 | Walpole | 24,070 | Signed on Aug 2017 |
| 27 | Dartmouth | 34,032 | Own letter May 2018 | 62 | Waltham | 60,632 | Signed May 2018 |
| 28 | Deerfield | 5,125 | Signed on Apr 2017 | 63 | Westfield | 41,094 | Signed on July 2017 |
| 29 | Eastham | 4,956 | Signed on Aug 2017 | 64 | Weston | 11,261 | Signed on Mar 2018 |
| 30 | Egremont | 1,225 | Signed on July 2017 | 65 | West Springfield | 28,391 | Signed on May 2017 |
| 31 | Essex | 3,504 | Signed on Apr 2017 | 66 | Weymouth | 53,743 | Signed on Apr 2017 |
| 32 | Grafton | 17,765 | Signed on Apr 2017 | 67 | Winthrop | 17,497 | Signed on Jun 2017 |
| 33 | Great Barrington | 7,104 | Signed on Jun 2017 | 68 | | | |
| 34 | Greenfield | 17,456 | Own letter May 2018 | | | | |
| 35 | Harvard | 6,520 | Signed on May 2017 | | | | |
| | | | | | | | ***Updated - June 3, 2018*** |

**From:** T Stephen Jones [mailto:t.stephen.jones@gmail.com]
**Sent:** Thursday, June 14, 2018 3:11 PM
**To:** Timothy McDonald
**Subject:** Needham methane "natural" gas leaks in 2017

Tim

This map is from http://heetma.org/gas-leaks/gas-leak-maps/
It is based on Eversource reports of gas leaks
Several communities, including Acton, Chelsea, and Salem have done their own search for gas leaks and found two or three times more leaks than reported by the gas utility.

Steve Jones

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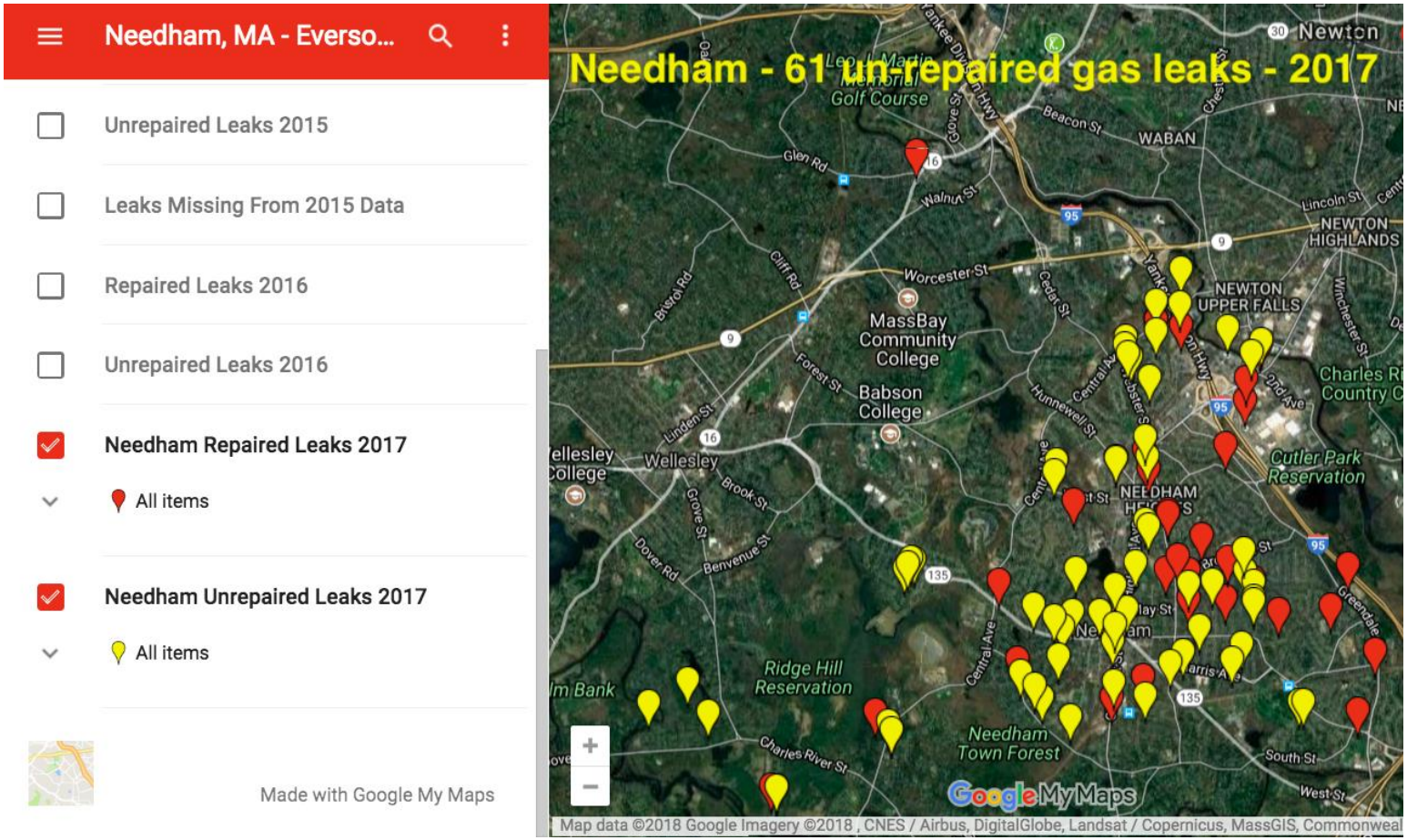

Kile et al. Environmental Health 2014, 13:71
http://www.ehjournal.net/content/13/1/71

ENVIRONMENTAL HEALTH

RESEARCH Open Access

# A cross-sectional study of the association between ventilation of gas stoves and chronic respiratory illness in U.S. children enrolled in NHANESIII

Molly L Kile[1*], Eric S Coker[1], Ellen Smit[1], Daniel Sudakin[2], John Molitor[1] and Anna K Harding[1]

## Abstract

**Background:** Gas stoves emit pollutants that are respiratory irritants. U.S. children under age 6 who live in homes where gas stoves are used for cooking or heating have an increased risk of asthma, wheeze and reduced lung function. Yet few studies have examined whether using ventilation when operating gas stoves is associated with a decrease in the prevalence of respiratory illnesses in this population.

**Methods:** The Third National Health and Nutrition Examination Survey was used to identify U.S. children aged 2–16 years with information on respiratory outcomes (asthma, wheeze, and bronchitis) who lived in homes where gas stoves were used in the previous 12 months and whose parents provided information on ventilation. Logistic regression models evaluated the association between prevalent respiratory outcomes and ventilation in homes that used gas stoves for cooking and/or heating. Linear regression models assessed the association between spirometry measurements and ventilation use in children aged 8–16 years.

**Results:** The adjusted odds of asthma (Odds Ratio [OR] = 0.64; 95% confidence intervals [CI]: 0.43, 0.97), wheeze (OR = 0.60, 95% CI: 0.42, 0.86), and bronchitis (OR = 0.60, 95% CI: 0.37, 0.95) were lower among children whose parents reported using ventilation compared to children whose parents reported not using ventilation when operating gas stoves. One-second forced expiratory volume ($FEV_1$) and $FEV_1$/FVC ratio was also higher in girls who lived in households that used gas stoves with ventilation compared to households that used gas stoves without ventilation.

**Conclusions:** In homes that used gas stoves, children whose parents reported using ventilation when operating their stove had higher lung function and lower odds of asthma, wheeze, and bronchitis compared to homes that never used ventilation or did not have ventilation available after adjusting for other risk factors. Additional research on the efficacy of ventilation as an intervention for ameliorating respiratory symptoms in children with asthma is warranted.

**Keywords:** Asthma, Wheeze, Bronchitis, Gas stoves, Ventilation, Spirometry, NHANES, Children

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## Background

Asthma is the most common chronic childhood disease and is characterized by recurrent airway obstruction, bronchial hyper-responsiveness, and airway inflammation [1]. It is also the leading cause of childhood hospitalizations and school absenteeism [2]. There is considerable evidence that air pollution - specifically coarse and fine particulate matter, ozone, sulfur dioxides, and nitrogen oxides - is associated with increased rates of asthma, asthma morbidity, respiratory illness and diminished lung function in children [3-8].

In the indoor environment, gas stoves are a common source of air pollution, including combustion-related particulate matter and nitrogen oxides [9-16]. While gas stoves are primarily used for cooking, approximately 7.7 million U.S. households (9.3%) reported using their gas stove or oven for heat at least once during the previous year [17]. There is considerable evidence from epidemiological studies in developed countries that gas stoves used for cooking and/or heat are associated with an increased risk of asthma and respiratory symptoms in children [9,18-33]. Although other studies that have examined the relationship between gas stoves or nitrogen dioxide levels in homes do not observe significant associations with asthma symptoms in childhood [34-36].

Housing characteristics have been shown to influence indoor air pollution levels. For instance, indoor air concentrations of nitrogen dioxide can be higher than ambient levels if there are unvented combustion appliances in the home, such as gas stoves [37]. Ventilation has also been shown to reduce the concentration of other indoor air pollutants such as formaldehyde and volatile organic compounds [38]. There are many different types of household ventilation systems, some of which are automatic, and some of which require point-of-use operation such as kitchen stove vent hoods. While several studies have examined the role of ventilation on indoor air pollutants and indoor air pollution on children's chronic respiratory illnesses, little is known about the role of behavior related to point-of-use ventilation and how this behavior might influence children's respiratory health [39-41]. Subsequently, we theorized that if gas stoves in homes and their emissions are related to asthma and its symptoms in children, then using ventilation when operating gas stoves should reduce indoor air pollution levels and benefit children's respiratory health outcomes. Specifically, we hypothesized that using ventilation when operating gas stoves should be associated with a lower prevalence of chronic respiratory illnesses in children.

## Methods

### Study population

The Third National Health and Nutrition Examination Survey (NHANES III) is a nationally representative cross-sectional survey of the civilian non-institutionalized U.S. population conducted by the National Center for Health Statistics from 1988–1994. Participants were administered standardized interviews in their homes and underwent physical examinations and laboratory testing in mobile examination centers [42]. NHANES III includes data on children's respiratory health, spirometry data and residential characteristics, which provide a unique opportunity to assess the relationship between parental habits when using gas stoves and respiratory illnesses in U.S. children.

To focus on the association between respiratory illnesses in children and parental use of ventilation in homes that had gas stoves in their kitchens, the current analysis was restricted to children aged 2–16 years (n = 12,570) whose parents: *i)* reported that a gas stove was used in the past twelve months in their child's primary residence (yes); *ii)* provided information on the presence of ventilation near the gas stove (yes/no) and their use of ventilation (never, rarely, sometimes, or always); *iii)* provided information on their child's respiratory health (doctor-diagnosed asthma [yes/no], doctor-diagnosed bronchitis [yes/no], and chest wheeze [yes/no]); and *iv)* reported their child's body mass index, parental history of asthma or hay fever (yes/no), presence of a pet in the household (yes/no), and history of smoking cigarettes indoors (yes/no). Twelve respondents did not answer the question about ventilation. Fewer participants consented to the examination portion of the survey where measurements were taken to compute body mass index. This resulted in data on 7,378, 7,380, and 7,378 children who resided in a home that had a gas stove in the kitchen and who provided information on asthma, wheeze, and chronic bronchitis respectively. Additionally, spirometry measurements were measured only in a subset of children ≥ 8 years old (N = 2,400). Details on deriving the sample size are provided in Additional file 1: Figure S1. Missing data was assumed to be completely at random.

NHANES III was approved by the National Center for Health Statistics Institutional Review Board. Participants who were 12 to 17 years old and their parents provided informed consent; participants who were 7 to 11 years old provided assent and their parents provided consent; and, parents provided informed consent for those <7 years old.

### Behaviors when using gas stoves and ventilation characterization

Parents were asked, "Is there a gas stove or oven used to cook in this house (yes/no)." Only parents who answered "yes" were asked the follow up question about ventilation. Due to this skip pattern design in the NHANES III questionnaire, the analytical sample was restricted to children whose parents answered "yes" to the gas stove question. Children were classified as living in households

that used gas stoves for heat (yes/no) based on their parent's response to the question, "Was this gas stove or oven used to heat the house over the past 12 months (yes/no)".

Ventilation was characterized based on parent's response to, "Is there an exhaust fan near this stove that sends fumes outside the home (yes/no)" and, "How often is this exhaust fan used (never, rarely, sometimes, or always)." We classified children as living in a household that did not use ventilation if parents stated that there was no exhaust fan or that they never used the exhaust fan. We classified children as living in a household that used ventilation if parents reported that they rarely, sometimes or always used the exhaust fan.

### Respiratory health outcomes

For children aged 2–16 years of age, dichotomous respiratory health outcomes were available including parent-reported: *i)* doctor-diagnosed asthma, *ii)* chest wheeze or whistling in past 12 months, and *iii)* doctor-diagnosed chronic bronchitis.

Lung function tests were performed at the mobile examination centers on children between 8–16 years of age following spirometry protocols issued by the American Thoracic Society [43].

### Sociodemographic factors and covariates

Selected characteristics were assessed for their relationship to respiratory outcomes and parental behaviors regarding gas stoves. These included age group, sex, race-ethnicity, parental education, parental history of asthma or hay fever, body mass index percentile for age cut-offs following the U.S. Centers for Disease and Prevention recommended guidelines [44], poverty income ratio, household income < $20,000, cigarette smoking indoors, heating with a gas stove, the presence of pets in the household (only cats, dogs and birds), type of residence (rural versus urban) and US census region.

### Statistical approach

To account for the complex sampling design, data were analyzed using appropriate NHANES sample weights using the "svy" command in Stata version 12.1 (StataCorp, College Station, TX). The weighted proportions of participants with respiratory health outcomes and 95% confidence intervals were calculated for children residing in four different settings in homes: (1) where parents reported using ventilation when operating gas stoves for cooking or heating; (2) where parents reported not using ventilation when operating a gas stove for cooking or heating; (3) where parents reported using ventilation when operating gas stoves for cooking only; and, (4) where parents reported not using ventilation when operating gas stoves for cooking only. Chi-squared tests assessed the association between prevalent respiratory health outcomes and ventilation use. Covariates were included in the models if they were associated with a respiratory health outcome at $\alpha < 0.20$. Additionally, household income below $20,000, which had the least amount of missing data, was included in each model because prior research has demonstrated a strong association between income and reported ventilation use.

Multivariate linear regression models assessed the association between percent of predicted spirometry measurements (one-second forced expiratory volume [$FEV_1$], forced vital capacity [FVC], and $FEV_1$/FVC ratio) and gas stoves in all children aged 8–16 years. These models were also stratified by sex. Reference population spirometry values were calculated using NHANES III race and sex specific estimating equations that accounted for age and height for $FEV_1$ and FVC, as derived by Hankinson et al. [45] and Collen et al. [46]. Percent-predicted values were calculated by taking the ratio of observed spirometry measurements over predicted values and multiplying by 100%. Model covariates accounted for environmental and host factors such as indoor cigarette smoking, the presence of pets in the home, household income < $20,000, using a gas stove for heating purposes, and asthma status.

## Results

Population characteristics and prevalence rates of respiratory illnesses for children residing in homes that used a gas stove are presented in Table 1. Overall, the unadjusted prevalence of wheeze (14.2% vs. 19.3%, p-value = 0.01, N = 7,380) and bronchitis (3.2% vs. 5.0%, p-value = 0.02, N = 7,378) were lower among children residing in households that reported using ventilation when operating their gas stoves compared to households that did not use ventilation when operating their gas stove. The unadjusted prevalence of asthma (8.1% vs. 11.1%, p-value = 0.11, N = 7,378) was not significantly different between households by ventilation status. The unadjusted prevalence of asthma (8.86% vs. 13.54%, p = 0.04) and wheeze (15.7% vs. 23.26%, p = 0.003), but not bronchitis (3.94% vs. 4.48%, p = 0.62), was lower among children residing in households that reported not using a gas stove for heat compared to households that used a gas stove for heat. In unadjusted models, asthma prevalence was also associated with gender, BMI, parental history of asthma or hay fever, household income < $20,000, and age group. The unadjusted prevalence of chronic bronchitis was associated with age, race-ethnicity, parental history of asthma or hay fever, indoor cigarette smoke, household income < $20,000, and census region. The unadjusted prevalence of wheeze was associated with age, parental history of asthma or hay fever, the presence of a pet with fur or a bird in the home, indoor cigarette smoke, race-ethnicity, household

**Table 1 Mean percent prevalence with 95% confidence intervals of asthma, wheeze, and bronchitis among children aged 2–16 living in homes with gas stoves by different stove use habits[1]**

| | Ever diagnosed with asthma (N = 7,390) | | | Wheeze in past 12 months (N = 7,392) | | | Ever diagnosed with chronic bronchitis (N = 7,390) | | |
|---|---|---|---|---|---|---|---|---|---|
| **Variable** | **No. cases** | **Prevalence (95% CI)** | ***P-value*[2]** | **No. cases** | **Prevalence (95% CI)** | ***P-value*[2]** | **No. cases** | **Prevalence (95% CI)** | ***P-value*[2]** |
| Total cases | 572 | 9.48 (8.87, 11.30) | | 1,422 | 16.58 (14.88, 18.28) | | 329 | 4.05 (3.08, 5.03) | |
| **Vent used w/gas stove** | | *n = 7,378* | | | *n = 7,380* | | | *n = 7,378* | |
| Yes | 260 | 8.07 (6.11, 10.59) | *0.11* | 643 | 14.20 (11.79, 17.01) | *0.01* | 134 | 3.17 (2.20, 4.53) | *0.02* |
| No | 310 | 11.09 (8.42, 14.47) | | 776 | 19.30 (16.90, 21.95) | | 194 | 5.08 (3.85, 6.67) | |
| **Gas stove used for heating** | | *n = 7,346* | | | *N = 7,348* | | | *n = 7,346* | |
| Yes | 117 | 13.54 (9.46, 19.03) | *0.04* | 278 | 23.26 (18.35, 29.03) | *0.003* | 74 | 4.48 (2.73, 7.25) | *0.62* |
| No | 447 | 8.86 (7.16, 10.92) | | 1,133 | 15.70 (14.05, 17.52) | | 251 | 3.94 (3.03, 5.09) | |
| **Vent and Stove Use** | | *n = 7,334* | | | *n = 7,336* | | | *n = 7,334* | |
| Vent not used and stove used for cooking and heating | 78 | 13.63 (8.59, 20.97) | *0.13* | 197 | 25.07 (18.58, 32.91) | *0.003* | 60 | 5.43 (3.51, 8.33) | *0.10* |
| Vent used and stove used for cooking and heating | 39 | 13.40 (7.41, 23.03) | | 81 | 20.14 (13.84, 28.38) | | 14 | 2.82 (1.09, 7.08) | |
| Vent not used and stove only used for cooking | 224 | 10.36 (7.48, 14.18) | | *568* | 18.13 (15.59, 20.99) | | 130 | 4.87 (3.52, 6.72) | |
| Vent used and stove only used for cooking | 221 | 7.67 (5.63, 10.35) | | *562* | 13.76 (11.32, 16.63) | | 120 | 3.20 (2.19, 4.65) | |

[1]Unweighted sample sizes and weighted proportions (prevalence).
[2]P-values obtained from χ2 test.

income < $20,000, and BMI. Parental education and urban versus rural residence were not associated with any health outcomes (data not shown).

Multivariate logistic regression models were used to evaluate the odds of chronic respiratory illnesses in children who lived in homes where gas stoves were ventilated and only used for cooking while adjusting for other confounders (Table 2: Model 1). After adjusting for confounders, children who lived in homes where parents reported that they used ventilation were less likely to be diagnosed with asthma (aOR = 0.64, 95% CI: 0.43, 0.97), diagnosed with chronic bronchitis (aOR = 0.60, 95% CI: 0.37, 0.95), or report wheeze (aOR = 0.60, 95% CI: 0.42, 0.86). When parental habits regarding using a gas stove for heating were included as an additional covariate (Table 3: Model 2), only wheeze (aOR = 0.62, 95% CI: 0.44-0.89) and chronic bronchitis (aOR = 0.61, 95% CI: 0.38-0.98) remained significantly associated with vented gas stoves after adjusting for other confounders (p = 0.01 and p = 0.04, respectively). In homes where parents reported using gas stoves only for cooking and not heating, children were significantly less likely to have a diagnosis of

**Table 2 Adjusted Odds ratios and 95% confidence intervals for the association between respiratory illnesses in children aged 2–16 years who live in households that use gas stove with ventilation compared to households that use gas stoves without ventilation (Model 1)**

| | Ever diagnosed with asthma[a] (N = 5,745) | | Wheeze in past 12 months[b] (N = 5,744) | | Ever diagnosed with bronchitis[c] (N = 7,255) | |
|---|---|---|---|---|---|---|
| **Ventilation of gas stove** | **No. cases** | **OR (95% CI)** | **No. cases** | **OR (95% CI)** | **No. cases** | **OR (95% CI)** |
| No | *269* | 1 Ref. | *561* | 1 Ref. | *188* | 1 Ref. |
| Yes | *224* | 0.64 (0.43, 0.97)* | *458* | 0.60 (0.42, 0.86)* | *128* | 0.60 (0.37, 0.95)* |

*P-value <0.05.
[a]Adjusted for age group, sex, parental history of asthma or hay fever, and furry or feathery pets in the house, household income < $20,000, and BMI percentiles for age.
[b]Adjusted for age group, parental history of asthma or hay fever, furry or feathery pets in the house, indoor tobacco smoke, race-ethnicity, household income < $20,000, and BMI percentile for age.
[c]Adjusted for age group, parental history of asthma or hay fever, indoor tobacco smoke, race-ethnicity, household income < $20,000, and census region.

**Table 3 Adjusted Odds ratios and 95% confidence intervals for the association between respiratory illnesses in children aged 2–16 years and gas stove use habits (Model 2)**

| | Ever diagnosed with asthma[a] (N = 5,646) | | Wheeze in past 12 months[b] (N = 5,647) | | Ever diagnosed with bronchitis[c] (N = 7,114) | |
|---|---|---|---|---|---|---|
| | *No. cases* | OR (95% CI) | *No. cases* | OR (95% CI) | *No. cases* | OR (95% CI) |
| **Gas stove used with ventilation** | | | | | | |
| No | *263* | 1 Ref. | *555* | 1 Ref. | *184* | 1 Ref. |
| Yes | *224* | 0.68 (0.45, 1.04) | *458* | 0.62 (0.44, 0.89)* | *128* | 0.61 (0.38, 0.98)* |
| **Gas stove used for heating** | | | | | | |
| Yes | *382* | 1 Ref. | *795* | 1 Ref. | *239* | 1 Ref. |
| No | *105* | 0.56 (0.34, 0.94)* | *218* | 0.57 (0.38, 0.85)* | *73* | 1.12 (0.66, 1.92) |

*P-value <0.05.
[a]Adjusted for gas stove used for heating, age group, sex, parental history of asthma or hay fever, and pets in the house, household income < $20,000, and BMI.
[b]Adjusted for gas stove used for heating, age group, parental history of asthma or hay fever, pets in the house, indoor tobacco smoke, race-ethnicity, household income < $20,000, and BMI.
[c]Adjusted for gas stove used for heating, age group, parental history of asthma or hay fever, indoor tobacco smoke, race-ethnicity, household income < $20,000, and census region.

asthma (aOR = 0.56, 95% CI: 0.34-0.94) and wheeze (aOR = 0.57, 95% CI: 0.38-0.85), compared to children in homes that used a gas stove for cooking and heating after adjusting for other confounders. The odds of chronic bronchitis, however, was not significantly different for households that used a gas stove only for cooking compared to households that used a gas stove for cooking and heating (aOR = 1.12, 95% CI: 0.66-1.92) after adjusting for other confounders.

Table 4 examined the potential for joint effects of ventilation practices and using the gas stove for heating on respiratory illness in children. Compared to children living in homes where parents reported not using ventilation and who also used the gas stove for heat, using ventilation lowered the odds of asthma in children by 14%; not using the stove for heat lowered the odds by 38%; and using ventilation and not using the stove for heat lowered the odds by 59%. Similar results were found for wheezing. However, no significant association was observed for the joint effect of ventilation and using the gas stove heat on the odds of chronic bronchitis.

The relationship between lung function and behavioral factors related to gas stoves are presented in Table 5. The $FEV_1$ measurements ranged between 468 mL to 5683 mL with a weighted mean and standard deviation of 2658 mL and 882 mL. The FVC measurements ranged between 864 to 6846 mL with a weighted mean and standard deviation of 3069 mL and 1036 mL. For the $FEV_1$/FVC ratio, we observed a range between 31.6% and 100% with a weighted mean and standard error of 86.9% and 0.2%. Among children aged 8–16 years who provided spirometry measurements, unadjusted mean $FEV_1$ and FVC were higher in children who lived in homes where parents used an exhaust vent compared to children who lived in homes where there was no exhaust vent or parents reported not using the exhaust vent when operating their gas stoves (Table 5). Table 6 compares the percent of predicted (or normalized) differences in spirometry measurements among children aged 8–16 years in households that operated gas stoves with ventilation compared to households that operated gas stoves without ventilation. In fully adjusted models, the overall percent-predicted $FEV_1$ ($p = 0.08$), FVC ( $p = 0.20$) and $FEV_1$/FVC ($p = 0.11$) were modestly higher in children living in homes with vented gas stoves compared to homes without ventilation of gas stoves, although these did not reach statistical significance (Table 6). Although after stratifying by sex, we observed that the percent-

**Table 4 Adjusted Odds ratios and 95% confidence intervals for respiratory illnesses in children aged 2–16 years and the joint association between ventilation (yes/no) and gas stove use habits (cooking only/cooking and heating)**

| | Asthma[a] (N = 5,646) | | Wheeze[b] (N = 5,647) | | Bronchitis[c] (N = 7,114) | |
|---|---|---|---|---|---|---|
| | *No. cases* | aOR (95% CI) | *No. cases* | aOR (95% CI) | *No. cases* | aOR (95% CI) |
| Vent not used and stove used for cooking & heating | *69* | 1 Ref. | *156* | 1 Ref. | *59* | 1 Ref. |
| Vent used and stove used for cooking & heating | *36* | 0.86 (0.34, 2.17) | *62* | 0.62 (0.31, 1.20) | *14* | 0.49 (0.21, 1.12) |
| Vent not used and stove used only for cooking | *194* | 0.62 (0.32, 1.23) | *399* | 0.57 (0.35, 0.92)* | *125* | 1.05 (0.61, 1.81) |
| Vent used and stove used only for cooking | *188* | 0.41 (0.23, 0.74)* | *396* | 0.35 (0.21, 0.60)* | *114* | 0.65 (0.36, 1.19) |

*P-value <0.05.
[a]Adjusted for age group, sex, parental history of asthma or hay fever, household income < $20,000, pets in the house, and BMI.
[b]Adjusted for age group, parental history of asthma or hay fever, pets in the house, indoor tobacco smoke, race-ethnicity, household income < $20,000, and BMI.
[c]Adjusted for age group, parental history of asthma or hay fever, indoor tobacco smoke, race-ethnicity, household income < $20,000, and census region.

**Table 5 Univariate association between behaviors related to gas stove use and spirometry measurements for $FEV_1$ (mL), FVC (mL) and $FEV_1$/FVC Ratio in children aged 8–16 years**

| | *N* | Mean $FEV_1$ (95% CI) | Mean FVC (95% CI) | $FEV_1$/FVC (95% CI) |
|---|---|---|---|---|
| All | *2,472* | 2658 (2586, 2730) | 3069 (2977, 3161) | 86.9% (86.5, 87.3) |
| Vented Gas Stove | | | | |
| Yes | *1,147* | 2742 (2645, 2841)* | 3147† (3027, 3267) | 87.4% (86.8, 88.0) |
| No | *1,325* | 2562 (2457, 2668) | 2981 (2850, 3113) | 86.4% (85.8, 87.1) |
| Gas Stove Used for Heating | | | | |
| Yes | *441* | 2569 (2385, 2755) | 2963 (2751, 3175) | 86.9% (85.9, 87.9) |
| No | *2,017* | 2670 (2595, 2744) | 3084 (2989, 3179) | 86.9% (86.5, 87.3) |

*p-value ≤0.05.
†0.05 < p-value ≤ 0.1.

predicted $FEV_1$ was almost 3% higher in girls (p = 0.02) that lived in homes where parents reported using ventilation compared to homes where ventilation was not used. There was no significant association between venting of gas stoves with FVC in girls (p = 0.13). The percent-predicted $FEV_1$/FVC ratio was 1.6% (95%CI: 0.16, 3.0, p-value = 0.03) higher among girls living in homes that reported vent usage compared to girls in homes that reported not using ventilation with gas stoves (Table 6). No associations between spirometry measurements and ventilation were observed in boys. In addition, no association between spirometry and heating with a gas stove were observed overall or in the sex-stratified analysis.

## Discussion

The results show that among children who live in households with a gas stove kitchen appliance, the prevalence of respiratory illness was lowest in children when ventilation was used when operating the gas stove and when the gas stove was not used for heat. Our finding support previous analysis of NHANES III by Lanphear et al. [28], which found that using a gas stove for heating increased the likelihood of asthma in children. Our analysis suggests that ventilation is likely an effect modifier of this association. Furthermore, we observed better lung function in children living in households where ventilation was used when operating the gas stove than in households that did not have ventilation or where no ventilation was used. This association with lung function was only significant in girls and it is unclear whether this stems from a greater sensitivity to gas stove emissions or differential behaviors that would result in more frequent exposure to gas stoves. Children's lung function, however, was not associated with parental report of using the gas stove for heat.

While indoor air pollution measurements are not available in NHANESIII, there is considerable evidence that gas stoves emit pollutants that adversely impact respiratory health and lend biological plausibility to our findings. Gas cooking and heating are a major source of nitrogen dioxide in the indoor environment [34-36]. In animal models, dose-dependent effects of nitrogen dioxide include activation of nuclear factors (NF-kB) within airway epithelial cells, resulting in neutrophilic inflammation and increased release of inflammatory cytokines [47]. Other mechanistic studies have consistently described that nitrogen dioxide has adjuvant properties in the development of allergic asthma by promoting eosinophilia, and the production of antigen-specific IgE and IgG antibodies [48]. In epidemiological studies, short- and long-term exposure to nitrogen dioxide has been inversely associated with FEV1 in pediatric populations [49,50]. A recent prospective epidemiological study found a higher

**Table 6 Differences in percent of predicted spirometry (observed/predicted*100%) indicators among children aged 8–16 years in households that operated gas stoves with ventilation compared to households that operated gas stoves without ventilation that is stratified by gender (females N = 1,192; males N = 1,186)**

| | | $FEV_1$ (Crude) | $FEV_1$ (Adjusted)[a] | FVC (Crude) | FVC (Adjusted)[a] | $FEV_1$/FVC (Crude) | $FEV_1$/FVC (Adjusted)[a] |
|---|---|---|---|---|---|---|---|
| | | Difference[b] (95% CI) | Difference[b] (95% CI) | Difference[b] (95% CI) | Difference[b] (95% CI) | Difference[b] (95% CI) | Difference[b] (95% CI) |
| | *N* | *2,378* | *2,335* | *2,3378* | *2,335* | *2,378* | *2,335* |
| All | *1113* | 2.75 (0.29, 5.21)* | 2.33 (−0.29, 4.95) | 2.08 (−0.66, 4.82) | 1.75 (−0.95, 4.44) | 1.14 (−.03, 2.31) | 0.97 (−0.24, 2.17) |
| Female | *570* | 2.86 (0.71, 5.01)* | 2.93 (0.57, 5.30)* | 1.6 (−0.4, 3.6) | 1.76 (−0.51, 4.02) | 1.45 (0.05, 2.85)* | 1.58 (0.16, 3.00)* |
| Male | *543* | 2.62 (−1.36, 6.61) | 1.74 (−1.74, 5.24) | 2.24 (−2.47, 6.96) | 1.59 (−2.14, 5.32) | 0.87 (−0.56, 2.30) | 0.43 (−0.94, 1.81) |

[a]Adjusted for environmental tobacco smoke, using a gas stove for heating, furry or feathery pets in the home, asthma status and household income < $20,000.
[b]NHANESIII reference spirometry measurements derived from Hankinson et al. [45].
*P-value <0.05.

risk of asthma morbidity among asthmatic children exposed to nitrogen dioxide levels below the US EPA outdoor air standard [51]. Polycyclic aromatic hydrocarbons (PAHs), another pollutant emitted from gas stoves, is also known to augment the allergic response by enhancing the release of inflammatory mediators in the immune system [52,53]. Polycyclic aromatic hydrocarbons are commonly found in association with fine particulate matter ($PM_{2.5}$), which has been inversely associated with $FEV_1$ in preschool children [54]. A recent case–control study in children found strong associations between environmental exposure to PAHs and multiple asthma-related biomarkers including IgE and inflammatory cytokines [55].

Using an exhaust fan can improve indoor air quality and reduce pollutants generated from gas stoves [9-16,56-58]. Thus, it is plausible that children who live in households that use exhaust fans when operating their gas stoves have better lung function and lower odds of respiratory illnesses. The assessment of the presence or absence of an exhaust fan in homes with gas stoves may be an important environmental factor to consider when taking an exposure history. Physicians, nurses, or health educators could encourage parents to use exhaust fans when operating gas stoves as an additional intervention for improving their children's respiratory health. Further, physicians, nurses and health educators could discourage the use of a gas stove as a household heating source.

It is important to note that this study has several limitations. While the study is generalizable to all U.S. non institutionalized children ages 2–16 years of age, it is cross-sectional and so we cannot comment on the temporal relationship between households with gas stoves, parental use of ventilation, and respiratory illnesses. NHANES III does not measure indoor air pollution levels which also limits our ability to quantitatively evaluate the relationship between gas stove emissions, ventilation practices, and respiratory outcomes. This analysis did not control for ambient air pollution concentrations because this data is not collected in NHANES and while it is possible to link NHANES data to ambient air pollution this would require access to restricted data that was outside the scope of this study. Nor did this survey collect information on the specific type of ventilation system or its effectiveness. Collecting information on the types of ventilation and its effectiveness by quantitatively measuring indoor air pollution in a nationally representative survey, like NHANES, would be very useful for future studies examining the relationship between gas stoves and respiratory health. Additionally, both the exposures and the outcomes in this study relied upon parental recall which may be a source of bias. It is therefore possible that respondents under-reported smoking behaviors which could explain why indoor smoke exposure was not a risk factor for asthma even though exposure to environmental smoke exposure was a risk factor for bronchitis in this sample. However, the consistency of our results between parental-reported respiratory illnesses in children and quantitative lung function measurements provide additional confidence in the association between ventilation practices and children's respiratory health. There were also missing observations, particularly for BMI because fewer people consent to the physiological measurement portion of the survey. However, when we analyze the data without BMI using the larger sample size, the statistical significance of the observed associations did not change in any meaningful way for asthma or wheeze (data not shown). Missing data could lead to selection bias but the consistency in the results (with or without BMI) makes this seem unlikely. Finally, the survey only queried respondents about ventilation if they indicated that they had a gas stove making it impossible to evaluate the effect of ventilation on respiratory outcomes in homes that electric stoves. Moreover, we opted to categorize ventilation usage using an extreme dichotomy (no exhaust fan or never use exhaust fan versus rarely, sometimes and always using exhaust fan) rather than four gradations of ventilation use (never, rarely, sometimes and always) because the division between rarely and sometimes is somewhat ambiguous and only 15 people with asthma and 17 people with bronchitis reported "rarely" using their exhaust fan.

## Conclusion

This study observed that using a ventilating exhaust fan when operating a gas stove for cooking or heating was associated with a lower prevalence of asthma and other chronic respiratory symptoms in U.S. children after adjusting for other risk factors. Ensuring that ventilation is installed near gas stoves and that it is used when operating gas stoves is important, as is, only using gas stoves for cooking and not as an auxiliary heat source. The built environment and how people interact with their built environment, such as gas stoves, can change over time and it is important that national surveys continue to ask questions about gas stoves, ventilation, and behaviors related to their use in surveys that also collect information about children's respiratory health. Additionally, while the type of stoves and heating used in households are often considered by health care providers who are evaluating indoor air quality risk factors in pediatric patients, additional questions relating to the presence of an exhaust fan may provide an opportunity for preventive intervention and improved outcomes.

## Additional file

**Additional file 1: Figure S1.** Description of the population selection criteria used to restrict to children aged 2-16 years of age who live in homes with gas stoves and have complete data for the covariates included in the multivariate regression models.

### Abbreviations

CI: Confidence interval; $FEV_1$: Forced expiratory volume in 1 second; FVC: Forced vital capacity; NHANES: National Health and Nutrition Examination Survey; NOx: Nitrogen oxides; OR: Odds ratio; P: p-value; PAH: Polycyclic aromatic hydrocarbons; Pct: Percentile; SES: Socioeconomic status.

### Competing interest

The authors declare that they have no competing interests.

### Authors' contributions

MLK: Coordinated data analysis and interpretation, drafted the manuscript, and approved the final manuscript as submitted. ESC: Conducted the data analysis, contributed to the drafting of the manuscript, and approved the final manuscript as submitted. ES: Supervised the data analysis, critically reviewed the manuscript, and approved the final manuscript as submitted. DS: Contributed to data interpretation, contributed to manuscript draft, and approved the final manuscript as submitted. JM: Contributed to the review and interpretation of the statistical results and approved the final manuscript as submitted. AKH: Conceptualized the study design, contributed to drafting of manuscript, and approved the final manuscript as submitted.

### Acknowledgements

This work was supported by grants from the US National Institute of Environmental Health Sciences NIEHS Grant P42 ES016465 and P30 ES000210.

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Received: 24 April 2014 Accepted: 25 August 2014
Published: 2 September 2014

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doi:10.1186/1476-069X-13-71
**Cite this article as:** Kile *et al.*: A cross-sectional study of the association between ventilation of gas stoves and chronic respiratory illness in U.S. children enrolled in NHANESIII. *Environmental Health* 2014 **13**:71.

*Letterhead here*

*Date*

The State House
24 Beacon Street
Room 280
Boston, MA 02133

Attention: Governor's Office

Dear Governor Baker,

The _____ Board of Health joins other local health boards in urging you to require an independent health impact assessment prior to authorization of any natural gas infrastructure project in the Commonwealth.

Natural gas flowing through pipelines contains volatile contaminants, such as benzene and formaldehyde, which can cause human illnesses, even at low concentrations. Releases are routine, whether from leaks or maintenance. The Commonwealth has an obligation to protect the health of its citizens, yet, the potential health effects of natural gas pipelines are not being examined.

More effective regulation of existing natural gas pipelines to minimize adverse health effects is needed. In addition, health impact assessments should be required before any new pipeline authorization occurs. This perspective is shared by national health organizations, including the American Medical Association:

> "Our AMA recognizes the potential impact on human health associated with natural gas infrastructure and supports legislation that would require a comprehensive Health Impact Assessment regarding the risks that may be associated with natural gas pipelines." (Resolution H- 135.930)

The Massachusetts Medical Society (MMS) has adopted the following policies:

1. That the MMS recognizes the potential impact on human health associated with natural gas infrastructure. (HP)

2. That the MMS advocate to appropriate agencies and the Massachusetts state legislature to require ongoing independent Comprehensive Health Impact Assessments to assess the human health risks of all existing and proposed new or expanded natural gas infrastructure in Massachusetts. (D)

This is an issue of great urgency as new pipelines are being considered for Massachusetts. The health of the citizens of Massachusetts is in your hands.

Sincerely,

*Signature(s) for Board of Health here*


**April 5, 2017**

Dear Board of Health Members:

Attached please find a letter for Boards of Health to consider signing about interstate gas pipelines. MAHB is partnering with the Sierra Club in this outreach. If you wish to participate, please sign and return to Emily Norton, at the email address below.

During the past few years, two new interstate gas pipelines were proposed to be built in Massachusetts. One, Northeast Energy Direct, was cancelled. The other proposed pipeline, Access Northeast, has been stalled after the MA Supreme Judicial Court ruled that state law does not allow a tariff to be imposed on electric bills to pay for new interstate gas pipelines.

New projects continue to be built or proposed however: the Metering and Regulating station in West Roxbury; expansions of existing infrastructure in Acushnet; and compressor stations in Rehoboth and Weymouth.

The negative health impacts associated with high pressure fracked gas infrastructure (FGI) are well documented.

Health risks of FGI include asthma and heart disease from particulate matter, neurologic disease and miscarriage due to heavy metals, and cancer due to carcinogens such as benzene and radioactive radon and lead. These health consequences are a hazard for the communities that abut the FGI, but also, due to meteorologic effects, for more distant communities, particularly due to leaks in our aging pipeline infrastructure.

Health risks posed by FGI directly undermine the stated goals of our Massachusetts Department of Public Health: combatting health disparities, promoting health, and targeting programs for the best utilization of resources. Pipeline infrastructure exacerbates health disparities, potentially creates considerable negative health impacts, and diverts scarce public health resources because of the illnesses they create.

There is concern the Baker Administration will propose a change in law or regulation in order to enable new natural gas pipelines or otherwise encourage pipeline companies to bring new interstate gas pipelines to Massachusetts. That is why a strong showing from Boards of Health on a letter urging support for clean renewable energy rather than more fossil fuel infrastructure is so important.

It would be ideal if you could take up a discussion of whether to sign on at your next Board meeting.

**If your Board votes to sign on to the letter, please let us know as soon as possible.**

As it is a monumental task to collect signatures from up to 351 Boards of Health, we are partnering with Sierra Club to handle this task. Please email Emily Norton at emily.norton@sierraclub.org if your Board is interested in signing onto the letter below.

Please do not sign and send the letter directly to the Governor. We would like to send one letter with a plurality of Boards of Health listed as signatories.

We understand reasonable people have different opinions on the issue. We think it is appropriate, however, for us to give Boards of Health that would oppose new interstate natural gas pipelines the opportunity to speak with one voice on the matter to the Governor.

We will keep the letter open for sign-on through the end of May. If your Board needs more time to decide whether to sign on, or you have questions or comments about this, please let me or Emily know.

Thank you,

Marcia Benes
Executive Director
MAHB

See next page for letter

**Sign on Letter to Governor Baker**

Dear Governor Baker:

We write to you as Boards of Health from communities across Massachusetts who are committed to protecting the health, welfare, and safety of the residents of the Commonwealth. We commend Massachusetts' Health Commissioner Monica Bharel's goals to combat health disparities, promote health, and make the best use of our resources in that endeavor.

We are concerned that the rush to develop fracked gas infrastructure (FGI) in our state is in direct conflict with those goals: it increases health disparities, worsens public health and makes poor use of our health care resources by potentially creating public health problems instead of preventing them.

The health concerns surrounding FGI are several. While it is widely recognized that gas extraction via the hydraulic fracturing process causes health problems due to air and water pollution where the drilling is done, many people are not aware that the toxins and carcinogens that travel with the gas when it is extracted from the earth's crust can be emitted when there are releases of gas, unintentional or intentional, anywhere along the pipeline infrastructure.

These substances, acknowledged by Spectra and other gas companies in their reports, include hazardous air pollutants like benzene and formaldehyde, particulate matter, radioactive elements like radon, and heavy metals including mercury, lead and chromium. These toxins pose a health risk as they can potentially cause cancers like leukemia, lung problems like asthma and lung cancer, heart deformities in babies, miscarriages, and neurologic disease.

Natural gas pipelines pose threats to human health and to the environment at every stage of processing and delivery including interstate transmission pipelines, distribution pipelines, storage facilities, metering and regulating stations, compressor stations, and liquefied natural gas facilities. Without comprehensive health impact assessments of the effects of these toxins and carcinogens, it is impossible to know the magnitude of risk that these pollutants pose to human health.

New FGI in our state also threatens public health because it is a driver of climate change, releasing significant amounts of methane, nitrogen oxides and sulfur dioxide. New interstate pipelines add significant amounts of greenhouse gases to the atmosphere, exacerbating climate change. Climate change is disrupting our state's natural ecosystems and built infrastructure and negatively impacting human health, and is leading to increased rates of infectious diseases and cancer.

FGI also threaten public health and safety due to leaks, water contamination, and explosions; accidents have increased five-fold across the United States between the years 2000 and 2010.

We agree with the American Medical Association that FGI has a potentially significant human health impact and that any expanded or new FGI requires comprehensive health impact assessments to evaluate these health risks.

Also, according to an analysis by our State Attorney General, an expanded FGI is unnecessary and alternatives such as renewable energy and energy efficiency are healthier and less expensive.

While we recognize that our legislators and governor may differ in their views of FGI, they are unanimous in their commitment to promote and protect the public health, welfare and safety of the residents of the Commonwealth. We need safe, reliable and affordable energy for our residents, businesses and municipalities. Our state can and must achieve those goals by investing in renewable energy and energy efficiency rather than in more fossil fuels that warm our planet and create health hazards for all our residents.

Thank you.
Sincerely,
[City/Town] Board of Health

Governor Charles Baker
Massachusetts State House
Office of the Governor
Room 280
Boston, MA 02133

Dear Governor Baker:

The _____ Board of Health joins other Massachusetts Boards of Health in urging you to require an independent and comprehensive health impact assessment prior to authorization of any new natural gas infrastructure, including, pipelines, compressor stations, and storage facilities in the Commonwealth.

We have adapted the excellent letter to you from the Amherst Board of Health, dated October 12, 2017.

Natural gas transmitted in pipelines contains contaminants that can cause human illnesses even at low concentrations. These contaminants include benzene and other volatile organics, heavy metals, formaldehyde, and small particulate matter, as acknowledged by pipeline companies in permit applications[1]. Ideally, pipeline gas and its contaminants would be perfectly contained, and there would be no illness risk to people living near pipelines and compressor stations. In fact, however, releases of pipeline contents are well-documented[2]. Inadvertent release occurs via equipment failures, "fugitive" gas leaks, and accidents and explosions[3]. In addition to inadvertent releases, maintaining the transmission infrastructure requires regular, deliberate venting of compressors (blowdowns), which expel significant quantities of gas plus contaminants into the environment around compressor stations[4].

Preliminary studies have linked gas transmission infrastructure to adverse health effects on people living nearby[5,6], but better data are needed on actual toxin levels near pipeline infrastructure and on their health impacts. Since releases containing toxic chemicals definitely do occur, it is not prudent to authorize new pipeline construction until pollutant levels have been measured over time and at different distances from existing pipelines, and health registries have been established and the results studied to allow valid assessments of the health of people living near gas infrastructure. Perhaps actual health risks will turn out to be so low as to be deemed acceptable if the pipeline delivers gas needed in the community under conditions where renewable energy sources are currently insufficient. However, if the pipelines main purpose is to export gas, as is the case for some pipelines proposed in Massachusetts, it is difficult to imagine a legitimate justification for subjecting local residents even to very low levels of health risk.

Existing pipelines, and any new ones that may be built however inadvisably, must be subject to regulation. At the national level, the Federal Energy Regulatory Commission has a history of favoring the fossil fuel industry rather than the public interest. This is perhaps not surprising

given the Commission's funding, which comes entirely from the industries it regulates[7]. Thus, it is vital for the Commonwealth to take the lead in ensuring that existing as well as new gas infrastructure are safe, since federal regulation may be inadequate.

Based on the foregoing considerations, the _____ Board of Health makes these specific recommendations for state action:

1. Do not authorize new natural gas infrastructure projects in Massachusetts until and unless adequate data have been gathered to allow making a valid health impact assessment specific to each project.
2. When the above data have been gathered, require a comprehensive health impact assessment before permitting any gas infrastructure project, following the American Medical Association and Massachusetts Medical Society policies to that effect[8,9].
3. Do not allow any new natural gas infrastructure in the state that primarily serves to export natural gas, if it subjects state residents even to small health effects.
4. Review current regulations, both state and federal, for existing and new pipelines and other natural gas infrastructure. Put in place additional state regulations needed to improve safety of the infrastructure and containment of pipeline contents.
5. Consider renewable alternatives to natural gas such as solar and wind reducing our reliance on fossil fuels which add to global warming.

We ask that you take timely action on this request. Several pipelines, compressor stations, and storage facilities are being considered in the Commonwealth. Beginning independent comprehensive health impact assessments of the potential human health hazards of these new natural gas infrastructure projects is a high priority.

Thank you for considering these requests.

Sincerely,

References

**1** e.g. Spectra Energy Partners, Atlantic Bridge Project, Resource Report 9. Algonquin Gas Transmission LLC Weymouth Compressor Station Permit Application, Table B1A1. Cited by Nordgaard C.,
(2015) https://drive.google.com/file/d/0ByMONoeZSvWSTVRYUjFGUDZubmM/view

**2** Allen, DT Emissions from oil and gas operations in the United States and their air quality implications. *Journal of the Air & Waste Management Association* 66: 549-575
(2016). http://www.tandfonline.com/doi/full/10.1080/10962247.2016.1171263

**3** Pipeline and Hazardous Materials Safety Administration (U.S. Department of Transportation), serious incidents (injury or death, or large accidental releases or fires or explosions); search limited to onshore gas transportation incidents: in the 10 years 2007 through 2016, in the U. S. there were 579 incidents resulting in 22 fatalities, 112 injuries requiring hospitalization, and over $1 billion in property damage.
https://www.phmsa.dot.gov/pipeline/library/data-stats/pipelineincidenttrends

**4** Kloczko, N. A Brief Review of Compressor Stations. *Southwest Pennsylvania Environmental Health Project*,
(2015). http://www.environmentalhealthproject.org/files/A%20Brief%20Review%20of%20Compressor%20Stations%2011.2015.pdf

**5** Steinzor N, Subra W, Sumi L. Investigating links between shale gas development and health impacts through a community survey project in Pennsylvania. *New Solutions: A Journal of Environmental and Occupational Health Policy* 23: 55-83 (2013) https://doi.org/10.2190/NS.23.1.e

**6** Anderson AR. Health effects of cut gas lines and other petroleum product release incidents - seven states. *Morbidity and Mortality Weekly Report* 64*:* 601-605
(2015) https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6422a1.htm

**7** "The Federal Energy Regulatory Commission (FERC or the Commission) recovers the full cost of its operations through annual charges and filing fees assessed on the industries it regulates … resulting in a net appropriation of zero." https://ferc.gov/about/strat-docs/2017/FY18-Budget-Request.pdf

**8** American Medical Association H-135.930 Protecting public health from natural gas infrastructure, Resolution 519, A-15 (2015). https://policysearch.ama-assn.org/policyfinder/detail/Resolution%20519%2C%20?uri=%2FAMADoc%2FHOD.xml-0-301.xml

**9** Massachusetts Medical Society. Natural gas policy adopted by House of Delegates, April 29, 2017. Page 30, Massachusetts Medical Society Policy Compendium.

**ADOPTED AS AMENDED**

| | |
|---|---|
| Item #: | 8 |
| Code: | Resolution A-17 A-105 |
| Title: | Protecting Public Health from Natural Gas Infrastructure in Massachusetts |
| Sponsors: | Brita Lundberg, MD<br>Krupa Patel, MD<br>Susan Racine, MD |
| Referred to: | Reference Committee A<br>Kevin O'Callaghan, MD, Chair |

| | |
|---|---|
| **HOUSE VOTE:** | |
| **Referred to:** | **(Item 1): *MMS Policy Compendium***<br>**(Item 2): Committee on Legislation (and *MMS Policy Compendium*)** |
| **Informational Report:** | **(Item 2): A-18** |
| **Strategic Priority:** | **Sustainable Health Care Delivery** |

1. **That the MMS adopt the following adapted from AMA policy:**

   **That the MMS recognizes the potential impact on human health associated with natural gas infrastructure. (*HP*)**

2. **That the MMS advocate to appropriate agencies and the Massachusetts state legislature to require ongoing independent Comprehensive Health Impact Assessments to assess the human health risks of all existing and proposed new or expanded natural gas infrastructure in Massachusetts. *(D)***

| | |
|---|---|
| Fiscal Note:<br>(Out-of-Pocket Expenses) | No Significant Impact |
| FTE:<br>(Staff Effort to Complete Project) | Existing Staff |

PUBLIC HEARING 5/11/18

**LEGAL NOTICE**
**Needham Public Health**
**Notice of Public Hearings**
**Friday, May 11, 2018**
**7:00 AM – 9:00 AM**

**Charles River Room –**
**Public Services Administration Building**
**500 Dedham Avenue, Needham MA 02492**

The purpose of this Public Hearing is to:

Revise Article 2, Disposal of Refuse in Needham in the interest of, and for the preservation of, the public health. Specific revisions will incorporate guidance from the Town's Recycling and Transfer Station team and from the MA Department of Environmental Protection and to require authorized haulers to offer recycling services to all customers. This summary shall serve as notice to all.

Comments will be accepted at the public hearing, and will also be accepted through Friday, May 4th in writing via electronic or postal mail. Please send comments to healthdepartment@needhamma.gov or to Public Health Division, 1471 Highland Avenue, Needham, MA 02492. A copy of the regulation is available for interested parties to review on the Public Health Department's website at www.needham.gov/health.

AD#13682001
Needham Times 4/26, 5/3/18

BOH/ARTICLE 2, DISPOSAL OF REFUSE
**LEGAL NOTICE**
**NEEDHAM PUBLIC HEALTH**

At a public meeting held on May 11, 2018, the Board of Health voted to revise Article 2, Disposal of Refuse in Needham in the interest of, and for the preservation of, the public health. Specific revisions will incorporate guidance from the Town's Recycling and Transfer Station team and from the MA Department of Environmental Protection and to require authorized haulers to offer recycling services to all customers. This regulation will take effect on January 1, 2019. This summary shall serve as notice to all.

AD#13693557
Needham Times 5/31/18

**TOWN OF NEEDHAM LEGAL NOTICE**

At a public meeting held on May 11, 2018, the Board of Health voted to revise Article 2, Disposal of Refuse in Needham in the interest of, and for the preservation of, the public health. Specific revisions will incorporate guidance from the Town's Recycling and Transfer Station team and from the MA Department of Environmental Protection and to require authorized haulers to offer recycling services to all customers. This regulation will take effect on January 1, 2019. This summary shall serve as notice to all.

Weekly 5/31/18

Times 5/24/18

# Legal pot faces black market

## Price, safety measures may decide if new industry will eradicate illicit trade

**By Eli Sherman and Stefan Geller**
esherman@wickedlocal.com & sgeller@wickedlocal.com

Retail shops that start legally selling cannabis products this summer in Massachusetts will likely find themselves going head-to-head with a formidable and long-established competitor: the black market.

Advocates of adult-use marijuana, known also as recreational marijuana, have long argued legalization could help eradicate the illicit trade in Needham and state-wide. But how quickly – and, if at all – that happens is still being debated and measured throughout the country. In Massachusetts, the question will be put to the test in the months and years after commercial sales begin July 1.

While there are many who believe adult-use stores will help stamp out the black market, local law officials don't share their enthusiasm.

"The myth that legalized marijuana is going to tame the black market is not true," said Needham Police Chief John Schlittler. "It's actually the opposite, it's going to thrive."

According to Schlittler, the introduction of recreational marijuana would spur black market sales because it would introduce more of the drug into the community and would make it harder to police illegal dealers. Consequently, he said this would make it easier for underage kids to get their hands on marijuana.

"When you have the retail sales by nature it's going to increase the amount on the streets," he said. "The more marijuana you put into the community the harder it is to stop."

Needham will, for the time being, be spared from facing this

See POT, A2

bers approved a by-law this May to ban local recreational marijuana establishments. Schlittler said this will help limit the number of visitors who come into Needham for drugs.

"When you look at Colorado, they've become a source for states around it," he said. "We don't want to become the town that people from other towns visit to get marijuana."

**A man smokes a marijuana joint at a party celebrating weed on April 20, 2016, in Seattle.** [AP PHOTO / ELAINE THOMPSON]

### Advocates urge for patience

Among those in favor of retail sales is Kris Krane, president of 4Front Ventures, a Boston-based holding company of Mission Massachusetts Inc.

Mission has plans in July to open a medical-marijuana dispensary in Worcester and is eyeing another in Adams.

Krane said he's confident commercial sales will help get rid of the black market, but encourages local and state officials to be patient in the early days as the market establishes itself.

"It's not a matter of whether it eliminates the black market, it's more a matter of how long it takes," he said.

The issue in part, he added, is tied to how quickly the legal market can bring down prices to a level competitive with the black market. In the beginning, the supply of legal cannabis products will most likely be scant, as the burgeoning grow market, known also as cultivators, simultaneously becomes established.

At the same time, commercial sales will be taxed at about 20 percent. Added all together, consumers should initially expect to see relatively expensive costs, Krane said.

A similar trend has played out in other states where recreational marijuana is legal. In Oregon, an eighth of an ounce of marijuana sells on the black market for $25-$30, according to Krane, which made it difficult at first for retailers to compete in the early days of legalization, as legal commercial prices were about double.

But after more cultivators started doing business there, and supply subsequently grew, prices dropped and became more competitive.

Once cost is no longer an incentive for consumers to buy from the black market, the illicit trade starts to disappear, Kane said. The trend should play out in Massachusetts, he added.

"In the early days in Massachusetts, I think you're going to see $60 to $70 eighths because there's going to be so little of it," he said.

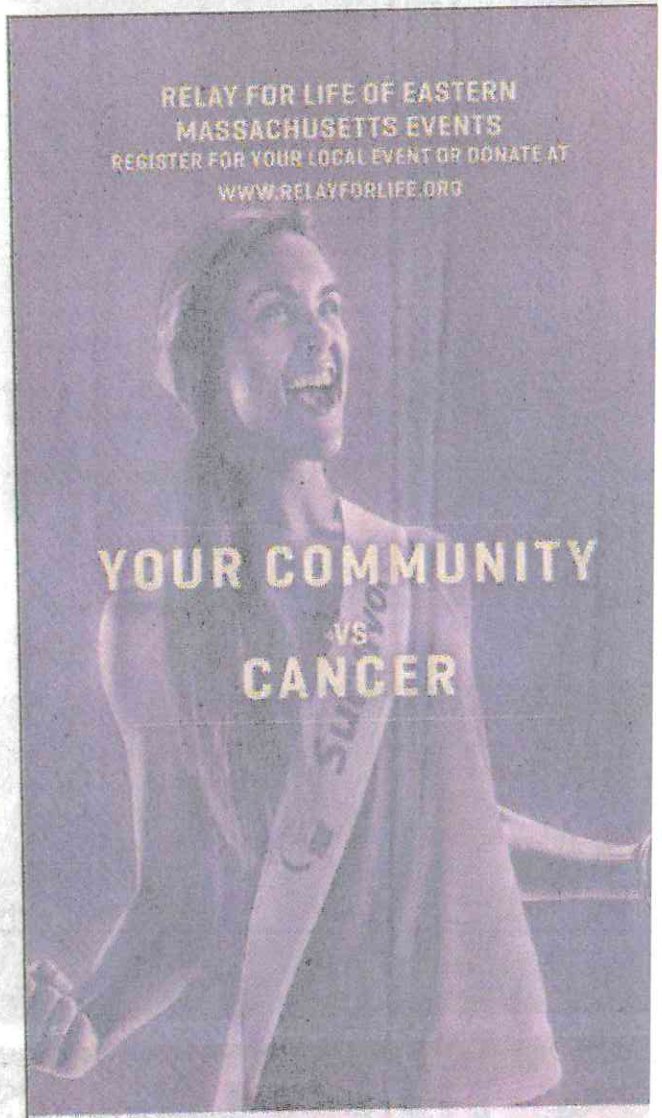
### State response

The state is banking on consumers choosing the legal market, estimating recreational marijuana sales will generate $63 million in revenue during the fiscal year beginning July 1, according to the Mass. Department of Revenue.

Steve Hoffman, chairman of the Mass. Cannabis Control Commission, said he's hopeful the commission's regulatory and safety requirements of the legal market will also appeal to consumers.

"The commission has implemented careful regulations so buyers will have the information they need on mandatory packaging and labeling about the potency, chemical content and testing of the products they purchase," Hoffman said. "These provisions will provide the public confidence that they are consuming safe products, which I hope, will drive them to the legal market first."





COMMENTARY

# Congratulations to tobacco vendors

By Diana Acosta
Needham Public Health Department

This is a letter to congratulate our Needham tobacco vendors for their on-going efforts in working with the Needham Public Health Department in enforcing our strict tobacco control and prevention requirements. The Needham Public Health Department works with the local police department in conducting routine tobacco compliance checks as part of our on-going tobacco prevention strategies, where we visit each tobacco vendor in town at least three times a year to verify that everyone is following the proper protocols by asking the buyer for a valid ID and not selling tobacco products or nicotine delivery products (i.e. E-Cigarettes) to anyone under the age of 21. We currently have a total of 10 tobacco permits in town, which is our limit.

We have had great success in conducting these tobacco compliance checks. These checks help keep everyone on their toes. We are happy to report, that on our most recent checks, conducted this past December, March and April, there were no sales to persons under 21 years of age! We wanted to take a moment to thank our tobacco vendors for following the strict tobacco buyer screening protocols, by asking the customer for a valid ID, and verifying that they are at least 21 years of age.

All tobacco products, including nicotine delivery products (i.e. E-Cigarettes) are fair game when it comes to conducting our compliance checks. We may be switching these products up a bit more in the near future to ensure that our vendors continue to check the buyers' ID when ANY tobacco product or nicotine delivery product is being purchased.

As a result of conducting these routine compliance checks, along with increasing the age to buy tobacco products back in 2005, we have seen a dramatic decrease in Needham High School student smoking rates. From 2006 to 2016, smoking rates among high schoolers in Needham dropped from 13 percent to 5 percent. Electronic cigarette use in Needham High School students has also dropped from 17 percent in 2014 to 16 percent in 2016.

This is a very successful program and we have found that these on-going prevention methods help to limit access of tobacco products and nicotine delivery products to minors which aids in preventing the risk of a host of many smoking-related lifelong diseases! Cigarette smoking has been identified as the most important source of preventable morbidity (disease and illness) and premature mortality (death) worldwide. Smoking-related diseases claim an estimated 443,000 American lives each year, including those affected indirectly, such as babies born prematurely due to prenatal maternal smoking and victims of "second-hand" exposure to tobacco's carcinogens. So great job!

If you have any questions on what was stated in this letter, please do not hesitate to contact the Needham Public Health Department at 781-455-7500, ext. 511. Thanks again for your on-going cooperation.

*Submitted on behalf of the Needham Public Health Department. Diana Acosta is an environmental health agent with the department.*

Needham Times 05/03/2018

PUBLIC HEARING 5/11/18
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AD#13682001
Needham Times 4/26, 5/3/18

# Abandoned homes cleared of trash

**These homes on Riverside Street have been abandoned for decades, but they were cleaned last week.** [WICKED LOCAL STAFF PHOTO / STEFAN GELLER]

## Property owners' attorney: 'he loves the town'

**By Stefan Geller**
sgeller@wickedlocal.com

The trash piled up along five abandoned homes on Riverside Street in Needham was cleared last week, relieving community members of the headaches and indignation it had continually caused.

"It's wonderful. Everyone has a smile on their face now when they go by," Nina Prohodski told the Needham Times last week. Prohodski lives on and rents out several properties on Riverside Street.

Prohodski had been complaining to town officials about the homes and the trash on them for years, as the garbage

**See HOMES, C1**

**Landscapers from Summerfield Landscaping and Construction Inc. clean up the properties.** [WICKED LOCAL STAFF PHOTO / STEFAN GELLER]

# HOMES

*From Page A1*

would regularly blow across the street onto her properties, as well as draw wild animals like raccoons and skunks into the small neighborhood.

"For over 20 years I've been cleaning up this neighborhood because of other people's neglect. I'm 85 years old and I cannot do it any longer," Prohodski told the Needham Times last month.

**Owners' attorney: 'He loves the town'**

Over the course of several days, landscapers from Summerfield Landscaping and Construction Inc. rid the properties of the trash bags, beer bottles and cat food cans that had collected in large piles, and cleared away dead brush and fallen leaves from all the yards.

The owner of the properties, John Savanovich, could not be reached for comment, but his attorney, Nick Louisa of Russell and Associates, said that the cleaning of the homes has been an ongoing process and that recent attention from town residents did not influence it.

"This has been in the works for the entire time that we've represented him," Louisa said. "John has lived his entire life in Needham. He grew up on those properties, he loves the town and has a lot of respect for his neighbors."

**Town trying to address properties**

According to Timothy McDonald, director of the Needham Public Health Department, the town has been working for several years to try to get Savanovich to sell the properties, but have repeatedly run into obstacles.

"I feel for the people in that neighborhood, because it's very frustrating. Especially because they have to put up with very unsightly homes," McDonald said. "The guy just doesn't want to sell."

McDonald said that they have been working with Attorney General Maura Healey's office to address the problem, which did help them flip another of Savanovich's abandoned properties on Highland Terrace last year, but there is still work to be done.

According to Louisa, Savanovich has not made a decision as to what will ultimately happen to the properties, but said that they are doing what they can to help the neighborhood.

"We've represented [Savanovich] since 2015 and the results that came out of 26 Highland Terrace can be used to assure the residents that their concerns are being addressed," Louisa said.

Prohodski said that she still feels the town needs to fix the curbs and the streets in her neighborhood, but overall she's happy with the progress that was made with the abandoned homes.

"Everyone's elated. My tenants, the people out back, they're so grateful," she said. "It looks like a normal neighborhood."