

UNION COUNTY PUBLIC HEALTH



2018 State of the County Health Report

The purpose of the State of the County Health (SOTCH) Report is to inform the community and stakeholders about the current health status, highlight health concerns and issues, and provide a starting point for community involvement in addressing identified health issues. The State of North Carolina requires each county to prepare a SOTCH Report in years when a Community Health Assessment (CHA) is not conducted. The most recent CHA for Union County was conducted in 2016.

State of The County Health Reports and the Community Health Assessments are available to the public at the Reference Desk of the Monroe branch of the Union County Library, and on-line at <http://www.co.union.nc.us/departments/health-services/resources/2016-cha> and <http://www.co.union.nc.us/departments/health-services/resources/sotch-reports>



2018 Highlights

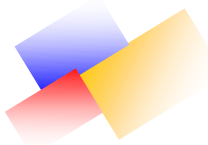
- Relocated Public Health and 3 other divisions from Union Village to the new 144,000 square foot state-of-the-art Human Service Center
- Public Health met 145 out of 147 activities in the accreditation process and received **Re-accreditation with Honors**
- Improved service provision and empowered team members through reorganization and alignment of Human Services Agency
- Partnered with UNC Gillings School of Public Health and the NC Occupational and Environmental Epidemiology Branch to develop an on-line interactive well interpretation tool
- Research article was featured in the National Journal of Environmental Health, December 2018 issue
- Began building bridges of awareness with the Health Equity Institute – A Tale of Two Union Counties
- Engaged the Community through a collaborative art project with Piedmont High School student artists
- Hosted the first Health Equity Collaborative
- Celebrated diversity with first Hispanic Heritage Event
- Provided shelter and transportation in response to Hurricane Florence. Provided free well sampling after the event to detect wells contaminated as a result of Florence
- Improved collaboration with our community resource fair



Union County Overview

Union County was founded in 1842 and is located southeast of Charlotte with 640-square miles and 14 municipalities. The County provides a wide range of services including public safety, human services (Business Operations, Community Support and Outreach, Public Health, Social Services, Transportation and Veterans' Services), funding for education, cultural and recreational activities, and general administrative functions. The County owns and operates water, sewer, and solid waste systems.

Union County continues to be one of the fastest growing counties in North Carolina with a 14.9% change from 2010 – 2017. It is the eighth largest county in the state. The median age in the county is 37.7 years old, and many young households with children. Union County Public Schools (UCPS) has also experienced growth, and is the sixth largest school system in the state, serving approximately 42,000 students at 53 schools. With a 2017-18 four-year graduation rate of 92.6 percent, UCPS continues to top high school graduation rankings among the 10 largest school systems in North Carolina.

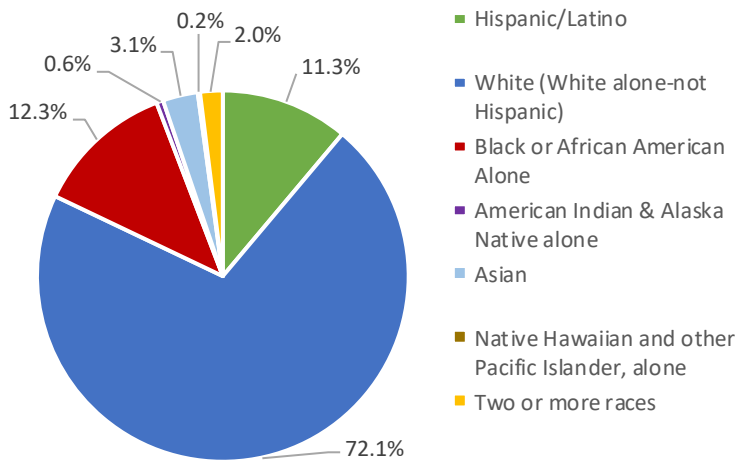


Economics

Union County has one of the ten largest populations, ten highest growth rates and ten largest school systems in the State of North Carolina. The county's economic indicators continue to trend positively. The 2018 median household income is \$70,858, the unemployment rate is down to 3.3%, 88.9% of the population has public or private health insurance coverage, 92.6% of high school students graduate, and only 9.1% of the county's population is below poverty level. However, if you look at individual census tracts, the 2016 median household income ranges from \$173,526 for tract 210.07 in west Union, to \$34,879 for tract 206.01 in Monroe.

Sources: U.S. Census Bureau
 DATA USA: Union County, NC
 Monroe Union County Economic Development

Demographics Breakdown



Source State and County Quick Facts census.gov

Population (2017)

Total Population:	231,366
Total Households:	73,709
Median Age:	37.7

Source: US Census Bureau

Education Attainment (2017)

% of people 25 years +

Less than High School	9.2%
High School Diploma	23.0%
Some College	22.2%
Associate's Degree	9.0%
Bachelor's Degree	26.1%
Postgraduate Degree	10.5%

Source: CharlotteUSA.com

Labor Force (2013—2017)

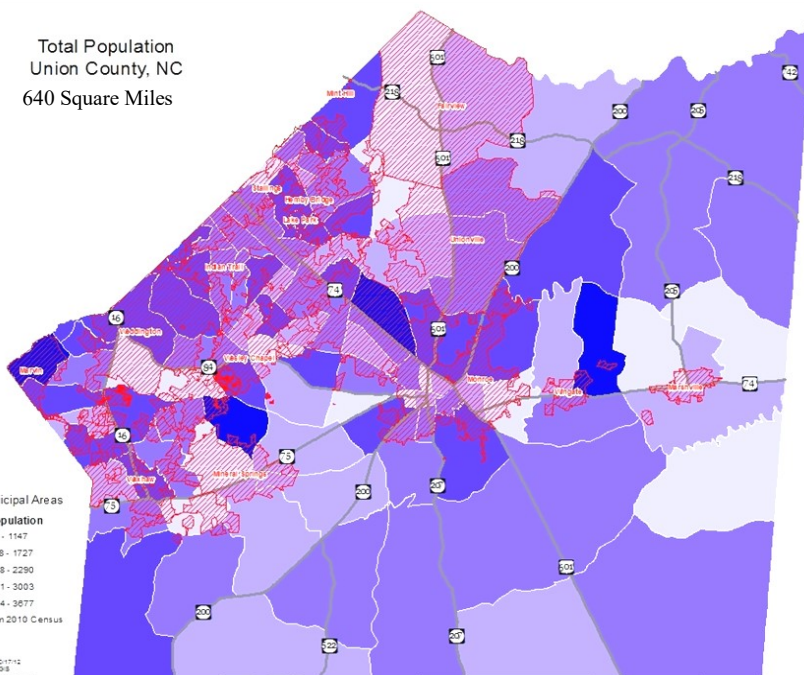
Labor Force	121,997
Unemployment Rate	3.3%

Source: NC Department of Commerce, December 2018

Income (2017)

Median Household Income	\$70,858
Per Capita Income	\$32,754
Health Insurance Coverage	90.1%
Persons in Poverty, Percent	9.1%

Source: US Census Bureau





Leading Causes of Death

Union County 2013-2017

North Carolina 2013-2017

Leading Causes of Death	Rank	Total Deaths	Death Rate	Rank	Total Deaths	Death Rate
TOTAL DEATHS --- ALL CAUSES	0	6,890	620.5	0	441,359	878.1
Cancer - All Sites	1	1,570	141.4	1	96,225	191.4
Diseases of the heart	2	1,447	130.3	2	90,942	180.9
Chronic lower respiratory diseases	3	381	34.3	3	26,092	51.9
Alzheimer's disease	4	377	33.9	5	18,360	36.5
Cerebrovascular disease	5	332	29.9	4	24,232	48.2
Other Unintentional injuries	6	223	20.1	6	18,046	35.9
Diabetes mellitus	7	193	17.4	7	13,549	27.0
Nephritis, nephrotic syndrome, & nephrosis	8	164	14.8	9	9,435	18.8
Pneumonia & influenza	9	140	12.6	8	9,887	19.7
Septicemia	10	131	11.8	10	7,477	14.9

Source: NC State Center for Health Statistics, County Health Data Book—2018



Health Projections

Life Expectancy Years					
	Total	Male	Female	White	African American
Union County (2015 -2017)	79.6	77.6	81.4	80.1	76.8
State (2017)	77.0	74.4	79.6	77.9	74.5

Source: State Center for Health Statistics (County Data Book) 2018

Projected New Cancer Cases 2018					
	Total Cases	Lung/ Bronchus	Breast Cancer (Female)	Prostate	Colon/ Rectum
Union County	1,232	176	221	154	94
State	60,958	9,064	10,625	7,545	4,697

Source: State Center for Health Statistics (County Data Book) 2018



Public Health Budget

FY	Local Allocation	FY	Expenses	FY	Revenues
2018	\$ 6,468,828.00	2018	\$ 11,736,647.00	2018	\$ 5,267,819.00
2017	\$ 5,861,360.00	2017	\$ 10,663,990.00	2017	\$ 4,802,630.00
2016	\$ 5,223,880.00	2016	\$ 9,909,145.00	2016	\$ 4,685,265.00



Public Health Emergency Preparedness

In September of 2018, Hurricane Florence affected both North and South Carolinas. With the threat of substantial flooding in Union County, the Union County Emergency Operations Center was activated. A determination was made to open a general population shelter at Monroe Middle School. The shelter operations were conducted by Division of Public Health, Division of Social Services, and American Red Cross. Monroe City Police and Union EMS provided on-scene assistance throughout the event. The shelter opened at 8:00 am on Friday, September 14 and remained open until Monday, September 17. The total population within the shelter was 105. Union County Division of Public Health staff provided medical assistance to the shelter residents throughout the entire duration. Staff was scheduled on 12 hour shifts, with each shift having at least two (2) nurses and an interpreter.

After the initial response, Environmental Health provided free bacteriological well water testing to Union County residents. Environmental Health Specialists collected samples, conducted visual inspections of wells, fielded calls from concerned citizens and provided educational information on drinking water. Analysis of the samples was performed by the Union County Public Health laboratory. 102 samples were collected during the 30 days following the hurricane flooding. Of those samples, 57.8% were present for coliform and 14.3% were present for E. coli, both rates were much higher than occur with normal sampling.



Clinical Services FY 17-18

Unduplicated Patient Count: 6,629
Visit Count: 13,691

Individual Program Data		
Program	Non-duplicated Patient Count	Visit Count
Child Health Clinic	2,836	4,326
CH Medical Nutritional Therapy	213	266
Care Coordination for Children (CC4C)	774	1282++
Family Planning (FP & FP Contra)	1,859	2,331
Immunizations/International Travel	1,690*	1,921*
STD	746	860
TB	261	537
Maternal Health	604	3,358
Pregnancy Care Management (PCM)	414	1246++
BCCCP	78	78
Adult Health (Vasectomy, Chart Review)	14	14
Phone Calls (Triage + Clinic)	3,465	5,898
WIC (3,264 avg. monthly caseload)	Clients per month	Contacts per month
WIC Breast Feeding Program	220	235
INMATE HEALTH		
Health Screenings		3,712
Medication Passes		43,008
Sick Calls		2,282

*Total Immunizations include 3 International Travel

++Patients screened



Communicable Diseases

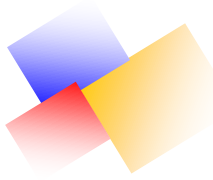
	INVESTIGATED	2018 CONFIRMED
Campylobacter Infection	35	9
Cryptosporidiosis (Caused by a parasite-diarrheal disease)	7	5
Cyclosporiasis	1	1
Carbapenem-resistant Enterobacter (CRE)	4	4
E. Coli	13	2
Foodborne disease-other/unknown	1	0
Haemophilus Influenza	3	2
Hantavirus	1	0
Hepatitis A	4	0
Hepatitis B, acute	2	1
Hepatitis B, chronic	18	9
Hepatitis B, perinatally acquired	4	0
Hepatitis C, acute	5	5
Hepatitis C, chronic	138	59
Influenza, Death: Adult (18 ≥ years)	9	8
Listeriosis	1	0
Lyme Disease	20	1
Meningitis, pneumococcal	1	1
Meningococcal Disease	0	0
Mumps	1	0
Pertussis (Whooping cough)	36	2
Rabies, Animal	1	1
Rocky Mountain Spotted Fever	26	0
Salmonellosis	79	44
Shigellosis	5	5
Streptococcal infections, Group A invasive	15	7
Tuberculosis	2	1
TB – LTBI	86	71-R 3-C
Zika	1	0

NC EDSS Report Data as of 02/27/19

SEXUAL TRANSMITTED DISEASES	INVESTIGATED	CONFIRMED
AIDS **	N/A	2
Chlamydia	1013	980
Gonorrhea	301	283
HIV Disease **	N/A	10
Non-gonococcal Urethritis (NGU)	15	15
Syphilis **	N/A	1

*NC EDSS Report Data as of 02/27/19

**NC DPH HIV/STD 3rd Quarter Report



Maternal Health

	UC Total Number	2017%	NC Total Number	2017%
Very Low Birthweight (1,499 grams or <)	27	1.1	2,071	1.7
Low Birthweight (1,500—2,500 grams)	145	6.1	9,240	7.7
Preterm (less than 37 weeks)	221	9.3	12,580	10.5
Care Began Second Trimester	644	27.0	27,537	22.9
Care Began Third Trimester	149	6.3	6,872	5.7
No Prenatal Care	38	1.6	2,163	1.8
Gestational Diabetes	205	8.6	7,673	6.4
Mother Smoked	112	4.7	10,399	8.7
C-section	715	30.0	35,256	29.4

(2013—2017)

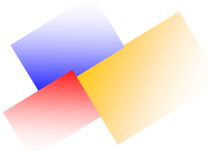
Women 15—44	Births	Fertility Rate	Total Pregnancies	Pregnancy Rate	Total Abortions	Abortion Rate
Union County	11,824	54.9	13,330	61.9	1416	6.6
NC State	601,621	60.3	715,309	71.7	109,540	11.0
Teens 15—17						
Union County	185	6.4	247	8.6	62	2.2
NC State	10,486	10.9	13,546	14.1	2968	3.1

Source: State Center, Vital Records



Infant Mortality

(2017)	Total Infant Deaths	White Non-Hispanic Deaths	African American Deaths	Hispanic Deaths	Other Deaths
Union County	11	7	4	0	0
North Carolina	852	326	361	106	59
Infant Mortality Rates Racial Disparities (2013-2017)	White Rate	African American Rate	Disparity Ratio		
Union County	3.6	13.1	3.63		
North Carolina	5.3	12.7	2.40	Source: State Center, Vital Records	



Union County Environmental Health

The **Environmental Health** Section endeavors to promote and protect public health and preserve the environment by conducting daily activities designed to prevent disease, educate the public and enforce regulations. Environmental Health includes mandated programs administered by the Union County Public Health Division pursuant to Chapter 130A of the General Statutes of North Carolina and/or adopted under Board of Health Authority. The employees that carry out these programs must be registered with the state as an Environmental Health Specialist. Three primary programs operate within Environmental Health: the **On-site Water Protection Program**, the **Food, Lodging and Institutions Program** and the **Children’s Environmental Health Program**.



On-Site Water Protection Program

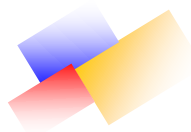
The **On-Site Water Protection Program** serves the community through the protection of surface and ground water supplies. Program staff educates citizens on water quality, contaminant issues and waterborne diseases. Permits are issued for the installation of new drinking and irrigation wells or for the repair of existing wells. Well water quality is an important issue for the residents of Union County. Health risk assessments are provided for well owners in conjunction with all water sample results. The primary well water contaminants observed in Union County were: coliform bacteria (31.8%), manganese (27.8%), arsenic (18.8%), iron (14%) and E coli (2.1%). Environmental Health Specialists conduct soil and site evaluations to determine suitability for on-site systems on both residential and commercial properties. This program is responsible for the design, permitting and inspection of new systems, permitting of system expansions for building additions and the repair of existing on-site wastewater systems. In response to population growth, there continues to be very high demand for on-site wastewater systems and the types of systems being utilized are increasingly complex. Staffing levels have improved and wait times for service are down, but the development of new staff remains a challenge.

On-Site Water Protection Program Data			
Well Permits Issued	369	On-Site Wastewater System Permits Issued	1,340
Well Inspections/Site Visits	1430	On-Site Wastewater System Inspections/Site Visits	5,039
Well Consultative Contacts	2,996	On-Site Wastewater System Consultative Contacts	15,465
Well Water Sampling	696		

Bacterial Analysis		
Bacteria Samples	Contaminant Detected	Positive Samples With Contaminant
383	<i>Coliform bacteria</i>	122 of 383 (31.8%)
	<i>Escherichia Coliform (E.coli)</i>	8 of 383 (2.1%)



Inorganic Contaminants	
Type of Contaminant	Number of Contaminants Above the EPA’s Maximum Contaminant Level (MCL) or Secondary Maximum Contaminant Level (SMCL)
Arsenic	59 of 313 were above the MCL of 0.010 parts per million (ppm)
Lead	8 of 313 were above the MCL of 0.015 ppm
Iron	44 of 313 were above the SMCL of 0.3 ppm
Manganese	87 of 313 were above the SMCL of 0.05 ppm
Copper	4 of 313 were above the MCL of 1.3 ppm
Selenium	1 of 313 were above the MCL of 0.05 ppm



Environmental Health Food, Lodging and Institutions

Environmental Health Specialists in the **Food, Lodging and Institutions Program** conduct plan reviews, permitting and inspections of businesses that prepare and serve food, institutions and lodging establishments. Plan review, permitting and inspection activities are also performed on seasonal and year-round public swimming pools. The program achieved 100% mandated inspection compliance again this year. In addition to inspections and associated compliance follow-up activities, Environmental Health staff is responsible for the investigations of complaints and communicable illness outbreak occurrences in the community. Emphasis is placed on education and voluntary compliance with best practice standards. The number of new food service establishments, institutions and public swimming pools continues to increase along with water and sewer infrastructure expansion. Since fiscal year 2010, there has been a 24% increase in the number of restaurant facilities, a 30% increase in permitted food stands and a 69% increase in the number of residential care facilities. The number of public swimming pools has grown by 11% in Union County.

Environmental Health Program Data		
Facility Type	Facilities	Total Inspections
Food Service Establishments: Restaurants, School Cafeterias, Meat Markets, Mobile Food Units, Concession Stands, Elderly Nutrition Sites, Institutional Food Service, etc.	681	1844
Lodging Facilities: Hotels, Motels, Bed and Breakfast Inns	12	11
Institutions: Nursing Homes, Hospitals, Adult Day Care, Residential Care Facilities, Jail, etc.	14	28
Public Swimming Pools	168	412
Mass Gathering Events	6	6
Tattoo Artists	27	28



Children’s Environmental Health Program

Union County’s **Children’s Environmental Health Program** serves to protect and improve the health of children by reducing environmental health risks in child care facilities, schools and camps. Environmental Health staff is involved in these facilities from the planning and construction phase to the daily operation by way of conducting plan reviews, routine sanitation inspections and offering instruction and training to personnel. Program staff also conducts investigations of communicable illness outbreak occurrences and follow-up on complaints as necessary. The numbers of schools (public, charter, private and religious) and child care facilities have grown along with the population in Union County. Since 2010, there has been a 16% increase in the number of schools and a 47% increase in the number of child care facilities.

The Children’s Environmental Health Program coordinates and assists in the environmental investigations of children who have been lead poisoned. Through the implementation of the North Carolina Rules Governing Lead Poisoning Prevention in Children, 15A NCAC 18A .3100, Environmental Health Specialists protect children from the harmful effects of lead.

Childcare Facilities and Schools Program Data			
Type of Facility / Institution	Number of Facilities	Number of Inspections /Visits	Plan Reviews of Facilities
Childcare Facilities	97	215	10
Schools	71	79	4



2018 CHA Health Priorities

Rise in Opiate/Heroin Addiction

Intervention 1 – Drug Use and Abuse Community Coalition

Measure	Completed in 2017/2018	Planned for 2019
Host 4 Information Sessions in different UCPS clusters across the county	Hosted 8 opioid sessions at area high schools and 2 sessions with Waxhaw PD	Host information sessions upon request
Host a resource fair with substance abuse service organizations	Hosted community resource fair which included providers of human services in Union County	Continue to make opioid addiction and substance treatment information available at community outreach meetings

Intervention 2 — Plan & Develop Union County Family Drug Court

Measure	Completed in 2017/2018	Planned for 2019
50% of referred family court participants complete substance abuse treatment	Met with district attorney about court involvement and status of substance abuse cases	Continue dialogue and collaboration with court and district attorney
Lessen recidivism rate within Family Court by 50%	Data is not tracked	Develop mechanism to track recidivism rate

Intervention 3 – Increase access to Operation Medicine Drop

Measure	Completed in 2017/2018	Planned for 2019
Increase availability of Operation Medicine Drop boxes in Union County (add 10 new locations)	In 2018 there were 5 drop boxes and 2 community days where 350,835 doses were collected	New locations will be utilized if possible but 24/7 law enforcement is a requirement
Increase in agencies hosting drop box events	Operation medicine drop is coordinated through “Safe Kids” which is a coalition of many community partners	Several events are scheduled and others are being planned
Increase in volume of medicine collected	Effort coordinated through Safe Kids	This year will track doses collected and identify specifically opiate based medications

Intervention 4 – Increase awareness and access to Medication-Assisted Treatment (MAT)

Measure	Completed in 2017/2018	Planned for 2019
Develop and implement marketing campaigns on MAT and other opiate / heroin issues	Met with McLeod Addictive Disease Center to assess collaboration possibilities	Continue meeting with treatment partners to develop availability awareness effort
Increase volume of abusers seeking MAT as part of Rehab	Not tracked in 2017/2018	Develop method to identify and track abusers seeking rehab

Intervention 5 – Develop plan for Jail Health to establish a stronger Substance Abuse Program

Measure	Completed in 2017/2018	Planned for 2019
Establish a baseline of Union County Jail inmates convicted of drug related crimes	Treated inmates by health needs including substance abuse/detox issues	Continue treating inmates for health issues/needs
Register a percentage (faith based program capacity TBD) within treatment	Reviewed inmate health programs to assure safe and appropriate treatment	Identify treatment program options for inmates being released from jail
Reduce drug related recidivism by an equal percentage	No measure for tracking has been developed	Develop a measure for tracking drug related recidivism

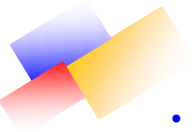


2018 CHA Health Priorities continued...

Water Quality

Intervention 1 – Develop Communication Tools to Increase Testing of Wells

Measure	Completed in 2017/2018	Planned for 2019
100% of residents with drinking water wells that test above EPA estimates for inorganic water samples, and may require water filtration will receive a letter from Union County EH OSWP	100% of residents that received well water testing through the Environmental Health Section were provided with a health risk assessment notification.	~100% of residents receiving well water testing through the Environmental Health Section will be provided with a health risk assessment notification. ~Educational information related to water treatment options will be provided to the citizen along with the health risk assessment.
10% of wells that test above EPA limits will request a secondary water sample be taken within 2 years of the problematic sample.	Well water testing (initial water sampling and resampling) is not mandatory and may only be performed at the request* of the owner. Resampling following chlorination and/or installation of a water treatment device is recommended and was always performed at the request of the owner. (*fees apply)	Will track the percentage of secondary water samples (resamples) that are voluntarily requested after problematic samples. (*fees apply)



Emerging Issues

- Union County Alzheimer’s Disease exceeds the state
- Cancer and Heart Disease remain leading causes of death
- Acuity of inmates and cost of Inmate Health services continues to increase requiring improvement of inmate health program by reducing risk, managing cost, and assuring compliance with medical/nursing standards
- Environmental Health permit requests increase
- The number of doctors, dentists and nurses in Union County per resident is lower than state average
- Infant mortality rate is lower than state average and continues to decline, but a huge disparity exists in infant mortality of black children



New Initiatives

- Complete 2019 Community Health Assessment (CHA) that was originally scheduled for 2020. The CHA will be done with Novant and Atrium Health as partners with the intent to align community health initiatives, reduce service gaps, and prevent duplication efforts. Shifting the CHA will require a review/ adjustment to activities in the community health action plans for opioids and water quality to be completed in 2019
- Develop 2019 Public Health Strategic Plan
- Enhance work collaborations within the Humans Services Agency and Union County Growth Management
- Transition to electronic Environmental Health tool for On-Site Waste Water Program (OSWP) and scan permanent environmental health paper records into laserfiche
- Continue well water education and testing campaign and develop plan for future water/sewer capacity growth in Union County
- Provide CLAS training to staff and assure that all clients receive culturally and linguistically appropriate services to improve equity and eliminate health care disparities
- Continue development of the Health Equity collaborative work group
- Build Dental Clinic services and client base
- Continue Quality Improvement projects agency wide