



URBAN SPRAWL AND PUBLIC HEALTH

by HOWARD FRUMKIN, MD, DrPH

Department of Environmental and Occupational Health, Rollins School of Public Health of Emory University, Atlanta, GA

Urban sprawl features rapid geographic expansion of metropolitan areas in a "leapfrog," low-density pattern; segregation of distinct land uses; heavy dependence on automobile travel with extensive road construction; architectural and social homogeneity; shift of capital investment and economic opportunity from the city center to the periphery; and relatively weak regional planning.

The economic, environmental, and social costs of sprawl have been widely debated, but the health implications have received less attention. This article reviews direct and indirect impacts of urban sprawl on health. Some relate to the heavy reliance on automobiles: air pollution, automobile crashes, and pedestrian injuries and fatalities. Others relate to the land use patterns that typify sprawl: decreased physical activity, threats to water quantity and quality, and an expansion of the urban heat island effect. Finally, some health effects—mental health and social capital—are mediated by the social dimensions of sprawl. For each, the health effect and its connection with sprawl are identified, available evidence is reviewed, and issues requiring

further research are noted. Inequities in the impact of sprawl are identified and discussed. Finally, some solutions are discussed.

BACKGROUND

When regular steam ferry service between Brooklyn and Manhattan began in 1814, the first commuter suburb became possible. Suburbs continued to develop slowly, but steadily, during the 19th and early 20th centuries, thanks to transportation advances such as com-

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INDOOR AIR QUALITY

Michael McClean, MAHB Science Advisor

Thousands of airborne chemicals and biological pollutants can be found in the indoor environment, many of which are known to have significant health impacts. Most people spend approximately 90% of their time indoors, where pollutants can concentrate to levels that are much higher than those found in the outdoor environment. Considering that the majority of our time is spent in the home, in the workplace, or at school, the Environmental Protection Agency (EPA) currently ranks indoor air as one of the top four environmental health risks. There are three specific types of building-related illness that are associated with poor indoor air quality: infectious diseases, hypersensitivity diseases, and toxic

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MTCP CUTS RESULT IN MAHB STAFF LOSES

Deep cuts to the Massachusetts Tobacco Control Program (MTCP) made by the Swift Administration have reduced MTCP's annual funding to \$9.5 million, far below the CDC-recommended minimum of \$36 million annually. This represents a 79% cut to the program from FY 02 funding levels of \$48 million.

The revenue streams that fund the MTCP – the tobacco tax and the Multistate Master Settlement Agreement – generate approximately \$610 million each year for the Commonwealth. The Legislature just raised the Tobacco Tax by 75¢ per pack, making it the highest in the nation. Very little of this revenue will now be used for tobacco control.

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## MAHB HOUSING CD NOW AVAILABLE

MAHB's latest cd covers the topic of Housing. It is auto-loading and includes multimedia with graphics, sound and video components. There are active links to the Web and it contains RTF documents such as inspection forms, compliance orders and other legal documents. This CD was created in partnership with Gary Moore Dr. P.H. and is available at \$25 to member boards.

The MAHB Legal Handbook has been reprinted and is also once again available.

### Budget Cuts Continued from page 1

Tobacco use remains the single greatest cause of illness and death in the Commonwealth, and, therefore, the single greatest contributor to Massachusetts' health care costs. Reductions in smoking rates will dramatically decrease the costs of caring for sick and dying smokers and treating secondary illnesses such as asthma, otitis media, and respiratory infections in children. During its first nine years of existence, the Massachusetts Tobacco Control Program (MTCP) saved Massachusetts \$680 million dollars in tobacco-related health care costs. Since its inception in 1993, the Program has reduced smoking rates by 4 percentage points annually compared with much smaller declines in other states. Researchers at the University of Massachusetts and the Massachusetts Institute of Technology have concluded that the MTCP has reduced the state's health care costs by an average \$85 million annually. This annual savings has now been largely eliminated.

Due to cuts to MAHB's tobacco control funding, MAHB will be left with the Executive Director, Marcia Benes and one full-time employee: Cheryl Sbarra, the director of its Tobacco Control Program. Melinda Calianos, Mike McClean, and Graham Kelder no longer possess the funding necessary for them to continue as MAHB staff members.

## GOT DIESEL?

**MAHB WOULD LIKE TO HEAR FROM BOARDS OF HEALTH CONCERNED ABOUT THE HEALTH IMPACTS OF TRUCK STOPS OR OTHER AIR POLLUTION ISSUES PERTAINING TO DIESEL ENGINES.**

## MAHB CONSULTING SERVICES

Due to cutbacks in the Massachusetts Tobacco Control Program, we are no longer able to provide some technical assistance services free of charge, but they will now be available on a consultant basis.

MAHB Science Advisor Michael McClean will be available through MAHB to provide technical support in Risk Communication pertaining to indoor air quality and other environmental health issues.

For more information, contact the MAHB office.

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EMAIL BENES@MAHB.ORG

THE PRIMARY PURPOSE OF THE MASSACHUSETTS ASSOCIATION OF HEALTH BOARDS IS TO ASSIST AND SUPPORT BOARDS OF HEALTH [AND RELATED GOVERNMENTAL AND COMMUNITY ORGANIZATIONS/ AGENCIES] THROUGHOUT THE COMMONWEALTH IN MEETING THEIR STATUTORY AND SERVICE RESPONSIBILITIES, THROUGH PROGRAMS OF EDUCATION, TECHNICAL ASSISTANCE, REPRESENTATION, AND RESOURCE DEVELOPMENT.

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# The editor's desk

## BUDGET CRISIS HITS HOME

This issue of the Journal is several months late because we have been awaiting resolution of the FY03 budget crisis. These words were begun before I knew whether I will need to make painful cuts in staff but today I received news that on September 1st we will lose MAHB staff attorney Melinda Calianos. Graham Kelder will be reduced to one day per week through outside funding sources. Cheryl Sbarra will remain as MAHB Tobacco Control Program Director.

Another victim of the economy is our nationally recognized Board of Health Certification program, which has been subsidized for years, first by the W.K. Kellogg Foundation, and then by the Tobacco Control Program (MTCP). Due to cuts in the tobacco program, we lost all funding for certification with the FY03 budget, although subsequently we have been promised partial funding by DPH, it will not cover all of our costs.

Graham, Melinda and Mike have contributed greatly to local public health and were a wonderful resource for board members and their professional staff. They have generously agreed to participate in our fall certification program as instructors, which is another reason why I hope that you will all make an effort to attend. Our curriculum was designed to take advantage of a highly trained staff who are familiar with the needs of local boards of health.

The registration fees make up only a fraction of the cost of putting on the program, which is approximately \$300 per person. The decision to raise tuition this year by \$10 to \$90 each was difficult, but unavoidable. As always, we will offer scholarships to any board member who cannot afford the registration fees. In addition, we always provide one free Guidebook for Local Board of Health to everyone attending the Primary Certification Program. This year we will be forced to forgo the printed Guidebook and provide instead a CD version to save the considerable costs (\$48 per book) of printing and binding.

## MAHB EXECUTIVE BOARD PROPOSES BYLAW CHANGES

During the past two years we have held our annual meeting concurrent with our certification programs, opening the meeting in Northampton and closing in Taunton. This was not strictly proper according to our bylaws, but it enabled us to reach a wider group of board members than we have ever managed with a single annual meeting.

After a thorough review of our bylaws this year, we decided that some housekeeping was in order, and the Executive Board has proposed changes which must be voted and accepted at an annual meeting. The full text of the bylaws and proposed changes is available on our website. They are not substantial changes, but are required to bring our bylaws up to date. For example, our Executive board finds email a much more efficient way of setting meeting dates and sharing minutes. We also realized that there was no reference to an Executive Director's position in our bylaws, despite the fact that there has been an Executive Director since the organization was founded! We chose the Marlborough Certification Program (during lunch) as the location of our Annual Meeting this year because it is the most centrally located.

## BIOTERRORISM AND PREPAREDNESS LINKED TO CAPACITY BUILDING...OR MAYBE NOT...

The BT Advisory Committee reflects the wide spectrum of organizations and agencies which might be involved in a bioterrorism incident. Approximately 127 people represent at least 57 groups including schools of public health, emergency room physicians, funeral directors, state police, postal service, hospitals, health plans, fire, local police and EMT's. Some participants do not have much contact with local boards of health, nor apparently, much sympathy for our infrastructure-building needs in the context of preparedness.

Despite a clear message from the CDC Director Dr. Julie Gerberding (see pp. 26-28), that terrorism response capacity is being built on the foundation of public health, using "new investments to strengthen the public health foundation", some hostility to this concept is expressed by those who do not believe that bioterrorism preparedness funds should be used in part to build local capacity.

Local health has strong representation through MAHB, MEHA, MHOA and NPHNA, but we are nonetheless outnumbered, and frankly, outgunned. We can only hope that DPH will be guided by the CDC Director's vision when it weighs comments from influential members of the advisory committee. I urge anyone interested in this process to log on to the DPH website [www.state.ma.us/dph/bioterrorism/advisorygrps/index.htm](http://www.state.ma.us/dph/bioterrorism/advisorygrps/index.htm) to follow the progress of these committees in assisting DPH with the enormous task of implementing the Bioterrorism Preparedness Grants.

Marcia Elizabeth Benes  
MAHB Executive Director & Editor

# FINAL MAHB STATE HOUSE REPORT FOR 2002

The Massachusetts legislative session lasts for two years, which means that bills which were submitted in 2000 had until the end of this session to be enacted into law. All of those bills which did not pass must be refiled and begin the entire process anew. The next legislative session will last from 2003 until 2005; bills for this session will be filed in December 2002.

## Tobacco Bills

MAHB and the Massachusetts Coalition for a Healthy Future (MCHF) supported:

- HB 3291 (introduced by Cahill) which would impose a statewide workplace smoking ban. **Sent to study on September 20, 2001.**
- HB 2169 (introduced by Kaprielian) and SB 1703 (introduced by Montigny) which would impose a new \$.50 tax on cigarettes that would fund health insurance for the underinsured in the Commonwealth. **SB 1703 reported out favorably by Committee on Taxation on 7/12/01 and discharged to House Ways and Means. Committee recommended bill out to be passed with an amendment. The new version of the bill is HB 5050. Bill further amended and becomes HB 5054. Engrossed by House on 5/2/02 and sent to Senate Ways and Means. This new law raises Massachusetts' cigarette excise tax by 75¢ per pack, giving Massachusetts the highest cigarette excise tax in the country. The money is, however, no longer dedicated to funding health insurance for the underinsured. In addition, on motion of Rep. Caron, the House reconsidered an order adopted July 18 setting up a special commission to study the impact of proposed increases in the prices of cigarettes. The House adopted a Caron amendment striking out the House chairmen of the Taxation and Government Regulations committee as members of the special commission. The House re-adopted the order, as amended and appointed Reps. Garry, Caron, Kujawski, Broadhurst, Fresolo, Hill, and Coppola to the panel. Recommendations are due in December.**
- HB 2907 (introduced by Kelly and Murphy) initially would have raised the minimum legal sale age for tobacco products in Massachusetts to age 19. **This bill was amended on August 16, 2001. The new version of the bill, HB 4471, does not raise the minimum legal sale age for tobacco in Massachusetts. The bill was reported out favorably by the Committee on Health Care to House Ways and Means on that same date. The bill would have accomplished several positive things for tobacco control. It was never brought up for a vote in the House.**
- HB 235 (introduced by Walrath) which would ban the free distribution of tobacco products for commercial purposes. **This bill was amended to include an anti-preemption clause written by MAHB staff attorney Graham Kelder. This amendment allows cities, towns, and local boards of health to pass mores stringent restrictions on the free distribution of tobacco products. The bill was further amended, however, to allow an exception for common victuallers (i.e., restaurants) or innholders (i.e., hotels, pubs, taverns) who are licensed to sell alcohol under Gen. Laws ch. 138, section 12. This further amendment makes the bill bad public policy (see concluding paragraph at the end of this report). The bill was passed to be engrossed on 7/29/02. Rep. Walrath may be willing to help tobacco control advocates to kill this bill before it is adopted.**

## MAHB Supports

- HB 1131 (introduced by Quinn) which would allow a tax credit of up to 40 percent for "the expenditures for design and construction expenses for the repair or replacement of a failed cesspool or septic system pursuant to the provisions of Title V..." (Said expenditures shall be the actual cost or \$15,000, whichever is less.) **Referred to the Committee on Taxation in 1/03/01.**

- HB 1391 (introduced by Stefanini) which would require health warnings for mercury to be placed on fish products. DPH would be required to produce a “fish consumption advisory” that boards of health could distribute to the public and local retail food establishments. Boards of health would enforce this law. **This bill was sent to study on September 13, 2001. This bill was never brought up for a vote in the House.**
- HB 1625 (introduced by Hall and Resor) which would provide loans to elderly persons over 65 who make less than \$40,000 per year to assist with Title V compliance. **Referred to the Committee on Natural Resources and Agriculture on 1/03/01. Public hearing held 3/26/01. This bill was never brought up for a vote in the House.**
- HB 2224 (introduced by Petersen) which would establish a legislative regulatory scheme for the recycling of used automotive oil. **Bill accompanied by HB 1253 and reported out favorably (as changed) on August 20, 2001. Sent to House Ways and Means on that same date. This bill was never brought up for a vote.**
- HB 2808 (introduced by Hynes) which would allow a tax credit of up to 40 percent for “the design and cost of construction of a subsurface septic system to meet the requirements of Title 5.... (Such costs not to exceed \$6,000 in credit.) **Bill reported out unfavorably on July 9, 2001. This bill was never brought up for a vote in the House.**
- HB 3627 (introduced by Harkins) and SB 1573 (introduced by Moore, Hodgkins, Parente, and Marcia Benes and Emile Gougen) which would exempt boards of health from the requirements of the Uniform Procurement Act. **SB 1573 reported out favorably by Committee on State Administration and referred to Senate Steering and Policy on 7/02/01. Bill ordered to third reading on 9/13/01. This bill was never brought up for a vote.**

#### MAHB Conditionally Supports

- HB 2943 (introduced by Parente, Lewis, and Linsky) and SB 945 (introduced by Moore, Tarr, and Bunker) which may give boards of health a mechanism to obtain use of the non-criminal disposition process on their own and which provide detailed requirements for the giving of non-crim tickets (pending clarification of the language in the bills). **HB 2943 referred to the Committee on Local Affairs on 1/03/01. Read and referred to House Steering on 3/29/01. Discharged to Judiciary Committee on 4/26/01. SB 945 sent to study on 7/11/01.**
- HB 3290 (introduced by Cahill, Canavan, Story, Cleven, and Kahn) which would establish a commission to “study the need for minimum requirements for health agents employed by and members of Local Boards of Health in the Commonwealth” (pending the insuring of adequate representation of MAHB on said commission). **Bill reported out favorably on August 16, 2001. Referred to the Committee of the Two Branches on 8/16/01. Discharged to House Rules on 8/27/01. No further action was taken on this bill.**
- SB 521 (introduced by Moore, Tarr, Pope, and Hodgkins) which would require DPH to establish standards and regulations regarding the practice of body art (pending the addition of anti-preemption language). **Accompanied by a new draft, SB 1965, on July 9, 2001. The new draft is not available on the web. No further action appears to have been taken on this bill.**

#### MAHB Opposes

- HB 963 (introduced by Simmons, Verga, and O'Brien) which would allow counties, councils of government, and, where there is no county government or councils of government, two or more cities or towns to “negotiate and contract with cities and towns to provide the same services their boards of health are required to provide....” This could be used by municipal governments to circumvent board of health authority. **Bill reported out favorably by committee on April 12, 2001. Sent to Committee on House Rules on 5/14/01. No further action appears to have been taken on this bill.**

## SPRAWL Continued from page 1

muter trains and streetcars, the innovations of early real estate developers, and the urge to live in pastoral tranquility rather than in urban squalor. With the advent of the automobile, suburban growth accelerated greatly during the second half of the 20th century, and one in two Americans now lives in the suburbs.

In recent years, the rapid expansion of metropolitan areas has been termed “urban sprawl”—a complex pattern of land use, transportation, and social and economic development. As cities extend into rural areas, large tracts of land are developed in a “leapfrog,” low-density pattern. Different land uses—housing, retail stores, offices, industries, recreational facilities, and public spaces such as parks—are kept separate from each other, enforced by both custom and zoning laws. Extensive roads need to be constructed, and most trips, even to buy a newspaper or a quart of milk, require driving a car. Newly built suburbs are relatively homogeneous in both human and architectural terms, compared with the diversity found in traditional urban or small town settings. There is a shift of capital investment and economic opportunity from the center to the periphery. Regional planning and coordination are relatively weak.

Clearly, the move to the suburbs reflects a lifestyle preference shared by many Americans. Such a major shift in the nation’s demographics and in the form of our environment might also be expected to have health implications, both positive and negative. Some of these impacts relate directly to heavy reliance on automobiles: air pollution, automobile crashes, and pedestrian injuries and fatalities. Other impacts relate to land use patterns that typify sprawl: decreased physical activity, threats to water quantity and quality, and an expansion of the urban heat island effect. Finally, some health effects—mental health and social capital—are mediated by the social dimensions of sprawl. Many of these health effects are well recognized as individual environmental health issues, and certain aspects of sprawl, such as automobile reliance, have been analyzed as public

health issues. Yet the broad phenomenon of sprawl—including land use, transportation, urban and regional design, and planning—has been the intellectual “property” of engineers and planners. Public health has provided neither an intellectual framework nor policy guidance. This is a striking

**“... the broad phenomenon of sprawl—including land use, transportation, urban and regional design, and planning—has been the intellectual “property” of engineers and planners. Public health has provided neither an intellectual framework nor policy guidance. This is a striking departure from the legacy of the 19th and early 20th centuries, when public health and urban design were overlapping and largely indistinguishable concerns.”**

departure from the legacy of the 19th and early 20th centuries, when public health and urban design were overlapping and largely indistinguishable concerns.

Sprawl occurs in the context of two closely related phenomena: urbanization (more generally) and population growth. In considering the health effects of sprawl—one particular form of urban growth—it is important to distinguish sprawl from these related phenomena.

### **The direct effects of automobile reliance**

One of the cardinal features of sprawl is driving, reflecting a well-established close relationship between lower density development and more automobile travel. For example, in the Atlanta metropolitan area, one of the nation’s leading examples of sprawl, the average person drives 35.1 miles each day—an average that includes the entire population, with both drivers and nondrivers. Denser cities have far lower per capita daily driving figures: 16.7 for Philadelphia, 19.7 for Chicago, and 21.1 for San Francisco. Within metro areas, the same pattern is observed.

Automobile use offers extraordinary personal mobility and independence. It is also associated with health hazards, including air pollution, motor vehicle crashes, and pedestrian injuries and fatalities.

### **Air pollution**

Motor vehicles are a leading source of air pollution. Even with automobile and truck engines that have become far cleaner in recent decades, the sheer quantity of vehicle miles driven results in large releases of carbon monoxide, carbon dioxide,

particulate matter, oxides of nitrogen (NOx's), and hydrocarbons into the air. NOx and hydrocarbons, in the presence of sunlight, form ozone.

Nationwide, "mobile sources" (mostly cars and trucks), account for approximately 30% of NOx and 30% of hydrocarbon emissions. However, in automobile-dependent metropolitan areas, this proportion may increase substantially. In the 10-county metropolitan Atlanta area, for example, on-road cars and trucks account for 58% of NOx emissions and 47% of hydrocarbon emissions—figures that underestimate the full impact of vehicle traffic because they exclude emissions from related sources, such as fuel storage facilities and filling stations.

In various combinations, these pollutants—especially NOx, hydrocarbons, ozone, and particulate matter—account for a substantial part of the air pollution burden of American cities. Of note, the highest air pollution levels in a metropolitan area may occur not at the point of formation, but downwind, due to regional transport. Thus, air pollution is a problem not only alongside roadways (or other sources), but also on the scale of entire regions.

The health hazards of air pollution are well known. Ozone is an airways irritant. Higher ozone levels are associated with more respiratory symptoms, worse lung function, more emergency room visits and hospitalizations, more medication use, and more absenteeism from school and work. Although healthy people may demonstrate these effects, people with asthma and other respiratory diseases are especially susceptible. Particulate matter is associated with many of the same respiratory effects and, in addition, with increased mortality. People who are especially susceptible include the elderly, the very young, and those with underlying cardiopulmonary disease.

An additional driving-related emission is carbon dioxide, the endproduct of burning fossil fuels such as gasoline. Carbon dioxide is the major greenhouse gas, accounting for approximately 80% of emissions with global warming potential. Motor vehicles are also an important source of other greenhouse gases, including methane, NOx, and volatile organic compounds. As a result, automobile traffic is a major contributor to global climate change, accounting for approximately 26% of US greenhouse gas emissions. During the decade of the 1990s, greenhouse gases from mobile sources increased 18%, primarily a reflection of more vehicle miles traveled. In turn,

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global climate change is expected to threaten human health in a number of ways, including the direct effects of heat, aggravation of some air pollutants, and increased prevalence of some infectious diseases.

Thus, the link between sprawl and respiratory health is as follows: Sprawl is associated with high levels of driving, driving contributes to air pollution, and air pollution causes morbidity and mortality. In heavily automobile-dependent cities, air pollution can rise to hazardous levels, and driving can account for a majority of the emissions. Although ongoing research is exploring the pathophysiology of air pollution exposure and related issues, there are also important research questions that revolve around prevention. Technical issues include such challenges as the development of low-emission vehicles and other clean technologies. Policy research needs to identify the best approaches to land use and transportation; this would minimize the need for motor vehicle travel. Behavioral research needs to identify factors that motivate people to choose less polluting travel behaviors, such as walking, carpooling, or purchasing more efficient vehicles.

### ***Motor vehicle crashes***

Automobiles now claim more than 40,000 lives each year in the United States, a number that has slowly declined from about 50,000 per year over the last four decades.<sup>2</sup> Automobile crashes are the leading cause of death among persons 1–24 years old, account for 3.4 million nonfatal injuries, and cost an estimated \$200 billion annually. Rates of automobile fatalities and injuries per driver and per mile driven have decreased substantially, thanks to safer cars and roads, laws that discourage drunk driving, and other measures, but the absolute toll of automobile crashes remains high.

The relationship between sprawl and motor vehicle crashes is complex. At the simplest level, more driving means greater exposure to the dangers of the road, thus translating to a higher probability of a motor vehicle crash. Suburban roads may be a special hazard, especially major commercial thoroughfares and “feeder” roads that combine high speed, high traffic volume, and frequent “curb cuts,” used to enter and exit stores and other destinations. Available data from the National Highway Traffic Safety Administration (NHTSA) do not provide results for suburban roads; they allocate fatal crashes into only two categories of roads: urban (accounting for approximately 60% of fatalities) and rural (approximately 40%).

NHTSA data do permit comparison of automobile fatality rates by city. In general, denser cities with more extensive public transportation systems have lower automobile fatality rates (including drivers and passengers, but excluding pedestrians): 2.65 per 100,000 population in New York, 6.98 in Philadelphia, 5.57 in Chicago, 2.54 in San Francisco, and 4.17 in Portland, compared with 9.97 in Houston, 12.55 in Phoenix, 11.53 in Dallas, 10.65 in Tampa, and 11.21 in Atlanta. (There are notable exceptions to this pattern, such as 4.85 in Los Angeles and 10.88 in Detroit.)

According to the American College of Emergency Physicians, “Traffic crashes are predictable and preventable, and therefore are not ‘accidents.’” In fact, the determinants of motor vehicle injuries and fatalities are well recognized. For some of these, public health interventions, from seat belts to traffic signals, have achieved dramatic reductions in injury and fatality rates in the three quarters of a century since automobile use became widespread. A relatively overlooked risk factor, however, is the simple fact of driving and the number of miles driven. Primary prevention would consist of decreasing the “exposure”; but, in many metropolitan areas, this approach is limited by the necessity of driving.

### ***Pedestrian injuries and fatalities***

On December 14, 1995, 17-year-old Cynthia Wiggins rode the public bus to her job in the Walden Galleria in suburban Cheektowaga, New York, outside Buffalo. The bus did not stop at the mall itself, so Cynthia had to cross a seven-lane highway on foot to complete her trip to work. On that day, she had made it across six lanes when a dump truck crushed her. Her death received national media attention; it was seen as exemplifying inadequate mass transporta-

tion links, pedestrian-hostile roadways, and the disproportionate impact of these factors on members of minority groups.

Each year, automobiles cause about 6,000 fatalities and 110,000 injuries among pedestrians nationwide. Pedestrians account for about one in eight automobile-related fatalities. Data from Atlanta show that, as that city sprawled in recent years, pedestrian fatalities steadily increased, even as the national rate declined slightly. The most dangerous stretches of road were those built in the style that typifies sprawl: multiple lanes, high speeds, no sidewalks, long distances between intersections or crosswalks, and lined with commercial establishments and apartments. Across the country, the pattern seen for driver and passenger fatalities is repeated for pedestrian fatalities, with lower annual rates in denser cities: 2.21 per 100,000 population in New York, 2.40 in Philadelphia, 2.25 in Chicago, 3.49 in San Francisco, and 2.98 in Portland, compared with 4.21 in Phoenix, 3.99 in Dallas, 5.72 in Tampa, and 5.72 in Atlanta. (Again, there are exceptions to the pattern, such as 2.54 in Houston, 2.64 in Los Angeles, and 5.18 in Detroit.)

Whereas many factors contribute to the high toll of pedestrian fatalities, including alcohol abuse, inadequate lighting, and pedestrian behavior, the proliferation of high-speed, pedestrian-hostile roads in expanding metropolitan areas plays an important part. Although walking offers important public health benefits, safe and attractive sidewalks and footpaths are needed to attract walkers and assure their safety. Much of the knowledge needed to make progress is available, but further research might help clarify the best and most cost-efficient ways to build walkways, and the most successful approaches to zoning, financing, and other incentives.

### ***The effects of land use decisions***

Land use and travel patterns are closely linked. If distinct land uses are separated, if the distances among them are great, and if roads are more available than sidewalks and paths, then people shift from walking and bicycling to driving. Accordingly, the United States is a nation of drivers. For example, in the Netherlands 30% of all trips are on bicycles and 18% are on foot, whereas in England these figures are 8% and 12%. In the United States, 1% of trips are on bicycles and 9% are on foot. Approximately 25% of all trips in the United States are less than 1 mile; of these, 75% are by car.

### ***Physical activity***

A considerable body of research establishes that sprawl—as measured by low residential density, low

## **"Evidence suggests that sprawl is associated with decreased physical activity, as driving replaces walking and bicycling."**

employment density, low "connectivity," and other indicators—is associated with less walking and bicycling, and with more automobile travel.

Low physical activity threatens health both directly and indirectly. A sedentary lifestyle is a well-established risk factor for cardiovascular disease, stroke, and all-cause mortality, whereas physical activity prolongs life. Men in the lowest quintile of physical fitness have a two- to threefold increased risk of dying overall, and a three- to fivefold increased risk of dying of cardiovascular disease, compared with men who are more fit. Among women, walking 10 blocks per day or more is associated with a 33% decrease in the risk of cardiovascular disease.<sup>3</sup> The risk of low physical fitness is comparable to, and in some studies greater than, the risk of hypertension, high cholesterol, diabetes, and even smoking. Among diabetic patients, the higher the blood sugar, the more protective is physical fitness. Physical activity also appears to be protective against cancer.

In addition to its direct effects on health, lack of physical activity is also a risk factor for being overweight. This may help explain the rapid increase in the prevalence of overweight in recent years. In 1960, 24% of Americans were overweight (defined as a body mass index  $25 \text{ kg/m}^2$ ), and by 1990 that proportion had increased to 33%. During the same interval, the prevalence of obesity (defined as a body mass index  $30 \text{ kg/m}^2$ ) nearly doubled. According to data from the Behavioral Risk Factor Surveillance System, this trend continued during the 1990s, with the prevalence of obesity rising from 12.0% in 1991 to 17.9% in 1998.

Being overweight is itself a well-established risk factor for a number of diseases: ischemic heart disease (overweight increases the risk up to fourfold in the 30–44 age group, less at older ages), hypertension, stroke, dyslipidemia, osteoarthritis, gallbladder disease, and some cancers. Overweight people die at as much as 2.5 times the rate of nonobese people. Being overweight increases the risk of Type 2 diabetes up to fivefold, and the current epidemic of Type 2 diabetes tracks closely with the increase in being overweight.

Sprawl does not fully account for Americans' increasingly sedentary lives, and physical inactivity does not tell the entire story of the national epidemic of being overweight. Evidence suggests that sprawl is associated with decreased physical activity, as driving replaces walking and bicycling. Decreased physical activity leads to being overweight. Both decreased physical activity and being overweight are risk factors for a wide range of health problems, including cardiovascular disease and cancer.

Further research will help provide a more complete understanding of the association between sprawl and diminished physical activity. In theory, a randomized trial might assign some people to live in walkable neighborhoods and others to live in subdivisions without sidewalks or nearby schools, stores, and workplaces. Then, the two groups might be followed for physical activity patterns and related health outcomes. Such residential randomization is impossible. Observational studies are underway to characterize the relationships among land use, travel patterns, and physical activity. However, such research is challenging. People living in walkable neighborhoods may have chosen to live there because of better health and a greater inclination to walk. Because children do not choose their neighborhoods, an alternative might include studies of adult physical activity and travel patterns according to the type of neighborhood of origin to test the hypothesis that childhood access to walkable neighborhoods predicts lifelong travel preferences and activity patterns. Research is also needed on design issues (how to build more walkable communities), policy (how to put incentives in place to encourage needed environmental and behavioral changes), and behavior (how to motivate more physical activity, including walking).

### ***Water quantity and quality***

Americans take for granted the availability of clean, plentiful, and cheap water. Indeed, the development of an excellent water supply—the result of social policy, civil engineering, and health advocacy over more than a century—is credited with a central role in improving public health during the first half of the 20th century.

Sprawl may threaten both the quantity and quality of the water supply. As forest cover is cleared and impervious surfaces built over large areas, rainfall is less effectively absorbed and returned to groundwater aquifers. Instead, relatively more stormwater flows to streams and rivers, and is carried

**"With better control of "point sources" of water pollution—factories, sewage treatment plants, and similar facilities—"nonpoint source" water pollution has emerged as the major threat to water supplies."**

downstream. In one study, about 4% of rainfall on undeveloped grassland, compared with 15% of rainfall on suburban land, was lost as runoff. The same is true for snowmelt, especially early in the melting process. Modeling shows that higher density development patterns can reduce peak flows and total runoff volumes. With less groundwater recharge, communities that depend on groundwater for their drinking water—about half of U.S. communities—may face shortages.

Water quality may be affected in several ways. With better control of "point sources" of water pollution—factories, sewage treatment plants, and similar facilities—"nonpoint source" water pollution has emerged as the major threat to water supplies. Nonpoint source water pollution occurs when rainfall or snowmelt moves over and through the ground, picking up contaminants and depositing them into surface water (lakes, rivers, wetlands, and coastal waters) and groundwater. Much of this problem relates to agricultural land, the primary source of contamination by fertilizers, herbicides, and insecticides. However, a growing form of nonpoint source pollution is oil, grease, and toxic chemicals from roadways, parking lots, and other surfaces, and sediment from improperly managed construction sites, other areas from which foliage has been cleared, and eroding stream banks. Studies of the movement of polycyclic aromatic hydrocarbons, zinc, and organic waste suggest that suburban development is associated with high loading of these contaminants in nearby surface water. Both water quantity and water quality are directly affected by land use and development patterns, and evidence suggests that sprawl contributes to these problems in specific ways. Further evidence is needed to identify the precise features of land use that best predict nonpoint source pollution, the impact of this pollution on drinking water quality, and the optimal control methods.

### ***The heat island effect***

On warm days, urban areas can be 6°–8°F warmer than surrounding areas, an effect known as the urban heat island. The heat island effect is caused by two factors. First, dark surfaces such as roadways and rooftops efficiently absorb heat from sunlight and reradiate it as thermal infrared radiation; these surfaces can reach temperatures of 50°–70°F higher than surrounding air. Second, urban areas are relatively devoid of vegetation, especially trees, that would provide shade and cool the air through "evapotranspiration." As cities sprawl outward, the heat island effect expands, both in geographic extent and in intensity. This is especially true if the pattern of development features extensive tree cutting and road construction. NASA satellite imagery, available for public viewing on the Web, documents this pattern for several cities.

The growth of sprawling cities includes a positive feedback loop that may aggravate the heat island effect. Sprawling metropolitan areas, with greater travel distances, generate more automobile travel. This, in turn, results in more fuel combustion, with more production of carbon dioxide, and consequent contributions to global climate change. At the scale of a city, this phenomenon may intensify the heat island effect. Thus, not only does the morphology of metropolitan areas contribute to warming, but also so may the greenhouse gas production that results from increased driving.

The magnitude of the contribution of sprawl to urban heat episodes is unclear. Data from the last half century show a clear increasing trend in extreme heat events in US cities. While global warming may contribute to this trend, the rate of the increase far exceeds the rate of global warming, suggesting that urban growth patterns may be a primary determinant. Further research on this phenomenon is required.

The direct health effects of heat have been well described. Relatively benign disorders include heat syncope, or fainting; heat edema, or swelling, usually of dependent parts such as the legs; and heat tetany, a result of heat-induced hyperventilation. Heat cramps are painful muscle spasms that occur after strenuous exertion in a hot environment. Heat exhaustion is a more severe acute illness that may feature nausea, vomiting, weakness, and mental status changes. The most serious of the acute heat-related conditions is heat stroke, which represents the body's failure to dissipate heat. The core body temperature may exceed 104°F, muscle breakdown

occurs, and renal failure and other profound physiologic derangements may follow. The fatality rate is high.

There are several well-known risk factors for developing heat stroke or dying during a heat wave, including being elderly, bedridden, homebound, or socially isolated, having certain diseases or using certain medications, and living on an upper floor. Poor people and members of minority groups are also at increased risk.

Heat also has indirect effects on health, mediated through air pollution. As the temperature rises, so does the demand for energy to power air conditioners, requiring power plants to increase their output. The majority of US power plants burn fossil fuels, such as coal and oil, so increased summer demand results in higher emissions of the pollutants they generate, including carbon dioxide, particulate matter, oxides of sulfur, NOx's, and air toxics. Ozone formation from its precursors, NOx and hydrocarbons, is enhanced by heat. Therefore, through both the direct and indirect effects of heat, sprawl has potential adverse health consequences.

## **SOCIAL ASPECTS OF SPRAWL**

### ***Mental health***

One of the original motivations for migration to the suburbs was access to nature. People like trees, birds, and flowers, and these are more accessible in the suburbs than in denser urban areas. Moreover, contact with nature may offer benefits beyond the purely aesthetic; it may benefit both mental health and physical health. In addition, the sense of escaping from the turmoil of urban life to the suburbs, the feeling of peaceful refuge, may also be soothing and restorative to some people. In these respects, there may be health benefits to suburban lifestyles.

On the other hand, certain aspects of sprawl, such as commuting, may exact a mental health toll. For some time, automobile commuting has been of interest to psychologists as a source of stress, stress-related health problems, and even physical ailments. Evidence links commuting to back pain, cardiovascular disease, and self-reported stress. As people spend more time on more crowded roads, an increase in these health outcomes might be expected.

One possible indicator of such problems is road rage, defined as "events in which an angry or impatient driver tries to kill or injure another driver after a

traffic dispute." Even lawmakers may be involved; one press account described a prominent attorney and former Maryland state legislator who knocked the glasses off a pregnant woman after she had the temerity to ask him why he had bumped her Jeep with his.

Road rage appears to be on the rise. According to the AAA Foundation for Traffic Safety, the interval from 1990 to 1996 saw a 51% increase in reported incidents of road rage. The Foundation documented 10,000 reports of such incidents, resulting in 12,610 injuries and 218 deaths. A variety of weapons was used, including guns, knives, clubs, fists, or feet, and in many cases the vehicle itself.

Road rage is not well understood, and there is a multiplicity of reasons for it. Stress at home or work may combine with stress while driving to elicit anger. Data from Australia and Europe suggest that both traffic volume and travel distance are risk factors. Long delays on crowded roads are likely to be a contributing factor.

Episodes of road rage may reflect a larger reservoir of frustration and anger on the roads. In a national telephone survey in 1999 and 2001, large numbers of respondents reported both engaging in aggressive behaviors while driving and being the objects of such behavior. A similar survey, conducted for the NHTSA in 1998, found somewhat lower but comparable numbers. In the NHTSA survey, the two leading reasons cited for aggressive driving were (1) being rushed or being behind schedule (23%), and (2) increased traffic or congestion (22%)—common experiences on the crowded roadways of sprawling cities. Moreover, 30% of the NHTSA respondents perceived that aggressive driving—their own and others'—was increasing over time (and only 4% thought it was decreasing). More recently, Curbow and Griffin surveyed 218 women employed by a telecommunications company. This was a stable, professional population; 67% of the respondents had more than a high school education, 76% were parents, and the average job seniority was 18 years. Among these women, 56% reported driving aggressively, 41% reported yelling or gesturing at other drivers while commuting, and 25% reported taking out their frustrations from behind the wheel of their cars. This appears to be a widespread problem.

It seems reasonable to hypothesize that anger and frustration among drivers are not restricted to their cars. When angry people arrive at work or at home, what are the implications for work and family

# MITCP

## MASSACHUSETTS TOBACCO CONTROL PROGRAM

### **Criminal Complaints**

*by Cheryl Sbarra J.D. MAHB Tobacco Control Program Director*

A Board of Health which has enacted tobacco control regulations may find itself in the position of seeking a criminal complaint in court to enforce its regulations. The district court and the municipal court of Boston have jurisdiction over these matters under Massachusetts General Laws Chapter 218 Section 26.

A criminal complaint is initiated in a district court by a Board of Health by filing an application for a complaint. The Health Agent, Tobacco Control Agent or a Board member may fill out the form on behalf of the Board. A form is available at the clerk magistrate's office of the district court. This form will begin the criminal complaint process. The clerk magistrate's office will schedule a hearing to determine whether probable cause exists to issue a criminal complaint. The clerk's office will notify the Board of Health of the hearing date by mail. This hearing is called a showcause hearing. The clerk magistrate of the court or an assistant clerk magistrate will conduct the hearing. It is important for the clerk magistrate to have a copy of the regulation you are seeking to enforce prior to the hearing, since showcause hearings are usually conducted quickly and a number are scheduled on the same day.

These are generally informal hearings. At the hearing the Board of Health will have the burden of showing that there is good reason or probable cause to believe a violation of the regulation occurred. For example, if a store sells tobacco products to a minor, the Board of Health will have to describe facts involved. Generally, witnesses are not required, however you should check with your clerk magistrate to determine the protocol preferred by the court. The violator (usually referred to as the defendant) will have an opportunity to respond. If the clerk magistrate finds probable cause to believe a violation occurred, a criminal complaint will issue.

After the criminal complaint issues, the defendant will

be arraigned on the charges on a different day before a judge in a court room. At arraignment, the charges are read to the defendant and generally, a "not guilty" plea is entered. The case is usually continued for a pre-trial conference in several weeks. The district attorney's office is responsible for prosecuting criminal complaints. It is important for the Board of Health to be sure the district attorney's office has a copy of the town's regulations which have been violated, since the prosecutor handling the case may not be familiar with them. It is usually a good idea to contact the district attorney's office after the complaint issues and before the defendant's arraignment, to be sure they receive all the information they need to handle the case.

The prosecutor will require the Board of Health to turn over all documents related to the offense, including any reports, photographs or notes describing the incident. The prosecutor must give these to the defendant. This is called the "discovery process." These documents are generally provided to the defendant at the arraignment, but you should check with the prosecutor to determine when the prosecutor needs them. Keep in mind that you will need to provide the prosecutor with names of all witnesses and that these names will be given to the defendant as part of the discovery process.

At the pre-trial conference, the prosecutor and the defendant or the defendant's attorney, will have an opportunity to discuss the case to determine if a plea agreement can be reached or whether the case will go to trial. Generally, a representative of the Board of Health is not needed at this hearing, but you may wish to contact the prosecutor to find out if it will be helpful for him or her to have you present. If a plea is reached, the case is resolved. Keep in mind that the prosecutor has the final say in the plea which is offered to the defendant and the judge hearing the case has the final say in whether the terms of the plea agreement are accepted.

If the case is not resolved by a plea agreement, the case will be schedule for trial at some time in the future. There are often long waits for trials. There may also be other hearing dates scheduled, such as hearings

for motions to dismiss. A motion to dismiss is a hearing in which the defendant asks the court to accept his or her arguments in favor of dismissing the case for a reason relating to laws not to facts. A judge may hear testimony from witnesses at this hearing or may only hear the arguments of the prosecutor and the defendant.

At a trial, the court will hear evidence in the form of testimony from witnesses. The person who witnessed the violation will be required to testify under oath. The prosecutor will usually meet with the witnesses prior to the hearing to discuss their testimony, although in a busy court, this meeting may occur the day of the trial.

Enforcing regulations is easier for a Board of Health in a town which has adopted "noncriminal disposition" under Massachusetts General Laws Chapter 40 Section 21, since it gives the Board an alternative to seeking a criminal complaint. The town adopts "noncriminal disposition" by means of a by-law. "Noncriminal disposition" allows the Board of Health to ticket someone who violates its regulations. The Board issues a ticket to the violator in hand or by mail within 15 days of the violation. A copy of the ticket is delivered to the clerk magistrate of the district court. A violator may pay the ticket to the town or may appeal the violation to the district court within 21 days of the date of notice. If the violator elects to have a hearing, the clerk magistrate will conduct a hearing similar to the showcause hearing.

If the violator fails to pay the ticket and does not file a timely appeal, the Board of Health may seek a criminal complaint.

## **TOBACCO SALES PERMITS**

*By Cheryl Sbarra JD*

The following is provided for educational purposes only and is not to be construed as legal advice. This information was provided to the New Bedford Health Department, on request of the Director.

I. The City of New Bedford has the authority to suspend a tobacco sales permit and is not limited to the imposition of monetary fines alone.

Counsel for the defendant claims that Mass. Gen. Laws ch. 270, § 6, the state law that prohibits tobacco sales to minors, limits the penalty for selling to minors to

monetary fines only, and therefore the City of New Bedford cannot suspend a tobacco sales permit. This is not the case.

New Bedford is not claiming that the defendant violated Mass. Gen. L. ch. 270, § 6, but rather that the defendant violated its youth access regulation. The state law that prohibits sales to minors is not preemptive. Therefore a local municipality can enact its own youth access regulation, as long as it is "not inconsistent" with state law. Connors v. City of Boston, 430 Mass. 31, 35-36 (1999).

In determining whether a local regulation is inconsistent with state law, municipalities are given ". . . considerable latitude, requiring a 'sharp conflict' . . . before invalidating the local law." Take Five Vending, Ltd. v. Provincetown, 415 Mass. 741744 (1993) (upholding a local law prohibiting the sale of cigarettes from vending machines). The Court held that the local law did not detract from, but rather augmented the state law. Id. at 745.

The City of New Bedford enacted a youth access regulation that includes the requirement of a tobacco sales permit pursuant to Mass. Gen. Laws ch. 111, § 31 which enables local health boards to "make reasonable health regulations." As of July 2001, 248 of the 351 municipalities, accounting for more than 80% of the population in Massachusetts require tobacco sales permits. A local law that requires a tobacco sales permit clearly augments the state law's purpose, which is to limit youth access to tobacco.

§ 31 "was passed as legislation of broad and general scope . . . establishing a 'broad power' which is not subject to the limitations of earlier rule making powers of boards of health." Board of Health v. Sousa, 338 Mass. 547, 551-552 (1959).

In Board of Health of Woburn v. Sousa, 338 Mass. 547 (1959), the Supreme Judicial Court held that the board was authorized to require a local permit for keeping swine. In so holding, the court found that the regulations that required permits could properly have been adopted under the board's general regulatory power provided in § 31, id. at 552.

In addition, municipalities have the authority pursuant to the Home Rule Amendment to enact a regulation or ordinance requiring a permit for the sale of tobacco products. Mass. Gen. L. ch. 140, sec. 1 et seq. While

## TOBACCO USE IN SCHOOLS AND BOARDS OF HEALTH

tobacco sales permits are not specifically mentioned in this statute, they would certainly fall within a municipality's broad powers to protect the public health. The Supreme Judicial Court has explicitly recognized that "[k]eeping young people from smoking" is a legitimate municipal health goal, and thus subject to regulation by municipal ordinance or by-law. Take Five Vending, Ltd. v. Provincetown, *supra* note 40.

II. The City of New Bedford Has the Authority to Suspend a Tobacco Sales Permit.

The Supreme Judicial Court has stated that "[o]nce licenses [or permits] are issued, their continued possession may become essential in the pursuit of a livelihood . . . [and] are not to be taken away without that procedural due process required by the Fourteenth Amendment . . ." Konstantopoulos v. Town of Whately, 384 Mass. 123, 133 (1981).

The defendant's reliance on Cochis v. Board of Health of Canton, 332 Mass. 721(1955) is misplaced. In the Cochis case, the relevant issue was whether the board could impose a fine that was above the fines allowed pursuant to § 31. The court held that the board could not impose a higher fine than those enumerated in Mass. Gen. L. ch. 111, § 31. *Id.* at 722.

The courts in the Commonwealth have recognized license (or permit) revocation as a "public safety measure." Luk v. Commonwealth, 421 Mass. 415, 425 (1995). "[A] [n]ecessary and lawful business of a nature liable, in the absence of regulation and supervision, to harm the public health . . . may be required to be licensed." Opinion of the Justices, 282 Mass. 619, 626 (1933).

A retail store that repeatedly sells tobacco to minors is harming the public health.

### Conclusion

The City of New Bedford is acting well within the scope of its legal authority when it fines a retailer for selling tobacco to minors pursuant to its youth access regulations. The City of New Bedford is also acting well within the scope of its legal authority when it suspends a tobacco sales permit for multiple sales to minors, as long as it affords the alleged violator an opportunity to be heard.

The National Education Reform Act of 1994<sup>1</sup> prohibits smoking in school buildings. The Secretary of Health and Human Services is charged with enforcing this federal law.<sup>2</sup> Massachusetts state law prohibits smoking in school buildings and on school property as well.<sup>3</sup> Pursuant to the Massachusetts Education Reform Act<sup>4</sup> (*hereinafter referred to as the Education Reform Act*), the superintendent of every school district must publish policies relative to the conduct of teachers and students. These policies " . . . shall prohibit the use of any tobacco products within the school buildings, the school facilities or on the school grounds or on school buses by any individual, including school personnel."<sup>5</sup>

In spite of these laws, school districts throughout Massachusetts report difficulty in curtailing smoking. Students often complain about smoking in bathrooms. Complaints have also been made about smoking by staff.<sup>6</sup>

School-based strategies to address student smoking vary widely among districts. Some schools utilize tobacco education and cessation programs if a student is caught smoking. Others restrict school privileges.<sup>7</sup> Some districts provide for in-school suspension or detention. At least one district required students caught smoking to visit cancer patients at a local hospital.<sup>8</sup> Still others combine several of these options.

It is not clear what school-based strategies are utilized in dealing with staff smoking. Union and other contractual issues can arise in addressing the issue of enforcing a no-smoking policy.

The Massachusetts Department of Education now requires a copy of each school district's written policy regarding tobacco use, "including . . . consequences and enforcement procedures for students, staff, and all visitors when violations occur."<sup>9</sup>

In recent years, some school administrators have requested assistance from boards of health in implementing tobacco policies that authorize the use of fines against student and adult violators and allow

for collecting the money through a process known as the non-criminal method of disposition, or the “civil ticketing process.”<sup>10</sup> School districts should be aware of the potential criminal consequences of a civil ticket, as well as the legal steps necessary to implement this enforcement strategy before pursuing it.

### **Potential Criminal Consequences**

Non-criminal disposition allows a local enforcement person (in this case, an agent of the board of health) to write a “ticket” which sets a fine to be paid as a penalty for a violation of a regulation, ordinance or by-law. The penalty is paid to the city or town clerk’s office within twenty-one days of issuance of the ticket. Alternatively, the alleged violator may request a district court hearing on the matter.<sup>11</sup>

Non-criminal disposition is an efficient and effective means of enforcing many local laws, including board of health regulations.<sup>12</sup> However, a civil ticket can have criminal consequences. If the ticket is not paid within twenty-one days, or if the violator does not pay after a district court hearing upholding the issuance of the ticket, the matter must be pursued as a criminal matter.<sup>13</sup>

As a first step, an application for a criminal complaint is filed against the alleged violator.<sup>14</sup> A district court hearing on the application for a criminal complaint is then held. If the complaint is issued, the violator would be arraigned and criminal trial process begins. If the violator is a minor student, a prosecutor within the juvenile court system handles the criminal case.<sup>15</sup> If the violator is an adult, a prosecutor in the district court handles the case.

A conviction in the juvenile court could possibly result in an adjudication of delinquency. An adjudication of delinquency can impact immigration status, financial aid and employment.<sup>16</sup> A conviction in the district court could result in a criminal record for an adult violator.

### **Necessary Legal Steps**

If a school district is resolute in its desire to fine through the civil ticket process in spite of the potential criminal consequences, certain legal steps are necessary.

Boards of health have the authority to issue fines against violators of its regulations, however, in order to collect the money through the civil ticketing process, a city or town must first adopt an enabling ordinance or by-law authorizing the board of health to use the non-criminal method of disposition. The enabling ordinance or by-law must specify:

1. whether the board of health’s use of the non-criminal method of disposition is mandatory or optional;
2. who the enforcing person(s) are; and
3. the specific penalty applicable for each violation.

The next step in promulgating a board of health regulation that enables schools to use the civil ticketing process is to draft a regulation that contains the following sections:

1. Statement of purpose;
2. Authority;
3. Definitions;
4. Tobacco use prohibited;
5. Penalties;
6. Enforcement;
7. Severability;
8. Conflict with other laws or regulations;
9. Effective date.

The regulation should be consistent with the Education Reform Act and make it clear that tobacco use by students and adults is prohibited.

While the Education Reform Act prohibits tobacco use, some cities and towns have gone further and prohibited possession of tobacco by students on school grounds. Because the Education Reform Act is a state law enforceable by the superintendent of schools, some town attorneys have cautioned boards of health against going further and prohibiting possession by students.<sup>17</sup> Some municipal attorneys have voiced concerns about involving boards of health in enforcement of school

policies.<sup>18</sup> Before a Board of Health enacts such a regulation, it is advisable that city or town counsel be consulted.

Any regulation concerning smoking in school buildings and on school grounds should make it clear that the board of health is deputizing certain specific school administrators as agents of the board of health for the purpose of enforcement. These school administrators know the students and are experienced in enforcing other school policies.

These deputized school administrators should be responsible for maintaining proper records and otherwise administering the civil ticketing process, including developing a system whereby the board of health is notified if a ticket is not paid and an application for a criminal complaint is necessary.

The regulation can be incorporated into a school policy; however the school policy may be more extensive than the regulation. The regulation should only address those issues that boards of health are able to enforce.

For instance, a school may want to include confiscation of tobacco products in its policy. The board of health regulation would probably not include confiscation because confiscation is not a specific penalty enforceable through the civil ticketing process. Also, as a practical matter, unlike school administrators, boards of health are not normally trained in confiscation procedures.

Deputizing school administrators does not absolve the board of responsibility to enforce its regulations. Therefore a board of health regulation should only include those penalties that the board has the authority and the ability to enforce.

Also, requiring supervised community service is not a specific penalty enforceable through the civil ticketing process. It can certainly be part of a school policy; but it is not something the board of health would be able to easily administer, supervise or enforce.

Finally, the fining structure in the regulation must be consistent with the fining structure in the enabling ordinance or by-law. The school policy should reflect that consistency also.

## Conclusion

A board of health regulation prohibiting tobacco use in school buildings and on school grounds and providing for a civil ticket as a penalty can have unintended but far-reaching implications. If a district wants to fine violators, a better approach might be to do so internally, as part of the school's policy, without board of health involvement and without unintended criminal consequences.

If a school district does pursue non-criminal disposition by means of a board of health regulation, city or town counsel should be consulted; and the above-described legal steps should be considered.

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Prepared by Cheryl Sbarra, JD, Senior Staff Attorney and Director of the Tobacco Control Program of the Massachusetts Association of Health Boards (MAHB), (781) 721-0183, sbarra@mahb.org, based in part on material prepared by Marc Boutin, JD, past Director of the Tobacco Control Program for MAHB. This information is provided for educational purposes only and is not to be considered legal advice. 2002.

<sup>1</sup> 20 USCS §6083.

<sup>2</sup> 20 USCS §6082.

<sup>3</sup> Mass. Gen. Laws ch. 71, §37H.

<sup>4</sup> Mass. Gen. Laws ch. 71, § 37H.

<sup>5</sup> Mass. Gen. Laws ch. 71, § 37H.

<sup>6</sup> Tobacco Free School Policy Workshop, February 28, 2001, sponsored by the Department of Education.

<sup>7</sup> The Massachusetts Interscholastic Athletic Association (MIAA) prohibits the use of any tobacco product during the season of practice or play.

<sup>8</sup> Braintree School District as reported at the Tobacco Free School Policy Workshop. The policy is no longer in place.

<sup>9</sup> Mass. Dept. of Education Health Protection grants program. Fund code 346/349

<sup>10</sup> Mass. Gen. Laws ch. 40, §21D.

<sup>11</sup> Mass. Gen. Laws ch. 40, §21D.

<sup>12</sup> "A Guide to Using Non-Criminal Disposition for Bylaw Enforcement," prepared by the Massachusetts Department of Housing and Community Development, revised August 1998.

<sup>13</sup> *Id.*

<sup>14</sup> Mass. R. Crim. P. 2(b).

<sup>15</sup> Massachusetts Juvenile Law Sourcebook, Hon. R.Marc Kantrowitz, Massachusetts Continuing Legal Education, Inc., 1999.

<sup>16</sup> Juvenile Delinquency Law Conference 2001, "Collateral Consequences of Delinquency."

<sup>17</sup> Kopelman & Page advice to Westport.

<sup>18</sup> *Id.*

## Dartmouth Board Helps Restaurant Comply

Jude Hutchinson, MA DEP

The MA Department of Environmental Protection (DEP) continues to rely on boards of health (BOH) to assist transient non-community (TNC) public water systems in complying with state drinking water regulations. A recent case involving the Dartmouth Board of Health (Board) and DEP highlights the importance of this relationship.

A Dartmouth restaurant refused to comply with state drinking water regulations and received several notices of non-compliance (NONs) and significant fines from DEP. DEP formally requested the assistance of the Massachusetts Department of Public Health (DPH) and the Board to make the facility comply with the Massachusetts Drinking Water Regulations. The Board was in the process of reviewing the restaurant's permit and asked the regional DEP staff to participate in the renewal hearing. The Board decided to allow the restaurant to operate for four months using DEP's emergency operator provision. Within the four months, the restaurant owner has to hire or become a certified operator. If the restaurant does not have an operator at that time, the Board will revoke its operating permit.

According to Chuck Shurtleff, environmental analyst at DEP's Lakeville office, "the restaurant owner did not believe it was a public water system (PWS). The health officer and the Board were able to explain the reasons why the restaurant had to comply and the likely event that the restaurant would be closed if they did not comply with the state Drinking Water Regulations."

Routinely, DEP sends copies of all final enforcement actions including NONs to the local BOH and appreciates the board's help in bringing TNCs into compliance and protecting public health. When DEP has difficulty in getting a TNC to comply, DEP will send a specific referral letter to the BOH requesting its assistance. Annually, DEP sends a list of all PWS within the community to each BOH for review and correction. If you would like to discuss PWS in your district, please contact one of the following people:

WERO: Doug Paine, 413.755.2281      CERO:  
Kelly Momberger, 508.849.4023

NERO: Jack Mullins, 978.661.7764      SERO:  
Chuck Shurtleff, 508.946.2879

All PWS in the state must provide safe water to its customers and comply with drinking water regulations (310CMR 22.00). TNCs such as restaurants, golf courses, gas stations and campgrounds must meet the following requirements:

- Monitor bacteria, nitrate, nitrite, sodium
- Report to DEP - results of all monitoring, annual statistical report, cross-connection annual plan, groundwater under the influence survey
- Provide treatment if the source is influenced by surface water or contaminated
- Provide public notice when a monitoring maximum contaminant level is exceeded, or facility fails to monitor or report
- Pay annual assessment fee
- Perform sanitary survey every five years
- Protect source of water with source protection tools (routinely check land uses around wellhead)
- Hire a certified operator
- Post Consumer Confidence Reports that DEP mails to TNCs (starting in June '02)
- Meter the source and any customers (effective January '02)
- Maintain capacity (stay in compliance with all regulations)

Jude Hutchinson is an environmental analyst in DEP's Drinking Water Program who can be reached at 617.292.5931 or email [Judith.Hutchinson@state.ma.us/dep](mailto:Judith.Hutchinson@state.ma.us/dep). Visit DEP's Web site: [Mass.gov/dep](http://Mass.gov/dep).

## Indoor Air Quality Continued from page 1

reactions. Airborne infectious diseases result from inhalation exposure to viruses and bacteria, and include diseases such as tuberculosis, chicken pox, influenza, and the common cold. Hypersensitivity diseases result from exposure to an allergen, which triggers an immune response and results in an allergic reaction. Hypersensitivity diseases that have been linked to indoor air exposure include hypersensitivity pneumonitis, allergic asthma, and allergic rhinitis. Toxic reactions result from exposure to chemicals (e.g. pesticides) or other harmful materials (e.g. asbestos) that can result in damage to organs such as the lung, liver, or kidney.

A fourth type of building-related illness is known as Sick Building Syndrome, and is defined by the fact that there is no apparent identifiable cause. This non-specific type of building-related illness is characterized by an elevated prevalence of complaints and/or symptoms, which are wide-ranging and can include: irritation of mucous membranes (eyes, nose, throat, sinuses); irritated skin; headaches; fatigue; nausea; and/or dizziness. Though sick building syndrome can sometimes be attributable to factors such as stress or job dissatisfaction, an investigation of complaint or symptom patterns can sometimes link the problem to poor indoor air quality.

There are many factors that affect indoor air quality and the effect that it may have on a population. The first factor to consider is the **potential sources** of indoor air pollutants. In our building, what types of pollutants are present and to what extent are they present? The second factor to consider is the status of the building's Heating, Ventilation, and Air-Conditioning (**HVAC System**). Though intended to maintain good air quality throughout a building, HVAC systems are not always designed or maintained properly. A poorly designed and/or maintained HVAC system can (a) result in a decreased ability to circulate clean air, and (b) potentially become an additional source of indoor air pollutants (e.g. microbial growth, dust). The third factor to consider is the **exposure pathway**. Where and when does exposure occur, and how are the pollutants moving through the building from source to receptor? And finally, the fourth factor to consider is the **exposure population**. Who are the occupants of the building and who is being exposed? Different populations can have different reactions and susceptibility to identical levels of the same pollutant.

There are numerous resources available to BOHs when indoor air quality becomes an issue. First, I am available to answer questions and discuss strategies for dealing with potential indoor air problems ([mcclean@mahb.org](mailto:mcclean@mahb.org); 617-384-8809). Second, the Massachusetts Division of Occupational Safety and the EPA both have Indoor Air Quality Programs that can be accessed at <http://www.state.ma.us/dos/pages/IAQ.htm> and <http://www.epa.gov/iaq/>, respectively. Finally, the EPA offers a publication titled, *Indoor Air Pollution: An Introduction for Health Professionals*, which is particularly useful to BOHs and is available at <http://www.epa.gov/iaq/pubs/hpguide.html>.

### New Guide to Water Quality Testing for Private Wells

There are more than 400,000 citizens of the Commonwealth of Massachusetts who rely on private wells for their daily use. Important information about the need to test private wells, and recommendations for such testing will soon be available for broad public distribution, by September 2002. A new brochure entitled "A Guide to Water Quality Testing for Private Wells" was developed as a collaborative project of the New England Region of the United States Environmental Protection Agency, the Massachusetts Department of Environmental Protection, and the Massachusetts Association of Health Boards.

Testing of private well quality is important because some contaminants that may pose a threat to public health cannot be identified by just taste and odor, or routine screening tests. Well water can contain contaminants that are present because of spills from gasoline, industrial solvents, or even some residential activities. Other contaminants, like radon and arsenic, come from natural rock formations which dissolve into ground water and can enter drinking water wells.

Testing private wells for the right contaminants and at the appropriate frequencies is an important cost-effective step homeowners should take to protect their families. The one page brochure "A Guide to Water Quality Testing for Private Wells" provides concise information on : recommended water quality tests; testing frequency; contaminants of concern; and additional references. For more information on this guide, or to request copies please contact the agencies or visit their websites at: [www.epa.gov/region01/eco/drinkwater.html](http://www.epa.gov/region01/eco/drinkwater.html) [www.mass.gov/dep](http://www.mass.gov/dep) and [www.mahb.org](http://www.mahb.org)

## Sprawl, Continued from page 11

relations? If the phenomenon known as “commuting stress” affects well-being and social relationships both on the roads and off, and if this set of problems is aggravated by increasingly long and difficult commutes on crowded roads, then sprawl may in this manner threaten mental health.

### ***Social capital***

Since the World War II, social commentators have ascribed to suburban living a sense of social isolation and loneliness, although some of these claims have recently been challenged. “It is no coincidence,” observes Yale architecture professor Philip Langdon, “that at the moment when the United States has become a predominantly suburban nation, the country has suffered a bitter harvest of individual trauma, family distress, and civic decay.” Indeed, a perceived erosion of civic engagement and mutual trust—a loss of what is called “social capital”—has been widely noted and discussed in recent years. Some authors have attributed this decline, in part, to suburbanization and sprawl.

A full discussion of the complex sociology of suburban life is beyond the scope of this article. Several facts bear mention. First, as Robert Putnam argues in *Bowling Alone*, the simple fact of more driving time means less time with family or friends, and less time to devote to community activities, from neighborhood barbecues to PTA meetings. Putnam estimates that each additional 10 minutes of driving time predicts a 10% decline in civic involvement. Second, suburban development patterns often feature considerable economic stratification. Many housing developments are built to specific price ranges, so that buyers of \$200,000 homes are effectively segregated from buyers of \$400,000 homes (and those at the bottom of the economic ladders are excluded altogether). This pattern creates income homogeneity within neighborhoods, but may intensify income inequality across metropolitan areas. Third, both polling data and voting records have demonstrated that suburban residents prefer more individualized, less collective solutions to social problems, with the possible exception of schools. Finally, suburban neighborhoods with capacious houses and lawns offer few options for older adults once their children have grown up and moved from the home. These “empty nesters” typically have to change neighborhoods if they wish to find smaller, lower maintenance homes. The inability to remain in a single neighborhood through the life cycle may also undermine community

cohesiveness. Collectively, these trends suggest that certain features of sprawl tend toward greater social stratification and less social capital.

A large literature has explored the relationship between social relationships and health, focusing both on the individual level (one’s own relationships) and on the societal level (social capital). In general, a higher quantity and quality of social relationships is associated with health benefits. Conversely, social stratification, in particular income inequality, is associated with higher all-cause mortality, higher infant mortality, and higher mortality from a variety of specific causes, independent of income and poverty, according to data from the United States and Great Britain. There is evidence that this effect is mediated, at least in part, through effects on social capital. Therefore, to the extent that sprawl is associated with social stratification and loss of social capital, and these phenomena are in turn associated with increased morbidity and mortality, sprawl may have a negative health impact on this broad scale.

## ENVIRONMENTAL JUSTICE CONSIDERATIONS

Research over the last 15 years has suggested that poor people and members of minority groups are disproportionately exposed to environmental hazards. Could any adverse health consequences of sprawl disproportionately affect these same populations?

In general, the pattern of urban development of which sprawl is a part may deprive the poor of economic opportunity. When jobs, stores, good schools, and other resources migrate outward from the core city, poverty is concentrated in the neighborhoods that are left behind. A full discussion of the impact of urban poverty on health is beyond the scope of this article, but a large literature explores this relationship. To the extent that sprawl aggravates poverty, at least for selected groups of people, it may contribute to the burden of disease and mortality.

More specifically, there is evidence that several of the specific health threats discussed previously affect minority populations disproportionately. Air pollution is one example. Poor people and people of color are disproportionately impacted by air pollution for at least two reasons: disproportionate exposure and higher prevalence of underlying diseases that increase susceptibility. Members of minority groups are relatively more exposed to air pollutants than

whites, independent of income and urbanization. Environmental Protection Agency data show that black people and Hispanics are more likely than white people to live in air pollution nonattainment areas. As asthma continues to increase, asthma prevalence and mortality remain higher in minority group members than in white people. The cumulative prevalence of asthma is 122 per 1,000 in black people and 104 per 1,000 in white people, and asthma mortality is approximately three times higher in black people than in white people. Similarly, asthma prevalence is more than three times higher among Puerto Rican children than among non-Hispanic children. Among Medicaid patients, black children are 93% more likely, and Latino children 34% more likely, than white children to have multiple hospitalizations for asthma. Although some of this excess is related to poverty, the excess persists after controlling for income. Asthma prevalence and mortality are especially high, and rising, in inner cities, where minority populations are concentrated. Both exposure to air pollution, and susceptibility to its effects, appear to be concentrated disproportionately among the poor and persons of color.

Heat-related morbidity and mortality also disproportionately affect poor people and members of minority groups. In the 1995 Chicago heat wave, black people had a 50% higher heat-related mortality rate than white people. Similar findings have emerged following heat waves in Texas, Memphis, St. Louis, Kansas City, and in nationwide statistics. Of special interest in the context of urban sprawl, one heat wave study considered transportation as a risk factor and found that poor access to transportation—a correlate of poverty and nonwhite race—was associated with a 70% increase in the rate of heat-related death.

Are minority populations disproportionately affected by lack of physical activity and its health consequences? People of color are more likely to be overweight, and more likely to lead sedentary lifestyles, than white people. In the Third National Health and Nutrition Examination Survey (NHANES-III), for example, 40% of Mexican Americans and 35% of blacks reported no leisure time physical activity, compared with 18% of white people. In this same survey, the mean body mass index was 29.2 among black people, 28.6 among Mexican Americans, and 26.3 among white people. The relationships among “race,” social class, the environment, diet, physical activity, and body weight are complex. There is no evidence that sprawl disproportionately affects people of color with regard to exercise. In fact,

it is possible that poorer people are less likely to own cars and are therefore more likely to walk. Further data on these relationships are needed.

There are significant “racial” differences in motor vehicle fatality rates. Results from the National Health Interview Survey revealed motor vehicle fatality rates (per 100,000 person-years) of 32.5 among black men, 10.2 among Hispanic men, and 19.5 among white men. The rates were 11.6 among black women, 9.1 among Hispanic women, and 8.5 among white women. Much of this difference was apparently attributable to social class differences; variations in automobile quality, road quality, and behavioral factors may also help explain these observations.

Pedestrian fatalities disproportionately affect members of minority groups and those at the bottom of the economic ladder. In Atlanta, for instance, pedestrian fatality rates during 1994–1998 were 9.74 per 100,000 for Hispanics, 3.85 for black people, and 1.64 for white people. In suburban Orange County, California, Latinos comprise 28% of the population but account for 43% of pedestrian fatalities. In the Virginia suburbs of Washington, Hispanics comprise 8% of the population, but account for 21% of pedestrian fatalities. The reasons for this disproportionate impact are complex, and may involve the probability of being a pedestrian (perhaps related to low access to automobiles and public transportation), road design in areas where members of minority groups walk, and behavioral and cultural factors (such as being unaccustomed to high speed traffic).

There is no evidence that sprawl-related threats to the water supply disproportionately affect poor people or members of minority groups. Similarly, there is no evidence that the mental health consequences of sprawl, such as road rage, affect various “racial” groups differently. In the survey data cited previously, there were no “racial” differences in self-reported aggressive behavior. Whereas black people were slightly less likely to be the victims of aggression than white people or members of other “races,” this difference was not statistically significant.

## SOLUTIONS

As discussed previously, further research is needed to clarify the complex relationships among land use, transportation, and health. What approaches to urban planning, design, and construction are most likely to reduce air pollution, reduce urban heat,

encourage physical activity, reduce automobile-related morbidity and mortality, and promote mental health and a sense of community? Although this article has focused on the health consequences of sprawl, other forms of built environment—dense cities, remote rural areas, and small towns—all have advantages and disadvantages that need to be assessed. It is likely that many different kinds of built environment can promote health, and that optimal approaches will borrow elements of cities, suburbs, and small towns.

Some interventions may be relatively simple, such as planting more trees or providing more sidewalks. Others are more complex and expensive to implement, such as mass transit and mixed-use zoning. For each of these, standard health research methods—ranging from clinical trials to observational epidemiology—may offer insights. Such research will require innovative partnerships with other professionals, such as urban planners, architects, and real estate developers.

It is especially important for health researchers to recognize and study “natural experiments.” Patterns of urban land use are changing, with migration back into inner cities, suburban growth boundaries, development of mixed-use projects, innovations in mass transportation, green space programs, and related initiatives. Such efforts offer opportunities for health researchers who can examine their effects on relevant health endpoints.

As we recognize and understand the health costs of urban sprawl, we can begin to design solutions. Many of these are found in an urban planning approach that has come to be known as “smart growth,” including higher density, more contiguous development; preserved green spaces; mixed-land uses with walkable neighborhoods; limited road construction, balanced by transportation alternatives; architectural heterogeneity; economic and “racial” heterogeneity; a balance of development and capital investment between central city and periphery; and effective, coordinated regional planning. Importantly, many of the health benefits that could flow from this approach—less air pollution, more physical activity, lower temperatures, fewer motor vehicle crashes—would also yield collateral benefits, such as a cleaner environment and more livable neighborhoods. If the health consequences of sprawl comprise a

“syndemic”—synergistic epidemics that contribute to the population burden of disease—then solutions may also operate synergistically, ameliorating several health problems.

Health professionals can play an important role in designing and implementing transportation and land use decisions. Similarly, the professionals who have traditionally managed these issues—urban planners, architects, engineers, developers, and others—should recognize the important health implications of their decisions and seek collaboration with health professionals.

## CONCLUSIONS

Urban sprawl is a longstanding phenomenon. It began with the expansion of cities into rural areas and accelerated greatly during the last half of the 20th century. As the 21st century begins, approximately half of Americans live in suburbs, and the features of sprawl—low density land use, heavy reliance on automobiles for transportation, segregation of land uses, and loss of opportunity for some groups, especially those in inner cities—are widespread and familiar.

This article has discussed the relationship between sprawl and health, based on eight considerations: air pollution, heat, physical activity patterns, motor vehicle crashes, pedestrian injuries and fatalities, water quality and quantity, mental health, and social capital. There are both health benefits and health costs. Like most public health hazards, the adverse impacts of sprawl do not fall equally across the population, and those who are most affected deserve special attention.

As we address sprawl on a variety of levels, from personal transportation decisions to local zoning ordinances, from regional mass transit and land use decisions to federal regulations, it is essential to incorporate health considerations into policy-making. Because the health effects of sprawl are unevenly distributed across the population, it is equally essential to incorporate considerations of social justice and equity into this policy-making.⌘

Editor's note: This article was first published by the Association of Schools of Public Health PUBLIC HEALTH REPORTS / MAY-JUNE 2002 / VOLUME 117 and contains numerous footnotes and tables. To fit it within the physical boundaries of the MAHB Journal, it was necessary to cut both. The entire original article may be viewed in PDF format on the MAHB web site [www.mahb.org](http://www.mahb.org). Dr Frumkin spoke at the National Association of Local Boards of Health conference in July. I felt that his timely comments should be shared with Massachusetts Boards of Health. -M.B.

# PESTICIDE USE IN SCHOOLS AND LOCAL BOARD OF HEALTH RESPONSIBILITIES

by Melinda Calianos J.D.

In January 2000, the federal government released a report stating that pesticide use in schools could be putting children at serious risk. According to reviewers, what was striking about the report was that it revealed how little the subject had been studied over the years. The report from the General Accounting Office, the investigative arm of Congress, found that local government officials, school administrators and parents knew little about the pesticides used at schools and the possible exposure of children to the potentially dangerous chemicals used in pesticides. In basic terms, no one had been keeping track of the pesticides used at schools or when the pesticides were being applied or what the effects on children might be. While standards for pesticide applications existed for work environments, an equal effort for schools was found woefully lacking. Soon after the release of the report many states, including Massachusetts studied the issue and enacted laws to protect children and their environment.

As part of the Children's Protection Act of 2000 Massachusetts legislators drafted and passed bills to address this issue. Regulation of pesticide use in schools can be found primarily in Massachusetts General Laws 132B s. 6C through 6J. Briefly, this series of related statutes provide a list of pesticide types that may be used indoors and outdoors of schools, day care centers and school age childcare programs. They mandate these facilities to provide warnings and postings about pesticide application and a timetable for such notifications. A mandatory record keeping system for pesticide use at these institutions is also described.

For the most part, pesticide use in schools is regulated and overseen by the Massachusetts Department of Food and Agriculture. However, the statutory scheme determined by the legislature also gives a critical role to local Boards of Health. When a school or other listed facility is facing an emergency situation where a pesticide must be applied quickly to avoid pest caused harm to human health and safety, and/or the pesticide that is needed to combat the problem is not on the list of automatically approved pesticides, the school official may turn to the local Board of Health for a waiver of the requirements of the

state statutes. Given the critical need for safety and precaution in such a situation, it is important for local Boards of Health to be familiar with the new statutes and about pesticide use in schools. When called upon to grant a "single-use waiver" it is critical that Boards make a proper decision based on the correct criteria.

## Summary of the Statutory Requirements for Pesticide Use in Schools

Every school, day care center and school age child care program in the Commonwealth must adopt and implement an Integrated Pest management Plan (IPM). As defined by the Department of Food and Agriculture, an IPM is a plan that looks beyond sole reliance on chemicals to for pest reduction, and includes common sense practices of control with an ultimate goal to minimize chemical usage. The IPM must include strategies for both indoor and outdoor areas of the facility. For example, more frequent grass mowing or changing the sanitation routine might mean reduction of certain sorts of pests. One copy of the plan adopted by the institution must be filed with the Department of Food & Agriculture and at least on other copy must be kept on site and be available upon request.

No one is permitted to use pesticides in, on or around structures of grounds of these facilities unless that person is a certified or licensed applicator or is under the supervision of a certified or licensed applicator.

The pesticide products that may be used at schools, day care center and school age child care programs is limited. The list of acceptable types of pesticides for use inside these facilities can be found in Mass. Gen. Laws Ch. 132B s. 6F. Similarly, Mass. Gen. Laws ch. 132B s. 6G describes the types of pesticides that are approved for outdoor use at these institutions.

A record of all chemical pesticides used at these facilities must be maintained on site for at least 5 years.

Timing of pesticide applications at schools, etc. is an essential part of the established statutory scheme. Pesticides cannot be used indoors while children are on the property of the facility. Pesticides cannot be used on the outdoor property of an institution while children are in, on, or adjacent to the area where pesticides are to be applied.

Whenever pesticides are used, whether inside or outside, the administration of the institution must provide to all employees, students, supervised children and their parents a “standard written notification.” This notice must be provided at least two (work) days prior to the commencement of the pesticide application. This notice must include the approximate dates of pesticide application; the specific location of the application; the product name and type of pesticide to be used; a fact sheet about the pesticide to be used which has been approved by the Department of Food and Agriculture; the U.S. E.P.A. registration number for each pesticide; a description of the purpose of the pesticide application; and a statement approved by the Department of Food and Agriculture suggesting ways to minimize exposure for especially sensitive individuals, such as pregnant women. The pesticide information required for the notice shall be provided to the administration of the institution by the certified or licensed applicator. A sample “Standard Written Notification Form” can be seen on the Department of Food and Agriculture website at [www.state.ma.us/dfa/cpa/cpa\\_notification\\_form\\_new.pdf](http://www.state.ma.us/dfa/cpa/cpa_notification_form_new.pdf). Exceptions to this notice requirement are listed in Mass. Gen. Laws ch. 132B s. 6C(2) and primarily relate to pesticide application during school vacations or lengthy closures when children are not expected on the premises. Two types of pest control are also exempted from this notice requirement. The statute provides that certain larval mosquito control applications and certain anti-microbial pesticides may not trigger the need for notice. More information about these exceptions can be found in Mass. Gen. Laws ch. 132B s. 6C(c)(2) and s. 6C(c)(3).

Before pesticide is applied to a specific area of a facility, a notice providing the same information detailed above must be posted in a common area of a facility at least two days prior to pesticide use and for at least 72 hours after. The exact areas where pesticides were applied must be posted with warning signs indicating chemical pesticide use along the perimeter of the area. Again, use of certain larval mosquito application and anti-microbial pesticides are exempt from this requirement.

### **Emergency Situations**

The local Board of Health becomes involved in the issue of pesticide use in schools when a facility official determines he has a health emergency due to pests. Per M.G.L. ch. 132B s. 6H if an official of

a school, day care center or other school age child care program “determines that a human health emergency warrants the use of a pesticide that is not allowed” under these statutes, or in order to remedy the health emergency the use of a listed pesticide must be used sooner than the two day notice requirement allows the official may apply for a “single-use waiver” from the municipal Board of Health. A sample “Emergency Waiver Application” can be found on the Food and Agriculture website at [www.state.ma.us/dfa/cpa/emergencywaiver.pdf](http://www.state.ma.us/dfa/cpa/emergencywaiver.pdf). Information on this website also indicates that the Department of Food and Agriculture may also receive these waiver requests, but that communication between the facility and the board of health, particularly if a public school is involved, is encouraged. Upon receipt of this request the Board of Health must then determine:

- (1) whether the pest situation poses an immediate threat to human health, and
  - (2) whether no viable alternatives to the use of chemical pesticides exist.
- Mass. Gen. Laws ch. 132B s. 6H.

Should the Board of Health grant the “single-use waiver” as described in the statute, the BOH must receive a “commitment from the school official...that the underlying causes of the pest outbreak will be identified and addressed,” so that such a health emergency does not occur again. Upon acceptance of the waiver request, the facility official must agree to post conspicuous warning signs near the area where the pesticide will be used prior to, and for at least 72 hours after the pesticide application and to post appropriate signs on the perimeter of the treated area. The facility official must also ensure that written notification identical to that outlined in Mass. Gen. Law ch. 132B s.6C and s.2 (as described above) is provided to employees, pupils and parents immediately prior to, or if necessary, following the pesticide use.

The BOH should also remind the facility official that the law requires the standard documentation in the facility’s pesticide use record must be made for this emergency pesticide application. A description of the pesticide used for the emergency, the cause of the emergency and the actions taken to address the situation must also be logged in the pesticide use records and saved for five years.

Limiting the use of chemical pesticides in school and other child oriented facilities is a good step in making children safe and reducing health risk. M.G.L. ch. 132B s. 6C through 6J allow for information to be

easily available to those who might be affected by the use of these chemicals, and is an important measure in the efforts to safeguard developing bodies against unnecessary exposure to potentially toxic substances. Further information about this topic can be found on the Department of Food and Agriculture website at [www.state.ma.us/dfa/cpa/index.htm](http://www.state.ma.us/dfa/cpa/index.htm).

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## **Presenting Evidence in Court and the Business Record Exception to the Hearsay Rule**

by Beth Crawford J.D.

It is sometimes necessary for a Board of Health to go to court to enforce its regulations. A question often arises about how to present facts to a judge.

There are limits on the type of information which can be provided in a court hearing. These limits are called the "rules of evidence." One of the rules to keep in mind is the hearsay rule. Hearsay is defined as an out of court statement, which is being offered to the court for the truth of the matter stated, by someone other than the person who made the statement. Hearsay statements are not admissible in a hearing unless they fall within an exception to the hearsay rule.

A useful exception to the hearsay rule is the business records exception, which is found in Massachusetts General Laws Chapter 233 section 78. Generally, written documents are not admissible in evidence, however, if the documents are generated or received in the course of conducting business, then they are admissible.

An example of a business record exception is found in the case Town of Shrewsbury v. Commissioner of the Department of Environmental Protection, 38 Mass. App. Ct. 946 (1995). In this case, the town of Shrewsbury shut down a composting facility due to odors created by the facility after receiving numerous citizen complaints. The Court held that the town proved substantial evidence of air pollution by presenting the citizen complaints. The Court held that these complaints were admissible as a business record exception to the hearsay rule.

Note that in this case, the citizens who made the complaints were available for cross-examination.

It is important to note also that in order to admit a document into evidence under the business record exception, the document must have been received prior to the commencement of litigation.

When business records are offered in court, you must have a witness who can testify to the following:

- the writing was made in the regular course of business;
- that it is in the regular course of business for the agency to make such a writing or record or to receive such a writing or record;
- that the record was made at or shortly after the time of the event in question; and
- that it was made prior to the commencement of litigation.

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## **Taxpayer and Government Injunctions to Prevent Damage to the Environment**

by Beth Crawford J.D.

In Massachusetts, both citizen groups and government agencies have the right to file a lawsuit in order to stop damage to the environment. Massachusetts General Laws Chapter 214 Section 7A provides that a group of ten or more citizens may file a complaint in equity in the Superior Court asking the court to restrain the person causing the damage from doing so. In order to use this statute, such damage to the environment must be in violation of a statute, ordinance, by-law or regulation, the major purpose of which is to prevent or minimize damage to the environment.

An example of the use of this statute is in the case of City of Worcester v. Vincent Gencarelli, 34 Mass. App. Ct. 907 (1993). In this case, the city of Worcester sought an injunction to stop the defendant from placing fill on a wetland owned by him. The court found that the action met the requirements of Chapter 214 Section 7A. Additionally the Court found that the city did not have to exhaust any administrative remedies before seeking a Section 7A injunction.

There is a notice requirement prior to filing the complaint in court. The plaintiff(s) must send notice of the violation by certified mail at least 21 days prior to the commencement of the lawsuit to the person

committing the violation, the agency responsible for enforcing the statute, ordinance, by-law or regulation which is being violated, and to the attorney general. The court may waive the notice requirement if the plaintiff(s) can show that irreparable damage will result unless immediate action is taken.

In order to seek an injunction pursuant to Chapter 214 Section 7A, you must:

- Twenty-one days before filing the case in court, give notice by certified mail to the person committing the violation, the agency responsible for enforcing the law concerning the violation, and the attorney general;
- File the proceeding in the Superior Court in the county in which the damage is occurring;
- If the lawsuit is filed by private citizens, there must be at least ten named as plaintiffs in the proceeding;
- You must show that the damage caused or about to be caused constitutes a violation of a statute, ordinance, by-law, or regulation, and that the major purpose of the statute, ordinance, by-law or regulation is to prevent or minimize damage to the environment.

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## **MASSACHUSETTS DPH RECEIVES BIOTERRORISM FUNDS**

In response to September 11 and the anthrax attacks, Congress and the President authorized over \$1 billion in funding to State and local health departments to enhance bioterrorism preparedness. The Commonwealth of Massachusetts submitted proposals to the U.S. Department of Health and Human Services (DHHS) for over \$21 million in funding, which were approved in June 2002. The purpose of the funding is expansive, ranging from the development of readiness assessments and hospital preparedness plans, to upgrading infectious disease surveillance and investigation, to expanding laboratory and communications capacity.

To address these issues, MDPH formed two advisory committees, the Statewide Bioterrorism Preparedness

and Response Program Advisory Committee and the Hospital Preparedness Planning Committee. Both committees have representation from a diverse range of disciplines, including local health departments, hospitals, fire, police, EMS, emergency management and other organizations. In order to begin addressing the priorities identified by the federal government, the MDPH has convened 10 work groups to carry out specific activities. These work groups include: 1) Decontamination, Isolation, and Personal Protective Equipment, 2) National Pharmaceutical Stockpile, 3) Hospital Surge Capacity, 4) Laboratory, 5) Smallpox Vaccine, 6) Needs Assessment, 7) Education and Training, 8) Epidemiology and Surveillance, 9) Health Alert Network, and 10) Risk Communication. More information can be found at :<http://www.state.ma.us/dph/bioterrorism/advisorygrps/index.htm>

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## **CDC's Terrorism Preparedness: One Year Later**

Excerpts from Teleconference broadcast Aug. 27, 2002

CDC Director, Dr. Julie Gerberding

DR. GERBERDING: ...This is really an opportunity for us to update you on some of the things that we've been doing over the last year since the terrorist attacks first began, and we're very happy to have the chance to provide this information in this forum.

It did cause me to look back a little bit on the very first day, 9/11, and I'm sure we can all remember where we were on that day which is, in a sense, the world changed for all of us. It certainly changed for CDC.

But there are a couple of other dates that are very important to us as an agency, also. One is, of course, October 4th, when we confirmed the first case of inhalation anthrax in the patient in Florida. And then on November 8th, President Bush, Governor Ridge and Secretary Thompson visited CDC, which I think sent a very strong signal

to this agency that we were an integral part of homeland security, and that message, and that awareness is certainly shaping our future, shaping our priorities and shaping the directions that we're taking. It's not a substitution for our core public health mission, but it certainly is an addition, and I think I'm pleased to say today that we are successfully embracing that addition and are very proud of some of the things that we've been able to accomplish in the last year.

We learned a lot of lessons in the fall. The purpose of this conversation is not to go into the lessons, but rather to tell you some of the things that we have accomplished and are going forward with from that point on.

We did step up to the plate in the fall, and since that time, we've really scaled up our response capacity. We've sped up the processes by which we do our work, and we've streamlined our overall emergency response operations.

The kinds of programs that you're going to be hearing about today are really those that address three major components of CDC work. One of the issues are the actual program components themselves, and I'll mention a couple of these. The other is the people and the partnerships that are used to accomplish our work.

And the third is the practice that we do to make sure that our response capacity is optimized.

In terms of some of the highlights of the programmatic changes that we've made, the biggest and most conspicuous is, of course, the state and local grant program for terrorism preparedness and response—the \$918 million that Secretary Thompson made available for state and local health departments through CDC, which really focuses on the critical components of preparedness, and already many states have achieved the benchmark capacities or are well on their way to achieving benchmark capacities in this regard.

The criteria for that program were flexibility, speed and accountability, and we are very much engaged in ensuring that we meet those criteria in all three categories.

Other programs that I think have expanded or enlarged since 9/11 include our National Pharmaceutical Stockpile Program. Not only have we added many medical assets, including new antibiotics and vaccine products to the stockpile, but also we've increased the absolute number of the push packs. These are the large containers full of medical resources that are deployed at strategic locations around the United States.

We've also increased the number of personnel involved in this program and remain fully confident that should there be another terrorist event or any other mass casualty event, we could get the stockpile to the site of need within 12 hours in the United States.

Another major component has been our laboratory capacity program, both here at CDC, as well as the laboratory response network, which now has more than 200 laboratories that are actively engaged in the detection, diagnosis and evaluation of samples that could represent a pathogen of bioterrorist origin. I think Dr. Hughes will say a couple more words about the laboratory response network.

But at CDC, laboratory response capacity has been a high priority, both for biologic agents, as well as chemical toxins, and we have expanded our capacity, expanded our throughput, and we've even opened new laboratory facilities since 9/11 to ensure that we have the full surge capacity that we need to deal with these problems.

We're not finished. We've got more expansion and more work to do in the laboratory department, but we've certainly taken some giant steps forward, and we're very pleased with those accomplishments.

Now talking a little bit about some of the things that people have done. We have rapid response teams here at CDC, and these are individuals who are ready to basically load and go whenever a problem arises. So they have special training. It's a mixture of people with a variety of skills, including communication skills, laboratory skills, epidemiology, whatever it takes to get to a site of a terrorist attack and start the ground investigation and ground response in quick order.

Our EIS officers have had special training this year in the field, practicing coordination of a bioterrorism event at one of our partner organizations in another state. So the EIS officers are now getting training in emergency response and will be a much more ready part of our overall teamwork.

I think the other major investment in people is the expansion of our communications capacity here at CDC. We've hired and recruited a number of new health communications experts, and we've developed an emergency ... plan which is I think an enormous change in the way we do business here, and I hope that you will identify differences as you interact with us and see the fruits of that effort that Dr. Freimuth [ph] and her colleagues have been leading in the communications arena.

Finally, let me talk a little bit about practice because I think practicing or exercising our response capacity is certainly valuable. We exercised our response capacity in the fall, and we've done a number of lookbacks at that to identify where we needed to improve. But since that time, we've also had opportunities for scenario development, for expert consultations from people from the outside. We're planning a large tabletop and have participated in some small tabletop exercises. But most recently you probably recognize that we're very involved in the West Nile outbreaks in multiple jurisdictions around the United States, and this West Nile

***"...the kinds of investments that we make in public health to handle natural public health problems are exactly the same infrastructure and the same mechanisms that we use for dealing with a terrorism attack. So this concept of dual functionality is not only a good way for us to exercise, but it really is how we've evolved our whole program.***

***We are building terrorism capacity on the foundation of public health, but we are also using the new investments in terrorism to strengthen the public health foundation."***

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infection outbreak experience has given us an opportunity to practice our public health response capacity. And we are, in fact, managing the West Nile outbreaks using our Operations Center. We are using our communications strategy for that outbreak, and we are deploying and managing the people in the field using the same style of leadership and the same operations concepts that we would do if we were actually dealing with a terrorist attack.

Now, in no way am I implying that West Nile has anything to do with terrorism. It is a totally natural epidemic. But I think it sends the message or illustrates the concept that the kinds of investments that we make in public health to handle natural public health problems are exactly the same infrastructure and the same mechanisms that we use for dealing with a terrorism attack. So this concept of dual functionality is not only a good way for us to exercise, but it really is how we've evolved our whole program.

We are building terrorism capacity on the foundation of public health, but we are also using the new investments in terrorism to strengthen the public health foundation. And these two programs are inextricably linked, and I think both

will benefit from the efforts and the investments that we intend to make on an ongoing basis.

So let me just end by saying ... We are scaling up, speeding up, and streamlining our operations. Our preparedness is very high, but we're not satisfied, and we have more work to do, and we intend to get the job done right.



**Dr. Richard Jackson** Director, National Center for Environmental Health ... [B]y the end of the year there will be a state-of-the-art Emergency Operations Center. We've brought consultants in from both ...— the Pentagon and FEMA to help us [with the] design...

Our chemistry laboratory...can now look at 150 toxic chemicals in human beings that could be used as chemical weapons. ... We don't look at environmental specimens. We get human specimens, blood or urine, from a site, [and] we can tell you what ... chemicals [were] being used within about 24 hours... All of our people in our laboratory have been trained to put down what they are doing and transfer immediately to handling terrorism-related specimens in a chemical event. And by the end of about three days, if we know which chemicals we'll be looking at, we can handle thousands of specimens a day.

So we've really changed the laboratory in its focus and its activity, and we're working very closely with FBI, EPA, CIA, and the other federal leadership agencies on this....

And, [lastly]... in the radiation arena... we have asked our nuclear physicists and others to think about prospective threats...brought in... about 50 experts, hospital leaders, emergency room docs, [and] radiation specialists... who have given us guidance about how you would set up hospitals, how you would prepare them, how you triage people, how you set up centers outside the hospital to deal with persons injured in a radiological or nuclear event.

## ESSENTIAL PUBLIC HEALTH SERVICES

**M**onitor health status to identify community health problems

**D**iagnose and investigate health problems and health hazards in the community

**I**nform, educate, and empower people about health issues

**M**obilize community partnerships to identify and solve health problems

**D**evelop policies and plans that support individual and community health efforts

**E**nforce laws and regulations that protect health and ensure safety

**L**ink people to needed personal health services and assure the provision of health care when otherwise unavailable

**A**ssure a competent public health and personal health care workforce

**E**valuate effectiveness, assessability, and quality of personal and population-based health services

**R**esearch for new insights and innovative solutions to health problems

The development of performance measures for the National Public Health Performance Standards Program (NPHPS) has been underway since 1998. This effort is a collaborative effort of the CDC, the American Public Health Association (APHA), Association of State and Territorial Health Officials (ASTHO), the National Association of Local Boards of Health (NALBOH), National Association of County and City Health Officials (NACCHO), and the Public Health Foundation.

# THE NATIONAL PUBLIC HEALTH PERFORMANCE STANDARDS PROGRAM

## ***A Vision for Excellence in State and Local Public Health***

*By Shepard Cohen*

Bringing excellence to local and state public health agencies is the ultimate purpose of the National Public Health Performance Standards Program (NPHPSP). It is designed to help states and local communities understand, assess and improve their public health infrastructure and programs. Through participation in the performance standards process, Boards of Health will gain a better understanding of what they are and are not capable of achieving, and thereby will likely seek and implement strategies to improve performance. Self-evaluations and strategic planning are key ingredients for successful boards of health.

The National Public Health Performance Standards Program has been four years in development and testing (including some pilot testing by the Massachusetts Institute for Local Public Health in five communities). The Program includes three instruments: a state-level instrument designed to assess the state public health system; an assessment instrument for local public health systems; and, of particular interests to our Board of Health members, an assessment instrument for local boards of health and other governing bodies. The program offers clear, measurable performance standards for state and local public health entities to help ensure the delivery of the three core public health functions (assessment, policy development, and assurance) and the 10 Essential Public Health Services.

The goals of the NPHPSP are: 1) to create tools for public health practitioners to use in a continuous quality improvement process as is done now in most other health care sectors; 2) to strengthen local public health entities by providing a proven, nationally-recognized mechanism for demonstrating accountability; and 3) to enhance state and local public health decision-making

by strengthening the science base for effective public health practice. Ultimately, the value of using the Governance Instrument of the NPHPSP is will be as a tool to help our local boards of health become more effective in their oversight of city and town health departments, in their participation in their local public health system, and in their provision of essential public health services.

Each of the three NPHPSP instruments (State, Local System, and Governance) are structured around the 10 Essential Services and articulate clear performance standards as well as indicators of performance that can be measured against those standards. Two illustrative excerpts from the Governing Instrument are provided, specifically Essential Service 5 "Develop policies and plans that support individual and community health efforts;" and Essential Service 6 "Enforce laws and regulations that protect health and assure safety."

By answering each question in the Governance Instrument, board members and health officers will have information that can be used to target areas of responsibilities needing improvement, to identify assets and needs, and to monitor improvement progress while advocating for additional resources. Completing the Governance Instrument will provide Massachusetts Boards of Health with objective data for assessing their effectiveness and for identifying their strengths and weaknesses.

Five Massachusetts Boards of Health have already participated in the pilot testing of the Governance Instrument. Based on the collective evaluations of completing the NPHPSP Governance Instrument, the Boards identified some of their strengths: good relations with their Health Director, good knowledge of their communities, and excellent enforcement of regulations. Weaknesses identified were: lack of strategic planning, lack of written policies and protocols, and limited capacity and opportunities to advocacy on their own behalf and on behalf of the populations they serve.

The Boards also identified certain opportunities for improvements by using this self-assessment process: validation of the role of Board members, awareness of the range of their responsibilities, awareness of other potential service delivery resources and collaborators, awareness of gaps in service delivery, awareness of the need to do strategic planning, and finally utilization of the completed Governance Document as a tool for advocacy. Finally, potential barriers to fulfilling these opportunities were acknowledged: lack of adequate resources, lack of full public appreciation of the importance of local public health, limitation of the state's public health infrastructure, and limitations placed on appointed, as compared to elected, boards.

With leadership from the Massachusetts Association of Health Boards and from the Massachusetts Institute for Local Public Health, all boards of health will now have the opportunity to self-assess their performance and to begin steps towards strengthening their policy-making and oversight roles. The National Public Health Performance Standards Program will be offered to your city or town within the next few years....welcome it with open arms for it will offer many benefits long awaited by dedicated, concerned Boards of Health.

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## **Strike Force Takes Enforcement Action Against Terralift**

The Environmental Strike Force has filed suit against an Acton company, Caldwell Environmental, Inc, for violating Title 5 and the Consumer Protection Act. The lawsuit, filed in Suffolk Superior Court, alleges that Caldwell was using an unapproved treatment method, known as Terralift, on septic systems in an attempt to allow failed soil adsorption systems to pass a Title 5 inspection.

In the suit against Caldwell Environmental, Inc., Attorney General Thomas Reilly alleges that the company repeatedly used "Terralift" on septic systems even though the process does not have DEP approval. The Terralift process uses a machine the size of a ride-on lawn mower to inject pressurized air and plastic into improperly functioning soil adsorption systems. The complaint alleges that the use of the machine creates fissures in the soil that may allow sewage to flow through the system without receiving proper treatment, resulting in potential groundwater contamination. In

addition to the alleged Title 5 violations for using the unapproved system, the Strike Force is also suing Caldwell Environmental for alleged violations to the Massachusetts Consumer Protection Act by advertising and selling the unapproved system for use by Massachusetts consumers.

To ensure that septic service companies were aware of the status of the Terralift process, AG Reilly's Office, in December 2001, notified a number of companies in Massachusetts that use of the process violates Title 5. The devices, developed in the mid-west, are often used in agriculture to improve the drainage characteristics of fields before planting. DEP is aware of other machines besides the machine operated by Caldwell Environmental. If anyone has information on other companies using this device at specific locations, you are asked to contact your DEP regional office.

The Strike Force is an interagency enforcement body overseen by Attorney General Reilly and Environmental Affairs Secretary Bob Durand. It was created to identify and handle high priority environmental cases.

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## **SENIOR LEVEL POSITION DEDICATED TO LOCAL PUBLIC HEALTH**

The Bureau of Communicable Disease Control announces the appointment of a new bureau Local Health Director. Paul Etkind, formerly Director of the Bureau's Division of STD Prevention, is now serving in this capacity, devoting his time to addressing local public health needs related to communicable disease prevention and control. Dr. Etkind has served the Department of Public Health for over 25 years in program management, surveillance and epidemiology positions, including direction of the Epidemiology and Immunization Programs prior to leading the STD Division. The Communicable Disease Control Bureau is very excited about this new opportunity to strengthen partnerships with local communities.

Dr Etkind People can be reached at 617-983-6550 or by email [paul.etkind@state.ma.us](mailto:paul.etkind@state.ma.us).

## INTRODUCING MAHB EXECUTIVE BOARD MEMBER MICHELLE ZEAMER

Michelle Zeamer J.D. joined the MAHB Executive Board this year and serves as an elected member of the Holliston Board of Health. She is an attorney who has devoted much of her professional life to public health issues, especially tobacco control. Michelle comments that she is probably one of the only Tobacco Control Program Directors that is able to answer septic system questions. She is also active in her town's wastewater advisory committee.

**Challenges** - The biggest challenge facing the Holliston Board of Health is the public's perception of the board. Rather than seeing us as the agency responsible for protecting and maintaining the public health of the community we are seen as an obstructionist board that hampers people's attempts to do anything. We are the group that traps people in their homes because they can't sell houses with failed septic systems. If a project is delayed because an engineer did not design something properly it is the Board of Health that is blamed rather than the engineer.

**Most Recently Read Book** - I am currently reading the *Forgotten* by Faye Kellerman and *Chopping Spree* by Diane Mott Davidson.

**Recently viewed Movie** - I don't see a lot of movies, but promised to take the kids to see *Spy Kids 2* before school starts.

**Hobbies** - Gardening, reading, bird watching and our vineyard and winery (Broad Hill Vineyards).

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## PHYSICIANS MAY BE ABLE TO EARN CME'S FOR BOARD OF HEALTH SERVICE

MAHB Executive Director Marcia Benes has been exploring ways to promote physician participation on local boards of health. For two years, MAHB offered CME's to physicians for attending the Certification Program, but the response was too small to warrant the amount of paperwork required to obtain CME approval.

### Holliston at a glance

Town of Holliston 1990 Population: 12,926  
2000 Population: 13,576  
Registered Voters: 8,813  
2000 School Enrollments: 3,078  
Population Over 65: 867  
Square Miles: 18.9  
Public Road Miles: 79.49  
Income Per Capita: \$21,225  
Median Family Income: \$62,712  
EQV Per Capita: \$75,456  
Avg. Tax Bill: \$4,007  
Residential Tax Rate: 17.98  
Commercial Tax Rate: 17.98  
Operating Budget: \$28,679,368

-source Mass. Municipal Association online directory [www.mma.org](http://www.mma.org)

A discussion of this issue with Paul Etkind DrPH MPH, Local Health Coordinator for the Bureau of Disease Control led to the idea for CME credits for service on the BOH.

Dr Etkind followed up with Sharon Nordling, the Manager of the Massachusetts Medical Society's CME Accreditation Program, who gave the opinion that being a BOH member would qualify for Category 2 CME Credits as well as for risk management credits. (Category 1 credits are awarded through accredited conferences, seminars, distance learning, etc. Category 2 credits can be claimed by a physician or education and training provided through other venues.) As part of the CME requirements for licensing, physicians must have 100 hours of CME,s of which 60 can be Category 2. They also need 10 hours of risk management credits, of which six can come from Category 2.

MAHB has contacted the Board of Registration of Medicine and requested a letter affirming that service on the BOH could be used to claim a portion of the required CEUs. Should MAHB receive a positive response to this request, it will be posted on the MAHB website.

## BOARD OF HEALTH RECOGNITION DAY

On Thursday April 25 the Massachusetts Association of Health Boards (MAHB) celebrated the contributions of local boards of health with our 7th annual Board of Health Recognition Day in Nurses Hall at the State House.

The Belmont Board of Health was recognized for their outstanding record of achievement in public health promotion and disease prevention.

The **Public Health Leadership Award** was presented to the **Belmont Board of Health**, an elected three-member board. **Dr. David Alper, D.P.M.**, a podiatrist in Belmont was elected in 1988; **Dr. Robert Eisendrath, M.D.**, a local psychiatrist, was elected in 1989; and **Donna David, R.N., M.N.**, elected in 1993, is a school nurse for a private school located in Belmont.

Collectively the members have volunteered their time for a total of thirty-six years and have been creative and pro-active in their actions on the Board. They have set a high standard for boards of health through early and proactive leadership including tobacco control, non-criminal enforcement and community education and have demonstrated consistent support for their professional staff.

Board of Health Recognition Day was established in 1995 to honor the volunteers who serve their communities on local boards of health, and recognize the contributions of exceptionally dedicated staff. It is an opportunity for board members to share ideas about innovative programs, and inform legislators about local health issues.

The **MAHB Distinguished Service Award** was presented to **Dr Marvin Mitchell** of the Watertown Board of Health.

Dr. Mitchell's early career in medicine began as a U.S. Navy Corpsman in 1945. He is a cum laude graduate (when it meant something) in chemistry from the University of Toledo and earned his medical doctorate from Ohio State University College of Medicine in 1950. He has held positions of Research Fellow for the U.S. Public Health Service

at Tufts New England Medical Center, Chief of Nuclear Medicine and Endocrinology at the Lemuel Shattuck Hospital, Chief of the Diabetes Outpatient Clinic at the Tufts University School of Medicine, and Professor of Medicine at the University of Massachusetts Medical School.

Dr. Mitchell founded the "Hypothyroidism Screening Laboratory" at the State Laboratory Institute in 1975. Massachusetts became one of the first states in the U.S. to screen all newborns for this preventable disorder. Because of his leadership, scientific expertise medical experience and commitment to children's health, serious disease including mental retardation has been prevented in children each year. Dr. Mitchell's contributions to the detection, prevention and treatment of hypothyroidism have benefited children not only in Massachusetts, but also throughout the U.S. and other countries as his pioneering work has been the basis for screening and treatment programs elsewhere.

He has served on the 3 member elected and appointed BOH for more than 20 years and has been responsible for the creation of many programs/regulations, including ETS, Youth Access and Hazardous Materials Regulations. In the last 7 years his advocacy has led to the doubling of the health department staff and programs including but not limited to, a full time Chief Environmental Health Officer, a full time Public Health Nurse, a full time Animal Control Officer, the creation of an environmental and community health internships and a contract food consultant position. New BOH programs include vector surveillance, community needs assessment, hazardous material program, creation of a permanent regional household hazardous waste facility, local health bioterrorism preparedness manual and numerous community health and environmental health educational in-services.

Dr. Mitchell enjoys traveling, water color painting, jogging and gardening. Marvin's wife Delores Mitchell is the Executive Director of Group Health Insurance for Massachusetts. His son and daughter have pursued careers in medicine.

The **MAHB Public Service Award** is presented to a public health professional who serves the community and assists the board of health with compassion, enthusiasm and dedication for public health. **Richard E Weschrob III** received this award in appreciation for his dedication to community health and environmental protection and his outstanding service to the Holbrook Board of Health.

Board of Health Recognition Day was established in 1995 to honor those who serve their communities on local boards of health, and to recognize the contributions of dedicated professional staff. It is an opportunity for board members to share ideas about innovative programs, and inform legislators about local health issues.

This year MAHB also celebrated the success of the BOH Certification Program by recognizing the nine individuals who have attended the training sessions for all six years, from the 1996 Pilot Program, to 2001. During this time we have trained 840 individuals from 238 towns for a total of 1346 training units.

The following Board of Health members received Certificates of Appreciation for their participation in the BOH Certification Program.

Robert Kimball - Salisbury  
Jack LaPuck - Sharon  
Stanley L. Rosen - Sharon  
Susan Smith - Uxbridge  
Barbara Whidby - Athol  
Dawn Peters - Heath  
Walter Murphy - Nashoba  
Peter Cassinari Littleton  
Peg Conley Leicester

Additionally, the following boards of health were recognized for supporting the certification program by attending at least 20 Certification Programs.

Sharon - 40  
Rehoboth - 30  
Athol - 25  
Norton - 22  
Egremont - 21  
Medfield - 21  
Rockland -21  
Northbridge -20  
Salisbury- 20

## State House Report Continued from page 5

- **HB 3156** (introduced by Garry, Pedone and Moore) which would prevent boards of health from imposing sewage and septic tank regulations that are more stringent than those set forth in the state environmental code, “and in particular Title 5 thereof....” **Bill sent to study on October 29, 2001.**
- **HB 3728** (introduced by Poirier) which would prevent boards of health from promulgating or establishing “any health rule or regulation, unless the legislative body in that city, town or municipality has in the first instance voted its approval to establish said rule or regulation....” The only exception to this would be “health emergencies.” **Bill sent to study on July 11, 2001.**
- **SB 491** (introduced by Creedon) which would amend Chapter 111, Section 31 so that board of health regulations would not take effect until they are filed with the Department of Environmental Protection. This law would also render ineffective any board of health regulation adopted before the effective date of SB 491, “and required to be filed with the department of environmental protection by section 31 of chapter 111 of the General Laws, ...until it has been so filed.” **Bill sent to study on July 11, 2001.**
- **SB 496** (introduced by Hedlund) which would require that any board of health regulation or amendment “promulgated after January 1, 1998 that exceeds state regulations relative to septic and cesspool systems shall not apply in a city or town unless approved by vote of the town meeting or city council.” **Bill sent to study on July 11, 2001.**
- **SB 1063** (introduced by Brewer, Moore, DiMasi, Bunker, and Peterson) which would boards of health to file a written application to the commissioner [of the Department of Environmental Protection? – it’s not clear from the bill] to adopt regulations that are more stringent than the state environmental code. **Bill sent to study on October 29, 2001.**

## MAHB Conditionally Opposes

- **SB 535** (introduced by Moore, Murray, Hodgkins, and Simmons) which would regulate the sale and distribution of bottled

## BOARD OF HEALTH AUTHORITY TO REGULATE PRIVATE CLUBS

by Cheryl Sbarra J.D. MAHB Senior Staff  
Attorney & MAHB Tobacco Control Program  
Director

The Loyal Order of Moose, Incorporated, Yarmouth Lodge #2270 recently sued the Yarmouth Board of Health alleging that the Board of Health did not have the legal authority to regulate the lodge because it was a private club. The lodge sought a preliminary injunction to enjoin the town from imposing a smoking ban within the premises. The plaintiff's argument went beyond the smoking ban, challenging the right of the board to regulate private clubs at all.

On August 22, 2002, Judge Richard Connon of the Barnstable Superior Court denied the lodge's motion for a preliminary injunction and ruled that the Yarmouth Board of Health did indeed have the authority to regulate the Loyal Order of Moose.

In January of 2001 the Supreme Judicial Court of Massachusetts held that Boards of Health have the authority to enact regulations "**prohibiting smoking 'in all food service establishments, lounges and bars.'**" Tri-Nel Management, Inc., & others vs. Board of Health of Barnstable & another, 433 Mass. 217, 218, 741 N. E. 2nd 37 (2001) (*emphasis added*). Clearly, a private club falls within the definition of food service establishment. Thus Boards of Health are already regulating private clubs by issuing these permits and inspecting private clubs to insure compliance with the terms of these permits. In addition, private clubs must comply with many other municipal regulations, such as locally issued liquor licenses, building code regulations and fire and safety regulations.

There are other examples of Board of Health authority to regulate "private" establishments. M.G.L. c. 111, § 31 enables Boards of Health to enact septic system regulations that affect private residences that are equal to or more stringent than the State Environmental Code, 310 CMR 11.02 and 15.003(3). Chapter II of the State Sanitary Code enables Board of Health to condemn private residences if it is necessary "in order to protect the health, safety and well-being of the occupants of housing and of the general public." 105 CMR 410.000, as required by M.G.L. c. 111, §127A.

Therefore, the fact that an establishment is "private" does not render it outside of the purview of local regulation. As noted above, the Moose Lodge in Barnstable, Massachusetts recently attempted to make this argument. It failed. The Lodge alleged that "the right of an adult individual to smoke a legal substance in the presence of consenting adults in private places" somehow rose to a "constitutionally protected right to personal autonomy." However, the constitutionally protected personal behavior does not extend to all behaviors that appear to be private. It only extends to fundamental areas of life, such as procreation, childbearing decisions, marriage, divorce and family relationships. No court has extended it to smoking. In fact one court has specifically stated that there is no fundamental right to smoke.

Smoking is not autonomous personal behavior because it affects more than the individual. The Supreme Judicial Court specifically held that secondhand smoke was "a legitimate municipal health concern

justifying municipal regulation . . .” Tri-Nel Management, Inc. & others v. Board of Health of Barnstable & another, supra at 221.

M.G.L. c. 231, §6F enables a party in a civil action to recover “. . . costs, expenses and interest for insubstantial, frivolous or bad faith claims.” In light of the above-described legal authority to regulate smoking in private clubs, it is quite possible that a court challenge to this legal authority would be considered a frivolous claim. A municipality could file a motion for reasonable counsel fees and other costs and expenses it incurs in defending the claim. Town of Brookline v. Melvin Goldstein et al, 388 Mass. 443, 447 N.E.2d 641 (1983).

*The foregoing is intended as educational assistance and not legal advice.*

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State House Report Continued from page 33

water and certain other nonalcoholic beverages (pending the addition of anti-preemption language and the clarification of language that appears to remove one form of existing board of health authority). **Reported out favorably by committee on February 26, 2002. Read for a third time and passed to be engrossed on February 28, 2002. Referred to House Ways and Means on 3/04/02. No further action appears to have been taken on this bill.**

### Conclusions

All in all, this was a pretty dismal year for public health and tobacco control legislation. Although the new cigarette excise tax was passed, giving Massachusetts the highest cigarette excise tax in the country, the new revenue will no longer be dedicated to expanding access to health care. The higher excise tax will, however, in all likelihood, bring the smoking rate down a bit as all excise tax increases do.

The Walrath bill, a fine piece of legislation as originally introduced by Rep. Walrath, was amended to ensure that it would not be preemptive. As originally written by Rep. Walrath, the bill would have banned the free distribution of tobacco products and would have gone beyond the Attorney

General’s regs because it did not contain the exception for adult-only facilities. It could have, therefore, been used to hamper the industry’s attempts to distribute free samples to college students, among other groups. The bill was, however, amended to allow an exception for common victuallers (i.e., restaurants) or innholders (i.e., hotels, pubs, taverns) who are licensed to sell alcohol under Gen. Laws ch. 138, section 12. The amended bill was passed to be engrossed on 7/29/02.

After the decision in Lorillard v. Reilly, the AG’s regs said: No sampling, promotional give-aways, or any other free distribution of cigarettes or smokeless tobacco products, except that, within an adult-only retail facility, no more than one free sample per day may be distributed to an adult. 940 CMR 21.04(1)(a). Adult-Only Retail Facility means a facility where the retailer ensures that no person younger than 18 years old is present or permitted to enter at any time. 940 CMR 21.03. With respect to cigarettes, “sample” means one pack of cigarettes in the smallest size package distributed by the manufacturer for individual consumer use. With respect to smokeless tobacco, “sample” means one can of smokeless tobacco in the smallest size can distributed by the manufacturer for individual consumer use. 940 CMR 21.04(4)(d).

The Walrath bill (as amended) is now weaker than the AG’s regs. Mass. Gen. Laws ch. 138, section 12 is all about the licensing of common victuallers (i.e., restaurants) or innholders (i.e., hotels, pubs, taverns) to sell alcohol. So free distribution can now happen in any place that has a license to sell booze, beer or wine under ch. 138, section 12. There is no requirement that these places keep minors out so long as they do not sell alcohol to minors. So, the Walrath bill now says that the tobacco industry can distribute free samples any time they want in places licensed to sell alcohol under ch. 138, section 12. The industry has, therefore, been given permission to do three great things for itself: 1) continue to distribute free samples in the bars and/or restaurants where college students hang out; 2) distribute free samples in any restaurant that sells alcohol under ch. 138, section 12; and 2) further cement the connection between restaurants/bars, alcohol and tobacco.

Rep. Walrath may be willing to help tobacco control advocates to kill this bill before it is adopted.

Graham Kelder J.D.  
MAHB Staff Attorney

**NOTICE OF ANNUAL MEETING AND PROPOSED BYLAW CHANGES IN CONJUNCTION WITH THE  
CERTIFICATION PROGRAM IN MARLBOROUGH ON SATURDAY NOV. 2ND**

The MAHB Bylaws are being revised after an interval of 8 years and the changes include renumbering of sections, additions of references to email, clarification of language on meetings, membership of sub-committees, and defining the role of the Executive Director. The complete text of the bylaws, in redline-strikeout format is available at our website [www.mahb.org/bylaws](http://www.mahb.org/bylaws). We will ask the membership present at the annual meeting to approve these changes. Please contact the office if you have any questions.

**BOARD OF HEALTH CERTIFICATION PROGRAMS WILL BE HELD AT THE FOLLOWING  
LOCATIONS: (SEE REGISTRATION FORM AND PROGRAM IN CENTERFOLD)**

**INN AT NORTHAMPTON - SATURDAY OCT 19TH**

**MARLBOROUGH ROYAL PLAZA - SATURDAY NOV. 2ND**

**TAUNTON HOLIDAY INN - SATURDAY DEC. 7TH**

**REGISTRATION FORM IS LOCATED IN CENTERFOLD.**



Massachusetts Association of Health Boards  
56 Taunton St.  
Plainville, MA 02762-2144  
tel & fax (508) 643-0234  
<http://www.mahb.org>

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two staples on the left - top and bottom

number of copies - **1,910**

Centerfold should be PDF file (Registration Form) printed on semi-glossy paper.

Journal Paper

Crushed Leaf - Cream with darkest brown ink - Legibility is a concern here.

Please send or fax the bill to Marcia Rising:

76 Treaty Elm Lane

Stow, MA 01775 508-897-2466

**1,880 copies should be sent to ProMail**

Providence RI

The balance, plus invoice copy and disk go to the MAHB office

If you have any questions, please call Marcia Benes - (508) 643-0234

Send CSV (comma delimited file) by modem to Promail

(401) 784 6368. They cannot read db file