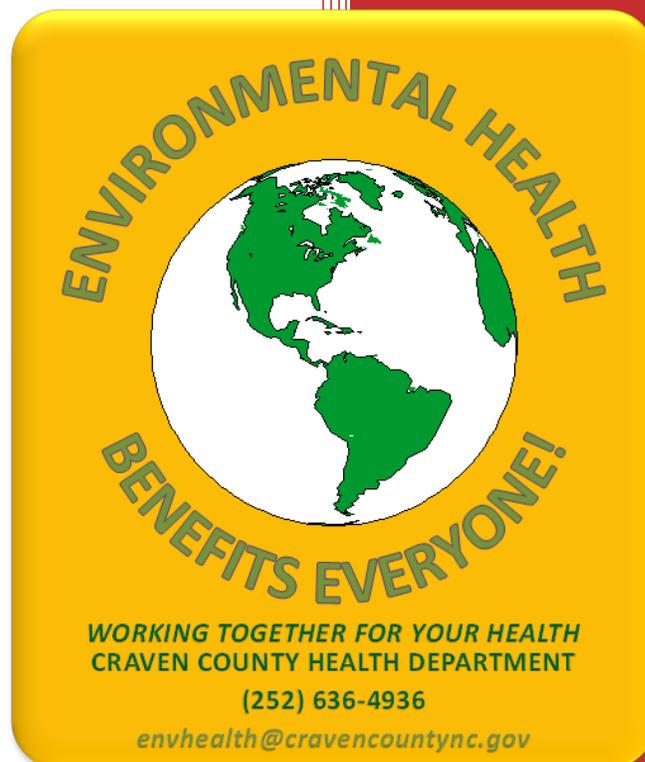


FY 15/16

# Environmental Health Annual Report



Craven County Health Department  
Division of Environmental Health  
FY 15/16





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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 provides education, surveillance and enforcement of state laws & regulations, Board of Health rules & county ordinances.**

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# ENVIRONMENTAL HEALTH

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Environmental health is the science and practice of preventing human injury and illness and promoting well-being by

- identifying and evaluating environmental sources and hazardous agents and
- limiting exposures to hazardous physical, chemical, and biological agents in air, water, soil, food, and other environmental media or settings that may adversely affect human 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 sections:

- Onsite Water Protection
  - Onsite Wastewater
  - Private Drinking Water Wells
  - Migrant Housing
- Food, Lodging and Institutions
- Healthy Homes - Children's Environmental Health
  - Childhood Lead Poisoning Prevention
  - Asthma Management
  - Decontamination of Methamphetamine Sites
- Rabies and Animal Control
- Environmental Health Laboratory
- Management Support

The current staff consists of

- 1 Environmental Health Director
- 2 Environmental Health Supervisors
- 1 Animal Control Supervisor
- 1 Environmental Health Program Specialist
- 8 Environmental Health Specialists
- 2 Animal Control Officers
- 1 Soil Scientist
- 1 Chemistry Technician (part-time)
- 3 Office Assistants
- 2 Animal Shelter Attendants (one is part-time)

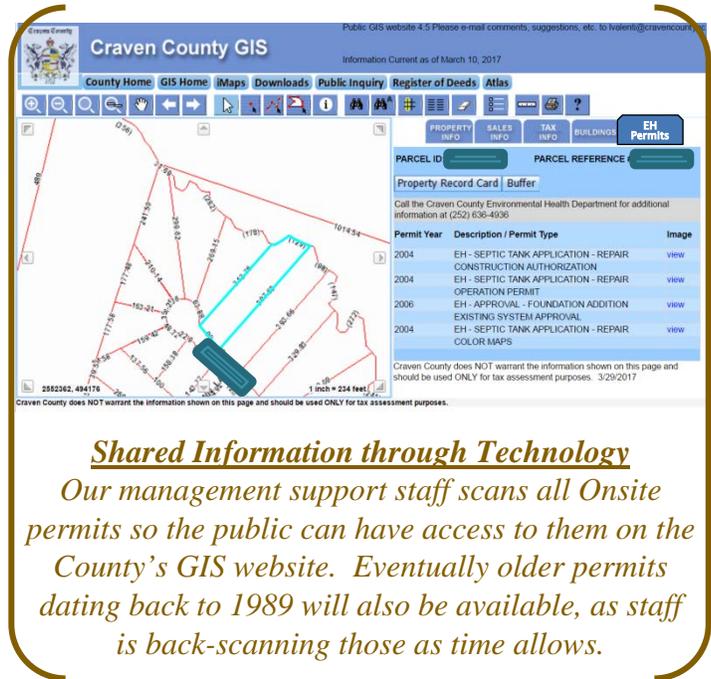


## MANAGEMENT SUPPORT SECTION

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

- Applications for well and wastewater 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.

This section ensures that required reports, forms, and permits are completed and submitted to the appropriate person or agency and maintained in-house in either digital or hard-copy filing systems. This section researches and locates documents, such as older septic permits, upon request by realtors, contractors and the general public. This section is also responsible for accounts receivable, accounts payable, and researching/purchasing supplies. Assisting with the various needs of staff and with special projects are integral duties of the management support section.



The screenshot shows the Craven County GIS website interface. At the top, it says "Craven County GIS" and "Public GIS website 4.5 Please e-mail comments, suggestions, etc. to hskent@cravencountync.gov". Below that, there are navigation tabs: "County Home", "GIS Home", "iMaps", "Downloads", "Public Inquiry", "Register of Deeds", and "Atlas". A search bar is visible. The main area displays a map with several parcels outlined in red and blue. To the right of the map is a "Property Record Card" for parcel ID 2882362, 404176. The card includes a "Buffer" button and a table of permits.

Permit Year	Description / Permit Type	Image
2004	EH - SEPTIC TANK APPLICATION - REPAIR	<a href="#">view</a>
	CONSTRUCTION AUTHORIZATION	
2004	EH - SEPTIC TANK APPLICATION - REPAIR	<a href="#">view</a>
	OPERATION PERMIT	
2006	EH - APPROVAL - FOUNDATION ADDITION	<a href="#">view</a>
	EXISTING SYSTEM APPROVAL	
2004	EH - SEPTIC TANK APPLICATION - REPAIR	<a href="#">view</a>
	COLOR MAPS	

Call the Craven County Environmental Health Department for additional information at (252) 636-4936

Craven County does NOT warrant the information shown on this page and should be used ONLY for tax assessment purposes. 3/29/2017

### 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. Eventually older permits dating back to 1989 will also be available, as staff is back-scanning those as time allows.*

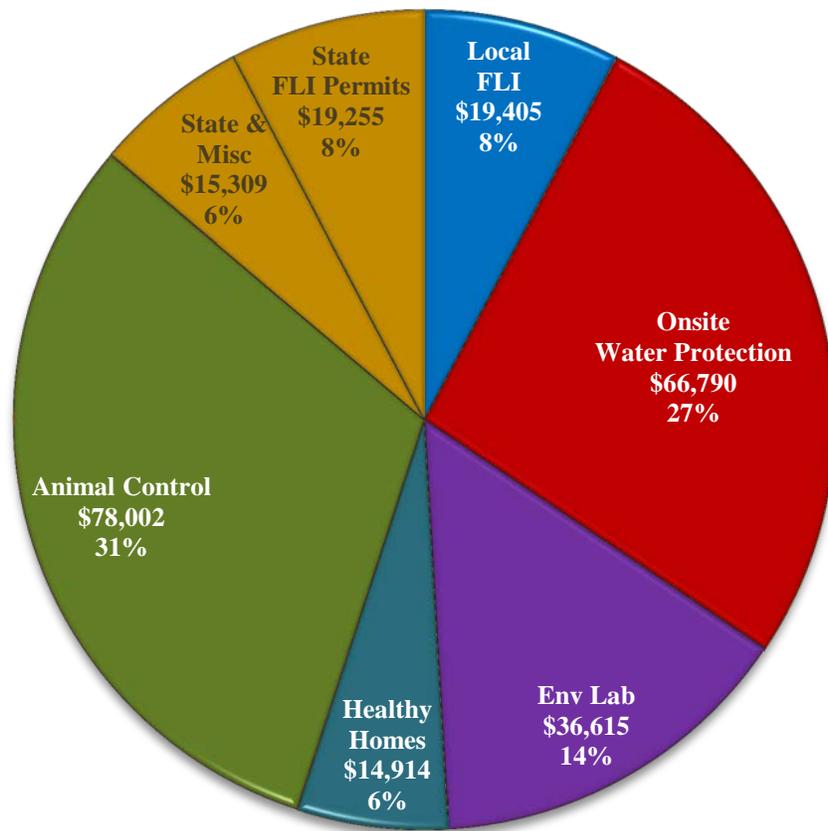
## Finance

The Environmental Health Section receives funds from several sources.

- Services for Fees
  - Food Service Plan Review
  - Temporary & Limited Food Establishment Permits
  - Swimming Pool & Tattoo Permits
  - Certified Food Protection Manager Proctored Exams
  - Onsite Wastewater Permits & Approvals
  - 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
- Services under Contract
  - Tri-State Biological Lab
  - MCAS Cherry Point Animal Control
  - Pamlico County Animal Control

- State Aid to County
  - Permit Fees collected by the State annually for food establishments to operate are shared with the local county. We received \$18,759 this year.
  - A small financial incentive is provided to inspect summer feeding sites. We received \$496 this year.
  - A portion of the State Health Aid to County was allocated for Environmental Health in the amount of \$15,240.
- Medicaid
  - Medicaid Reimbursements are collected for the inspections of the homes of lead-poisoned children.
- Local Tax Support
  - Environmental Health earned 2.2% more revenue than budgeted in FY 15/16.
  - Environmental Health expenditures were 10.2% less than budgeted in FY 15/16.
  - Local tax support was needed for 83.7% of expenditures in FY 15/16.

***FY 15/16 Revenue***



Environmental Health earned a total of \$250,290 in FY 15/16. Animal Control brought in 31% of total revenue, followed by Onsite Water Protection (27%), Environmental Laboratory (14%), State & Miscellaneous (14%), Food, Lodging & Institutions (8%), and Healthy Homes – Children’s Environmental Health (6%). It should be noted that over half of the State Revenues are because of activities conducted by the FLI Section. When combined with fees collected locally, FLI revenues total \$36,660 and are 16% of the total revenues collected during FY 15/16.



## ONSITE WATER PROTECTION SECTION

The goal of the Onsite Water Protection section (OSWP) is to protect the public's health by ensuring safe subsurface treatment & disposal of wastewater and the attainment of clean, potable water from private drinking wells located in Craven County, North Carolina. Environmental Health Specialists (EHS's) from the section investigate complaints, issue permits and educate the public on topics related to onsite wastewater, drinking water wells, water supplies and general sanitation. The OSWP section includes programs for Onsite Wastewater, Private Drinking Water Wells, and Migrant Housing, each of which is discussed below.



### *Onsite Wastewater Program*

While urbanized areas of Craven County have access to public sewer, there are significant portions of the county that are served by on-site wastewater systems (i.e. septic tank systems). The Craven County Health Department's Onsite Wastewater Program is responsible for overseeing the permitting, inspection, repair, enlargement, abandonment, operation and maintenance of all onsite wastewater subsurface treatment systems situated in the county. These septic systems utilize sub-surface soils in the collection, treatment and dispersal of wastewater from 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 Wastewater staff. Based on these evaluations, either a permit allowing construction of a septic system, or a letter of denial prohibiting such, is issued. Onsite Wastewater staff also evaluates existing septic tank systems for proper functionality, proposed changes in use, and to determine if large or complicated systems (those with pumps, pre-treatment technology, electronic components, etc.) are being properly maintained and operated. Installation inspections are performed by Environmental Health Specialists during the construction of each subsurface sewage dispersal system installed in the county, to ensure compliance with State rules and regulations. When any building addition, home replacement, swimming pool, or detached structure is proposed to be built on a property already having a septic system, a site visit and evaluation for an "existing septic system approval" is performed.

#### Documents Issued

##### Improvement Permits (IPs) are

- the first permit issued for a parcel of land,
- needed before Planning Board approval of subdivisions or mobile home parks,
- often required by finance companies prior to lending money for land purchases.

##### Construction Authorizations (CAs) are

- required before a building permit can be issued,
- issued before any construction can begin, and
- **required** when repairing a malfunctioning system

##### Operation Permits (OPs) are

- issued after the septic system has been properly installed and inspected, and
- needed before release of final electrical power and occupancy of a structure.

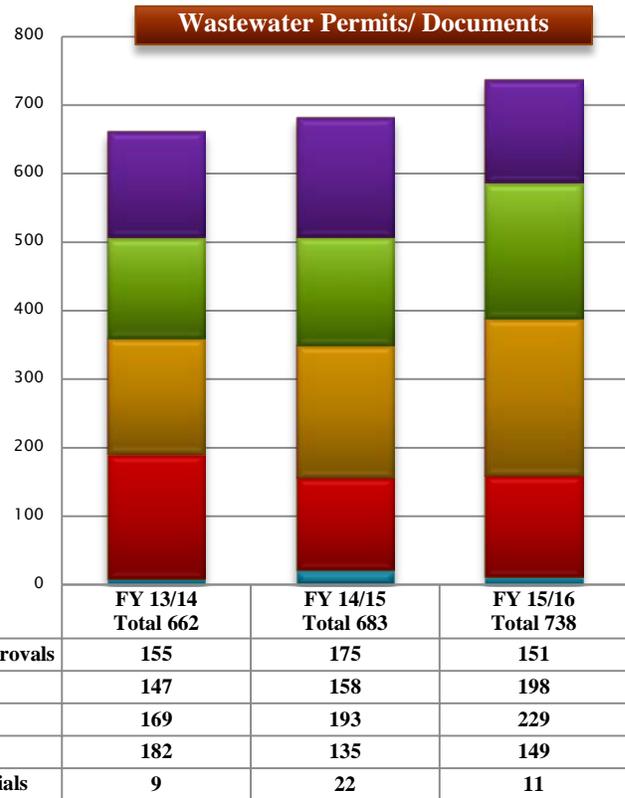
Approvals are issued when an applicant wants to add or build structures on an existing parcel already having a (properly functioning) septic tank system.

Denials are issued when the parcel of land cannot support an onsite wastewater system for the type of building listed on the application.

Most onsite and well activities are geographically located by staff using global positioning system (GPS) equipment and the Craven County GIS (geographic information service). The data is shared with the county-wide GIS “warehouse”.

In the interest of protecting public health, onsite staff members also evaluate failing septic systems and issue permits specifying for their proper repair. The section investigates complaints received from businesses, industry and the public (regarding a variety of environmental concerns), and performs other requests for service, such as water sampling, consultation, permit queries, educational presentations, etc.

The Onsite Wastewater Program received **592** total applications in FY 15/16. **738** permits, denials and approvals were issued during that same time period.

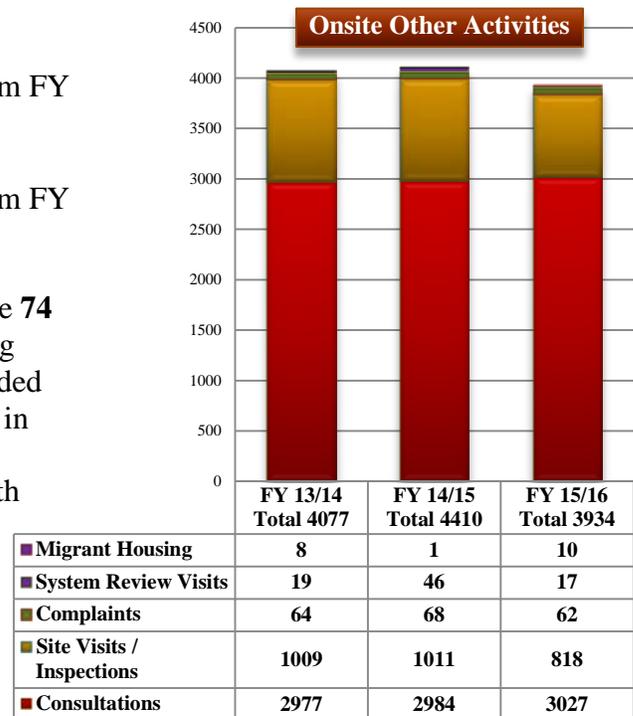


The total number of Onsite Wastewater documents in FY 15/16 increased by **8.1%** from FY 14/15 and **11.5%** from FY 13/14. The types of documents that had the most significant increases were OPs and CAs.

- During FY 15/16, the number of CAs issued increased **35.5%** from FY 13/14 and **18.7%** from FY 14/15.
- During FY 15/16, the number of OPs issued increased **34.7%** from FY 13/14 and **25.3%** from FY 14/15.

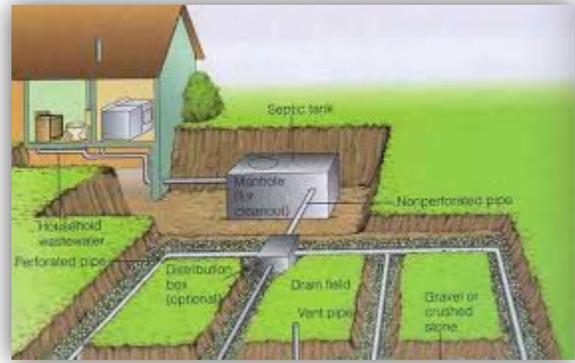
With regards to failing systems in the county, there were **74** CA’s issued this year to repair or replace malfunctioning septic systems compared to **155** CA’s for new or expanded septic systems. The average age of these failed systems in Craven County was **36 years** old. For comparison, traditionally, the average age of a failing system in North Carolina has been reported as 15 years old, and in the coastal plain, closer to 11 years.

In addition to evaluation and permitting of land, Onsite Wastewater staff performed an abundance of other activities in FY 15/16 to provide services to the public. The section handled **62** Wastewater Complaint Investigations, issued **8** notices of violation, conducted **10** migrant housing inspections, and evaluated **17** large or



complex systems that require periodic review. **530** copies of existing system documentation were requested.

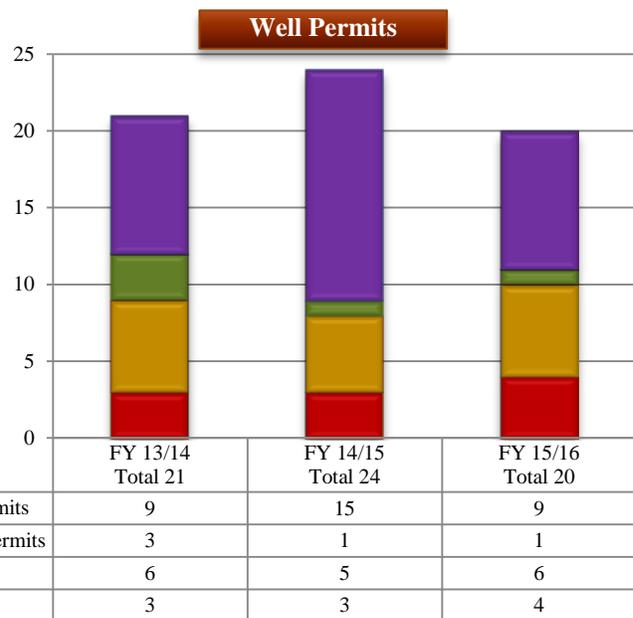
Onsite staff in FY 15/16 performed at least **818** site visits to perform installation inspections of septic systems, meet with clients, surveyors, engineers, contractors, etc. and to perform measurements and other activities. In addition, staff recorded at least **3027** consults with clients, including phone calls, visits to our office, and other forms of correspondence. Also, **4** subdivision and mobile home park maps were reviewed for approval by our soil scientist prior to approval by the Planning Board.



### *Private Drinking Water Well Program*

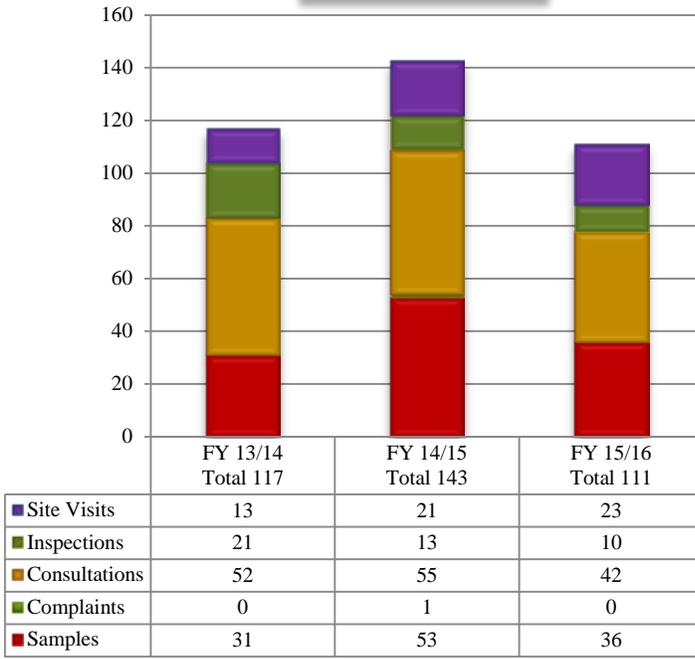
The OSWP section is also responsible for overseeing the permitting, construction, repair, sampling and abandonment of private drinking water wells (but not irrigation wells) via our Private Drinking Water Well program. Sites are visited to confirm the suitability of each proposed location for a well,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

Well permits to construct a new well, repair an existing well, or replace a well are issued or denied based on the visit. The permits issued always show ALL the locations that can be permitted for the well, and highlight proper setbacks between the well and all identified sources of possible contamination. Well program staff also performs installation inspections during construction of each well to ensure compliance with state rules and regulations.



Water sampling is performed by our specialists on new and existing drinking water wells to test for organic, inorganic, and bacteriological indicators of water contamination. Water samples collected from newly-installed wells are primarily tested at the State Lab of Public Health in Raleigh, North Carolina. Water samples from existing wells may be tested at the Craven County Environmental Health Laboratory or at the State lab, depending on the parameters desired. Because Craven County has an extensive public water network (and since irrigation wells are not covered in the State's drinking water well rules) the number of people requiring well permits in Craven County is much less than those requiring septic system permits and approvals.

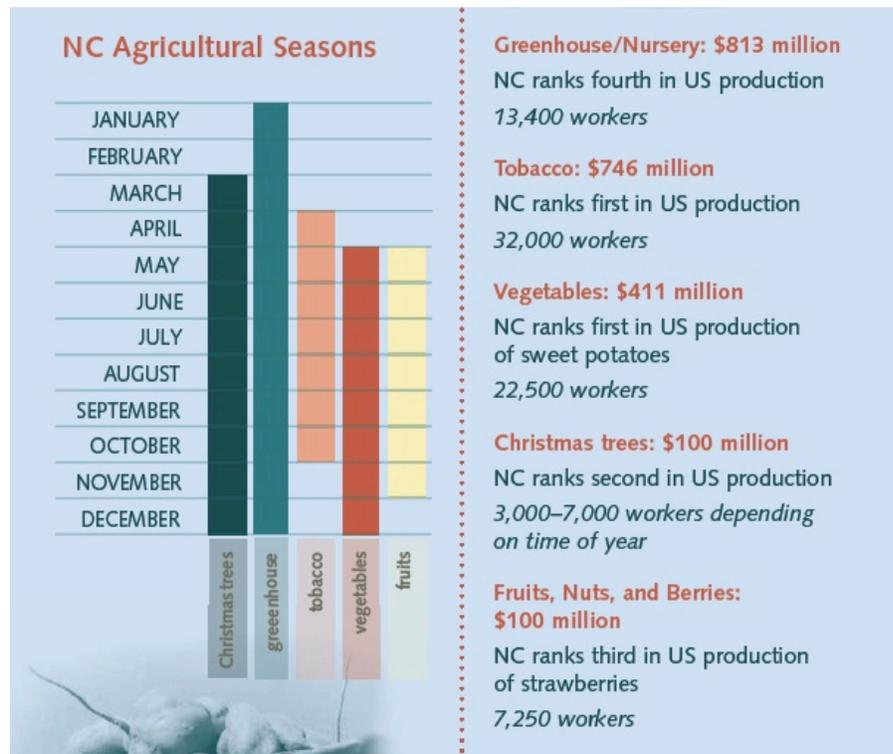
### Well Activities



Private Drinking Water Well Program staff performed many different well-related activities to safeguard our citizen's private water supplies, including installation inspections, well water sampling and other visits and consultations. In FY 15/16, 18 bacteriological water samples from new and existing private wells were collected by our staff to test for potential contamination. Seventeen of these were tested at the State Laboratory of Public Health (samples submitted to the State lab must always be collected by a certified Environmental Health Specialist). The remaining one was tested at the Craven County Environmental Health Laboratory. Additionally, well program staff made consultations with 42 clients and performed 7 well head and 8 grouting inspections during the 15/16 fiscal year.

### Migrant Housing Program

The Migrant Housing Program is also included in the Onsite Water Protection Section. This program's 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. We receive inspection requests from the local farmers before they may obtain workers. Workers may number in the hundreds. Inspections are made, corrections put in place, and post-inspection reports are provided to the appropriate regulatory agencies. Like the other sections of the Onsite Water Protection Section, we have seen a modest rise in numbers of migrant camps needing inspection in recent years, with 7 camps in FY 13/14, 8 camps in FY 14/15 and 10 migrant labor camps in FY 15/16.



HAND-HARVESTED AGRICULTURE IN NC

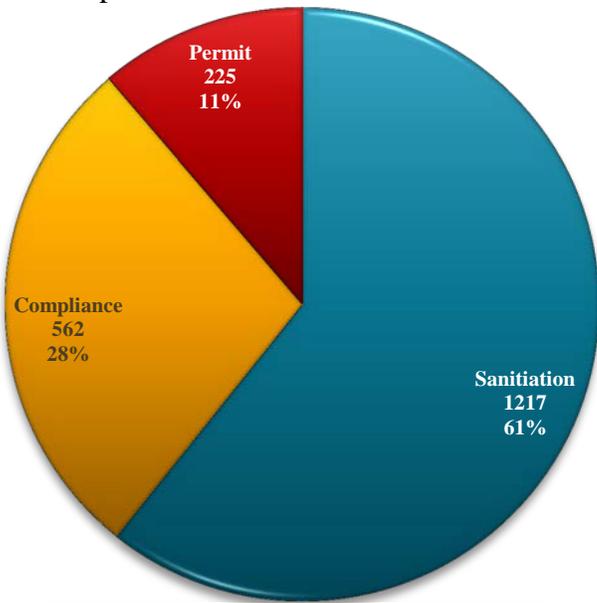
<http://www.ncfarmworkers.org/2012/05/farmworkers-vital-contribution-to-north-carolinas-economy/>



# FOOD, LODGING AND INSTITUTIONS SECTION

This section’s goal is to ensure food safety and sanitation in regulated establishments. The Food and Lodging program conducts unannounced inspections, in a variety of facilities including: restaurants, food stands, meat markets, nursing homes and hospitals, school cafeterias & buildings, residential care facilities, daycares, mobile food units and pushcarts, summer camps, jails, bed & breakfast homes, and other lodging facilities. Permitting of temporary food stands (food booths for festivals, carnivals, fairs, etc.) is also done throughout the year. Environmental Health Specialists work to ensure compliance with all sanitation laws through routine inspections, education, construction plan review, and complaint investigations.

All scores and inspection reports for facilities inspected by the Craven County Health Department can be found on the Craven County Website, specifically on the Food, Lodging, and Institutions webpage of the Health Department. At the website, follow the [Inspection Reports](#) report.



Inspection Types in All Establishments

## Terms to Know

### Sanitation Inspections

- 1-4 inspections per year based on risk hazard analysis of food preparation
- Unannounced
- Grade card is posted

### Compliance Inspections

- Verify violations are corrected, generally within 10 days
- Investigate complaints

### Permitting and Opening Inspections

- **Permits:** New establishments or new owners of existing establishments regulated by our department must receive permits before operating
- **Openings:** Facilities permitted by other agencies but inspected by our department

### Establishment Types

- **Food Service:** restaurants, school lunch rooms, institutional food service, food stands, mobile food units, push carts, temporary food stands, meat markets and locally regulated seafood markets and vehicles
- **Institutions:** nursing homes, private and public school buildings, summer camps, hospitals, jails, child day care centers, adult day centers, and residential care group homes
- **Lodging:** hotels, bed & breakfast inns and homes
- **Swimming Pools:** year-round and seasonal
- **Tattoo Artists & Facilities**

## FLI Inspections

There are three types of inspections: *Sanitation*, *Permit/Opening*, and *Compliance*.

The NC Division of Public Health collects permit fees from food and lodging establishments on an annual basis. \$70.00 out of every \$120.00 collected is distributed to county health departments to help improve environmental health inspection programs. A county’s allocation is based on the percentage of required sanitation inspections conducted at food service and lodging establishments.



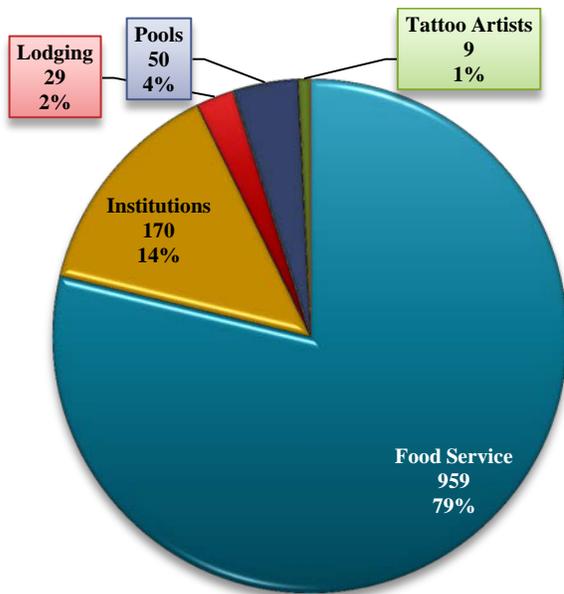
According to the NC Database Program BETS, in FY 15/16, we conducted 100% of the 931 required sanitation inspections at the 364 food service and lodging facilities<sup>3</sup>.

2,004 inspections were conducted at the Craven County regulated facilities in FY 15/16. This represents a 10.0% increase over the total number of inspections conducted in FY 14/15 (1,821). 81% (1,619) of all inspections were conducted in food service facilities.



**SANITATION INSPECTIONS** are conducted at each facility based on North Carolina General Statute requirements. The Public Health laws mandate the minimum number of inspections which must be conducted depending on the facility type and the potential risk to the public's health. Some facilities require a minimum of four sanitation inspections each year, while others are only required to be inspected once. These are most often unannounced inspections and a grade card is posted based on the results of the inspection where required by law. Sanitation inspections are also conducted upon request when an establishment wants to try to raise their letter grade, for example from a "B" to an "A".

In FY 15/16, 1217 (62%) of all inspections were Sanitation Inspections. This is a 2.6% increase over the number of sanitation inspections conducted in FY 14/15 (1186). 959 (79%) of the Sanitation Inspections were conducted for food service facilities. 170 (14%) were conducted at institutions and the remaining 88 (7%) were conducted at Lodging, Swimming Pools, or Tattoo Artists & Facilities.



Sanitation Inspections in All Establishments

<sup>3</sup> The State Report does not include permitting or compliance inspections. It also does not include Rest/Nursing Homes, Hospitals, Child Day Care, Residential Care, School Building (private & public), Local Confinement, Private Boarding Schools/College, Orphanage, Children's Home or Similar Institution, Adult Day Service, Swimming Pools & Spas, Tattoo Artists & Facilities, or Temporary Food Establishments.

**COMPLIANCE INSPECTIONS** are conducted to investigate a complaint or to verify that a violation documented from the sanitation inspection that is classified as a *priority* or *priority foundation* has been corrected. These types of violations should be corrected during the inspection. If an immediate correction cannot be achieved, it must be corrected within 10 days. The majority of the compliance inspections are conducted at food service establishments.



259 verification inspections were completed in FY 15/16 and 303 complaint and follow-up inspections were conducted. This represents a 10.6% increase over the number of compliance inspections conducted in FY 14/15.



**PERMIT OR OPENING INSPECTIONS** are conducted for new establishments or for existing establishments upon change of ownership. Many facilities are required to submit plans of the proposed layout for approval prior to opening to the public. The majority of permits issued are for food service establishments. Concession stands, tattoo artists, and swimming pools must obtain a new permit each year. Festival food vendors are issued a permit for each event.

225 permits and 3 openings were documented in FY 15/16; 71.1% (160) were for food service establishments; 19.6% were for swimming pools; the remaining permits / openings were for tattoo artists, lodging and institutions. This represents a 33.9% increase over the number of permits and openings in FY 14/15.

Other agencies may be consulted to help answer questions a manager or facility director may have. Agencies include local building inspection departments, fire marshal's offices, US Food and Drug Administration, the NC Department of Agriculture and Consumer Services, and the NC Department of Health and Human Services.

**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



The Children's Environmental Health & Healthy Homes Section 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 their patient's health. We encourage families to provide healthy homes so their children can thrive. Our major programs are Childhood Lead Poisoning Prevention, Asthma Management, and Meth Lab Decontamination.

## Childhood Lead Poisoning Prevention

There is no safe blood lead level in children. Even low levels of lead in blood have been shown to affect IQ, ability to pay attention, and academic achievement. And the effects of lead exposure cannot be corrected. According to the CDC, it can cost \$5,600 in medical and special education costs for each seriously lead-poisoned child. The most important steps parents, doctors, and others can take is to prevent lead exposure before it occurs.

The objective of this program is to prevent childhood lead poisoning. This is accomplished by:

- (1) Identifying children with elevated levels of lead in their blood through routine and targeted screening;
- (2) Identifying lead hazards in the environments of children with elevated lead levels;
- (3) Reducing exposure to lead hazards through remediation and education; and
- (4) Primary prevention through the education of contractors who could create lead hazards with common renovation activities.



This program formed a partnership with Jones, Pamlico and Lenoir counties in 1999. Working with area healthcare providers and the Public Health Departments, **The Craven-Jones-Pamlico-Lenoir Lead Poisoning Prevention Partnership** not only responds to the needs of identified lead-poisoned children, but strives to prevent children from being poisoned in the first place by (1) promoting lead-safe housing, (2) identifying lead-based paint & hazards prior to remodeling work and (3) teaching lead-safe work practices to remodeling workers.



Following the guidelines established by the NC Childhood Lead Poisoning Prevention Program (CLPPP), children are screened for elevated levels of lead in their blood at ages 1 and again at age 2. The results are uploaded into a statewide database so that a child's record shows the results of all the blood lead tests taken, whether in the doctor's office or the State Lab of Public Health.

Craven County has historically done exceptionally well at screening children enrolled in Medicaid, who are those most at risk for lead poisoning. For children ages 1 and 2 years and enrolled in Medicaid, we averaged a screening rate of **92.6%** (2007 – 2011<sup>4</sup>). For these children, Craven County's screening rate was **18%** higher than the State's average of **78.5%**. Unfortunately, beginning for the 2012 data, the Medicaid data is no longer available and we began analyzing the screening rate of all children ages 1 and 2.

For children ages 1 and 2 years and not enrolled in Medicaid, we averaged a screening rate of **62.4%** (2007 – 2011<sup>5</sup>) compared to the State's average rate of **48.8%** during the years 2007 - 2011. However, during the past three years, Craven County's screening rate dropped to an average **60.7%**. Almost 1200 children ages 1 and 2 were not screened for elevated blood lead levels in 2014. We are concerned that children are not being screened appropriately, and many are maturing to adulthood with an unnecessary burden of being poisoned by their environment(s).

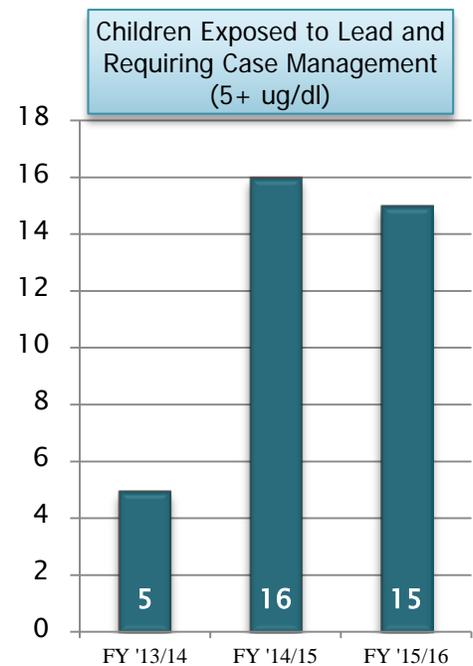
**Objective 1**  
**Identify children with elevated levels of lead in their blood through routine and targeted screening**

**Action Levels were lowered to 5 because harmful effects appear to be irreversible.**

There were approximately 2,224 children in Craven County ages six-months to six-years screened for blood lead poisoning in 2014. Of those children who were screened, nine were confirmed as having an elevated blood lead level between 5 – 9 micrograms per deciliter ( $\mu\text{g}/\text{dl}$ ), five were confirmed as having an elevated blood lead level between 10 – 19  $\mu\text{g}/\text{dl}$  and two were confirmed as having blood lead levels at or above 20  $\mu\text{g}/\text{dl}$ .

Beginning July 5, 2012, the Centers of Disease Control lowered its reference level to 5  $\mu\text{g}/\text{dl}$ , in part because there is compelling evidence that even low blood-lead levels are associated with IQ deficits, attention-related behaviors, and poor academic achievement. This new level is based on the U.S. population of children ages 1-5 years who are in the highest 2.5% of children when tested for lead in their blood, and will be evaluated every 4 years and changed as needed.

Now when a child has a blood lead level of 5  $\mu\text{g}/\text{dl}$  or above, public health actions are initiated. **This new reference level triples the number of children requiring case management.**



<sup>4</sup> 2011 is the last year Medicaid numbers are available.



## Objective 2

**Identify lead hazards in the environments of children with elevated lead levels and in the community**

Craven County conducts lead-hazard risk assessments of the environments of children with elevated blood lead levels; in FY 15/16, we investigated nine homes and two childcare centers in Craven County and two homes in our partner counties.

Because of our close working relationships, the local doctor's offices notifies our program directly instead of waiting for the state database to report children with elevated blood lead levels. This working relationship allows for the investigation of the child's environment to be completed quickly

Medicaid reimburses for home inspections of enrolled children with elevated blood lead levels. Individual counties are not able to bill Medicaid directly and the State has collected these funds. No counties had received funds since February 2013 for those cases. Craven County spearheaded the movement to prod the State to pay the counties for cases for which it had collected the Medicaid reimbursements. Our program received \$3,498 during FY 15/16.

## Objective 3

**Reduce exposure to lead hazards through remediation and education**

Once the lead hazards are identified, we work with the parent and property owner to reduce the child's exposure. Parents are taught about improved nutrition and effective hand washing. The parents are also taught cleaning techniques to effectively remove lead-contaminated dust and to put a barrier, even just duct tape on a short-term basis, over chipping lead-based paint. The property owners are encouraged to make repairs to remove the lead-based paint hazards.

The most common lead-based paint hazard is deteriorating old paint. It crumbles into such a small size that it becomes part of the household dust and a child ingests it through normal hand-to-mouth activities. Other sources include soil, vinyl mini-blinds, dishware, toys, and parents bringing home lead-contaminated dust from their job.

Whether or not a lead-based paint hazard must be eliminated is dependent on how high the child's blood-lead tests are. In the majority of investigations, the child does not have a very high blood-lead level and recommendations to remediate lead hazards are made. Landlords have voluntarily provided products or improvements to improve the child's living conditions, included placing a barrier on chipping paint, covering contaminated soil with clean dirt, providing a door mat to wipe soil off shoes before entering the home, and providing damp mopping system to remove dust from the floor.

In FY15/16, the elimination of the identified lead hazards was required in one home in Craven County. Staff has been working with the owner to develop a remediation plan. Although the permanent repairs have not been completed, the child's blood-lead level has decreased due to the rapid placement of temporary barriers to chipping paint. We have seen improvement in almost all of the children's blood-lead levels after the environmental health investigation and report.

We were hired by the City of New Bern to conduct lead-based paint inspections and risk assessments on the residences that were slotted to be renovated using CDBG funds. Seventeen homes were inspected, generating an income of \$7,451.30. Identified lead-based paint hazards must be remediated using lead-safe work practices by NC Certified Lead-Based Paint Renovators and NC Certified Lead-Based Paint



Firms. This will prevent lead-based paint hazards from construction being created and capable of poisoning young children.

#### Objective 4

**Primary prevention through the education of contractors who could create lead hazards with common renovation activities.**

Craven County has taught lead-safe work practices since 1999. In 2009, we became accredited by the EPA and the State of North Carolina to teach Lead Safety in Renovation, Repair and Painting (RRP). We taught 31 students in FY 15/16. There are currently 38 NC Certified Lead-Based Paint Renovation Firms located in Craven and adjacent counties.



Lead can poison children before they're born. In NC, pregnant women at risk for high levels of lead in their blood are tested. Environmental Health provides these same services to lead-poisoned pregnant woman and to the newborn.

## 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 patient's exposure to asthma triggers. Compared to the National Healthy People 2020 goals and North Carolina statistics, Craven County has reduced the hospitalization rates for each of the age ranges (0-4, 5-64, and 65+) significantly.



Asthma Coalition  
of Eastern Carolina

Breathing Should Be Easy!

Our program promotes asthma control through self-management and to help ensure that every patient receives quality, consistent care in order to lead productive *NO ATTACKS* lives. The program receives referrals from area pediatric health-care providers, Craven County Primary Care and the MERCI Clinic.

### Evidence-based strategy to improve asthma symptoms

Reducing exposure to multiple indoor asthma triggers (allergens and irritants) is an evidence-based strategy to improve asthma symptoms. We have provided this service since 1995 for children and since 2008 for adults. In 2016, we received grants to provide the products that reduce exposure.

This program provides:

- Asthma Self-Management Education among patients and their family support members
- Home Assessments are conducted to identify asthma triggers in the home and other Healthy Homes issues with low-cost / no-cost remediation
- Home-based Multi-Trigger, Multi-component Interventions, which can include pillow case allergen-barrier covers, mattress allergen-barrier covers, roach baits, HVAC filters and other site-specific products

This program has been re-energizing in FY 15/16. We received grant funding from the CarolinaEast Medical Center Foundation and the Harold H. Bates Foundation to

provide products, education and home assessments to patients with asthma so that exposure to multiple indoor asthma triggers can be reduced.

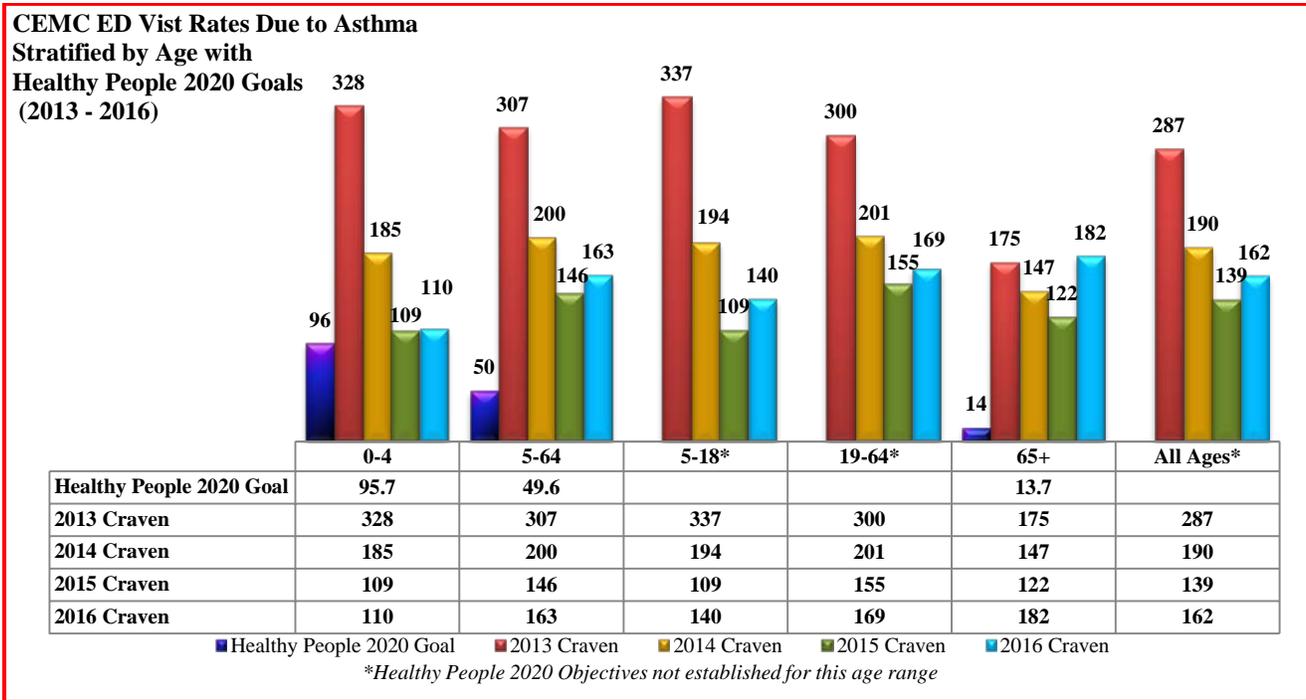
Because Craven County's hospitalization rates have remained under North Carolina's rate of asthma hospitalizations as well as under the goal set by Healthy People 2020, we began tracking emergency department utilization. This data shows that Craven County is utilizing the hospital for asthma management at a high rate. Healthy People 2020 set goals for age ranges of "0-4", "5-64", and "65+". The rate of emergency department utilization for asthma treatment for Craven County residents is higher in each of these age ranges.

During 2016,

- Children ages 0-4 sought asthma treatment in an Emergency Department at a rate of 110.3 per 10,000 (83 children). **This is essentially in line with the goal rate of 95.7 established by Healthy People 2020.**
- Patients ages 5 – 64 sought asthma treatment in an Emergency Department at a rate of 162.8 per 10,000 (1,295 patients). **This is over 2 times the goal rate of 49.6 established by Healthy People 2020.**
  - School-age patients 5 – 18 sought asthma treatment in an Emergency Department at a rate of 139.5 per 10,000 (226 patients). Healthy People 2020 did not establish a goal for this age range.



- Young adult patients 18 - 64 sought asthma treatment in an Emergency Department at a rate of 168.7 per 10,000 (1070 patients). Healthy People 2020 did not establish a goal for this age range.
- Patients ages 65+ sought asthma treatment in an Emergency Department at a rate of 181.6 per 10,000 (315 patients). **This is over 13 times the goal rate of 13.7 established by Healthy People 2020.**



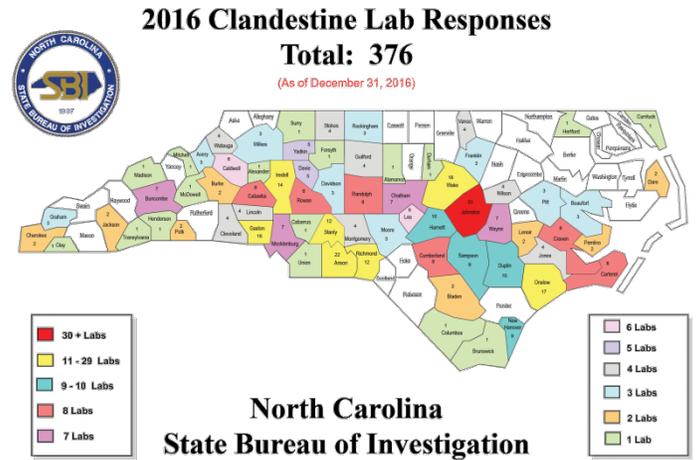
This program has made an impact on the asthma burden in Craven County, but the emergency department utilization needs to be addressed. Although the rate of emergency department visits for asthma declined from 2013 to 2015, we have seen an increase during 2016.

In Craven County, in-patient hospitalization rates from 2004 – 2014 have dropped 62% for 0-14 year-olds & 47% for All-Ages



## *Methamphetamine Laboratories*

Methamphetamine (meth) is a drug that can be easily made using ingredients purchased in local stores. Areas of concern where meth is made are called illegal clandestine laboratories, meth labs, or clan labs. The chemicals used to make meth can pose multiple dangers to both public health and the environment. By North Carolina law, meth contaminated properties must be decontaminated before re-occupancy. To ensure the protection of public health, State rules establish decontamination standards and procedures to ensure that properties used as meth laboratories are rendered safe for habitation.



Craven County Health Department is notified by the State Bureau of Investigation when an illegal meth lab is discovered. Since 2004, the Environmental Health Section has enforced the decontamination requirements. Craven County had five (5) in FY 15/16. The use of a new method of cooking the meth, called the “One-Pot”, has increased the number of meth labs over the past few years. It allows people to make smaller, more frequent batches with less pre-cursor supplies. The same decontamination regulations apply no matter which method is used to prepare the meth.



## ANIMAL / RABIES CONTROL SECTION

The Craven Pamlico Animal Services Center (CPASC) is located at 1639 Old Airport Road in New Bern NC.

This section’s goal is to promote public health by keeping the rabies virus out of the human population. North Carolina is saturated with rabies, mainly in wildlife. The virus is transmitted through the saliva or nervous tissue of the infected animal and is nearly 100% fatal. In FY 15/16, 196 bite investigations were conducted. Nine animals were tested for the rabies virus, and one tested positive.

Craven • Pamlico



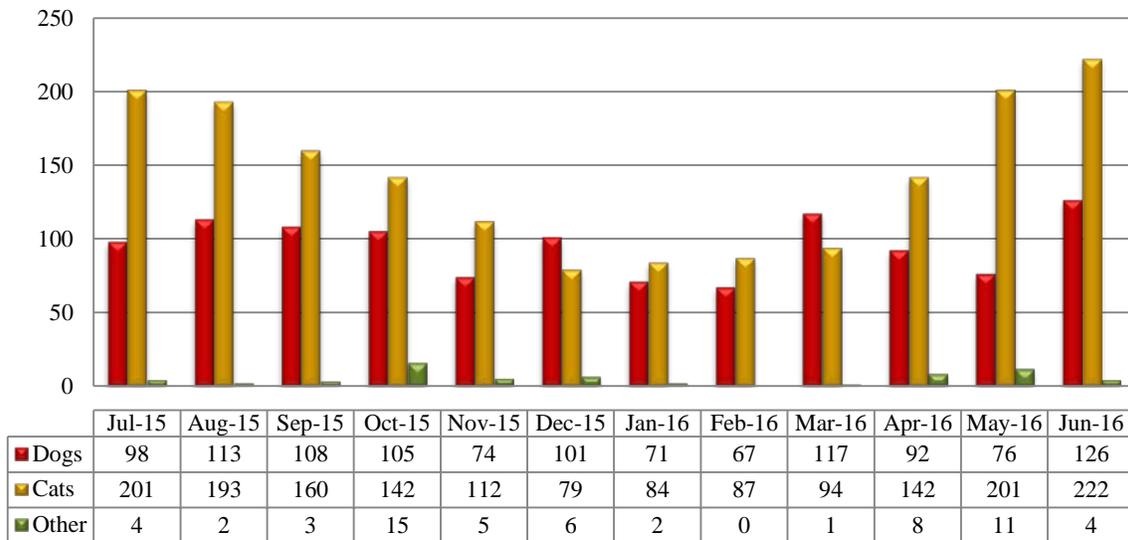
(252) 637-4606

[animalcontrol@cravencountync.gov](mailto:animalcontrol@cravencountync.gov)

To keep humans safe and lower the risk of rabies exposure, CPASC is tasked with the following:

- Ensuring the mandatory vaccination of dogs, cats, and ferrets. Domestic animals are the buffer between wildlife and humans. By vaccinating pets, humans have a much lower risk of exposure to the virus. With two Certified Rabies Vaccinators on staff, CPASC is able to offer a convenient and inexpensive way for the public to keep their pets’ rabies vaccination current.
- Removing stray, dangerous, and unvaccinated animals from the community and from contact with humans. Animals with unknown vaccination history are treated as unvaccinated and extra care is taken when handling such animals.
- Quarantining or rabies testing of animals that have bitten a person. If a dog, cat, or ferret bites a human, it will typically undergo a 10 day quarantine to observe for symptoms of the virus. If a biting animal cannot be quarantined, or in the case of wildlife, a specimen of the animal is sent to the North Carolina State Laboratory of Public Health for testing.

**Animal Intakes**



There was a total intake of 2,926 animals into the shelter during FY 15/16. Historically we experience a higher intake of cats versus dogs, mostly due to the high number of feral cats in our jurisdiction. In FY



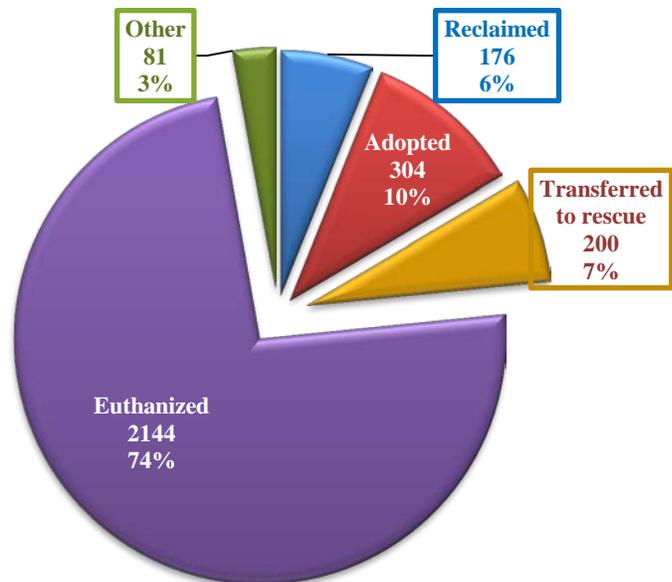
15/16, cats made up 58.6% of the total animal intake. Dogs made up 39.2%, with the remaining 2.2% classified as other species. The source of our intake is primarily owner surrenders, with ACO pick-ups, public drop-off of strays, legal holds (cruelty cases, etc.) and bite quarantines making up the remainder. Animals originate from various jurisdictions: Craven County, Pamlico County, and Marine Corps Air Station Cherry Point.

A main goal of CPASC is to reduce the intake number yearly. Through education, mandatory surgical alteration of all animals adopted from CPASC, and utilization of a Low Income Spay/Neuter program for Craven County residents, we continue to strive to reduce the number of animals coming through our doors.

CPASC continues to create new relationships with private adopters as well as rescue and humane organizations in an effort to increase our live release rate. Partnering with for-profit and non-profit entities provides exposure to the animals in our care, with a goal to increase adoptions. Volunteers play an essential role in maintaining the mental and physical health of the animals, thus increasing their adoptability.

Euthanasia is still 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. CPASC also offers owner-requested euthanasia at no charge to ease the pain and suffering of sick or debilitated companion animals.

A total of 2,144 animals were euthanized during FY 15/16. As can be expected, the high numbers of feral cats received has a detrimental effect on our euthanasia rate. 88.8% of cats were euthanized, as opposed to 52.1% of dogs. There are various reasons for euthanasia. and the reasons differ for dogs vs. cats. The main reasons for euthanasia at CPASC, regardless of species, are aggression, being unsocialized or feral, illness, and behavioral issues.

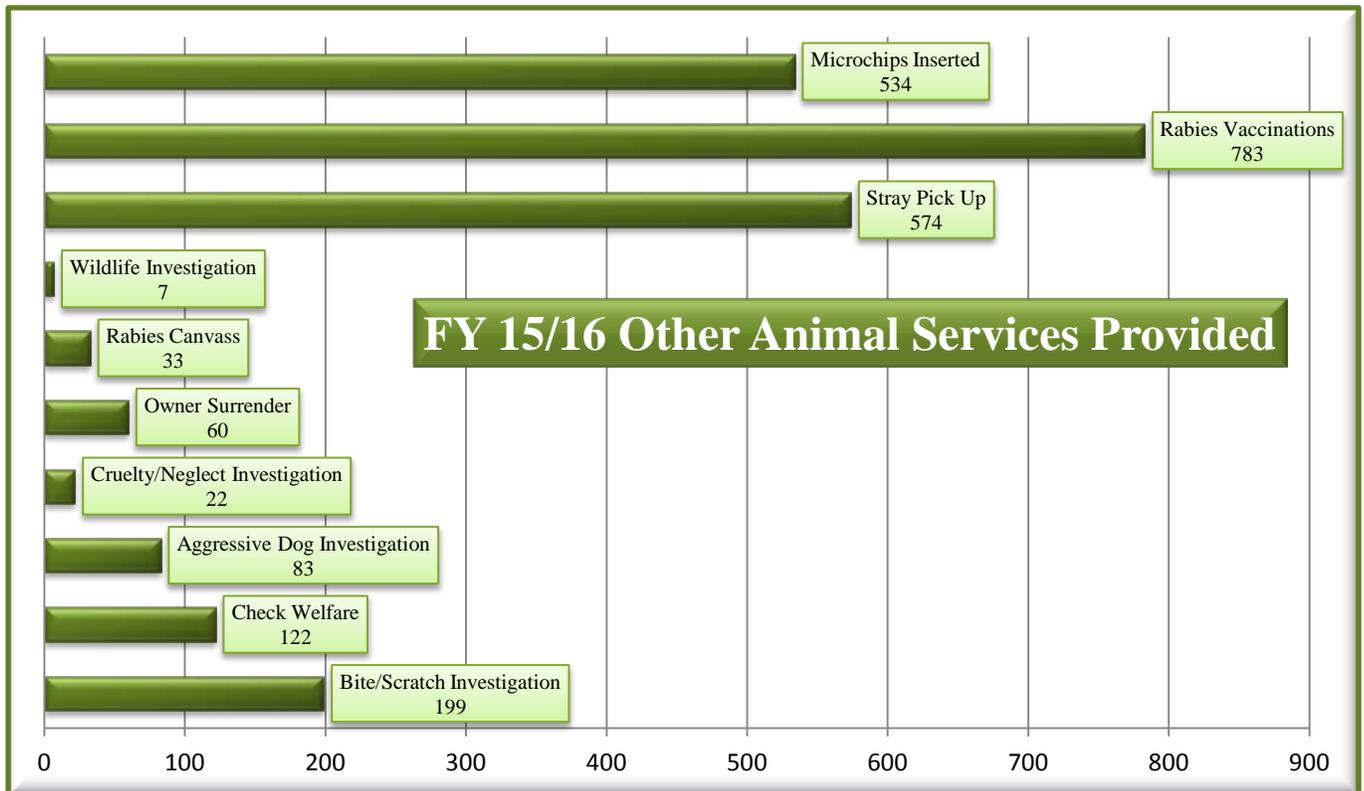


Although rabies prevention is the focus of this department, other services in addition to rabies vaccinations are available:

- Animal adoptions
- Owner reclaims
- Euthanasia service for pet owners
- Regulation of aggressive dogs
- Microchipping
- Low cost spay/neuter services for low income residents
- Emergency animal sheltering during disasters
- “New Leash” on Life Inmate Training Program



- Animal cruelty investigations
- Sheltering services for Pamlico County and MCAS Cherry Point



# ENVIRONMENTAL HEALTH LABORATORY SECTION



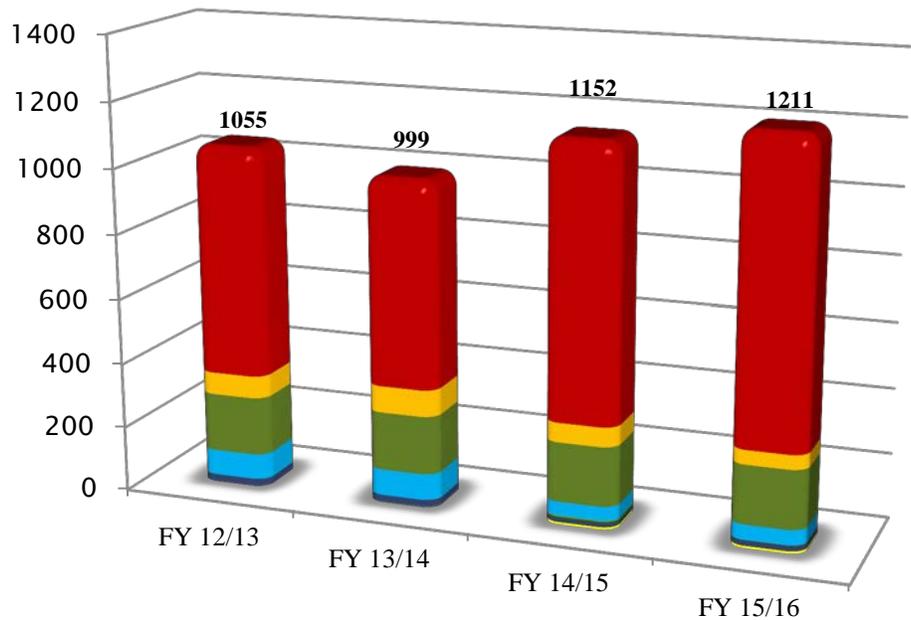
Bacteria, viruses, parasites, and other microorganisms are sometimes found in waters and can cause a variety of illnesses. The Environmental Health Laboratory's goal is to protect the public's health from disease-causing organisms by providing bacteriological testing of Public Water Systems, Private Wells, New Construction Plumbing, Ground Water Supplies, and Recreational Surface Waters.

## Water Testing

The Environmental Health Laboratory is certified by the North Carolina Department of Health and Human Services

Division of Laboratory Certification.

Bacteriological testing services include Total Coliform & E.coli Presence/Absence, E.coli MPN/100ml, Enterococcus MPN/100ml, and Heterotrophic Plate Count (HPC) MPN/ml. The Environmental Laboratory provides testing services to comply with regulatory and programs requirements such as NC Good Agricultural Practices (GAP), Environmental Protection Agency (EPA) and NC Public Water Supply (PWS) Total Coliform Compliance Monitoring Rule for Public Water Systems, US Veteran Affairs (VA) loans, City/County Inspections, and Federal Government Contracts.



	FY 12/13	FY 13/14	FY 14/15	FY 15/16
Public Water Regulatory Compliance (Total Coliform & E.coli)	704	633	838	915
Contractor New Water Lines (Total Coliform & E.coli)	69	82	60	44
Public Water Special-Noncompliance (Heterotrophic Plate Count)	181	180	183	180
Public Water Special-Noncompliance (Total Coliform & E.coli)	79	81	43	46
Private Wells-Env. Health Spec. (Total Coliform & E.coli)	0	0	6	1
Private Wells-Other (Total Coliform & E.coli)	22	22	14	17
Recreational Water Analysis (E.coli Coliform)			8	8
Wastewater Analysis (Fecal Coliform)		1		



The Environmental Lab currently performs compliance bacteriological testing for five public water systems in Craven, Jones, and Pamlico Counties that covers a population of approximately 76,377<sup>6</sup>. We have also tested special water samples for most of the other eighteen public water systems in the three counties. In addition, anyone with a private well may request a water sample to be tested for bacterial contamination.

In FY 15/16, the Craven County Environmental Health Laboratory tested 1211 water samples.

- 1023 Presence / Absence Tests
  - 915 were for Public Water Compliance sampling,
  - 44 were for Contractor New Water Lines,
  - 18 were for private drinking water wells,
  - 46 were for Public Water Special Non-Compliance sampling purposes,
- 188 Quantitative Tests
  - 180 were from drinking water systems and tested using a heterotrophic plate count method, and
  - 8 were from Recreational Waters.

Of the 1023 presence/absence samples tested for Total coliform /E. coliform, five water samples tested positive for potential bacterial contamination.

- 2 were from Contractor New Water Lines,
- 2 were from private drinking water wells, and
- 1 was from a Public Water system tested for a Special Non-Compliance sampling purpose.

Owners of public water systems are required to notify the users, sanitize the affected portions that may be contaminated, and retest. Owners of private water systems are recommended to sanitize and retest their well water.



### *Other Tests*

The Laboratory also tests food samples for bacteriological contamination, soils for mineral content or expansibility, and conducts other tests as appropriate for the sample collected.

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<sup>6</sup> EPA Safe Drinking Water Information System, [https://iaspub.epa.gov/enviro/sdw\\_form\\_v3.create\\_page?state\\_abbr=NC](https://iaspub.epa.gov/enviro/sdw_form_v3.create_page?state_abbr=NC)

# 2014-2016 CRAVEN COUNTY HEALTH DEPARTMENT STRATEGIC PLAN

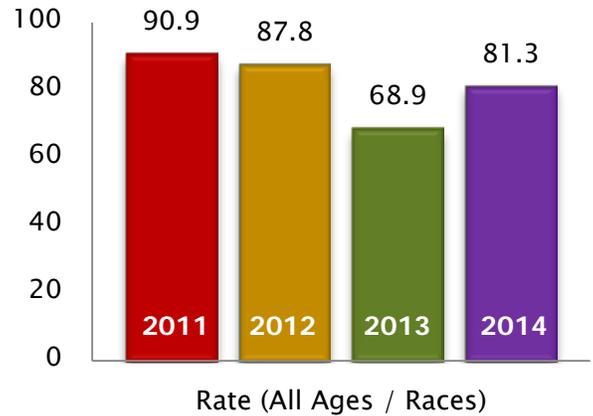
Environmental Health Programs were included in the Health Department's strategic plan for spanning the years from 2014 – 2016.

## *Asthma Management Progress Towards Goals*

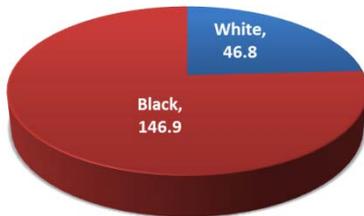
Goal 3 in the 2014 – 2016 Craven County Health Department's Strategic Plan is to Reduce the rate of asthma related hospital admissions from 90.9<sup>2011 Data</sup> to 85.6<sup>2013 Data</sup> per 100,000.

Data from the NC State Center for Health Statistics show that this goal was met. The rate of hospitalizations due to asthma was 90.9 in 2011. The rate dropped to 87.8 in 2012 and to 68.9 in 2013.

However, according to the latest report available, the rate increased 18% to 81.3 in 2014.



The rate of asthma hospitalizations for the black population is significantly higher than the white subset, and actually increased during the 2011 to 2013 time period, from 131.8 to 146.9 admissions per 10,000.



Even though Craven County consistently has more than three times the white population as the black, the same number of whites and blacks were admitted into the hospital for asthma in 2013. This indicates that specialized programs targeting the black population need to be developed to address this health disparity.

## *Animal Control Progress towards Goals*

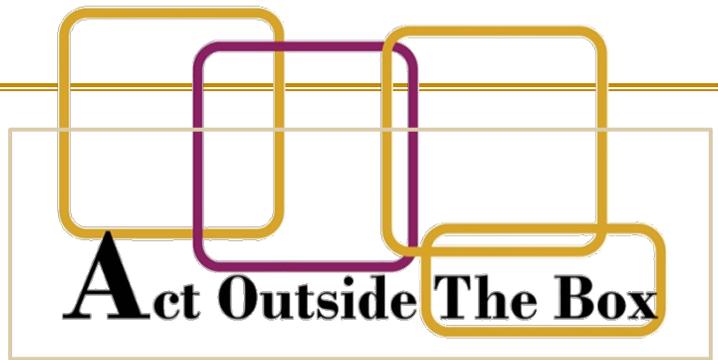
Goal 5 in the 2014 – 2016 Craven County Health Department's strategic plan is to **Expand the Animal Services Center by 2015**. The listed strategies are:

- Have project approved on the County's capital improvement plan.
- Contract with an outside source that plans and builds such facilities.
- Develop a construction plan to be approved by the Board of Health and the County Manager.

The County Commissioners have taken the leadership in this project and the shelter is expected to be expanded and renovated soon.

## OUTSIDE THE BOX

In addition to the tasks regularly performed by Environmental Health and already included in this report, we are often called in to respond to other Environmental Health concerns.



**Main things** – Each year the management staff of the Division of Environmental Health determines a list of items they wish to achieve. **We met all but one of the calendar year goals.**

- ✓ Complete 100% of all mandated Food, Lodging and Institutional inspections. *Achieved*
- ✗ Complete the expansion of the Craven Pamlico Animal Services Center to address overcrowding issues. While not accomplished in this time period, the addition is currently being erected. Completion date should be by the end of the current fiscal year.
- ✓ Work with other County Departments to develop and implement a customer portal allowing the public access for viewing and printing on-site wastewater permits and supportive documents. *Achieved*
- ✓ Explore and support the creation of a portal for internet access use by guests, typically staff of other agencies working at the health department, can access the internet. *Achieved*
- ✓ Develop and implement a new database to track and report our *Requests for Services* by working with the County's Information Technology Department. *Achieved*
- ✓ Become a NC Accredited Training Provider of the RRP lead-based paint safety refresher course. *Achieved*
- ✓ Complete a five year program self-assessment for the voluntary FDA Retail Food Regulatory Standards program. *Achieved*

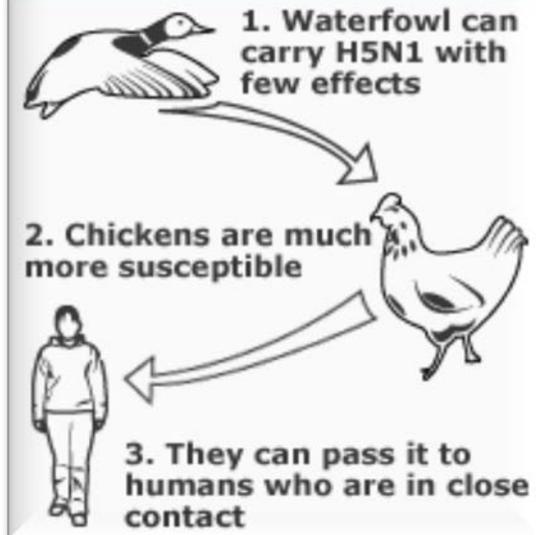


The Environmental Health Laboratory was relocated to the Clinical Laboratory to provide space for the new Adult Primary Care Unit. During construction, the Environmental Lab was temporarily moved to the City of New Bern Water Treatment Facility so that no interruptions in water testing would be encountered. The Environmental Lab moved into its new location and began operating on May 20, 2016.



Zika virus became a major concern for North America in this year. We tracked it's emergence in the Caribbean and into South America, Puerto Rico and northward into the United States. We were a conduit for information about this new disease to the citizens of Craven County presenting on numerous occasions to communities and to public leaders. We formulated strategies for the potential infection of our community and worked with the County Commissioners to develop a vector surveillance aspect, still in its infancy, for our Environmental Health program.

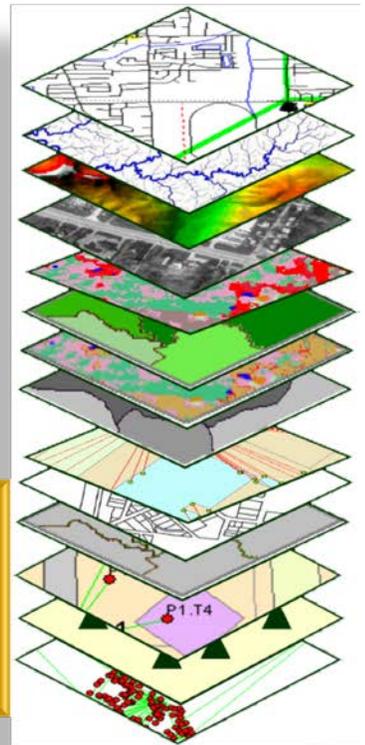
### HOW BIRD FLU SPREADS TO HUMANS



We also monitored the introduction of bird flu to poultry as infected bird populations travelled through migratory flyways in the United States.

**Properties with Hazards**

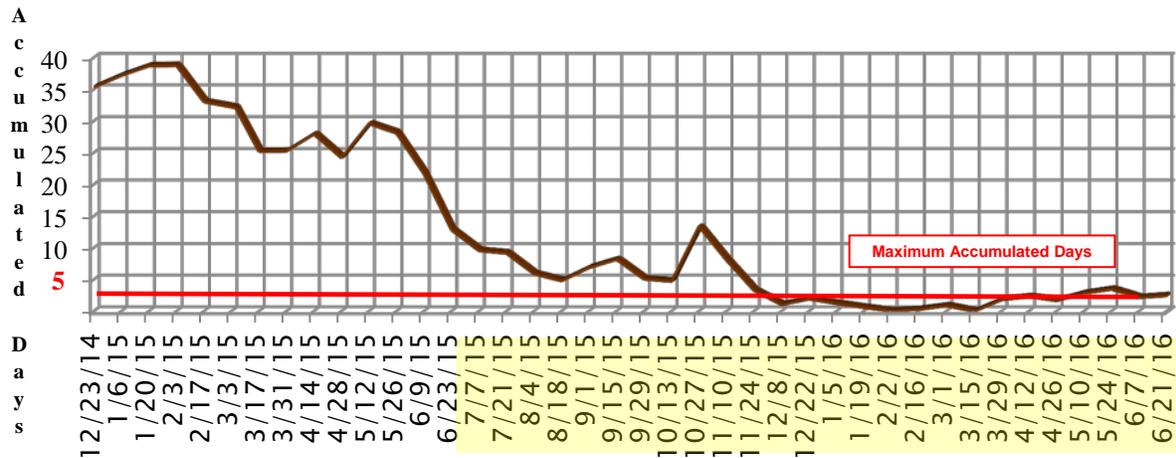
The Children's Environmental Health Staff worked with GIS to develop a "hazard layer". Using information from the request for services database, county staff will be able to see where properties with meth labs and lead-based paint hazards are located.



## Food Vendors at Festivals and Fairs

The Craven County Food Safety program inspects food vendors at events like Mumfest, Havelock Chili Festival and Vanceboro Strawberry Festival. Vendors are checked for various items like thermometers, approved food products and adequate hand washing facilities to name a few. Food vendors that do not meet the minimum requirements are not allowed to operate. All approved food vendors are required to display a permit issued by the Health Department.

Because most festivals are not during normal working hours, our staff often work weekends and holidays to help ensure food safety at these events. 102 permits were issued for food vendors at 11 festivals during FY15/16. Although generally just 1 staff member is required, all staff members help with large events like MumFest and the County Fair.



### Comp Time Reduction

At the beginning of the 2015 year Environmental Health staff had accumulated in excess of 37.266 days (298 hours) of compensatory time on the books. Environmental Health management staff members were charged with reducing the amount of comp time that was on the books and implementing measures and procedures to reduce the future excess accumulation and carry-over of these hours on the books.

The established goal was set at a maximum of five days (40 hours) for the Division.

By the beginning of FY15/16, the accumulated days totaled 9.61 (76.875 hours) – representing a 288% decrease! There were excess hours in September and October, but because of concessions stands at football, soccer, baseball and other amateur sport venues, as well as street fairs with food vendors, we often see an increase during this time period. Staff quickly used this time, and we did not have comp time in excess of 5 days (40 hours) since November 10, 2015.



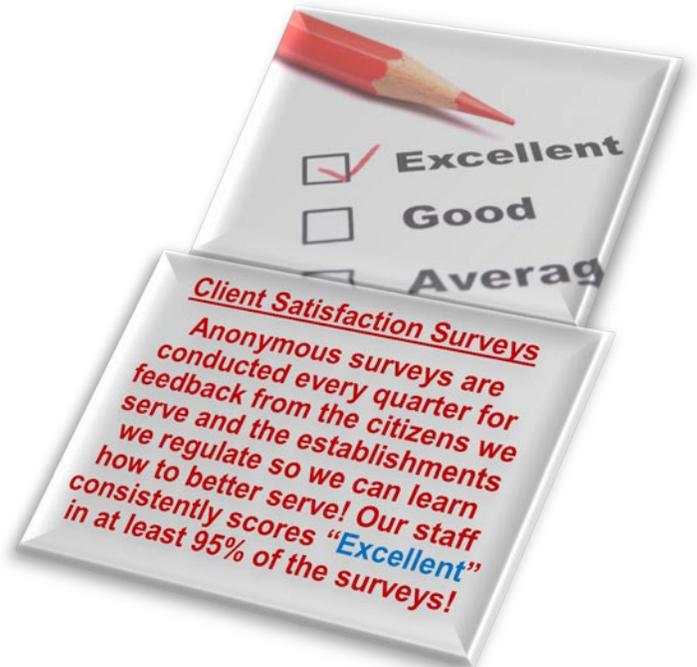


# The Harold H. Bate Foundation

The Children's Environmental Health Section was awarded a \$5,000 grant from CarolinaEast Foundation and \$10,000 from The Harold H. Bate Foundation. Both grants are helping to supply patients with asthma products to reduce exposure to their asthma triggers!



## CAROLINA EAST FOUNDATION



**Food Recalls – We maintain a watchful eye and follow the multitude of food recalls that occurred nationwide. Those that affected the State of North Carolina were reported to the Board of Health. The FDA and the USDA issue recall notices for several reasons, including bacterial / foreign materials contamination and undeclared allergens.**



FDA FOOD **RECALLS** & **UNITS** (MM = MILLION)



