

Division of Environmental Health and Engineering 2004-2005 Annual Report



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MIAMI-DADE COUNTY HEALTH DEPARTMENT

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"To promote and protect the health of our community through prevention and preparedness today, for a healthier tomorrow."

Table of Contents	Page
Executive Summary	3
Drinking Water Program	4
Beach Monitoring	5
Sentinel Chicken Program	6
Indoor Air Quality	9
Community Hygiene	9
Food and Group Care	12
Onsite Sewage Treatment Disposal Systems	14
Business Indicators	15
Administrative Indicators	17
Governor's Sterling Award	18
Community Partnerships	19
2004-2005 Accomplishments	19

Executive Summary

Miami-Dade County (MDC) is the largest county in the state of Florida in regards to population, and likewise, the Miami Dade County Health Department (MDCHD) is the largest County Health Department among its peers. The MDCHD serves some 2.3 million south Floridians on a daily basis whether it be through direct client services, protecting our drinking water and waterways, providing assistance to refugees or expectant mothers and children. Vital to ensuring the health of the community are those services that assure that the environment is protected and safe for our residents. This responsibility falls under the care of the Division of Environmental Health and Engineering (DEHE).

Environmental Health and Engineering staff are charged with some of the most important aspects of protecting the health of the public. We are not only responsible for ensuring that we are good stewards and prevent human activities from harming the environment, we are also concerned with making sure that our environment does not harm people. We do this a number of ways but primarily through the inspection and investigation of conditions, facilities and activities that serve or are used by the general public.

During the Fiscal Year (FY) 2004-2005, the Division performed thousands of inspections and answered hundreds of complaints regarding the environment. These complaints and inspections were carried out by highly skilled and trained individuals with a variety of backgrounds who bring a wealth of experience to the Division. Behind the scenes are a staff of clerks and other technicians who assist the organization further through administrative duties, information technology, and maintenance support.

The Division focuses on organizational performance excellence, an ideal that is championed by our governor as a standard by which all state institutions should function. We measure our performance through compliance with meeting or exceeding program expectations. These expectations, or goals, consist of performing all required regulatory inspections of facilities or institutions, responding to complaints by the public within a predetermined time period, through our client satisfaction requirements and by adhering to limits within our revenue supported budgetary expenditures. Compliance is tracked on a quarterly and yearly basis. We strive for 100% compliance for each section of the Division. For the 2004-2005 FY, the Division was severely understaffed and believes that additional reassignments due to a record number of hurricanes contributed to overall lower compliance results.

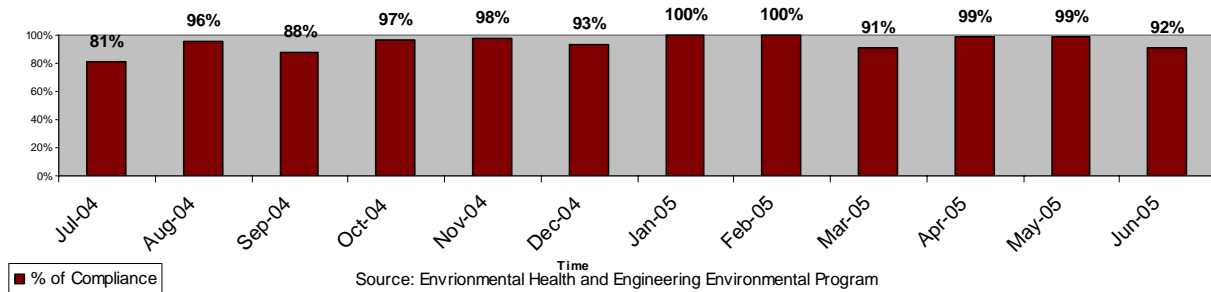
Drinking Water Program

The waste produced from human activities such as farming, manufacturing, driving our cars and walking our pets can severely impact the water that we use for drinking, cooking, and bathing. These activities can contribute to the contamination of our water by chemicals, minerals, and pathogens. In Florida, the Safe Drinking Water Act serves as a safeguard to protect water supplies that serve the public. Federal and State standards were developed to ensure compliance with the Act and ensure that our water supply is safe and free of contaminants for our citizens. From limited use water systems that serve only a handful of people, to large facilities that serve over a million users, all of the public and private water systems in the county that provide water for close to 2.3 million residents and visitors are monitored by the Environmental Engineering staff within the Division.

The staff within the drinking water program provide a variety of services to ensure compliance with state and federal standards. They do this by performing inspections of water distribution systems and facilities, reviewing water treatment plans for permitting and through regular surveillance and monitoring of bacteriological and chemical testing that is performed monthly, quarterly and sometimes yearly. Their testing may include those for bacteria, petroleum products, toxic chemicals or any number of other contaminants. They are also called upon to provide sampling following suspect waterborne illness complaints, or, in the event of a natural disaster, problems that may have affected water systems.

During the fiscal year 2004-2005, staff engineers and inspectors collected or tested almost 20,000 samples for quality control purposes and compliance with federal and state drinking water regulations. Of these, they collected nearly 8,000 separate water samples to test for Bacteriological and Chemical contaminants. They also investigated over 350 individual complaints while performing over 750 sanitary surveys and inspections of water producing facilities. They investigated over 1,200 sanitary survey and water quality complaints, and reviewed and certified for use more than 550 permit applications and plans for new or modified water mains or water plant additions.

Figure 1. Drinking Water Facility Sampling and Inspection Compliance Percentage, Fiscal Year July 1, 2004 to June 30, 2005

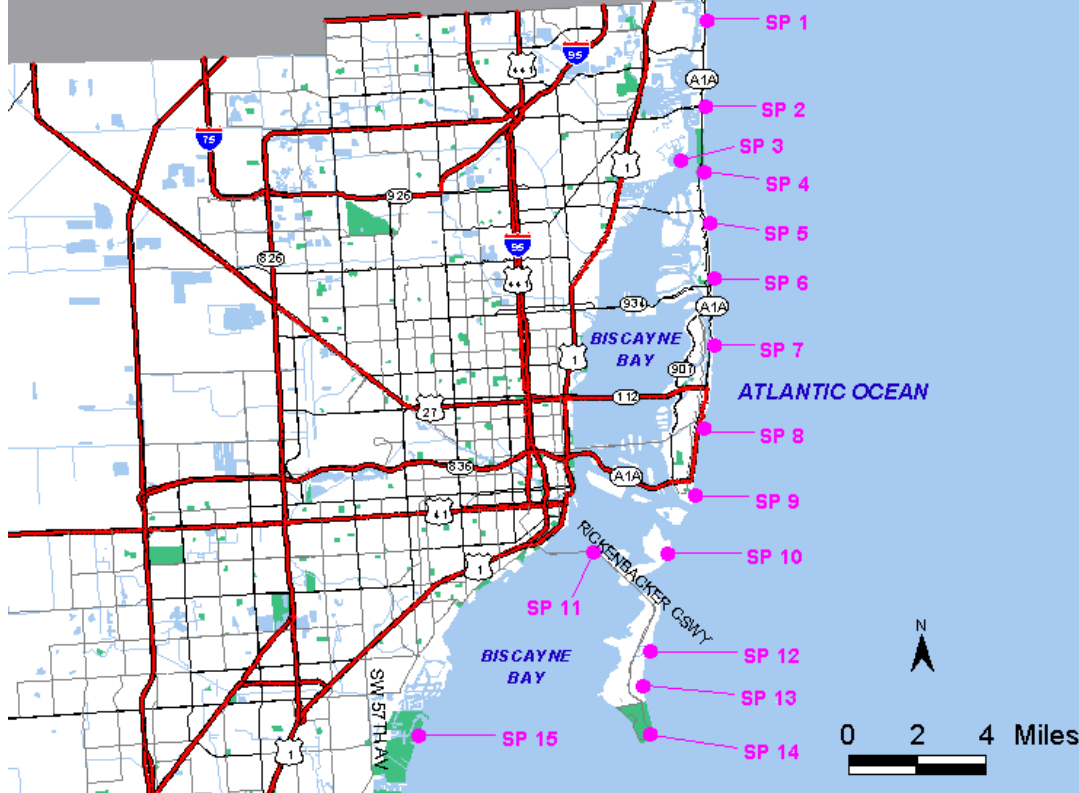


Beach Monitoring Program

In 1998, MDC became one of five original counties to participate in a grant-funded pilot program to monitor beaches. Division staff had already been monitoring our beaches for some time and MDCHD was one of the original participants to spearhead a new program funded by the Department of Environmental Protection and the Environmental Protection Agency. The aim of the program was to detect contamination and provide advisories when recreational waters possessed high enough levels of fecal coliform or enterococci or enteric bacteria that might cause disease. These bacteria naturally inhabit the intestinal tract of humans and animals, and fecal pollution may result from agricultural or storm water runoff, wildlife or pets, or human sewage.

Division staff monitored fifteen sites in MDC on a weekly basis, with additional sampling conducted in response to offshore sewage discharges. During the report period the staff collected and tested 1,340 routine samples and an additional 50 non-routine samples. In addition to sampling for this program, DEHE also had a contract with MDC Parks & Recreation to provide sampling at 10 predetermined sites within county parks. This sampling is conducted twice monthly during the summer months and monthly the rest of the year. During the reporting period, our program issued 5 health advisories to the public in three different months.

Figure 2. State approved Beach Monitoring Sites in Miami Dade County



Source: Florida Department of Health, Healthy Beaches Program
<http://esetappsdoeh/irm00beachwater/beachresults.aspx?county=Dade>

Arboviral Surveillance/Sentinel Chicken Program

The Division participates in the surveillance of mosquito borne viruses by means of the Sentinel Chicken Program. West Nile Virus (WNV), St. Louis Encephalitis (SLE) and Eastern Equine Encephalitis (EEE) are arboviral encephalitides endemic throughout Florida. These diseases are maintained within mammal or avian populations and are spread to humans through the bite of a mosquito. This program was initiated in March of 2003 and interacts closely with city and county mosquito control personnel to monitor the geographic distribution and incidence of positive mosquito pools, contaminated sentinel chickens, dead birds and suspect or confirmed cases of the West Nile Virus in animals, humans or horses. Data generated by this program is shared with neighboring counties as well as the Florida Dead Bird and Arbovirus Sentinel Surveillance Systems, neighboring county Health Departments, the Department of Agriculture and Consumer Services, and the Miami-Dade County Mosquito Control Program.

Division staff cared for and sampled a total of 36 chickens located at 6 different sites throughout the county. West Nile Virus activity was observed at three different locations in 2004 but none in 2005. In August and September, Site #1 had 3 and 2 positive results, respectively. Site #3 had 1 positive result in September and Site #5 had two. No EEE or SLE results were detected in the chickens during the reporting period. In addition, no mosquito pools from the area tested positive for any of the viruses.

Figure 3. Environmental Health Staff Tagging a Sentinel Chicken



**Figure 4. West Nile Virus Positive Sentinel Chickens by Site
Fiscal Year July 1, 2004 to June 30, 2005**

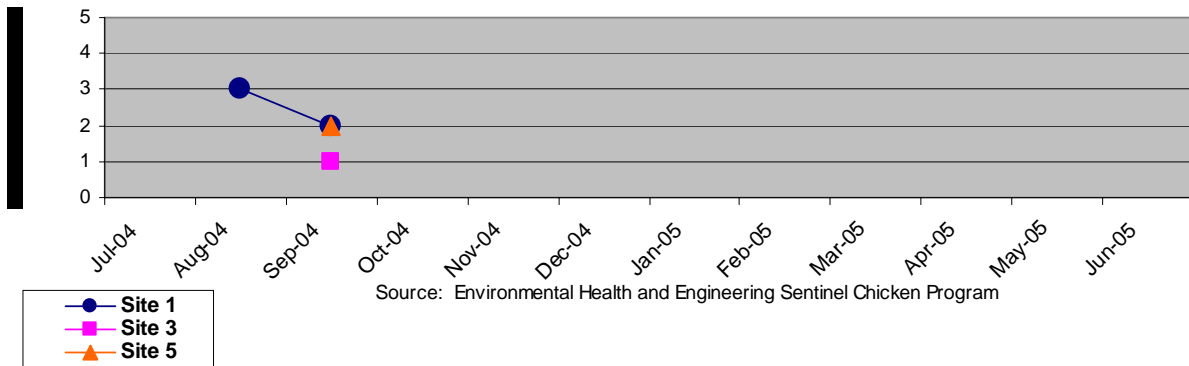
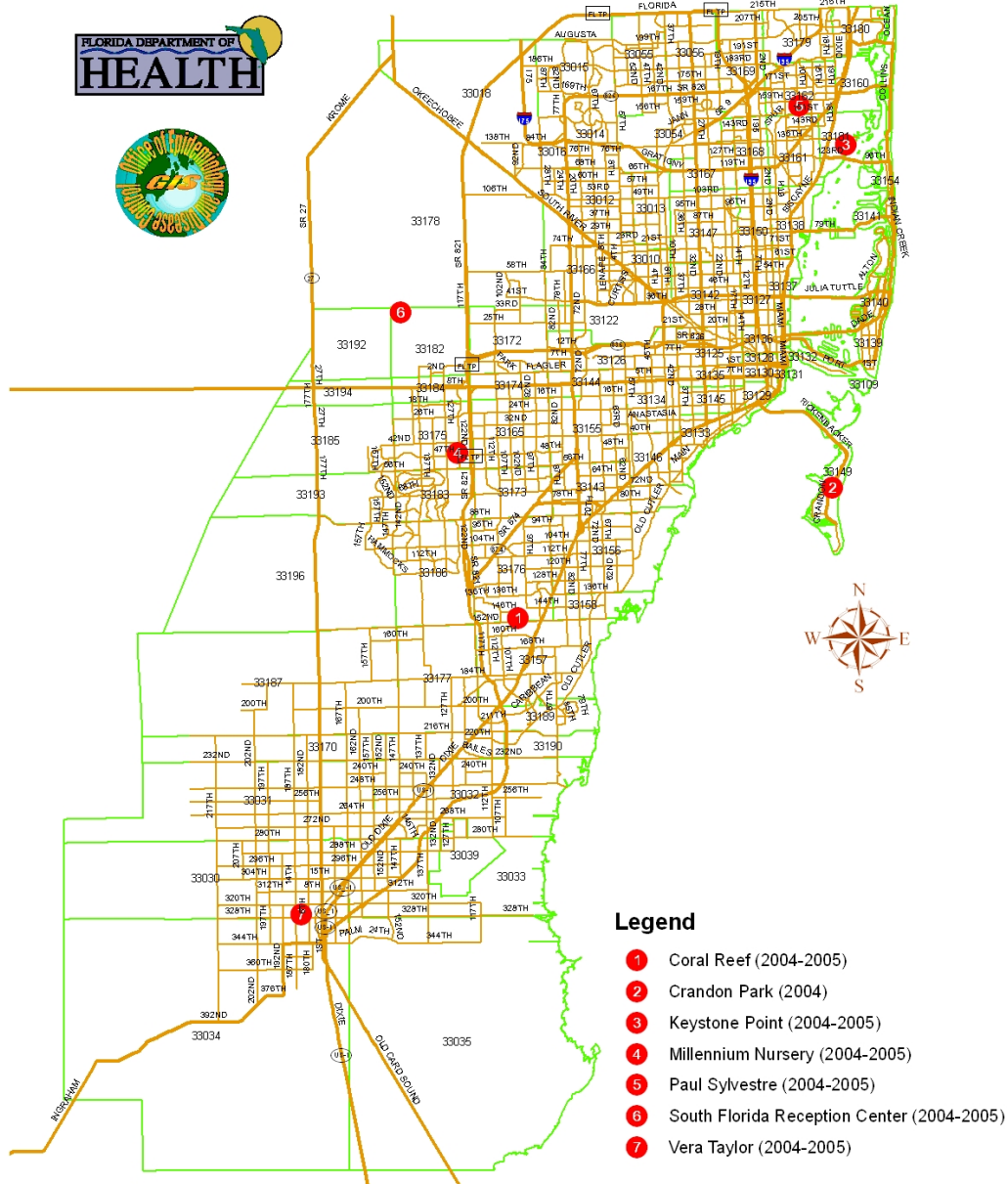


Figure 5. Map of Sentinel Chicken Flocks in MDC

Sentinel Chicken Sites in Miami-Dade County 2004-2005



*NOTE: The Camden Park Location was no longer used as a sentinel flock site in 2005

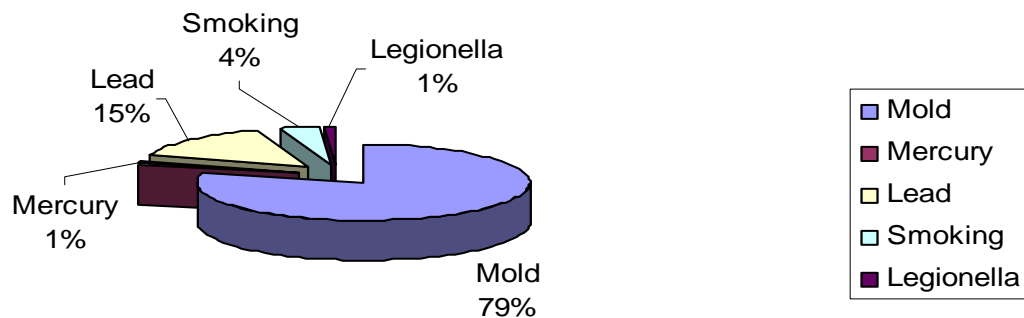
Source: Environmental Health and Engineering Sentinel Chicken Program, Map Courtesy of the MDCHD Office of Epidemiology and Disease Control

Indoor Air Quality

The purpose of this program is to minimize the risk of exposure to air pollutants in indoor environments through field inspections, public education, and the monitoring of air quality. The program also regulates smoking in public places under the Florida Clean Indoor Air Act (FCIAA), and investigates complaints from the public regarding allegations of smoking in public gatherings and work places.

For this reporting period, staff received 240 indoor air quality complaints. Seventy-nine percent of these complaints were mold related, and the rest were related to Mercury, Lead, Smoking and Legionella disease. The Indoor Air Quality section reached 100% compliance in all four quarters of the fiscal year responding to all complaints within the required 72 hours.

Figure 6. Percentage of Indoor Air Quality Compliants by Type, Fiscal Year July 1, 2004 to June 30, 2005



Source: Environmental Health and Engineering Indoor Air Quality Program

Community Hygiene Program

The Community Hygiene Program works with a variety of governmental agencies including police officers, code and compliance departments, public works and similar entities to correct Environmental Health nuisances and public health threats in targeted MDC neighborhoods. The program does so by responding to complaints, conducting block inspections, and promoting clean and safe communities. In addition to these hands on activities, the staff also participates in or conducts health fairs, organizes clean-up campaigns and makes community presentations that allow for the dissemination of information to residents in the community. It is believed that such education may lead to behavioral change and improved environmental conditions.

This program is divided into a number of sections that address problems such as community blight, rodent infestation, sewage problems, solid waste and building/structural compliance which are all part of the Environmental Quality Index (EQI), a tool designed to capture these stressors on the environment. Staff also assist with arboviral surveillance by collecting dead birds reported by the community and submitting them for testing to the state laboratory. They also provide additional support to the sentinel chicken program.

Figures 7, 8. Community Hygiene Program Staff Assisting Residents and Working with Other MDC Agencies.

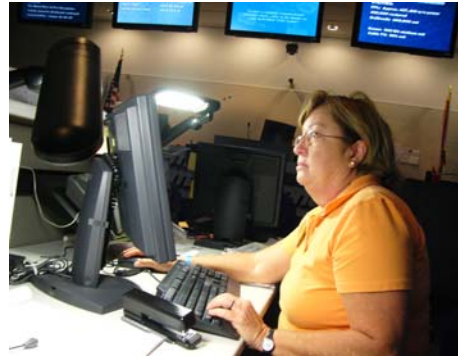


Source: Environmental Health and Engineering Community Hygiene Program

The Neighborhood Improvement Program is in the process of computerizing field data entry for environmental quality, rodent control, and complaint investigation. This project will allow the program to direct resources to the areas of the county that are most in need. Each staff member will be using a small hand held Personal Digital Assistant (PDA) which will be loaded with EQI, rodent control and the complaint investigation forms. These PDA's are equipped with Global Positioning hardware and software to capture position coordinates for inspections and assessments. This process will provide more accurate field data entry in a timely manner and will minimize paperwork for field and office staff. The electronic data can then be uploaded daily to a website hosted by Geo Age Inc.

Environmental Health maintains an active participation at the Miami Dade County Emergency Operations Center (EOC). Whenever the EOC is activated, representatives from Environmental Health are assigned to the center until the event has passed. The EOC is the place where the co-ordination of all emergency functions are handled by various governmental officials in one large room.

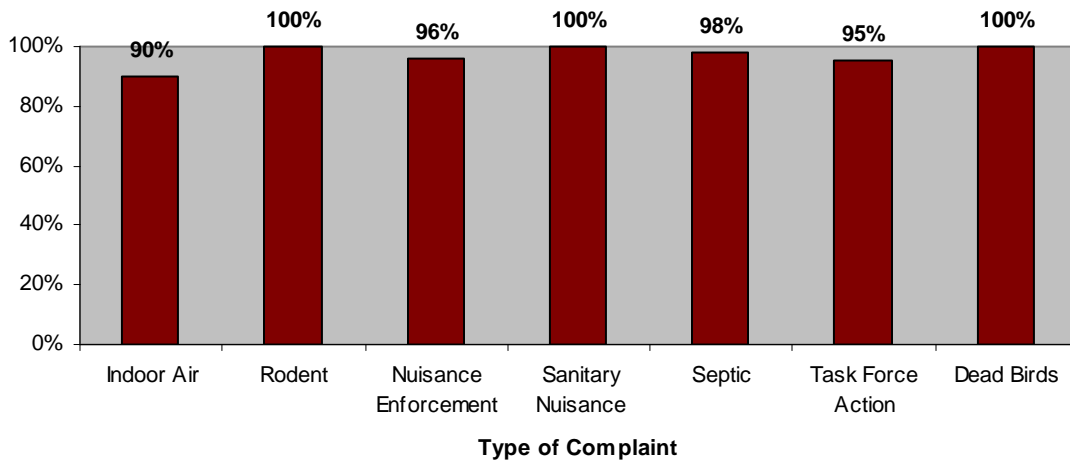
Figures 9, 10. Staff Assisting at the EOC



Source: Environmental Health and Engineering Community Hygiene Program

Compliance by Neighborhood Improvement Program is measured through responding to complaints by the public within 72 hours. During the reporting period, the staff responded to 1,022 complains for sanitary nuisances and conducted nearly 30,000 EQI inspections. The overall compliance by the program for the fiscal year was 93%. The quarterly compliance performance is exhibited in the graph below.

Figure 11. Community Hygiene Program
Percentage of Environmental Health Complaints Investigated within 72 Hours
by Type, Fiscal Year July 1, 2004 to June 30, 2005

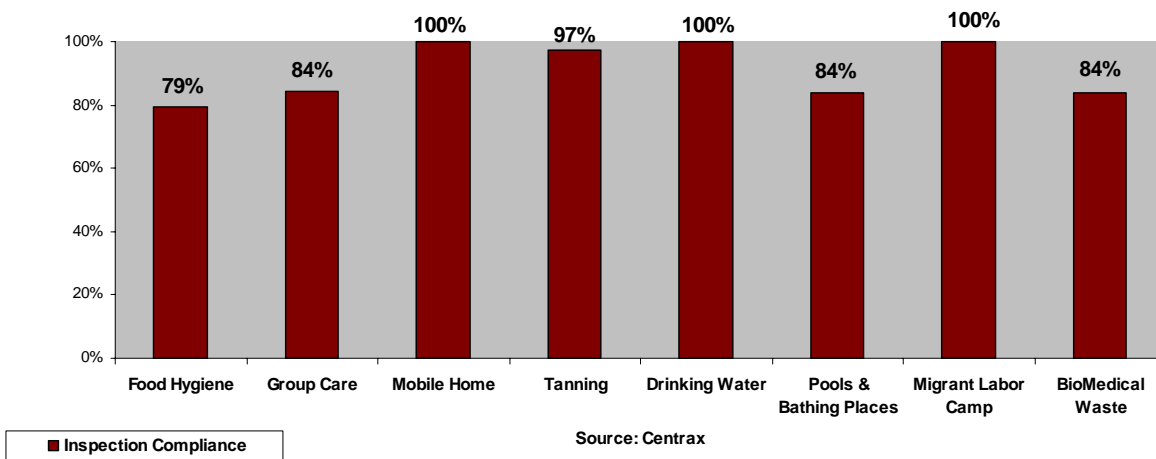


Source: Environmental Health and Engineering Community Hygiene Complaint Database

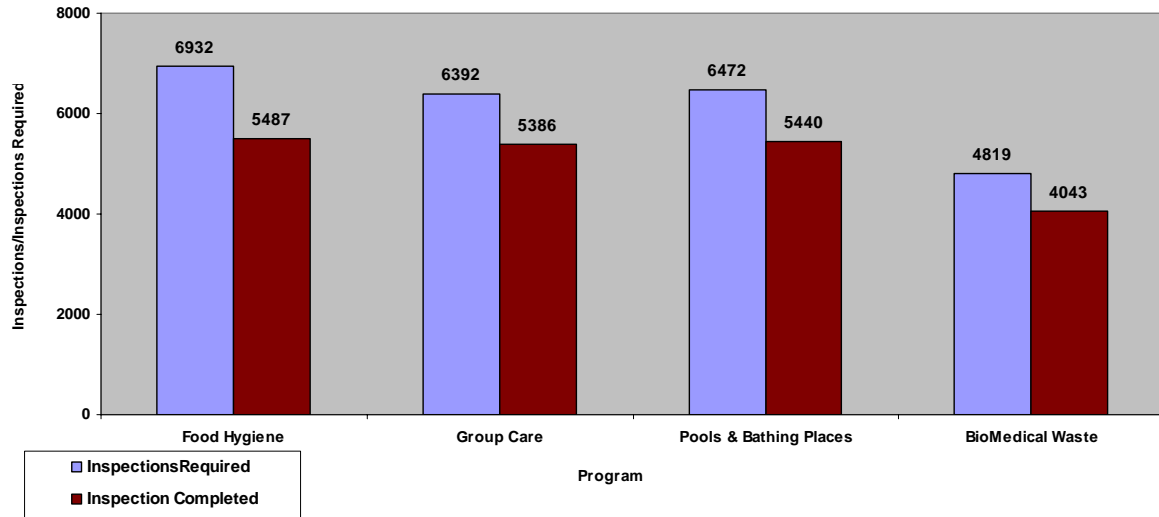
Food and Group Care Program

This program ensures that Environmental Health programs under the direction of the Bureau of Community Environmental Health (formerly Facilities Program) are implemented in compliance with state guidelines. Health and safety inspections conducted under this program assure minimum sanitation and safety standards relating to a comprehensive series of preventive health programs. Programs within this category include but are not limited to Food Hygiene, Migrant Labor Camps, Biomedical Waste, Group Care, Indoor Air Quality, Tanning Facilities, Mobile Home and RV Parks, Environmental Health Professional Certification, and Food and Waterborne Illness Surveillance.

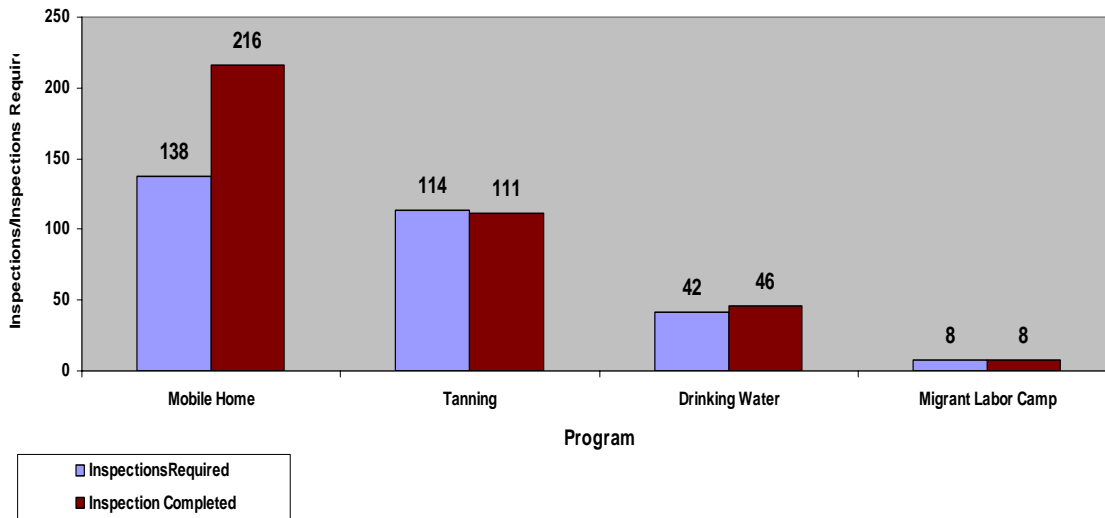
**Figure 12. Inspection Compliance Percentage (Number of Inspections Completed for period divided by the Number of Inspections Required for period) by Program
Fiscal Year July 1, 2004 to June 30, 2005**



**Figure 13. Annual Routine Inspections Completed versus Inspections Required
Fiscal Year July 1, 2004 to June 30, 2005**



**Figure 14. Annual Routine Inspections Completed versus Inspections Required
Fiscal Year July 1, 2004 to June 30, 2005**

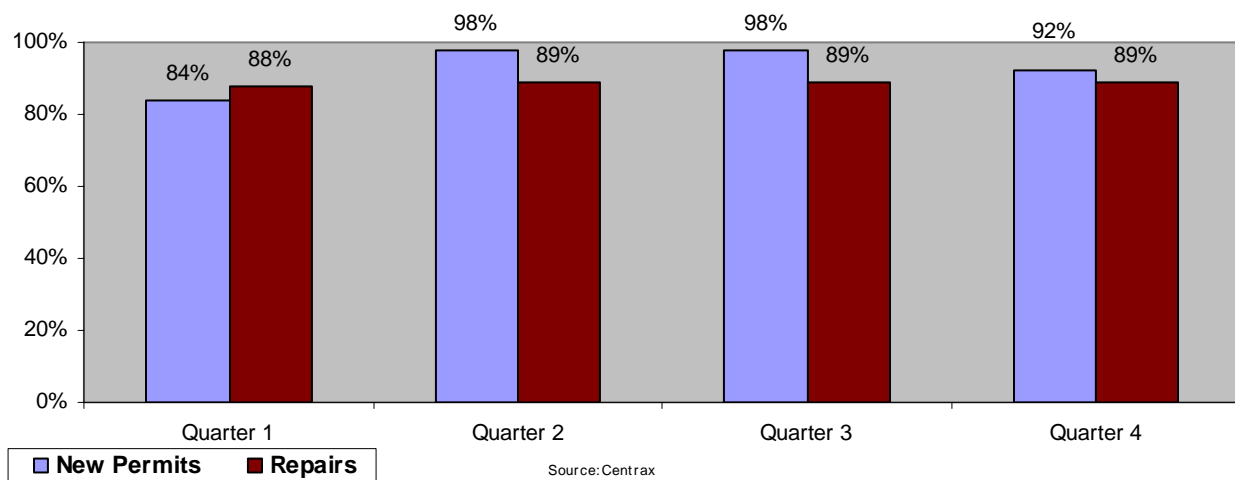


Onsite Sewage Treatment Disposal Systems Program

The Onsite Sewage Treatment and Disposal System (OSTDS) is a core program within the Miami-Dade County Department of Health/Environmental Health Division because the proper installation and repair of septic systems is vital to maintaining a healthy environment. The septic program has a staff of eight certified Environmental Health and Engineering professionals and three clerks. The OSTDS program is responsible for performing application and plan reviews, site evaluations, issuing permits, and conducting inspections and complaint investigations associated with the construction, installation, repair or abandonment of an onsite sewage treatment and disposal system. The OSTDS Program fulfills the mission of the MDCHD by ensuring that all systems regulated by the Division are sized, designed, constructed, repaired, modified and maintained properly in order to prevent ground and surface water contamination and to preserve the public health. This program also permits and inspects all waste-water haulers and portable toilet companies. In addition, this office regulates and permits maintenance entities for aerobic treatment units and performance based treatment systems.

During the reporting period, the number of services provided to the residents of Miami-Dade County increased by 15% from the previous year. This increase was due to rapid construction growth in the southern part of MDC. They also issued 2,749 permits for sewage systems in new and existing buildings, including plan reviews, issuance of construction permits, site evaluations, and inspections. A total of 2,419 onsite sewage treatment and disposal system inspections were conducted. This included inspections of new systems, drain field repairs, aerobic treatment units, septic tank manufacturers, portable sewage systems, systems receiving commercial sewage waste, and systems located in industrial and manufacturing areas.

Figure 15. Onsite Sewage Treatment Disposal Systems Compliance Percentage (Response to New Permits in < 21 days, Response to Repair Permits < 3 days) by Quarter, Fiscal Year July 1, 2004 to June 30, 2005



Business Indicators

The Environmental Health Division has established five performance indicators in order to ensure the quality and quantity of the Environmental Health services currently provided to the community and the general public. These performance indicators are:

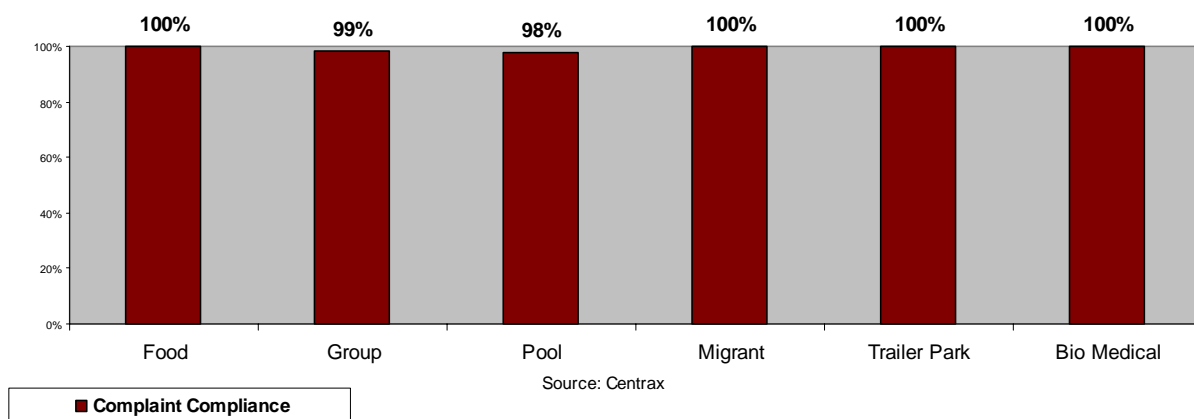
- I. Health and Safety Facility Inspections
- II. Response to Environmental Health Complaints
- III. Issuance of Septic Tank Permits for New Installations
- IV. Issuance of Septic Tank Permits for Repairs
- V. Client Satisfaction Survey
- VI. Expenses vs. Revenues

By focusing on these activities the Division strives to effectively monitor program and staff productivity, tie productivity to performance, provide employees with training and educational opportunities, review and evaluate customer needs and ensure a healthy budget.

Facility Maintenance and Safety Scores for the MDCHD have steadily improved over the past three years. The 87 point scoring system used to determine whether compliance has been achieved has improved from 63 points, or 73% in 2003 to 79 points with equivalence of 91% for 2005 in regards to compliance with safety criteria.

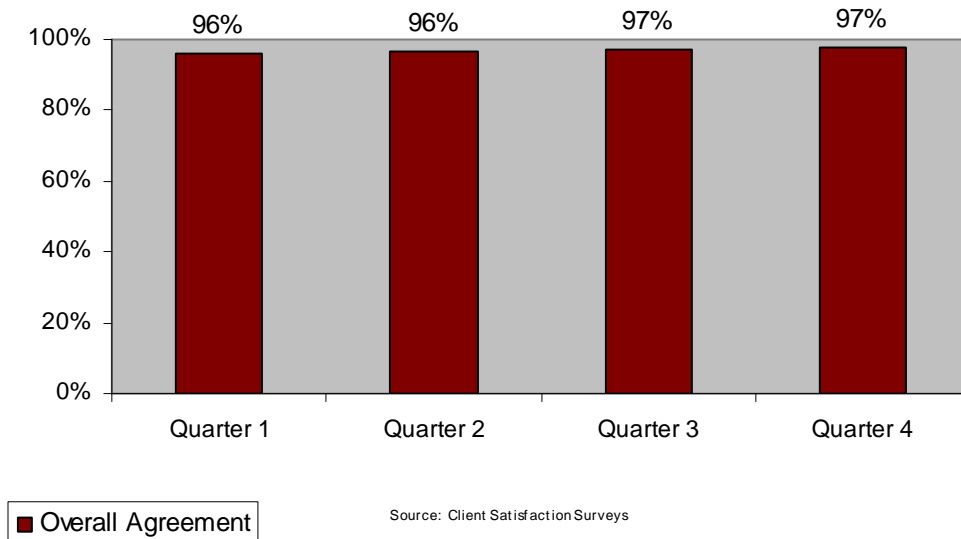
The Division receives complaints from the general public regarding the facilities we are responsible for inspecting. During the reporting period, the DEHE received thousands of complaints, but maintained a 99.5% compliance rate for complaint response within 72 hours. This excellent rate was met despite being short staffed and further hindered by a number of hurricanes which stretched our resources to the limit. Individual program compliance is charted below.

**Figure 16. Environmental Health Complaints Compliance Percentage
(Complaint Response within 72 Hours) by Program,
Fiscal Year July 1, 2004 to June 30, 2005**



Client Satisfaction with the Division is measured through a client survey which is administered in the quarter following the period in which clients receive our services. This survey consists of five statements and requires the client to rate each statement from disagree up to agree. Compliance is calculated by the percentage of agreement with all statements. This is the third year the survey has been used by the Division and we continually strive to maintain greater than 90% compliance. This compliance goal was exceeded during the reporting period.

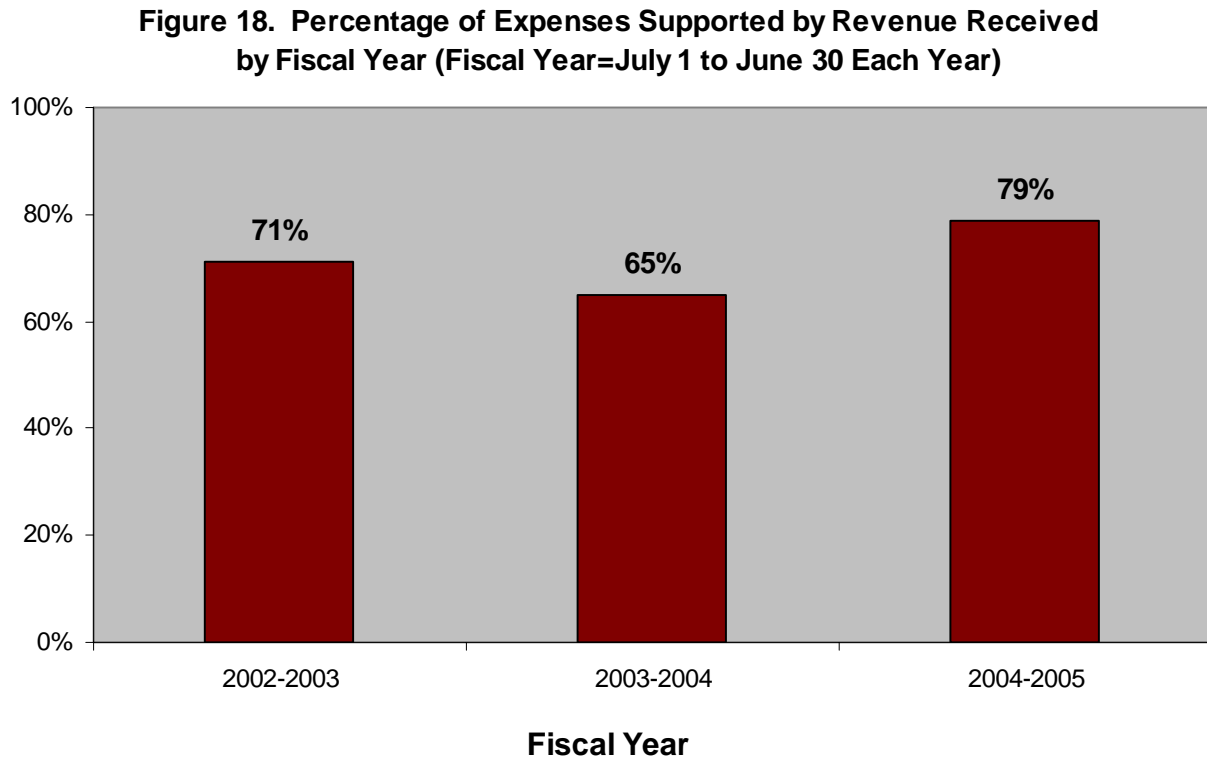
**Figure 17. Client Satisfaction Survey Percentage
Overall Agreement to Questions,
Fiscal Year July 1, 2004 to June 30, 2005**



Client Survey Questions:

- Q1. The Division Personnel properly identified himself/herself.
- Q2. The service was provided in a professional manner.
- Q3. Violations if any were explained in a clear and concise manner.
- Q4. The information I received was useful and beneficial.
- Q5. Overall how would you rate the Health Department?

Having a budget that is primarily funded by revenue is certainly an ambitious goal. While 100% support may not be attainable, the more financial support generated from revenue, the better. Over the last three fiscal years, support from revenue has increased for the Division from 71% to 79%, with a slight decrease in FY 2003-2004 as seen in the following figure.



Administrative Indicators

Administrative Measures have been put in place in order to evaluate the support processes that manage the office and allow Core processes to be accomplished to their highest degree. The administrative processes measured relate to personnel, staffing and their management. The DARs (Daily Activity Reports) allow management to monitor activity and corresponding performance. It is used to identify where labor resources are being spent.

The vacancy rate is monitored by trying to maintain necessary staffing and is measured by the number of positions vacant for more that 180 days. A snapshot of this year shows that only four of 101 possible positions have been vacant for more than 180 days. Two positions no-longer considered necessary have been eliminated for the upcoming year.

Governor's Sterling Award

In addition to business indicators, the Division follows the guidelines stipulated in the Governor's Sterling Criteria for Organizational Performance Excellence. Significant improvement and achievement of performance excellence within a County Health Department is recognized by the Florida Sterling Council with the Governor's Sterling Award (GSA). This award is hailed as one of the preeminent state award processes in the nation. This year the MDCHD again made an application for the GSA. Our Division played an active role in developing the application; including taking the lead in one of the most critical aspects, Category 6: Process Management. We volunteered to solicit and compile information from all the other divisions within MDCHD to highlight the best aspects of our business practices and demonstrate that our Health Department in Miami-Dade County is applying the criteria as a Sterling complying organization. EH continues to grow and be challenged by the criteria of the Governor's Sterling Award and strives to meet or exceed the expectations that the award and criteria set forth.

Community Partnerships

The Division has established partnerships with federal, state, and local agencies for assistance with task force operations, enforcement of regulations, and aid in determining methods to limit environmental risks to the community. We maintain constant communication with our partners to assure the needs of the public are met through collaborative efforts between different agencies. Complaints received by the Division that fall outside its jurisdiction are referred to the appropriate agency for investigation. Some of our major partners include: Team Metro Neighborhood Services, the Metro Police Department (Environmental Investigative Unit), the Miami-Dade County Public Works Department, the Department of Environmental Resource Management, the Department of Business and Professional Regulation, the Department of Agriculture and Consumer Services, the Department of Children & Families, the Agency for Health Care Administration and the Miami-Dade County Department of Solid Waste Management. In addition, the Miami-Dade CHD established a collaboration with the Switchboard of Miami which now serves as the answering service for the Health Department. The switchboard receives complaint calls and refers them to the appropriate sections of the Health Department. For the 2004 – 2005 year, the switchboard referred 298 complaint calls to EH. The highest numbers of environmental calls were for facility health (110) and poisoning/contamination (101) complaints. The rest of the complaints received related to other EH issues. Complaints received by the Division are logged in and investigated by EH staff.

2004-2005 Fiscal Year Major Accomplishments

The Biomedical Waste Program received an award for completing the Medical Quality Assurance (MQA) required inspections in only nine months and meeting 100% compliance. Award was presented by Dr. Heidi Schaeffer from the MQA Investigation Services.

Yosef Shapiro, director of EH Safety, received a commendation from the Public Defenders Office for the training he presented on handling Anthrax or other suspect powder scares. Mr. Shapiro is also one of the highest rated presenters at the New Employee Orientation Classes.

The Bureau of Onsite Sewage Program in Tallahassee awarded a certificate to the MDCHD OSTDS Program for their performance evaluation which was 90% or above for the period of 2002 to 2005. The award was in recognition of the hard work and diligence of the staff.

The Drinking Water Program was recognized with an Appreciation Award during the Florida Department of Environmental Protection annual conference. The program also received individual staff awards for Longevity and Most Productive. Several staff members participated in a joint Health Department and University of Miami field experiment to study sources of bacterial contamination of beach water.

Throughout the year several interns and students from Florida International University and the University of Miami have visited Environmental Health as part of their orientation or to gain work experience. We conduct tours of our Environmental Health programs for them or coordinate their training activities.

The Division conducted a joint study (fish tissue and water quality) with the Department of Environmental Resources Management and the Miami-Dade Bureau of Environmental Epidemiology concerning the condition of the Wagner Creek Water Way.