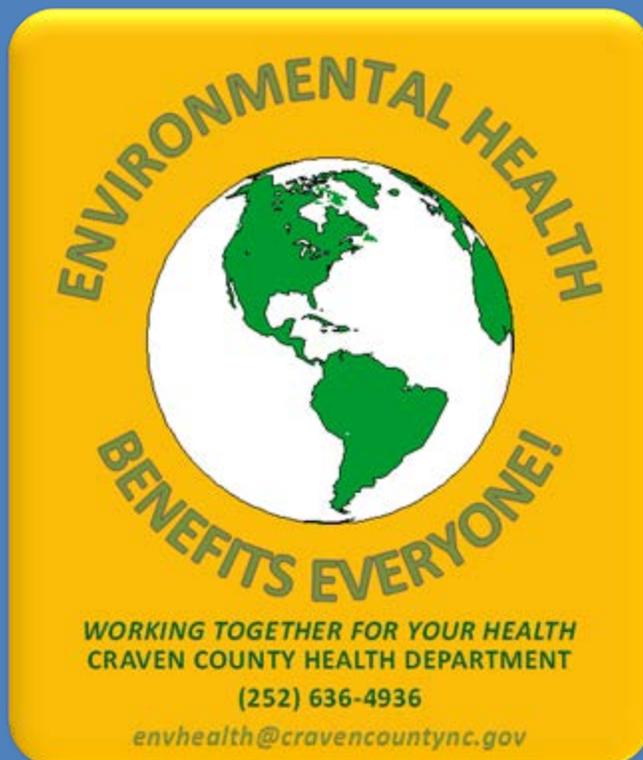


ENVIRONMENTAL HEALTH ANNUAL REPORT



*Fiscal
Year
2017-18*

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Environmental Health Mission Statement

To safeguard life, promote human health, and protect the environment through the practice of modern environmental health science, the use of technology, rules, public education, and above all, dedication to the public trust.

Environmental Health

The Craven County Health Department - Division of Environmental Health seeks to build upon the history of public health and to assist in maintaining a healthy environment in which it is pleasant to live and work. This Division strives to respond to the dynamics and growth of our county and the changing priorities of Public Health. This is accomplished through the development and implementation of programs designed to assist in the promotion of healthy living and the mitigation of adverse environmental factors.

The Division protects public health and safety through preventive measures designed to identify and control the spread of disease. This is accomplished primarily by (1) the promotion of environmental health through education of the general public and (2) through the enforcement of state and local Public Health regulations. This Division provides education, inspections, consultations, and enforcement of appropriate local, state and federal laws, rules, and regulations in accordance with proper policies and procedures.

In Craven County, the Division of Environmental Health currently consists of the following programs:

- Onsite Water Protection (Onsite)
 - Onsite Septic Systems
 - Private Drinking Water Wells
 - Migrant Housing
- Food, Lodging and Institutions (FLI)
 - Plan Review/Permitting of Facilities
 - Sanitation & Compliance Inspections of Facilities
 - Food Safety Education and Proctored Food Safety Exams
- Healthy Homes - Children's Environmental Health (HH)
 - Childhood Lead Poisoning Prevention
 - Asthma Management
 - Decontamination of Methamphetamine Sites
- Rabies and Animal Control (AC)
 - Operation of Animal Shelter
 - Animal Rabies Control
 - Pet Adoptions
- Environmental Health Laboratory (Lab)
 - Testing Drinking Water
- Management Support (MS)

The current staff consists of:

- 1 Environmental Health Director
- 2 Environmental Health Supervisors (1 Onsite, 1 FLI)
- 1 Environmental Health Program Specialist (FLI)
- 1 Soil Scientist (Onsite)
- 8 Environmental Health Specialists (4 Onsite, 4 FLI)
- 1 Animal Control Director
- 3 Animal Control Officers (1 part-time)
- 2 Animal Shelter Attendants (1 part-time)
- 1 Chemistry Technician (part-time)
- 3 Office Assistants (1 AC)

Management Support

This section's goal is to ensure that citizens' requests, data and other information are distributed in a timely manner to the appropriate personnel/program. Among these are:

- Applications for well and septic tank permits, lead-based paint inspections, and food, lodging & institutional plan reviews and permits,
- Water sample analyses,
- Rabies vaccination documentation,
- Animal microchipping registration,
- Complaints or inquiries from citizens, and
- Various other requests for services.

Shared Information through Technology

Our management support staff scans all Onsite permits so the public can have access to them on the County's GIS website. Older permits dating back to 1989 will also be available, as staff is back-scanning those as time allows.

This section is responsible for:

- Generating required reports
- Ensuring documents are completed, processed and maintained
- Researching and providing documents, such as older septic permits upon request by citizens.
- Accounts receivable and accounts payable
- Researching and purchasing supplies
- Assisting with the various needs of staff and with special projects
- Finances associated with the various programs

Finance

Environmental Health Management Support receives funds from several sources.

Fees for Services:

- Plan Review for Food Service Establishments
- Temporary & Limited Food Establishment Permits
- Plan Review and Annual permits for Swimming Pools
- Annual Tattoo Artist Permits
- ServSafe Proctored Exams
- Permits & Approvals for Septic Tank Systems
- Private Drinking Water Well Permits
- Water Sample Analyses
- Lead-Based Paint Inspections
- Certified Lead Renovator Training & Exam
- Animal Adoptions and Owner Reclaims
- Animal Microchipping
- Rabies Vaccinations
- Animal Control Non-compliance fines
- Animal Boarding

Contract Services with Animal Control:

- L.B.S. Biologicals
- MCAS Cherry Point Animal Control
- Pamlico County Animal Control

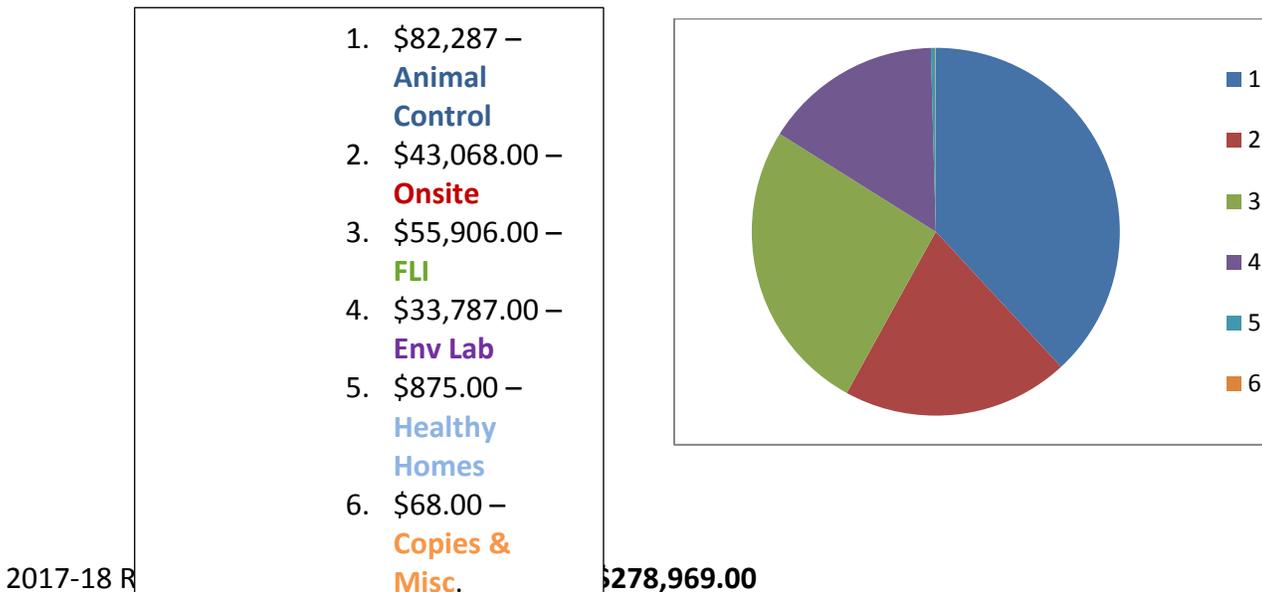
Local Tax Support: **\$1,166,383.00**

Craven County support is provided to the Environmental Health Division, however not as revenue, and it's handled through the Health Department's Administrative Program. Onsite and FLI received **\$926,839.00**; Healthy Homes received **\$510.00**; Animal Control received **\$239,034**.

State Aid to County: **\$48,122.00**

- Annual permit fees collected by the State for FLI establishments are shared with the counties based on the percentage of required sanitation inspections completed. We received **\$33,198**.
- A portion of the State Health Aid to County was allocated for Environmental Health in the amount of **\$2,000**.

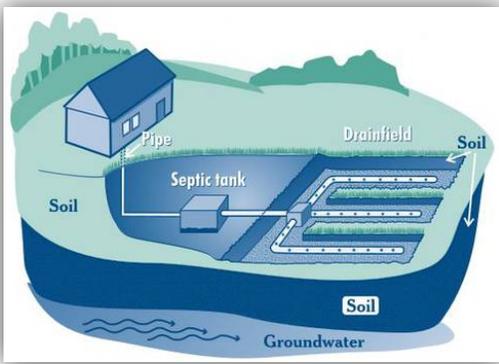
2017-2018 Revenues from services: \$230,847



Onsite Water Protection

The goal of the Onsite Water Protection (Onsite) program is to protect the public's health by ensuring safe subsurface treatment and disposal of wastewater (septic tank systems) and the attainment of clean, potable water from private drinking wells located in Craven County. Staff (EHS's) from this program:

- Issue permits
- Educate the public on topics related to
 - onsite septic tank systems
 - drinking water wells
 - migrant housing
- Investigate complaints



Onsite Wastewater Program

There are significant portions of Craven County that are served by septic tank systems. The County's Onsite program is responsible for the permitting and inspecting

of all onsite septic systems in the County. This includes new systems, repairs, and flow increases for septic system for residences, places of business and places of public assembly.

To determine the suitability of land parcels to accommodate new septic systems, detailed soil and site evaluations are performed by Onsite staff. Based on these evaluations, either a **permit** or a **denial** is issued.

- Onsite staff review & inspect large and/or complicated septic tank systems (those with pumps, pre-treatment technology, electronic components, etc.) to ensure they are being properly maintained and operated. This is known as the System Review Program (SRP) within the Onsite program.
- Installation inspections are performed by EHS's during the construction of each system installed in the County, to ensure compliance with State rules and regulations.

Documents Issued

Improvement Permit (IP): The first permit issued for a parcel of land if it is determined usable for a subsurface septic system. It is needed prior to Planning Board approval of subdivisions or mobile home parks.

Construction Authorization (CA): Required before any construction on the septic system or structure begins. This permit is required when repairing a malfunctioning septic system.

Operation Permit (OP): Issued after the septic system has been properly installed and inspected. It is needed prior to release of final electrical power and occupancy of a structure.

Approval: Issued when additional structures are added or structures are replaced on parcels with existing septic tank systems.

Denial: Issued when the parcel cannot support a septic tank system for the type of structure applied for.

- A site visit and evaluation for an **Approval** for an existing septic system is performed when any building addition, structure replacement, swimming pool, or detached structure is proposed.
- Most onsite and well activities are geographically located by staff and shared within the County-wide GIS “warehouse”.
- Onsite staff evaluates failing septic systems and issue permits for repairing them.
- Onsite staff investigates various complaints and respond to requests for services, such as water sampling, consultations, permit queries, educational presentations, etc.

In the fiscal year 2017-18:

500 Total applications were received

292 sites evaluated

529 total site visits

97 IP’s issued

179 CA’s issued

159 OP’s issued

79 Repair CA’s

35 Septic system complaint investigations

5 Violation Notices issued

32 SRP systems reviewed

455 Requests for existing septic system document - responded to by Management Support staff

2393 consults with clients, including phone calls, office visits, and forms of correspondence.

5 subdivision and mobile home park maps were reviewed for approval by the Soil Scientist prior to approval by the Panning Board.

Drinking Water Well Program

The Onsite program is responsible for overseeing the permitting, construction, repair, sampling and abandonment of private drinking water wells (not irrigation wells) via our Private Drinking Water Well (Well) program. Sites are visited by EHS’s to confirm the suitability of each proposed location for a well, and to identify potential sources of contamination.

Water sampling is performed to test for organic, inorganic and bacteriological indicators of water contamination. Water samples from newly-installed wells are primarily tested at the State Laboratory of Public Health in Raleigh, NC. Samples from existing wells may be tested at our Env lab, depending on the parameters desired.

In the fiscal year 2017-18:

27 samples from new and existing private wells collected by Onsite staff

34 consultations with clients

7 well head inspections

5 grouting inspections

Migrant Housing

The Migrant Housing program is included in the Onsite program. The primary goal is to ensure that seasonal migrant labor camps located in Craven County provide safe drinking water, sanitary facilities and adequate wastewater disposal to their workers. Farmers request inspections before they obtain workers. Inspections are made, corrections put in place, and post-inspection reports are provided to the appropriate regulatory agencies.

Food, Lodging and Institutions

This program’s goal is to ensure food safety and sanitation in regulated establishments. The FLI program conducts unannounced inspections in a variety of facilities including:

Food Service Establishments	Institutions	Lodging
Restaurants	Nursing Homes	Hotels
Food Stands	Hospitals	Motels
School Cafeterias	Day Care Centers	Bed & Breakfast Inns
Institutional Kitchens	Local Confinement	Bed & Breakfast Homes
Meat Markets	School Buildings	
Limited Food Stands (Concessions Stands)		
Temporary Food Establishments (Special Events)	Other	
Mobile Food Units & Push Carts	Residential Care Facilities	Tattoo Artists & Shops
Elderly Nutrition Sites	Summer Camps	Swimming Pools & Spas

- All inspection reports for these facilities can be found on the Craven County website (www.cravencountync.gov) specifically on the FLI webpage of the Health Department.
- FLI staff work to ensure compliance with all sanitation laws through routine inspections, education, construction plan review and complaint investigations.



An Environmental Health Specialist disassembles the linen at a lodging establishment to ensure that it is clean and in good repair. (Above)

According to 15A NCAC 18A .1828, clean bed and bath linen in good repair shall be provided for each guest who is provided accommodations and shall be changed between successive guests.

The lower sheet shall be folded under both ends of the mattress. The upper sheet shall be folded under the mattress at the lower end.





In the fiscal year 2017-18:

2039 Total Inspections conducted.

1374 Sanitation Inspections.

553 Compliance Inspections.

112 Permits or Openings.

Concession stands, tattoo artists and swimming pools must obtain new permits every year. Temporary food establishments (food vendors at special events) must obtain a permit for each event in which they participate.

3 Inspection Types

Sanitation

- 1-4 inspections per year based on risk hazard analysis of food preparation.
- Unannounced
- Grade card is posted. 90-100 = A; 80-89.5 = B; 70-79.5 = C. Establishments receiving a score below 70 will be closed.
- Majority conducted at food service establishments.

Compliance

- Verify violations are corrected, generally within 10 days.
- Investigate complaints.
- Majority conducted at food service establishments.

Permit or Opening

- Permits – new establishments or new owners of existing establishments. Plan is review required.
- Opening – facilities permitted by other agencies and inspected by our FLI program.
- Majority conducted at food service establishments.



U.S. Food and Drug Administration
Protecting and Promoting *Your* Health

Voluntary FDA Retail Food Regulatory Standards – The Craven County Food Safety program is registered with the US Food and Drug Administration's quality assurance initiative. The FDA's Retail Food Regulatory Standards require our inspection program meets certain criteria such as rigorous training for staff, access to certain inspection tools and reviewing of inspection reports to identify the greatest health concerns in our restaurants and other food service facilities such as nursing homes, school cafeterias and grocery store delis.

Children's Environmental Health – Healthy Homes

This program concentrates on disease prevention and management through environmental controls. We work with healthcare providers to identify hazards or other conditions in the built environment that may be affecting a child's health. We encourage families to provide healthy homes to their children in two areas:

- Childhood Lead Poisoning Prevention
- Asthma Management

Childhood Lead Poisoning Prevention (Lead)

There is no safe blood lead level in children. Even low levels have been shown to affect a child's IQ, ability to pay attention and academic achievement, and the effects of lead exposure cannot be corrected. The objective of the Lead program is to prevent childhood lead poisoning by:

- **Identify children** with elevated blood lead levels (EBL) through routine and targeted screenings
- **Identify lead hazards** in the environments of EBL children
- **Reduce exposures** to lead hazards through renovation, repair and education
- **Primary prevention** by educating contractors who can create lead hazards with common renovation activities. Lead Repair and Renovator Practices (RRP) classes are taught by the Lead Program Specialist to contractors.

The Lead program formed a partnership with the counties of Jones, Pamlico and Lenoir in 1999. The Craven-Jones-Pamlico-Lenoir Lead Poisoning Prevention Partnership works with area healthcare providers and health departments.

In the fiscal year 2017-18:

Four children were identified with elevated blood lead levels.

Asthma Management

Craven County has been addressing childhood asthma since 1995 and adult asthma since 2008 by:

- Teaching asthma management classes,
- Conducting home assessments, and
- **Recommending and providing products** to reduce the patients' exposure to asthma triggers.

This Asthma program has significantly reduced the hospitalization rates for asthma patients.

In the fiscal year 2017-18:

There were 8 Indoor Air Quality Requests for Services and Complaints.



Meth Labs

Methamphetamine is a drug that can easily be made using ingredients purchased in local stores. The chemicals used to make meth can pose multiple dangers to both public health and the environment. NC law requires contaminated properties to be decontaminated before re-occupancy. State rules establish decontamination standards and procedures to ensure that properties used as meth labs are rendered safe for habitation. These same standards and procedures apply to the “one-pot” method of making meth. One-pot, or “shake and bake”, is a smaller more mobile method.

Craven County Environmental Health has been enforcing decontamination requirements since 2004.

In the fiscal year 2017-18:

- 0 Site Investigations
- 0 Site decontaminations completed
- 0 Site decontamination plans received.

Animal Rabies Control

The Craven Pamlico Animal Services Center (CPASC) is located at a separate facility from the Health Department.

This program’s goal is to promote public health by keeping the rabies virus out of the human population. Rabies is prominent in North Carolina, mainly in wildlife. The virus is transmitted through the saliva or nervous tissue of the infected animal and is nearly 100% fatal once symptoms are manifested. To keep humans safe and lower the risk of rabies exposure, CPASC is tasked with the following:



(252) 637-4606

animalcontrol@cravencountync.gov

- Ensuring mandatory vaccinations of dogs, cats and ferrets. Domestic animals are the buffer between wildlife and humans. Vaccinating pets keeps humans at a much lower risk of exposure to the virus. CPASC currently has four certified rabies vaccinators on staff.
- Removing stray, dangerous and unvaccinated animals from the community and from contact with humans. Animals with an unknown vaccination history are treated as unvaccinated.
- Quarantine or rabies testing of animals that have bitten a person. Quarantine is typically 10 days. If a biting animal cannot be quarantined, or in the case of wildlife, a specimen of the animal is sent to the NC State Lab of Public Health for rabies testing.

In the fiscal year 2017-18:

263 Animal bite investigations

844 Service requests

2631 Animals brought to the shelter

435 Animals adopted

180 Reclaimed

1640 Animals euthanized

6 Rabies specimens submitted (2 positive)

160 Cruelty /neglect / welfare check investigations

381 Microchips implanted

709 Rabies vaccinations administered

Another goal of CPASC is to reduce the intake number yearly. Through education and mandatory surgical spay/neuter of all animals adopted from CPASC, we continue to strive to reduce the number of animals coming through our doors.

Trends in Animal Control

Fiscal Year	Total Animals In	Adopted or Transferred	Percent Adopted	Euthanized	Percent Euthanized
2010-11	5803	660	11%	4666	80%
2011-12	4352	596	14%	3442	79%
2012-13	4719	727	15%	3591	76%
2013-14	4188	677	16%	3120	74%
2014-15	3981	539	14%	3170	80%
2015-16	2926	504	17%	2144	73%
2016-17	2432	582	24%	1644	68%
2017-2018	2631	435	16%	1640	62%

CPASC has ongoing partnerships with outside entities such as:

- Private adopters
- Rescue organizations
- Humane societies
- Pet supply stores
- Pet shops
- Veterinarian Offices
- Pet grooming facilities
- Other miscellaneous profit and nonprofit organizations

Euthanasia is a necessary service. In general, all happy, healthy and friendly animals are given every opportunity for adoption. Feral or aggressive animals are not placed for adoption.

Services offered by CPASC are:

- Animal adoptions
- Owner reclaims
- Euthanasia service for pet owners
- Regulation of aggressive dogs
- Low-cost microchipping of pets
- Low-cost rabies vaccinations of pets
- Emergency sheltering of animals during disasters
- Animal cruelty investigations
- Sheltering services for Pamlico County and MCAS Cherry Point

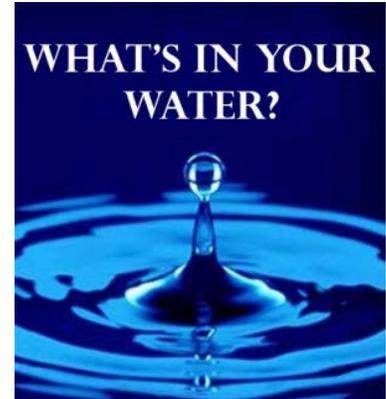
Dogs and cats are not the only types of animals brought into the Craven Pamlico Animal Services Center. Owner drop-offs and cruelty investigations allow for many types of animals to be sheltered – from reptiles, to birds, to farm animals. Staff works diligently to relocate these animals to rescue centers and/or foster homes.



Environmental Health Laboratory

The Environmental Lab is certified by the NC Department of Health and Human Services, Division of Laboratory Certification.

Bacteria, viruses, parasites and other microorganisms are sometimes found in waters and can cause a variety of illnesses. The goal of the Environmental Health Laboratory (Environmental Lab) is to protect the public from disease-causing organisms by providing bacteriological testing of public water systems, private wells, new construction plumbing, ground water supplies and recreational surface waters.



Bacteriological Testing includes:

- Total coliform and E. coli presence/absence
- E. coli MPN/100 ml
- Enterococcus MPN/100 ml
- Heterotrophic Plate Count MPN/ml

The Environmental Lab provides testing service to comply with regulatory programs and requirements such as:

- NC Public Water Supply (compliance testing of public water supplies)
- NC Good Agricultural Practices
- Environmental Protection Agency
- US Veteran Affairs (VA home loans)
- City/County Building Inspections (new construction)
- Federal governmental contracts

The following municipal water systems routinely utilize the Environmental Lab for compliance testing:

- Craven County
- Jones County
- Pamlico County
- First Craven Sanitary District
- City of Havelock

The Environmental Lab tests special water samples for many other municipal water systems within surrounding counties. Anyone with a private well can have their water tested for bacterial contamination.

In the fiscal year 2017-18:

- 189** Heterotrophic Plate count samples
- 1121** Total coliform and E. coli samples
- 937** Public system compliance samples
- 17** Well water samples
- 73** New construction samples
- 94** Special samples
- 8** Recreational samples
- 1** Good Agricultural Practices sample



* * * * *

Main Things

Each year the Environmental Health management team determines a list of items they wish to achieve. Our list for fiscal year 2017/18:

- Complete 100% of all FLI mandated inspections, including school buildings. **Achieved.**
- Continue population of database for customer access portal for Onsite wastewater permits and supportive documents. **On-going.**
- Complete expansion of CPASC to address over-crowding issues. **In progress.**

Outside the Box

In addition to tasks regularly performed by Environmental Health and already in this report, we are often called upon to respond to other environmental concerns, issues or projects.

CPASC lost a staff member, Karen Ensworth, to illness. Our Office Assistant IV Charlene Frazier assisted at the CPASC 3 days a week for 6 months until they could fill Karen's position.



Our Environmental Health Director Ray Silverthorne was appointed **Zika Planning Coordinator**. He presented at many venues during the course of the year, including a spot on Cable TV 10, to educate regarding the Zika virus and vector management. Funds were allocated by the Commissioners for Zika education and surveillance.

Hurricane Matthew hit causing wide-spread destruction and flooding in Craven County. Environmental Health staff followed protocols in place for disaster response, and helped man the Disaster Action Center in Vanceboro for an extended period. Relevant information was also presented to the public via Cable TV 10.



Engineered Option Permits went into effect and new fees were formulated, submitted to the Commissioners and approved.

Environmental Health staff monitored the disinterment of 98 unmarked gravesites on hospital property and their reinterment at a local cemetery.

A law change by the State resulted in shorter quarantine times for certain domestic animals suspected of coming in contact with the rabies virus.

Environmental Health was a force behind the effort to create an internet portal of access for use by guests of Craven County Health Department.



We achieved initial certification for the Environmental Lab after the expansion of the Primary Care clinic, the discontinuation of the soils lab and the completion of the relocation of the Environmental Lab to the Clinical Lab area.

We mentored an ECU Intern in the development of special environmental health projects.



NOTE: A large portion of our time was spent on interviewing, hiring and training personnel during this fiscal year. As a result, a lot of staff achieved certifications, authorizations and registrations in specific fields. Staffs were certified to inspect public swimming pools, tattoo artists and to investigate child lead poisoning cases.

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