Aircraft Noise Increases Risk of Disease and Causes Cognitive Impairment in Children

Findings of a study on airport noise and health commissioned by the German Federal Environmental Agency analyzing data from more than 1 million people.

http://www.umweltdaten.de/publikationen/fpdf-l/3153.pdf and http://www.time.com/time/specials/packages/article/0,28804,1929071_1929070_1947782,00.ht

- 1. Men living under the flight path have a 69% higher risk of being hospitalized for cardiovascular disease compared to those who live in quiet areas. For women the risk is 93% higher.
- 2. Women who are exposed to jet noise equivalent to 60 dB DNL are 172% more likely to suffer a stroke.
- 3. The study also reported a higher incidence of depression among women living near an airport
- 4. Professor Eberhard Greiser, a principle author of the study, said, "Jet noise is more dangerous than any other kind of road-traffic noise or rail noise because it is especially acute and sharp and it induces stress hormones."

WHO "The Burden of Disease from Environmental Noise" http://www.euro.who.int/ data/assets/pdf file/0008/136466/e94888.pdf

- 1. Heart disease is the leading cause of death in developed countries
- 2. Studies from Stockholm and Amsterdam airports show that a 10 dB (A) increase in aircraft noise exposure produces 78% increase in the odds of developing high blood pressure. (page 23) [high blood pressure is a leading cause of heart attack and stroke]
- 3. According to the noise/stress reaction model, the arousal of the endocrine and autonomic nervous system affects classical biological risk factors (e.g. blood pressure, blood lipids, glucose regulation, blood flow, haemostatic factors and cardiac output). Chronic metabolic changes or dysfunction due to noise increase the risk of manifest diseases, including hypertension, arteriosclerosis and myocardial infarction (p. 17)

Chronic Noise Exposure Causes Cognitive Impairment in Children

Tasks affected are those involving central processing and language, such as reading comprehension, memory and attention. Exposure during critical periods of learning at school could potentially impair development and have a lifelong effect on educational attainment. (p. 45)

- 1. 50% of children will develop Noise Induced Cognitive Impairment in the 65-75 dB zone, with 75% affected above 75 dB. (page 50)
- In addition to the burden of cognitive impairment imposed upon individual children, there is a societal cost of wasted teaching hours in schools,--wasted for the teachers, the pupils and society.

3. The study notes the potential usefulness of its findings in political decisions about any sociodemographic redistribution of noise exposure.

International Journal of Epidemiology http://ije.oxfordjournals.org/content/30/4/839.full-10.25/

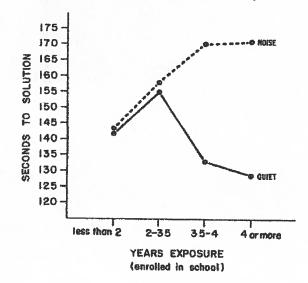
Consistent associations between chronic aircraft noise exposure and impaired cognition and stress responses in children have been found in cross-sectional studies around international airports.

- Chronic exposure to aircraft noise was associated with impairments in reading and attention and raised annoyance and perceived stress.
- The results provide evidence that aircraft noise adversely affects the performance and health of school children and that these effects do not diminish over time.

University of Oregon Study http://kungfu.psy.cmu.edu/~scohen/kidnoise80.pdf

Children do not learn to cope over time with excessive noise. Increased years of exposure to noise led to poorer performance and greater distractibility

Time required to solve a puzzle related to years of exposure



September 21, 2012

Dear Burlington City Council Members,

As a resident of Burlington for over 30 years, I have held positions directing a statewide AmeriCorps program, working as a paralegal and healthcare advocate for the Office of the Healthcare Ombudsman, and as an educator teaching at several colleges, including the University of Vermont. I am opposed to the basing of the F-35s in South Burlington for health, environmental, quality of life and moral reasons. I also used to teach high school under the flight path of O'Hare International Airport, and can attest that children were often upset by the noise of the jets, as were teachers and staff. This goes beyond mere disruption of the class to actual behavioral issues. I am the daughter of a Navy pilot, and do respect the men and women of the VT ANG, and understand their mission.

In terms of health and environmental issues, noise is just one. The U.S. Air Force draft environmental impact statement (DEIS) states "our area would be negatively affected in the following categories: Noise, Safety, Climate Change, Air Quality, Socioeconomics, Land Use, Transportation, and Environmental Justice and the Protection of Children."

Declines in safety and air quality clearly have negative health effects, and I would argue that all of these categories threaten public health.

In terms of noise pollution, the DEIS shows an increase in maximum sound during a "military power take off" from 94 to 115 decibels (page BR4-18), and the report notes that each additional 10 decibels represents a doubling of sound to the human ear. The 21 decibel difference is more than two doublings of the sound or <u>more than four times</u> <u>louder</u>.

The 65 decibel level discussed by many that makes a house <u>unsuitable for residential living</u> (C-47) is an average sound level over 24 hours according to the DEIS. The 115 decibel peak sound level of a squadron of F-35s flying over Winooski lasts only for minutes (although cumulatively these minutes add to days/year total), yet it is so loud that it makes the average over 24 hours go above that 65 decibel threshold for about half the houses in Winooski, while the current peak sound level of the current F-16s does not exceed that threshold.

As someone who lives in the Old North End, I have been affected negatively by the sound of the F16s. Outside of my workplace on North Winooski Ave., I have witnessed a Bosnian refugee falling to the ground during a flyover, hysterical with fear that she was being bombed after having survived such bombing. This kind of Post Traumatic Stress Disorder is particularly common among veteran and refugee populations.

In addition to re-traumatizing people living with such experience and resultant PTSD as the woman mentioned above, studies show that this noise pollution adversely affects kids' ability to learn, causes elevated rates of stroke and heart attack in the general population, and causes hearing loss. These weapons systems also burn more fuel, and release benzene among other toxins that are known carcinogens. (1)

The Washington Post in a 6/5/07 article describes how a study on children near the Munich airport bore out the claim that children suffer from extreme noise. Students living near the airport scored lower on tests of memory and reading than children in the neighborhoods where the airport was slated to move. However, the children living near the new airport saw a decline in scores after the move, while the children that had initially scored lower living near the old airport site had improved scores. One reaction students had to the noise was a type of "learned helplessness" where students just gave up problem-solving when subjected to loud noise.

Elevated levels of cortisol and adrenaline were also measured in groups of children living near the working Munich airports, which could account for these differences. The resulting increase in blood pressure puts these children at a higher risk of suffering a stroke or heart attack later in life. Other studies have shown the resultant immune suppression caused by elevated levels of stress hormones inhibits healing, and even discourages a tendency most people have of generosity towards others. (2)

A more recent article printed in <u>Time</u> on 12/15/09 cites several studies that indicate noise impacts on human health. Eberhard Greiser, an emeritus professor of epidemiology at Bremen University, states that in a study commissioned by Bonn authorities, it was found that women living near the Cologne-Bonn Airport had an increased risk of developing breast cancer and leukemia. (3)

These bombers are designed for first strike and offensive as well as defensive missions, and indeed qualify as "stealth" weapons systems. They can carry 18,000 lbs of bombs to initiate attacks on countries thousands of miles away, and are equipped, according to the Air Force's own advertisement, to have the ability to reduce the people in targeted countries to "hair, teeth, and eyeballs". In terms of health, which I understand is your primary concern, this basing will also make us a primary terrorist target in the U.S.

While the F-35 may be acceptable for other large military bases far from residential neighborhoods (barring moral arguments), 115 decibels is a grossly unacceptable level of loudness at a commercial airport surrounded by residential communities. Retired Colonel Roseanne Greco spoke to an Air Force personnel who said that the Burlington base was given 10 out of 10 points when evaluating the placement, 6 points of which were given in error, as the fact that there are 6700 people and over 2900 homes in the encroachment area would have disqualified us for these very health reasons.

Economic impacts can also cause people stress and anxiety. In terms of economics, the same number of Vermont tax dollars spent on education, health care, mass transit, or construction, creates many more jobs than military spending like the F-35, according to 2007 and 2011 studies from the Economics Department at the University of Massachusetts among others. Twice as many jobs, at higher average pay, are created by spending money on education than on defense.

At the initial meeting in April 2010 in South Burlington that outlined the public process for the EIS, Adjutant General Michael Dubie admitted that the F-35s will most likely bring a net LOSS of jobs to Vermont as corporate military contractors find it more cost-effective to outsource maintenance jobs. (This can be viewed on Channel 17's video of this event; see citation number 1 below.)

Colonel Greco states: "Noise is causing the demolition of homes. For example, 1,578 homes are currently in the noise contour area. So far, 200 South Burlington homes have been identified for purchase and demolition. 1,366 more homes, for a total of 2,944 homes, would be in this noise area if the F-35As were based here. And, the FAA home buy-out money is not guaranteed; nor is the airport under any obligation to purchase homes. In fact, last week, the airport said they were not going to purchase any more homes. Noise is stopping people from selling homes. Sellers in the noise area must disclose to prospective buyers and lessees that their homes have been designated by the government as "not considered suitable for residential use." Potential buyers won't qualify for federally guaranteed loans, program assistance, subsidies or housing insurance." These impacts will fall disproportionately on low-income and refugee communities, amounting to environmental discrimination.

When I wrote to Senators Sanders and Leahy about this issue in the autumn of 2010, they answered in a way that indicated that they and their staffs did not have up-to-date information (seems to still be the case by the way: see below), since they both implied a cost-savings to taxpayers due to the sharing of plane parts between the Navy, Air Force and Marines, and yet commonality at that point had already plummeted to below 60% of components and had been dropped as a cost-saving attribute per the 2010 DOD recertification.

Interestingly enough, while Senator Leahy did indicate overall support of the program, he included this statement in his reply to me: "Unfortunately, news reports show that current production of the F-35 has run into additional costs and delays. I agree with Secretary of Defense Gates who called these major cost overruns "unacceptable", and I support his decision to fire the Pentagon's F-35 program manager and to withhold more than \$600 million from the lead contractor, Lockheed Martin."

While several of our elected leaders state that noise mitigation will be exercised by VTANG, the DEIS mentions that there are no plans by the Air Force, VTANG, or the airport to mitigate the noise impacts of the F-35, and the FAA further states that no noise mitigation methods actually work.

Many factions within the Pentagon, Navy and Air Force see this whole project as a classic boondoggle, and think that the F-35 is obsolete before its deployment, some comparing it to a 'flying brick'. By recent estimates the F-35 will now cost US taxpayers at least \$382 billion for its development and production run (doesn't include deployment or maintenance). Such a sum for a single weapons system is vast enough to be hard to fathom. It would, for instance, easily fund all federal government spending on education for the next five years.

A Pentagon report shows that the F-35 bomber program will cost \$1.45 trillion and that each plane will cost \$135 to \$160 million, all money needed for jobs in education, health care, sustainable development and infrastructure. Wars abroad yield austerity at home. The logic of military weapons systems like the F-35 can be best explained by former Republican President Dwight D. Eisenhower: "Every gun that is made, every warship launched, every rocket fired signifies, in the final sense, a theft from those who hunger and are not fed, those who are cold and not clothed."

Safety is another health-related issue raised by Colonel Greco among others: "Safety projections for the F-35A are based on the F-22A, which was operationally deployed in 2002. However the F-22 is now experiencing significant safety issues, so much so that Air National Guard pilots are refusing to fly them. Moreover, new aircraft normally have more crashes than mature aircraft. And crashes are more prone to happen on take-offs and landings." The DEIS states that projected "Class A Mishaps" (the crash rate) during years 2 -5 is 11 times higher than those of the current F-16 (BR4-46 and BR4-47). If the planes are ever loaded with nuclear payloads or depleted uranium, accidents could cause a deplorable level of damage here at home, and I will argue that they cause a reprehensible effect anywhere they are deployed.

As I mentioned previously, something that is not mentioned much is the fact of the greater Burlington area remaining or becoming a terrorist target; this is not conducive to people's health or wellness.

South Burlington's school board and city council have already rejected the local basing of these bombers, as has the Winooski school board. As a board, you are charged with some statutory responsibility for the "prevention, removal or destruction of public health hazards and the mitigation of public health risks." I highly recommend that you consider your liability and advise the City Council and mayor appropriately.

A parting quote from Colonel Greco: "We are being asked to comment on the environmental impact of basing the F-35A in South Burlington. Without a doubt, the basing has a significant negative environmental impact on our area. The DEIS states on page 2-29, that *not* basing the F-35A here 'would be the environmentally preferable alternative.' I agree."

I also agree, and hope that you do, too. Thank you for your time and consideration of this issue as part of your duty to the public health.

Sincerely,

Laurie Larson 93 Lafountain St. Burlington VT 05401

Citations:

- (1) Whether you agree with the premise of the website's title or not, all citations, including a link to the DEIS, can be found by visiting www.stopthef35.com and the link that can be found there to Juliet Buck's blog, which documents numerous studies, many of which are published by the Air Force itself, as well as the DOD, etc
- (2)www.washingtonpost.com/wpdyn/content/article/2007/06/04/AR2007060401430_pf.h tml
- (3) <u>www.time.com/time/specials/packages/printout/0,29239,1929071_1929070_1947782.</u> 00.html

Additional:

South Burlington School Board's Statement:

http://sbsd.schoolfusion.us/modules/groups/homepagefiles/cms/483095/File/School%20Board/F-35%20Info/F35 board info.pdf

CCTV footage of South Burlington's City Council rejecting the F-35 can be viewed here: http://www.stopthef35.com/node/93

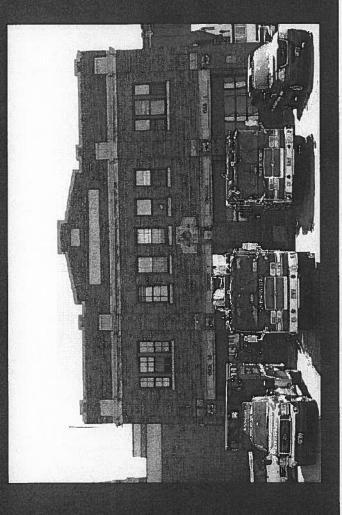
Burlington Emergency Burlington Fire Management Department and



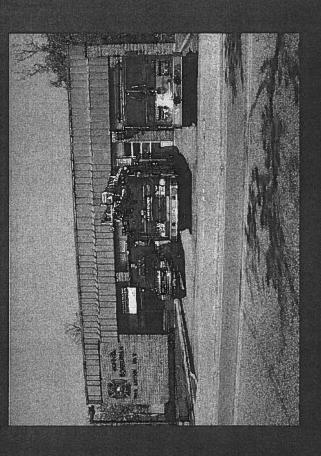
Burlington Fire Department Overview

- 5 Fire Stations
- 79 Firefighters (Includes Fire Chief, Deputy Chiefs; Training Officer and Fire Marshal)
- All FD Staff are certified at EMT or EMTA
- 3 Shifts (a) 24 hours (48 72 hr weeks)
- Call volume over 7,000/year
- Combined with Fire/Police Business Office Finance, IT and Administrative Support —

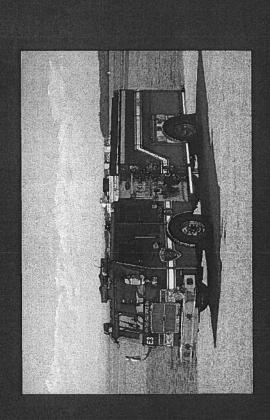
- Station #1 Fire Headquaters, 136 South Winooski Avenue
- Engine #1, Tower #1, Rescue #1 and Car 12 (on duty Chief)
- 8 on duty staff
- Admin offices

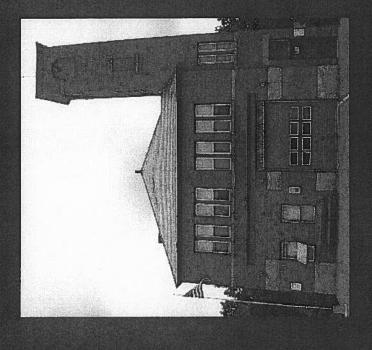


- Station #2 132 North Avenue
- Engine #2, 6 and Rescue #2
- Haz-Mat Decon Trailer
- 5 on duty staff
- Fire prevention offices

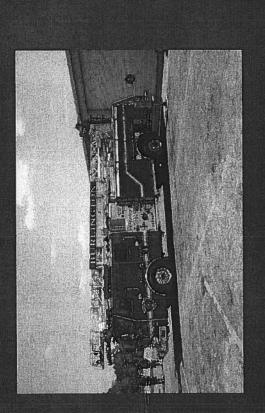


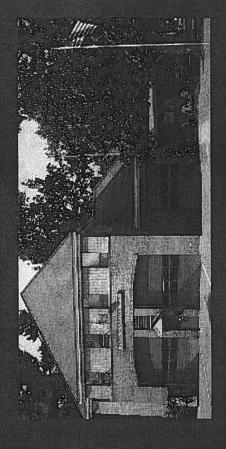
- Station #3 20 Mansfield Avenue
- Engine #3
- 2 on duty staff



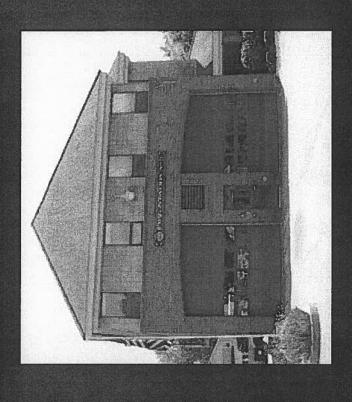


- Station #4 1397 North Avenue
- Engine #4 and Rescue #3
- Multiple Casualty Trailer
- 3 on duty staff





- Station #5 23 Ferguson Avenue
- Engine #5
- Technical Rescue Trailer
- 2 on duty staff

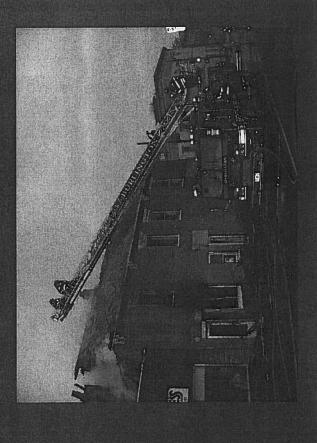


Responsibilities

- Fire Suppression
- Hazardous Materials Response
- Technical Rescue Response: (above and below grade, High Angle Rescues and Structural Collapse)
- Post 9-11: Preparation/Training and Activities
- Community Emergency

Planning (Weather emergencies

Mass care)



Responsibilities

Emergency Medical Service

(2 staffed Ambulances, 1 spare)

■ Fire Prevention + Investigation

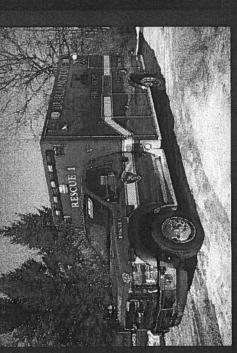
■ Permits and Project Review

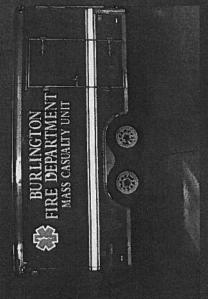
Inspection and Public Education

■ Time of Sale Inspections

FM office has over 10,000 contacts each year.

Training





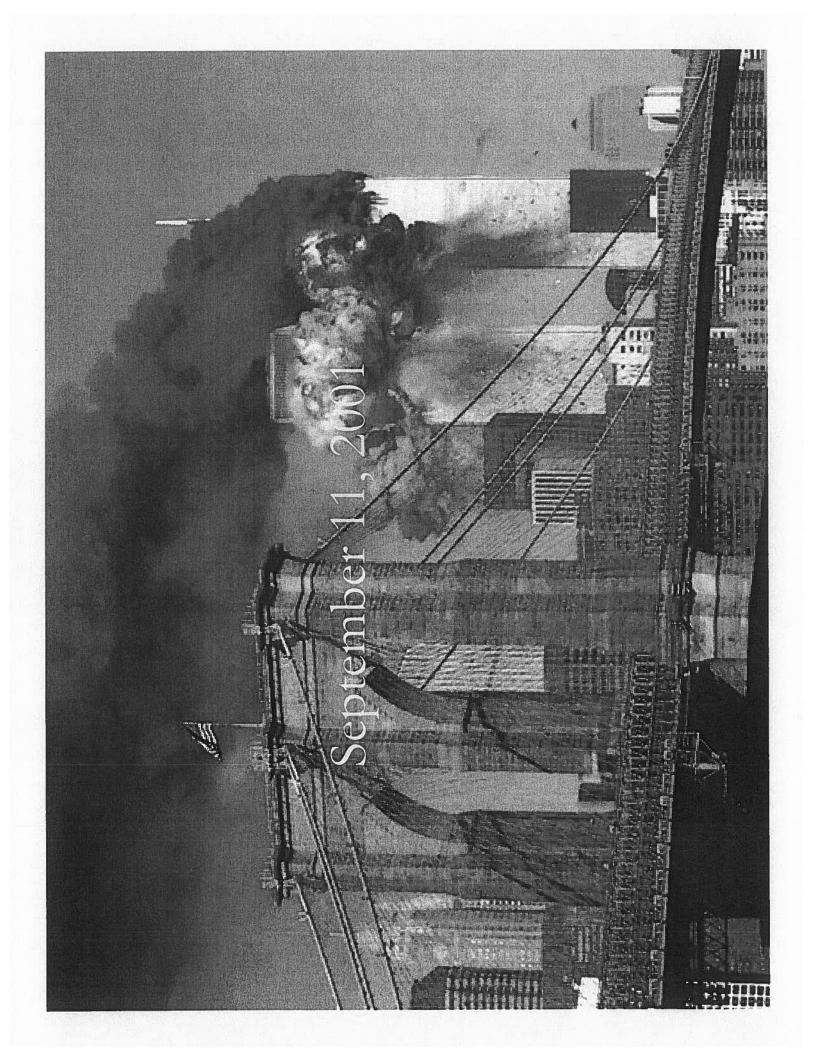
Incidents

District	2007	2008	2009	2010	2011	Increase
1	1755	1804	2018	0	2349	33.85%
2	266	696	1005	0	1296	29.99%
3	1486	1625	1598	0	1677	12.85%
4	1041	1089	1029	0	1090	4.71%
5	569	536	572	0	580	1.93%
Mutual Aid	21	8	12	0	8	
Aid/FM Office and Other	0	3	1	0	Ţ	
	5869	6034	6235	9999	7007	19.39%

5 Year Increase – City Wide 19.39%

Emergency Management

- Responsibilities transferred to Fire Chief in the $1990^{\circ}s$
- Ensure the complete and efficient utilization of all city facilities to combat disasters and emergencies.
- Coordinating agency for all activity/conduit for the Mayor to exercise authority and discharge responsibilities vested.
- Code of Ordinances: Chapter 11



Community Emergency Planning

- signed Homeland Security Presidential Directive 8 ■ December 2003, President George W. Bush (HSPD-8), National Preparedness.
- and respond to threatened or actual domestic preparedness of the United States to prevent terrorist attacks, major disasters, and other Established policies to strengthen the emergencies

Community Emergency Planning

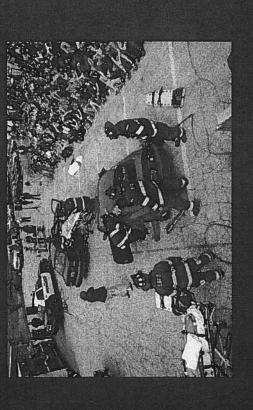
- Incident Command System (NIMS)
- management and sustainability prior to FEMA Recognition/need for local incident assistance.
- Establishment of common radio channels
- Program Funding

Community Emergency Planning Burlington

- City's Emergency Operation Plan has been updated.
- Incident Command System (NIMS) training for all city departments.
- Emergency operation center training.
- FD is apart of a Statewide response network.
- Urban Search and Rescue
- Fire Mutual Aid
- Mass care/Multiple Casualty Incidents
- National Radio Channels installed

Community Emergency Planning Burlington

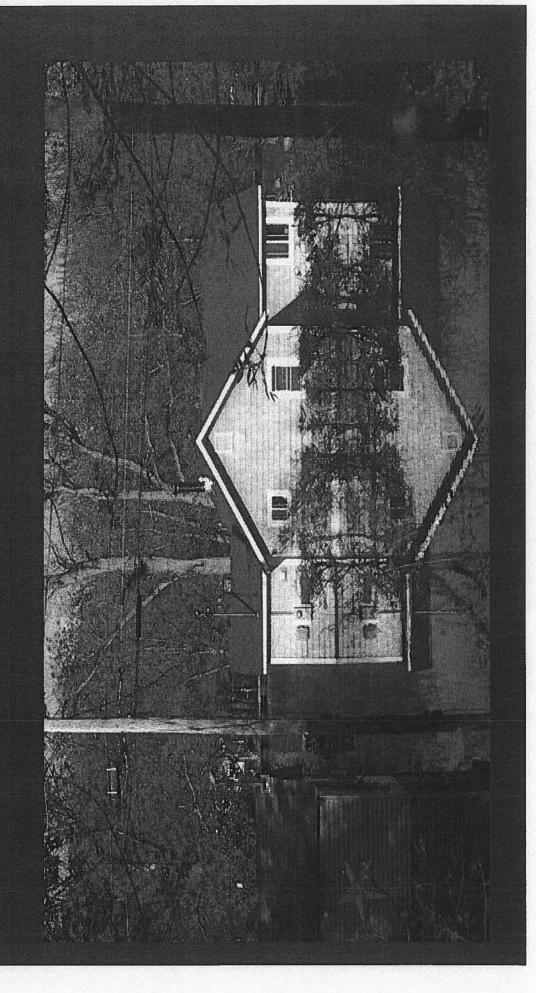
- community: i.e. FAHC decontamination drill. ■ Large scale drills with partners within the Transportation drills with LCT.
- Public education: Classes at Burl public schools, and distribution of preparedness materials.

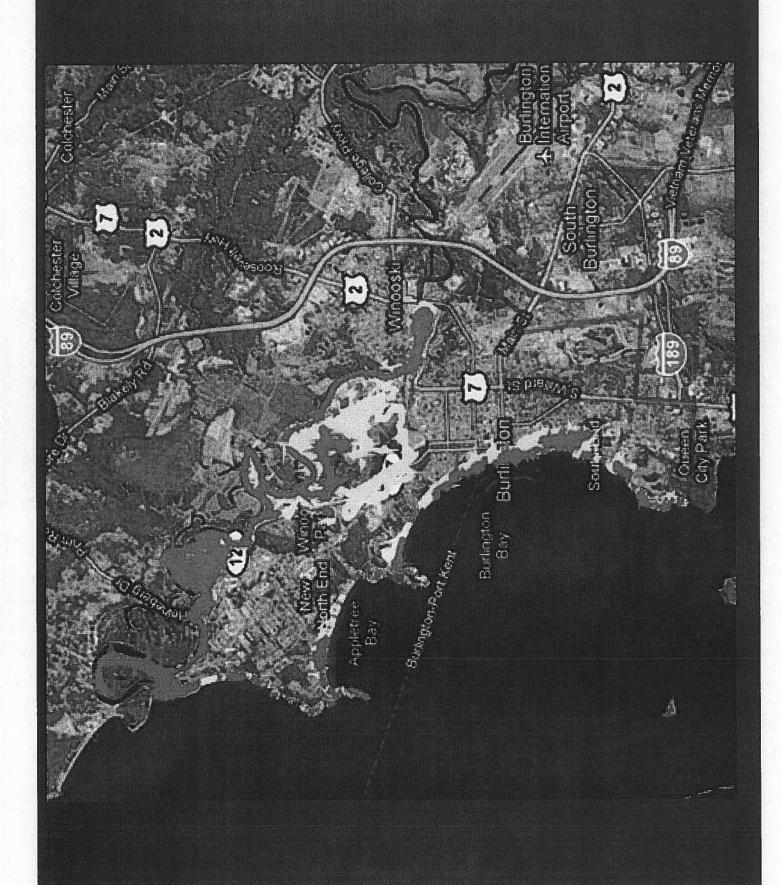






2011 Lake Champlain Shoreline Flooding





2011 Flooding

- Meetings with City leadership, department heads.
- Coordination and planning for response, mitigation and recovery began early and continues today!
- Just about every city department involved.

2011 Flooding

- 30 people displaced from their homes
- buildings (many more business and public) ■ Damage and or flooding to 60+ private
- 18 homes disconnected from the power grid.
- Approx 18,000 sand bags given out.

Vermont Emergency Management



Teams (CERTs), state agencies, and emergency Emergency Management Directors (LEMDs), provides aid and support to Vermont's Local (RPCs), Community Emergency Response (LEPCs), Regional Planning Commissions Local Emergency Planning Committees response providers.

Vermont Emergency Management

- Act as Vermont's single point of contact for emergency management
- Provide emergency management leadership for state and local partners
- Exercise and train staff and partners in modern facilities to deliver services
- Develop and maintain emergency management accreditation/standards
- Ensure sufficient training opportunities for emergency providers
- Increase partnerships with both the public and private sectors
- Enhance the State's capability to deliver services through resource management
- potential hazards and to develop strategies to protect themselves from future Facilitate a mitigation program that will allow for communities to identify
- Provide public outreach/education for a wide audience.



Department of Health

Health Alert Network

- VTHAN is a web based communication system used as a tool to support 24/7/365 alerting and notification.
- professionals and key response partners about public The system informs registered public health health situations



Department of Health

Emergency Preparedness Senior Advisory Committee

Enforcement, Fire Service, ARC, Homeland Security and the Military. Members include: VDH, VEM, VT Hosp Assco, Hospitals, Law

- Mission: Healthcare Issues, Facility readiness, Mass Care, Home and Community Services, Training and planning.
- H1N1 and Pandemic Flu

- Training with our local Hospital
- Vermont National Guard and the Civil Support Team (1998 Ice Storm/2011 Floods)
- American Red Cross.
- LEPC/All-Hazard Planning.







Strategic National Stockpile (SNS)

supplies to be used for emergency situations such as a A national repository of medications and medical bioterrorism attack or natural disaster

Closed POD (closed point of dispensing)

Closed PODs provide:

Quick dispensing of medications to your essential personnel/first responders Ease of access to life-saving medications Enhanced continuity of operations and their families

Questions/Contact

Chief Seth S. Lasker

Slasker@ci.burlington.vt.us

802-865-7578

ATTACHMENT D

RECEIVED

SEP 1 1 2012

BURLINGTON CODE ENFORCEMENT 125 Cherry Lane Burlington, VT 05401-4910 802-860-1018 regina150@hotmail.com

September 8, 2012

Burlington Board of Health 645A Pine Street Burlington, VT 05401-0849

To Whom It May Concern:

Many residents of the Birchcliff Parkway neighborhood, including several of us on Cherry Lane have been physically disturbed by the loud, constantly barking dogs boarded from before 8 a.m. until just after 5 p.m., seven days a week, at "Play Dog Play Canine Care Center, 668 Pine Street. Pine Street is adjacent to Cherry Lane, which up to the time Doggie Day Care moved in, was a quiet residential neighborhood. As far as I know, Donna and Ed Foley, 92 Cherry Lane, were the only people in the Birchcliff Parkway neighborhood notified by Burlington Zoning that an animal care business was going to open up within our hearing distance. The two women who opened this business unexpectedly went to the Foley's home with an offering of cake, to personally tell the Foleys not to worry; there would be no noise from the dogs. How this huge cover-up got past Burlington Zoning we will never understand. We did not hear the dogs until they were let outside for any length of time, last Spring, but from then on; we've heard them every single day of the week. The leader and loudest dog of the pack appears to belong to the owner. We recognize its voice because we hear it several times a day, every day. The others chime in and I can no longer enjoy sitting on my own porch. I get headaches from the barking every single day, so have to go inside and close my windows. Enough is enough. I know other Cherry Lane home-owners have called the Day Care owners about the noise. The owners pretend they care, but have done nothing to stop the problem. They don't intend to do anything. I live in a house my late husband and I worked our whole life for, where I should be able to enjoy my yard whenever I want to, and open my windows whenever I want to. Please notice that I will be sending out a copy of this letter containing Section 21-13 Noise Control Ordinance to another Burlington Department. Constant barking causing my constant headaches as well as noise disturbance to my neighbors and I certainly is a public nuisance. That is my complaint.

rug kinterres) menama pin sung menapakkan pingganan grapis kan propinsi

Yours truly, Regina Murray Brault

Cc: Burlington Code Enforcement

CITY OF BURLINGTON CODE ENFORCEMENT

Sec. 21-13 Noise Control Ordinance

"Prohibited noise offenses: General prohibitions

It shall be unlawful for any person to make or cause to be made any loud or unreasonable noise. Noise shall be deemed to be unreasonable when it disturbs, injures or endangers the peace or health of another or when it endangers the health, safety or welfare of the community. Any such noise shall be considered to be a noise disturbance and a public nuisance."

Board of Heath Update for September 2012 from the City Heath Officer



Housing Issues

No new properties have been posted "unfit for human habitation" since our last meeting.

Inspections

Inspection rate for rental units remains on track for reaching a minimum of 3,000 initial units inspected for 2012. The 8 month total year to date in 2012 was 1,938 on August 31, 2012. The 2010 annual total was 2,134 units. The 2011 total was 3,228 units.

Tiered fine system

The City Council passed the Code Enforcement request to increase the fines for nuisance violations. If the Mayor signs the ordinance change, the basic fines for Code violations will increase from \$75 to \$100, and a second tier for nuisance violations will be added and fines will increase to \$200 for second or subsequent offenses within a 12 month period.

AMANDA 5 and Mobile AMANDA

Amanda mobile implementation was delayed in July and the 60 day trial period is set to begin September 17, 2012. The initial trial period was delayed due to software upgrades needed to operate AMANDA 5 and the handheld devices were not available for trial use in July.

William M. Ward/Health Officer



P.O.P.E. Report BOH Meeting 9/13/12

GreenWorks sponsored by the Vermont Nursery and Landscape Association at Horsfords Nursery, August 23, 2012 – 7- 4:00: P.O.P.E. committee (Jurij Homziak, Jay Vos, Lisa Hoare, and Linda Ayer) set up a table with banner which displayed our Healthy Lawns, Healthy Lives logo, two large posters featuring Burlington buffer zone and materials re: the P.O.P.E. efforts, best practices, examples of Burlington pesticide ordinance and application form. This was a free table thanks to Kristina McKulin, Organizer of GreenWorks.

Interviews were conducted with 25 of approximately 100 attendees regarding practices and interest in partnering with P.O.P.E. One nursery & three lawn maintenance companies expressed interest in a partnership with us. This was a great opportunity to network and many were interested in our ordinance for their communities as well as our map of the buffer zone.

There is a Lawn Labs Seminar/Appreciation Dinner on September 18, 2012; 5:30 – 7:00 pm at the Robert Miller Community Center for all partners in lawn demonstration project. Fifty invitations were issued. Papa Franks is providing lasagna dinner, Gardeners Supply is providing products for new lawn lab partners, Sid Bosworth is presenting a short lawn seminar, BOH Board member, David Casey and Health Officer, William Ward are presenting a SHORT power point to include a 6 minute video of the Winter Sprouts event.

Data Collection – Analysis Methodology – UVM students will do a weed analysis of 9 new lawn labs under supervision of Sid Bosworth.

DR Power Equipment will be loaning us the aerating equipment between September 19 and October 9 and Linda Ayer will be scheduling use

Grant application in development with Puppets in Education, Deb Lyons and experienced grant writer/volunteer Tree Spaulding.

The EPA Office of Environmental Education has issued a new Request for Proposals (RFP) for grant-funded projects to increase public awareness and knowledge about environmental issues and provide the skills that participants in its funded projects need to make informed environmental decisions and take responsible actions toward the environment. The title of the new RFP is Environmental Education Regional Grants -- Solicitation Notice for 2012. The RFP number is EPA-EE-12-01; Catalog of Federal Domestic Assistance (CFDA) number 66.951.

Applications must be postmarked by November 21, 2012, 11:59 pm local time; hand delivered by the end of the business day November 21, 2012, in the regional office to which the application is being submitted; or submitted electronically via www.grants.gov by November 21, 2012, 11:59 pm Eastern Standard Time (EST) in order to be considered for funding.

The total estimated funding for this competitive opportunity is approximately \$2,160,000 nationwide. EPA expects to award **one (1) grant per Region** for an expected total of 10 grants