



Barnstable County Department of Health and Environment

Barnstable County Department of Health and Environment
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Established under a Special Act of the Legislature in 1926, the Barnstable County Department of Health & Environment (BCDHE) provides regional public health and environmental health services throughout the 15 towns comprising Barnstable County. Services to municipal agencies and residents of Barnstable County are directed primarily through the following divisions:

- Public Health Administration
- Public Health Nursing
- Environmental Health
- Water Quality Testing Laboratory
- Community Septic Management Program
- Emergency Preparedness
- Tobacco Control

Additionally, the Department manages a number of environmental, public health, and homeland security grants that are funded through state and federal resources. The primary mission of the Department is to protect public health and the environment and to promote the physical and mental health and well being of the residents of Barnstable County.

Administration

The Administration Division oversees the Department's budget and programs and provides an avenue through which citizens and towns can obtain services and information relative to public health and the environment. In fiscal year 2010 (FY10), the

Staff Nurses

Alice Forbes, R.N.

Sandra Galvin, R.N.

Seanna Gretchen, R.N.

Linda Iafrate, R.N.

Diana Lawson, R.N.

Carolyn MacDonald, R.N.

Susan O'Neill, R.N.

Deborah Patellos, R.N.

Patricia Ruspantine, R.N.

Margaret Stanton, R.N.

Kathleen Sullivan, R.N.

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Patricia Lindauer, M.S., Health Educator

Administrative Division prepared several grants to support the following: bathing beach monitoring, the Massachusetts Alternative Septic System Test Center, homeland security efforts, public health emergency preparedness efforts, vaccination clinics during the

2009 H1N1 emergency and the Cape Cod Medical Reserve Corps, which serves the towns in the event of public health emergencies.

Public Health Nursing Program

During fiscal year 2010, the public health nursing component of the Department of Health & Environment continued to expand and serve the needs of Barnstable County's Communities. The Program is under the direction of Public Health Nurse Rita Mitchell, B.S.N., R.N., who oversees a staff of eleven contract registered nurses: Alice Forbes, Sandra Galvin, Seanna Gretchen, Judith Griffin, Linda Iafrate, Carolyn MacDonald, Susan O'Neill, Deborah Patellos, Patricia Ruspantine, Margaret Stanton, and Kathleen Sullivan.

Municipal Wellness Program

The Municipal Wellness Program, originally developed for police and fire personnel and expanded to include other municipal employees throughout Barnstable County, has continued to be successful. The goal of the Wellness Program is prevention of disease by encouraging healthy eating and exercise habits as well as the early detection of health issues. These strategies promote overall good health and save municipalities money on medical insurance and lost time. The Wellness Program components include health screening, nutrition education (conducted by Kimberly Condra, Nutritionist for the Barnstable County Cooperative Extension), and stress management. Medical screening is provided for total cholesterol, high-density lipoprotein (HDL), glucose, hearing, blood pressure, pulse, and bone density. A skin analyzer is used to screen for sun damage to the skin. Additionally, printed educational information is available on a large number of topics including but not limited to: heart disease, stroke, cancer, diabetes, cholesterol, blood pressure, osteoporosis, Lyme disease, hepatitis, HIV and AIDS, depression, stress management, alternative therapies, first aid, men's and women's health screening guidelines, back (spinal) safety, substance abuse and child care issues. Separate modules on nutrition and on Ticks and Lyme Disease, Mosquitoes and West Nile Virus, and Rabies are presented to many fire departments on the Cape. Monthly blood pressure screening clinic is offered to County employees from July through December.

The immunization component of the Wellness Program, utilized by many of Barnstable County's fire, police, and DPW departments included: Hepatitis B, tetanus and diphtheria, rabies pre-exposure prophylaxis, pneumonia and influenza vaccines. Tuberculosis (TB) testing was also offered. In response to the H1N1 pandemic of 2009/2010, Department nurses and staff worked with the VNA of Cape Cod, the Cape Cod Medical Reserve Corps, and local health departments to educate and immunize residents of Barnstable County. Thirty new nurses were hired and oriented to assist with this effort. The H1N1 School Preparedness Forum was presented and numerous H1N1 clinics were held for the general public as well as fire and police departments.

The Bladder Cancer Screening Program has continued to serve fire department personnel who are at increased risk for bladder cancer. The simple test provides early detection and treatment of a potentially serious problem. Screenings were scheduled for nine fire departments in fiscal year 2010.

Lyme Disease Prevention Program



The control and surveillance of ticks and Lyme disease as well as an educational tick awareness campaign were continued successfully throughout fiscal year 2010. In addition to presentations conducted by the public health nursing staff and David Simser, Entomologist with the Cape Cod Cooperative Extension, printed informational materials were widely distributed Cape-wide through fairs, mailings and physicians' and veterinarians' offices. The children's program alone reached over 3,500 children during the spring of 2010 and incorporated age appropriate handouts for each group. The Program recognizes the extreme importance of education in preventing this debilitating disease.

Nursing Staff Assistance

Assistance in the form of nursing staff was provided to the Towns of Sandwich, Dennis, Eastham, and Bourne Health Departments in order to hold influenza vaccine clinics for the constituents of those towns.

Public Health Education

Based on the growing needs of the Cape Cod community, the educational component of the Public Health Nursing Program has also grown. More than 80 seminars are now available to the community on a variety of subjects from blood borne pathogens to West Nile Virus.

In-services were developed and provided to nursing homes, assisted living facilities, Headstart, church groups, health service organizations, Councils on Aging, and schools. Rita Mitchell also worked closely with numerous Cape Cod service agencies in fiscal year 2010 to develop new partnerships and strengthen existing collaborations.

ENVIRONMENTAL HEALTH

Logistical Service to Boards of Health

Regular environmental staff maintains the readiness and certifications necessary to assume health agent responsibilities in any town that needs increased temporary assistance for any reason. The Department's close and regular contact with local boards of health and their agents makes any such event seamless to the public requiring service. The Town of Orleans continues to contract with the Department for sanitarian services to supplement their staff.

Support staff faced particular challenges this year with the H1N1 influenza public health emergency. To support the need to staff, supply and organize clinics for schools and the general population, staff member Brian Baumgaertel designed and implemented a web-based vaccine registration program that was credited with maintaining calm and order at many vaccination sites. In addition, many staff members contributed to the coordination of fifty per-diem vaccinators that assisted in rapidly dispensing the H1N1 vaccine.

It has been routine through the years for the Department to employ three temporary (seasonal) health inspectors under the supervision of senior staff member Lynn Mulkeen Perry. These sanitarians assist local boards of health with the increased need for pool and restaurant inspections during Cape Cod's busiest season, therefore relieving strain on local health agent resources. Over 1,100 restaurant/retail food establishment and swimming pool

inspections were conducted under this program in fiscal year 2010 including complaint follow-up and repeat inspections. Additional services included public health inspections and monitoring at the Barnstable County Fair, providing education and communication to the public and local businesses during public health emergencies such as a boil water order and tobacco compliance monitoring. Other inspectional services include hazardous materials, septic systems, housing, retail and rental locations.

Environmental Health and Safety

The Environmental Health and Safety (EHS) Program continues to promote and enhance environmental health and safety in the workplace. Environmental Specialist and Public Health Sanitarian Marina Brock continues to provide and encourage team-based approaches to integrating aspects of Toxic Use Reduction (TUR), proper hazardous material/waste management, pollution prevention (P2) and indoor air quality (IAQ) into comprehensive facility-specific EHS plans. By facility request and using a non-regulatory approach, each facility team initiates, participates and develops its own specific management plan, assuring an investment in its continuation.

Specific assistance offered includes: IAQ assessments, mechanical systems analysis, comprehensive EHS audits, development and implementation of employee training programs, preventative maintenance/hazardous material management/written work safety plans, standard operating procedures, guideline development and other user friendly tools. The Program addressed 35-50 calls per month regarding indoor air quality at residences and small businesses concerned about asbestos, mold, mildew and other airborne contaminants and conducted 43 onsite IAQ assessments at the request of the individual towns. The Program also facilitates and encourages continued awareness and promotion of improved EHS in the workplace. Results include significant risk reduction and loss prevention in the form of avoidance of environmental degradation, occupational illnesses/injuries and negligent liabilities. All of these efforts result in significant cost savings to the town in the form of reduced Workman's Compensation claims and insurance premium costs. The Program underscores what

can be accomplished when existing resources come together as a team towards a unified goal encouraging a safer, cleaner workplace.

In addition to its working relationship with numerous state and federal agencies, the Program has increased the dimension of its activities by forming service partnerships with local educational institutions to provide applied field assistance in the form of direct program service to facilities, operators and employees. A total of 16 students from Massachusetts Maritime and Cape Cod Community College have provided direct service assistance to fifteen municipal entities through applied internships, independent study programs and special projects in the areas of facility audits and the development of written safety and training programs. In addition, the Program also conducted 37 municipal departmental trainings and 43 facility health/safety audits in fiscal year 2010. The Program is developing an ongoing Safety in the Workplace Series designed specifically for the Department of Public Works employees and presented at the EPA National Symposium for IAQ in Washington.

Rabies Awareness and the Cape Cod Oral Vaccine Program

The Barnstable County Department of Health and Environment, in conjunction with the Cape Cod Rabies Task Force, continues to assist towns with maintaining control of terrestrial raccoon rabies on Cape Cod. Presently all fifteen towns throughout Barnstable County have reported positive cases for the raccoon strain of rabies.

The Cape Cod Rabies Task Force (CCRTF), co-chaired by staff member Lee A. McConnell and Karl von Hone, Yarmouth Director of Natural Resources, continues to meet regularly to coordinate with local Health Directors, Animal Control Officers and Natural Resource Officers Cape-wide. Through these coordination efforts, the Task Force works to facilitate the education of town residents and visitors in order to implement town policies and procedures and coordinate the semi-annual distribution of the Oral Rabies Vaccine (ORV).

Since 1994, the Department has worked in conjunction with federal, state and local government

in the fight against this potentially fatal disease. For over a decade the Program was successful in keeping rabies off Cape Cod, using the canal as a natural barrier. Although the rabies-free barrier was breached in 2004, baiting continues twice a year. The goal is to vaccinate wildlife against this disease to reduce and then hopefully eliminate rabies on the Cape. The Cape Cod ORV (CCORV) Program is praised as one of the longest running, increasingly successful projects to control rabies in Massachusetts. Unfortunately, the CCORV Program was one of the many public health initiatives which recently lost its state funding. As a direct result of the CCRTF and local communities' commitment, the United States Department of Agriculture (USDA) will continue to fund the baiting program. Approximately 80,000 baits will be distributed this year in the towns of Yarmouth, Dennis, Chatham, Harwich, Orleans, Eastham, Wellfleet, Truro and Provincetown. The aerial baiting in the Cape Cod National Seashore properties will be conducted with the assistance of the United States Coast Guard (USCG).

The Barnstable County representative of the CCRTF is active in other areas as well. Ms. McConnell coordinates trainings for town police departments, health departments and departments of public works and transfer station staff educating employees about rabies exposure prevention. Communities continue to benefit from the efforts of the CCRTF through annual low cost rabies vaccination clinics as part of a statewide control program.

Bathing Beach Water Quality Monitoring

The task of overseeing an extensive Bathing Beach Monitoring Program was continued by Bethany Sadlowski, Environmental Project Assistant. Supervising a temporary (seasonal) staff of four bathing Beach Sampler/Analysts, Ms. Sadlowski coordinated the sampling and reporting necessary to maintain compliance with the Massachusetts State Sanitary Code for Bathing Beaches, which was amended in 2010. The new amendments required all towns and semi-public beach operators to permit their beaches and install permanent signs indicating dates of operation, contact information for the beach operator, the permit number, and sampling dates. To assist towns and semi-public operators, the Department offered to permit semi-public beaches

in towns that chose not to require a permitting fee. Furthermore, the Department designed and commissioned the production of 450 aluminum signs to meet the new regulatory requirements at the lowest possible cost. The signs were utilized Cape-wide.

Routine monitoring of public and semi-public beaches was performed with follow-up assistance where violations of bacteria standards were observed. Over 4,300 samples were collected and processed during the summer bathing season from 243 marine and 113 freshwater beaches on Cape Cod. Testing results were published real-time and daily on the Department website as well as the state Department of Public Health statewide beach website. During the off season, the Department maintains a yearly summary of information for all public beaches and issues annual reports to the respective town boards of health. Recommendations for follow-up measures in order to reduce public health risks were rendered when necessary.

Regional Wastewater Education and Planning

The Barnstable County Department of Health and Environment actively participates in the Cape Cod Water Protection Collaborative. Department staff serves the Collaborative in a number of functions including membership on the Technical Advisory and Education Committees. The Department continues to be involved with ongoing public education conducted by the Collaborative about the relationship between wastewater and coastal water quality and the need to begin a transition to more advanced wastewater treatment. The Cape Cod Water Protection Collaborative maintains an informational website, www.capekeepers.org, which contains information pertinent to both the Collaborative's regional efforts and local wastewater planning efforts within the towns. CapeKeepers also offers a speakers' bureau; interested parties may contact Cape Keepers via the website to request a speaker for their organization.

Underground Storage Tank Program

The Department continues existing efforts to protect groundwater resources from leaking underground petroleum storage tanks. All boards of health on Cape Cod have implemented regulations requiring

that underground storage tanks be periodically tested and removed from the ground at specified times, typically when the tank reaches 30 years of age. As a service to local boards of health, the Department tracks tanks that need to be tested and removed, and performs soil vapor testing of these tanks to detect any leakage. Environmental Health Specialist Susan Risk manages this program.

Alternative Septic System Tracking Initiative

Concomitant with the use of advanced onsite septic systems is the need for a system of tracking that ensures the systems continue to work as shown by testing and maintenance. During fiscal year 2003, the Department established a database to begin assisting ten towns in tracking the information on these systems so that their actual efficacy in long-term wastewater management could be determined. In fiscal year 2005, this concept was expanded when the Department contracted with Carmody Data Systems Inc. for a web-based database to track system performance. The database allows system operators to report results of inspections and sampling data directly, via the Internet, eliminating the need to send paper reports. Local health departments have access to the database and can log on to receive real-time information on systems in their town. Similar to the Underground Storage Tank Program, the Department tracks system compliance for towns to ensure that advanced on site systems are properly monitored and maintained. In fiscal year 2010 the Department tracked 1,500 permitted systems Cape-wide. Over 800 compliance actions were undertaken on behalf of the towns to ensure compliance with operation and maintenance contract requirements and effluent sampling and reporting requirements. Beginning in FY 2010, wastewater system operators who report to the database are assessed a small fee for each system operated. This requirement has been instituted in an effort to make the program financially self-sustaining and therefore available as a service to towns in the future.

Use of the database has allowed efficient data collection on system performance. In fiscal year 2007, the Department analyzed performance data and prepared a report for local towns summarizing how each type of technology is performing. In fiscal year 2009, the Department received \$38,000 in grant

funding from the Massachusetts Environmental Trust to conduct research relating system performance to household occupancy and water use patterns. Results of this research will be issued as a report to assist towns in identifying systems which are not meeting effluent quality standards and to guide operators in methods to improve system performance. The report will be used by towns to advise decisions on the proper use and management of these systems and will assist in defining the role advanced onsite septic systems play in overall wastewater management.

Reports on the creation and use of the database and on system performance have been presented at national conferences. The web-based reporting system and customized features of the database are becoming a national model that has been adopted by several states and jurisdictions. Environmental Health Specialist Susan Rask oversees the Department's program for development and use of the database; environmental Project Assistant Brian Baumgaertel administers the program.

Alternative Septic System Testing Center

The Massachusetts Alternative Septic System Test Center (MASSTC) is operated by the Department for the purpose of testing new pollutant-reduction technologies and disseminating that information to the towns for possible incorporation into their comprehensive wastewater planning efforts. Established in 1999, the Test Center is operated by George Heufelder and staff members Keith Mroczka and William Klein. It has been at the forefront of developing and conducting testing protocols that establish the efficacy of new technologies, and is supported solely by grants from state and federal sources and subscriber funding.

During fiscal year 2010, at least six technologies or products underwent research and development at the site. Technologies that gave initial promise based on tests elsewhere in the world are also continuing to test under our local conditions. In addition, the Test Center continues to serve as a location where internationally-accepted protocols, established by the National Sanitation Foundation International, can be conducted.

During 2010, the Test Center initiated research on the efficacy of soils-based septic systems for

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removal of pharmaceuticals and personal care products. This project, funded jointly by industry, the US Environmental Protection Agency (EPA) and the State DEP through the Section 319(b) Section Grant Program hopes to identify best management practices for the treatment of this class of persistent compounds. The specific technology class being investigated, drip dispersal, also offers the potential reduction of nutrients in wastewater as well as negating the need for the application of commercial fertilizer in certain instances.

Another project initiated under the aegis of the Test Center in 2010 allows for the installation and monitoring of composting toilets and urine separating devices by Test Center personnel. The project will be used to determine whether the remaining graywater from homes served is sufficiently low in nutrients to enable the strategies to be applied to nutrient management in watersheds. This program also uses lending power afforded by the Community Septic Management Program to finance the installations.

Landfill Monitoring

Consistently stringent requirements for the surveillance of groundwater plumes beneath landfills resulted in the addition of several sampling well locations in multiple towns over the past year. Twelve Cape Cod towns currently depend on Department staff for post-closure or operational monitoring of their landfills, while remaining towns stay in continuous communication with landfill monitoring/sampling staff regarding sampling parameters, procedures and supplies and with the Barnstable County Laboratory staff regarding sample analysis. This results in almost 600 well samplings annually.

The Department has also assisted six towns in the specialized monitoring of soil gases required as part of the landfill closure process. This has required the use of specialized instrumentation and trained staff. The availability of this service through the Department has been financially beneficial to participating towns. Environmental Specialist/Public Health Sanitarian, Lynn Mulkeen Perry, continues to supervise this program with the assistance of Lee McConnell, Environmental Project Assistant.

Regional Emergency Planning Committee

The Barnstable County Regional Emergency Planning Committee (BCREPC) was organized in 2002 to assist Cape Cod communities with preparation for intentional and unintentional hazardous materials emergencies and to ensure municipal compliance with the Superfund Amendments and Reauthorization Act, also known as SARA Title III. As BCREPC has developed over the years, it has seen its role expand to “All Hazards” emergency planning to address homeland security, meteorological, and public health issues that may affect the region.

Fifteen communities on Cape Cod and Nantucket are represented on the BCREPC. Participating towns include Barnstable, Bourne, Brewster, Chatham, Dennis, Eastham, Harwich, Mashpee, Orleans, Provincetown, Sandwich, Truro, Wellfleet, Yarmouth and Nantucket. Additionally, many private and public sector agencies also have membership on the committee including the Barnstable County Sheriff’s Office, the Barnstable County Resource Development Office, Cape Cod Commission, Cape and Islands Chapter of the American Red Cross, Cape Cod Hospital, Falmouth Hospital, American Red Cross, Army National Guard, Coast Guard, 102 Fighter Wing, Cape Cod Medical Reserve Corps, Cape Cod Transit Authority, NSTAR, the Massachusetts Maritime Academy and the Massachusetts Emergency Management Agency. Chief George Baker of the Mashpee Fire Department and Chief Michael Whalen of the Dennis Police Department serve as the chair and vice chair respectively. Jeffrey Luce from NSTAR Electric & Gas Corporation served as the secretary until the end of the fiscal year when he retired from his NSTAR position. BCREPC would like to thank Jeff for his many years of service to the Cape and Islands and to the committee.

Businesses and municipalities that use OSHA hazardous chemicals, extremely hazardous substances, or Section 313 toxic chemicals at their facilities are required to comply with the Emergency Planning Community Right to Know Act (EPCRA), a regulation under SARA Title III; and report their inventory to the local or regional emergency planning committee. Earlier this year, the BCREPC received Tier II Hazardous Chemical Inventory Reports for 300 facilities in Barnstable and Nantucket Counties. This is a 30 facility increase in chemical inventories

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and information submitted for fiscal year 2010. Facilities are assisted in the Tier II reporting process in a proactive manner. Compliance assistance workshops, site visits in coordination with local fire departments, and consultations are provided year round to educate and assist the operators of hazardous materials facilities with the complexities of this regulation. The data collected each year are utilized by the BCREPC and/or local fire departments for hazardous materials incident pre-planning and response. This continuous education and compliance cycle has resulted in improved relationships with the numerous Tier II facility operators and more familiarity by local fire departments with facilities housing large quantities of hazardous materials. The consistent compliance of the Tier II facilities increases firefighter protection, and lessens that facility’s regulatory and accident liability. Dukes County separately coordinates their Tier II Hazardous Chemical Emergency Reports through their Local Emergency Planning Committee (LEPC).

A tabletop exercise of a simulated anhydrous ammonia leak from a Tier II Hazardous Chemical Inventory Reporter was held at the Massachusetts Maritime Academy (MMA) in June. The scenario was developed and presented by the Emergency Management Department at the academy. This exercise was developed, planned and implemented by the senior cadets working under the supervision of the REPC. Participating Agencies included the Hyannis, Sandwich, Eastham, Wellfleet, and Dennis Fire Departments, Barnstable Police Department, Mass Department of Public Health, MEMA, the Department of Homeland Security, Massachusetts District 1 Hazardous Materials Response Team, Barnstable County Sheriff’s Office, Massachusetts DEP, and various Tier II facility representatives.

The fifteen communities on Cape Cod and Nantucket represented on the BCREPC also received ongoing Emergency Preparedness educational services throughout the year. This included regional trainings in WEB EOC, the Emergency Response Guidebook for hazardous materials, and emergency alert training through the Health and Homeland Alert Network (HHAN).

The Cape and Islands Chapter of the American Red Cross and BCREPC continued to develop a Regional

Sheltering Plan for Barnstable County. The plan will establish strategically placed shelters on the Lower Cape, Mid-Cape and Outer Cape that will be the first to open and the last to close in response to emergencies and disasters. On December 19, 2009 BCREPC utilized the draft plan to open 4 shelters on Cape Cod as a response to a blizzard that affected the area. The locations were the Sandwich Oakridge School, Dennis Yarmouth Regional High School, Cape Cod Regional Technical High School and the Nauset Regional High School. Shelters were opened before the storm arrived and closed after roads were cleared of snow and ice on December 20th. Operation of the shelters was coordinated through the American Red Cross Cape and Islands Chapter, the Cape Cod Disaster Animal Response Team and the Barnstable County Incident Management Team, which established a Multi Agency Coordination Center (MACC) at the Massachusetts Military Reservation. Municipal agencies such as emergency management, police, fire and school departments were the key to getting these shelters opened in a timely manner. The Amateur Radio Emergency Service coordinated internal shelter communication and external communication with the MACC. Overall, the opening of the shelters and the deployment of volunteers was a great success.

Additionally, exercises were conducted at two of the shelters during fiscal year 2010 to further test the locations' capabilities. On November 14, 2009, a deployment drill was conducted at the Sandwich Oakridge School. Representatives from our partner volunteer agencies and officials from the Town of Sandwich were very successful simulating the shelter opening for a weather event. This was an excellent practice opportunity since this shelter was opened for a real event in December. On March 27, 2010 a similar exercise was conducted at the Nauset Regional High School in Eastham. Representatives from Eastham, Wellfleet and our volunteer agencies had a successful day evaluating the facility's capabilities.

Cape Cod and the Islands had a few narrow escapes during the 2009 hurricane season. In August 2009, Hurricane Bill showed potential for passing close to the Outer Cape and Nantucket during its path up the coast. Conference calls and meetings with state and local response agencies were coordinated by BCREPC

to prepare for the storm which passed safely out to sea. By fostering and encouraging communication, resource sharing, and emergency asset identification, the region is continuing to improve its ability to respond to large disasters, making BCREPC an essential element in Barnstable County's emergency response.

This year, the BCREPC also continued to develop and train its own Incident Management Team (IMT). The IMT is deployed during times of widespread cross-jurisdictional emergencies to assist local response agencies with the movement and deployment of response assets. This fiscal year members of the IMT were deployed twice by the Commonwealth of Massachusetts to assist with major events in the state. In March, the IMT assisted the Massachusetts Emergency Management Agency with their response to flooding issues that affected Southeastern Massachusetts. The IMT also assisted with municipal requests for assistance and the development of Incident Action Plans. The IMT was again called in May to assist MEMA with their response to the Massachusetts Water Resources Authority (MWRA) water emergency. Team members assisted the Commonwealth with the distribution of bottled water to the City of Boston and the surrounding communities during a boil water order that affected over a million people. Other IMT deployments include assistance to the town of Provincetown on July 4, 2009 to manage Emergency Medical Service dispatching as a part of the towns annual Fourth of July festivities, and assistance on December 19, 2009 to the Barnstable County Sheriff's Department Operated Regional Dispatch Center to assist with weather related support functions due to a predicted winter storm.

Cape Cod Medical Reserve Corps

The Cape Cod Medical Reserve Corps (CCMRC) became a part of the Barnstable County Department of Health and Environment last year at the request of the Cape and Islands Health Agents Coalition. Directed by Jean Roma M.S.N., A.P.R.N.-B.C., the CCMRC is fiscally supported through state and federal grant money received by the coalition annually and currently maintains a database of 392 volunteers. The mission of the CCMRC is to engage volunteers to strengthen public health, emergency

response, and build community resiliency. To achieve this mission, CCMRC is committed to building a self-sustaining, trained and credentialed volunteer force.

The biggest challenge of fiscal year 2010 was the declaration of the H1N1 Influenza as national pandemic with state and national protocols reflecting an expanded role for clinical CCMRC volunteers. As an emergency act declaration, the Public Readiness and Emergency Preparedness Act allowed liability coverage for CCMRC volunteers during the pandemic. As a result, the CCMRC staffed 57 clinics throughout Cape Cod with over 102 clinical and non-clinical volunteers in 14 out of 15 communities between September 2009 and May 2010. This resulted in a savings to the towns in excess of \$65,000. Additionally, eight volunteers worked with individual health departments answering questions concerning H1N1, booking appointments, and assisting with paperwork prior to clinics.

The second challenge of the CCMRC in fiscal year 2010 was presented as a result of the Recovery and Reinvestment Act, which for a short period of time provided the opportunity to access free vaccines including Shingles, Tetanus and Diphtheria (Td), Tetanus, Diphtheria, and Pertussis (Tdap), Hepatitis A, Hepatitis B, Measles, Mumps, and Rubella (MMR), and Varicella. Barnstable County Department of Health and Environment worked with the Health Agents Coalition to staff regional clinics in the Upper Cape, Mid-Cape and Lower Cape communities. The CCMRC Director Jean Roma was the lead nurse for these clinics; facilitating the ordering of vaccines, administrating the vaccines, ensuring proper storage and handling of the vaccines, getting signed MD orders, setting up emergency protocols, and satisfying all of the logistical challenges that present with an off-site clinic. The five clinic sites were also used as training exercises for Emergency Distribution Sites (EDS). Lessons learned from our H1N1 distribution were put into action with an increased efficiency in the delivery of vaccines. Due to the need for booster doses on several of the vaccines, the CCMRC Director will continue to run monthly immunization clinics to facilitate delivery of 2nd or 3rd doses of vaccine through February 2011 to the residents of Cape Cod. Through this program, 1,104 free doses of vaccine have been administered resulting in a savings

in excess of \$150,000 in vaccine costs.

The third major initiative undertaken by the CCMRC was the Safe Sun Project which provided sun safety education to a 13-18 year old target population on 14 of Cape Cod's beaches. Educational sessions were held from 10am-4pm three days per week for six weeks in July and August of 2010. The Project was co-sponsored by the Barnstable County Department of Health and Environment and the CCMRC, and also utilized an intern from the Massachusetts Department of Public Health as well as 20 CCMRC volunteers. Beaches were strategically selected to reach the 13-18 year old target population. Participants were asked to complete and submit a pre-survey designed to determine the current level of knowledge concerning ultraviolet exposure, which was then followed by a ten minute informational presentation on sun safety. Lastly, a post education survey was completed to measure any increase of knowledge resulting from the intervention. Over 500 surveys were completed by the target population, with sun safety education being provided for all age groups (approximately 3,000 total participants). All participants were rewarded with free promotional items including posters, handouts, safe sun tee-shirts, safe sun beach balls, SPF 30 sunscreen, SPF 30 lip balm, and individual packets of SPF sunscreen.

A Department staff member who co-sponsored the Safe Sun Project is currently analyzing data collected in the pre- and post-surveys. This collaborative program is being presented at two upcoming public health conferences in the hopes of sharing information and encouraging the replication of our efforts in other communities.

The fourth initiative of the CCMRC involved preparing and staffing the medical component of Barnstable County's six regional shelters. Extensive supplies were ordered and housed in storage containers at each shelter. In preparation for Hurricane Earl, five shelters were staffed and operated by CCMRC. Six teams composed of two RN's, a mental health provider, and a non-clinical team leader were assembled and pre-positioned at each site. In addition, 20 CCMRC volunteers were deployed to assist the Red Cross with their health care services, with an additional 30 volunteers prepared

to provide relief if needed (we recently finalized our memorandum of understanding (MOU) with the Red Cross in order to continue to foster a successful long-term partnership).

The fifth initiative that the CCMRC coordinated was the distribution of 1,500 "Emergency Preparedness Bags". Each bag bears the CCMRC logo and a list of items (medications, batteries, first aid kit, etc.) to be stored in the bag for use in emergency situations. The bags were distributed several days in advance of Hurricane Earl's arrival to all of the 15 senior centers on Cape Cod, Cape Abilities (a sheltered workshop for the developmentally disabled), Community Connections (a life skills program for the developmentally disabled), the Kennedy Donovan Center (a family support program for the developmentally disabled) and CORD (Cape Organization on the Rights of the Disabled). The distribution process presented an opportunity to speak with vulnerable populations about emergency preparedness, address fears and answer questions.

Other CCMRC initiatives in the community include seasonal flu clinics, speaker presentations (Tick Borne Diseases, Emergency Preparedness, and Adult Immunizations) and deployment of a pharmacist to the medication collection site in Eastham. In addition, CCMRC's Director Jean Roma has conducted several trainings including CPR, renewal CPR, First Aid, Strategies for Dealing with Cognitively Impaired People in a Disaster, Incident Command 100 and Incident Command 700, Emergency Preparedness, and Radio Communication. During fiscal year 2010 trainings have also been made available to volunteers using the Core Competencies as outlined in the National Medical Reserve Corps Guidelines.

Water Quality Laboratory

The Barnstable County Laboratory provides analytical services both directly to the public and to the municipalities on Cape Cod. One primary directive of the laboratory is to provide high quality analyses of various contaminants in drinking water. Accordingly, the laboratory assists the water districts and departments on Cape Cod in meeting the monitoring requirements necessary for adherence to state and federal water quality standards. Water districts and departments benefit from the flexibility

of the laboratory to assist when periodic problems arise, such as the seasonal and transient occurrences of bacteria. The Laboratory also provides analytical services to owners of private drinking water wells. Weekly pick-up of private well samples is conducted for Wellfleet, Truro, Eastham, Brewster, Falmouth and Mashpee.

In addition to drinking water, the Laboratory conducted a wide variety of environmental analyses during fiscal year 2010 including bathing beach water quality (over 4,300 samples processed), shellfish harvesting area, ponds and lake samples, wastewater samples from the Alternative Septic System Test Center, swimming pool and spa samples, and samples associated with town-requested special projects. Special projects include a continuing town-wide assessment of nitrates in Eastham and Truro, pollution source identification near bathing beaches, and special projects associated with services provided by environmental field staff. Another major effort of the laboratory is to provide analyses associated with groundwater samples beneath sanitary landfills. These analyses are conducted at significant savings to the towns and are collected by the Environmental Health Division field staff.

Barnstable County Laboratory is a Massachusetts State Certified Laboratory. In fiscal year 2010, the Laboratory was successfully certified by the Massachusetts Department of Environmental Protection (MASSDEP) for analysis of *E.coli* in ambient water and wastewater using EPA 1603, and for simultaneous analyses of total coliform and *E.coli* in potable water using EPA 1604. At the same time, the Laboratory was successfully certified by MASSDEP for analyses of total dissolved solids (SM 2540C), fluoride (EPA 300.0), total organic carbon (SM 5310B) and total suspended solids (SM 2540D) in non-potable water. On-going certification of new analytical parameters enables the Laboratory not only to closely follow any new rules and regulations from MASSDEP and the United States Environmental Protection Agency (USEPA), but also to enhance its analytical capability in order to better serve local municipalities and the public.

The Laboratory also continues to operate a new flame atomic absorption spectrometer and an inductively

coupled plasma mass spectrophotometer to analyze for a larger suite of metals. These capabilities allow the Laboratory to assist towns in their compliance monitoring beneath landfills. The use of both automated instruments results in significant savings to the towns for these analyses.

The Laboratory continues to work as a team to improve its operation and enhance quality assurance and quality control measures. The Director of the Laboratory, Gongmin Lei, also conducts routine quality assurance checks and audits of all subcontracted laboratories. This year witnessed an increase in lab revenues compared with previous years, as well as increased savings for most water departments on the Cape through the maintenance of reduced sample costs.

Community Septic Management Program

(a/k/a Septic System Repair Loan Program)

The Community Septic Management Program (CSMP), aimed at upgrading failed residential septic systems to Title 5 standards, was made possible by the enactment of the Open Space Bond Bill of 1996. This law appropriated \$30 million to the Massachusetts Department of Environmental Protection (MASSDEP) to assist qualified homeowners in defraying the cost of complying with Title 5 regulations. In turn, MASSDEP used this appropriation to fund loans through the Massachusetts Water Pollution Abatement Trust (MWPAT).

In past years, the Barnstable County Department of Health and Environment administered this program on behalf of all fifteen Cape towns. In that process, after securing town meeting approval for a typical \$200,000 appropriation, loans could be distributed to qualified homeowners at a 5% interest rate payable over a maximum 20-year term. More than \$8.5 million was borrowed by Cape Cod towns for septic system upgrades through the early part of 2006. This money provided financial assistance for the installation of approximately 1,400 septic systems.

As a way of streamlining the Program, Barnstable County recently secured special legislation allowing the Program to borrow money directly from the MWPAT. This relieved the burden of towns by

eliminating the need for town meeting approval for borrowings. In addition, towns no longer were required to bill and collect regular payments from homeowners or track loan repayments to the State Revolving Fund. Foremost however, the passage of this legislation eliminated funding lapses that occurred when towns ran out of money prior to a town meeting vote. Presently, appropriation of funds by the Assembly of Delegates provides for the Program's uninterrupted service to the citizens in Barnstable County for replacing their septic systems.

The Program began making loans Cape-wide in this manner in May of 2006. The interest rate charged to homeowners remains at 5% as does the 20-year repayment term. The Program recently incorporated flexible payment plans (monthly or quarterly) after conducting a survey of needs. Septic system repair projects completed for the fiscal year ending June 30, 2010 totaled 381. This translates into \$4.43 million in project costs. At the present rate of application approval, it is expected that approximately 400 projects totaling \$4.5 million or more will be completed on an annual basis. Program funds from the state remain available into the foreseeable future.

It is important to note that that this program is self supporting with all costs including. The salaries of the administrator, Kendall Ayers, and assistants Angela Do Carmo and Cinthia Wallace, and costs associated with legal expenses such as title searches and recording fees at the Registry of Deeds covered by the interest charges from program participants.

Ultimately, this program, which has always been beneficial for the region, has now become a much more effective and efficient means of assisting area residents with often cost-prohibitive yet essential septic system requirements.

Cape Cod Regional Tobacco Control Program

Under the direction of Robert Collett, the Cape Cod Regional Tobacco Control Program (CCRTCP) is supported through a state grant administered by the Barnstable County Department of Health and Environment. The grant enables staff members to provide collaborative member towns, including Cape Cod's 15 towns, Martha's Vineyard, Nantucket and

Wareham, with education and enforcement services to assure compliance with state and local regulations. The regulations pertain to youth's access to tobacco products and smoking in indoor public areas and workplaces.

The Program's education efforts include two annual visits to tobacco merchants in all twenty-seven communities within the service area, totaling 1,040 visits, and assisting local Boards of Health with promulgation and implementation of tobacco control regulations. Two tobacco compliance checks (utilized to assure compliance with youth access laws) are conducted in each town within the service area for a total of 1,064 checks. In addition, 425 area tobacco retailers were surveyed to assess availability of "Other Tobacco Products", such as little cigars, blunt wraps, dissolvable tobacco products, etc. During fiscal year 2010, the Program also conducted nine inspections of workplaces in response to public complaints regarding smoking, and ensured compliance with smoking laws at all middle schools and high schools. The Cape Cod Regional Tobacco Control Program was represented on the Falmouth Substance Abuse Commission, and provided educational seminars to several PTA's, school nurse's groups, and local boards of health, showcasing the aforementioned "Other Tobacco Products".

In response to a heightened interest in smoke-free public housing and condominium complexes, CCRTCP has provided guidance throughout fiscal year 2010 to several residents and management staff of these entities.

An advisory panel consisting of one representative from each collaborative member town meets semi-annually to review policy and initiatives and help guide the Program.



Bacterial plate from the laboratory showing the growth of Enterococcus. This organism is used to classify the saltwater bathing beaches throughout Cape Cod.



Lynn Mulkeen-Perry begins sampling one of the 600 landfill well samples taken and processed annually on behalf of towns.



Marina Brock of the Environmental Staff assist facilities in assessing the risks of improperly stored or aging hazardous chemicals.



Kendall Ayers, Angela DoCarmo and Cinthia L. Wallace of the Septic Betterment Program discuss a betterment loan. Loans are made throughout Barnstable County for the replacement of septic systems.