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NORTH CAROLINA LOCAL GOVERNMENT
PERFORMANCE MEASUREMENT PROJECT

Final Report on City Services for Fiscal Year 2013–2014

PERFORMANCE AND COST DATA

FEBRUARY 2015

COSPONSORED BY:

THE CITIES OF APEX, ASHEVILLE, BURLINGTON, CARY, CHARLOTTE, CONCORD, GREENSBORO, GREENVILLE, HICKORY, HIGH POINT, SALISBURY, WILSON, AND WINSTON-SALEM

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NORTH CAROLINA LOCAL GOVERNMENT BUDGET ASSOCIATION

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The School of Government at the University of North Carolina at Chapel Hill works to improve the lives of North Carolinians by engaging in practical scholarship that helps public officials and citizens understand and improve state and local government. Established in 1931 as the Institute of Government, the School provides educational, advisory, and research services for state and local governments. The School of Government is also home to a nationally ranked graduate program in public administration and specialized centers focused on information technology and environmental finance.

As the largest university-based local government training, advisory, and research organization in the United States, the School of Government offers up to 200 courses, webinars, and specialized conferences for more than 12,000 public officials each year. In addition, faculty members annually publish approximately 50 books, manuals, reports, articles, bulletins, and other print and online content related to state and local government. Each day that the General Assembly is in session, the School produces the *Daily Bulletin Online*, which reports on the day's activities for members of the legislature and others who need to follow the course of legislation.

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PREFACE

North Carolina municipalities are continually looking for ways to improve the efficiency and effectiveness of service delivery. As part of this effort, a group of municipalities joined together with the School of Government and the North Carolina Local Government Budget Association to create an ongoing project to compare performance and cost data for selected governmental services. This joint undertaking is known as the North Carolina Local Government Performance Measurement Project or, more commonly, as the North Carolina Benchmarking Project. This report presents performance and cost data for the fiscal year ending June 30, 2014, for the thirteen North Carolina municipalities participating in the benchmarking project —Apex, Asheville, Burlington, Cary, Charlotte, Concord, Greensboro, Greenville, Hickory, High Point, Salisbury, Wilson, and Winston-Salem. Eighteen previous reports have been published regarding municipal services. All of these reports are available through the Publications Sales Office of the School of Government (919.966.5381). The previous four reports may be purchased online by using the following URL: http://shopping.netsuite.com/s.nl?c=433425&sc=7&category=107&search=final%20report

The benchmarking project is a collaborative effort. Officials from the participating local governments have made vital contributions to the success of the project, including budget and finance staff, program and service staff, and city and town managers. Special thanks are owed to the members of the steering committee, who provide the necessary leadership demanded by such a project: Suzanne Parmentier, Accounting and Budget Manager of Apex; Tony McDowell, Budget and Finance Report Manager, and John Sanchez, Budget Analyst of Asheville; Aaron Noble, Human Resources Director of Burlington; Kathy Lleras, Budget Analyst, and Heather Drennan, Budget Analyst of Cary; Karen Whichard, Budget and Evaluation Analyst of Charlotte; Robin Barham, Budget and Performance Manager, and Lesley Reder, Management Analyst of Concord; Jon Decker, Budget Analyst of Greensboro; Kim Branch, Financial Services Manager, and Byron Hayes, Financial Analyst of Greenville; Karen Hurley, Budget Analyst of Hickory; Laura Altizer, Budget Analyst of High Point; Evans C. Ballard, Budget and Benchmarking Analyst of Salisbury; Lanette Pridgen, Budget Analyst of Wilson; and Scott Tesh, Budget Analyst of Winston-Salem.

The benchmarking project receives contributions from other individuals who strongly support benchmarking and performance measurement. William C. Rivenbark, David N. Ammons, and A. John Vogt, faculty members with the School of Government, serve as project advisors. Special thanks go to Michael R. Smith, dean of the School of Government, and Thomas H. Thornburg, senior associate dean of the School of Government, for their leadership and support of the benchmarking project. The author wishes to acknowledge other School of Government staff who have contributed many hours to the benchmarking project, including Melissa Twomey and Dan Soileau in the Publications Division.

Dale J. Roenigk
February 2015


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Performance and Cost Data

INTRODUCTION


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INTRODUCTION

Can local governments measure their performance and cost in a meaningful way? Can performance measures in one local government be legitimately compared to the performance of another? In the fall of 1995, fourteen large municipalities and counties in North Carolina agreed to participate in a collaborative project to answer these and other questions relating to benchmarking. Seven of the jurisdictions were municipalities, forming Phase I of what is now known as the North Carolina Local Government Performance Measurement Project or, more commonly, the North Carolina Benchmarking Project. The other seven jurisdictions were counties, constituting Phase II of the benchmarking project. A third phase of the benchmarking project began in January 1997, consisting of fourteen municipal and county, small- and medium-size North Carolina jurisdictions. These phases represented the pilot stage of the benchmarking project.

Since that beginning, the benchmarking project has proceeded with an ongoing agreement to collect, clean, and report comparative performance and cost data from the participating municipalities. Listed below are the thirteen municipalities that are included in this report:

- Apex
- Asheville
- Burlington
- Cary
- Charlotte
- Concord
- Greensboro
- Greenville
- Hickory
- High Point
- Salisbury
- Wilson
- Winston-Salem

This report is the result of a joint undertaking of the participating municipalities, the School of Government, and the North Carolina Local Government Budget Association. The North Carolina League of Municipalities and the Local Government Commission also have contributed to the development of this report. The goals of the benchmarking project are as follows:

1. To develop/expand the use of performance measurement in local government
2. To produce reliable performance and cost data for comparison
3. To facilitate the use of performance and cost data for service improvement

SERVICES

This report presents performance and cost data and accompanying explanatory information for the following service areas:

- Residential Refuse Collection
- Household Recycling
- Yard Waste/Leaf Collection
- Police Services
- Emergency Communications
- Asphalt Maintenance and Repair
- Fire Services
- Building Inspections
- Fleet Maintenance
- Central Human Resources
- Water Services
- Wastewater Services
- Core Parks and Recreation

The participating units did not agree to continue the benchmarking project to endure the challenges of data collection and "data cleaning" simply to produce a report. They continue with the belief that performance measurement and benchmarking are catalysts to service improvement. No jurisdiction can be the best in every service that it provides, highlighting the notion that even outstanding performers can learn from the practices of others. Performance measurement and benchmarking are about tracking performance and cost data and making changes based on both internal and external comparisons over time.

This report is the nineteenth publication representing municipal services. The previous eighteen reports are listed below along with their publication dates:

- *Performance and Cost Data: Phase I City Services* (October 1997)
- *Performance and Cost Data: Phase III City Services* (March 1999)
- *Final Report on City Services for Fiscal Year 1997–98* (March 1999)
- *Final Report on City Services for Fiscal Year 1998–99* (February 2000)
- *Final Report on City Services for Fiscal Year 1999–2000* (February 2001)
- *Final Report on City Services for Fiscal Year 2000–2001* (February 2002)
- *Final Report on City Services for Fiscal Year 2001–2002* (February 2003)
- *Final Report on City Services for Fiscal Year 2002–2003* (February 2004)
- *Final Report on City Services for Fiscal Year 2003–2004* (February 2005)
- *Final Report on City Services for Fiscal Year 2004–2005* (February 2006)
- *Final Report on City Services for Fiscal Year 2005–2006* (February 2007)
- *Final Report on City Services for Fiscal Year 2006–2007* (February 2008)
- *Final Report on City Services for Fiscal Year 2007–2008* (February 2009)
- *Final Report on City Services for Fiscal Year 2008–2009* (February 2010)
- *Final Report on City Services for Fiscal Year 2009–2010* (February 2011)
- *Final Report on City Services for Fiscal Year 2010–2011* (February 2012)
- *Final Report on City Services for Fiscal Year 2011–2012* (February 2013)
- *Final Report on City Services for Fiscal Year 2012–2013* (February 2014)

REPORTING FORMAT

This is primarily a data report. It incorporates graphs, summary tables, and explanatory information to present the performance and cost results for each service area under study. The results of each service area by municipality are displayed with a standard, two-page format. The following information is contained in this report:

1. **Explanatory Information.** This segment of the report describes how the service is provided and identifies conditions or dimensions that affect performance and cost data of service delivery.
2. **Municipal Profile.** This includes a limited number of characteristics of each municipality, such as population density and median family income, which may affect service performance and cost. Some of the general characteristics, such as population, appear in the municipal profiles for all of the service areas. Others, such as weather and tax base served, appear only in selected profiles.
3. **Service Profile.** This area provides input and output data and identifies important dimensions of service delivery.
4. **Full Cost Profile.** A cost accounting model is used to calculate full or total cost of providing each service area under study. Although the cost data were collected in detail, using a collection instrument with more than seventy specific line items, the reporting format aggregates the detailed cost data into three general categories for the purpose of presentation: personal services for the direct expenses of salaries, wages, and related fringe benefits; operating costs that include direct operating expenses and indirect cost allocations; and capital costs that represent depreciation for equipment and facilities.
5. **Resource Measures.** These measures gauge the amount of resources or inputs municipalities allocate for the provision of a given service.
6. **Performance Measures.** Three types of performance measures are used and reported—workload, efficiency, and effectiveness. A municipality's performance is compared to the performance average, noting that the average is based on services with numerous variations and should be viewed with caution. The measures used in this report do not assess total service performance. They gauge certain service dimensions and should be approached with an understanding of the service being provided.

SUMMARY OF OVERALL RESULTS

What the project has achieved

1. The project's methodology, consisting of service profiles, performance measures, cost accounting, and explanation of results, works extremely well for data consistency and comparability. The project's accounting model is especially effective in producing reliable and materially accurate cost data.

2. The performance data have been used in numerous jurisdictions for service improvement, especially in the areas of residential refuse collection, household recycling, police services, and fleet services.
3. The project's success is directly correlated with consensus about service definitions and measurement formulas, involving numerous local government officials from the participating units.

What we have learned

1. Local governments can produce accurate, reliable, and comparable performance and cost data, which can then be used for service improvement.
2. Specific service definitions are vital to performance measurement, including explanatory information.
3. Data availability and quality are very important to performance measurement.
4. Performance measurement and cost accounting are time consuming. However, performance measures provide valuable feedback when the goal is to deliver quality services at reasonable cost.

READING THE REPORT

This report presents the performance and cost data for the thirteen North Carolina municipalities participating in the benchmarking project for the fiscal year ending June 30, 2014. It also presents multiyear data for participants based on the number of fiscal years that each municipality has participated in the benchmarking project. The following table provides the five fiscal years of performance measures (by final report) contained within the present report and the corresponding municipalities by fiscal year of participation.

Final Report	Jurisdictions
Final Report on City Services for Fiscal Year 2009–2010	Asheville, Burlington, Cary, Charlotte, Concord, Durham, Greensboro, Greenville, Hickory, High Point, Salisbury, Wilmington, Wilson, and Winston-Salem
Final Report on City Services for Fiscal Year 2010–2011	Apex, Burlington, Cary, Charlotte, Concord, Greensboro, Greenville, Hickory, High Point, Salisbury, Wilmington, Wilson, and Winston-Salem
Final Report on City Services for Fiscal Year 2011–2012	Apex, Burlington, Cary, Charlotte, Concord, Greensboro, Greenville, Hickory, High Point, Salisbury, Wilmington, Wilson, and Winston-Salem
Final Report on City Services for Fiscal Year 2012–2013	Apex, Burlington, Cary, Charlotte, Concord, Durham, Greensboro, Greenville, Hickory, High Point, Salisbury, Wilmington, Wilson, and Winston-Salem
Final Report on City Services for Fiscal Year 2013–2014	Apex, Burlington, Cary, Charlotte, Concord, Greensboro, Greenville, Hickory, High Point, Salisbury, Wilson, and Winston-Salem

The municipal profile, full cost profile, service profile, and explanatory information for each municipality are based solely on performance and cost data for the fiscal year ending June 30, 2014. Readers should be extremely careful when interpreting the performance and cost data for municipalities with multiyear data. Municipal

profiles, full cost profiles, service profiles, and explanatory information that support performance measures for the fiscal years ending June 30, 2010, through June 30, 2013, are located in prior year performance and cost data reports and can be obtained from the School of Government.

The benchmarking project considers new service areas and service changes on an annual basis under the guidance of the steering committee. Asphalt Maintenance and Repair represented a new service area for the fiscal year ending June 30, 2000. This service was previously reported as Street Pavement Maintenance. Police Services represented a new service area for the fiscal year ending June 30, 2001. This service was presented as Police Patrol and Police Investigations in prior reports. Fleet Maintenance represented a new service area for the fiscal year ending June 30, 2002. Central Human Resources represented a new service area for the fiscal year ending June 30, 2004. Water Services represented a new service area added in the fiscal year ending June 30, 2007. Wastewater Services was added in the fiscal year ending June, 30, 2012. Finally, Core Parks and Recreation Services was added in the fiscal year ending June 30, 2013.

Municipalities do not participate in every service area for a variety of reasons. Certain ones do not participate in Emergency Communications and Building Inspections because those services are often county functions. In some cases, a municipality may not participate due to organizational structures or other issues. The following table provides the jurisdictions participating in each service area contained in this report.

Service Area	Jurisdictions
Residential Refuse Collection	Apex, Asheville, Burlington, Cary, Charlotte, Concord, Greensboro, Greenville, Hickory, High Point, Salisbury, Wilson, and Winston-Salem
Household Recycling	Apex, Asheville, Burlington, Cary, Charlotte, Concord, Greensboro, Greenville, Hickory, High Point, Salisbury, Wilson, and Winston-Salem
Yard Waste/Leaf Collection	Apex, Asheville, Burlington, Cary, Charlotte, Concord, Greensboro, Greenville, Hickory, High Point, Salisbury, Wilson, and Winston-Salem
Police Services	Apex, Asheville, Burlington, Cary, Concord, Greensboro, Greenville, Hickory, High Point, Salisbury, Wilson, and Winston-Salem
Emergency Communications	Apex, Asheville, Burlington, Cary, Concord, Greensboro, Greenville, Hickory, High Point, and Winston-Salem
Asphalt Maintenance and Repair	Apex, Asheville, Burlington, Cary, Charlotte, Concord, Greensboro, Greenville, Hickory, High Point, Salisbury, Wilson, and Winston-Salem
Fire Services	Apex, Asheville, Burlington, Cary, Charlotte, Concord, Greensboro, Greenville, Hickory, High Point, Salisbury, Wilson, and Winston-Salem
Building Inspections	Apex, Asheville, Burlington, Cary, Greensboro, Greenville, High Point, Wilson, and Winston-Salem
Fleet Maintenance	Apex, Asheville, Burlington, Cary, Charlotte, Concord, Greensboro, Greenville, Hickory, High Point, Salisbury, Wilson, and Winston-Salem

Service Area	Jurisdictions
Central Human Resources	Apex, Asheville, Burlington, Cary, Charlotte, Concord, Greensboro, Greenville, Hickory, High Point, Salisbury, Wilson, and Winston-Salem
Water Services	Apex, Asheville, Burlington, Cary, Charlotte, Concord, Greensboro, Hickory, High Point, Salisbury, Wilson, and Winston-Salem
Wastewater Services	Apex, Cary, Charlotte, Concord, Greensboro, Hickory, High Point, Salisbury, Wilson, and Winston-Salem
Core Parks and Recreation	Apex, Asheville, Burlington, Cary, Concord, Greensboro, Greenville, Hickory, High Point, Salisbury, Wilson, and Winston-Salem

It also should be noted that not all municipalities submit performance and cost data for each performance measure contained within the respective service area. Therefore, data are missing for selected performance measures regardless of service participation.

Performance and Cost Data

RESIDENTIAL REFUSE COLLECTION


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PERFORMANCE MEASURES FOR RESIDENTIAL REFUSE COLLECTION

SERVICE DEFINITION

This is regularly scheduled collection of household refuse or "garbage" from residential premises and other locations, including small businesses, using containers small enough that residents and/or workers can move or lift them manually. The service excludes collection of waste from dumpsters; regular or special collection of yard waste and leaves; collection of recyclable materials, white goods, or other bulky items; and any special or non-routine service provided to residences. Transportation of refuse to a landfill or a transfer station is included, but the disposal of refuse and tipping costs are excluded.

NOTES ON PERFORMANCE MEASURES

1. Tons of (Residential) Refuse Collected per 1,000 Population and per 1,000 (Residential) Collection Points

"Tons of refuse collected" is widely used as a measure of workload for this service. A collection point or pickup point is a single locale (active address) from which residential refuse is collected. It can be a single-family residence, a condominium, an apartment, or a small business that uses containers that residents or sanitation workers can move or lift. Pickup points directly generate collection work, so this measure provides a good assessment of workload. "Tons of refuse collected per 1,000 population" and "per 1,000 collection points" also serve as measures of need for this service. Because of citizen expectations and public health requirements, sanitation crews or contractors must pick up all or virtually all household refuse that residents put out for collection.

2. Cost per Ton of Residential Refuse Collected and Cost per Residential Collection Point

These are the project's principal measures of efficiency for this service. Because of differences in the number of people per household and the percentage of the municipal population served by curbside collection, the comparisons for these two efficiency measures can vary.

3. Full-Time Equivalent (FTE) Positions

The number of full-time equivalent (FTE) positions for residential refuse collection is the number of employees directly involved in providing the service as approved in the annual operating budget during the fiscal year. This number includes both full-time and part-time workers and both permanent and temporary workers. One FTE equates to 2,080 hours of work per year. Any combination of employees providing 2,080 hours of work annually equals one FTE. Cost data reflect all such workers. The measure "tons collected per collection FTE," however, includes only those workers who actually collect refuse and not supervisory or support personnel.

4. Number of Complaints and Number of Valid Complaints

All of the participating units take calls about residential refuse collection, and nearly all maintain records of one kind or another about such calls. However, the municipalities follow very different procedures in processing and recording these calls and in determining which ones are complaints and which are not. For these reasons, the project is able to present limited comparative data about complaints or valid complaints for residential refuse collection or other solid waste services. Nonetheless, the project recommends that the participating municipalities devise common criteria for identifying complaints and procedures for processing and recording calls.

Residential Refuse Collection

Summary of Key Dimensions of Service

City or Town	Normal Collection Location	Collection Points	Tons Collected	Weekly Routes	Percentage Contracted Service	Crew Size (most commonly used)	City FTE Collection Positions	Main Equipment		Landfill/Transfer	
								Packers	Automated	Trips per Day	Distance
Apex	Curbside	12,982	10,731	NA	100%	Contracted	NA	NA	NA	NA	NA
Asheville	Curbside	29,838	22,276	33	0%	1 & 3 person	14	1	7	2	6 miles
Burlington	Curbside	16,762	13,668	16	0%	1 & 2 person	6	2	4	2	19 miles
Cary	Curbside	46,232	32,050	51	0%	1 & 4 person	28	2	10	1	30 miles
Charlotte	Curbside	214,419	173,479	320	0%	1 & 2 person	80	7	57	1.5	13 miles
Concord	Curbside	28,996	23,436	25	100%	Contracted	NA	0	5	1	8 miles
Greensboro	Curbside	81,102	54,737	68	0%	1 & 2 person	27	3	23	1.8	8 miles
Greenville	Curbside and backyard	17,619	27,955	24	0%	3 person	20	6	2	1	5 miles
Hickory	Curbside	12,200	8,642	15	0%	1 & 2 person	3.75	0.25	3.25	2	5 miles
High Point	Curbside	39,107	27,613	52	0%	1 & 2 person	20.5	0.5	9	2	8 miles
Salisbury	Curbside	11,878	8,130	15	0%	2 person	6	4	1	1	10 miles
Wilson	Curbside	19,750	18,000	17	0%	1 & 3 person	11	2	5	2	10 miles
Winston-Salem	Curbside	76,240	52,009	103	0%	1 & 3 person	94	16	10	1	10 miles

NOTES

All of the municipalities currently collect residential refuse once per week.
All of the municipalities have special provisions for collecting from the back or side yards of individuals with disabilities or mobility restrictions.

EXPLANATORY FACTORS

These are factors that the project found affected residential refuse collection performance and cost in one or more of the municipalities:

Backyard or curbside collection
Routing
Climate
Topographic conditions
Population density
Size of crews
Type of equipment used (automated)
Privatization
Participation in recycling program
Economies of scale
Distance to landfill/transfer station
Fee policies (volume-based or other)

Apex Residential Refuse

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery
Apex contracts with Waste Industries for refuse collection, disposal, and recycling. Only the refuse collection is reflected on this page.

Residents pay $9.92 per month for collection. Refuse is collected once a week curbside, although backyard collection is provided for disabled customers at no additional charge. Residents receiving service are provided with one ninety-six-gallon container. The service also includes a small number of businesses in the downtown area who use the standard carts but recieve service twice a week.

The contractor collects five days a week from different routes. Trash is trucked to the landfill.

The contractor collected 10,731 tons of residential refuse during FY 2013–14, at a cost of $113 per ton. The cost per ton does not include the disposal cost at the landfill of $34.25 per ton.

Conditions Affecting Service, Performance, and Costs
Apex began participation in the benchmarking project in July 2011, with FY 2010–11 being the first reporting year.

Municipal Profile

Population (OSBM 2013)	40,925
Land Area (Square Miles)	16.25
Persons per Square Mile	2,518
Median Family Income U.S. Census 2010	$97,201

Service Profile

FTE Positions—Collection	Contractor
FTE Positions—Other	Contractor
Type of Equipment	Contractor
Size of Crews (most commonly used)	Contractor
Weekly Routes	NA
Average Distance to Disposal Site	NA
Average Daily Trips to Disposal Site	NA
Percentage of Service Contracted	100%
Collection Frequency	1 x week
General Collection Location	Curbside
Residential Customers (number represents collection points)	12,982
Tons Collected	10,731
Monthly Service Fee	$9.92

Full Cost Profile

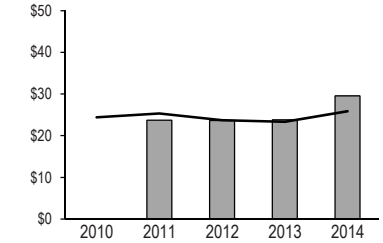
Cost Breakdown by Percentage	
Personal Services	0.0%
Operating Costs	100.0%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$0
Operating Costs	$1,209,969
Capital Costs	$0
TOTAL	$1,209,969

Apex Residential Refuse Collection

Key: Apex ■ Benchmarking Average — Fiscal Years 2010 through 2014

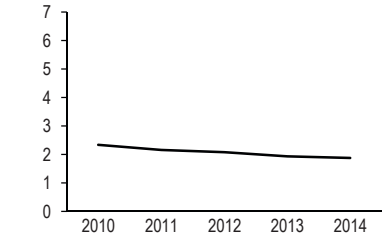
Resource Measures

Residential Refuse Collection Costs per Capita



	2010	2011	2012	2013	2014
Apex		$23.68	$23.63	$23.83	$29.57
Average	$24.42	$25.34	$23.72	$23.36	$25.88

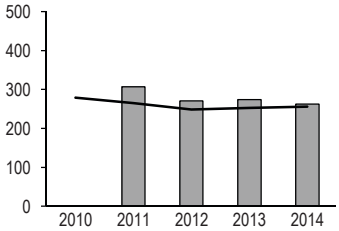
Residential Refuse FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Apex					
Average	2.34	2.16	2.08	1.94	1.88

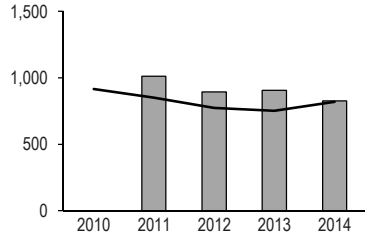
Workload Measures

Residential Refuse Tons per 1,000 Population



	2010	2011	2012	2013	2014
Apex		307	271	274	262
Average	279	265	248	253	255

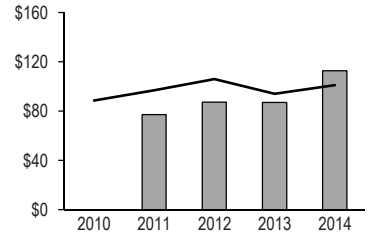
Residential Refuse Tons per 1,000 Collection Points



	2010	2011	2012	2013	2014
Apex		1,013	894	905	827
Average	915	850	774	753	819

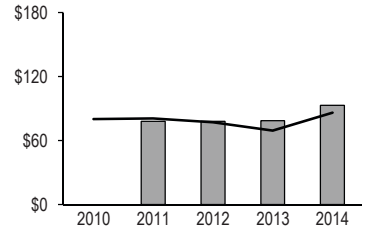
Efficiency Measures

Residential Refuse Collection Cost per Ton Collected



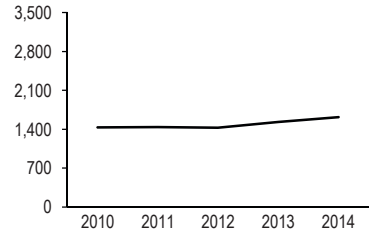
	2010	2011	2012	2013	2014
Apex		$77	$87	$87	$113
Average	$89	$97	$106	$94	$101

Residential Refuse Collection Cost per Collection Point



	2010	2011	2012	2013	2014
Apex		$78	$78	$79	$93
Average	$80	$81	$77	$69	$86

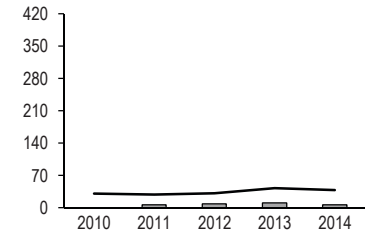
Refuse Tons Collected per Municipal Collection FTE



	2010	2011	2012	2013	2014
Apex					
Average	1,434	1,442	1,430	1,531	1,619

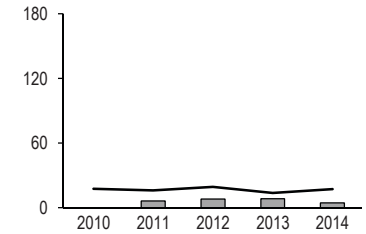
Effectiveness Measures

Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Apex		6.8	8.6	10.4	6.2
Average	30.6	28.4	31.1	42.2	38.4

Valid Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Apex		6.5	8.1	8.3	4.6
Average	17.7	16.3	19.5	13.6	17.4

Asheville — Residential Refuse

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Asheville collects residential refuse once a week at curbside, although backyard collection is provided for disabled customers at no charge and for other customers for a fee.

The city uses seven automated trucks, each with one driver, from Monday to Thursday working ten-hour days. Two rear packers with two- and three-person crews are used from Monday to Thursday for the collection of bulky items, clean-ups, and streets not accessible by automated trucks.

There are twenty-six main collection routes served by the automated trucks, with seven done each day. The average number of trips to the transfer station is two per day per route. Nearly all trash goes to the transfer station before going to the landfill. The average distance to the transfer station is six miles. Two rear packers serve seven collection routes.

The city collected 22,276 tons of residential refuse during FY 2013–14, at a cost of $110 per ton. The cost per ton does not include the disposal cost per ton of $43 at the landfill or $47 at the transfer station. The transfer station is the primary disposal point for Asheville's trucks.

Residents receiving automated service are provided with one container. The majority of the containers are ninety-six-gallon capacity. Some residents use containers of sixty-five-gallon or thirty-five-gallon capacity. Residents may rent more containers if desired for $7 per month. Residents receiving rear-loading service provide their own containers. They are able to use up to six containers or bags. There is a $7 per month waste fee regardless of container size.

Conditions Affecting Service, Performance, and Costs

Asheville is highly automated in the area of residential refuse collection.

Municipal Profile

Population (OSBM 2013)	88,003
Land Area (Square Miles)	45.52
Persons per Square Mile	1,933
Median Family Income U.S. Census 2010	$53,350

Service Profile

FTE Positions—Collection	14.0
FTE Positions—Other	3.0
Type of Equipment	7 automated packers 1 packer
Size of Crews (most commonly used)	1 & 3 person
Weekly Routes	33
Average Distance to Disposal Site	6 miles
Average Daily Trips to Disposal Site	2
Percentage of Service Contracted	0%
Collection Frequency	1 x week
General Collection Location	Curbside
Residential Customers (number represents collection points)	29,838
Tons Collected	22,276
Monthly Service Fee	$7.00

Full Cost Profile

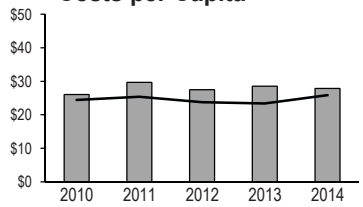
Cost Breakdown by Percentage	
Personal Services	37.0%
Operating Costs	42.8%
Capital Costs	20.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$907,858
Operating Costs	$1,049,497
Capital Costs	$497,102
TOTAL	$2,454,457

Asheville Residential Refuse Collection

Key: Asheville ■ Benchmarking Average — Fiscal Years 2010 through 2014

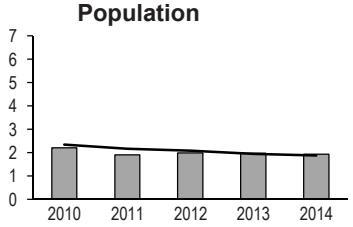
Resource Measures

Residential Refuse Collection Costs per Capita



	2010	2011	2012	2013	2014
Asheville	$26.08	$29.67	$27.49	$28.57	$27.89
Average	$24.42	$25.34	$23.72	$23.36	$25.88

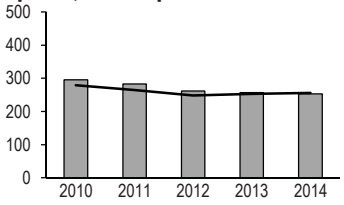
Residential Refuse FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Asheville	2.2	1.91	1.98	1.97	1.93
Average	2.34	2.16	2.08	1.94	1.88

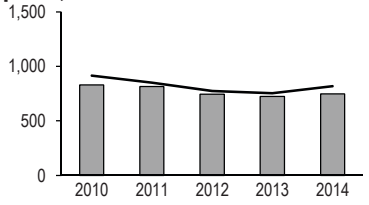
Workload Measures

Residential Refuse Tons per 1,000 Population



	2010	2011	2012	2013	2014
Asheville	295.78	283	262	257	253
Average	279	265	248	253	255

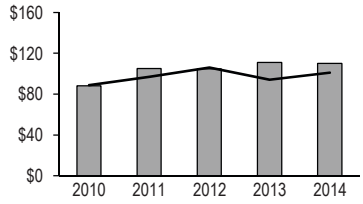
Residential Refuse Tons per 1,000 Collection Points



	2010	2011	2012	2013	2014
Asheville	831	814	744	725	747
Average	915	850	774	753	819

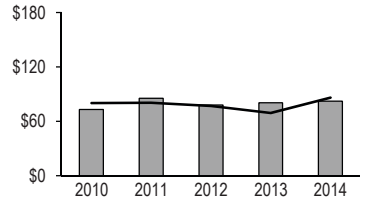
Efficiency Measures

Residential Refuse Collection Cost per Ton Collected



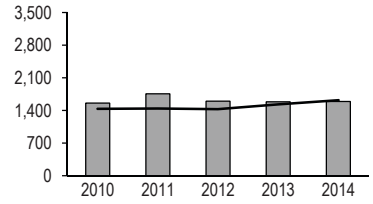
	2010	2011	2012	2013	2014
Asheville	$88	$105	$105	$111	$110
Average	$89	$97	$106	$94	$101

Residential Refuse Collection Cost per Collection Point



	2010	2011	2012	2013	2014
Asheville	$73	$85	$78	$81	$82
Average	$80	$81	$77	$69	$86

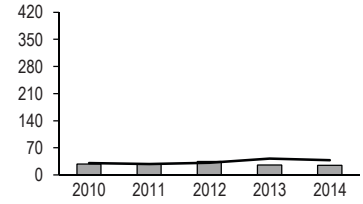
Refuse Tons Collected per Municipal Collection FTE



	2010	2011	2012	2013	2014
Asheville	1,562	1,758	1,603	1,585	1,591
Average	1,434	1,442	1,430	1,531	1,619

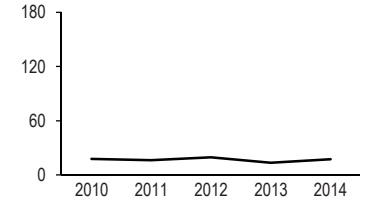
Effectiveness Measures

Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Asheville	28.2	29.2	34.4	25.3	25.2
Average	30.6	28.4	31.1	42.2	38.4

Valid Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Asheville					
Average	17.7	16.3	19.5	13.6	17.4

Burlington Residential Refuse

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Burlington collects residential refuse once a week at curbside, although backyard collection is provided if it is medically necessary.

The city uses four automated trucks, each with one driver, four days a week. One rear packer with a two-person crew works downtown five days per week. The average number of trips to the transfer station is two per day per route. The average distance to the landfill is seventeen miles.

The city collected 13,668 tons of residential refuse during FY 2013–14, at a cost of $96 per ton. The cost per ton does not include the disposal cost per ton of $38 at the landfill.

Residents receiving automated service are provided with one container. Residents pay a monthly fee of $6 for refuse collection.

Conditions Affecting Service, Performance, and Costs

Complaints for Burlington include calls for service, inquiries, and regular complaints. Complaints are considered valid if verified by a supervisor in the field.

Municipal Profile

Population (OSBM 2013)	51,396
Land Area (Square Miles)	27.28
Persons per Square Mile	1,884
Median Family Income U.S. Census 2010	$46,461

Service Profile

FTE Positions—Collection	6.0
FTE Positions—Other	3.0
Type of Equipment	4 automated packers 2 packers
Size of Crews (most commonly used)	1 & 2 person
Weekly Routes	16
Average Distance to Disposal Site	19 miles
Average Daily Trips to Disposal Site	2
Percentage of Service Contracted	0%
Collection Frequency	1 x week
General Collection Location	Curbside
Residential Customers (number represents collection points)	16,762
Tons Collected	13,668
Monthly Service Fee	$6.00

Full Cost Profile

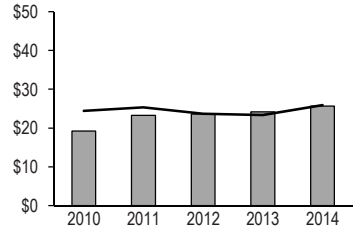
Cost Breakdown by Percentage	
Personal Services	40.6%
Operating Costs	40.1%
Capital Costs	19.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$534,543
Operating Costs	$528,767
Capital Costs	$254,566
TOTAL	$1,317,876

Burlington Residential Refuse Collection

Key: Burlington ■ Benchmarking Average — Fiscal Years 2010 through 2014

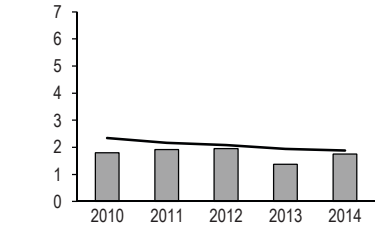
Resource Measures

Residential Refuse Collection Costs per Capita



	2010	2011	2012	2013	2014
Burlington	$19.28	$23.27	$23.60	$24.21	$25.64
Average	$24.42	$25.34	$23.72	$23.36	$25.88

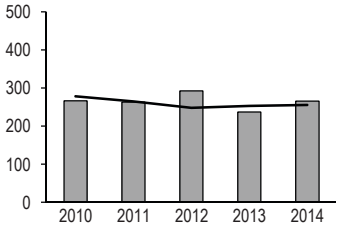
Residential Refuse FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Burlington	1.80	1.91	1.95	1.37	1.75
Average	2.34	2.16	2.08	1.94	1.88

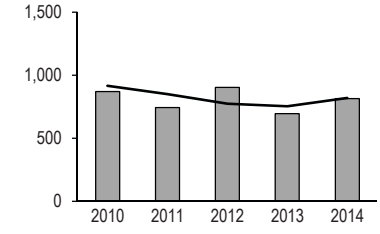
Workload Measures

Residential Refuse Tons per 1,000 Population



	2010	2011	2012	2013	2014
Burlington	267	263	293	237	266
Average	279	265	248	253	255

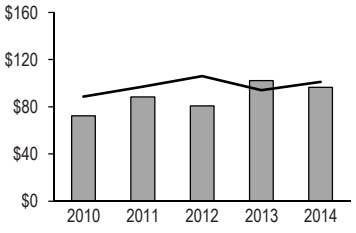
Residential Refuse Tons per 1,000 Collection Points



	2010	2011	2012	2013	2014
Burlington	869	744	902	695	815
Average	915	850	774	753	819

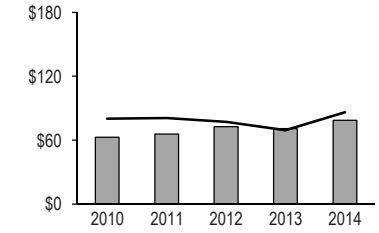
Efficiency Measures

Residential Refuse Collection Cost per Ton Collected



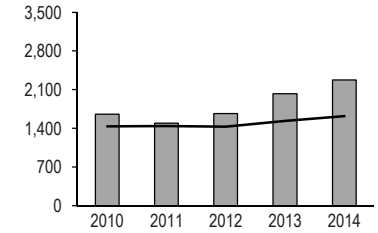
	2010	2011	2012	2013	2014
Burlington	$72	$88	$81	$102	$96
Average	$89	$97	$106	$94	$101

Residential Refuse Collection Cost per Collection Point



	2010	2011	2012	2013	2014
Burlington	$63	$66	$73	$71	$79
Average	$80	$81	$77	$69	$86

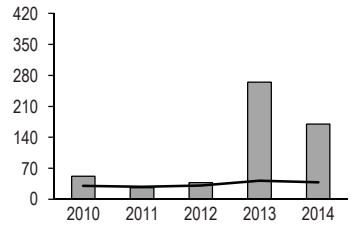
Refuse Tons Collected per Municipal Collection FTE



	2010	2011	2012	2013	2014
Burlington	1,658	1,493	1,667	2,024	2,278
Average	1,434	1,442	1,430	1,531	1,619

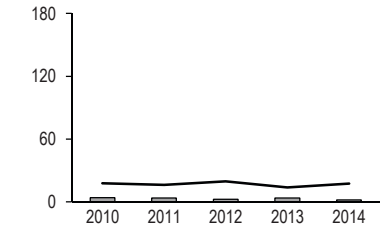
Effectiveness Measures

Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Burlington	52.2	26.2	37.3	264.5	170.2
Average	30.6	28.4	31.1	42.2	38.4

Valid Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Burlington	4.1	3.6	2.4	3.6	1.9
Average	17.7	16.3	19.5	13.6	17.4

Cary Residential Refuse

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Cary residential refuse collection began making major changes during FY 2005–06, moving from backyard collection to curbside and transitioning to automation by the start of FY 2006–07. The town charges a fee of $15.00 per month, covering both solid waste and recycling services.

Cary used ten automated trucks, each with one driver, and two rear loaders, each with one driver and three collectors. A total of fifty-one collection routes were used during FY 2013–14. The average distance to the landfill was thirty miles, with each route averaging one trip per day.

The town collected 32,050 tons of residential refuse during FY 2013–14, at a cost of $151 per ton. The cost per ton does not include the disposal cost of $32, representing the transfer station cost and the county landfill tipping fee. Residents use one ninety-five-gallon receptacle.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Population (OSBM 2013)	144,671
Land Area (Square Miles)	55.54
Persons per Square Mile	2,605
Median Family Income U.S. Census 2010	$108,956

Service Profile

FTE Positions—Collection	28.0
FTE Positions—Other	4.0
Type of Equipment	10 automated packers 2 packers
Size of Crews (most commonly used)	1 & 4 person
Weekly Routes	51
Average Distance to Disposal Site	30 miles
Average Daily Trips to Disposal Site	1
Percentage of Service Contracted	0%
Collection Frequency	1 x week
General Collection Location	Curbside
Residential Customers (number represents collection points)	46,232
Tons Collected	32,050
Monthly Service Fee	$15.00

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	41.9%
Operating Costs	41.3%
Capital Costs	16.8%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$2,020,772
Operating Costs	$1,996,413
Capital Costs	$811,373
TOTAL	$4,828,558

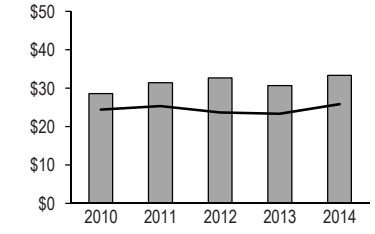
Cary

Residential Refuse Collection

Key: Cary ■ Benchmarking Average — Fiscal Years 2010 through 2014

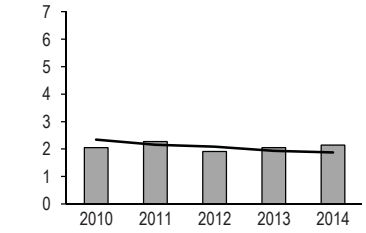
Resource Measures

Residential Refuse Collection Costs per Capita



	2010	2011	2012	2013	2014
Cary	$28.61	$31.46	$32.69	$30.68	$33.38
Average	$24.42	$25.34	$23.72	$23.36	$25.88

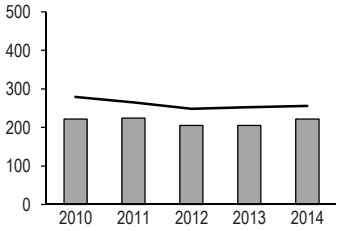
Residential Refuse FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Cary	2.05	2.28	1.92	2.05	2.14
Average	2.34	2.16	2.08	1.94	1.88

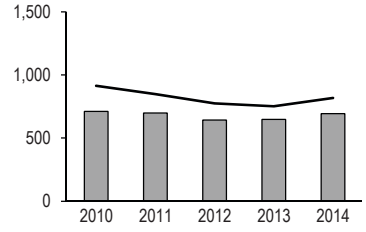
Workload Measures

Residential Refuse Tons per 1,000 Population



	2010	2011	2012	2013	2014
Cary	222	224	205	205	222
Average	279	265	248	253	255

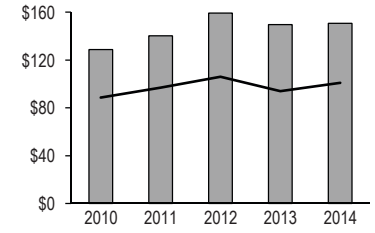
Residential Refuse Tons per 1,000 Collection Points



	2010	2011	2012	2013	2014
Cary	711	700	642	648	693
Average	915	850	774	753	819

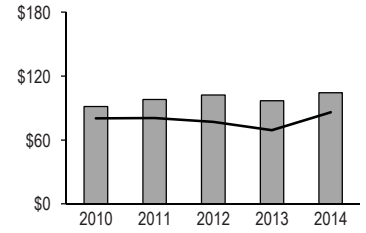
Efficiency Measures

Residential Refuse Collection Cost per Ton Collected



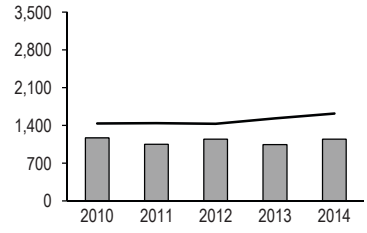
	2010	2011	2012	2013	2014
Cary	$129	$140	$159	$150	$151
Average	$89	$97	$106	$94	$101

Residential Refuse Collection Cost per Collection Point



	2010	2011	2012	2013	2014
Cary	$92	$98	$102	$97	$104
Average	$80	$81	$77	$69	$86

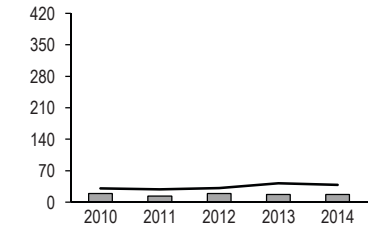
Refuse Tons Collected per Municipal Collection FTE



	2010	2011	2012	2013	2014
Cary	1,168	1,054	1,143	1,043	1,145
Average	1,434	1,442	1,430	1,531	1,619

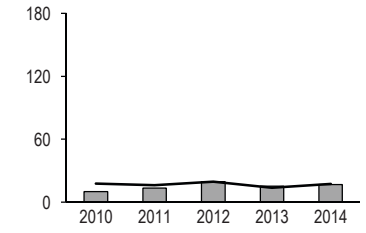
Effectiveness Measures

Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Cary	19.3	13.4	19.6	17.1	16.8
Average	30.6	28.4	31.1	42.2	38.4

Valid Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Cary	10.0	13.4	19.6	15.2	16.8
Average	17.7	16.3	19.5	13.6	17.4

Charlotte — Residential Refuse

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Charlotte collects residential refuse once a week at curbside. Backyard service is available only to those persons with valid medical reasons and physician certification. The city did not charge a fee for residential refuse collection.

The city's residential refuse collection program was reorganized from its previous system of managed competition, which had some contracted collection and some city collection. Starting in FY 2010–11, all of Charlotte's residential refuse has been collected by city workers. The city's collection routes were changed so that in FY 2010–11 approximately 80 percent of the collection points had service day changes at the start of the year.

City crews are composed primarily of one driver each, operating an automated packer. There were fifty-seven of these crews for FY 2013–14. In addition, three crews, each composed of one driver and one laborer, collected refuse using semi-automated packers. These crews are used primarily for backyard service for those citizens with disabilities and some multi-family complexes with less than thirty units. Small business garbage is collected by four crews, each composed of one driver and one laborer, using rear loaders. Costs include reserve crews that were used as needed throughout the year.

The city serviced 320 daily collection routes once each week during FY 2013–14, with an average of 1.5 trips to the landfill per day per route at an average one-way distance of thirteen miles. Each single-family residence is provided one ninety-six-gallon rollout container. An additional receptacle may be purchased for a nominal one-time fee. Charlotte collected 173,479 tons of residential refuse during the fiscal year, at a cost of $88 per ton. The cost per ton does not include the disposal cost of $29, representing the landfill tipping fee.

Conditions Affecting Service, Performance, and Costs

Charlotte is highly automated in the area of residential refuse collection. It considers all complaints to be valid complaints.

Charlotte's Solid Waste Services division has been focused on improving customer service in FY 2013–14, explaining the drop in complaints.

Municipal Profile

Population (OSBM 2013)	789,248
Land Area (Square Miles)	304.28
Persons per Square Mile	2,594
Median Family Income U.S. Census 2010	$61,405

Service Profile

FTE Positions—Collection	80.0
FTE Positions—Other	6.5
Type of Equipment	57 automated packers 7 packers
Size of Crews (most commonly used)	1 & 2 person
Weekly Routes	320
Average Distance to Disposal Site	13 miles
Average Daily Trips to Disposal Site	1.5
Percentage of Service Contracted	0%
Collection Frequency	1 x week
General Collection Location	Curbside
Residential Customers (number represents collection points)	214,419
Tons Collected	173,479
Monthly Service Fee	No

Full Cost Profile

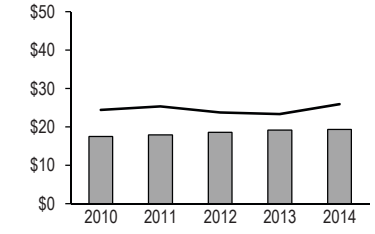
Cost Breakdown by Percentage	
Personal Services	33.1%
Operating Costs	50.0%
Capital Costs	16.9%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$5,050,009
Operating Costs	$7,618,309
Capital Costs	$2,575,836
TOTAL	$15,244,154

Charlotte — Residential Refuse Collection

Key: Charlotte ■ Benchmarking Average — Fiscal Years 2010 through 2014

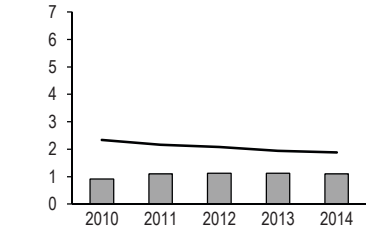
Resource Measures

Residential Refuse Collection Costs per Capita



	2010	2011	2012	2013	2014
Charlotte	$17.53	$17.96	$18.60	$19.16	$19.31
Average	$24.42	$25.34	$23.72	$23.36	$25.88

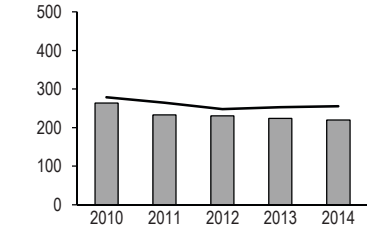
Residential Refuse FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Charlotte	0.91	1.10	1.12	1.12	1.10
Average	2.34	2.16	2.08	1.94	1.88

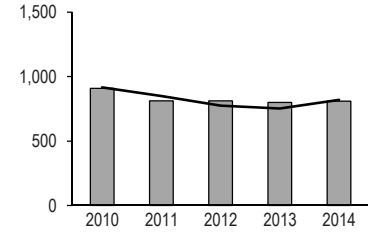
Workload Measures

Residential Refuse Tons per 1,000 Population



	2010	2011	2012	2013	2014
Charlotte	264	233	230	224	220
Average	279	265	248	253	255

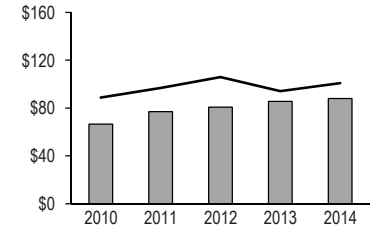
Residential Refuse Tons per 1,000 Collection Points



	2010	2011	2012	2013	2014
Charlotte	910	813	813	800	809
Average	915	850	774	753	819

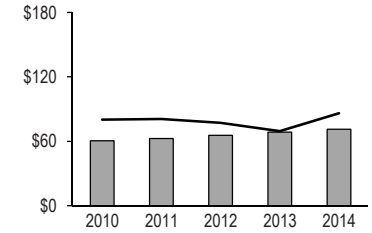
Efficiency Measures

Residential Refuse Collection Cost per Ton Collected



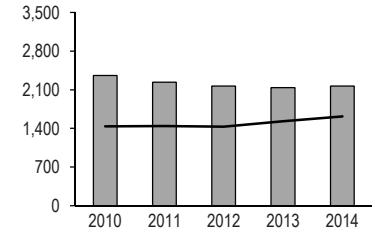
	2010	2011	2012	2013	2014
Charlotte	$66	$77	$81	$86	$88
Average	$89	$97	$106	$94	$101

Residential Refuse Collection Cost per Collection Point



	2010	2011	2012	2013	2014
Charlotte	$60	$63	$66	$69	$71
Average	$80	$81	$77	$69	$86

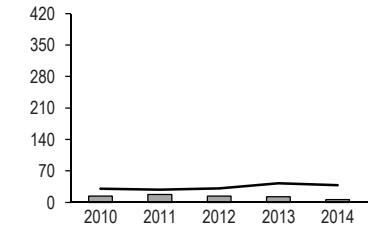
Refuse Tons Collected per Municipal Collection FTE



	2010	2011	2012	2013	2014
Charlotte	2,359	2,235	2,165	2,140	2,168
Average	1,434	1,442	1,430	1,531	1,619

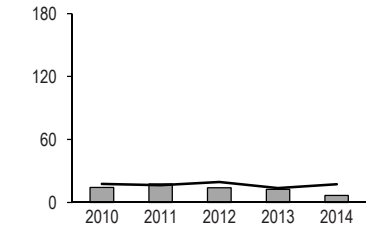
Effectiveness Measures

Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Charlotte	14.3	17.7	13.9	12.4	6.5
Average	30.6	28.4	31.1	42.2	38.4

Valid Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Charlotte	14.3	17.7	13.9	12.4	6.5
Average	17.7	16.3	19.5	13.6	17.4

Concord Residential Refuse

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Residential refuse collection service is provided once a week at curbside to Concord residents. Backyard service is available for the elderly and disabled. The city has provided residential refuse collection service under contract for many years, but it changed the contractor used in FY 2010–11. The cost of the contract for the year was approximately $1.71 million.

The contractor primarily used five automated packers, each with one person. Residents used one ninety-five-gallon cart, with extra carts available for larger families or unusual circumstances.

The contractor serviced twenty-five collection routes each week, with an average distance per route per day to the landfill of eight miles. The packers made an average of one trip to the landfill per day per route. The contractor collected 23,436 tons of residential refuse during the fiscal year, at a cost of $89 per ton.

Conditions Affecting Service, Performance, and Costs

During FY 2011–2012, Concord switched contractors. This change in Concord's refuse collection process produced serveral challenges during the startup and transition periods. Complaints were up in the first three months due to errors by the contractor and because of customer actions. Valid complaints in the startup period were also notably up, as the contractor was not able to close complaints with proper notation. These problems were largely fixed after the initial three months.

Concord is one of only two jurisdictions participating in the benchmarking project that contracts 100 percent of its residential refuse collection service. Therefore, "tons collected per collection FTE" is not used for Concord as a performance measure, as this reflects only municipal workers.

Concord's "total tons collected" includes bulk trash, which is collected along with residential refuse and cannot be separated for reporting purposes.

Concord defines valid complaints to mean any missed collection or request for service as determined by the city to result from contractor negligence or omission.

Concord discontinued its old system, which required citizens to schedule the collection of bulky items. Too many collections were not called in, resulting in bulky items being left curbside for days and generating complaints. The drop in complaints in FY 2013–14 was the result of a new system where the city scouts out items to be picked up and citizens are not required to call in. Pickup is improved and additional costs for the scouting have been offset by savings from avoided costs through improved collection efficiencies.

Municipal Profile

Population (OSBM 2013)	83,279
Land Area (Square Miles)	60.93
Persons per Square Mile	1,367
Median Family Income U.S. Census 2010	$63,643

Service Profile

FTE Positions—Collection	Contractor
FTE Positions—Other	1.5
Type of Equipment	5 automated packers
Size of Crews (most commonly used)	1 person
Weekly Routes	25
Average Distance to Disposal Site	8 miles
Average Daily Trips to Disposal Site	1
Percentage of Service Contracted	100%
Collection Frequency	1 x week
General Collection Location	Curbside
Residential Customers (number represents collection points)	28,996
Tons Collected	23,436
Monthly Service Fee	No

Full Cost Profile

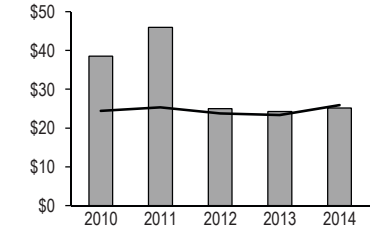
Cost Breakdown by Percentage	
Personal Services	4.3%
Operating Costs	95.5%
Capital Costs	0.2%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$90,776
Operating Costs	$2,000,531
Capital Costs	$3,716
TOTAL	$2,095,023

Concord Residential Refuse Collection

Key: Concord ■ Benchmarking Average — Fiscal Years 2010 through 2014

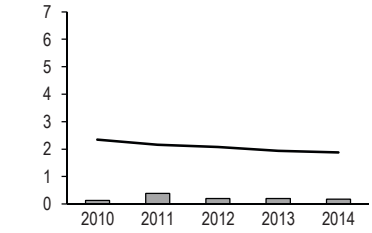
Resource Measures

Residential Refuse Collection Costs per Capita



	2010	2011	2012	2013	2014
Concord	$38.54	$45.96	$25.02	$24.27	$25.16
Average	$24.42	$25.34	$23.72	$23.36	$25.88

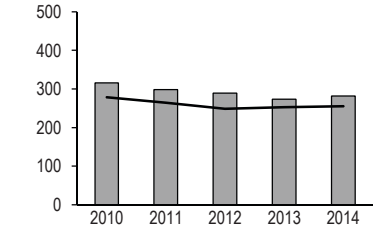
Residential Refuse FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Concord	0.13	0.38	0.20	0.20	0.18
Average	2.34	2.16	2.08	1.94	1.88

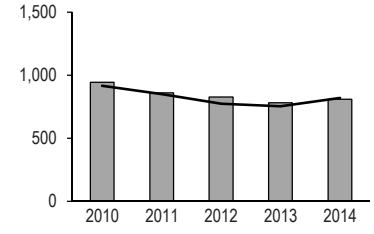
Workload Measures

Residential Refuse Tons per 1,000 Population



	2010	2011	2012	2013	2014
Concord	316	299	289	274	281
Average	279	265	248	253	255

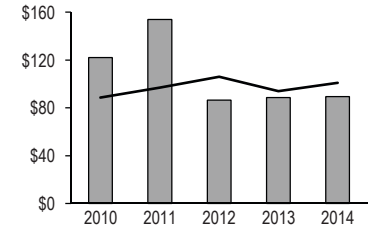
Residential Refuse Tons per 1,000 Collection Points



	2010	2011	2012	2013	2014
Concord	942	858	825	782	808
Average	915	850	774	753	819

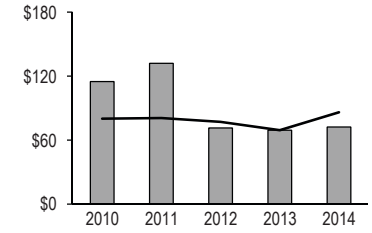
Efficiency Measures

Residential Refuse Collection Cost per Ton Collected



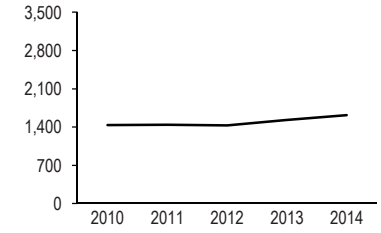
	2010	2011	2012	2013	2014
Concord	$122	$154	$87	$89	$89
Average	$89	$97	$106	$94	$101

Residential Refuse Collection Cost per Collection Point



	2010	2011	2012	2013	2014
Concord	$115	$132	$72	$69	$72
Average	$80	$81	$77	$69	$86

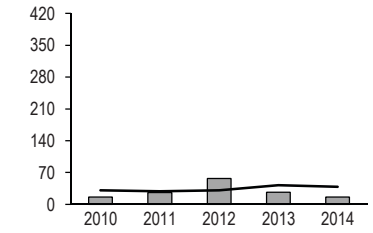
Refuse Tons Collected per Municipal Collection FTE



	2010	2011	2012	2013	2014
Concord					
Average	1,434	1,442	1,430	1,531	1,619

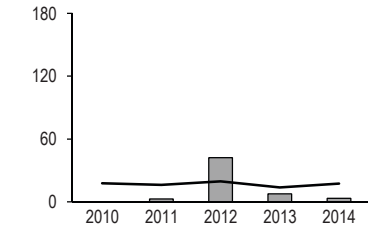
Effectiveness Measures

Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Concord	15.9	25.8	56.9	26.7	16.0
Average	30.6	28.4	31.1	42.2	38.4

Valid Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Concord		2.5	42.2	7.5	3.2
Average	17.7	16.3	19.5	13.6	17.4

Greensboro Residential Refuse

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Greensboro provides once-a-week collection of residential refuse at curbside. Each resident is provided up to two ninety-gallon carts. Currently there is no fee for residential collection of refuse.

There were twenty-one city crews for FY 2013–14. Eighteen crews each have one driver operating an automated packer. Three crews use rear loaders.

The city used sixty-eight collection routes during the fiscal year, with each packer making an average of 1.8 trips per day to a municipal solid waste transfer station and the travel distance averaging eight miles.

The city collected 54,737 tons of residential refuse during FY 2013–14, at a cost of $69 per ton.

Greensboro defines automated packers as one-armed automated-loading packers that are operated by one person. Rear loaders are rear-loading packer trucks.

Conditions Affecting Service, Performance, and Costs

Greensboro is highly automated in the area of residential refuse collection.

Municipal Profile

Population (OSBM 2013)	278,654
Land Area (Square Miles)	127.93
Persons per Square Mile	2,178
Median Family Income U.S. Census 2010	$52,752

Service Profile

FTE Positions—Collection	27.0
FTE Positions—Other	4.0
Type of Equipment	18 automated packers 3 packers
Size of Crews (most commonly used)	1 & 2 person
Weekly Routes	68
Average Distance to Disposal Site	8 miles
Average Daily Trips to Disposal Site	1.8
Percentage of Service Contracted	0%
Collection Frequency	1 x week
General Collection Location	Curbside
Residential Customers (number represents collection points)	81,102
Tons Collected	54,737
Monthly Service Fee	No

Full Cost Profile

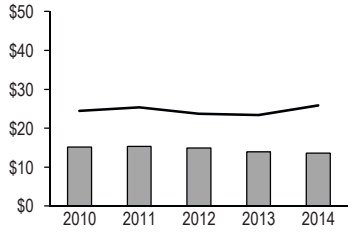
Cost Breakdown by Percentage	
Personal Services	32.0%
Operating Costs	68.0%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,216,046
Operating Costs	$2,580,352
Capital Costs	$0
TOTAL	$3,796,398

Greensboro Residential Refuse Collection

Key: Greensboro ■ Benchmarking Average — Fiscal Years 2010 through 2014

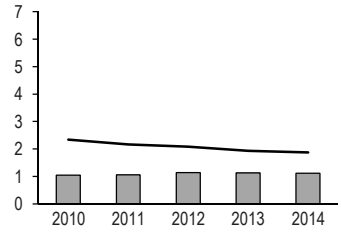
Resource Measures

Residential Refuse Collection Costs per Capita



	2010	2011	2012	2013	2014
Greensboro	$15.18	$15.32	$14.92	$13.89	$13.62
Average	$24.42	$25.34	$23.72	$23.36	$25.88

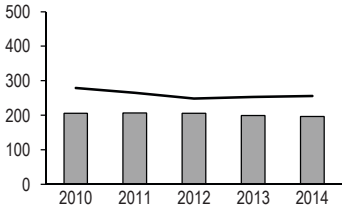
Residential Refuse FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greensboro	1.05	1.06	1.14	1.13	1.11
Average	2.34	2.16	2.08	1.94	1.88

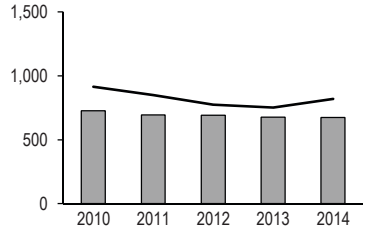
Workload Measures

Residential Refuse Tons per 1,000 Population



	2010	2011	2012	2013	2014
Greensboro	206	206	205	199	196
Average	279	265	248	253	255

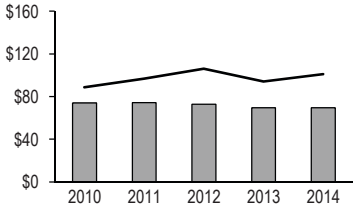
Residential Refuse Tons per 1,000 Collection Points



	2010	2011	2012	2013	2014
Greensboro	728	694	693	677	675
Average	915	850	774	753	819

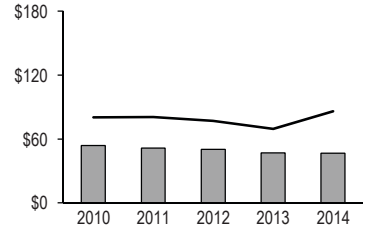
Efficiency Measures

Residential Refuse Collection Cost per Ton Collected



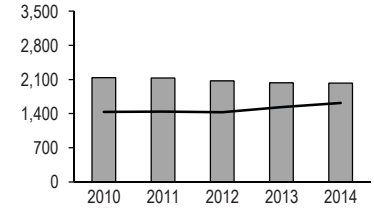
	2010	2011	2012	2013	2014
Greensboro	$74	$74	$73	$70	$69
Average	$89	$97	$106	$94	$101

Residential Refuse Collection Cost per Collection Point



	2010	2011	2012	2013	2014
Greensboro	$54	$52	$50	$47	$47
Average	$80	$81	$77	$69	$86

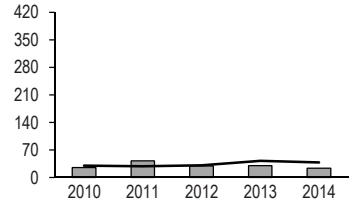
Refuse Tons Collected per Municipal Collection FTE



	2010	2011	2012	2013	2014
Greensboro	2,136	2,128	2,069	2,032	2,027
Average	1,434	1,442	1,430	1,531	1,619

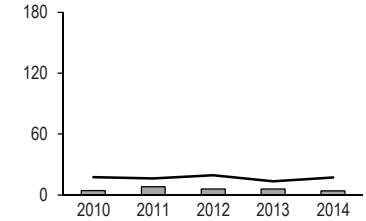
Effectiveness Measures

Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Greensboro	25.4	42.2	29.7	30.0	23.6
Average	30.6	28.4	31.1	42.2	38.4

Valid Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Greensboro	4.5	8.2	5.9	6.0	4.1
Average	17.7	16.3	19.5	13.6	17.4

Greenville Residential Refuse

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Greenville collects refuse from residential premises once a week at both curbside and backyard. Residents can choose which level of service to receive at different costs. Backyard collection is priced at $42.30 per month, while curbside is priced at $14.50 per month. Most residents have chosen curbside. White goods and electronic reclying curbside is included in the residential refuse fee.

The city uses six crews, each composed of one driver and two collection workers who work four days a week. The crews use rear-loading collection trucks. Two additional drivers work alone on automated trucks.

Twenty-four collection routes were used during FY 2013–14, with an average of one trip to the transfer station per day per route. The average distance to the transfer station per route was five-and-a-half miles.

Greenville collected 27,995 tons of residential refuse during FY 2013–14, at a cost of $161 per ton. The cost per ton does not include the disposal cost of $28, representing the tipping fee at the transfer station.

Conditions Affecting Service, Performance, and Costs

Greenville was the only municipality participating in this benchmarking project that continues to collect residential refuse from the backyard for many customers. This is a relatively labor-intensive process and represents a high level of service.

The apparent drop in the data in the graphs which look at tons collected is due to reporting improvements. In earlier years, Greenville could not easily separate out refuse collected from multi-family units. Improvements in what the county landfill is able to track and report back to the city mean that the most recent year includes just single-family units.

Greenville made substantial changes during FY 2013–14 including new trucks and new carts. Additionally, early retirement incentives were given to some employees to reduce staff size raising costs on a one-time basis.

Municipal Profile

Population (OSBM 2013)	87,241
Land Area (Square Miles)	34.85
Persons per Square Mile	2,503
Median Family Income U.S. Census 2010	$50,395

Service Profile

FTE Positions—Collection	20.0
FTE Positions—Other	2.2
Type of Equipment	2 automated packers 6 packers
Size of Crews (most commonly used)	1 & 3 person
Weekly Routes	24
Average Distance to Disposal Site	5 miles
Average Daily Trips to Disposal Site	1
Percentage of Service Contracted	0%
Collection Frequency	1 x week
General Collection Location	Curbside and backyard
Residential Customers (number represents collection points)	17,619
Tons Collected	27,995
Monthly Service Fee	$14.50 Curbside $42.30 Backyard

Full Cost Profile

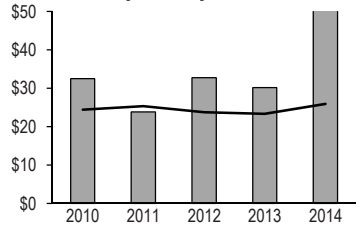
Cost Breakdown by Percentage	
Personal Services	50.6%
Operating Costs	37.5%
Capital Costs	11.9%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$2,273,405
Operating Costs	$1,684,587
Capital Costs	$532,929
TOTAL	$4,490,921

Greenville Residential Refuse Collection

Key: Greenville ■ Benchmarking Average — Fiscal Years 2010 through 2014

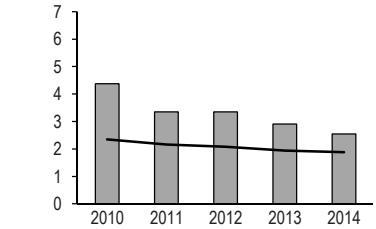
Resource Measures

Residential Refuse Collection Costs per Capita



	2010	2011	2012	2013	2014
Greenville	$32.48	$23.86	$32.77	$30.14	$51.48
Average	$24.42	$25.34	$23.72	$23.36	$25.88

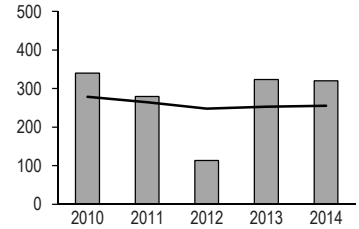
Residential Refuse FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greenville	4.37	3.35	3.35	2.90	2.54
Average	2.34	2.16	2.08	1.94	1.88

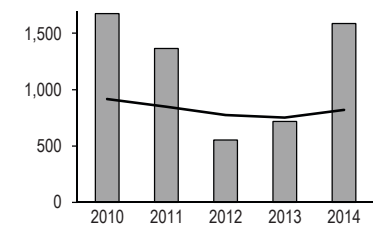
Workload Measures

Residential Refuse Tons per 1,000 Population



	2010	2011	2012	2013	2014
Greenville	340	279	114	324	320
Average	279	265	248	253	255

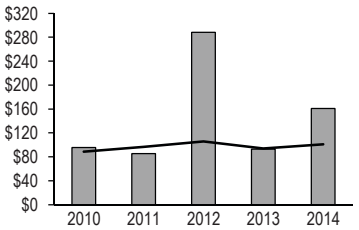
Residential Refuse Tons per 1,000 Collection Points



	2010	2011	2012	2013	2014
Greenville	1,673	1,364	554	719	1,587
Average	915	850	774	753	819

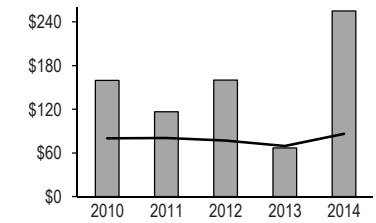
Efficiency Measures

Residential Refuse Collection Cost per Ton Collected



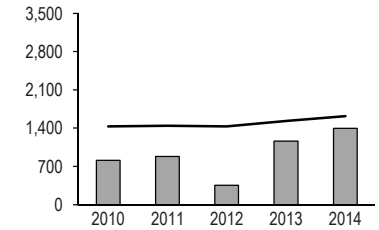
	2010	2011	2012	2013	2014
Greenville	$95	$85	$288	$93	$161
Average	$89	$97	$106	$94	$101

Residential Refuse Collection Cost per Collection Point



	2010	2011	2012	2013	2014
Greenville	$160	$117	$160	$67	$255
Average	$80	$81	$77	$69	$86

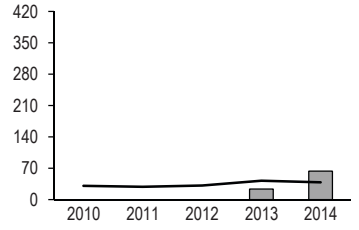
Refuse Tons Collected per Municipal Collection FTE



	2010	2011	2012	2013	2014
Greenville	810	881	358	1,162	1,398
Average	1,434	1,442	1,430	1,531	1,619

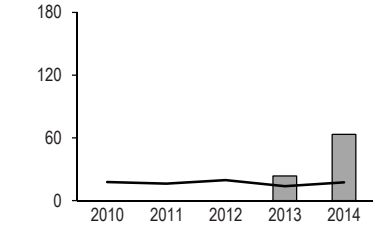
Effectiveness Measures

Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Greenville				23.6	63.5
Average	30.6	28.4	31.1	42.2	38.4

Valid Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Greenville				23.6	63.5
Average	17.7	16.3	19.5	13.6	17.4

Hickory Residential Refuse

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Hickory collects refuse from residential premises once a week at curbside, although backyard collection is provided for elderly and disabled citizens. A monthly solid waste fee of $15 per cart was charged for residential refuse collection service during FY 2013–14. Each residence uses a cart provided by the city for residential refuse collection. Each cart has a capacity of ninety-six gallons and is provided at no charge. Upon request, a second cart is provided to the customer for an additional solid waste fee.

The city used four one-person crews operating automated packers, with three of these trucks running full-time and one one-fourth of the time. A regular packer truck with one driver and one crew member works about half-time collecting on one-way streets and dead ends.

Fifteen collection routes were used during FY 2013–14, with an average of two trips to the transfer station per day per route. The average distance to the transfer station per route was five miles.

Hickory collected 8,642 tons of residential refuse during FY 2013–14, at a cost of $72 per ton. The cost per ton does not include the disposal cost of $33, representing the tipping fee at the Catawba County landfill.

Hickory defines automated packers as trucks with mechanical arms.

Conditions Affecting Service, Performance, and Costs

Hickory is highly automated in the area of residential refuse collection.

Municipal Profile

Population (OSBM 2013)	40,222
Land Area (Square Miles)	29.83
Persons per Square Mile	1,348
Median Family Income U.S. Census 2010	$54,093

Service Profile

FTE Positions—Collection	3.75
FTE Positions—Other	0.49
Type of Equipment	4 automated packers 1 packer
Size of Crews (most commonly used)	1 & 2 person
Weekly Routes	15
Average Distance to Disposal Site	5 miles
Average Daily Trips to Disposal Site	2
Percentage of Service Contracted	0%
Collection Frequency	1 x week
General Collection Location	Curbside
Residential Customers (number represents collection points)	12,200
Tons Collected	8,642
Monthly Service Fee	$15.00 per cart

Full Cost Profile

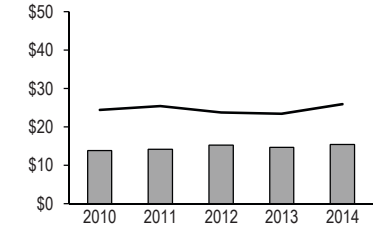
Cost Breakdown by Percentage	
Personal Services	26.7%
Operating Costs	33.4%
Capital Costs	39.9%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$165,237
Operating Costs	$206,699
Capital Costs	$246,572
TOTAL	$618,508

Hickory Residential Refuse Collection

Key: Hickory ■ Benchmarking Average — Fiscal Years 2010 through 2014

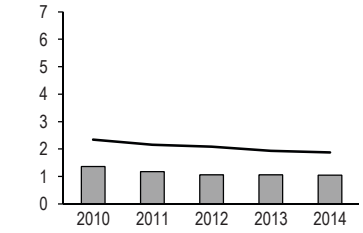
Resource Measures

Residential Refuse Collection Costs per Capita



	2010	2011	2012	2013	2014
Hickory	$13.82	$14.12	$15.22	$14.66	$15.38
Average	$24.42	$25.34	$23.72	$23.36	$25.88

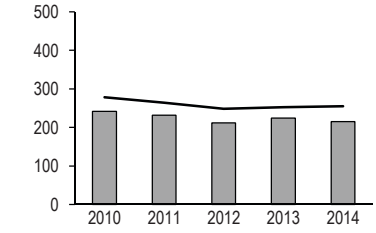
Residential Refuse FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Hickory	1.36	1.18	1.06	1.06	1.05
Average	2.34	2.16	2.08	1.94	1.88

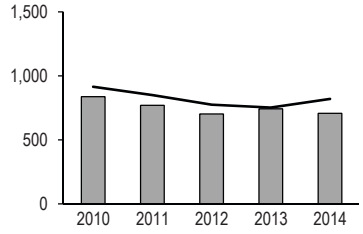
Workload Measures

Residential Refuse Tons per 1,000 Population



	2010	2011	2012	2013	2014
Hickory	242	232	212	224	215
Average	279	265	248	253	255

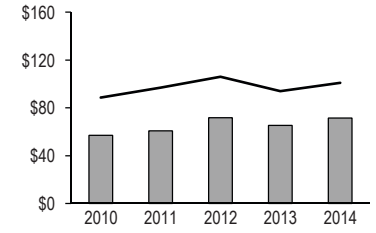
Residential Refuse Tons per 1,000 Collection Points



	2010	2011	2012	2013	2014
Hickory	839	769	702	742	708
Average	915	850	774	753	819

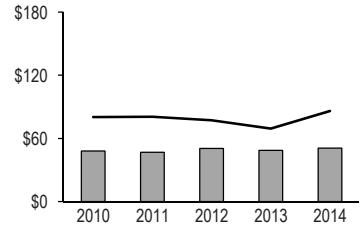
Efficiency Measures

Residential Refuse Collection Cost per Ton Collected



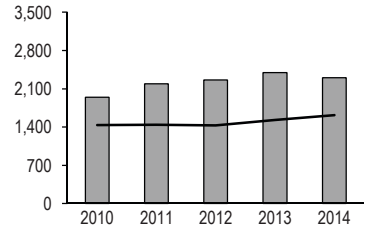
	2010	2011	2012	2013	2014
Hickory	$57	$61	$72	$65	$72
Average	$89	$97	$106	$94	$101

Residential Refuse Collection Cost per Collection Point



	2010	2011	2012	2013	2014
Hickory	$48	$47	$50	$49	$51
Average	$80	$81	$77	$69	$86

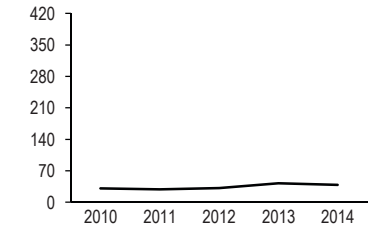
Refuse Tons Collected per Municipal Collection FTE



	2010	2011	2012	2013	2014
Hickory	1,946	2,190	2,264	2,395	2,305
Average	1,434	1,442	1,430	1,531	1,619

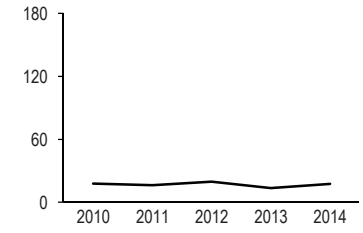
Effectiveness Measures

Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Hickory					
Average	30.6	28.4	31.1	42.2	38.4

Valid Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Hickory					
Average	17.7	16.3	19.5	13.6	17.4

High Point Residential Refuse

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

High Point collects residential refuse once a week at curbside, although backyard collection is provided for residents with verified medical disabilities. High Point also has a contract for the collection of refuse from dumpsters at multi-family units, but these costs and tons are not included in this reporting. There is a $5 per month fee for residential refuse collection.

The city primarily collects residential refuse with nine automated trucks, each with one person. There are forty collection routes. The average number of trips to the landfill is two per day per route. The average distance to the landfill is eight miles.

The city collected 27,613 tons of residential refuse during FY 2013–14, at a cost of $81 per ton. The cost per ton does not include the disposal cost of $26, representing the landfill tipping fee.

Residents may use up to two roll-out carts constructed so that they can be emptied by the lifting devices mounted on city trucks. The cart size is ninety-six gallons.

Conditions Affecting Service, Performance, and Costs

High Point is now fully automated in its pickups, other than those involving special needs.

Municipal Profile

Population (OSBM 2013)	107,652
Land Area (Square Miles)	54.73
Persons per Square Mile	1,967
Median Family Income U.S. Census 2010	$49,720

Service Profile

FTE Positions—Collection	20.5
FTE Positions—Other	2.0
Type of Equipment	9 automated packers 3 special
Size of Crews (most commonly used)	1 & 2 person
Weekly Routes	52
Average Distance to Disposal Site	8 miles
Average Daily Trips to Disposal Site	2
Percentage of Service Contracted	0%
Collection Frequency	1 x week
General Collection Location	Curbside
Residential Customers (number represents collection points)	39,107
Tons Collected	27,613
Monthly Service Fee	$5.00

Full Cost Profile

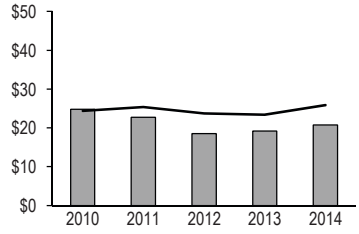
Cost Breakdown by Percentage	
Personal Services	41.1%
Operating Costs	37.6%
Capital Costs	21.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$917,985
Operating Costs	$840,428
Capital Costs	$475,961
TOTAL	$2,234,374

High Point — Residential Refuse Collection

Key: High Point ■ Benchmarking Average — Fiscal Years 2010 through 2014

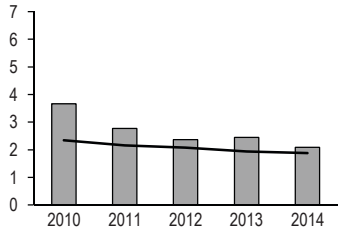
Resource Measures

Residential Refuse Collection Costs per Capita



	2010	2011	2012	2013	2014
High Point	$24.80	$22.73	$18.49	$19.20	$20.76
Average	$24.42	$25.34	$23.72	$23.36	$25.88

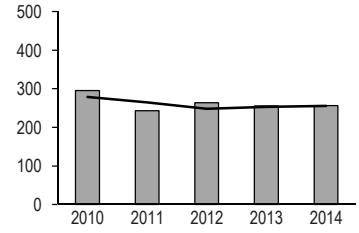
Residential Refuse FTEs per 10,000 Population



	2010	2011	2012	2013	2014
High Point	3.67	2.77	2.37	2.44	2.09
Average	2.34	2.16	2.08	1.94	1.88

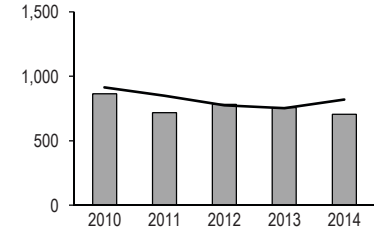
Workload Measures

Residential Refuse Tons per 1,000 Population



	2010	2011	2012	2013	2014
High Point	295	243	264	256	257
Average	279	265	248	253	255

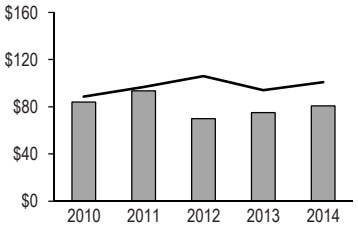
Residential Refuse Tons per 1,000 Collection Points



	2010	2011	2012	2013	2014
High Point	866	717	784	758	706
Average	915	850	774	753	819

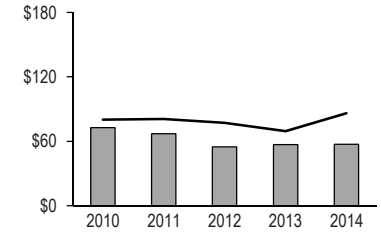
Efficiency Measures

Residential Refuse Collection Cost per Ton Collected



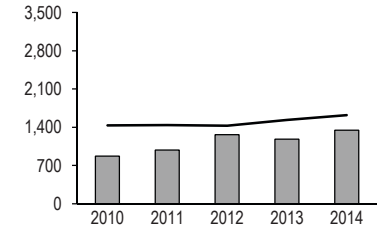
	2010	2011	2012	2013	2014
High Point	$84	$93	$70	$75	$81
Average	$89	$97	$106	$94	$101

Residential Refuse Collection Cost per Collection Point



	2010	2011	2012	2013	2014
High Point	$73	$67	$55	$57	$57
Average	$80	$81	$77	$69	$86

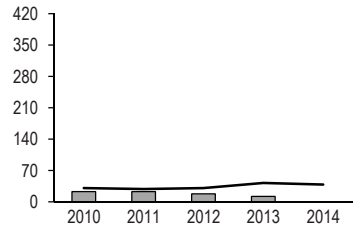
Refuse Tons Collected per Municipal Collection FTE



	2010	2011	2012	2013	2014
High Point	874	980	1,266	1,184	1,347
Average	1,434	1,442	1,430	1,531	1,619

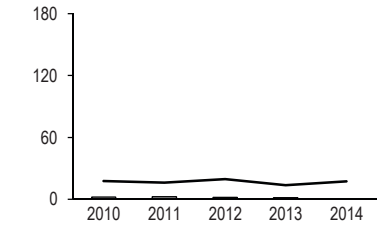
Effectiveness Measures

Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
High Point	23.1	22.7	18.1	12.0	
Average	30.6	28.4	31.1	42.2	38.4

Valid Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
High Point	2.3	2.4	1.8	1.5	
Average	17.7	16.3	19.5	13.6	17.4

Salisbury Residential Refuse

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Salisbury provides residential refuse collection service once per week at curbside. Backyard collection service is provided for disabled customers only. The city charges a monthly fee of $15.12 for all solid waste collection.

The city employed three crews during FY 2013–14, with two persons on each crew. Fifteen collection routes were used, with an average of one ten-mile trip per route per day to the landfill.

Each resident has one ninety-six-gallon roll-out cart provided and paid for by the city. A second cart may be obtained. The city collected 8,130 tons of residential refuse during FY 2013–14, at a cost per ton of $98. Not included in the cost per ton was a $34 landfill tipping fee.

Salisbury defines its semi-automated packers as low-entry compactors that can be driven from either side of the truck, with the refuse being dumped in the rear of the truck from roll-out carts.

Conditions Affecting Service, Performance, and Costs

Salisbury's total tons collected includes bulk trash, which is collected along with residential refuse and cannot be separated for reporting purposes.

Municipal Profile

Population (OSBM 2013)	33,726
Land Area (Square Miles)	22.18
Persons per Square Mile	1,521
Median Family Income U.S. Census 2010	$40,192

Service Profile

FTE Positions—Collection	6.0
FTE Positions—Other	1.0
Type of Equipment	6 packers
Size of Crews (most commonly used)	1 & 2 person
Weekly Routes	15
Average Distance to Disposal Site	10 miles
Average Daily Trips to Disposal Site	1
Percentage of Service Contracted	0%
Collection Frequency	1 x week
General Collection Location	Curbside
Residential Customers (number represents collection points)	11,878
Tons Collected	8,130
Monthly Service Fee	$15.12

Full Cost Profile

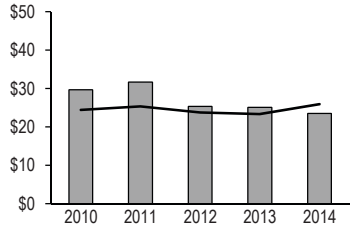
Cost Breakdown by Percentage	
Personal Services	48.4%
Operating Costs	29.5%
Capital Costs	22.1%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$383,612
Operating Costs	$234,064
Capital Costs	$175,297
TOTAL	$792,973

Salisbury Residential Refuse Collection

Key: Salisbury ■ Benchmarking Average — Fiscal Years 2010 through 2014

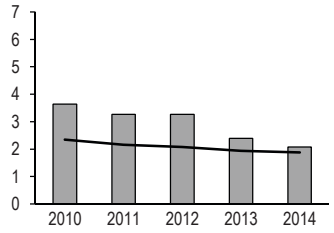
Resource Measures

Residential Refuse Collection Costs per Capita



	2010	2011	2012	2013	2014
Salisbury	$29.66	$31.69	$25.34	$25.05	$23.51
Average	$24.42	$25.34	$23.72	$23.36	$25.88

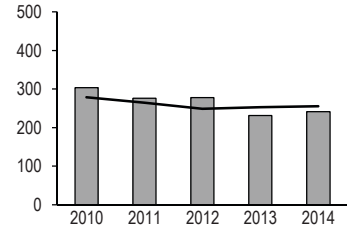
Residential Refuse FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Salisbury	3.64	3.26	3.26	2.39	2.08
Average	2.34	2.16	2.08	1.94	1.88

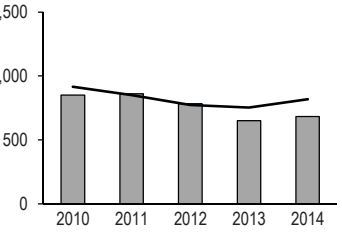
Workload Measures

Residential Refuse Tons per 1,000 Population



	2010	2011	2012	2013	2014
Salisbury	304	276	278	231	241
Average	279	265	248	253	255

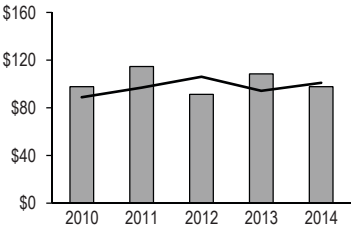
Residential Refuse Tons per 1,000 Collection Points



	2010	2011	2012	2013	2014
Salisbury	850	862	782	651	684
Average	915	850	774	753	819

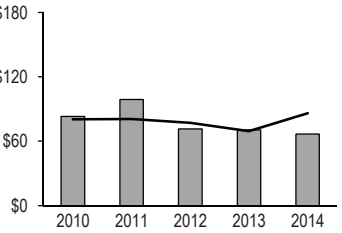
Efficiency Measures

Residential Refuse Collection Cost per Ton Collected



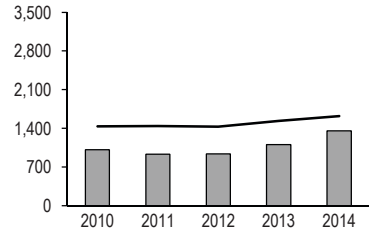
	2010	2011	2012	2013	2014
Salisbury	$98	$115	$91	$108	$98
Average	$89	$97	$106	$94	$101

Residential Refuse Collection Cost per Collection Point



	2010	2011	2012	2013	2014
Salisbury	$83	$99	$71	$71	$67
Average	$80	$81	$77	$69	$86

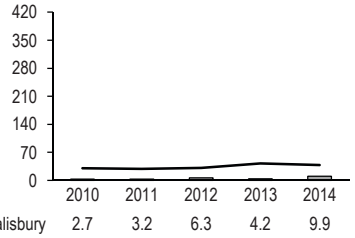
Refuse Tons Collected per Municipal Collection FTE



	2010	2011	2012	2013	2014
Salisbury	1,011	932	935	1,105	1,355
Average	1,434	1,442	1,430	1,531	1,619

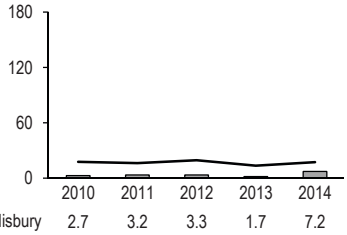
Effectiveness Measures

Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Salisbury	2.7	3.2	6.3	4.2	9.9
Average	30.6	28.4	31.1	42.2	38.4

Valid Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Salisbury	2.7	3.2	3.3	1.7	7.2
Average	17.7	16.3	19.5	13.6	17.4

Wilson Residential Refuse

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery
Residential refuse collection service is provided once a week at curbside to Wilson residents. Senior citizens and disabled persons may apply for and receive backyard pickup. There is currently a monthly $18.50 fee per household for residential refuse collection service.

During FY 2013–14, the city used five one-person crews working from automated packers. The city also used two three-person crews, each composed of one driver and two collectors working from semi-automated rear loaders. Residents are required to use ninety-six-gallon roll-out containers.

The city serviced seventeen collection routes each week during FY 2013–14. The packers made an average of two trips to the disposal facility per day per route, with the distance to the transfer station being ten miles.

Wilson collected 18,000 tons of residential refuse during the fiscal year, at a cost of $69 per ton. The cost per ton does not include the disposal cost of $38.55, representing the tipping fee at the transfer station.

Wilson defines automated packers as fully automated trucks requiring one driver. Packers are rear-loading, semi-automated trucks requiring one driver and two collectors.

Conditions Affecting Service, Performance, and Costs
The city of Wilson considers all complaints to be valid complaints.

Municipal Profile

Population (OSBM 2013)	49,097
Land Area (Square Miles)	30.48
Persons per Square Mile	1,611
Median Family Income U.S. Census 2010	$43,442

Service Profile

FTE Positions—Collection	11.0
FTE Positions—Other	1.0
Type of Equipment	5 automated packers 2 packers
Size of Crews (most commonly used)	1 & 3 person
Weekly Routes	17
Average Distance to Disposal Site	10 miles
Average Daily Trips to Disposal Site	2
Percentage of Service Contracted	0%
Collection Frequency	1 x week
General Collection Location	Curbside
Residential Customers (number represents collection points)	19,750
Tons Collected	18,000
Monthly Service Fee	$18.50

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	43.6%
Operating Costs	35.9%
Capital Costs	20.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$542,352
Operating Costs	$445,839
Capital Costs	$255,292
TOTAL	$1,243,483

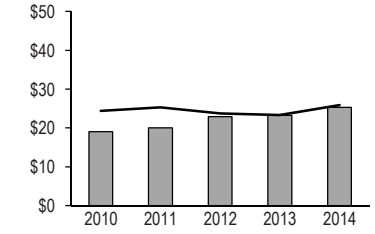
Wilson

Residential Refuse Collection

Key: Wilson ■ Benchmarking Average — Fiscal Years 2010 through 2014

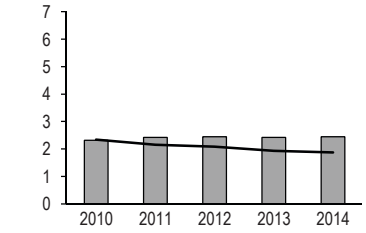
Resource Measures

Residential Refuse Collection Costs per Capita



	2010	2011	2012	2013	2014
Wilson	$19.01	$20.00	$22.92	$23.21	$25.33
Average	$24.42	$25.34	$23.72	$23.36	$25.88

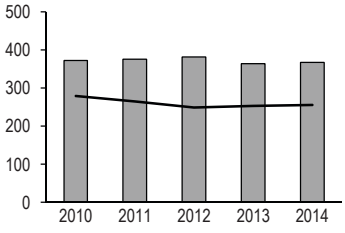
Residential Refuse FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Wilson	2.32	2.43	2.44	2.43	2.44
Average	2.34	2.16	2.08	1.94	1.88

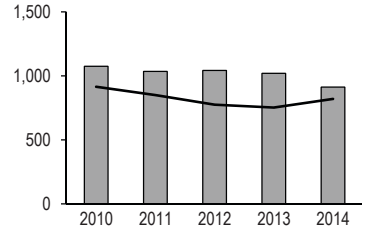
Workload Measures

Residential Refuse Tons per 1,000 Population



	2010	2011	2012	2013	2014
Wilson	372	375	381	364	367
Average	279	265	248	253	255

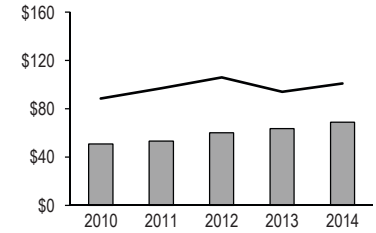
Residential Refuse Tons per 1,000 Collection Points



	2010	2011	2012	2013	2014
Wilson	1,076	1,036	1,043	1,020	911
Average	915	850	774	753	819

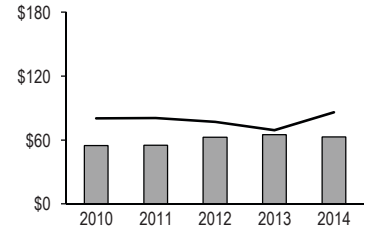
Efficiency Measures

Residential Refuse Collection Cost per Ton Collected



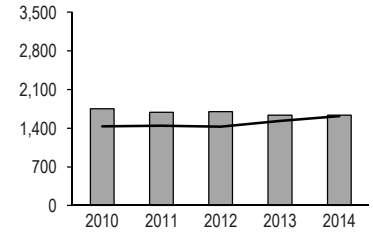
	2010	2011	2012	2013	2014
Wilson	$51	$53	$60	$64	$69
Average	$89	$97	$106	$94	$101

Residential Refuse Collection Cost per Collection Point



	2010	2011	2012	2013	2014
Wilson	$55	$55	$63	$65	$63
Average	$80	$81	$77	$69	$86

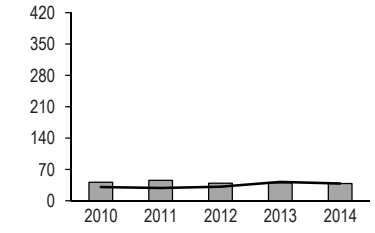
Refuse Tons Collected per Municipal Collection FTE



	2010	2011	2012	2013	2014
Wilson	1,750	1,686	1,702	1,636	1,636
Average	1,434	1,442	1,430	1,531	1,619

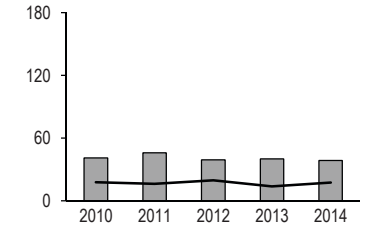
Effectiveness Measures

Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Wilson	40.9	45.9	39.0	40.1	38.4
Average	30.6	28.4	31.1	42.2	38.4

Valid Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Wilson	40.9	45.9	39.0	40.1	38.4
Average	17.7	16.3	19.5	13.6	17.4

Winston-Salem Residential Refuse

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Winston-Salem collects residential refuse once a week from backyards and at curbside. The city implemented a voluntary curbside collection program in March 2005. In October 2010, the city began the transition to mandatory curbside collection. The transition to a curbside only collection system was complete during FY 2011–2012.

The city uses sixteen three-person crews, each composed of a driver and two collectors equipped with rear-loading packers, to collect most of the residential refuse. In addition, there are ten automated trucks with one person each, one special collections truck with one person, and one central business district crew with one driver and one collector.

Residents may use three thirty-two-gallon containers or one ninety-six-gallon roll-out cart. There was no fee for the residential refuse service during FY 2013–14.

The city collected 52,009 tons of residential refuse during FY 2013–14 from 76,240 collection points. The cost per ton was $115, which does not include the tipping fee of $36 per ton. The city used 100 collection routes during the fiscal year, with an average of one trip per route per day to the landfill. The average distance to the landfill was ten miles.

Winston-Salem primarily uses rear-loading packers, which are trucks that load from the back. Two lifters are on the back of each truck. The crews hook their carts onto these lifters and dump the refuse into the back of the truck. The compactor blade is also located in the back of the truck.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Population (OSBM 2013)	235,527
Land Area (Square Miles)	132.45
Persons per Square Mile	1,778
Median Family Income U.S. Census 2010	$51,491

Service Profile

FTE Positions—Collection	94.0
FTE Positions—Other	3.0
Type of Equipment	10 automated packers 16 packers
Size of Crews (most commonly used)	1 & 3 person
Weekly Routes	103
Average Distance to Disposal Site	10 miles
Average Daily Trips to Disposal Site	1
Percentage of Service Contracted	0%
Collection Frequency	1 x week
General Collection Location	Curbside
Residential Customers (number represents collection points)	76,240
Tons Collected	52,009
Monthly Service Fee	No

Full Cost Profile

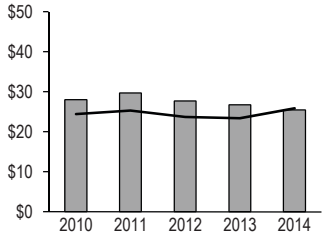
Cost Breakdown by Percentage	
Personal Services	51.4%
Operating Costs	34.2%
Capital Costs	14.4%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$3,085,673
Operating Costs	$2,051,707
Capital Costs	$864,201
TOTAL	$6,001,581

Winston-Salem Residential Refuse Collection

Key: Winston-Salem ■ Benchmarking Average — Fiscal Years 2010 through 2014

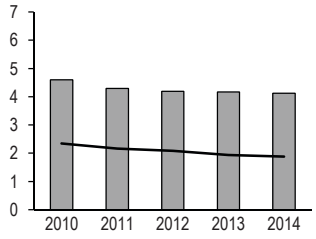
Resource Measures

Residential Refuse Collection Costs per Capita



	2010	2011	2012	2013	2014
Winston-Salem	$28.01	$29.71	$27.72	$26.77	$25.48
Average	$24.42	$25.34	$23.72	$23.36	$25.88

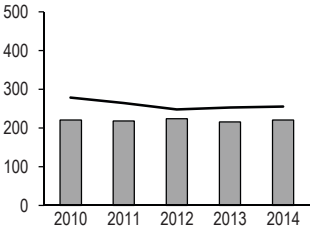
Residential Refuse FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	4.60	4.30	4.18	4.17	4.12
Average	2.34	2.16	2.08	1.94	1.88

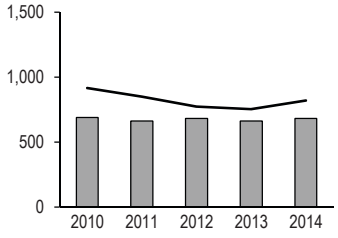
Workload Measures

Residential Refuse Tons per 1,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	220	218	224	216	221
Average	279	265	248	253	255

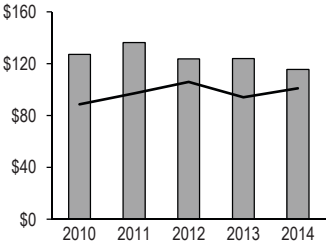
Residential Refuse Tons per 1,000 Collection Points



	2010	2011	2012	2013	2014
Winston-Salem	689	661	683	661	682
Average	915	850	774	753	819

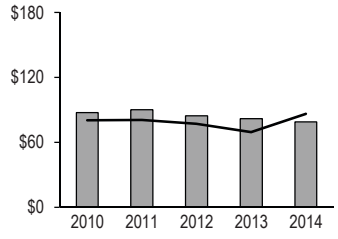
Efficiency Measures

Residential Refuse Collection Cost per Ton Collected



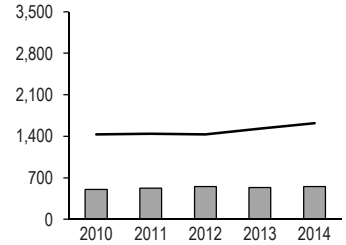
	2010	2011	2012	2013	2014
Winston-Salem	$127	$136	$124	$124	$115
Average	$89	$97	$106	$94	$101

Residential Refuse Collection Cost per Collection Point



	2010	2011	2012	2013	2014
Winston-Salem	$88	$90	$84	$82	$79
Average	$80	$81	$77	$69	$86

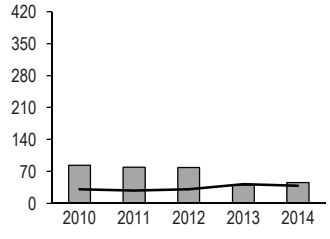
Refuse Tons Collected per Municipal Collection FTE



	2010	2011	2012	2013	2014
Winston-Salem	502	524	553	535	553
Average	1,434	1,442	1,430	1,531	1,619

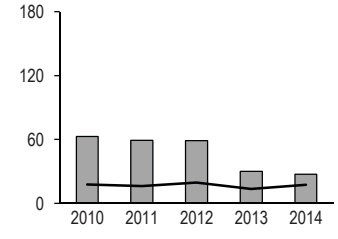
Effectiveness Measures

Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Winston-Salem	83.6	79.1	78.4	40.0	45.7
Average	30.6	28.4	31.1	42.2	38.4

Valid Complaints per 1,000 Collection Points



	2010	2011	2012	2013	2014
Winston-Salem	62.7	59.3	58.8	30.0	27.4
Average	17.7	16.3	19.5	13.6	17.4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Performance and Cost Data

HOUSEHOLD RECYCLING

PERFORMANCE MEASURES FOR HOUSEHOLD RECYCLING

SERVICE DEFINITION

This includes both curbside collection and processing of household recyclable materials from residences and certain other locations and the drop-off of such materials by citizens at recycling stations or centers. The recyclable materials collected are mainly aluminum and steel cans, plastics, glass bottles, newspapers, magazines, and cardboard. The curbside portion of this service involves regularly scheduled collection that utilizes containers small enough that residents and/or workers can move or lift them. Excluded are collection of yard waste, leaves, and commercial recycling.

NOTES ON PERFORMANCE MEASURES

1. Workload and Efficiency Measures

The same sorts of workload and efficiency measures are used for household recycling as for residential refuse collection. The project's workload measures for household recycling are tons of recyclable materials collected per 1,000 population and per 1,000 collection points, and the efficiency measures for this service are cost per ton of recyclable materials collected, cost per collection point, and tons of household recyclable materials collected per full-time equivalent (FTE) position directly involved in household recycling. FTEs for recycling are calculated in the same way as they are for residential refuse collection. Only those FTE positions that actually collect recyclables are used for the measure "tons collected per FTE."

2. Tons Solid Waste Landfilled per 1,000 Population

"Tons solid waste landfilled per 1,000 population" is used as a workload measure. Although not all residential refuse is recyclable, much more of it is likely to be recycled in the future as recycling technology improves and markets for recyclable materials grow. Thus, tons of solid waste landfilled per 1,000 population serves as a useful indicator of the need for household recycling.

3. Community Set-Out Rate in Household Recycling

The project uses this as a measure of household recycling effectiveness. Residents in municipalities with curbside recycling choose whether to participate in the program and decide the extent of their participation. As the portion of households participating in household recycling grows, the more effective recycling is likely to be in reducing the volume of residential refuse. This measure combines the set-out rate for those participating and the participation rate to estimate the percentage of potential households that are actually recycling.

4. Tons of Household Recyclable Materials Collected as a Percentage of the Sum of Tons of Residential Refuse Collected Plus Tons of Household Recyclable Materials Collected

This measure assesses the magnitude of household recycling in relation to residential refuse collected for disposal. A household recycling program is effective to the extent it diverts residential refuse from the disposal stream.

Household Recycling

Summary of Key Dimensions of Service

City or Town	Drop-Off Sites		Collection Frequency	Recyclables Sorted at Curb?	Collection Points	Community Set-Out Rate	Tons Collected	Percentage of Waste Stream Diverted from Landfill	Percentage Service Contracted	Municipal FTE Collection Positions
	City Owned	Other								
Apex	0	0	1 x week	No	13,085	71%	3,114	22%	100%	NA
Asheville	0	1	1 x 2 weeks	No	28,331	82%	8,163	27%	99%	NA
Burlington	0	0	1 x 2 weeks	No	16,762	57%	2,790	17%	100%	NA
Cary	1	0	1 x 2 weeks	No	47,033	79%	11,781	27%	0%	12
Charlotte	0	12	1 x 2 weeks	No	212,141	50%	45,870	21%	100%	NA
Concord	0	1	1 x 2 weeks	No	28,996	78%	5,746	20%	100%	NA
Greensboro	20	0	1 x 2 weeks	No	81,102	62%	18,080	25%	0%	15
Greenville	200	0	1 x week	No	15,554	60%	2,819	9%	0%	11
Hickory	2	0	1 x week	Yes	12,200	81%	1,336	13%	80%	0.5
High Point	14	75	1 x 2 weeks	No	39,107	75%	8,614	24%	0%	6
Salisbury	0	0	1 x 2 weeks	No	10,059	53%	1,506	16%	100%	NA
Wilson	0	0	1 x week	No	19,750	35%	1,440	7%	0%	6
Winston-Salem	11	0	1 x 2 weeks	No	76,064	54%	12,879	20%	100%	NA

NOTES

Community Set-Out Rate is a combination of the participation rate and the participant's set-out rate.

EXPLANATORY FACTORS

These are factors that the project found affected household recycling collection performance and cost in one or more of the municipalities:

Types of items eligible for recycling
Landfill tipping fees for solid waste
Commitment of city officials to recycling
Number of drop-off centers
Community education
Market prices for recyclable materials
Demographic makeup of community

Apex Household Recycling

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Apex contracts with Waste Industries for refuse collection, disposal, and recycling. Only the recycling collection is reflected on this page. The town offers curbside recycling to all residents. Residents pay a $2.41 fee per container per month. Most residents have a sixty-four gallon cart though some have eighteen gallon containers.

The following materials are collected:

- plastics
- paperboard
- chipboard
- paper tubes
- corrugated cardboard
- aluminum
- tin and steel cans
- glass
- newspaper
- magazines and catelogs
- phone books.

Residents living within Apex are encouraged to participate in the curbside recycling program. The program serves 13,085 residences.

Conditions Affecting Service, Performance, and Costs

Apex began participation in the benchmarking project in July 2011, with FY 2010–11 being the first reporting year.

Municipal Profile

Population (OSBM 2013)	40,925
Land Area (Square Miles)	16.25
Persons per Square Mile	2,518
Median Family Income U.S. Census 2010	$97,201

Service Profile

FTE Positions—Collection	Contractor
FTE Positions—Other	Contractor
Number of City Drop-Off Centers	0
Other Drop-Off Centers	0
Percentage of Service Contracted	100%
Collection Frequency	1 x week
General Collection Location	Curbside
Recyclables Sorted at Curb	No
Collection Points	13,085
Tons of Recyclables Collected	
Curbside	3,114
City Drop-Off Centers	0
Total Tons Collected	3,114
Monthly Service Fee	$2.41
Revenue from Sale of Recyclables	$0
Sale Revenue as Percentage of Cost	NA

Full Cost Profile

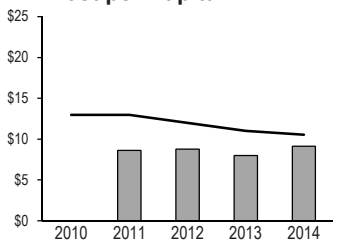
Cost Breakdown by Percentage	
Personal Services	0.0%
Operating Costs	100.0%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$0
Operating Costs	$373,142
Capital Costs	$0
TOTAL	$373,142

Apex — Household Recycling

Key: Apex ■ Benchmarking Average — Fiscal Years 2010 through 2014

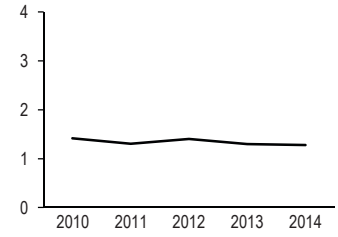
Resource Measures

Recycling Services Cost per Capita



	2010	2011	2012	2013	2014
Apex		$8.64	$8.76	$8.00	$9.12
Average	$12.97	$12.97	$11.99	$11.02	$10.54

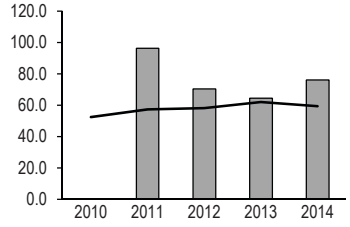
Recycling Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Apex					
Average	1.42	1.31	1.40	1.30	1.28

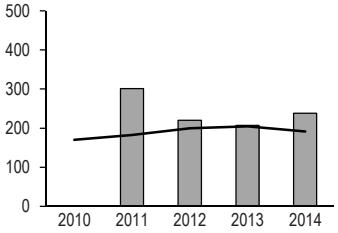
Workload Measures

Tons Recyclables Collected per 1,000 Population



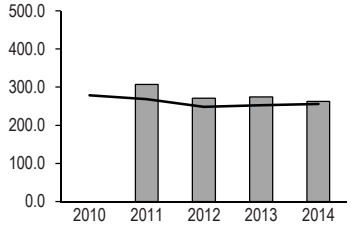
	2010	2011	2012	2013	2014
Apex		96.3	70.4	64.5	76.1
Average	52.4	57.2	58.2	62.1	59.3

Tons Recyclables Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Apex		301	220	207	238
Average	170	183	199	204	191

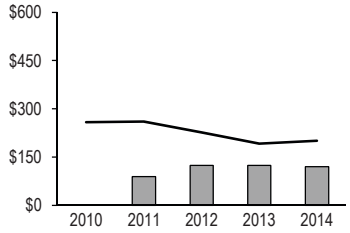
Tons Solid Waste Landfilled per 1,000 Population



	2010	2011	2012	2013	2014
Apex		306.8	270.8	274.0	262.2
Average	278.6	268.6	248.3	252.8	255.4

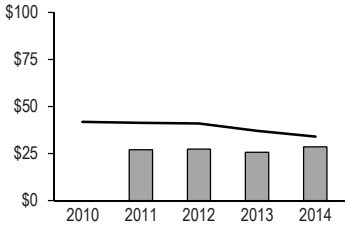
Efficiency Measures

Recycling Services Cost per Ton Collected



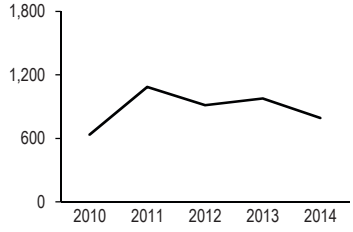
	2010	2011	2012	2013	2014
Apex		$90	$124	$124	$120
Average	$258	$261	$227	$192	$201

Recycling Services Cost per Collection Point



	2010	2011	2012	2013	2014
Apex		$26.98	$27.41	$25.63	$28.52
Average	$41.77	$41.22	$41.01	$37.02	$33.99

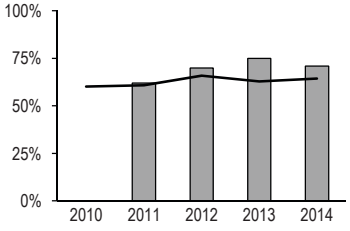
Tons Collected Curbside per Municipal FTE



	2010	2011	2012	2013	2014
Apex					
Average	637	1,086	915	976	792

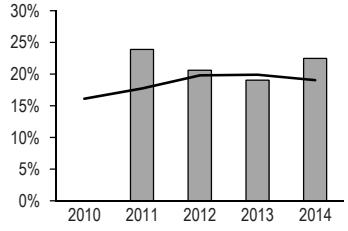
Effectiveness Measures

Community Set-Out Rate



	2010	2011	2012	2013	2014
Apex		62.0%	70.0%	75.0%	71.0%
Average	60.2%	60.8%	65.9%	62.8%	64.4%

Tons Recycled as Percentage of Tons Refuse and Recyclables Collected



	2010	2011	2012	2013	2014
Apex		23.9%	20.6%	19.1%	22.5%
Average	16.1%	17.8%	19.8%	19.9%	19.1%

Asheville Household Recycling

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The city offers curbside recycling service to all residential customers. The service was provided by contract during FY 2013–14 by Curbside Management Incorporated.

Asheville charged a $7 monthly fee for all solid waste services. Recyclables are collected using a two-bin system, with curbside sorting from the collection vehicle. The following materials are collected:

- mixed paper
- newspaper
- corrugated cardboard
- clear, green, and brown glass bottles
- all plasttic bottles
- aluminum and steel cans
- telephone books (seasonal)
- aerosol cans.

Residents living within the city of Asheville are encouraged to participate in the curbside recycling program. The program serves 28,331 residences, with each residence receiving a ninety-five gallon or in some cases a sixty-five gallon cart. Recycling is collected every other week on the regular trash day. A curbside recycling truck comes to each neighborhood on a predetermined schedule and separates the recyclables at the curb.

There is one drop-off center within Asheville. This center is set up for people who do not have curbside recycling pickup at their homes or businesses. Anyone can use this center to drop off their recycling during transfer station operating times.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Population (OSBM 2013)	88,003
Land Area (Square Miles)	45.52
Persons per Square Mile	1,933
Median Family Income	$53,350
U.S. Census 2010	

Service Profile

FTE Positions—Collection	Contractor
FTE Positions—Other	Contractor
Number of City Drop-Off Centers	0
Other Drop-Off Centers	1
Percentage of Service Contracted	99.3%
Collection Frequency	Every 2 weeks
General Collection Location	Curbside
Recyclables Sorted at Curb	No
Collection Points	28,331
Tons of Recyclables Collected	
Curbside	8,163
City Drop-Off Centers	0
Total Tons Collected	8,163
Monthly Service Fee	NA
Revenue from Sale of Recyclables	$0
Sale Revenue as Percentage of Cost	NA

Full Cost Profile

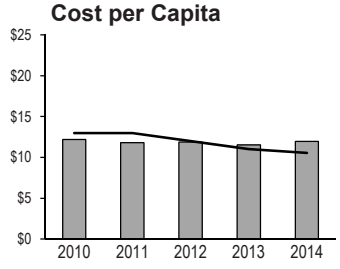
Cost Breakdown by Percentage	
Personal Services	0.0%
Operating Costs	99.9%
Capital Costs	0.1%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$0
Operating Costs	$1,053,139
Capital Costs	$635
TOTAL	$1,053,774

Asheville Household Recycling

Key: Asheville ■ Benchmarking Average — Fiscal Years 2010 through 2014

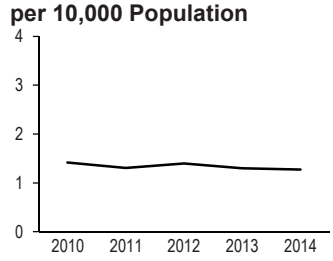
Resource Measures

Recycling Services Cost per Capita



	2010	2011	2012	2013	2014
Asheville	$12.19	$11.81	$11.90	$11.54	$11.97
Average	$12.97	$12.97	$11.99	$11.02	$10.54

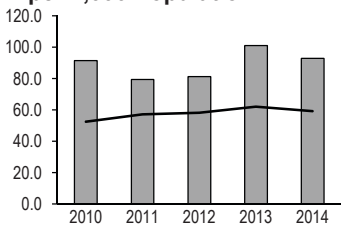
Recycling Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Asheville					
Average	1.42	1.31	1.40	1.30	1.28

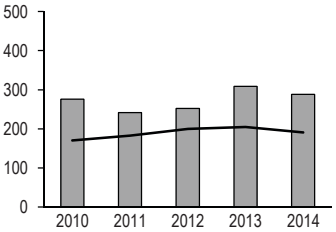
Workload Measures

Tons Recyclables Collected per 1,000 Population



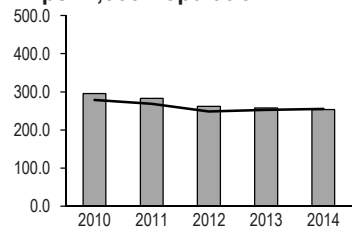
	2010	2011	2012	2013	2014
Asheville	91.4	79.3	81.2	101.0	92.8
Average	52.4	57.2	58.2	62.1	59.3

Tons Recyclables Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Asheville	276	241	252	309	288
Average	170	183	199	204	191

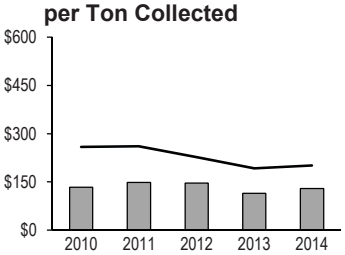
Tons Solid Waste Landfilled per 1,000 Population



	2010	2011	2012	2013	2014
Asheville	295.8	282.6	262.1	257.3	253.1
Average	278.6	268.6	248.3	252.8	255.4

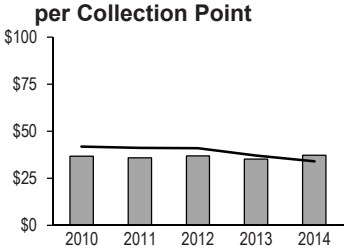
Efficiency Measures

Recycling Services Cost per Ton Collected



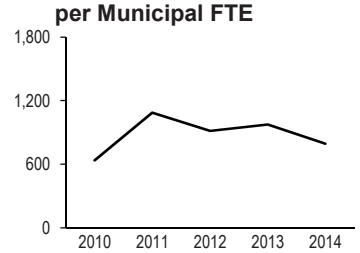
	2010	2011	2012	2013	2014
Asheville	$133	$149	$147	$114	$129
Average	$258	$261	$227	$192	$201

Recycling Services Cost per Collection Point



	2010	2011	2012	2013	2014
Asheville	$36.76	$35.94	$36.92	$35.27	$37.20
Average	$41.77	$41.22	$41.01	$37.02	$33.99

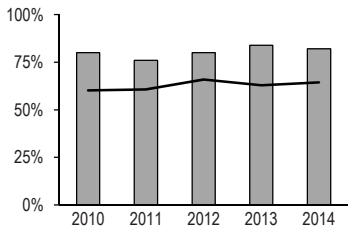
Tons Collected Curbside per Municipal FTE



	2010	2011	2012	2013	2014
Asheville					
Average	637	1,086	915	976	792

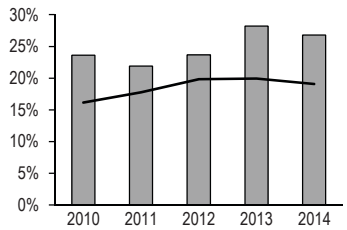
Effectiveness Measures

Community Set-Out Rate



	2010	2011	2012	2013	2014
Asheville	80.0%	76.0%	80.0%	84.0%	82.0%
Average	60.2%	60.8%	65.9%	62.8%	64.4%

Tons Recycled as Percentage of Tons Refuse and Recyclables Collected



	2010	2011	2012	2013	2014
Asheville	23.6%	21.9%	23.6%	28.2%	26.8%
Average	16.1%	17.8%	19.8%	19.9%	19.1%

Burlington Household Recycling

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Burlington offers curbside recycling to all city residents. The service was contracted through Waste Industries in FY 2013–14.

The city charges a monthly fee of $6.00 for recycling, which is included in the solid waste fee. Collection of recyclables is done every two weeks. Residents are provided with a ninety-five gallon roll-out cart. Items collected include:

- plastic jugs and bottles, No. 1 and No. 2
- aluminum cans
- steel cans
- corrugated cardboard
- chipboard
- newspaper and inserts
- phone books
- mixed paper
- magazines
- clear, green, amber, and brown glass bottles and jars.

Conditions Affecting Service, Performance, and Costs

The set-out rate is provided annually by the contractor.

Municipal Profile

Population (OSBM 2013)	51,396
Land Area (Square Miles)	27.27
Persons per Square Mile	1,885
Median Family Income U.S. Census 2010	$46,461

Service Profile

FTE Positions—Collection	Contractor
FTE Positions—Other	Contractor
Number of City Drop-Off Centers	0
Other Drop-Off Centers	0
Percentage of Service Contracted	100%
Collection Frequency	Every 2 weeks
General Collection Location	Curbside
Recyclables Sorted at Curb	No
Collection Points	16,762
Tons of Recyclables Collected	
Curbside	2,790
City Drop-Off Centers	0
Total Tons Collected	2,790
Monthly Service Fee	$6.00
Revenue from Sale of Recyclables	$0
Sale Revenue as Percentage of Cost	NA

Full Cost Profile

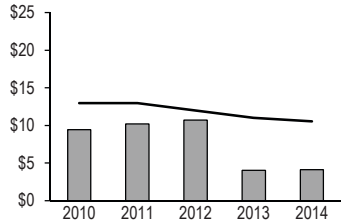
Cost Breakdown by Percentage	
Personal Services	0.0%
Operating Costs	100.0%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$0
Operating Costs	$212,254
Capital Costs	$0
TOTAL	$212,254

Burlington Household Recycling

Key: Burlington ■ Benchmarking Average — Fiscal Years 2010 through 2014

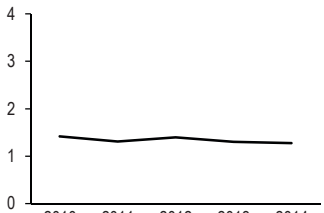
Resource Measures

Recycling Services Cost per Capita



	2010	2011	2012	2013	2014
Burlington	$9.45	$10.20	$10.73	$4.05	$4.13
Average	$12.97	$12.97	$11.99	$11.02	$10.54

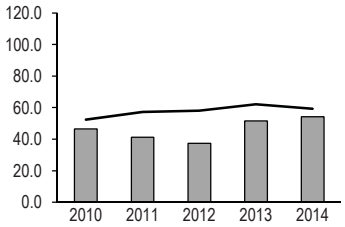
Recycling Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Burlington					
Average	1.42	1.31	1.40	1.30	1.28

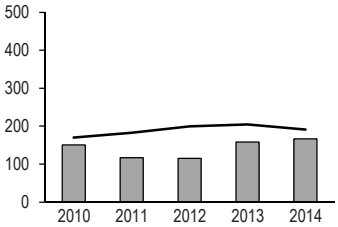
Workload Measures

Tons Recyclables Collected per 1,000 Population



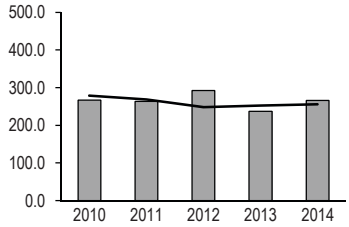
	2010	2011	2012	2013	2014
Burlington	46.4	41.3	37.4	51.6	54.3
Average	52.4	57.2	58.2	62.1	59.3

Tons Recyclables Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Burlington	151	117	115	158	166
Average	170	183	199	204	191

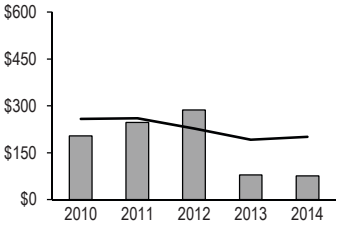
Tons Solid Waste Landfilled per 1,000 Population



	2010	2011	2012	2013	2014
Burlington	267.0	263.2	292.6	237.2	265.9
Average	278.6	268.6	248.3	252.8	255.4

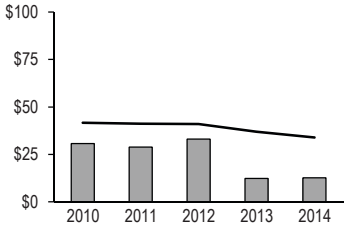
Efficiency Measures

Recycling Services Cost per Ton Collected



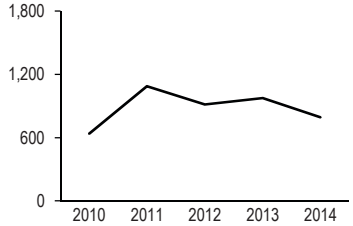
	2010	2011	2012	2013	2014
Burlington	$204	$247	$287	$78	$76
Average	$258	$261	$227	$192	$201

Recycling Services Cost per Collection Point



	2010	2011	2012	2013	2014
Burlington	$30.77	$28.83	$33.06	$12.39	$12.66
Average	$41.77	$41.22	$41.01	$37.02	$33.99

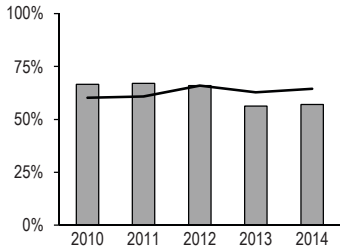
Tons Collected Curbside per Municipal FTE



	2010	2011	2012	2013	2014
Burlington					
Average	637	1,086	915	976	792

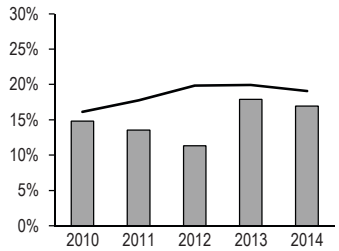
Effectiveness Measures

Community Set-Out Rate



	2010	2011	2012	2013	2014
Burlington	66.6%	67.0%	66.0%	56.3%	57.0%
Average	60.2%	60.8%	65.9%	62.8%	64.4%

Tons Recycled as Percentage of Tons Refuse and Recyclables Collected



	2010	2011	2012	2013	2014
Burlington	14.8%	13.6%	11.3%	17.9%	17.0%
Average	16.1%	17.8%	19.8%	19.9%	19.1%

Cary Household Recycling

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Cary provides biweekly curbside collection of recyclable materials and maintains one drop-off recycling center. The town changed from weekly to biweekly collection in July 2010. There is a monthly $15 fee, which covers both recycling and solid waste pickup. Citizens use a variety of different types of bins or roll-out carts.

Materials collected in the curbside program and at the drop-off recycling center include the following:

- newspaper
- chipboard
- phone books
- junk mail
- glossy white paper
- glossy magazines and catalogs
- corrugated cardboard
- milk/juice gable-top cartons
- aluminum cans and foil
- steel and tin food cans
- clear, green, and brown glass bottles and jars
- plastic materials, such as No. 1, 2, 5, and 7 bottles
- used motor oil, electronics, and appliances on request.

The town collected 11,165 tons from the curbside collection and gathered 616 tons at its drop-off site. The town changed to commingled recycling at the curb during FY 2006–07, eliminating curbside sorting. The town collected $218,236 for the sale of recyclables duing the year.

Conditions Affecting Service, Performance, and Costs

The set-out rate is calculated annually.

Cary defines a valid complaint as a complaint that has been verified in the field by a supervisor.

Municipal Profile

Population (OSBM 2013)	144,671
Land Area (Square Miles)	55.54
Persons per Square Mile	2,605
Median Family Income U.S. Census 2010	$108,956

Service Profile

FTE Positions—Collection	12.0
FTE Positions—Other	1.0
Number of City Drop-Off Centers	1
Other Drop-Off Centers	0
Percentage of Service Contracted	0%
Collection Frequency	Every 2 weeks
General Collection Location	Curbside
Recyclables Sorted at Curb	No
Collection Points	47,033
Tons of Recyclables Collected	
Curbside	11,165
City Drop-Off Centers	616
Total Tons Collected	11,781
Monthly Service Fee	$15
Revenue from Sale of Recyclables	$218,236
Sale Revenue as Percentage of Cost	10.9%

Full Cost Profile

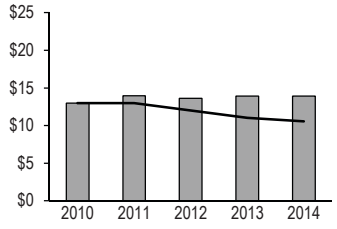
Cost Breakdown by Percentage	
Personal Services	39.3%
Operating Costs	44.1%
Capital Costs	16.6%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$789,645
Operating Costs	$886,879
Capital Costs	$334,334
TOTAL	$2,010,858

Cary — Household Recycling

Key: Cary ■ Benchmarking Average — Fiscal Years 2010 through 2014

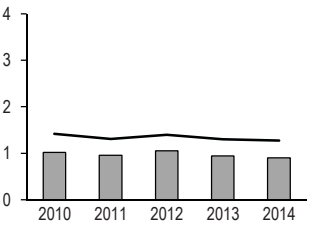
Resource Measures

Recycling Services Cost per Capita



	2010	2011	2012	2013	2014
Cary	$13.00	$13.95	$13.64	$13.90	$13.90
Average	$12.97	$12.97	$11.99	$11.02	$10.54

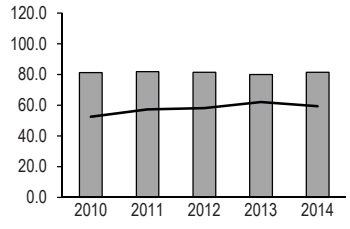
Recycling Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Cary	1.02	0.95	1.05	0.94	0.90
Average	1.42	1.31	1.40	1.30	1.28

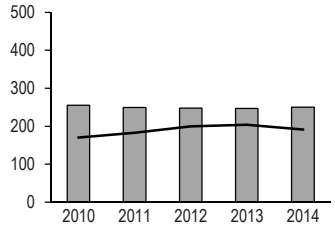
Workload Measures

Tons Recyclables Collected per 1,000 Population



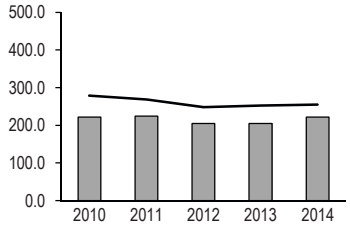
	2010	2011	2012	2013	2014
Cary	81.2	81.9	81.4	80.0	81.4
Average	52.4	57.2	58.2	62.1	59.3

Tons Recyclables Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Cary	255	249	248	247	250
Average	170	183	199	204	191

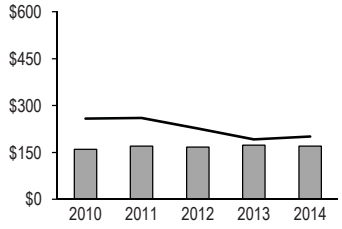
Tons Solid Waste Landfilled per 1,000 Population



	2010	2011	2012	2013	2014
Cary	222.2	224.4	205.4	205.1	221.5
Average	278.6	268.6	248.3	252.8	255.4

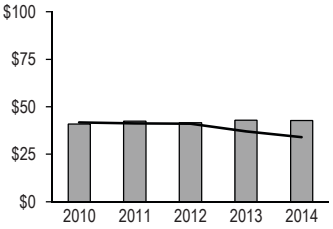
Efficiency Measures

Recycling Services Cost per Ton Collected



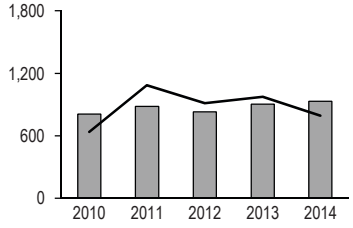
	2010	2011	2012	2013	2014
Cary	$160	$170	$168	$174	$171
Average	$258	$261	$227	$192	$201

Recycling Services Cost per Collection Point



	2010	2011	2012	2013	2014
Cary	$40.83	$42.45	$41.50	$42.95	$42.75
Average	$41.77	$41.22	$41.01	$37.02	$33.99

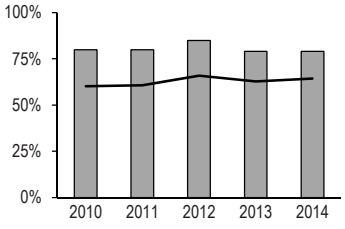
Tons Collected Curbside per Municipal FTE



	2010	2011	2012	2013	2014
Cary	810	882	832	904	930
Average	637	1,086	915	976	792

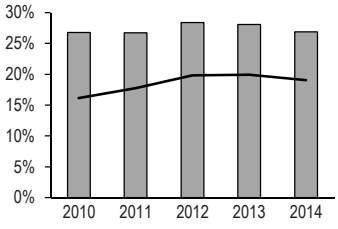
Effectiveness Measures

Community Set-Out Rate



	2010	2011	2012	2013	2014
Cary	80.0%	80.0%	85.0%	79.0%	79.0%
Average	60.2%	60.8%	65.9%	62.8%	64.4%

Tons Recycled as Percentage of Tons Refuse and Recyclables Collected



	2010	2011	2012	2013	2014
Cary	26.8%	26.7%	28.4%	28.1%	26.9%
Average	16.1%	17.8%	19.8%	19.9%	19.1%

Charlotte Household Recycling

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Charlotte provides curbside recycling collection to single-family residential customers once every two weeks. In FY 2010–11, the service went from being provided by both city staff and contractors under a managed competition system to now being completely contracted out. Materials collected in the recycling program include the following:

- glass
- plastic
- aluminum
- newspaper
- magazines
- catalogs
- phone books
- cardboard
- milk cartons
- aerosol cans
- juice boxes.

Recycling was changed to a single stream in FY 2010–11. The majority of users were switched to ninety-five or ninety-six-gallon roll-out containers rather than the previous sixteen-gallon bins. The city receives a modest amount from sale of recyclables, which totaled $179,051 for the year.

The county operates several recycling drop-off centers that are available for use by citizens of Charlotte and Mecklenburg County. Tonnage from the drop-off centers is not included in this report.

Conditions Affecting Service, Performance, and Costs

The set-out rate is calculated daily, as the trucks are outfitted with Radio Frequency Identification (RFID) readers and the recycling carts have RFID chips installed.

The change to a completely contracted out service in FY 2010–2011 was a major change for recylcing collection in Charlotte. Comparisons over time should take this switch into account.

During FY 2013–14, the recycling contractor implemented substantial route changes, leading to confusion and a rise in complaints.

Municipal Profile

Population (OSBM 2013)	789,248
Land Area (Square Miles)	304.28
Persons per Square Mile	2,594
Median Family Income U.S. Census 2010	$61,405

Service Profile

FTE Positions—Collection	Contractor
FTE Positions—Other	Contractor
Number of City Drop-Off Centers	0
Other Drop-Off Centers	12
Percentage of Service Contracted	100%
Collection Frequency	Every 2 weeks
General Collection Location	Curbside
Recyclables Sorted at Curb	No
Collection Points	212,141
Tons of Recyclables Collected	
Curbside	45,870
City Drop-Off Centers	0
Total Tons Collected	45,870
Monthly Service Fee	No
Revenue from Sale of Recyclables	$179,051
Sale Revenue as Percentage of Cost	3.8%

Full Cost Profile

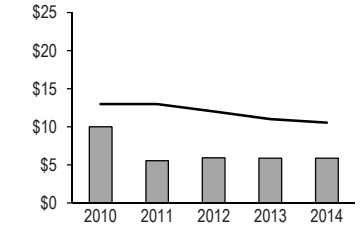
Cost Breakdown by Percentage	
Personal Services	0.0%
Operating Costs	99.5%
Capital Costs	0.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$0
Operating Costs	$4,628,806
Capital Costs	$24,263
TOTAL	$4,653,069

Charlotte — Household Recycling

Key: Charlotte ■ Benchmarking Average — Fiscal Years 2010 through 2014

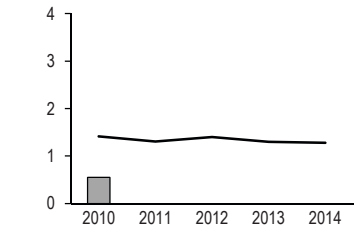
Resource Measures

Recycling Services Cost per Capita



	2010	2011	2012	2013	2014
Charlotte	$9.99	$5.55	$5.92	$5.90	$5.90
Average	$12.97	$12.97	$11.99	$11.02	$10.54

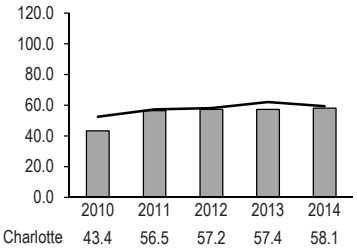
Recycling Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Charlotte	0.55				
Average	1.42	1.31	1.40	1.30	1.28

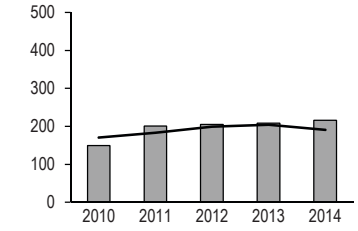
Workload Measures

Tons Recyclables Collected per 1,000 Population



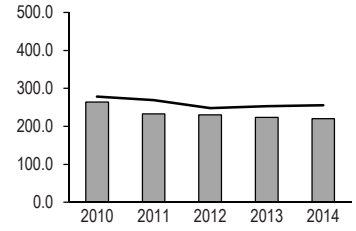
	2010	2011	2012	2013	2014
Charlotte	43.4	56.5	57.2	57.4	58.1
Average	52.4	57.2	58.2	62.1	59.3

Tons Recyclables Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Charlotte	150	201	205	208	216
Average	170	183	199	204	191

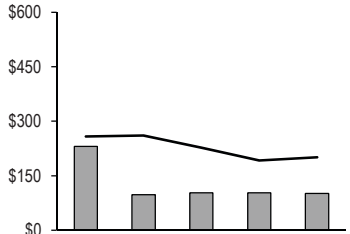
Tons Solid Waste Landfilled per 1,000 Population



	2010	2011	2012	2013	2014
Charlotte	263.7	232.9	230.3	223.6	219.8
Average	278.6	268.6	248.3	252.8	255.4

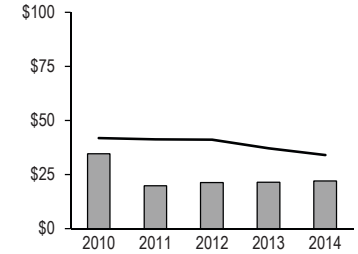
Efficiency Measures

Recycling Services Cost per Ton Collected



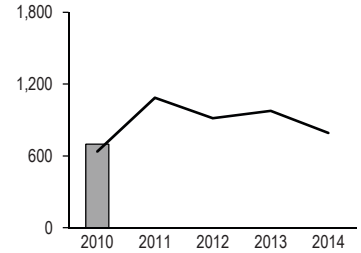
	2010	2011	2012	2013	2014
Charlotte	$230	$98	$103	$103	$101
Average	$258	$261	$227	$192	$201

Recycling Services Cost per Collection Point



	2010	2011	2012	2013	2014
Charlotte	$34.48	$19.73	$21.23	$21.43	$21.93
Average	$41.77	$41.22	$41.01	$37.02	$33.99

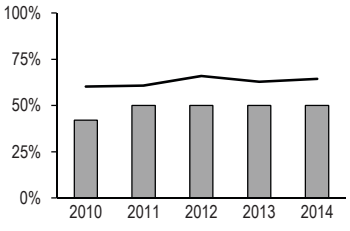
Tons Collected Curbside per Municipal FTE



	2010	2011	2012	2013	2014
Charlotte	699				
Average	637	1,086	915	976	792

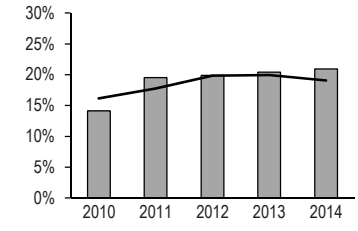
Effectiveness Measures

Community Set-Out Rate



	2010	2011	2012	2013	2014
Charlotte	42.0%	50.0%	50.0%	50.0%	50.0%
Average	60.2%	60.8%	65.9%	62.8%	64.4%

Tons Recycled as Percentage of Tons Refuse and Recyclables Collected



	2010	2011	2012	2013	2014
Charlotte	14.1%	19.5%	19.9%	20.4%	20.9%
Average	16.1%	17.8%	19.8%	19.9%	19.1%

Concord Household Recycling

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Concord provides biweekly curbside collection of recyclable materials from households. The city uses a contractor to provide recycling collection. Residents place materials into a ninety-five-gallon cart. The recyclable materials collected include:

- glass
- newspaper
- magazines
- mixed paper and mail
- No. 1 and No. 2 plastics
- metal and aluminum food and beverage containers.

Concord uses a contract collector for regular residential curbside recycling. The materials are collected on a commingled basis biweekly from each participating resident and delivered to a materials recovery facility (MRF) in Charlotte for separation and marketing.

The city received $126,097 from the sale of recyclables during the year offsetting, some of the costs.

Conditions Affecting Service, Performance, and Costs

During FY 2011–2012, Concord switched contractors. This change in Concord's recycling collection produced serveral challenges during the startup and transition periods. Complaints were up in the first three months due to errors by the contractor and because of customer actions. Valid complaints in the startup period were also notably up, as the contractor was not able to close complaints with proper notation. These problems were largely fixed after the intial three months.

In FY 2010–11, Concord purchased new recycling carts. The cost of these carts is a special one-time expense that is not treated as capital because each cart is below a dollar threshold. The large jump in the various cost measures for recycling is therefore a special one-time jump that will not be repeated.

The set-out rate is calculated twice a year.

The costs for recyclables has fallen for Concord as it has for many cities due to a weak market for recyclable materials.

Municipal Profile

Population (OSBM 2013)	83,279
Land Area (Square Miles)	60.93
Persons per Square Mile	1,367
Median Family Income U.S. Census 2010	$63,643

Service Profile

FTE Positions—Collection	Contractor
FTE Positions—Other	1.2
Number of City Drop-Off Centers	0
Other Drop-Off Centers	1
Percentage of Service Contracted	100%
Collection Frequency	Every 2 weeks
General Collection Location	Curbside
Recyclables Sorted at Curb	No
Collection Points	28,996
Tons of Recyclables Collected	
Curbside	5,746
City Drop-Off Centers	0
Total Tons Collected	5,746
Monthly Service Fee	No
Revenue from Sale of Recyclables	$126,097
Sale Revenue as Percentage of Cost	16.1%

Full Cost Profile

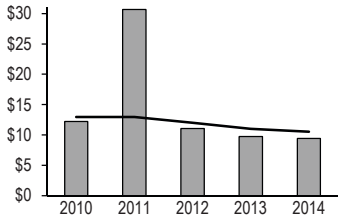
Cost Breakdown by Percentage	
Personal Services	9.7%
Operating Costs	88.3%
Capital Costs	2.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$76,189
Operating Costs	$691,752
Capital Costs	$15,775
TOTAL	$783,716

Concord — Household Recycling

Key: Concord ■ Benchmarking Average — Fiscal Years 2010 through 2014

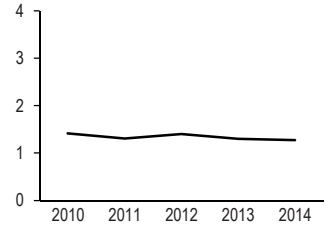
Resource Measures

Recycling Services Cost per Capita



	2010	2011	2012	2013	2014
Concord	$12.23	$30.65	$11.08	$9.76	$9.41
Average	$12.97	$12.97	$11.99	$11.02	$10.54

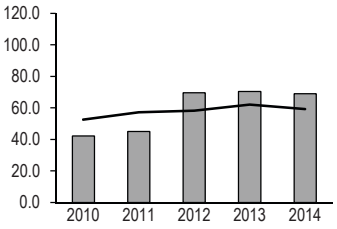
Recycling Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Concord					
Average	1.42	1.31	1.40	1.30	1.28

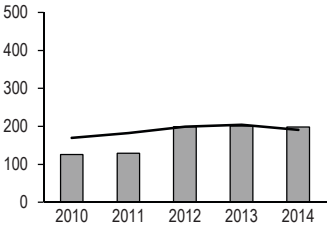
Workload Measures

Tons Recyclables Collected per 1,000 Population



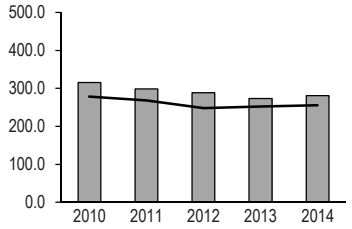
	2010	2011	2012	2013	2014
Concord	42.2	45.0	69.7	70.4	69.0
Average	52.4	57.2	58.2	62.1	59.3

Tons Recyclables Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Concord	126	129	199	201	198
Average	170	183	199	204	191

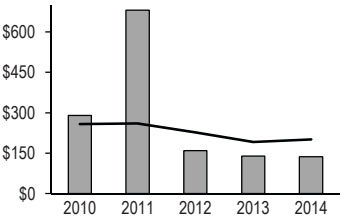
Tons Solid Waste Landfilled per 1,000 Population



	2010	2011	2012	2013	2014
Concord	315.7	298.8	288.9	273.7	281.4
Average	278.6	268.6	248.3	252.8	255.4

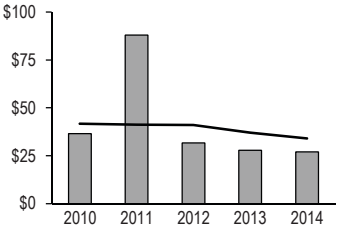
Efficiency Measures

Recycling Services Cost per Ton Collected



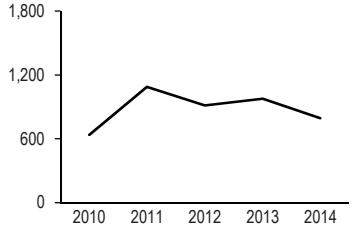
	2010	2011	2012	2013	2014
Concord	$290	$681	$159	$139	$136
Average	$258	$261	$227	$192	$201

Recycling Services Cost per Collection Point



	2010	2011	2012	2013	2014
Concord	$36.50	$88.07	$31.67	$27.88	$27.03
Average	$41.77	$41.22	$41.01	$37.02	$33.99

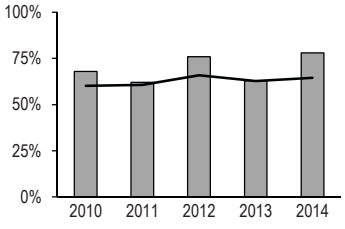
Tons Collected Curbside per Municipal FTE



	2010	2011	2012	2013	2014
Concord					
Average	637	1,086	915	976	792

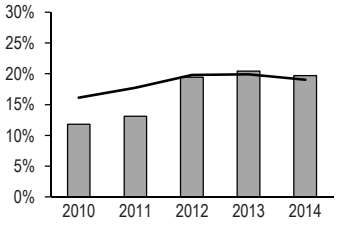
Effectiveness Measures

Community Set-Out Rate



	2010	2011	2012	2013	2014
Concord	68.0%	62.0%	76.0%	63.0%	78.0%
Average	60.2%	60.8%	65.9%	62.8%	64.4%

Tons Recycled as Percentage of Tons Refuse and Recyclables Collected



	2010	2011	2012	2013	2014
Concord	11.8%	13.1%	19.4%	20.4%	19.7%
Average	16.1%	17.8%	19.8%	19.9%	19.1%

Greensboro Household Recycling

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Greensboro operates a voluntary commingled collection process for its recycling customers. Recycling services are provided to the community by means of single ninety-six or sixty-four-gallon automated containers and by green translucent bags. Partnerships also are maintained with fire departments, the county school system, the extension office, and the parks department for providing drop-off sites. There are twenty city-owned drop-off sites, but these collected tons are not reported in Greensboro's data.

Greensboro changed its recycling pickup from once per week to every other week in FY 2007–08. Recycling materials are not sorted curbside. Instead they are set out in one container, picked up by an automated-collection crew, and taken to an off-site contractor that sorts and recycles the materials. Greensboro provides the collection pickup and delivery to the contractor's location, while the contractor provides for recovery of materials and disposal of the residuals it is unable to recycle.

Materials collected by Greensboro's household recycling program include:

- No. 1 and No. 2 plastics
- newspaper
- magazines
- telephone books
- cardboard
- aluminum and steel cans
- chipboard (cereal boxes)
- glass jars and bottles
- plastic soda bottles and milk jugs
- office paper
- empty aerosol cans.

Greensboro contracts with a private firm for separation, packaging, and sale of recyclable materials. City payments to the contractor for FY 2013–14 are included in total cost. The contractor pays the city 50 percent of the net proceeds it receives from the sale of recyclable items. The estimated revenues for sale of recyclables for residential recycling for FY 2013–14 was $929,496. Greensboro gets additional revenues from the sale of recyclables from non-residential sources, but these are not counted here.

Conditions Affecting Service, Performance, and Costs

Greensboro is highly automated in gathering materials from its recycling program.

The set-out rate was based on a manual count done on a weekly basis.

Municipal Profile

Population (OSBM 2013)	278,654
Land Area (Square Miles)	127.93
Persons per Square Mile	2,178
Median Family Income U.S. Census 2010	$52,752

Service Profile

FTE Positions—Collection	15.0
FTE Positions—Other	4.0
Number of City Drop-Off Centers	20
Other Drop-Off Centers	0
Percentage of Service Contracted	0%
Collection Frequency	Every 2 weeks
General Collection Location	Curbside
Recyclables Sorted at Curb	No
Collection Points	81,102
Tons of Recyclables Collected	
Curbside	18,080
City Drop-Off Centers	0
Total Tons Collected	18,080
Monthly Service Fee	No
Revenue from Sale of Recyclables	$929,496
Sale Revenue as Percentage of Cost	39.5%

Full Cost Profile

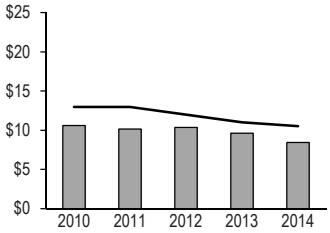
Cost Breakdown by Percentage	
Personal Services	37.3%
Operating Costs	62.7%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$878,006
Operating Costs	$1,477,578
Capital Costs	$0
TOTAL	$2,355,584

Greensboro Household Recycling

Key: Greensboro ■ Benchmarking Average — Fiscal Years 2010 through 2014

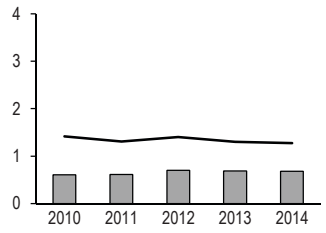
Resource Measures

Recycling Services Cost per Capita



	2010	2011	2012	2013	2014
Greensboro	$10.62	$10.15	$10.35	$9.64	$8.45
Average	$12.97	$12.97	$11.99	$11.02	$10.54

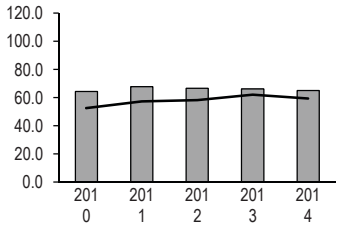
Recycling Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greensboro	0.61	0.61	0.70	0.69	0.68
Average	1.42	1.31	1.40	1.30	1.28

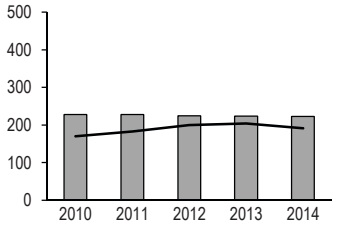
Workload Measures

Tons Recyclables Collected per 1,000 Population



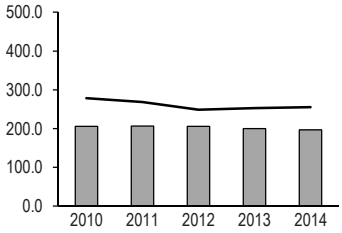
	2010	2011	2012	2013	2014
Greensboro	64.3	67.6	66.6	66.0	64.9
Average	52.4	57.2	58.2	62.1	59.3

Tons Recyclables Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Greensboro	228	228	225	224	223
Average	170	183	199	204	191

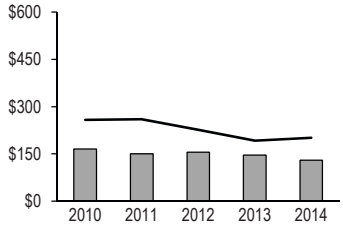
Tons Solid Waste Landfilled per 1,000 Population



	2010	2011	2012	2013	2014
Greensboro	205.6	206.2	205.2	199.5	196.4
Average	278.6	268.6	248.3	252.8	255.4

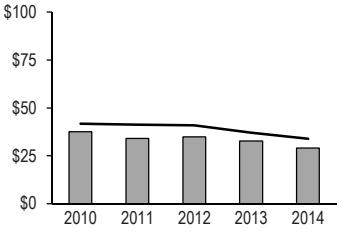
Efficiency Measures

Recycling Services Cost per Ton Collected



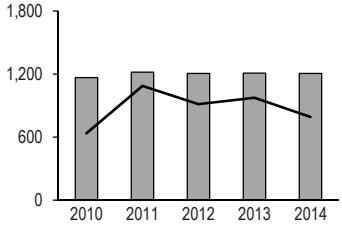
	2010	2011	2012	2013	2014
Greensboro	$165	$150	$155	$146	$130
Average	$258	$261	$227	$192	$201

Recycling Services Cost per Collection Point



	2010	2011	2012	2013	2014
Greensboro	$37.62	$34.17	$34.95	$32.69	$29.04
Average	$41.77	$41.22	$41.01	$37.02	$33.99

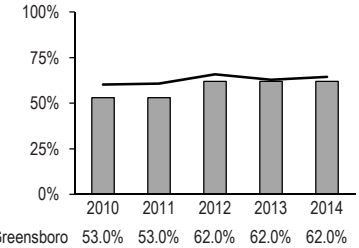
Tons Collected Curbside per Municipal FTE



	2010	2011	2012	2013	2014
Greensboro	1,166	1,218	1,208	1,211	1,205
Average	637	1,086	915	976	792

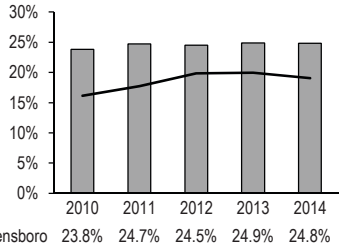
Effectiveness Measures

Community Set-Out Rate



	2010	2011	2012	2013	2014
Greensboro	53.0%	53.0%	62.0%	62.0%	62.0%
Average	60.2%	60.8%	65.9%	62.8%	64.4%

Tons Recycled as Percentage of Tons Refuse and Recyclables Collected



	2010	2011	2012	2013	2014
Greensboro	23.8%	24.7%	24.5%	24.9%	24.8%
Average	16.1%	17.8%	19.8%	19.9%	19.1%

Greenville Household Recycling

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Greenville offers once-a-week curbside or backyard collection of recyclable materials to its residents through a city-run program. Residents can choose to have backyard collection for a fee. The recycling fee is included in the solid waste fee for residential refuse collection. The recycling materials include:

- newspaper and magazines
- cardboard
- aluminum and steel cans
- No. 1 and No. 2 plastics
- glass of all colors
- white goods.

Greenville's household recycling program also uses three city-owned drop-off recycling centers and 200 other sites connected to multi-family complexes. Tonnage and cost for these other drop-off sites are not included in the performance and cost data.

Conditions Affecting Service, Performance, and Costs

Greenville does not track the number of households which set out recyclables on a weekly basis.

The apparent drop in collected tonnage in FY 2013–14 reports only items which were taken to the local material recovery facility. The drop appears to reflect more accurate reporting excluding items such as concrete, tree limbs and other material rather than actual service change in recyclables.

Greenville introduced new recycling carts in FY 2013–14 which generated service complaints during the transition period.

Municipal Profile

Population (OSBM 2013)	87,241
Land Area (Square Miles)	34.85
Persons per Square Mile	2,503
Median Family Income U.S. Census 2010	$50,395

Service Profile

FTE Positions—Collection	11.0
FTE Positions—Other	2.0
Number of City Drop-Off Centers	200
Other Drop-Off Centers	0
Percentage of Service Contracted	0%
Collection Frequency	1 x week
General Collection Location	Curbside
Recyclables Sorted at Curb	Yes
Collection Points	15,554
Tons of Recyclables Collected	
Curbside	2,819
City Drop-Off Centers	0
Total Tons Collected	2,819
Monthly Service Fee	No
Revenue from Sale of Recyclables	$2,500
Sale Revenue as Percentage of Cost	0.3%

Full Cost Profile

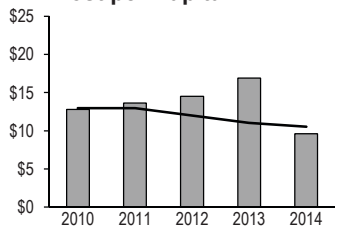
Cost Breakdown by Percentage	
Personal Services	57.6%
Operating Costs	42.4%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$482,914
Operating Costs	$355,243
Capital Costs	$0
TOTAL	$838,157

Greenville Household Recycling

Key: Greenville ■ Benchmarking Average — Fiscal Years 2010 through 2014

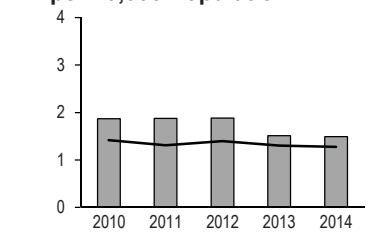
Resource Measures

Recycling Services Cost per Capita



	2010	2011	2012	2013	2014
Greenville	$12.80	$13.65	$14.50	$16.92	$9.61
Average	$12.97	$12.97	$11.99	$11.02	$10.54

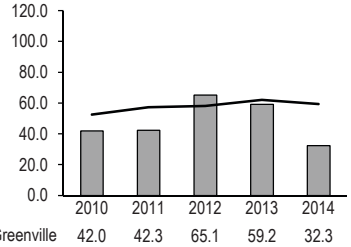
Recycling Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greenville	1.87	1.88	1.88	1.51	1.49
Average	1.42	1.31	1.40	1.30	1.28

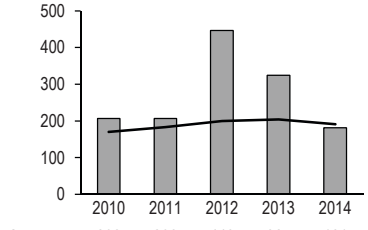
Workload Measures

Tons Recyclables Collected per 1,000 Population



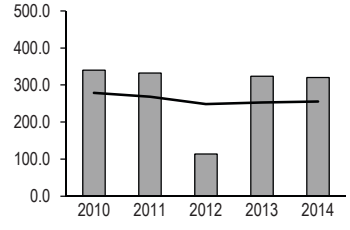
	2010	2011	2012	2013	2014
Greenville	42.0	42.3	65.1	59.2	32.3
Average	52.4	57.2	58.2	62.1	59.3

Tons Recyclables Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Greenville	206	206	446	325	181
Average	170	183	199	204	191

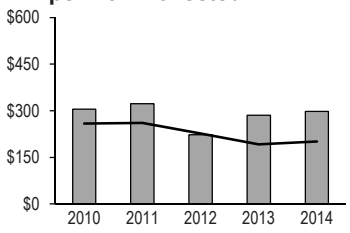
Tons Solid Waste Landfilled per 1,000 Population



	2010	2011	2012	2013	2014
Greenville	340.2	332.2	113.6	323.7	320.4
Average	278.6	268.6	248.3	252.8	255.4

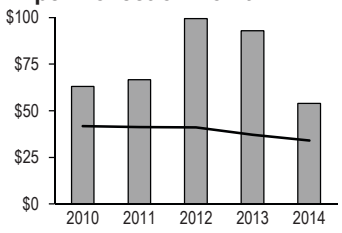
Efficiency Measures

Recycling Services Cost per Ton Collected



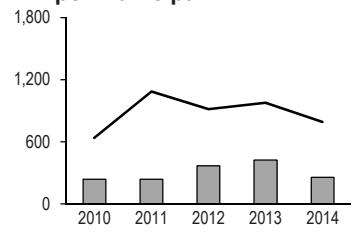
	2010	2011	2012	2013	2014
Greenville	$305	$323	$223	$286	$297
Average	$258	$261	$227	$192	$201

Recycling Services Cost per Collection Point



	2010	2011	2012	2013	2014
Greenville	$62.94	$66.69	$99.36	$92.80	$53.89
Average	$41.77	$41.22	$41.01	$37.02	$33.99

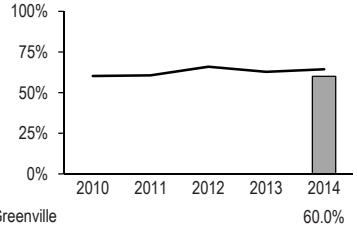
Tons Collected Curbside per Municipal FTE



	2010	2011	2012	2013	2014
Greenville	240	240	369	425	256
Average	637	1,086	915	976	792

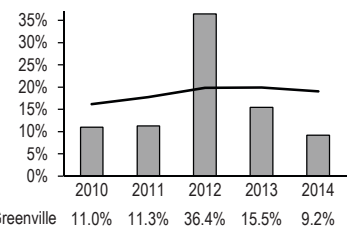
Effectiveness Measures

Community Set-Out Rate



	2010	2011	2012	2013	2014
Greenville					60.0%
Average	60.2%	60.8%	65.9%	62.8%	64.4%

Tons Recycled as Percentage of Tons Refuse and Recyclables Collected



	2010	2011	2012	2013	2014
Greenville	11.0%	11.3%	36.4%	15.5%	9.2%
Average	16.1%	17.8%	19.8%	19.9%	19.1%

Hickory — Household Recycling

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Hickory offers once-a-week curbside collection of recyclable materials to its residents through a contractual agreement. The recycling materials collected include:

- newspaper and magazines
- aluminum and steel cans
- No. 1 and No. 2 plastics
- glass—all colors
- phone books and junk mail.

Hickory's household recycling program also uses two drop-off recycling centers. One is staffed, and the other is not. These centers collect antifreeze and oil in addition to the same household materials that are collected at the curb. Tonnage and costs for this service are included in the performance and cost data.

A separate commercial recycling program that services businesses and multi-family units is operated by the city. The program utilizes city workers and equipment to collect cardboard and paper in addition to the curbside materials. The performance and cost data do not include the commercial program.

The city charges residents a monthly fee for recycling, which is included in the monthly solid waste fee. In FY 2013–14, the city collected $70,069 in revenue from the sale of recyclables.

Conditions Affecting Service, Performance, and Costs

The set-out rate is calculated on a monthly basis by the contractor. While not tracked, missed recycling pickups are minimal and average less than one per month.

Municipal Profile

Population (OSBM 2013)	40,222
Land Area (Square Miles)	29.83
Persons per Square Mile	1,348
Median Family Income U.S. Census 2010	$54,093

Service Profile

FTE Positions—Collection	Contractor and 0.5 City
FTE Positions—Other	0.1
Number of City Drop-Off Centers	2
Other Drop-Off Centers	0
Percentage of Service Contracted	80%
Collection Frequency	1 x week
General Collection Location	Curbside
Recyclables Sorted at Curb	Yes
Collection Points	12,200
Tons of Recyclables Collected	
Curbside	1,171
City Drop-Off Centers	165
Total Tons Collected	1,336
Monthly Service Fee	No
Revenue from Sale of Recyclables	$70,069
Sale Revenue as Percentage of Cost	13.9%

Full Cost Profile

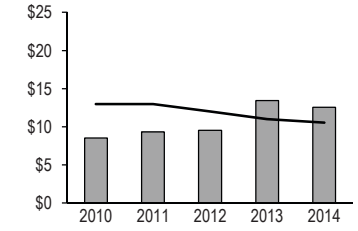
Cost Breakdown by Percentage	
Personal Services	4.9%
Operating Costs	83.9%
Capital Costs	11.2%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$24,797
Operating Costs	$422,738
Capital Costs	$56,568
TOTAL	$504,103

Hickory — Household Recycling

Key: Hickory ■ Benchmarking Average — Fiscal Years 2010 through 2014

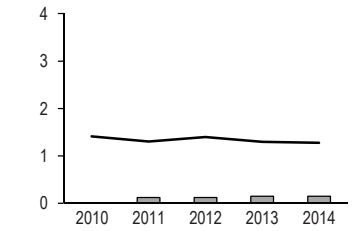
Resource Measures

Recycling Services Cost per Capita



	2010	2011	2012	2013	2014
Hickory	$8.52	$9.33	$9.53	$13.43	$12.53
Average	$12.97	$12.97	$11.99	$11.02	$10.54

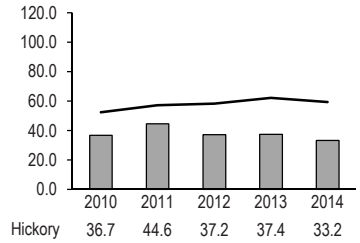
Recycling Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Hickory		0.13	0.13	0.15	0.15
Average	1.42	1.31	1.40	1.30	1.28

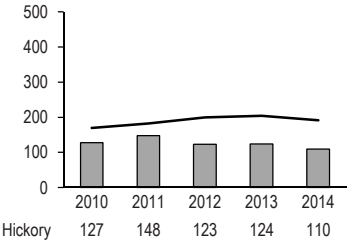
Workload Measures

Tons Recyclables Collected per 1,000 Population



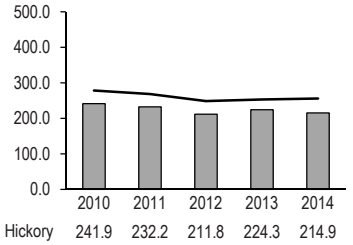
	2010	2011	2012	2013	2014
Hickory	36.7	44.6	37.2	37.4	33.2
Average	52.4	57.2	58.2	62.1	59.3

Tons Recyclables Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Hickory	127	148	123	124	110
Average	170	183	199	204	191

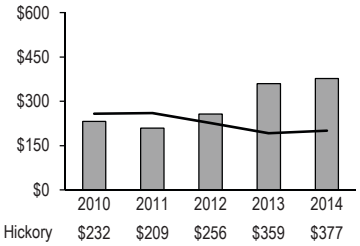
Tons Solid Waste Landfilled per 1,000 Population



	2010	2011	2012	2013	2014
Hickory	241.9	232.2	211.8	224.3	214.9
Average	278.6	268.6	248.3	252.8	255.4

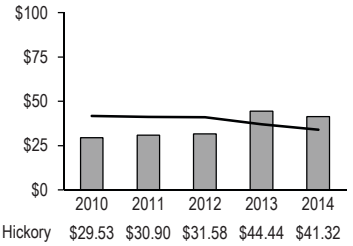
Efficiency Measures

Recycling Services Cost per Ton Collected



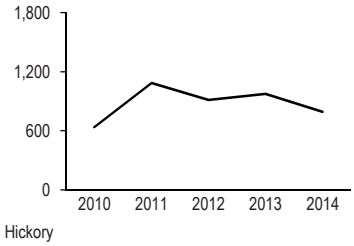
	2010	2011	2012	2013	2014
Hickory	$232	$209	$256	$359	$377
Average	$258	$261	$227	$192	$201

Recycling Services Cost per Collection Point



	2010	2011	2012	2013	2014
Hickory	$29.53	$30.90	$31.58	$44.44	$41.32
Average	$41.77	$41.22	$41.01	$37.02	$33.99

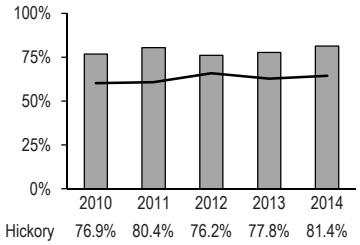
Tons Collected Curbside per Municipal FTE



	2010	2011	2012	2013	2014
Hickory					
Average	637	1,086	915	976	792

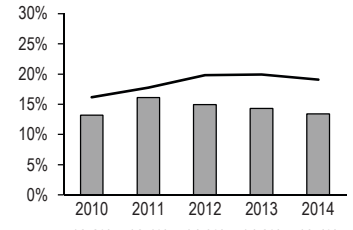
Effectiveness Measures

Community Set-Out Rate



	2010	2011	2012	2013	2014
Hickory	76.9%	80.4%	76.2%	77.8%	81.4%
Average	60.2%	60.8%	65.9%	62.8%	64.4%

Tons Recycled as Percentage of Tons Refuse and Recyclables Collected



	2010	2011	2012	2013	2014
Hickory	13.2%	16.1%	14.9%	14.3%	13.4%
Average	16.1%	17.8%	19.8%	19.9%	19.1%

High Point Household Recycling

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The city offers curbside collection every other week. Large ninety-six-gallon containers are provided to customers. Additional carts may be purchased. The recycling program is a city function.

Recyclables are collected using four recycling crews that work in the Environmental Services Division. The pickup trucks are automated with one driver. A truck for special circumstances such as downtown collection uses a crew with a driver and one laborer. There are fourteen drop-off sites throughout the city and a number of multi-family sites at which the city collects. Materials collected include:

- plastic
- glass
- metal and aluminum cans
- magazines
- newspaper
- phone books
- cardboard
- mixed paper.

The city also operates and owns a material recovery facility (MRF). There is a buy-back center at the MRF to service individuals selling recyclables.

Conditions Affecting Service, Performance, and Costs

The city used a random sample to determine the set-out rate.

High Point has been working on improving efficiency and processing of recyclables for resale. Sales of recyclable materials were $614,893 for the year.

High Point made a transition in FY 2009–10 to less frequent automated collection. This changeover brought with it a large amount of one-time costs associated with recycling containers and new collection equipment. High Point is now fully automated in its pickups, other than those involving special requests.

Municipal Profile

Population (OSBM 2013)	107,652
Land Area (Square Miles)	54.73
Persons per Square Mile	1,967
Median Family Income U.S. Census 2010	$49,720

Service Profile

FTE Positions—Collection	6.0
FTE Positions—Other	27.5
Number of City Drop-Off Centers	14
Other Drop-Off Centers	75
Percentage of Service Contracted	0%
Collection Frequency	Every 2 weeks
General Collection Location	Curbside
Recyclables Sorted at Curb	No
Collection Points	39,107
Tons of Recyclables Collected	
Curbside	7,974
City Drop-Off Centers	640
Total Tons Collected	8,614
Monthly Service Fee	$1.00
Revenue from Sale of Recyclables	$614,893
Sale Revenue as Percentage of Cost	25.9%

Full Cost Profile

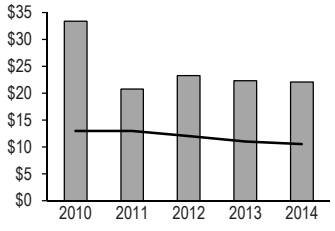
Cost Breakdown by Percentage	
Personal Services	15.3%
Operating Costs	79.4%
Capital Costs	5.4%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$362,363
Operating Costs	$1,882,893
Capital Costs	$127,457
TOTAL	$2,372,713

High Point Household Recycling

Key: High Point ■ Benchmarking Average — Fiscal Years 2010 through 2014

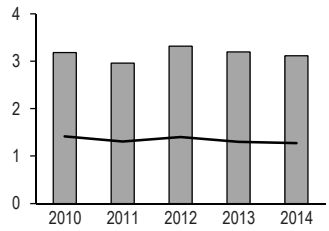
Resource Measures

Recycling Services Cost per Capita



	2010	2011	2012	2013	2014
High Point	$33.36	$20.78	$23.28	$22.29	$22.04
Average	$12.97	$12.97	$11.99	$11.02	$10.54

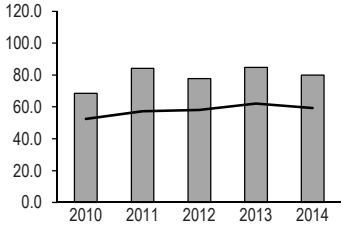
Recycling Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
High Point	3.18	2.96	3.32	3.20	3.11
Average	1.42	1.31	1.40	1.30	1.28

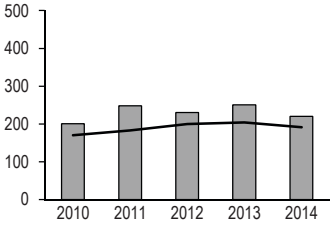
Workload Measures

Tons Recyclables Collected per 1,000 Population



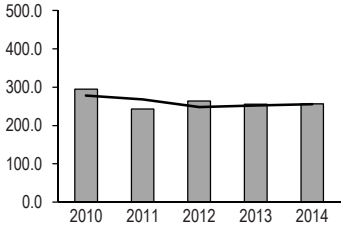
	2010	2011	2012	2013	2014
High Point	68.5	84.1	77.7	84.8	80.0
Average	52.4	57.2	58.2	62.1	59.3

Tons Recyclables Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
High Point	201	248	231	251	220
Average	170	183	199	204	191

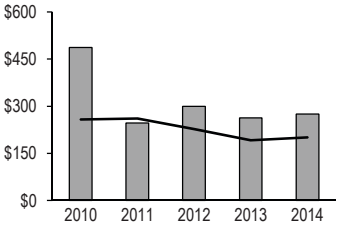
Tons Solid Waste Landfilled per 1,000 Population



	2010	2011	2012	2013	2014
High Point	295.2	243.3	264.0	256.0	256.5
Average	278.6	268.6	248.3	252.8	255.4

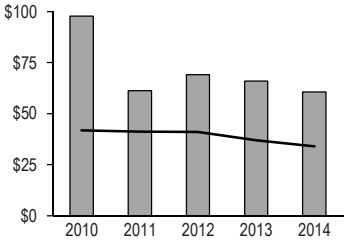
Efficiency Measures

Recycling Services Cost per Ton Collected



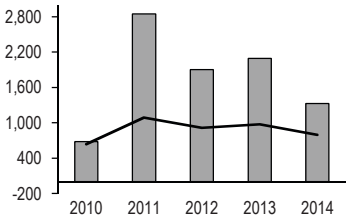
	2010	2011	2012	2013	2014
High Point	$487	$247	$300	$263	$275
Average	$258	$261	$227	$192	$201

Recycling Services Cost per Collection Point



	2010	2011	2012	2013	2014
High Point	$97.83	$61.25	$69.10	$65.99	$60.67
Average	$41.77	$41.22	$41.01	$37.02	$33.99

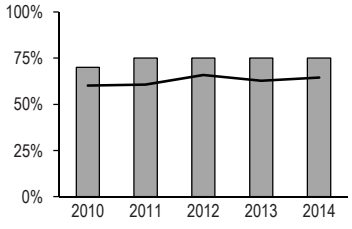
Tons Collected Curbside per Municipal FTE



	2010	2011	2012	2013	2014
High Point	683	2,848	1,904	2,093	1,329
Average	637	1,086	915	976	792

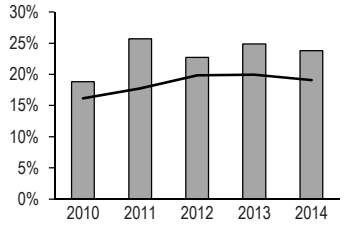
Effectiveness Measures

Community Set-Out Rate



	2010	2011	2012	2013	2014
High Point	70.0%	75.0%	75.0%	75.0%	75.0%
Average	60.2%	60.8%	65.9%	62.8%	64.4%

Tons Recycled as Percentage of Tons Refuse and Recyclables Collected



	2010	2011	2012	2013	2014
High Point	18.8%	25.7%	22.7%	24.9%	23.8%
Average	16.1%	17.8%	19.8%	19.9%	19.1%

Salisbury Household Recycling

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Salisbury provides every other week curbside collection of recyclable materials from households. The city charged a monthly recycling fee of $4.03 in FY 2013–14. The city provides and pays for the ninety-six-gallon recycling roll-out containers that residents use. The city contracts 100 percent of its recycling program. Recyclables are collected by the contractor and taken to the recycling site.
The recyclable materials collected include:

- glass (all colors)
- newspaper
- magazines and catalogs
- mixed paper and mail
- telephone books
- cardboard—broken down and cereal boxes
- all plastics
- aluminum cans
- steel cans.

Conditions Affecting Service, Performance, and Costs

The set-out rate was reported monthly by the contractor. The city reserves the right to conduct unannounced follow-up inspections of the collection process.

Municipal Profile

Population (OSBM 2013)	33,726
Land Area (Square Miles)	22.18
Persons per Square Mile	1,521
Median Family Income U.S. Census 2010	$40,192

Service Profile

FTE Positions—Collection	Contractor
FTE Positions—Other	Contractor
Number of City Drop-Off Centers	0
Other Drop-Off Centers	0
Percentage of Service Contracted	100%
Collection Frequency	Every 2 weeks
General Collection Location	Curbside
Recyclables Sorted at Curb	No
Collection Points	10,059
Tons of Recyclables Collected	
Curbside	1,506
City Drop-Off Centers	0
Total Tons Collected	1,506
Monthly Service Fee	$4.03
Revenue from Sale of Recyclables	$0
Sale Revenue as Percentage of Cost	NA

Full Cost Profile

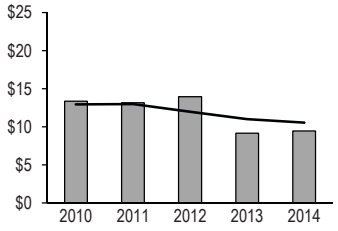
Cost Breakdown by Percentage	
Personal Services	0.0%
Operating Costs	100.0%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$0
Operating Costs	$318,768
Capital Costs	$0
TOTAL	$318,768

Salisbury — Household Recycling

Key: Salisbury ■ Benchmarking Average — Fiscal Years 2010 through 2014

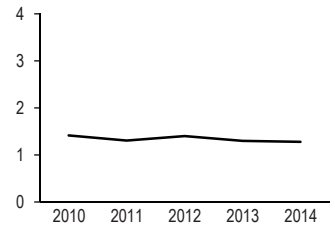
Resource Measures

Recycling Services Cost per Capita



	2010	2011	2012	2013	2014
Salisbury	$13.35	$13.16	$13.94	$9.18	$9.45
Average	$12.97	$12.97	$11.99	$11.02	$10.54

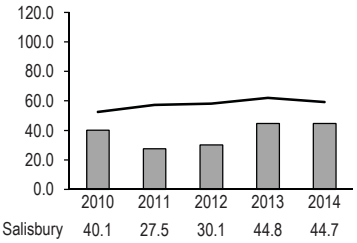
Recycling Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Salisbury					
Average	1.42	1.31	1.40	1.30	1.28

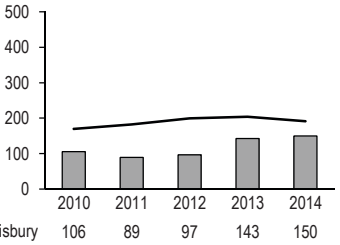
Workload Measures

Tons Recyclables Collected per 1,000 Population



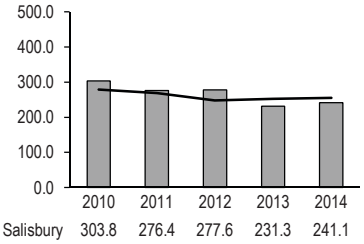
	2010	2011	2012	2013	2014
Salisbury	40.1	27.5	30.1	44.8	44.7
Average	52.4	57.2	58.2	62.1	59.3

Tons Recyclables Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Salisbury	106	89	97	143	150
Average	170	183	199	204	191

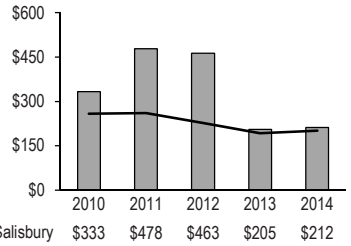
Tons Solid Waste Landfilled per 1,000 Population



	2010	2011	2012	2013	2014
Salisbury	303.8	276.4	277.6	231.3	241.1
Average	278.6	268.6	248.3	252.8	255.4

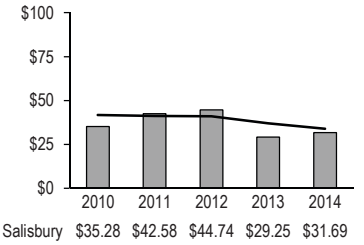
Efficiency Measures

Recycling Services Cost per Ton Collected



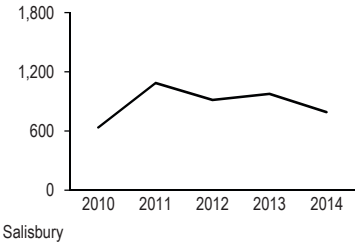
	2010	2011	2012	2013	2014
Salisbury	$333	$478	$463	$205	$212
Average	$258	$261	$227	$192	$201

Recycling Services Cost per Collection Point



	2010	2011	2012	2013	2014
Salisbury	$35.28	$42.58	$44.74	$29.25	$31.69
Average	$41.77	$41.22	$41.01	$37.02	$33.99

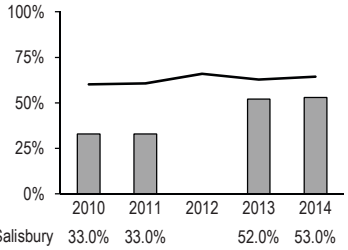
Tons Collected Curbside per Municipal FTE



	2010	2011	2012	2013	2014
Salisbury					
Average	637	1,086	915	976	792

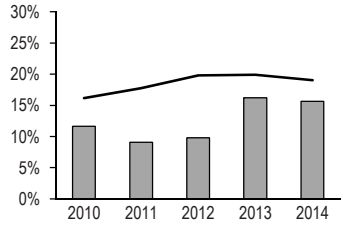
Effectiveness Measures

Community Set-Out Rate



	2010	2011	2012	2013	2014
Salisbury	33.0%	33.0%		52.0%	53.0%
Average	60.2%	60.8%	65.9%	62.8%	64.4%

Tons Recycled as Percentage of Tons Refuse and Recyclables Collected



	2010	2011	2012	2013	2014
Salisbury	11.7%	9.1%	9.8%	16.2%	15.6%
Average	16.1%	17.8%	19.8%	19.9%	19.1%

Wilson — Household Recycling

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Wilson's household recycling program provides curbside pickup of materials once each week to residents on the same day as residential refuse collection but by different crews. The recycling program is part of the Division of Environmental Services.

The following materials are collected:

- aluminum and steel cans
- No. 1 and No. 2 plastic containers
- newsprint
- clear, green, and brown glass
- waste oil on a call-in basis.

Wilson used two three-person crews during the year, consisting of one driver and two collectors each.

Conditions Affecting Service, Performance, and Costs

The set-out rate was calculated on a monthly basis by drivers on the recycling trucks using counters.

Municipal Profile

Population (OSBM 2013)	49,097
Land Area (Square Miles)	30.48
Persons per Square Mile	1,611
Median Family Income U.S. Census 2010	$43,442

Service Profile

FTE Positions—Collection	6.0
FTE Positions—Other	0.5
Number of City Drop-Off Centers	0
Other Drop-Off Centers	0
Percentage of Service Contracted	0%
Collection Frequency	1 x week
General Collection Location	Curbside
Recyclables Sorted at Curb	No
Collection Points	19,750
Tons of Recyclables Collected	
Curbside	1,440
City Drop-Off Centers	0
Total Tons Collected	1,440
Monthly Service Fee	$18.50
Revenue from Sale of Recyclables	$0
Sale Revenue as Percentage of Cost	NA

Full Cost Profile

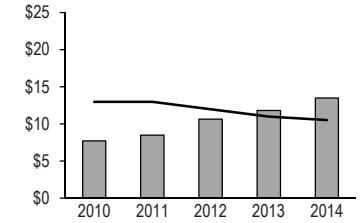
Cost Breakdown by Percentage	
Personal Services	43.2%
Operating Costs	43.8%
Capital Costs	13.1%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$286,058
Operating Costs	$289,919
Capital Costs	$86,581
TOTAL	$662,558

Wilson — Household Recycling

Key: Wilson ■ Benchmarking Average — Fiscal Years 2010 through 2014

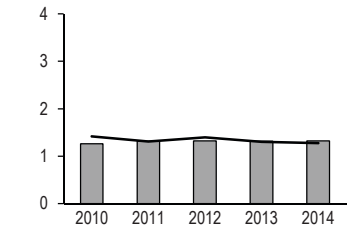
Resource Measures

Recycling Services Cost per Capita



	2010	2011	2012	2013	2014
Wilson	$7.74	$8.49	$10.65	$11.80	$13.49
Average	$12.97	$12.97	$11.99	$11.02	$10.54

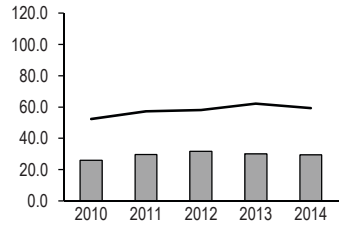
Recycling Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Wilson	1.26	1.32	1.32	1.31	1.32
Average	1.42	1.31	1.40	1.30	1.28

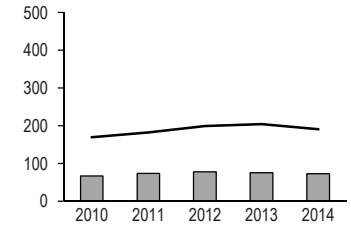
Workload Measures

Tons Recyclables Collected per 1,000 Population



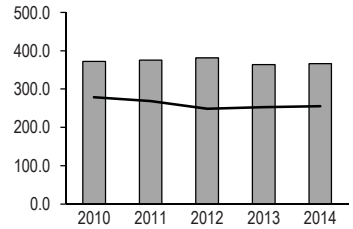
	2010	2011	2012	2013	2014
Wilson	25.9	29.7	31.7	30.0	29.3
Average	52.4	57.2	58.2	62.1	59.3

Tons Recyclables Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Wilson	67	74	78	76	73
Average	170	183	199	204	191

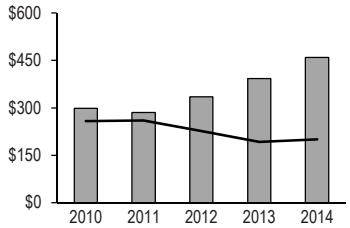
Tons Solid Waste Landfilled per 1,000 Population



	2010	2011	2012	2013	2014
Wilson	372.4	375.2	381.2	364.1	366.6
Average	278.6	268.6	248.3	252.8	255.4

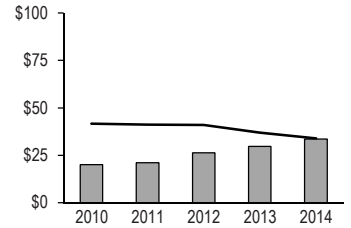
Efficiency Measures

Recycling Services Cost per Ton Collected



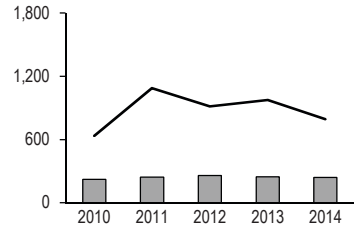
	2010	2011	2012	2013	2014
Wilson	$298	$286	$336	$393	$460
Average	$258	$261	$227	$192	$201

Recycling Services Cost per Collection Point



	2010	2011	2012	2013	2014
Wilson	$20.10	$21.08	$26.29	$29.69	$33.55
Average	$41.77	$41.22	$41.01	$37.02	$33.99

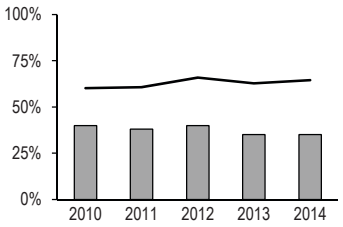
Tons Collected Curbside per Municipal FTE



	2010	2011	2012	2013	2014
Wilson	224	245	260	248	240
Average	637	1,086	915	976	792

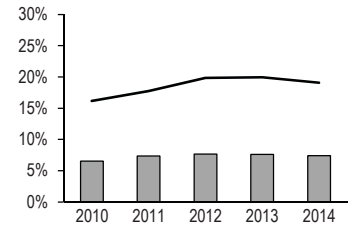
Effectiveness Measures

Community Set-Out Rate



	2010	2011	2012	2013	2014
Wilson	40.0%	38.0%	40.0%	35.0%	35.0%
Average	60.2%	60.8%	65.9%	62.8%	64.4%

Tons Recycled as Percentage of Tons Refuse and Recyclables Collected



	2010	2011	2012	2013	2014
Wilson	6.5%	7.3%	7.7%	7.6%	7.4%
Average	16.1%	17.8%	19.8%	19.9%	19.1%

Winston-Salem Household Recycling

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Winston-Salem provides biweekly curbside household recycling service to its single-family residences using ninety-six-gallon carts. The city provides nine drop-off sites for cardboard at its fire stations plus two full-service drop-off sites. Items collected in the city's curbside household recycling program include:

- aluminum and steel cans
- all plastic bottles
- green, amber, and clear glass
- newspaper
- magazines, telephone books, and junk mail
- chipboard
- corrugated cardboard (no bundling requirement)
- office paper
- aerosol cans.

The city contracts for 100 percent of its curbside household recycling program. The city does not charge a recycling fee. Revenue to the city for the sale of recyclables was $297,079 during the year.

Conditions Affecting Service, Performance, and Costs

In FY 2011–12, 60 percent of the cost of Winston-Salem's recycling program was funded by landfill tipping fees. The remaining 40 percent was funded by the general fund.

In April 2012, the city implemented a single-stream recycling program in which residents place all recyclables into a city-issued ninety-six-gallon cart that is rolled to the curb for collection. The service was also changed to a biweekly collection. The city anticipates signficant cost savings and increased participation from a single-stream program.

Municipal Profile

Population (OSBM 2013)	235,527
Land Area (Square Miles)	132.45
Persons per Square Mile	1,778
Median Family Income U.S. Census 2010	$51,491

Service Profile

FTE Positions—Collection	Contractor
FTE Positions—Other	1.0
Number of City Drop-Off Centers	11
Other Drop-Off Centers	0
Percentage of Service Contracted	100%
Collection Frequency	Every 2 weeks
General Collection Location	Curbside
Recyclables Sorted at Curb	No
Collection Points	76,064
Tons of Recyclables Collected	
Curbside	12,671
City Drop-Off Centers	208
Total Tons Collected	12,879
Monthly Service Fee	No
Revenue from Sale of Recyclables	$297,079
Sale Revenue as Percentage of Cost	18.1%

Full Cost Profile

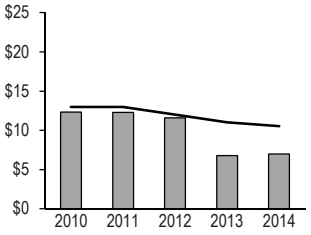
Cost Breakdown by Percentage	
Personal Services	4.3%
Operating Costs	95.7%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$71,215
Operating Costs	$1,573,182
Capital Costs	$0
TOTAL	$1,644,397

Winston-Salem Household Recycling

Key: Winston-Salem ■ Benchmarking Average — Fiscal Years 2010 through 2014

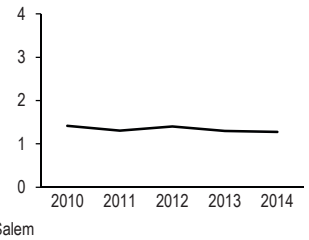
Resource Measures

Recycling Services Cost per Capita



	2010	2011	2012	2013	2014
Winston-Salem	$12.34	$12.30	$11.58	$6.80	$6.98
Average	$12.97	$12.97	$11.99	$11.02	$10.54

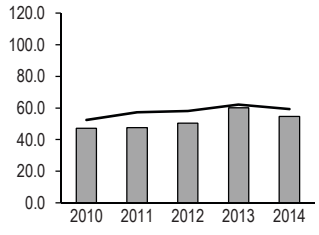
Recycling Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Winston-Salem					
Average	1.42	1.31	1.40	1.30	1.28

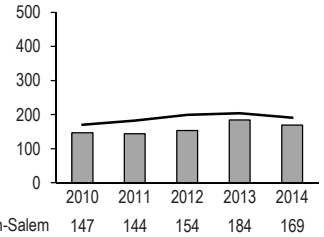
Workload Measures

Tons Recyclables Collected per 1,000 Population



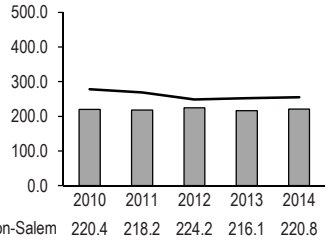
	2010	2011	2012	2013	2014
Winston-Salem	47.1	47.5	50.3	60.1	54.7
Average	52.4	57.2	58.2	62.1	59.3

Tons Recyclables Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Winston-Salem	147	144	154	184	169
Average	170	183	199	204	191

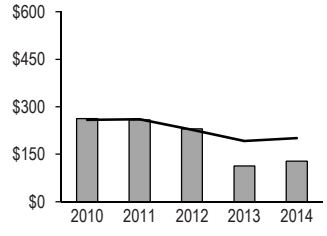
Tons Solid Waste Landfilled per 1,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	220.4	218.2	224.2	216.1	220.8
Average	278.6	268.6	248.3	252.8	255.4

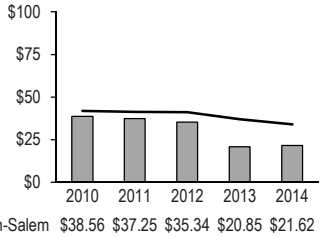
Efficiency Measures

Recycling Services Cost per Ton Collected



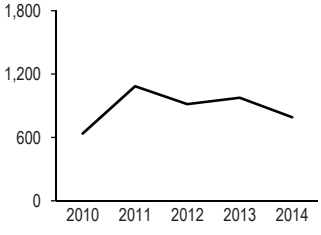
	2010	2011	2012	2013	2014
Winston-Salem	$262	$259	$230	$113	$128
Average	$258	$261	$227	$192	$201

Recycling Services Cost per Collection Point



	2010	2011	2012	2013	2014
Winston-Salem	$38.56	$37.25	$35.34	$20.85	$21.62
Average	$41.77	$41.22	$41.01	$37.02	$33.99

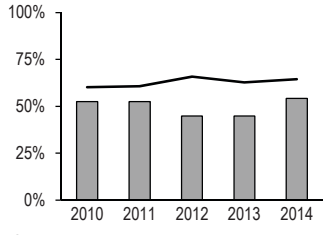
Tons Collected Curbside per Municipal FTE



	2010	2011	2012	2013	2014
Winston-Salem					
Average	637	1,086	915	976	792

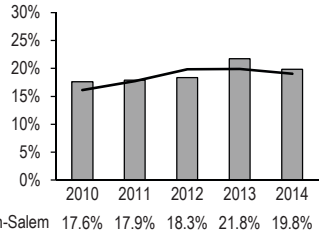
Effectiveness Measures

Community Set-Out Rate



	2010	2011	2012	2013	2014
Winston-Salem	52.5%	52.6%	44.9%	44.9%	54.2%
Average	60.2%	60.8%	65.9%	62.8%	64.4%

Tons Recycled as Percentage of Tons Refuse and Recyclables Collected



	2010	2011	2012	2013	2014
Winston-Salem	17.6%	17.9%	18.3%	21.8%	19.8%
Average	16.1%	17.8%	19.8%	19.9%	19.1%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Performance and Cost Data

YARD WASTE / LEAF COLLECTION

PERFORMANCE MEASURES FOR YARD WASTE/LEAF COLLECTION

SERVICE DEFINITION

Yard waste and leaf collection includes regularly scheduled or special collection of these items. Such collection may occur from the curb, backyard, or another locale. Yard waste and leaves may be bagged, placed in containers, or loose. The service definition excludes the collection of white goods and other bulky items. Although some municipalities collect yard waste and leaves with household refuse or other trash, they separate the items at some point in the collection process because yard waste and leaves cannot be placed in landfills.

NOTES ON PERFORMANCE MEASURES

1. Tons Collected per 1,000 Population and per 1,000 Collection Points

These are the same performance measures that are used for residential refuse collection, except that tonnage is for yard waste, leaves, and miscellaneous trash rather than residential refuse. “Collection points” refers to the number of residential premises served by regularly scheduled collection of yard waste, leaves, and miscellaneous trash.

2. Cost per Ton Collected

Cost is measured using the project’s full cost accounting model, calculating direct, indirect, and capital costs. Tons are as defined above.

3. Tons Collected per Collection FTE

The number of full-time equivalent (FTE) positions refers to the number of employees or laborers who were directly involved in collection of yard waste, leaves, and miscellaneous trash during the fiscal year. This number includes temporary, permanent, full-time, and part-time workers. Such workers can be sanitation, street, or other municipal employees. One FTE equals 2,080 hours of work per year. Any combination of employees providing 2,080 hours of work per year is one FTE.

4. Complaints (and Valid Complaints) per 10,000 Collection Points

Complaints are those tracked by each jurisdiction, using its own criteria and procedures. Collection points are as defined above. The municipalities follow very different procedures in processing and recording these calls and in determining which ones are complaints and which are not. For these reasons, the project is able to present limited comparative data about complaints or valid complaints. Nonetheless, the project recommends that the participating municipalities devise common criteria for identifying complaints and procedures for processing and recording calls.

Yard Waste/Leaf Collection

Summary of Key Dimensions of Service

City or Town	Yard Waste Collection		Seasonal Loose Leaf Collection	Collection Points	Tons Collected		FTE Positions
	Location	Frequency			Yard Waste	Seasonal Leaves	
Apex	Curbside	1 x week	NA	12,467	5,775	NA	11.35
Asheville	Curbside	2 x month	NA	30,590	8,472	NA	14.9
Burlington	Curbside	1 x week	4 sweeps	16,762	2,677	3,862	10.5
Cary	Curbside	1 x week	3 sweeps	45,881 Yard Waste 47,033 Leaves	13,487	6,902	22
Charlotte	Curbside	1 x week	NA	212,141	52,354	NA	77
Concord	Curbside	1 x week	3 sweeps	28,996	6,950	1,636	26.2
Greensboro	Curbside	1 x week	2 sweeps	81,102	15,175	13,623	45.94
Greenville	Curbside	1 x week	1 x week	20,000	4,046	3,800	18
Hickory	Curbside	1 x week	2 sweeps	12,200	3,240	3,427	9.75
High Point	Curbside	1 x week	2 sweeps	39,107	5,802	2,762	15
Salisbury	Curbside	1 x week	1 x 3 weeks	10,961	4,784	2,681	8.75
Wilson	Curbside	1 x week	1 x 3 weeks	19,750	5,145	1,965	15.5
Winston-Salem	Curbside	Yard Waste Cart 1 x week Brush every 10 days	3 sweeps	14,000 Yard Waste 76,064 Brush and Leaves	23,599	22,553	86.3

NOTES

Municipalities with no reported seasonal leaf collection collect leaves as part of their yard waste collection programs.

EXPLANATORY FACTORS

These are factors that the project found affected yard waste and leaf collection performance and cost in one or more of the municipalities:

Whether or not a fee is charged for collection
Residential/commercial/industrial nature of the community
Policies regarding sizes and types of items collected
Extent of seasonal leaf collection service
Landfill policies and tipping fees

Apex Yard Waste/Leaf Collection

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Town of Apex collects yard waste curbside once per week for all city residents. The town collects vegetative matter from residential landscaping. The town does not operate a seasonal leaf collection, but leaves are collected year-round as part of the weekly service. Land clearing debris is not collected. The town charges $4 per month for collection of yard waste.

There are three grass/vacuum trucks, two two-person limb-chipping crews, and one grapple-truck operator for larger items. These crews cover the town every week using a five-day-a-week schedule.

Conditions Affecting Service, Performance, and Costs

Apex began participation in the benchmarking project in July 2011, with FY 2010–11 being the first reporting year.

Apex made a major purchase of new leaf and grappler trucks for leaf collection in FY 2013–14, which pushed up capital costs but helped with productivity.

Municipal Profile

Population (OSBM 2013)	40,925
Land Area (Square Miles)	16.25
Persons per Square Mile	2,518
Median Family Income U.S. Census 2010	$97,201

Service Profile

FTE Positions—Collection	10.0
FTE Positions—Other	1.4
Collection Frequency	
Yard Waste	1 x week
Collection Points	12,467
Tons Collected	
Yard Waste	5,775
Seasonal Leaves	with yard waste
Total Tons Collected	5,775
Monthly Service Fee	$4.00

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	56.4%
Operating Costs	23.1%
Capital Costs	20.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$520,166
Operating Costs	$213,166
Capital Costs	$188,597
TOTAL	$921,929

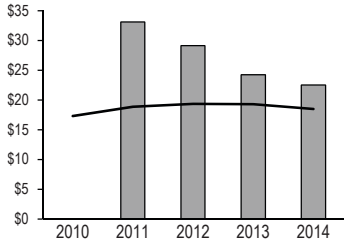
Apex

Yard Waste/Leaf Collection

Key: Apex ■ Benchmarking Average — Fiscal Years 2009 through 2013

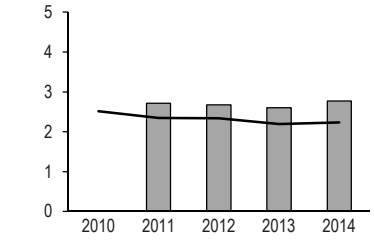
Resource Measures

Yard Waste and Leaf Collection Costs per Capita



	2010	2011	2012	2013	2014
Apex		$33.12	$29.13	$24.23	$22.53
Average	$17.32	$18.87	$19.32	$19.28	$18.49

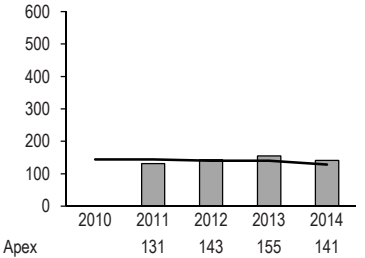
Yard Waste and Leaf Collection FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Apex		2.7	2.7	2.6	2.8
Average	2.5	2.4	2.3	2.2	2.2

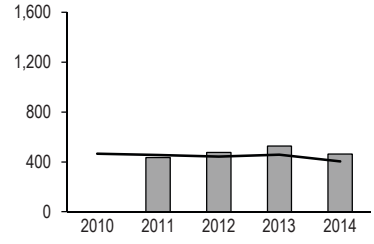
Workload Measures

Yard Waste and Leaf Tons Collected per 1,000 Population



	2010	2011	2012	2013	2014
Apex		131	143	155	141
Average	144	144	140	140	129

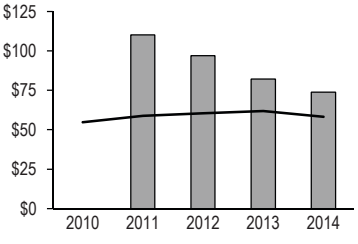
Yard Waste and Leaf Tons Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Apex		436	476	526	463
Average	464	456	442	459	405

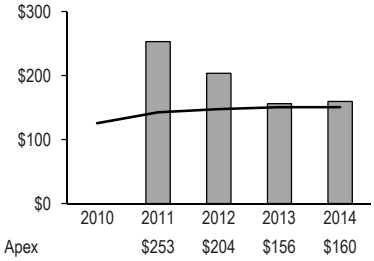
Efficiency Measures

Yard Waste and Leaf Collection Cost per Collection Point



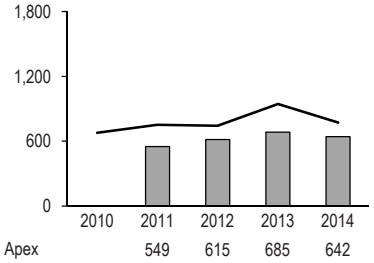
	2010	2011	2012	2013	2014
Apex		$110	$97	$82	$74
Average	$55	$59	$60	$62	$58

Yard Waste and Leaf Collection Cost per Ton Collected



	2010	2011	2012	2013	2014
Apex		$253	$204	$156	$160
Average	$126	$142	$147	$150	$151

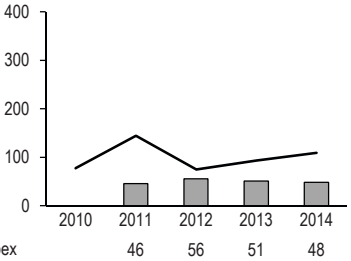
Yard Waste and Leaf Tons Collected per Collection FTE



	2010	2011	2012	2013	2014
Apex		549	615	685	642
Average	679	753	742	943	774

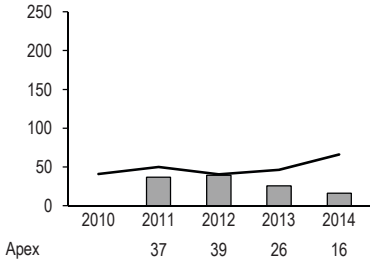
Effectiveness Measures

Collection Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Apex		46	56	51	48
Average	77	144	75	94	109

Valid Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Apex		37	39	26	16
Average	41	50	41	46	66

Asheville Yard Waste/Leaf Collection

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Asheville collects yard waste curbside twice per month for all city residents. The city collects yard trimmings no longer than 4 feet and no wider than 6 inches. Grass clippings and materials cut by contractors are not collected.

There are three one-person crews on knucklebooms, scheduled for approximately three-and-one-half days per week. Three three-person crews operating rear packers collect yard waste four days per week.

The city does not charge a fee for yard waste collection. A $5 fee is charged for white goods, and a $10 fee is charged for dead animals.

Starting in FY 2011–2012, Asheville no longer has a separate leaf collection program. Instead, leaves are collected as part of the normal twice-a-month yard waste collection.

Conditions Affecting Service, Performance, and Costs

Asheville had several major winter storms during FY 2011–12 which damaged trees and led to an increase in the tons of yard waste collected.

Municipal Profile

Population (OSBM 2013)	88,003
Land Area (Square Miles)	45.52
Persons per Square Mile	1,933
Median Family Income U.S. Census 2010	$53,350

Service Profile

FTE Positions—Collection	14.0
FTE Positions—Other	0.9
Collection Frequency	
Yard Waste	2 x month
Collection Points	30,590
Tons Collected	
Yard Waste	8,472
Seasonal Leaves	with yard waste
Total Tons Collected	8,472
Monthly Service Fee	No

Full Cost Profile

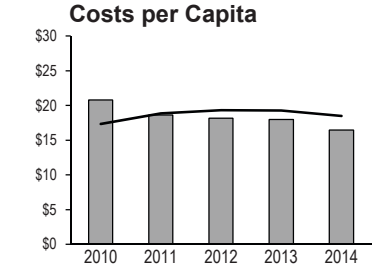
Cost Breakdown by Percentage	
Personal Services	41.8%
Operating Costs	47.8%
Capital Costs	10.4%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$605,237
Operating Costs	$691,913
Capital Costs	$151,201
TOTAL	$1,448,351

Asheville — Yard Waste/Leaf Collection

Key: Asheville ■ Benchmarking Average — Fiscal Years 2009 through 2013

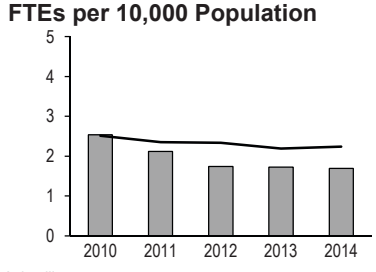
Resource Measures

Yard Waste and Leaf Collection Costs per Capita



	2010	2011	2012	2013	2014
Asheville	$20.81	$18.63	$18.17	$17.99	$16.46
Average	$17.32	$18.87	$19.32	$19.28	$18.49

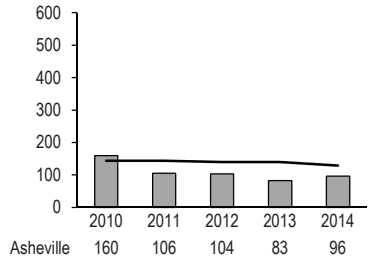
Yard Waste and Leaf Collection FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Asheville	2.5	2.1	1.7	1.7	1.7
Average	2.5	2.4	2.3	2.2	2.2

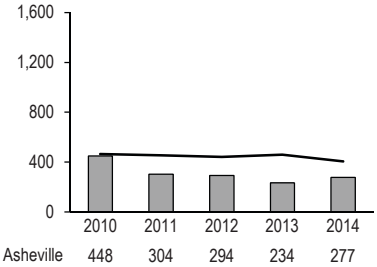
Workload Measures

Yard Waste and Leaf Tons Collected per 1,000 Population



	2010	2011	2012	2013	2014
Asheville	160	106	104	83	96
Average	144	144	140	140	129

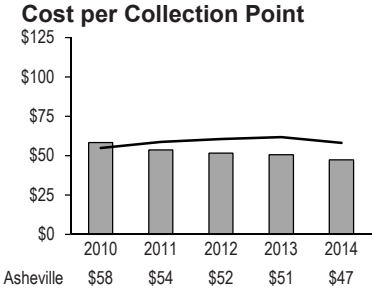
Yard Waste and Leaf Tons Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Asheville	448	304	294	234	277
Average	464	456	442	459	405

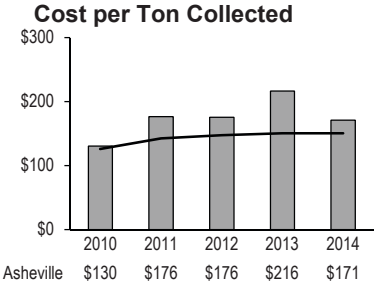
Efficiency Measures

Yard Waste and Leaf Collection Cost per Collection Point



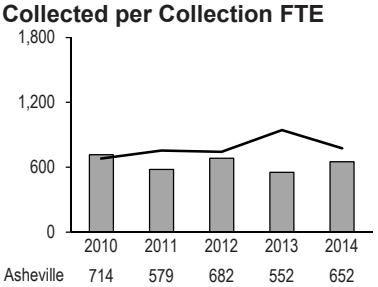
	2010	2011	2012	2013	2014
Asheville	$58	$54	$52	$51	$47
Average	$55	$59	$60	$62	$58

Yard Waste and Leaf Collection Cost per Ton Collected



	2010	2011	2012	2013	2014
Asheville	$130	$176	$176	$216	$171
Average	$126	$142	$147	$150	$151

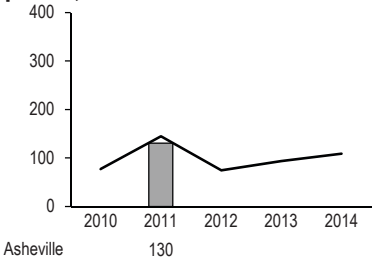
Yard Waste and Leaf Tons Collected per Collection FTE



	2010	2011	2012	2013	2014
Asheville	714	579	682	552	652
Average	679	753	742	943	774

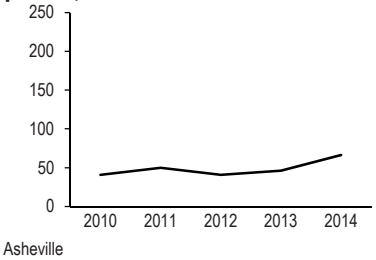
Effectiveness Measures

Collection Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Asheville		130			
Average	77	144	75	94	109

Valid Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Asheville					
Average	41	50	41	46	66

Burlington Yard Waste/Leaf Collection

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Yard waste is collected by the Burlington Sanitation Division once per week. Residents may put yard waste in cans, bags, or simply stack it curbside. The amount per household cannot exceed 50 pounds each week. There is a $4.50 charge for each 3 cubic yards of yard waste removed; the first 3 cubic yards are free.

The city uses two three-person crews four days per week. Each crew has one driver and two collectors and uses a rear loader.

Burlington's Grounds and Cemetery Division conducts seasonal loose leaf collection from mid-October through January. Leaves are placed curbside and collected by vacuum. Four sweeps are made through each section of the city. Additionally, call-in collections are available in February. When not performing loose leaf collection, permanent employees provide mowing and lawn and grounds care at other times of the year. The ability to separate out costs is somewhat difficult.

Loose leaf collection is done with five crews, each consisting of one driver and two collectors using a box dump and vacuum machine. One of the collectors on each crew is a part-time employee. The city also uses one self-contained one-armed leaf truck with one permanent employee. Leaves are also accepted in the regular weekly yard waste collection if they are bagged or placed in a container.

Conditions Affecting Service, Performance, and Costs

The city does not track complaints.

Municipal Profile

Population (OSBM 2013)	51,396
Land Area (Square Miles)	27.28
Persons per Square Mile	1,884
Median Family Income U.S. Census 2010	$46,461

Service Profile

FTE Positions—Collection	10.0
FTE Positions—Other	0.5
Collection Frequency	
Yard Waste	1 x week
Seasonal Leaf Collection	4 sweeps
Collection Points	16,762
Tons Collected	
Yard Waste	2,677
Seasonal Leaves	3,862
Total Tons Collected	6,539
Monthly Service Fee	$4.50 for special bulk pickup, 3 cubic yards

Full Cost Profile

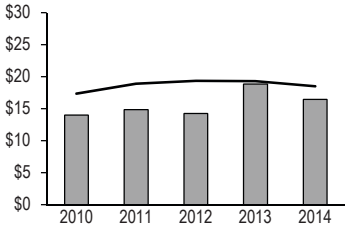
Cost Breakdown by Percentage	
Personal Services	46.2%
Operating Costs	28.4%
Capital Costs	25.4%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$390,391
Operating Costs	$240,093
Capital Costs	$214,558
TOTAL	$845,042

Burlington — Yard Waste/Leaf Collection

Key: Burlington ■ Benchmarking Average — Fiscal Years 2009 through 2013

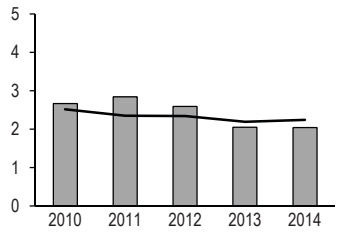
Resource Measures

Yard Waste and Leaf Collection Costs per Capita



	2010	2011	2012	2013	2014
Burlington	$14.00	$14.83	$14.24	$18.84	$16.44
Average	$17.32	$18.87	$19.32	$19.28	$18.49

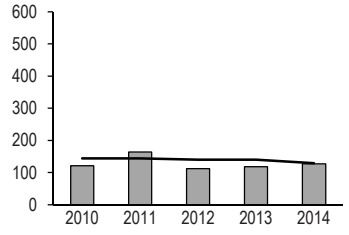
Yard Waste and Leaf Collection FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Burlington	2.7	2.8	2.6	2.1	2.0
Average	2.5	2.4	2.3	2.2	2.2

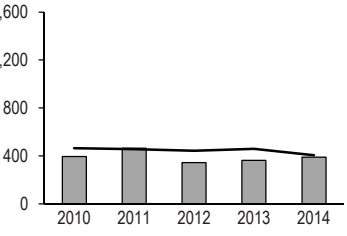
Workload Measures

Yard Waste and Leaf Tons Collected per 1,000 Population



	2010	2011	2012	2013	2014
Burlington	122	164	112	118	127
Average	144	144	140	140	129

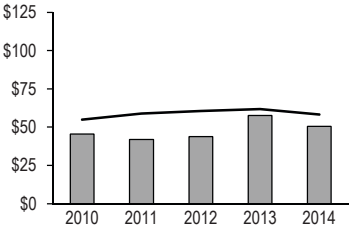
Yard Waste and Leaf Tons Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Burlington	396	464	345	362	390
Average	464	456	442	459	405

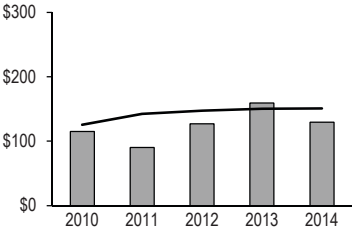
Efficiency Measures

Yard Waste and Leaf Collection Cost per Collection Point



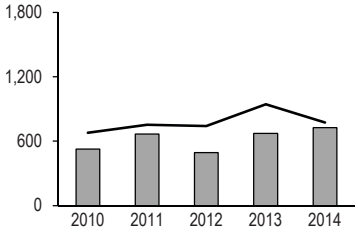
	2010	2011	2012	2013	2014
Burlington	$46	$42	$44	$58	$50
Average	$55	$59	$60	$62	$58

Yard Waste and Leaf Collection Cost per Ton Collected



	2010	2011	2012	2013	2014
Burlington	$115	$90	$127	$159	$129
Average	$126	$142	$147	$150	$151

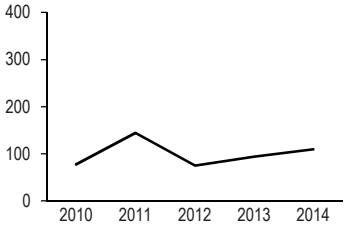
Yard Waste and Leaf Tons Collected per Collection FTE



	2010	2011	2012	2013	2014
Burlington	527	667	495	674	727
Average	679	753	742	943	774

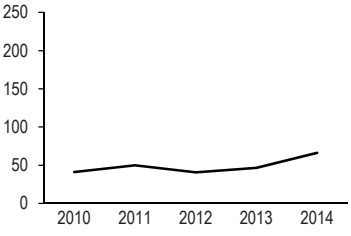
Effectiveness Measures

Collection Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Burlington					
Average	77	144	75	94	109

Valid Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Burlington					
Average	41	50	41	46	66

Cary Yard Waste/Leaf Collection

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Cary's yard waste is collected curbside weekly on the same day the customer's regular trash is collected. The yard waste program includes the collection of grass clippings, pine straw, fallen leaves, shrubbery, twigs, small tree limbs, and Christmas trees. Branches must be shorter than 4 feet in length and less than 4 inches in diameter. The total volume to be picked up at a household cannot exceed 240 cubic feet. There is no separate fee charged for yard waste collection.

Town crews collect all yard waste at the curb. Collections are done Tuesday through Friday using four crews with four people in each crew—a driver and three collectors. Additionally, a special annual Christmas tree collection is made at the curb in January.

Cary has a seasonal leaf collection program that collects two times in the fall and one time in the spring. Leaves are collected curbside by vacuum by nine crews, each consisting of one driver and two collectors. The driver is a regular full-time employee, while the collectors are seasonal temporary workers.

Conditions Affecting Service, Performance, and Costs

Cary defines valid complaints as those that have been verified in the field by a supervisor.

Municipal Profile

Population (OSBM 2013)	144,671
Land Area (Square Miles)	55.54
Persons per Square Mile	2,605
Median Family Income U.S. Census 2010	$108,956

Service Profile

FTE Positions—Collection	22.0
FTE Positions—Other	0.0
Collection Frequency	
Yard Waste	1 x week
Seasonal Leaf Collection	3 sweeps
Collection Points	47,033
Tons Collected	
Yard Waste	13,487
Seasonal Leaves	6,902
Total Tons Collected	20,389
Monthly Service Fee	Included in solid waste fee

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	56.6%
Operating Costs	36.6%
Capital Costs	6.7%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,390,210
Operating Costs	$899,268
Capital Costs	$165,268
TOTAL	$2,454,746

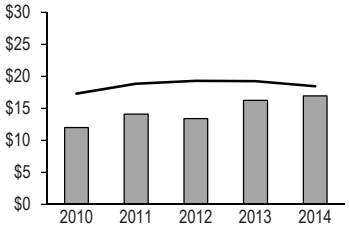
Cary

Yard Waste/Leaf Collection

Key: Cary ■ Benchmarking Average — Fiscal Years 2009 through 2013

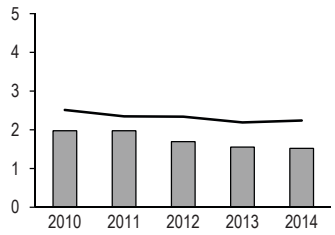
Resource Measures

Yard Waste and Leaf Collection Costs per Capita



	2010	2011	2012	2013	2014
Cary	$12.01	$14.12	$13.41	$16.27	$16.97
Average	$17.32	$18.87	$19.32	$19.28	$18.49

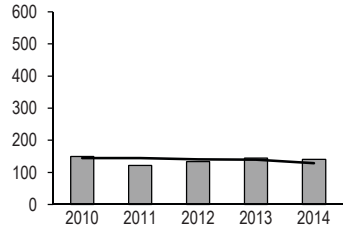
Yard Waste and Leaf Collection FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Cary	2.0	2.0	1.7	1.6	1.5
Average	2.5	2.4	2.3	2.2	2.2

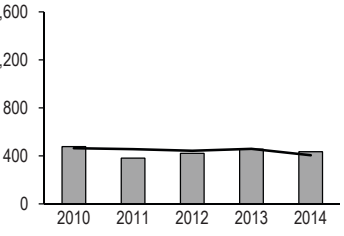
Workload Measures

Yard Waste and Leaf Tons Collected per 1,000 Population



	2010	2011	2012	2013	2014
Cary	149	122	134	144	141
Average	144	144	140	140	129

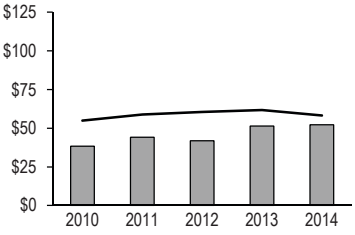
Yard Waste and Leaf Tons Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Cary	477	379	420	455	434
Average	464	456	442	459	405

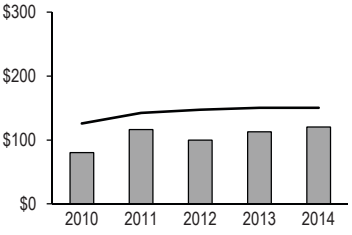
Efficiency Measures

Yard Waste and Leaf Collection Cost per Collection Point



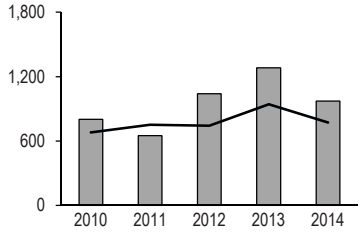
	2010	2011	2012	2013	2014
Cary	$38	$44	$42	$51	$52
Average	$55	$59	$60	$62	$58

Yard Waste and Leaf Collection Cost per Ton Collected



	2010	2011	2012	2013	2014
Cary	$80	$116	$100	$113	$120
Average	$126	$142	$147	$150	$151

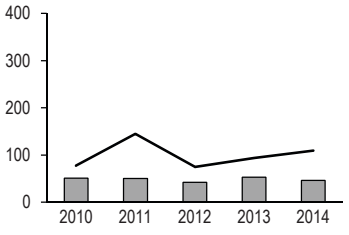
Yard Waste and Leaf Tons Collected per Collection FTE



	2010	2011	2012	2013	2014
Cary	803	652	1,042	1,283	971
Average	679	753	742	943	774

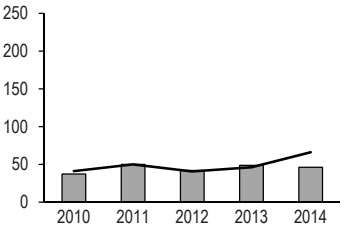
Effectiveness Measures

Collection Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Cary	51	50	42	53	46
Average	77	144	75	94	109

Valid Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Cary	37	50	42	49	46
Average	41	50	41	46	66

Charlotte — Yard Waste/Leaf Collection

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Charlotte collects yard waste once per week curbside. The collection process was significantly revised for FY 2010–11. Previously Charlotte had been divided into zones, with private contractors competing and providing some yard waste services. However, the city now performs all yard waste collection.

Yard waste includes leaves, stems, grass, limbs, and other residential organic matter. Limbs should be separated into piles small enough for one individual to handle. Leaves and grass clippings must be placed in untied plastic bags or in uncovered trash cans. Yard waste placed at the curb by a commercial landscaping service will not be collected by the city. The city of Charlotte used thirty-four two-person crews working from rear loaders to service the entire city. Additional trucks and staff are allocated as a yard waste reserve.

Leaves are collected in bags and are debagged at the curb as part of the regular yard waste service. A special seasonal leaf collection is not done by the city of Charlotte.

Conditions Affecting Service, Performance, and Costs

Starting with FY 2010–11, Charlotte's yard waste function is being wholly performed by the city. In earlier years it was done by a combination of city staff and a zone contract.

Charlotte's Solid Waste Services division has been focussd on improving customer service in FY 2013–14, explaining the drop in complaints.

Municipal Profile

Population (OSBM 2013)	789,248
Land Area (Square Miles)	304.28
Persons per Square Mile	2,594
Median Family Income U.S. Census 2010	$61,405

Service Profile

FTE Positions—Collection	77.0
FTE Positions—Other	0.0
Collection Frequency	
Yard Waste	1 x week
Collection Points	212,141
Tons Collected	
Yard Waste	52,354
Seasonal Leaves	with yard waste
Total Tons Collected	52,354
Monthly Service Fee	No

Full Cost Profile

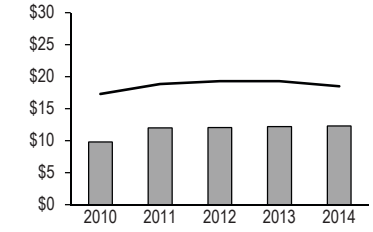
Cost Breakdown by Percentage	
Personal Services	39.0%
Operating Costs	46.5%
Capital Costs	14.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$3,786,043
Operating Costs	$4,507,103
Capital Costs	$1,408,859
TOTAL	$9,702,005

Charlotte — Yard Waste/Leaf Collection

Key: Charlotte ■ Benchmarking Average — Fiscal Years 2009 through 2013

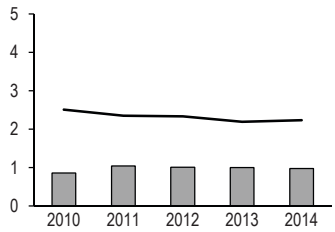
Resource Measures

Yard Waste and Leaf Collection Costs per Capita



	2010	2011	2012	2013	2014
Charlotte	$9.81	$12.02	$12.08	$12.20	$12.29
Average	$17.32	$18.87	$19.32	$19.28	$18.49

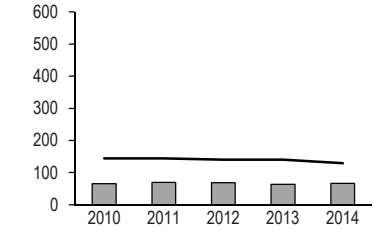
Yard Waste and Leaf Collection FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Charlotte	0.9	1.0	1.0	1.0	1.0
Average	2.5	2.4	2.3	2.2	2.2

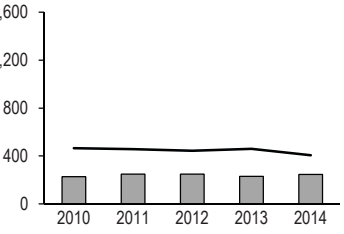
Workload Measures

Yard Waste and Leaf Tons Collected per 1,000 Population



	2010	2011	2012	2013	2014
Charlotte	66	70	69	64	66
Average	144	144	140	140	129

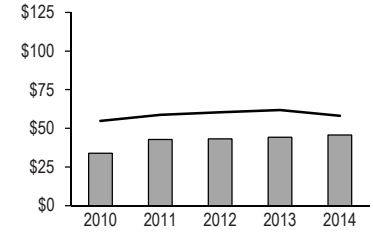
Yard Waste and Leaf Tons Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Charlotte	227	248	248	231	247
Average	464	456	442	459	405

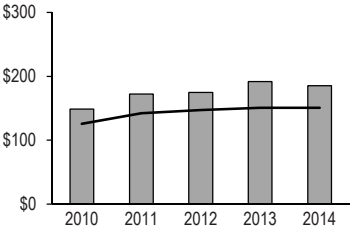
Efficiency Measures

Yard Waste and Leaf Collection Cost per Collection Point



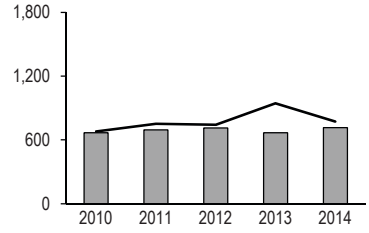
	2010	2011	2012	2013	2014
Charlotte	$34	$43	$43	$44	$46
Average	$55	$59	$60	$62	$58

Yard Waste and Leaf Collection Cost per Ton Collected



	2010	2011	2012	2013	2014
Charlotte	$149	$172	$175	$192	$185
Average	$126	$142	$147	$150	$151

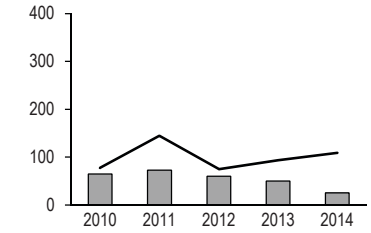
Yard Waste and Leaf Tons Collected per Collection FTE



	2010	2011	2012	2013	2014
Charlotte	668	696	712	667	717
Average	679	753	742	943	774

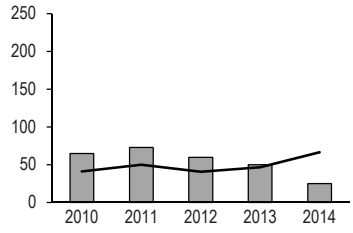
Effectiveness Measures

Collection Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Charlotte	65	73	60	50	25
Average	77	144	75	94	109

Valid Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Charlotte	65	73	60	50	25
Average	41	50	41	46	66

Concord Yard Waste/Leaf Collection

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Concord collects all yard waste once per week. Yard waste includes limbs, logs, grass clippings, shrubbery clippings, and leaves.

Concord used three two-person crews with garbage trucks and a one-person crew with a dump truck to collect yard waste. Four two-person crews also were used to collect limbs and brush with knuckleboom trucks on a weekly basis.

Concord's seasonal loose leaf collection runs from mid-October through mid-February. Each street is serviced following a publicized schedule a minimum of three times for loose leaf collection during this period. Residents who bag their leaves receive weekly collection along with the normal yard waste collection program.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Population (OSBM 2013)	83,279
Land Area (Square Miles)	60.93
Persons per Square Mile	1,367
Median Family Income U.S. Census 2010	$63,643

Service Profile

FTE Positions—Collection	25.18
FTE Positions—Other	1.02
Collection Frequency	
Yard Waste	1 x week
Seasonal Leaf Collection	3 sweeps
Collection Points	28,996
Tons Collected	
Yard Waste	6,950
Seasonal Leaves	1,636
Total Tons Collected	8,586
Monthly Service Fee	No

Full Cost Profile

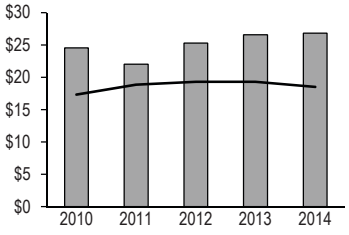
Cost Breakdown by Percentage	
Personal Services	53.6%
Operating Costs	32.6%
Capital Costs	13.9%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,196,254
Operating Costs	$726,991
Capital Costs	$309,416
TOTAL	$2,232,661

Concord — Yard Waste/Leaf Collection

Key: Concord ■ Benchmarking Average — Fiscal Years 2009 through 2013

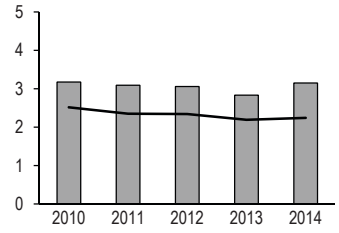
Resource Measures

Yard Waste and Leaf Collection Costs per Capita



	2010	2011	2012	2013	2014
Concord	$24.55	$22.02	$25.30	$26.55	$26.81
Average	$17.32	$18.87	$19.32	$19.28	$18.49

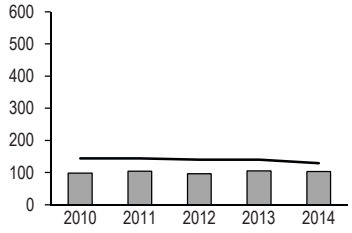
Yard Waste and Leaf Collection FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Concord	3.2	3.1	3.1	2.8	3.1
Average	2.5	2.4	2.3	2.2	2.2

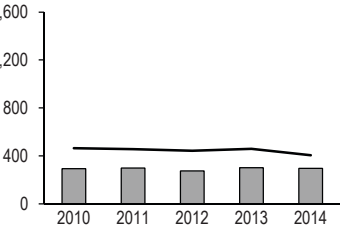
Workload Measures

Yard Waste and Leaf Tons Collected per 1,000 Population



	2010	2011	2012	2013	2014
Concord	98	104	96	105	103
Average	144	144	140	140	129

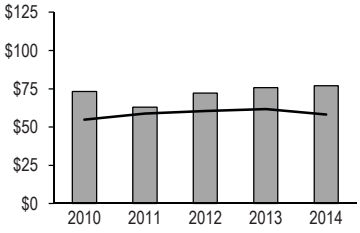
Yard Waste and Leaf Tons Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Concord	292	298	273	300	296
Average	464	456	442	459	405

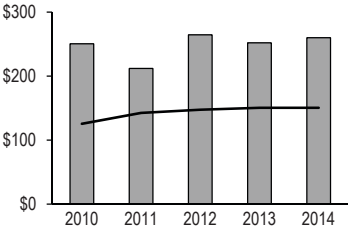
Efficiency Measures

Yard Waste and Leaf Collection Cost per Collection Point



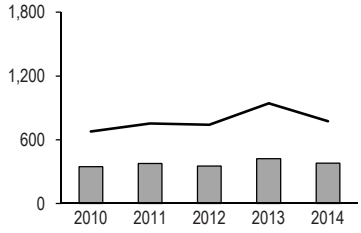
	2010	2011	2012	2013	2014
Concord	$73	$63	$72	$76	$77
Average	$55	$59	$60	$62	$58

Yard Waste and Leaf Collection Cost per Ton Collected



	2010	2011	2012	2013	2014
Concord	$251	$212	$264	$252	$260
Average	$126	$142	$147	$150	$151

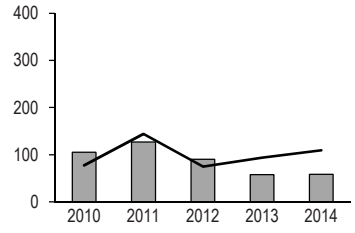
Yard Waste and Leaf Tons Collected per Collection FTE



	2010	2011	2012	2013	2014
Concord	347	379	353	422	382
Average	679	753	742	943	774

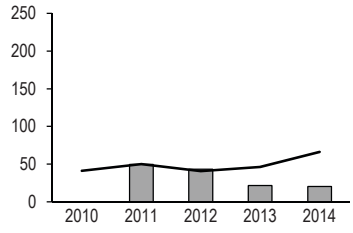
Effectiveness Measures

Collection Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Concord	105	127	90	57	58
Average	77	144	75	94	109

Valid Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Concord		50	43	22	20
Average	41	50	41	46	66

Greensboro Yard Waste/Leaf Collection

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Greensboro collects yard waste once per week curbside, either in clear plastic bags, thirty-five-gallon containers, or tied in bundles not to exceed 50 pounds or 5 feet in length. Yard waste includes grass, weeds, leaves, tree trimmings, plants, shrubbery trimmings, and other materials generated in yard maintenance. Yard waste does include some bagged leaves during the fall, and this waste is not broken out separately into leaf collection.

The city provides yard waste service to all single-family residences inside the city limits. Yard waste crews include nine two-person crews that rotate between driver and collector. The crews work four days per week, ten hours per day.

Seasonal leaf collection (October through January) is provided by Greensboro's Field Operations Division. Leaves are picked up a minimum of two times from November until mid-January by vacuuming the leaves from the curb.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Population (OSBM 2013)	278,654
Land Area (Square Miles)	127.93
Persons per Square Mile	2,178
Median Family Income	$52,752
U.S. Census 2010	

Service Profile

FTE Positions—Collection	44.79
FTE Positions—Other	1.15
Collection Frequency	
Yard Waste	1 x week
Seasonal Leaf Collection	2 sweeps
Collection Points	81,102
Tons Collected	
Yard Waste	15,175
Seasonal Leaves	13,623
Total Tons Collected	28,798
Monthly Service Fee	No

Full Cost Profile

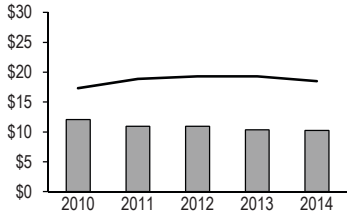
Cost Breakdown by Percentage	
Personal Services	35.4%
Operating Costs	64.6%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,010,834
Operating Costs	$1,842,121
Capital Costs	$0
TOTAL	$2,852,955

Greensboro Yard Waste/Leaf Collection

Key: Greensboro ■ Benchmarking Average — Fiscal Years 2009 through 2013

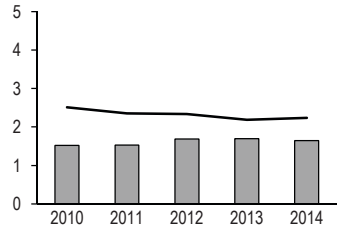
Resource Measures

Yard Waste and Leaf Collection Costs per Capita



	2010	2011	2012	2013	2014
Greensboro	$12.09	$10.95	$10.93	$10.32	$10.24
Average	$17.32	$18.87	$19.32	$19.28	$18.49

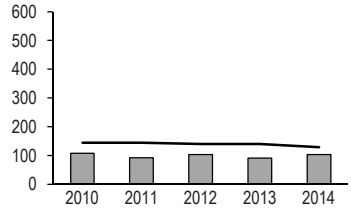
Yard Waste and Leaf Collection FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greensboro	1.5	1.5	1.7	1.7	1.6
Average	2.5	2.4	2.3	2.2	2.2

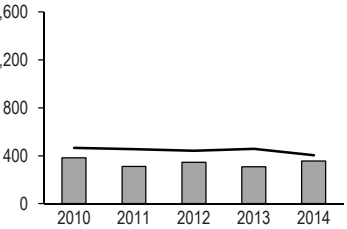
Workload Measures

Yard Waste and Leaf Tons Collected per 1,000 Population



	2010	2011	2012	2013	2014
Greensboro	108	92	103	91	103
Average	144	144	140	140	129

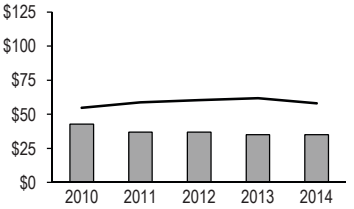
Yard Waste and Leaf Tons Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Greensboro	382	310	346	308	355
Average	464	456	442	459	405

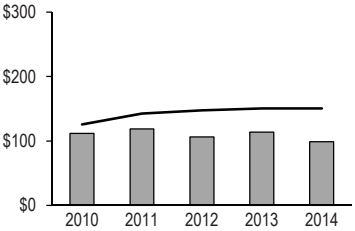
Efficiency Measures

Yard Waste and Leaf Collection Cost per Collection Point



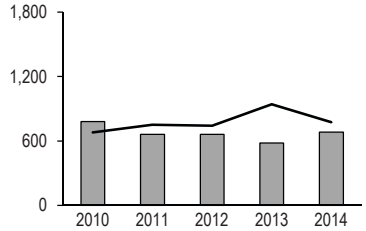
	2010	2011	2012	2013	2014
Greensboro	$43	$37	$37	$35	$35
Average	$55	$59	$60	$62	$58

Yard Waste and Leaf Collection Cost per Ton Collected



	2010	2011	2012	2013	2014
Greensboro	$112	$119	$106	$114	$99
Average	$126	$142	$147	$150	$151

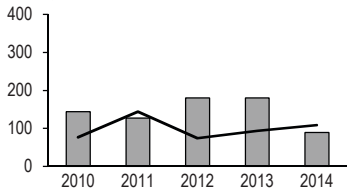
Yard Waste and Leaf Tons Collected per Collection FTE



	2010	2011	2012	2013	2014
Greensboro	780	661	662	582	683
Average	679	753	742	943	774

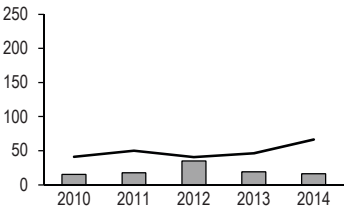
Effectiveness Measures

Collection Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Greensboro	144	127	180	180	90
Average	77	144	75	94	109

Valid Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Greensboro	16	18	35	19	16
Average	41	50	41	46	66

Greenville — Yard Waste/Leaf Collection

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Greenville collects yard waste once per week curbside. Yard waste includes tree limbs up to 6 feet in length or 4 inches in diameter, bushes, grass clippings, and other vegetative matter. The city does not charge a separate fee for yard waste, leaves, or bulky items. It is part of the solid waste fee.

Greenville uses two-person crews to collect yard waste. Crews are made up of a driver and a collection worker. Each crew has an assigned route for each day.

The city's seasonal leaf collection service runs from November to February. Leaves are collected weekly from the backs of curbs. The city uses five crews, each having a driver and two collection workers. The leaf collection crews are all seasonal employees.

Conditions Affecting Service, Performance, and Costs

Greenville experienced equipment breakdowns and personnel changes during FY 2013–14 which led to a high level of complaints.

Municipal Profile

Population (OSBM 2013)	87,241
Land Area (Square Miles)	34.85
Persons per Square Mile	2,503
Median Family Income U.S. Census 2010	$50,395

Service Profile

FTE Positions—Collection	17.0
FTE Positions—Other	1.0
Collection Frequency	
Yard Waste	1 x week
Seasonal Leaf Collection	1 x week
Collection Points	20,000
Tons Collected	
Yard Waste	4,046
Seasonal Leaves	3,800
Total Tons Collected	7,846
Monthly Service Fee	No

Full Cost Profile

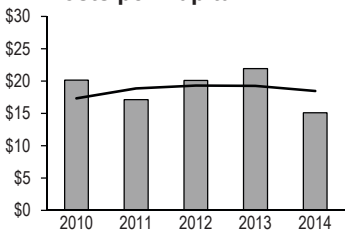
Cost Breakdown by Percentage	
Personal Services	50.8%
Operating Costs	37.3%
Capital Costs	11.9%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$668,649
Operating Costs	$491,875
Capital Costs	$156,743
TOTAL	$1,317,267

Greenville — Yard Waste/Leaf Collection

Key: Greenville ■ Benchmarking Average — Fiscal Years 2009 through 2013

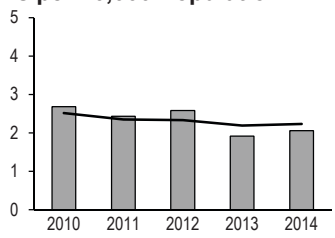
Resource Measures

Yard Waste and Leaf Collection Costs per Capita



	2010	2011	2012	2013	2014
Greenville	$20.15	$17.13	$20.12	$21.94	$15.10
Average	$17.32	$18.87	$19.32	$19.28	$18.49

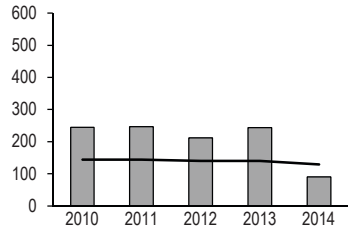
Yard Waste and Leaf Collection FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greenville	2.7	2.4	2.6	1.9	2.1
Average	2.5	2.4	2.3	2.2	2.2

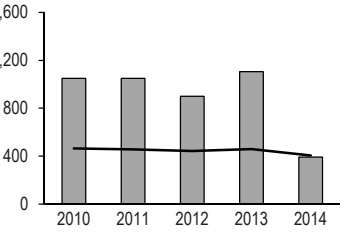
Workload Measures

Yard Waste and Leaf Tons Collected per 1,000 Population



	2010	2011	2012	2013	2014
Greenville	245	247	212	244	90
Average	144	144	140	140	129

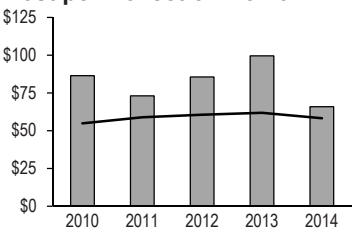
Yard Waste and Leaf Tons Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Greenville	1,050	1,050	900	1,105	392
Average	464	456	442	459	405

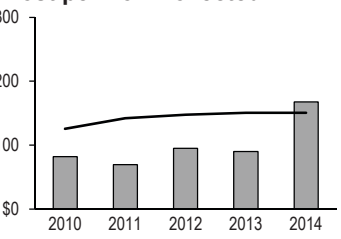
Efficiency Measures

Yard Waste and Leaf Collection Cost per Collection Point



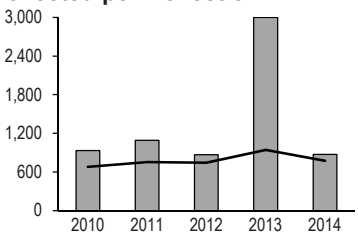
	2010	2011	2012	2013	2014
Greenville	$86	$73	$86	$99	$66
Average	$55	$59	$60	$62	$58

Yard Waste and Leaf Collection Cost per Ton Collected



	2010	2011	2012	2013	2014
Greenville	$82	$69	$95	$90	$168
Average	$126	$142	$147	$150	$151

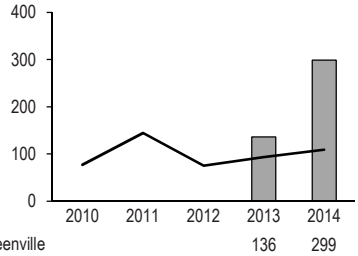
Yard Waste and Leaf Tons Collected per Collection FTE



	2010	2011	2012	2013	2014
Greenville	933	1,091	867	3,000	872
Average	679	753	742	943	774

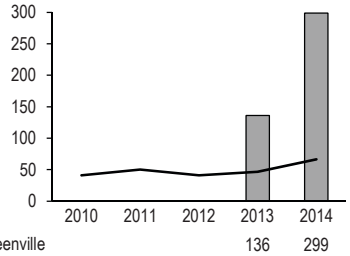
Effectiveness Measures

Collection Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Greenville				136	299
Average	77	144	75	94	109

Valid Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Greenville				136	299
Average	41	50	41	46	66

Hickory — Yard Waste/Leaf Collection

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Hickory collects yard waste once per week curbside. Yard waste includes tree limbs less than 6 feet in length and 6 inches in diameter, shrubs, grass clippings, leaves, and other vegetative matter. The city does not charge a separate fee for yard waste, leaves, or bulky items. It is part of the solid waste fee. Residents use either clear plastic bags or open containers.

Hickory is divided into five sections for the yard waste program. Three routes are serviced each day within each section, using three rear loaders with crews comprised of one driver and one laborer each. Large piles are collected with a knuckleboom loader with one driver on a scheduled basis working about half-time.

All yard waste is collected and stockpiled at the city yard waste facility. Debris is ground into mulch or compost and sold back to citizens or used for city projects.

The city's seasonal leaf collection service runs from November to January. There are two sweeps down each city street during this time. City crews use leaf vacuums to collect leaves in box trucks. Hickory uses temporary contract workers to help with leaf collection. These seasonal employees are counted in the total employee count, but only for the one-fourth of the year they work.

Conditions Affecting Service, Performance, and Costs

Hickory's yard waste collection is set up to provide regular service but also takes requests for service when collection is needed. These calls for service cannot be separated out from actual complaints, so complaint data cannot be reported for this service area.

Municipal Profile

Population (OSBM 2013)	40,222
Land Area (Square Miles)	29.83
Persons per Square Mile	1,348
Median Family Income U.S. Census 2010	$54,093

Service Profile

FTE Positions—Collection	9.25
FTE Positions—Other	0.5
Collection Frequency	
Yard Waste	1 x week
Seasonal Leaf Collection	2 sweeps
Collection Points	12,200
Tons Collected	
Yard Waste	3,240
Seasonal Leaves	3,427
Total Tons Collected	6,667
Monthly Service Fee	No

Full Cost Profile

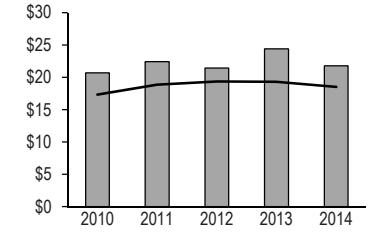
Cost Breakdown by Percentage	
Personal Services	45.4%
Operating Costs	44.5%
Capital Costs	10.1%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$397,991
Operating Costs	$389,997
Capital Costs	$88,245
TOTAL	$876,233

Hickory — Yard Waste/Leaf Collection

Key: Hickory ■ Benchmarking Average — Fiscal Years 2009 through 2013

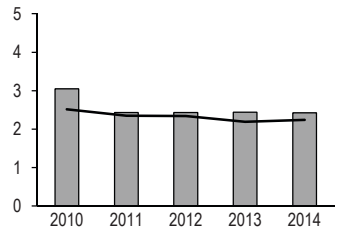
Resource Measures

Yard Waste and Leaf Collection Costs per Capita



	2010	2011	2012	2013	2014
Hickory	$20.69	$22.42	$21.43	$24.38	$21.78
Average	$17.32	$18.87	$19.32	$19.28	$18.49

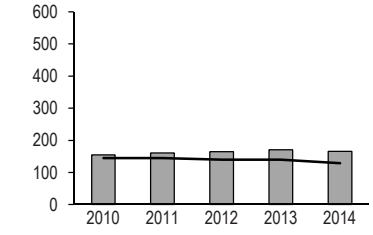
Yard Waste and Leaf Collection FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Hickory	3.1	2.4	2.4	2.4	2.4
Average	2.5	2.4	2.3	2.2	2.2

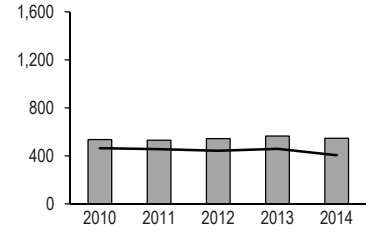
Workload Measures

Yard Waste and Leaf Tons Collected per 1,000 Population



	2010	2011	2012	2013	2014
Hickory	155	160	164	171	166
Average	144	144	140	140	129

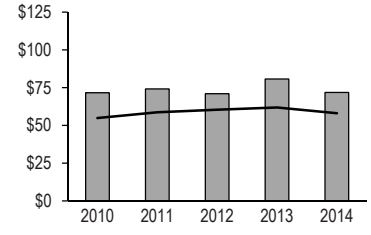
Yard Waste and Leaf Tons Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Hickory	536	531	544	565	546
Average	464	456	442	459	405

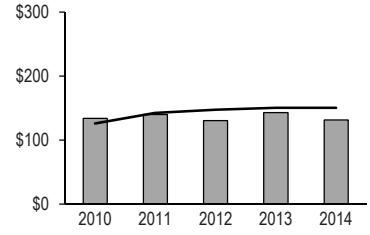
Efficiency Measures

Yard Waste and Leaf Collection Cost per Collection Point



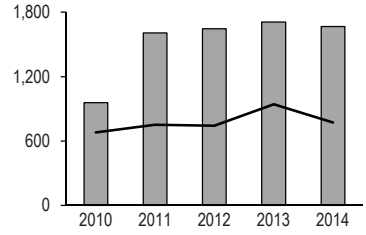
	2010	2011	2012	2013	2014
Hickory	$72	$74	$71	$81	$72
Average	$55	$59	$60	$62	$58

Yard Waste and Leaf Collection Cost per Ton Collected



	2010	2011	2012	2013	2014
Hickory	$134	$140	$131	$143	$131
Average	$126	$142	$147	$150	$151

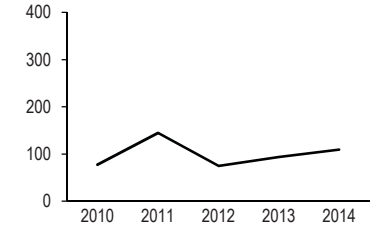
Yard Waste and Leaf Tons Collected per Collection FTE



	2010	2011	2012	2013	2014
Hickory	957	1,606	1,646	1,709	1,667
Average	679	753	742	943	774

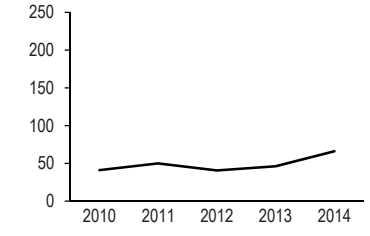
Effectiveness Measures

Collection Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Hickory					
Average	77	144	75	94	109

Valid Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Hickory					
Average	41	50	41	46	66

High Point — Yard Waste/Leaf Collection

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Collectible yard waste in High Point's program consists solely of vegetative matter resulting from landscaping and lawn maintenance, including grass clippings, leaves, brush, tree branches, flowers, and other organic materials.

Yard waste is collected once each week curbside using three-person crews. Each crew is composed of one driver and two collectors. The work schedule is from Monday through Thursday. There is no separate fee charged for yard waste collection.

The city provides two citywide cycles of loose leaf collection beginning mid-November and continuing through mid-January. There are usually three leaf collection crews of one person each on truck-mounted vacuum trucks and five crews with four employees each on pick-up trucks with self-contained vacuums. Bagged leaves are collected once per week with the regular yard waste.

Conditions Affecting Service, Performance, and Costs

There was a shift of employees out of yard waste collection in FY 2009–10. The city had been picking up bulk limbs, but this was discontinued as it was not required by ordinance. The employees were shifted over to bulk white good collection. Stopping collection of the bulk limbs led to a small increase in citizen complaints.

Municipal Profile

Population (OSBM 2013)	107,652
Land Area (Square Miles)	54.73
Persons per Square Mile	1,967
Median Family Income U.S. Census 2010	$49,720

Service Profile

FTE Positions—Collection	14.5
FTE Positions—Other	0.5
Collection Frequency	
Yard Waste	1 x week
Seasonal Leaf Collection	2 sweeps
Collection Points	39,107
Tons Collected	
Yard Waste	5,802
Seasonal Leaves	2,762
Total Tons Collected	8,564
Monthly Service Fee	No

Full Cost Profile

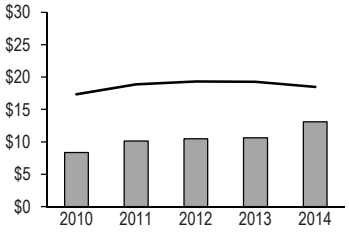
Cost Breakdown by Percentage	
Personal Services	62.4%
Operating Costs	28.4%
Capital Costs	9.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$878,414
Operating Costs	$399,248
Capital Costs	$130,335
TOTAL	$1,407,997

High Point Yard Waste/Leaf Collection

Key: High Point ■ Benchmarking Average — Fiscal Years 2009 through 2013

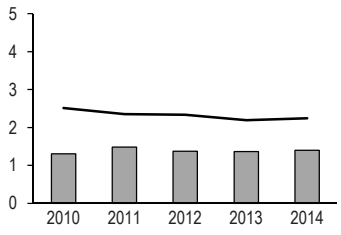
Resource Measures

Yard Waste and Leaf Collection Costs per Capita



	2010	2011	2012	2013	2014
High Point	$8.35	$10.12	$10.45	$10.61	$13.08
Average	$17.32	$18.87	$19.32	$19.28	$18.49

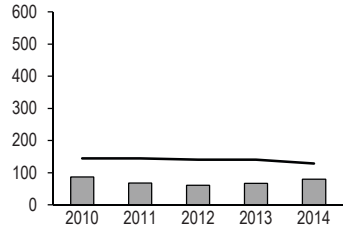
Yard Waste and Leaf Collection FTEs per 10,000 Population



	2010	2011	2012	2013	2014
High Point	1.3	1.5	1.4	1.4	1.4
Average	2.5	2.4	2.3	2.2	2.2

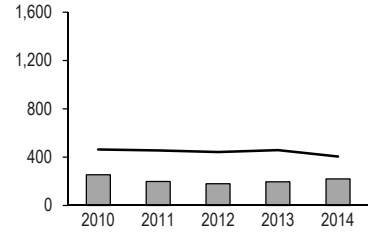
Workload Measures

Yard Waste and Leaf Tons Collected per 1,000 Population



	2010	2011	2012	2013	2014
High Point	87	68	60	67	80
Average	144	144	140	140	129

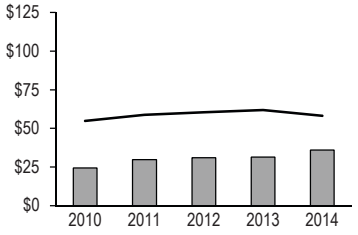
Yard Waste and Leaf Tons Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
High Point	254	200	179	197	219
Average	464	456	442	459	405

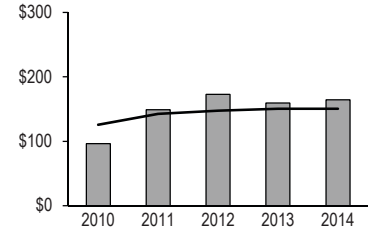
Efficiency Measures

Yard Waste and Leaf Collection Cost per Collection Point



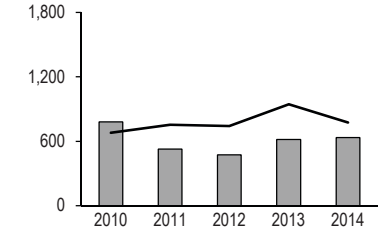
	2010	2011	2012	2013	2014
High Point	$24	$30	$31	$31	$36
Average	$55	$59	$60	$62	$58

Yard Waste and Leaf Collection Cost per Ton Collected



	2010	2011	2012	2013	2014
High Point	$96	$149	$173	$159	$164
Average	$126	$142	$147	$150	$151

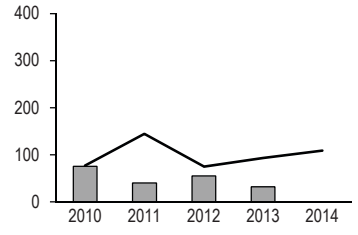
Yard Waste and Leaf Tons Collected per Collection FTE



	2010	2011	2012	2013	2014
High Point	781	526	473	616	634
Average	679	753	742	943	774

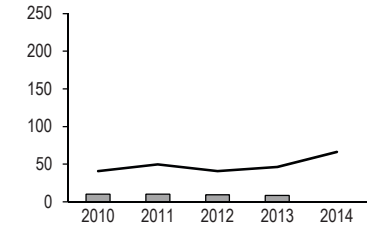
Effectiveness Measures

Collection Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
High Point	76	40	55	32	
Average	77	144	75	94	109

Valid Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
High Point	10	10	9	9	
Average	41	50	41	46	66

Salisbury — Yard Waste/Leaf Collection

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Yard waste is picked up weekly at the curb in Salisbury. Yard waste includes limbs, shrubs, bagged grass clippings, and bagged leaves. It is collected the same day as trash and recycling materials for city residents.

The city uses two or three two-person crews, each consisting of a driver and laborer, on packer trucks for yard waste collection. One to two additional two-member crews operating two knuckleboom trucks collect large brush piles and limbs. One supervisor patrols the routes throughout the day, coordinating pick-ups and responding to citizen requests.

Loose leaves are collected curbside during leaf season, which runs from mid-October through March. Loose leaves are collected every third week during leaf season. Bagged leaves are collected as part of the weekly yard waste program.

One to seven crews, each composed of an operator, a street maintenance worker, and a seasonal worker, are used for the annual leaf collection program.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Population (OSBM 2013)	33,726
Land Area (Square Miles)	22.18
Persons per Square Mile	1,521
Median Family Income	$40,192
U.S. Census 2010	

Service Profile

FTE Positions—Collection	8.0
FTE Positions—Other	0.5
Collection Frequency	
Yard Waste	1 x week
Seasonal Leaf Collection	1 x 3 weeks
Collection Points	10,961
Tons Collected	
Yard Waste	4,784
Seasonal Leaves	2,681
Total Tons Collected	7,465
Monthly Service Fee	No

Full Cost Profile

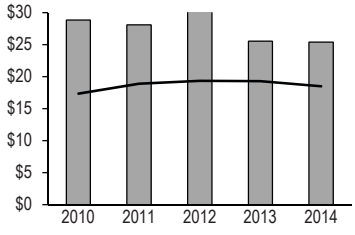
Cost Breakdown by Percentage	
Personal Services	61.0%
Operating Costs	26.2%
Capital Costs	12.8%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$522,861
Operating Costs	$224,012
Capital Costs	$109,745
TOTAL	$856,618

Salisbury — Yard Waste/Leaf Collection

Key: Salisbury ■ Benchmarking Average — Fiscal Years 2009 through 2013

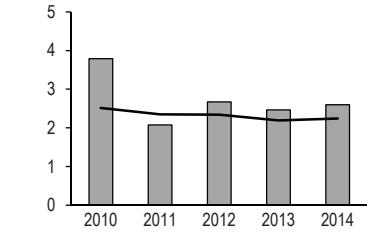
Resource Measures

Yard Waste and Leaf Collection Costs per Capita



	2010	2011	2012	2013	2014
Salisbury	$28.86	$28.10	$32.47	$25.52	$25.40
Average	$17.32	$18.87	$19.32	$19.28	$18.49

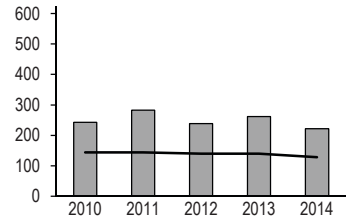
Yard Waste and Leaf Collection FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Salisbury	3.8	2.1	2.7	2.5	2.6
Average	2.5	2.4	2.3	2.2	2.2

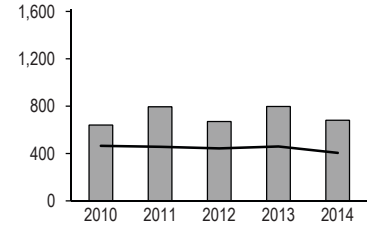
Workload Measures

Yard Waste and Leaf Tons Collected per 1,000 Population



	2010	2011	2012	2013	2014
Salisbury	242	283	239	262	221
Average	144	144	140	140	129

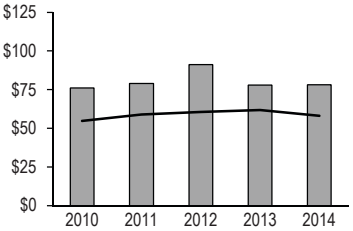
Yard Waste and Leaf Tons Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Salisbury	639	795	671	798	681
Average	464	456	442	459	405

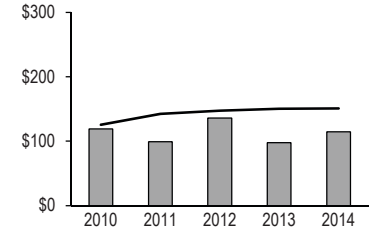
Efficiency Measures

Yard Waste and Leaf Collection Cost per Collection Point



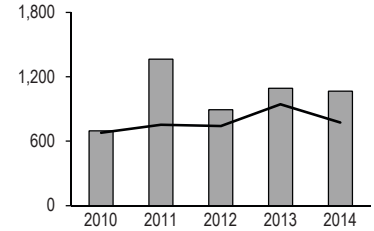
	2010	2011	2012	2013	2014
Salisbury	$76	$79	$91	$78	$78
Average	$55	$59	$60	$62	$58

Yard Waste and Leaf Collection Cost per Ton Collected



	2010	2011	2012	2013	2014
Salisbury	$119	$99	$136	$98	$115
Average	$126	$142	$147	$150	$151

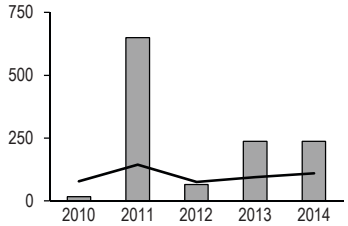
Yard Waste and Leaf Tons Collected per Collection FTE



	2010	2011	2012	2013	2014
Salisbury	697	1,363	894	1,094	1,066
Average	679	753	742	943	774

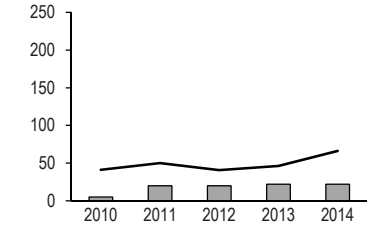
Effectiveness Measures

Collection Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Salisbury	17	650	65	237	237
Average	77	144	75	94	109

Valid Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Salisbury	5	20	20	22	22
Average	41	50	41	46	66

Wilson — Yard Waste/Leaf Collection

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Yard waste is containerized in bags, sheets, roll-out containers, or other container types for collection by rear-loader packers. Yard waste is collected once per week by compost crews on the same day as residential refuse collection.

The city uses two three-person crews on Tuesdays and Fridays and three or four three-person crews on Mondays and Thursdays to collect yard waste. Each crew is composed of one driver and two workers. These crews rotate collection between residential refuse and yard waste. A one-person crew uses a knuckleboom truck to collect large limbs daily.

The city's leaf season is from mid-October to mid-January. Leaves are collected loose at the curb on a one-to-three-week cycle. The city uses leaf vacuum machines and compacting leaf trucks to collect loose leaves.

Six to eight three-person crews are used to collect loose leaves. The drivers are permanent employees. Collectors are seasonal employees.

Conditions Affecting Service, Performance, and Costs

During FY 2011–2012, Wilson picked up additional yard waste generated from Hurrican Irene. An estimated extra 3,494 tons were collected after the storm.

Municipal Profile

Population (OSBM 2013)	49,097
Land Area (Square Miles)	30.48
Persons per Square Mile	1,611
Median Family Income U.S. Census 2010	$43,442

Service Profile

FTE Positions—Collection	15.5
FTE Positions—Other	0.0
Collection Frequency	
Yard Waste	1 x week
Seasonal Leaf Collection	1 x 3 weeks
Collection Points	19,750
Tons Collected	
Yard Waste	5,145
Seasonal Leaves	1,965
Total Tons Collected	7,110
Monthly Service Fee	Included in solid waste fee

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	45.0%
Operating Costs	31.9%
Capital Costs	23.1%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$421,147
Operating Costs	$299,058
Capital Costs	$215,888
TOTAL	$936,093

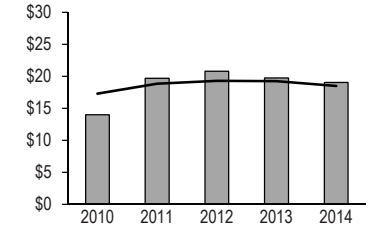
Wilson

Yard Waste/Leaf Collection

Key: Wilson ■ Benchmarking Average — Fiscal Years 2009 through 2013

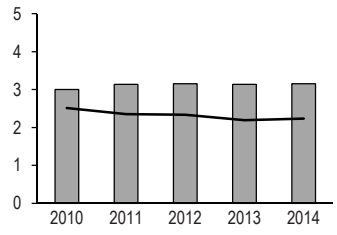
Resource Measures

Yard Waste and Leaf Collection Costs per Capita



	2010	2011	2012	2013	2014
Wilson	$14.00	$19.71	$20.80	$19.76	$19.07
Average	$17.32	$18.87	$19.32	$19.28	$18.49

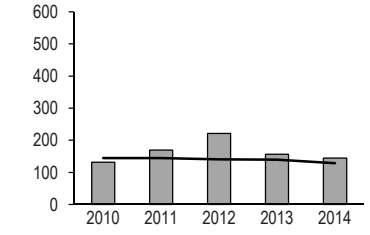
Yard Waste and Leaf Collection FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Wilson	3.0	3.1	3.2	3.1	3.2
Average	2.5	2.4	2.3	2.2	2.2

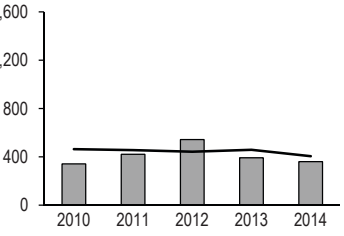
Workload Measures

Yard Waste and Leaf Tons Collected per 1,000 Population



	2010	2011	2012	2013	2014
Wilson	132	170	221	157	145
Average	144	144	140	140	129

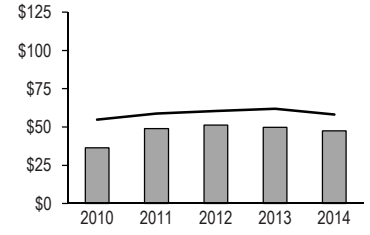
Yard Waste and Leaf Tons Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Wilson	342	422	545	394	360
Average	464	456	442	459	405

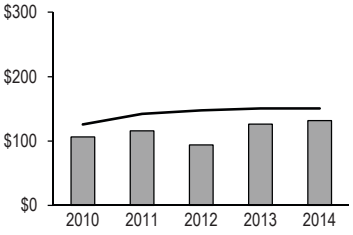
Efficiency Measures

Yard Waste and Leaf Collection Cost per Collection Point



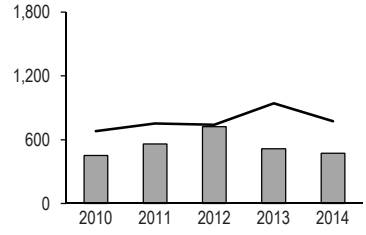
	2010	2011	2012	2013	2014
Wilson	$36	$49	$51	$50	$47
Average	$55	$59	$60	$62	$58

Yard Waste and Leaf Collection Cost per Ton Collected



	2010	2011	2012	2013	2014
Wilson	$106	$116	$94	$126	$132
Average	$126	$142	$147	$150	$151

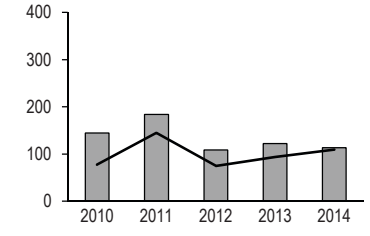
Yard Waste and Leaf Tons Collected per Collection FTE



	2010	2011	2012	2013	2014
Wilson	453	560	723	516	474
Average	679	753	742	943	774

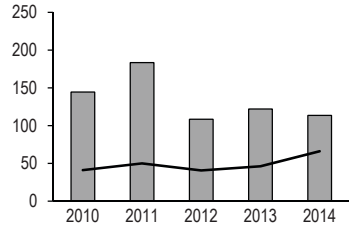
Effectiveness Measures

Collection Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Wilson	145	183	109	122	113
Average	77	144	75	94	109

Valid Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Wilson	145	183	109	122	113
Average	41	50	41	46	66

Winston-Salem Yard Waste/Leaf Collection

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The city operates a curbside collection program for brush, leaves, and bulky items. Brush is collected throughout the year, while leaves and bulky items are collected on a seasonal basis. Brush is defined as small tree limbs, branches, and shrubbery clippings. Tree and shrubbery limbs cannot be larger than 6 inches in diameter or 6 feet in length. A city ordinance requires that brush be collected once every ten working days except during leaf season. There were no separate fees for the curbside collection program.

The yard waste cart program provides weekly collection of containerized yard waste placed in ninety-six-gallon carts. The city uses six one-person crews using automated packers and one two-person crew using a rear-loading packer to service these carts. Collection is provided Monday through Thursday. Carts are delivered on Friday.

Residents who participate in the yard waste cart program pay an annual $60 fee. Residents also pay for the ninety-six-gallon carts at a cost of $60 if the cart is picked up or $65 if the cart is delivered. A household can have up to three carts.

The city's seasonal leaf collection program picks up leaves that are deposited at the curb between November 1 and January 15. Loose leaves are vacuumed two to three times during this time period. Containerized leaves are collected throughout the year as part of the yard waste program. The city uses thirty-two crews for seasonal leaf collection, with a combination of equipment operators, maintenance workers, and both permanent and seasonal workers. During FY 2011–2012 several automated vacuum trucks were added to the fleet.

Conditions Affecting Service, Performance, and Costs

The performance measure "cost per collection point" is based on the total 76,064 collection points.

Municipal Profile

Population (OSBM 2013)	235,527
Land Area (Square Miles)	132.45
Persons per Square Mile	1,778
Median Family Income U.S. Census 2010	$51,491

Service Profile

FTE Positions—Collection	86.3
FTE Positions—Other	0.0
Collection Frequency	
Yard Waste	1 x week
Seasonal Leaf Collection	1 x 3 weeks
Brush	1 x 10 days
Collection Points	
Brush	76,064
Leaves	76,064
Yard Waste Cart	14,000
Tons Collected	
Yard Waste	23,599
Seasonal Leaves	22,553
Total Tons Collected	46,152
Monthly Service Fee	No

Full Cost Profile

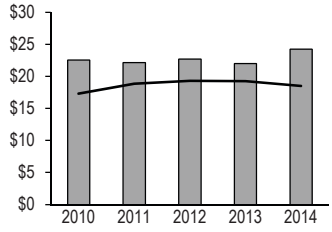
Cost Breakdown by Percentage	
Personal Services	51.9%
Operating Costs	33.8%
Capital Costs	14.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$2,964,066
Operating Costs	$1,933,018
Capital Costs	$817,505
TOTAL	$5,714,589

Winston-Salem Yard Waste/Leaf Collection

Key: Winston-Salem ■ Benchmarking Average — Fiscal Years 2009 through 2013

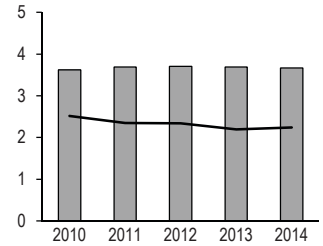
Resource Measures

Yard Waste and Leaf Collection Costs per Capita



	2010	2011	2012	2013	2014
Winston-Salem	$22.55	$22.13	$22.69	$21.99	$24.26
Average	$17.32	$18.87	$19.32	$19.28	$18.49

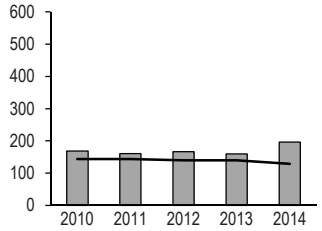
Yard Waste and Leaf Collection FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	3.6	3.7	3.7	3.7	3.7
Average	2.5	2.4	2.3	2.2	2.2

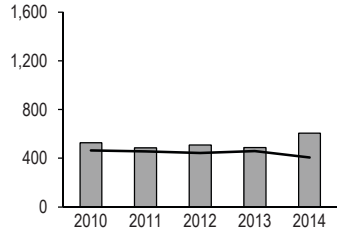
Workload Measures

Yard Waste and Leaf Tons Collected per 1,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	169	161	167	159	196
Average	144	144	140	140	129

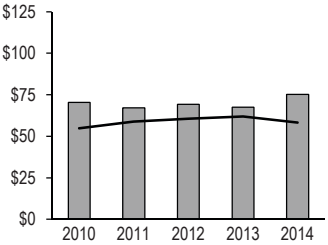
Yard Waste and Leaf Tons Collected per 1,000 Collection Points



	2010	2011	2012	2013	2014
Winston-Salem	528	486	510	489	607
Average	464	456	442	459	405

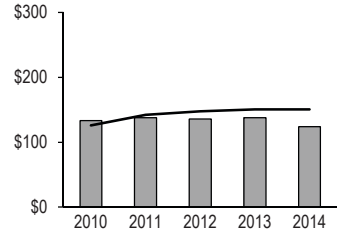
Efficiency Measures

Yard Waste and Leaf Collection Cost per Collection Point



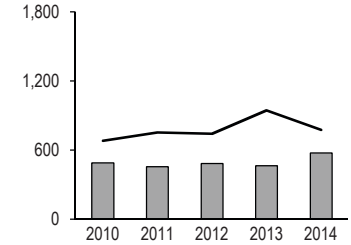
	2010	2011	2012	2013	2014
Winston-Salem	$70	$67	$69	$67	$75
Average	$55	$59	$60	$62	$58

Yard Waste and Leaf Collection Cost per Ton Collected



	2010	2011	2012	2013	2014
Winston-Salem	$133	$138	$136	$138	$124
Average	$126	$142	$147	$150	$151

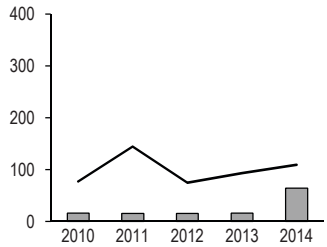
Yard Waste and Leaf Tons Collected per Collection FTE



	2010	2011	2012	2013	2014
Winston-Salem	490	457	484	464	575
Average	679	753	742	943	774

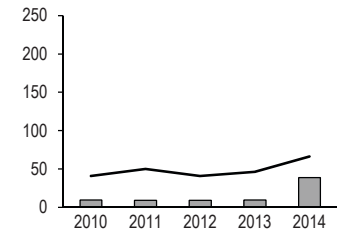
Effectiveness Measures

Collection Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Winston-Salem	16	16	16	16	64
Average	77	144	75	94	109

Valid Complaints per 10,000 Collection Points



	2010	2011	2012	2013	2014
Winston-Salem	10	9	9	9	39
Average	41	50	41	46	66


UNC
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GOVERNMENT

Performance and Cost Data

POLICE SERVICES

PERFORMANCE MEASURES FOR POLICE SERVICES

SERVICE DEFINITION

Police Services consist of all police activities performed by sworn and non-sworn personnel. This includes, but is not limited to, activities performed by patrol, traffic, investigations, special units, support staff, supervisors, and police administration. This definition captures all functions of the police department except for emergency communications.

NOTES ON PERFORMANCE MEASURES

1. Dispatched Calls

These are calls resulting in the dispatch of an officer. Most dispatches result from calls coming into the emergency communications center or the police department, but some are self-initiated by officers on duty. Multiple calls resulting in the dispatch of several officers are counted as one.

2. Uniform Crime Reporting (UCR) Part I Crimes

Uniform Crime Reporting (UCR) Part I crimes include crimes against persons (criminal homicide, forcible rape, robbery, and aggravated assault) and crimes against property (burglary, larceny, motor vehicle theft, and arson).

3. Incident-Based Reporting (IBR) Part I Crimes

Incident-Based Reporting (IBR) Part I crimes include crimes against persons (criminal homicide, forcible rape, robbery, and aggravated assault) and crimes against property (burglary, larceny, motor vehicle theft, and arson). The difference between the UCR method and the IBR method for reporting crimes is that IBR counts crime and arrest activities at the incident level, as opposed to counting only the most serious crime with multiple offenses.

4. Full-Time Equivalent (FTE) Positions: Sworn Officers

The number of full-time equivalent (FTE) positions is the number of budgeted positions for sworn officers during the fiscal year.

5. Response Time to High Priority Calls

Each police department defines high priority calls somewhat differently. The definitions generally refer to crimes in progress or situations where there are risks of injury or threats to life or property. Response time commences with the dispatch of an officer and ends with the arrival of the officer at the scene of the incident. The officer may be dispatched while on patrol or from the police station.

Police Services

Summary of Key Dimensions of Service

City or Town	Police Department Accredited?	Number of Sworn Officers	Average Length of Service for Sworn Officers (Years)	Number of Patrol Vehicles	Reporting Format	Part I Crimes			Part II Crimes	Dispatched Calls	Number of Traffic Accidents
						Against Persons	Against Property	Total			
Apex	Yes	62	14.0	49	IBR	37	569	606	1,360	37,457	1,068
Asheville	Yes	224	9.4	197	IBR	459	5,138	5,597	4,756	113,448	5,025
Burlington	Yes	125	10.0	154	IBR	319	2,457	2,776	3,832	75,142	2,683
Cary	Yes	180	10.6	124	IBR	112	2,010	2,122	2,581	141,946	3,346
Concord	No	160.25	10.5	187	IBR	111	2,639	2,750	2,033	76,851	3,375
Greensboro	Yes	673	10.3	240	IBR	1,115	11,261	12,376	16,144	296,561	8,594
Greenville	Yes	185	10.4	172	UCR	546	4,013	4,559	4,935	89,235	3,630
Hickory	No	117	9.2	150	IBR	138	2,277	2,415	3,146	73,396	2,271
High Point	No	229	10.9	229	UCR	492	4,260	4,752	3,258	115,744	4,258
Salisbury	Yes	81	9.4	88	IBR	218	1,963	2,181	2,479	34,146	1,827
Wilson	Yes	119	10.1	129	UCR	228	2,099	2,327	3,387	92,850	2,007
Winston-Salem	Yes	559	11.0	470	IBR	1,712	13,178	14,890	36,370	262,118	8,796

EXPLANATORY FACTORS

These are factors that the project found affected police services performance and cost in one or more of the municipalities:

Demographic makeup of the community
Community policing policies
Population density and land area
Downtown area characteristics
Use of incident-based reporting
Presence of unique problems in particular areas, such as drugs or gangs
Emphasis on quick response to all calls
Vehicle take-home policy
Beat structure
Use of special units

Apex Police Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Town of Apex Police Department provides an array of police services, including patrol, investigations, a special response unit, and school resource officers at the high school and middle schools located in the town.

The city had sixty-two sworn officer positions authorized for the year, with an average length of service of nearly fourteen years. Police services occupies a headquarters located in downtown Apex, newly built in 2010, which houses all divisions in the department. There is also an unmanned substation attached to one of the town fire stations.

Officers in Apex in the partrol division work twelve-hour modified DuPont schedules. Each patrol squad is also assigned a flex officer. The traffic unit works a modified DuPont schedule based on crash statistics. The investigations division works Monday through Friday from 8 a.m. to 5 p.m., with one investigator working from 2 p.m. to 11 p.m. The investigator working the late shift is also the on-call investigator, and this position rotates every week.

Patrol and investigation units are assigned individual vehicles. Command staff also have individually assigned vehicles, which are the only take-home vehicles in the fleet.

The police department was successful in clearing a total of 271 Part I cases in FY 2013–14.

The definition of a high priority call in Apex is any call when the immediate arrival and presence of the police may prevent death or injury or alleviate the threat of death or injury.

Conditions Affecting Service, Performance, and Costs

Apex began participation in the benchmarking project in July 2011, with FY 2010–11 being the first reporting year.

Municipal Profile

Population (OSBM 2013)	40,925
Land Area (Square Miles)	16.25
Persons per Square Mile	2,518
Median Family Income	$97,201
U.S. Census 2010	

Service Profile

FTE Positions—Sworn	62.0
FTE Positions—Other	16.0
Marked and Unmarked Patrol Vehicles	49
Part I Crimes Reported	
Homicide	0
Rape	5
Robbery	10
Assault	22
Burglary	126
Larceny	428
Auto Theft	12
Arson	3
TOTAL	606
Part II Crimes Reported	1,360
Part I Crimes Cleared	
Persons	32
Property	239
TOTAL	271
Reporting Format	IBR
Number of Calls Dispatched	37,457
Number of Traffic Accidents	1,068
Property Damage for Accidents	$337,900

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	70.7%
Operating Costs	20.7%
Capital Costs	8.6%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$5,309,924
Operating Costs	$1,555,095
Capital Costs	$647,152
TOTAL	$7,512,171

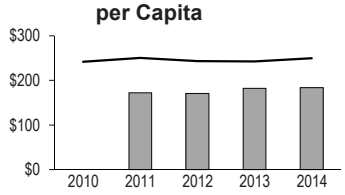
Apex

Police Services

Key: Apex ■ Benchmarking Average — Fiscal Years 2010 through 2014

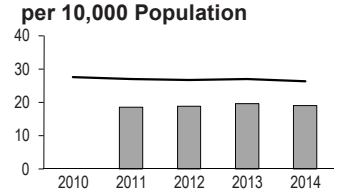
Resource Measures

Police Services Costs per Capita



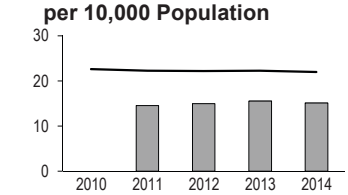
	2010	2011	2012	2013	2014
Apex		$172	$171	$182	$184
Average	$242	$250	$244	$243	$250

Total Police Services Personnel per 10,000 Population



	2010	2011	2012	2013	2014
Apex		18.5	18.9	19.6	19.1
Average	27.6	27.0	26.8	27.0	26.4

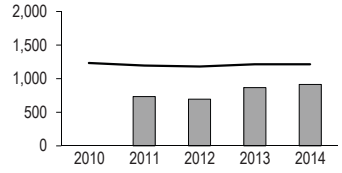
Sworn Police Officers per 10,000 Population



	2010	2011	2012	2013	2014
Apex		14.6	15.0	15.6	15.1
Average	22.7	22.3	22.3	22.3	22.0

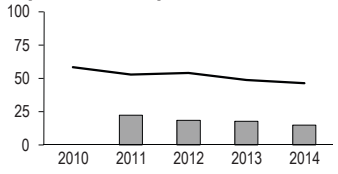
Workload Measures

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Apex		734	694	866	915
Average	1,234	1,195	1,178	1,211	1,214

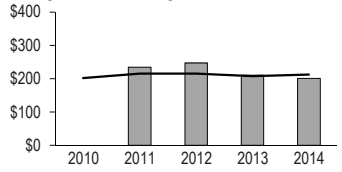
Part I Crimes per 1,000 Population



	2010	2011	2012	2013	2014
Apex		22.4	18.5	17.9	14.8
Average	58.3	52.8	54.2	48.8	46.4

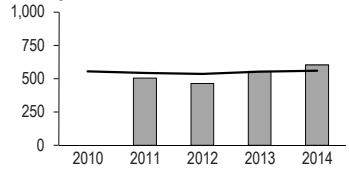
Efficiency Measures

Police Services Cost per Call Dispatched



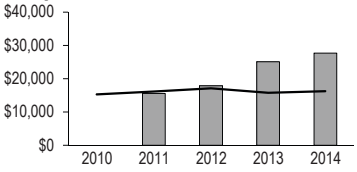
	2010	2011	2012	2013	2014
Apex		$235	$247	$211	$201
Average	$202	$215	$215	$207	$213

Calls Dispatched per Sworn Officer



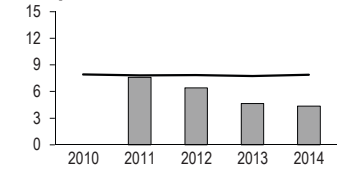
	2010	2011	2012	2013	2014
Apex		504	463	555	604
Average	554	543	535	551	559

Police Services Cost per Part I Case Cleared



	2010	2011	2012	2013	2014
Apex		$15,558	$17,842	$25,093	$27,720
Average	$15,243	$16,108	$17,093	$15,771	$16,220

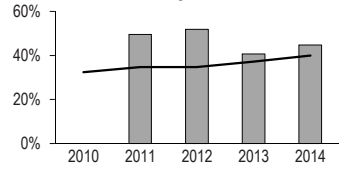
Part I Cases Cleared per Sworn Officer



	2010	2011	2012	2013	2014
Apex		7.6	6.4	4.7	4.4
Average	7.9	7.8	7.8	7.8	7.9

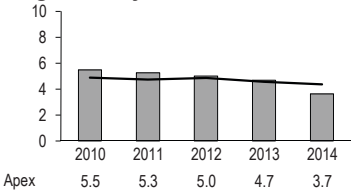
Effectiveness Measures

Percentage of Part I Cases Cleared of Those Reported



	2010	2011	2012	2013	2014
Apex		49.5%	51.9%	40.7%	44.7%
Average	32.3%	34.8%	34.7%	37.3%	39.9%

Response Time to High Priority Calls in Minutes



	2010	2011	2012	2013	2014
Apex	5.5	5.3	5.0	4.7	3.7
Average	4.9	4.7	4.9	4.6	4.4

Asheville Police Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Asheville Police Department provides an array of police services, including patrol, investigations, a telephone response unit, a canine unit, a special response unit, animal control, a drug enforcement unit, a hostage negotiation team, a hazardous device team, and several other special programs.

The city had 224 sworn officer positions authorized for the year, with an average length of service of about 9.4 years. Police services occupies five facilities: the main downtown facility shared by the fire department and four substations.

Officers in Asheville work a varied DuPont schedule based on a fourteen-day period, working six twelve-hour days and one eight-hour day. The schedule requires two or three days on followed by two days off in alternating sequences over the two-week period. A power squad is assigned to work the evening shift during the peak time of calls. Detectives work four ten-hour days, with half the detectives off Mondays and the other half off on Fridays. Detective supervisors work five eight-hour days.

Specialty units such as traffic, SWAT, and detectives have assigned take-home cars. Additionally, sergeants and higher-ranked officers also have assigned vehicles. Patrol cars have multiple users.

The police department was successful in clearing a total of 1,923 Part I cases in FY 2013–14. The definition of a high priority call in Asheville is any call dealing with a crime in progress or a situation where there is immediate danger to a person.

Conditions Affecting Service, Performance, and Costs

Asheville switched over its crime reporting format from UCR to IBR in June 2009.

Significant efforts have been made, starting in FY 2006–07, to reduce drug crime in Asheville. The number of Part I crimes has declined, which is believed to be due in part to the focus on reducing drug crime.

The average response time to high priority calls reflects the response time of the first arriving unit. Self-initiated calls are not included in the response time. Due to a better classification of high priority calls at the Asheville communications unit, police have been able to lower their response time to high priority calls.

Municipal Profile

Population (OSBM 2013)	88,003
Land Area (Square Miles)	45.52
Persons per Square Mile	1,933
Median Family Income U.S. Census 2010	$53,350

Service Profile

FTE Positions—Sworn	224.0
FTE Positions—Other	52.0
Marked and Unmarked Patrol Vehicles	197
Part I Crimes Reported	
Homicide	6
Rape	35
Robbery	192
Assault	226
Burglary	1,115
Larceny	3,712
Auto Theft	294
Arson	17
TOTAL	5,597
Part II Crimes Reported	4,756
Part I Crimes Cleared	
Persons	271
Property	1,652
TOTAL	1,923
Reporting Format	IBR
Number of Calls Dispatched	113,448
Number of Traffic Accidents	5,025
Property Damage for Accidents	$16,365,449

Full Cost Profile

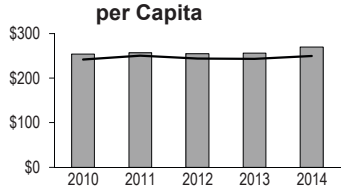
Cost Breakdown by Percentage	
Personal Services	65.9%
Operating Costs	25.4%
Capital Costs	8.7%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$15,643,026
Operating Costs	$6,040,547
Capital Costs	$2,064,925
TOTAL	$23,748,498

Asheville — Police Services

Key: Asheville ■ Benchmarking Average — Fiscal Years 2010 through 2014

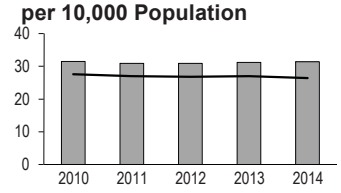
Resource Measures

Police Services Costs per Capita



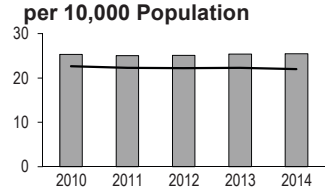
	2010	2011	2012	2013	2014
Asheville	$253.98	$257	$254	$256	$270
Average	$242	$250	$244	$243	$250

Total Police Services Personnel per 10,000 Population



	2010	2011	2012	2013	2014
Asheville	31.6	31.0	30.9	31.2	31.4
Average	27.6	27.0	26.8	27.0	26.4

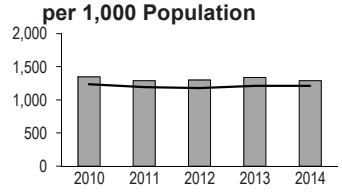
Sworn Police Officers per 10,000 Population



	2010	2011	2012	2013	2014
Asheville	25.3	25.0	25.1	25.4	25.5
Average	22.7	22.3	22.3	22.3	22.0

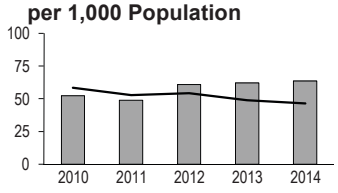
Workload Measures

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Asheville	1,348	1,289	1,299	1,338	1,289
Average	1,234	1,195	1,178	1,211	1,214

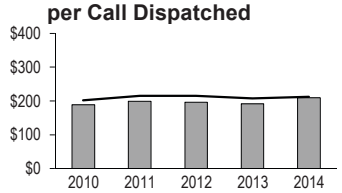
Part I Crimes per 1,000 Population



	2010	2011	2012	2013	2014
Asheville	52.3	48.9	60.9	62.1	63.6
Average	58.3	52.8	54.2	48.8	46.4

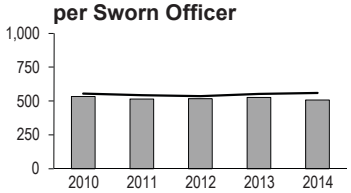
Efficiency Measures

Police Services Cost per Call Dispatched



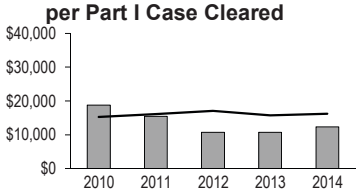
	2010	2011	2012	2013	2014
Asheville	$189	$199	$196	$191	$209
Average	$202	$215	$215	$207	$213

Calls Dispatched per Sworn Officer



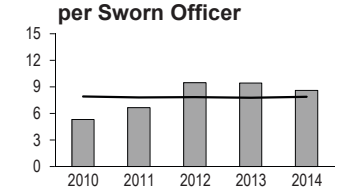
	2010	2011	2012	2013	2014
Asheville	533	516	517	527	506
Average	554	543	535	551	559

Police Services Cost per Part I Case Cleared



	2010	2011	2012	2013	2014
Asheville	$18,814	$15,442	$10,698	$10,684	$12,350
Average	$15,243	$16,108	$17,093	$15,771	$16,220

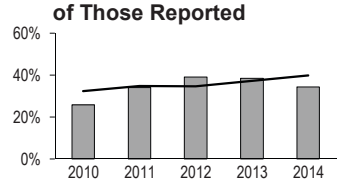
Part I Cases Cleared per Sworn Officer



	2010	2011	2012	2013	2014
Asheville	5.3	6.7	9.5	9.4	8.6
Average	7.9	7.8	7.8	7.8	7.9

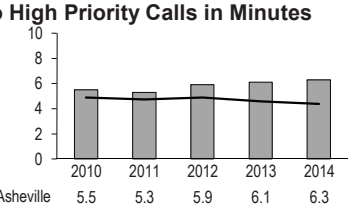
Effectiveness Measures

Percentage of Part I Cases Cleared of Those Reported



	2010	2011	2012	2013	2014
Asheville	25.9%	34.0%	39.1%	38.6%	34.4%
Average	32.3%	34.8%	34.7%	37.3%	39.9%

Response Time to High Priority Calls in Minutes



	2010	2011	2012	2013	2014
Asheville	5.5	5.3	5.9	6.1	6.3
Average	4.9	4.7	4.9	4.6	4.4

Burlington Police Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Burlington Police Department provides an array of police services, including patrol, investigations, a telephone response unit, a canine unit, a motorcycle unit, a special response unit, a drug enforcement unit, an animal control officer, and other programs.

The town had 125 sworn officer positions authorized for the year, with an average length of service of ten years. Police services occupies its own separate building. There are also several substations and a separate facility for animal control services and a pet adoption center.

Burlington's uniform patrol officers work a rotating day or night shift. The officers rotate from days to nights or nights to days every twenty-eight days. They work a modified DuPont schedule in which they work twelve-hour shifts for a total of 2,080 hours per year. The schedule includes eighty-four court hours and forty training hours. Half the officers work either days or nights, on Monday and Tuesday, off Wednesday and Thursday, work Friday, Saturday, and Sunday. They then are off Monday and Tuesday, work Wednesday and Thursday, and are off Friday, Saturday, and Sunday. The other half of the uniformed patrol officers work the opposite days on or off to provide twenty-four-hour, seven-day-a-week, fifty-two-week-a-year coverage.

Vehicles are assigned following a take-home policy. All sworn employees with the exception of the Chief, Deputy Chief, and Major have take-home vehicles.

The definition of a high priority call in Burlington is any call requiring immediate police response. This includes crimes in progress where there is a threat to life and officers responding to traffic crashes or other incidents creating a life-threatening situation.

The police department was successful in clearing a total of 1,111 Part I cases in FY 2013–14.

Conditions Affecting Service, Performance, and Costs

The average response time to high priority calls reflects the response time of the first arriving unit. Self-initiated calls are not included in the response time.

Municipal Profile

Population (OSBM 2013)	51,396
Land Area (Square Miles)	27.28
Persons per Square Mile	1,884
Median Family Income	$46,461
U.S. Census 2010	

Service Profile

FTE Positions—Sworn	125.0
FTE Positions—Other	33.0
Marked and Unmarked Patrol Vehicles	154
Part I Crimes Reported	
Homicide	1
Rape	17
Robbery	90
Assault	211
Burglary	526
Larceny	1,836
Auto Theft	89
Arson	6
TOTAL	2,776
Part II Crimes Reported	3,832
Part I Crimes Cleared	
Persons	261
Property	850
TOTAL	1,111
Reporting Format	IBR
Number of Calls Dispatched	75,142
Number of Traffic Accidents	2,683
Property Damage for Accidents	$9,334,394

Full Cost Profile

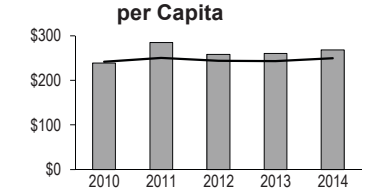
Cost Breakdown by Percentage	
Personal Services	75.1%
Operating Costs	14.4%
Capital Costs	10.4%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$10,369,816
Operating Costs	$1,992,224
Capital Costs	$1,441,746
TOTAL	$13,803,786

Burlington — Police Services

Key: Burlington ■ Benchmarking Average — Fiscal Years 2010 through 2014

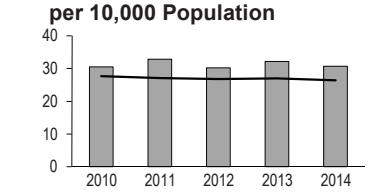
Resource Measures

Police Services Costs per Capita



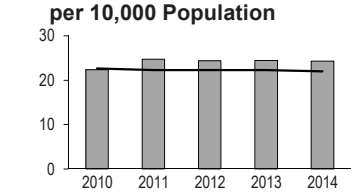
	2010	2011	2012	2013	2014
Burlington	$238.92	$285	$258	$261	$269
Average	$242	$250	$244	$243	$250

Total Police Services Personnel per 10,000 Population



	2010	2011	2012	2013	2014
Burlington	30.5	32.9	30.2	32.2	30.7
Average	27.6	27.0	26.8	27.0	26.4

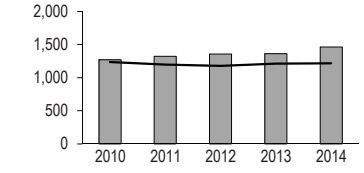
Sworn Police Officers per 10,000 Population



	2010	2011	2012	2013	2014
Burlington	22.4	24.8	24.4	24.4	24.3
Average	22.7	22.3	22.3	22.3	22.0

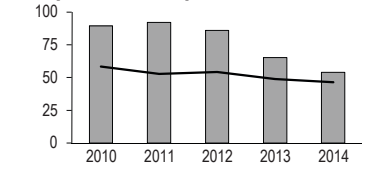
Workload Measures

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Burlington	1,269	1,323	1,358	1,360	1,462
Average	1,234	1,195	1,178	1,211	1,214

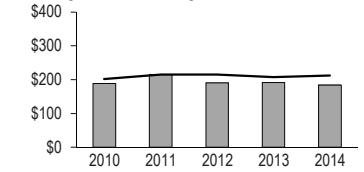
Part I Crimes per 1,000 Population



	2010	2011	2012	2013	2014
Burlington	89.4	92.1	86.1	65.3	54.0
Average	58.3	52.8	54.2	48.8	46.4

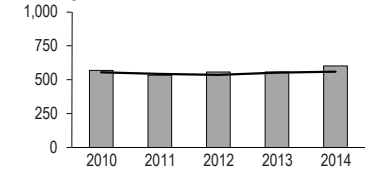
Efficiency Measures

Police Services Cost per Call Dispatched



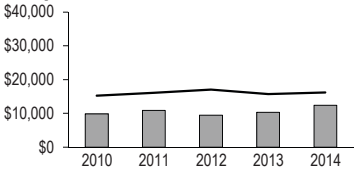
	2010	2011	2012	2013	2014
Burlington	$188	$215	$190	$192	$184
Average	$202	$215	$215	$207	$213

Calls Dispatched per Sworn Officer



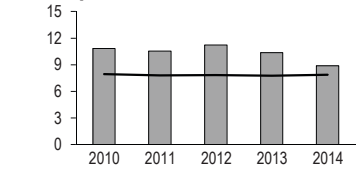
	2010	2011	2012	2013	2014
Burlington	568	534	557	557	601
Average	554	543	535	551	559

Police Services Cost per Part I Case Cleared



	2010	2011	2012	2013	2014
Burlington	$9,853	$10,917	$9,431	$10,299	$12,425
Average	$15,243	$16,108	$17,093	$15,771	$16,220

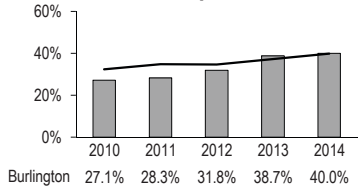
Part I Cases Cleared per Sworn Officer



	2010	2011	2012	2013	2014
Burlington	10.8	10.5	11.2	10.4	8.9
Average	7.9	7.8	7.8	7.8	7.9

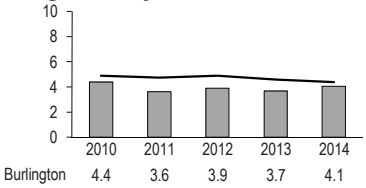
Effectiveness Measures

Percentage of Part I Cases Cleared of Those Reported



	2010	2011	2012	2013	2014
Burlington	27.1%	28.3%	31.8%	38.7%	40.0%
Average	32.3%	34.8%	34.7%	37.3%	39.9%

Response Time to High Priority Calls in Minutes



	2010	2011	2012	2013	2014
Burlington	4.4	3.6	3.9	3.7	4.1
Average	4.9	4.7	4.9	4.6	4.4

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Cary Police Department provides an array of police services, including patrol, investigations, a motorcycle unit, a special response unit, bicycle patrol, animal control, drug enforcement, a youth services program for public schools, and a canine unit.

The town had 180 sworn officer positions authorized for the fiscal year, with an average length of service of 10.6 years. The primary police headquarters is located in a three-story building shared with the town's technology services department. The department also operates two substations.

In order to provide continuous service to the citizens of Cary, personnel are assigned to permanent shifts. These shifts overlap by design to provide sufficient protection during shift changes and to provide additional coverage during the times of peak activity. Tuesday through Friday the staff consists of three platoons of officers working ten-hour shifts. Saturday through Monday the staff consists of two platoons of officers working twelve-and-a-half-hour shifts. Investigators work on-call schedules and are also scheduled to work some evening hours to ensure coverage during the most active times of the day.

Two uniformed patrol officers are assigned to each marked vehicle. Traffic officers and detectives are assigned individual vehicles. Only the detective on call is allowed to take home a vehicle, and the on-call assignment rotates.

The town defines a high priority call as one that is life-threatening in nature.

The police department was successful in clearing a total of 813 Part I cases in FY 2013–14.

Conditions Affecting Service, Performance, and Costs

The average response time to high priority calls reflects the response time of the first arriving unit. Self-initiated calls with a response time of zero are included in the average response time to high priority calls.

Municipal Profile

Population (OSBM 2013)	144,671
Land Area (Square Miles)	55.54
Persons per Square Mile	2,605
Median Family Income	$108,956
U.S. Census 2010	

Service Profile

FTE Positions—Sworn	180.0
FTE Positions—Other	14.0
Marked and Unmarked Patrol Vehicles	124
Part I Crimes Reported	
Homicide	3
Rape	14
Robbery	36
Assault	59
Burglary	395
Larceny	1,549
Auto Theft	61
Arson	5
TOTAL	2,122
Part II Crimes Reported	2,581
Part I Crimes Cleared	
Persons	92
Property	721
TOTAL	813
Reporting Format	IBR
Number of Calls Dispatched	141,946
Number of Traffic Accidents	3,346
Property Damage for Accidents	$12,369,133

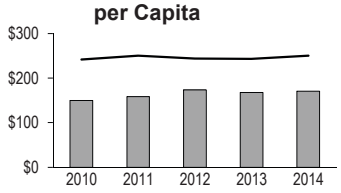
Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	73.4%
Operating Costs	20.7%
Capital Costs	5.9%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$18,130,450
Operating Costs	$5,120,140
Capital Costs	$1,454,927
TOTAL	$24,705,517

Key: Cary ■ Benchmarking Average — Fiscal Years 2010 through 2014

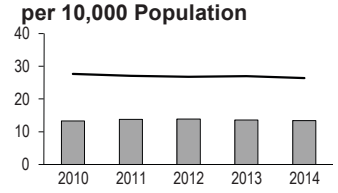
Resource Measures

Police Services Costs per Capita



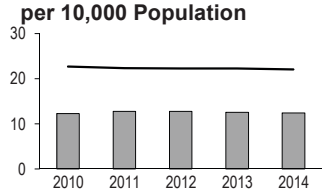
	2010	2011	2012	2013	2014
Cary	$149.52	$159	$173	$168	$171
Average	$242	$250	$244	$243	$250

Total Police Services Personnel per 10,000 Population



	2010	2011	2012	2013	2014
Cary	13.3	13.8	13.8	13.6	13.4
Average	27.6	27.0	26.8	27.0	26.4

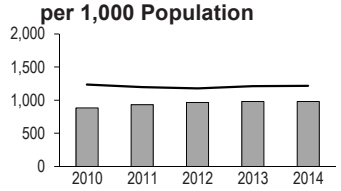
Sworn Police Officers per 10,000 Population



	2010	2011	2012	2013	2014
Cary	12.3	12.8	12.8	12.6	12.4
Average	22.7	22.3	22.3	22.3	22.0

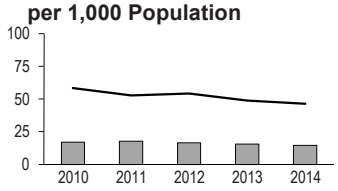
Workload Measures

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Cary	883	931	964	979	981
Average	1,234	1,195	1,178	1,211	1,214

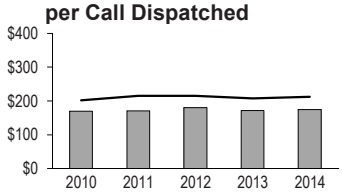
Part I Crimes per 1,000 Population



	2010	2011	2012	2013	2014
Cary	17.1	17.7	16.5	15.6	14.7
Average	58.3	52.8	54.2	48.8	46.4

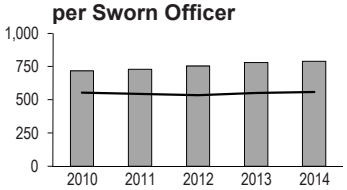
Efficiency Measures

Police Services Cost per Call Dispatched



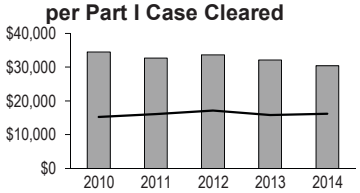
	2010	2011	2012	2013	2014
Cary	$169	$170	$180	$171	$174
Average	$202	$215	$215	$207	$213

Calls Dispatched per Sworn Officer



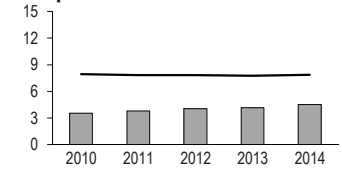
	2010	2011	2012	2013	2014
Cary	719	729	754	779	789
Average	554	543	535	551	559

Police Services Cost per Part I Case Cleared



	2010	2011	2012	2013	2014
Cary	$34,450	$32,694	$33,603	$32,099	$30,388
Average	$15,243	$16,108	$17,093	$15,771	$16,220

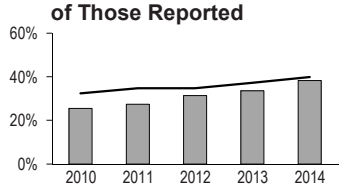
Part I Cases Cleared per Sworn Officer



	2010	2011	2012	2013	2014
Cary	3.5	3.8	4.0	4.2	4.5
Average	7.9	7.8	7.8	7.8	7.9

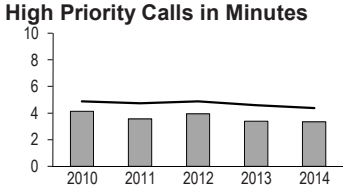
Effectiveness Measures

Percentage of Part I Cases Cleared of Those Reported



	2010	2011	2012	2013	2014
Cary	25.5%	27.4%	31.3%	33.5%	38.3%
Average	32.3%	34.8%	34.7%	37.3%	39.9%

Response Time to High Priority Calls in Minutes



	2010	2011	2012	2013	2014
Cary	4.1	3.6	3.9	3.4	3.3
Average	4.9	4.7	4.9	4.6	4.4

Concord Police Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Concord's police department provides an array of police services, including patrol, investigations, a traffic unit, a telephone response unit, a canine unit, a special response unit, a bicycle patrol unit, a drug enforcement unit, and other programs such as school resource officers.

The city had 160.25 sworn officer positions authorized for the fiscal year, with an average length of service of 10.5 years. The police headquarters is in a new separate building located downtown. Four substations are used, two in fire stations and two in shopping malls.

Uniformed patrol officers work twelve-hour rotating shifts. Investigators work five eight-hour days on first and second shifts. District Commanders have the authority to change individual schedules to meet peak demands.

The city defines high priority emergency calls as those involving an assault in progress, personal injury, breaking and entering, or robbery in progress.

Concord uses a one-on-one car plan. Officers may take their vehicles home if they live in the city or within one mile of the city limits.

The police department was successful in clearing a total of 2,750 Part I cases in FY 2013–14.

Conditions Affecting Service, Performance, and Costs

The average response time to high priority calls reflects the response time of the first arriving unit. Self-initiated calls are not included.

Concord's high clearance rate has been driven by a focus on clearing larceny cases by arrest or by leads exhausted as quickly as possible. Since larcenies are the largest category of Part I crimes, this effort has substantially improved the overall clearance rate.

Municipal Profile

Population (OSBM 2013)	83,279
Land Area (Square Miles)	60.93
Persons per Square Mile	1,367
Median Family Income	$63,643
U.S. Census 2010	

Service Profile

FTE Positions—Sworn	160.25
FTE Positions—Other	20.0
Marked and Unmarked Patrol Vehicles	187
Part I Crimes Reported	
Homicide	4
Rape	14
Robbery	45
Assault	48
Burglary	373
Larceny	2,123
Auto Theft	135
Arson	8
TOTAL	2,750
Part II Crimes Reported	2,033
Part I Crimes Cleared	
Persons	80
Property	1,390
TOTAL	1,470
Reporting Format	IBR
Number of Calls Dispatched	76,851
Number of Traffic Accidents	3,375
Property Damage for Accidents	$11,903,921

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	70.5%
Operating Costs	19.6%
Capital Costs	9.9%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$12,311,809
Operating Costs	$3,424,638
Capital Costs	$1,730,591
TOTAL	$17,467,038

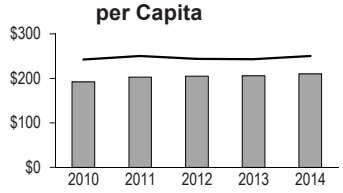
Concord

Police Services

Key: Concord ■ Benchmarking Average — Fiscal Years 2010 through 2014

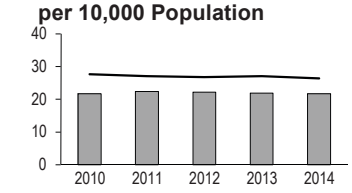
Resource Measures

Police Services Costs per Capita



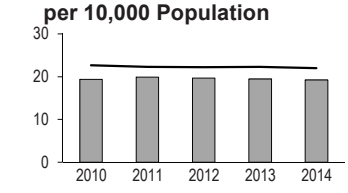
	2010	2011	2012	2013	2014
Concord	$192.24	$203	$205	$205	$210
Average	$242	$250	$244	$243	$250

Total Police Services Personnel per 10,000 Population



	2010	2011	2012	2013	2014
Concord	21.7	22.4	22.2	21.9	21.6
Average	27.6	27.0	26.8	27.0	26.4

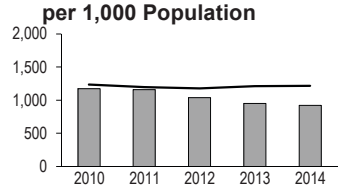
Sworn Police Officers per 10,000 Population



	2010	2011	2012	2013	2014
Concord	19.3	19.9	19.7	19.4	19.2
Average	22.7	22.3	22.3	22.3	22.0

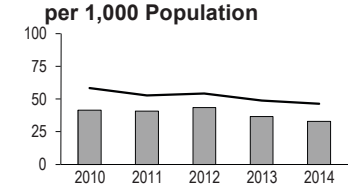
Workload Measures

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Concord	1,171	1,156	1,038	952	923
Average	1,234	1,195	1,178	1,211	1,214

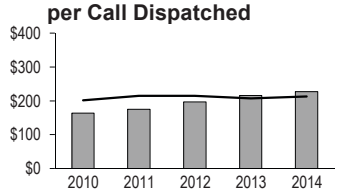
Part I Crimes per 1,000 Population



	2010	2011	2012	2013	2014
Concord	41.4	40.8	43.4	36.7	33.0
Average	58.3	52.8	54.2	48.8	46.4

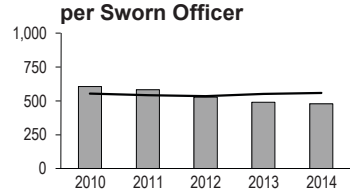
Efficiency Measures

Police Services Cost per Call Dispatched



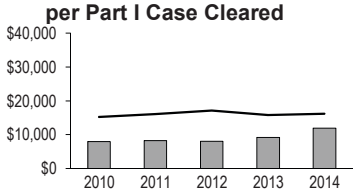
	2010	2011	2012	2013	2014
Concord	$164	$175	$197	$216	$227
Average	$202	$215	$215	$207	$213

Calls Dispatched per Sworn Officer



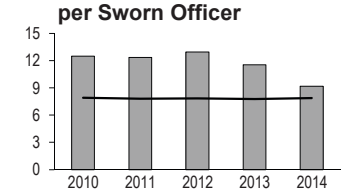
	2010	2011	2012	2013	2014
Concord	606	582	527	490	480
Average	554	543	535	551	559

Police Services Cost per Part I Case Cleared



	2010	2011	2012	2013	2014
Concord	$7,944	$8,268	$8,032	$9,161	$11,882
Average	$15,243	$16,108	$17,093	$15,771	$16,220

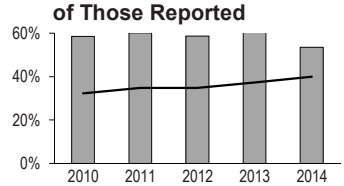
Part I Cases Cleared per Sworn Officer



	2010	2011	2012	2013	2014
Concord	12.5	12.3	12.9	11.5	9.2
Average	7.9	7.8	7.8	7.8	7.9

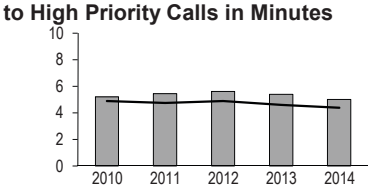
Effectiveness Measures

Percentage of Part I Cases Cleared of Those Reported



	2010	2011	2012	2013	2014
Concord	58.5%	60.1%	58.7%	61.2%	53.5%
Average	32.3%	34.8%	34.7%	37.3%	39.9%

Response Time to High Priority Calls in Minutes



	2010	2011	2012	2013	2014
Concord	5.2	5.4	5.6	5.4	5.0
Average	4.9	4.7	4.9	4.6	4.4

Greensboro Police Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Greensboro provides comprehensive police services, including patrol, investigations, a traffic unit, a telephone response unit, a forensics laboratory, a canine unit, a motorcycle unit, a special response unit, a bicycle patrol unit, a drug enforcement unit, and a student outreach and recruiting program.

The city had 673 sworn officer positions authorized for the fiscal year, with an average length of service of just over ten years. The police department is housed in a downtown facility with other city departments. The city also has three substations that serve as remote line-up facilities.

Patrol officers work a four-days-on and four-days-off fixed schedule. There are four shifts each day, with each patrol officer shift lasting eleven hours. Investigators and administrative personnel work Monday through Friday from 8 a.m. to 5 p.m. Schedules can be adjusted at any time according to call demand, special events, or special incidents.

Line patrol officers do not take vehicles home. Patrol supervisors, division commanders, and some investigators take vehicles home, depending on their assignments.

Greensboro defines a high priority emergency call as one where there is a potential for imminent serious injury or death. The police department was successful in clearing a total of 4,386 Part I cases in FY 2013–14.

Conditions Affecting Service, Performance, and Costs

The average response time to high priority calls reflects the response time of the first arriving unit. Self-initiated calls with a response time of zero are included in the average response time to high priority calls with the exception of traffic stops and report-only calls.

Beginning in FY 2009–10, Greensboro refined its reporting of response time and now only includes patrol calls, which are the majority of calls. Calls to special units are no longer included. A change was also made in the prioritization of calls, which improved response time for the most urgent calls.

Dispatched calls rose noticeably over earlier years due to significant annexations to the city.

Municipal Profile

Population (OSBM 2013)	278,654
Land Area (Square Miles)	127.93
Persons per Square Mile	2,178
Median Family Income	$52,752
U.S. Census 2010	

Service Profile

FTE Positions—Sworn	673.0
FTE Positions—Other	113.0
Marked and Unmarked Patrol Vehicles	240
Part I Crimes Reported	
Homicide	22
Rape	63
Robbery	485
Assault	545
Burglary	2,911
Larceny	7,729
Auto Theft	501
Arson	120
TOTAL	12,376
Part II Crimes Reported	16,144
Part I Crimes Cleared	
Persons	620
Property	3,766
TOTAL	4,386
Reporting Format	IBR
Number of Calls Dispatched	296,561
Number of Traffic Accidents	8,594
Property Damage for Accidents	$30,466,547

Full Cost Profile

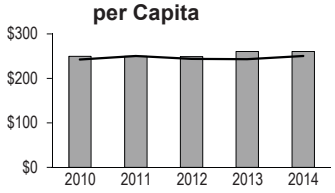
Cost Breakdown by Percentage	
Personal Services	77.8%
Operating Costs	22.2%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$56,495,692
Operating Costs	$16,083,359
Capital Costs	$0
TOTAL	$72,579,051

Greensboro — Police Services

Key: Greensboro ■ Benchmarking Average — Fiscal Years 2010 through 2014

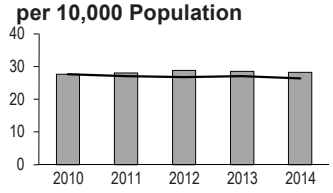
Resource Measures

Police Services Costs per Capita



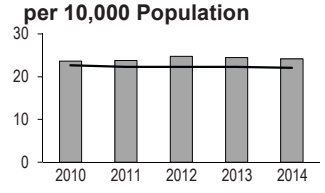
	2010	2011	2012	2013	2014
Greensboro	$249.14	$249	$249	$260	$260
Average	$242	$250	$244	$243	$250

Total Police Services Personnel per 10,000 Population



	2010	2011	2012	2013	2014
Greensboro	27.6	28.0	28.8	28.5	28.2
Average	27.6	27.0	26.8	27.0	26.4

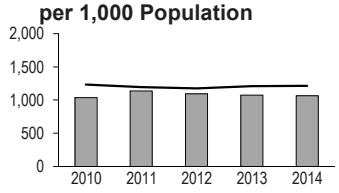
Sworn Police Officers per 10,000 Population



	2010	2011	2012	2013	2014
Greensboro	23.6	23.8	24.7	24.5	24.2
Average	22.7	22.3	22.3	22.3	22.0

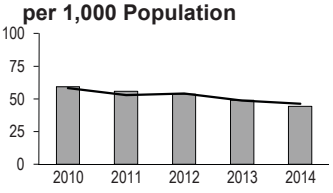
Workload Measures

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Greensboro	1,038	1,138	1,095	1,073	1,064
Average	1,234	1,195	1,178	1,211	1,214

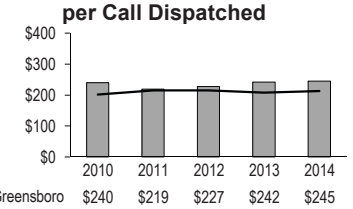
Part I Crimes per 1,000 Population



	2010	2011	2012	2013	2014
Greensboro	59.4	55.9	53.8	49.0	44.4
Average	58.3	52.8	54.2	48.8	46.4

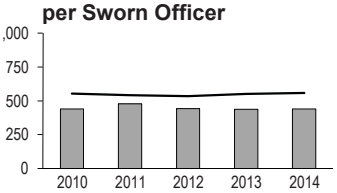
Efficiency Measures

Police Services Cost per Call Dispatched



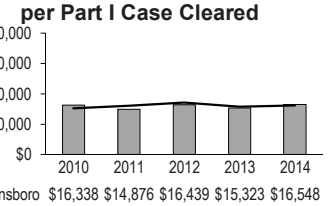
	2010	2011	2012	2013	2014
Greensboro	$240	$219	$227	$242	$245
Average	$202	$215	$215	$207	$213

Calls Dispatched per Sworn Officer



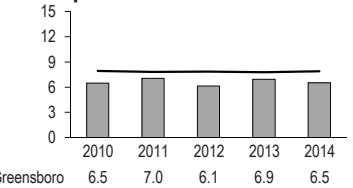
	2010	2011	2012	2013	2014
Greensboro	440	478	443	439	441
Average	554	543	535	551	559

Police Services Cost per Part I Case Cleared



	2010	2011	2012	2013	2014
Greensboro	$16,338	$14,876	$16,439	$15,323	$16,548
Average	$15,243	$16,108	$17,093	$15,771	$16,220

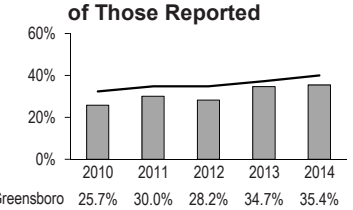
Part I Cases Cleared per Sworn Officer



	2010	2011	2012	2013	2014
Greensboro	6.5	7.0	6.1	6.9	6.5
Average	7.9	7.8	7.8	7.8	7.9

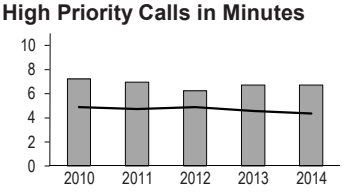
Effectiveness Measures

Percentage of Part I Cases Cleared of Those Reported



	2010	2011	2012	2013	2014
Greensboro	25.7%	30.0%	28.2%	34.7%	35.4%
Average	32.3%	34.8%	34.7%	37.3%	39.9%

Response Time to High Priority Calls in Minutes



	2010	2011	2012	2013	2014
Greensboro	7.2	7.0	6.2	6.7	6.7
Average	4.9	4.7	4.9	4.6	4.4

Greenville — Police Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Greenville provides a full array of police services, including patrol, investigations, a canine unit, a special response unit, bicycle patrol, and drug enforcement.

The city had 185 sworn officer positions authorized for the fiscal year, with an average length of service of 10.4 years. The police department occupies space in the city government building.

Patrol officers work a rotating schedule of two on/two off/three on/two off/two on/three off. There are four shifts each day for patrol officers, with the shifts lasting eleven hours. Investigators and administrative personnel work Monday through Friday, with eight-hour shifts. Schedules are subject to change based on call demand, special events, or unusual events.

Some patrol officers have take-home vehicles. There are seven or eight take-home cars per shift. They are assigned by seniority and whether or not the officer lives in the city limits. Officers on a shift who do not have a take-home car are assigned a pool car to drive each day. All investigators and administative personnel (with one exception) have take-home cars.

Greenville defines high priority emergency calls as those situations that present a potential for imminent serious injury or death. These calls are dispatched to the first available patrol unit, which may require a citywide dispatch.

The police department was successful in clearing a total of 1,372 Part I cases in FY 2013–14.

Conditions Affecting Service, Performance, and Costs

The average response time to high priority calls reflects the response time of the first arriving unit. Self-initiated calls are not included in the response times.

Municipal Profile

Population (OSBM 2013)	87,241
Land Area (Square Miles)	34.85
Persons per Square Mile	2,503
Median Family Income	$50,395
U.S. Census 2010	

Service Profile

FTE Positions—Sworn	185.0
FTE Positions—Other	57.0
Marked and Unmarked Patrol Vehicles	172
Part I Crimes Reported	
Homicide	5
Rape	19
Robbery	186
Assault	336
Burglary	1,064
Larceny	2,801
Auto Theft	137
Arson	11
TOTAL	4,559
Part II Crimes Reported	4,935
Part I Crimes Cleared	
Persons	251
Property	1,121
TOTAL	1,372
Reporting Format	UCR
Number of Calls Dispatched	89,235
Number of Traffic Accidents	3,630
Property Damage for Accidents	$11,064,650

Full Cost Profile

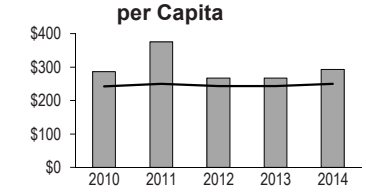
Cost Breakdown by Percentage	
Personal Services	75.1%
Operating Costs	21.8%
Capital Costs	3.1%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$19,210,639
Operating Costs	$5,584,973
Capital Costs	$786,430
TOTAL	$25,582,042

Greenville — Police Services

Key: Greenville ■ Benchmarking Average — Fiscal Years 2010 through 2014

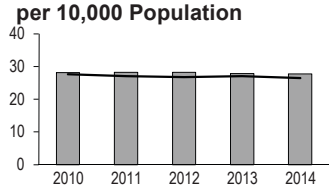
Resource Measures

Police Services Costs per Capita



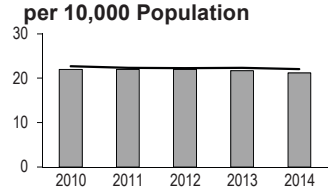
	2010	2011	2012	2013	2014
Greenville	$286.14	$376	$267	$267	$293
Average	$242	$250	$244	$243	$250

Total Police Services Personnel per 10,000 Population



	2010	2011	2012	2013	2014
Greenville	28.1	28.2	28.2	27.9	27.7
Average	27.6	27.0	26.8	27.0	26.4

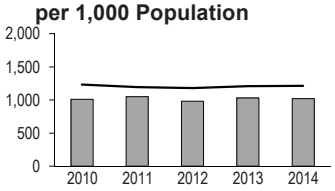
Sworn Police Officers per 10,000 Population



	2010	2011	2012	2013	2014
Greenville	21.9	22.0	22.0	21.7	21.2
Average	22.7	22.3	22.3	22.3	22.0

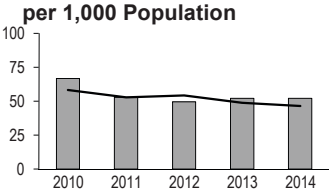
Workload Measures

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Greenville	1,013	1,051	983	1,031	1,023
Average	1,234	1,195	1,178	1,211	1,214

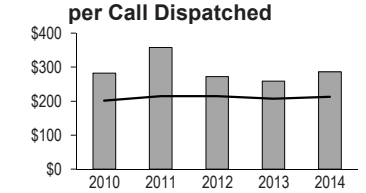
Part I Crimes per 1,000 Population



	2010	2011	2012	2013	2014
Greenville	66.7	52.9	49.5	52.2	52.3
Average	58.3	52.8	54.2	48.8	46.4

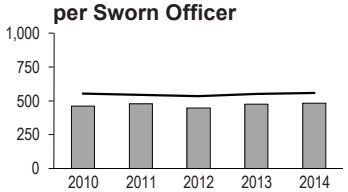
Efficiency Measures

Police Services Cost per Call Dispatched



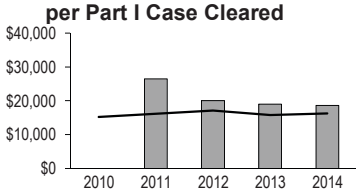
	2010	2011	2012	2013	2014
Greenville	$282	$357	$272	$259	$287
Average	$202	$215	$215	$207	$213

Calls Dispatched per Sworn Officer



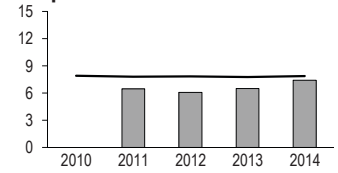
	2010	2011	2012	2013	2014
Greenville	462	478	447	475	482
Average	554	543	535	551	559

Police Services Cost per Part I Case Cleared



	2010	2011	2012	2013	2014
Greenville		$26,454	$20,020	$18,963	$18,646
Average	$15,243	$16,108	$17,093	$15,771	$16,220

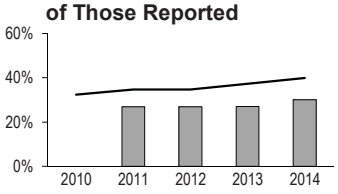
Part I Cases Cleared per Sworn Officer



	2010	2011	2012	2013	2014
Greenville		6.5	6.1	6.5	7.4
Average	7.9	7.8	7.8	7.8	7.9

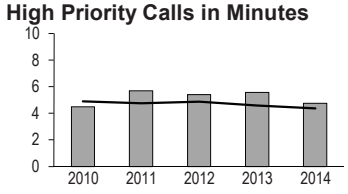
Effectiveness Measures

Percentage of Part I Cases Cleared of Those Reported



	2010	2011	2012	2013	2014
Greenville		26.8%	26.9%	27.0%	30.1%
Average	32.3%	34.8%	34.7%	37.3%	39.9%

Response Time to High Priority Calls in Minutes



	2010	2011	2012	2013	2014
Greenville	4.5	5.7	5.4	5.6	4.8
Average	4.9	4.7	4.9	4.6	4.4

Hickory Police Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Hickory provides a full array of police services, including patrol, investigations, a traffic unit, a laboratory facility, a canine unit, a special response unit, bicycle patrol, a jail/holding facility, animal control, drug enforcement, and a DARE program.

The city had 117 sworn officer positions authorized for the fiscal year, with an average length of service of 9.2 years. The police department occupies its own three-story facility, completed in January 1996. Each of the five community police areas has an office located in its respective community. These offices are not staffed. They are used for interviews, to obtain information, to store supplies, and to make phone calls.

Patrol officers work a fourteen-day, 80.5-hour cycle. During this period, officers work seven 11.5-hour days. Each of the five districts is commanded by a lieutenant who establishes schedules based on need.

Investigators work Monday through Friday, either from 8:30 a.m. to 5:00 p.m. or 3:30 p.m. to 12:00 a.m. for the second-shift on-call investigators.

Hickory uses the one-officer, one-car plan. Officers take vehicles home if they live in or within one mile of the city. Officers who are members of specialized units needed for emergency response, such as special operations, K-9, or criminial investigations, may also take their vehicles home.

Hickory defines high priority emergency calls as those situations that present an in-progress threat to life or serious property loss. Officers are authorized to utilize blue lights and sirens during responses and may exceed posted speed limits by up to 20 miles per hour.

The police department was successful in clearing a total of 751 Part I cases in FY 2013–14.

Conditions Affecting Service, Performance, and Costs

The average response time to high priority calls reflects the response time of the first arriving unit. Self-initiated calls with a response time of zero are included in the average response time to high priority calls.

Municipal Profile

Population (OSBM 2013)	40,222
Land Area (Square Miles)	29.83
Persons per Square Mile	1,348
Median Family Income	$54,093
U.S. Census 2010	

Service Profile

FTE Positions—Sworn	117.0
FTE Positions—Other	35.0
Marked and Unmarked Patrol Vehicles	150
Part I Crimes Reported	
Homicide	2
Rape	17
Robbery	52
Assault	67
Burglary	463
Larceny	1,660
Auto Theft	141
Arson	13
TOTAL	2,415
Part II Crimes Reported	3,146
Part I Crimes Cleared	
Persons	71
Property	680
TOTAL	751
Reporting Format	IBR
Number of Calls Dispatched	73,396
Number of Traffic Accidents	2,271
Property Damage for Accidents	$8,196,945

Full Cost Profile

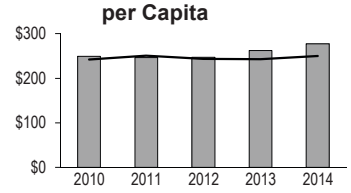
Cost Breakdown by Percentage	
Personal Services	69.1%
Operating Costs	23.9%
Capital Costs	7.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$7,701,696
Operating Costs	$2,660,461
Capital Costs	$779,714
TOTAL	$11,141,871

Hickory — Police Services

Key: Hickory ■ Benchmarking Average — Fiscal Years 2010 through 2014

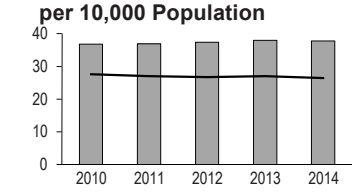
Resource Measures

Police Services Costs per Capita



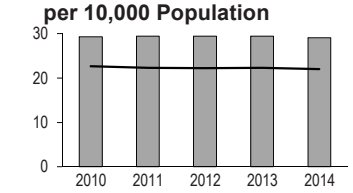
	2010	2011	2012	2013	2014
Hickory	$249.43	$246	$247	$262	$277
Average	$242	$250	$244	$243	$250

Total Police Services Personnel per 10,000 Population



	2010	2011	2012	2013	2014
Hickory	36.8	36.9	37.4	38.0	37.8
Average	27.6	27.0	26.8	27.0	26.4

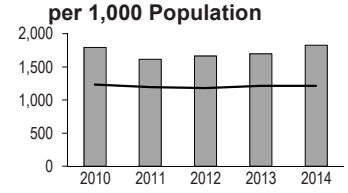
Sworn Police Officers per 10,000 Population



	2010	2011	2012	2013	2014
Hickory	29.3	29.4	29.4	29.5	29.1
Average	22.7	22.3	22.3	22.3	22.0

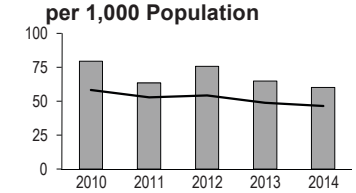
Workload Measures

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Hickory	1,792	1,613	1,664	1,697	1,825
Average	1,234	1,195	1,178	1,211	1,214

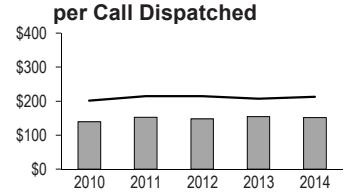
Part I Crimes per 1,000 Population



	2010	2011	2012	2013	2014
Hickory	79.5	63.5	75.8	64.9	60.0
Average	58.3	52.8	54.2	48.8	46.4

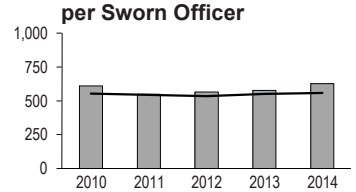
Efficiency Measures

Police Services Cost per Call Dispatched



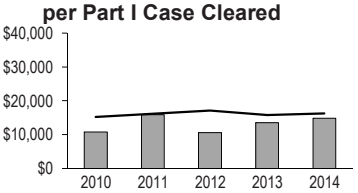
	2010	2011	2012	2013	2014
Hickory	$139	$153	$148	$155	$152
Average	$202	$215	$215	$207	$213

Calls Dispatched per Sworn Officer



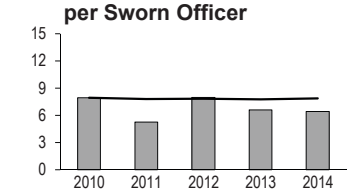
	2010	2011	2012	2013	2014
Hickory	611	548	565	576	627
Average	554	543	535	551	559

Police Services Cost per Part I Case Cleared



	2010	2011	2012	2013	2014
Hickory	$10,732	$15,903	$10,524	$13,517	$14,836
Average	$15,243	$16,108	$17,093	$15,771	$16,220

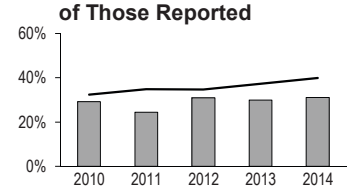
Part I Cases Cleared per Sworn Officer



	2010	2011	2012	2013	2014
Hickory	7.9	5.3	8.0	6.6	6.4
Average	7.9	7.8	7.8	7.8	7.9

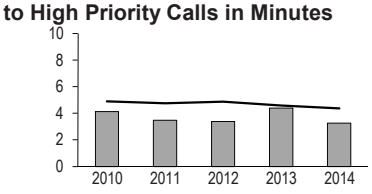
Effectiveness Measures

Percentage of Part I Cases Cleared of Those Reported



	2010	2011	2012	2013	2014
Hickory	29.2%	24.4%	31.0%	29.9%	31.1%
Average	32.3%	34.8%	34.7%	37.3%	39.9%

Response Time to High Priority Calls in Minutes



	2010	2011	2012	2013	2014
Hickory	4.1	3.5	3.4	4.4	3.3
Average	4.9	4.7	4.9	4.6	4.4

High Point Police Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

High Point's police department provides an array of police services, including patrol, investigations, traffic, a telephone response unit, a forensics laboratory, a canine unit, a motorcycle unit, a special response unit, a bicycle patrol unit, an animal control function, a drug enforcement unit, and other programs such as school resource officers.

The city had 229 sworn officer positions authorized for the fiscal year, with an average length of service of 10.9 years. The police department is located in a separate building from city hall.

Patrol officers work a 10.5-hour shift on either the first, second, or third shift. Officers are assigned to separate teams and alternate four days on and four days off. In order to provide coverage for peak hours, the second and third shifts overlap by 5.5 hours. This applies to both daytime and night coverage.

Detectives work a twenty-eight-day cycle of five days on and two days off. The first shift is from 8 a.m. to 5 p.m., and the second shift is from 4 p.m. to 12 a.m. Each week, three detectives rotate to cover the second shift.

Each officer is assigned a vehicle. Officers living within the city limits take vehicles home. If the officer lives outside of the city limits, the vehicle must be parked at an approved location within the city.

The city defines high priority emergency calls as those where the threat of physical injury or the level of danger created by a suspect or condition requires such a quick response.

The police department was successful in clearing a total of 3,243 Part I cases in FY 2013–14.

Conditions Affecting Service, Performance, and Costs

The average response time to high priority calls reflects the response time of the first arriving unit. Self-initiated calls with a response time of zero are not included in the average response time to high priority calls.

High Point conducted a large audit of open cases in FY 2013–14. A large number of open cases were discovered which had not been cleared going back over a decade before the implementation of the current case management software system. An effort was made to go back through these older open cases. Many were found to have been resolved but not recorded in prior years, and some others were cleared as inactive. As a result of this auditing work, the number of cleared cases for High Point jumped noticeably for the fiscal year. This is likely to be a one-time high number due to the clean-up effort.

Municipal Profile

Population (OSBM 2013)	107,652
Land Area (Square Miles)	54.73
Persons per Square Mile	1,967
Median Family Income U.S. Census 2010	$49,720

Service Profile

FTE Positions—Sworn	229.0
FTE Positions—Other	38.0
Marked and Unmarked Patrol Vehicles	229
Part I Crimes Reported	
Homicide	4
Rape	27
Robbery	176
Assault	285
Burglary	1,111
Larceny	2,873
Auto Theft	251
Arson	25
TOTAL	4,752
Part II Crimes Reported	3,258
Part I Crimes Cleared	
Persons	641
Property	2,602
TOTAL	3,243
Reporting Format	UCR
Number of Calls Dispatched	115,744
Number of Traffic Accidents	4,258
Property Damage for Accidents	$12,043,834

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	73.0%
Operating Costs	22.5%
Capital Costs	4.4%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$19,793,405
Operating Costs	$6,108,415
Capital Costs	$1,200,422
TOTAL	$27,102,242

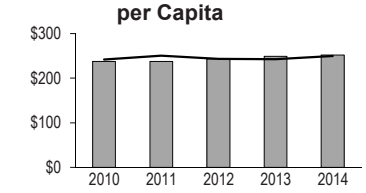
High Point

Police Services

Key: High Point ■ Benchmarking Average — Fiscal Years 2010 through 2014

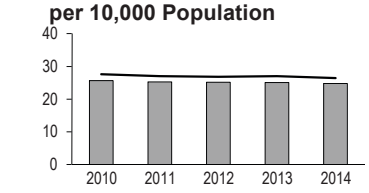
Resource Measures

Police Services Costs per Capita



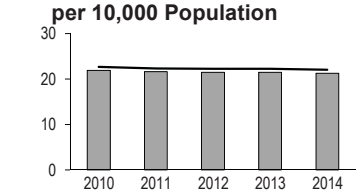
	2010	2011	2012	2013	2014
High Point	$237.89	$238	$244	$249	$252
Average	$242	$250	$244	$243	$250

Total Police Services Personnel per 10,000 Population



	2010	2011	2012	2013	2014
High Point	25.7	25.3	25.1	25.1	24.8
Average	27.6	27.0	26.8	27.0	26.4

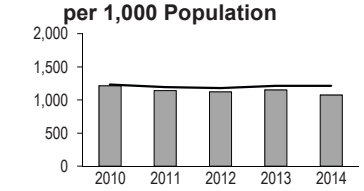
Sworn Police Officers per 10,000 Population



	2010	2011	2012	2013	2014
High Point	21.9	21.7	21.5	21.5	21.3
Average	22.7	22.3	22.3	22.3	22.0

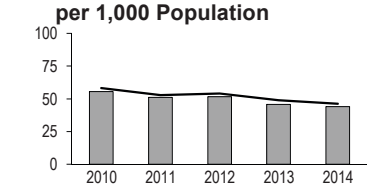
Workload Measures

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
High Point	1,211	1,141	1,124	1,150	1,075
Average	1,234	1,195	1,178	1,211	1,214

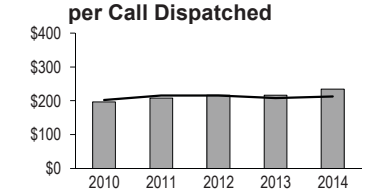
Part I Crimes per 1,000 Population



	2010	2011	2012	2013	2014
High Point	55.6	51.1	51.6	45.7	44.1
Average	58.3	52.8	54.2	48.8	46.4

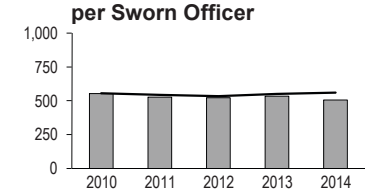
Efficiency Measures

Police Services Cost per Call Dispatched



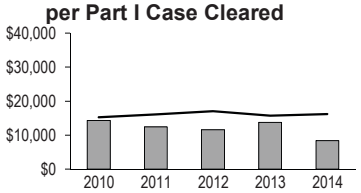
	2010	2011	2012	2013	2014
High Point	$196	$208	$217	$217	$234
Average	$202	$215	$215	$207	$213

Calls Dispatched per Sworn Officer



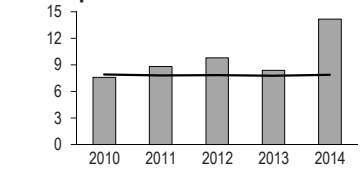
	2010	2011	2012	2013	2014
High Point	553	527	522	535	505
Average	554	543	535	551	559

Police Services Cost per Part I Case Cleared



	2010	2011	2012	2013	2014
High Point	$14,289	$12,421	$11,557	$13,798	$8,357
Average	$15,243	$16,108	$17,093	$15,771	$16,220

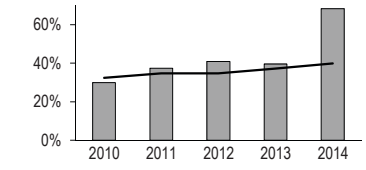
Part I Cases Cleared per Sworn Officer



	2010	2011	2012	2013	2014
High Point	7.6	8.8	9.8	8.4	14.2
Average	7.9	7.8	7.8	7.8	7.9

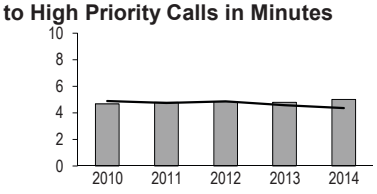
Effectiveness Measures

Percentage of Part I Cases Cleared of Those Reported



	2010	2011	2012	2013	2014
High Point	29.9%	37.4%	40.9%	39.5%	68.2%
Average	32.3%	34.8%	34.7%	37.3%	39.9%

Response Time to High Priority Calls in Minutes



	2010	2011	2012	2013	2014
High Point	4.7	4.8	4.9	4.8	5.0
Average	4.9	4.7	4.9	4.6	4.4

Salisbury Police Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Salisbury's police department provides an array of police services, including patrol, investigations, traffic, canine, special response, bicycle patrol, drug enforcement units, a school program, and other programs.

The city had eighty-one sworn officer positions authorized for the fiscal year, with an average length of service of 9.4 years. The police department is located in a two-story facility.

Uniformed officers work a variety of shift schedules. The most common schedule is one twelve-hour shift, with two days on and two off, three days on and two off, and then two days on and three off. A few officers work 10.5-hour shifts, with four days on and three off. This 10.5-hour shift serves as flex coverage during the day's heaviest call volume period and can be moved according to departmental need.

Officers are assigned a vehicle when hired and are allowed to take it home if they live within Rowan County. If they live within Rowan County but beyond five miles of the city limits, they have to reimburse the city for the cost of mileage in excess of the five miles.

The police department was successful in clearing a total of 624 Part I cases in FY 2013–14.

The city defines high priority emergency calls as those involving crimes that are in progress or calls that are life-threatening or potentially life-threatening.

Conditions Affecting Service, Performance, and Costs

The average response time to high priority calls reflects the response time of the first arriving unit. Self-initiated calls with a response time of zero are included in the average response time to high priority calls.

Salisbury has increased special initiatives to reduce crime, such as through projects aimed at "hot spots" and aggressive prosecutions through Project Safe.

Municipal Profile

Population (OSBM 2013)	33,726
Land Area (Square Miles)	22.18
Persons per Square Mile	1,521
Median Family Income	$40,192
U.S. Census 2010	

Service Profile

FTE Positions—Sworn	81.0
FTE Positions—Other	8.0
Marked and Unmarked Patrol Vehicles	88
Part I Crimes Reported	
Homicide	5
Rape	12
Robbery	74
Assault	127
Burglary	482
Larceny	1,349
Auto Theft	120
Arson	12
TOTAL	2,181
Part II Crimes Reported	2,479
Part I Crimes Cleared	
Persons	99
Property	525
TOTAL	624
Reporting Format	IBR
Number of Calls Dispatched	34,146
Number of Traffic Accidents	1,827
Property Damage for Accidents	NA

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	67.8%
Operating Costs	21.6%
Capital Costs	10.6%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$5,279,388
Operating Costs	$1,682,780
Capital Costs	$827,380
TOTAL	$7,789,548

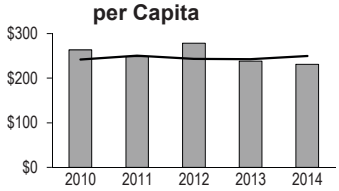
Salisbury

Police Services

Key: Salisbury ■ Benchmarking Average — Fiscal Years 2010 through 2014

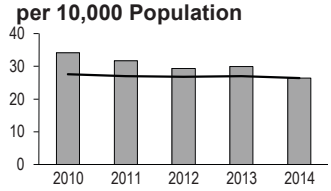
Resource Measures

Police Services Costs per Capita



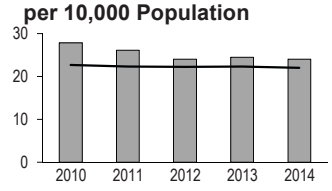
	2010	2011	2012	2013	2014
Salisbury	$263.52	$248	$279	$238	$231
Average	$242	$250	$244	$243	$250

Total Police Services Personnel per 10,000 Population



	2010	2011	2012	2013	2014
Salisbury	34.1	31.7	29.4	29.9	26.4
Average	27.6	27.0	26.8	27.0	26.4

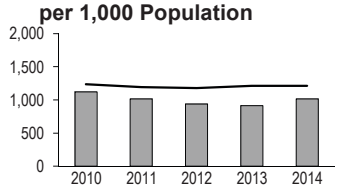
Sworn Police Officers per 10,000 Population



	2010	2011	2012	2013	2014
Salisbury	27.8	26.1	24.0	24.5	24.0
Average	22.7	22.3	22.3	22.3	22.0

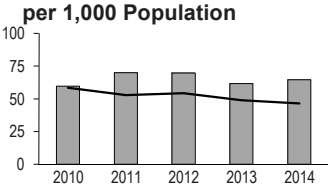
Workload Measures

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Salisbury	1,121	1,013	940	915	1,012
Average	1,234	1,195	1,178	1,211	1,214

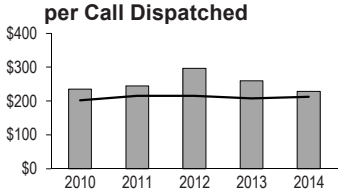
Part I Crimes per 1,000 Population



	2010	2011	2012	2013	2014
Salisbury	59.7	70.0	69.6	61.7	64.7
Average	58.3	52.8	54.2	48.8	46.4

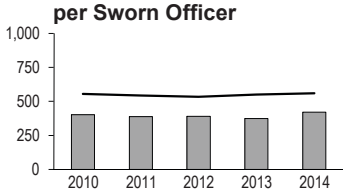
Efficiency Measures

Police Services Cost per Call Dispatched



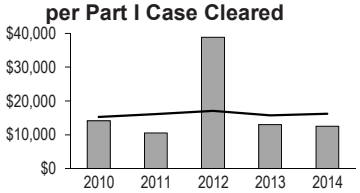
	2010	2011	2012	2013	2014
Salisbury	$235	$245	$297	$260	$228
Average	$202	$215	$215	$207	$213

Calls Dispatched per Sworn Officer



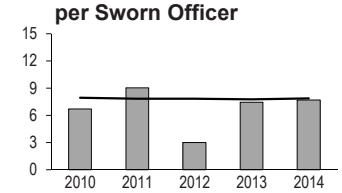
	2010	2011	2012	2013	2014
Salisbury	403	388	391	373	422
Average	554	543	535	551	559

Police Services Cost per Part I Case Cleared



	2010	2011	2012	2013	2014
Salisbury	$14,177	$10,523	$38,821	$13,023	$12,483
Average	$15,243	$16,108	$17,093	$15,771	$16,220

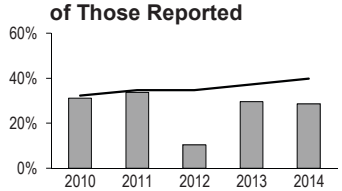
Part I Cases Cleared per Sworn Officer



	2010	2011	2012	2013	2014
Salisbury	6.7	9.0	3.0	7.5	7.7
Average	7.9	7.8	7.8	7.8	7.9

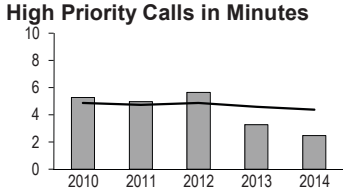
Effectiveness Measures

Percentage of Part I Cases Cleared of Those Reported



	2010	2011	2012	2013	2014
Salisbury	31.1%	33.7%	10.3%	29.6%	28.6%
Average	32.3%	34.8%	34.7%	37.3%	39.9%

Response Time to High Priority Calls in Minutes



	2010	2011	2012	2013	2014
Salisbury	5.3	5.0	5.7	3.3	2.5
Average	4.9	4.7	4.9	4.6	4.4

Wilson Police Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Wilson's police department provides an array of police services, including patrol, investigations, a telephone response unit, a forensics laboratory, a canine unit, a part-time mounted equine unit, a special response unit, street crimes, drug enforcement, and other services.

The city had 119 sworn officer positions authorized for the fiscal year, with an average length of service of 10.1 years. The main police department headquarters is located in downtown Wilson, housing administration, records, property, major case investigations, police information services, victim services, evidence, and recruitment and training. There are six substations.

Patrol officers work twelve-hour shifts, working fourteen days of a twenty-eight day cycle (168 hours). Shifts are either 7 a.m. to 7 p.m. or 7 p.m. to 7 a.m. and are rotated every two weeks. Department needs may cause shifts to vary. Investigators generally work eight-hour shifts five days per week. Shifts are 8 a.m. to 5 p.m.

Each patrol officer is assigned a vehicle and may take the vehicle home if he or she resides in the city. Officers living outside the city limits park their vehicles at businesses.

The police department was successful in clearing a total of 1,003 Part I cases in FY 2013–14.

Wilson defines high priority emergency calls as calls related to crimes in progress that require immediate response: murder, rape, robbery, burglary, arson/fire, and assaults.

Conditions Affecting Service, Performance, and Costs

The average response time to high priority calls reflects the response time of the first unit to arrive. Self-initiated calls with a response time of zero are not included in the average response time to high priority calls.

Municipal Profile

Population (OSBM 2013)	49,097
Land Area (Square Miles)	30.48
Persons per Square Mile	1,611
Median Family Income	$43,442
U.S. Census 2010	

Service Profile

FTE Positions—Sworn	119.0
FTE Positions—Other	15.0
Marked and Unmarked Patrol Vehicles	129
Part I Crimes Reported	
Homicide	3
Rape	4
Robbery	80
Assault	141
Burglary	464
Larceny	1,535
Auto Theft	93
Arson	7
TOTAL	2,327
Part II Crimes Reported	3,387
Part I Crimes Cleared	
Persons	152
Property	851
TOTAL	1,003
Reporting Format	UCR
Number of Calls Dispatched	92,850
Number of Traffic Accidents	2,007
Property Damage for Accidents	NA

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	68.1%
Operating Costs	24.3%
Capital Costs	7.6%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$10,341,408
Operating Costs	$3,683,898
Capital Costs	$1,156,508
TOTAL	$15,181,814

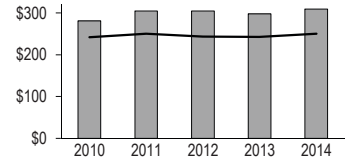
Wilson

Police Services

Key: Wilson ■ Benchmarking Average — Fiscal Years 2010 through 2014

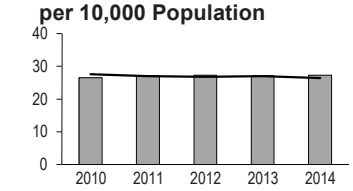
Resource Measures

Police Services Costs per Capita



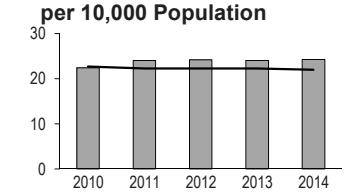
	2010	2011	2012	2013	2014
Wilson	$281.13	$305	$305	$297	$309
Average	$242	$250	$244	$243	$250

Total Police Services Personnel per 10,000 Population



	2010	2011	2012	2013	2014
Wilson	26.5	27.1	27.3	27.1	27.3
Average	27.6	27.0	26.8	27.0	26.4

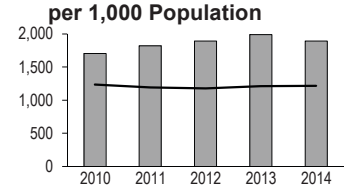
Sworn Police Officers per 10,000 Population



	2010	2011	2012	2013	2014
Wilson	22.4	24.1	24.2	24.1	24.2
Average	22.7	22.3	22.3	22.3	22.0

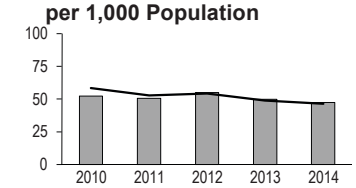
Workload Measures

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Wilson	1,702	1,820	1,892	1,988	1,891
Average	1,234	1,195	1,178	1,211	1,214

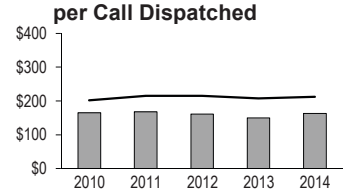
Part I Crimes per 1,000 Population



	2010	2011	2012	2013	2014
Wilson	52.2	50.6	55.0	50.0	47.4
Average	58.3	52.8	54.2	48.8	46.4

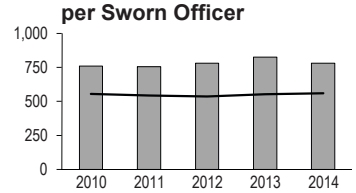
Efficiency Measures

Police Services Cost per Call Dispatched



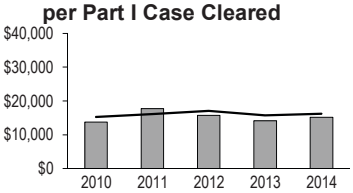
	2010	2011	2012	2013	2014
Wilson	$165	$167	$161	$150	$164
Average	$202	$215	$215	$207	$213

Calls Dispatched per Sworn Officer



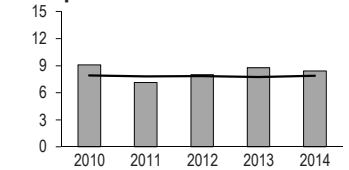
	2010	2011	2012	2013	2014
Wilson	759	756	781	826	780
Average	554	543	535	551	559

Police Services Cost per Part I Case Cleared



	2010	2011	2012	2013	2014
Wilson	$13,778	$17,735	$15,751	$14,100	$15,136
Average	$15,243	$16,108	$17,093	$15,771	$16,220

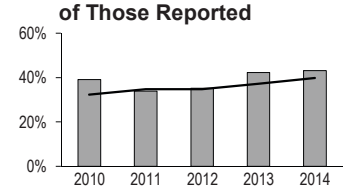
Part I Cases Cleared per Sworn Officer



	2010	2011	2012	2013	2014
Wilson	9.1	7.1	8.0	8.8	8.4
Average	7.9	7.8	7.8	7.8	7.9

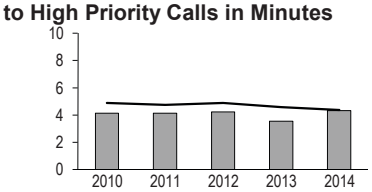
Effectiveness Measures

Percentage of Part I Cases Cleared of Those Reported



	2010	2011	2012	2013	2014
Wilson	39.1%	33.9%	35.2%	42.2%	43.1%
Average	32.3%	34.8%	34.7%	37.3%	39.9%

Response Time to High Priority Calls in Minutes



	2010	2011	2012	2013	2014
Wilson	4.2	4.2	4.2	3.6	4.3
Average	4.9	4.7	4.9	4.6	4.4

Winston-Salem Police Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Winston-Salem provides an array of police services to its citizens, including patrol, investigations, a traffic enforcement unit, a DWI Task Force, a telephone response unit, a canine unit, a special response unit, bicycle patrol, drug enforcement, a gang unit, and other crime prevention programs.

The city had 559 sworn officer positions authorized for the fiscal year, with an average length of service of eleven years. The police department occupies the public safety center. It houses the police department, emergency communications, and the fire department administration. The special investigations division occupies offices in leased space in another facility. A downtown bike patrol office is maintained in the central downtown area.

The department employs a forward-rotating schedule of five shifts. Officers work five days on and four days off. Shifts are ten hours in length. The majority of investigators work Monday through Friday from 8 a.m. to 5 p.m.

Patrol vehicles are assigned to individual officers. Officers residing within Forsyth County take their vehicles home. If officers reside outside of the county, they park their vehicles in a residential or business area within the city limits.

The police department was successful in clearing a total of 4,666 Part I crimes in FY 2013–14.

Winston-Salem defines highest priority emergency calls as those dealing with a significant threat of imminent injury to persons or with crimes against persons that are in progress or have just occurred and where the suspect is still there.

Conditions Affecting Service, Performance, and Costs

The average response time to high priority calls reflects the response time of the first arriving unit. Self-initiated calls with a response time of zero are included in the average response time to high priority calls.

The Winston-Salem Police Department does not investigate arsons, so arsons are not included in the crimes reported here. Arson investigations are handled by the Winston-Salem Fire Department.

For FY 2011–12, the Winston-Salem/Forsyth County School System contracted with the Winston-Salem Police Department for the provision of eighteen school resource officers to serve fourteen middle and high schools within Winston-Salem. The school system reimburses the city for eleven months worth of the cost of the officers.

Municipal Profile

Population (OSBM 2013)	235,527
Land Area (Square Miles)	132.45
Persons per Square Mile	1,778
Median Family Income U.S. Census 2010	$51,491

Service Profile

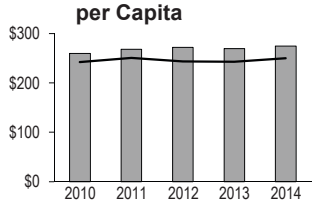
FTE Positions—Sworn	559.0
FTE Positions—Other	114.0
Marked and Unmarked Patrol Vehicles	470
Part I Crimes Reported	
Homicide	20
Rape	107
Robbery	457
Assault	1,128
Burglary	3,956
Larceny	8,581
Auto Theft	641
Arson	NA
TOTAL	14,890
Part II Crimes Reported	36,370
Part I Crimes Cleared	
Persons	816
Property	3,850
TOTAL	4,666
Reporting Format	IBR
Number of Calls Dispatched	262,118
Number of Traffic Accidents	8,796
Property Damage for Accidents	$26,509,628

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	75.6%
Operating Costs	15.7%
Capital Costs	8.8%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$48,903,402
Operating Costs	$10,140,185
Capital Costs	$5,664,559
TOTAL	$64,708,146

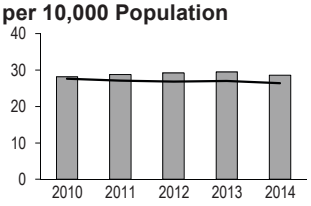
Resource Measures

Police Services Costs per Capita



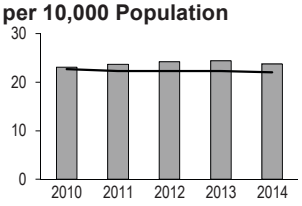
	2010	2011	2012	2013	2014
Winston-Salem	$259.44	$268	$272	$269	$275
Average	$242	$250	$244	$243	$250

Total Police Services Personnel per 10,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	28.1	28.7	29.2	29.4	28.6
Average	27.6	27.0	26.8	27.0	26.4

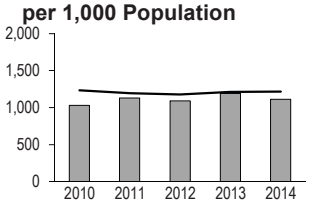
Sworn Police Officers per 10,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	23.1	23.7	24.2	24.4	23.7
Average	22.7	22.3	22.3	22.3	22.0

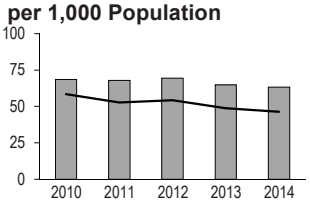
Workload Measures

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	1,029	1,131	1,092	1,188	1,113
Average	1,234	1,195	1,178	1,211	1,214

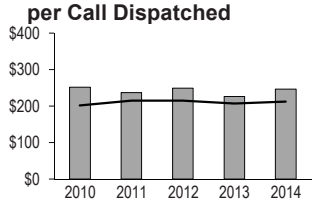
Part I Crimes per 1,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	68.6	67.8	69.5	64.9	63.2
Average	58.3	52.8	54.2	48.8	46.4

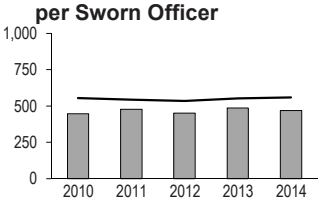
Efficiency Measures

Police Services Cost per Call Dispatched



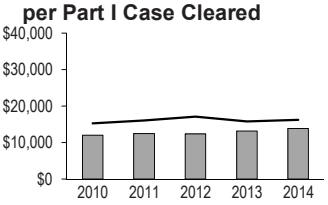
	2010	2011	2012	2013	2014
Winston-Salem	$252	$237	$249	$226	$247
Average	$202	$215	$215	$207	$213

Calls Dispatched per Sworn Officer



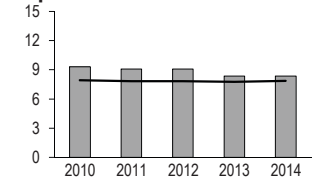
	2010	2011	2012	2013	2014
Winston-Salem	446	478	452	487	469
Average	554	543	535	551	559

Police Services Cost per Part I Case Cleared



	2010	2011	2012	2013	2014
Winston-Salem	$12,055	$12,500	$12,401	$13,193	$13,868
Average	$15,243	$16,108	$17,093	$15,771	$16,220

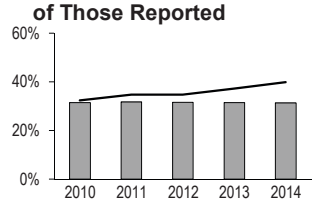
Part I Cases Cleared per Sworn Officer



	2010	2011	2012	2013	2014
Winston-Salem	9.3	9.1	9.1	8.4	8.3
Average	7.9	7.8	7.8	7.8	7.9

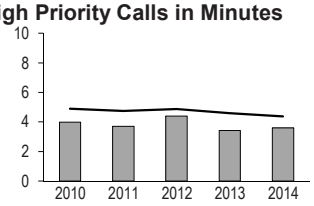
Effectiveness Measures

Percentage of Part I Cases Cleared of Those Reported



	2010	2011	2012	2013	2014
Winston-Salem	31.4%	31.6%	31.6%	31.5%	31.3%
Average	32.3%	34.8%	34.7%	37.3%	39.9%

Response Time to High Priority Calls in Minutes



	2010	2011	2012	2013	2014
Winston-Salem	4.0	3.7	4.4	3.4	3.6
Average	4.9	4.7	4.9	4.6	4.4


UNC
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Performance and Cost Data

EMERGENCY COMMUNICATIONS

PERFORMANCE MEASURES FOR EMERGENCY COMMUNICATIONS

SERVICE DEFINITION

This service refers to the receipt and handling of 911 and other calls by an emergency communications center. Such a center must answer all calls, including those that come in over 911 lines and others that come in over regular phone lines. Some calls result in the dispatch of a police or other emergency response unit. Others do not.

NOTES ON PERFORMANCE MEASURES

1. Number of Calls Answered and Number of Calls Dispatched per 1,000 Population

These are used as measures of workload. All calls coming into a police emergency communications center must be answered; therefore these measures assess service workload. Calls coming into a center also reflect the actual or existing, if not full potential, need for emergency communications services. Many calls coming into a center are dispatched. Others come in over regular telephone lines, and still others may be referred to the center by an external call-taker, such as a county emergency communications center.

2. Telecommunicators

Telecommunicators are the personnel who handle the calls in the communication centers. They may take calls, dispatch calls, or do both. Telecommunicators receive specialized training. They work on a shift schedule that generally allows twenty-four-hour-a-day, seven-day-a-week coverage.

3. Average Number of Seconds from Initial Ring to Answer and Percentage of Calls Answered within Twenty Seconds

These are effectiveness measures that assess how quickly telecommunicators answer calls.

4. Average Processing Time (Seconds)

This is an effectiveness measure, representing the average time in seconds between when the telecommunicator answers the telephone and when Computer-Aided Dispatch (CAD) entry begins. This measure is often referred to as “talk time.”

5. For Calls Dispatched, Average Number of Seconds from CAD Entry to Dispatch—Highest Priority Calls

Some calls result in the dispatch of a police or other emergency response unit to a threatening or other similar emergency situation. Other calls result in a dispatch to a serious—but not emergency—situation. Other calls do not result in a dispatch. This measure assesses dispatch time for high priority, emergency situations.

Emergency Communications

Summary of Key Dimensions of Service

City or Town	Population Served	Number of FTEs	Average Length of Service for Call Takers (in Years)	Total Incoming Calls Handled	Total E-911 Calls Handled	Total Dispatches	Outgoing Calls Other than Dispatches
Apex	40,925	10.3	14.1	44,891	3,369	37,521	14,504
Asheville	88,003	24.0	8.3	196,764	31,498	113,448	37,689
Burlington	51,396	14.0	6.2	108,586	21,059	75,142	NA
Cary	144,671	27.0	4.8	161,702	64,475	141,107	45,247
Concord	83,279	22.5	7.5	109,382	31,915	95,237	38,326
Greensboro	507,419	104.0	8.3	608,440	324,084	456,463	165,977
Greenville	87,241	17.0	10.0	104,352	25,877	89,235	NA
Hickory	40,222	14.0	8.6	102,290	10,912	73,396	NA
High Point	107,652	27.0	10.3	263,650	80,508	136,020	NA
Winston-Salem	235,527	50.0	9.2	429,509	212,758	282,884	74,990

NOTES

The population served by the municipal emergency communications center may go beyond municipal boundaries up to the entire county in cases where the service is a consolidated center.

EXPLANATORY FACTORS

These are factors that the project found affected emergency communication performance and cost in one or more of the municipalities:

Types of emergency response units dispatched, such as police, fire, and EMS
Number and proportion of nonemergency calls received by center
Types of assistance or advice, such as medical, that telecommunicators provide over the phone
Technology available to telecommunication centers
City's definition of what constitutes an "emergency" and "highest priority" call
Service to city only or to city and outlying areas
Training of telecommunicators
Demographic makeup of community
Organizational configuration and staffing for service

Apex Emergency Communications

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Apex Emergency Communications Center is a division within the Apex Police Department. This center is a secondary public safety answering point within Wake County, using Raleigh computer-aided dispatch (CAD) as a remote position. The communications center dispatches calls for police, fire, public works, and utilities.

The town owns a 150-foot radio tower which is tied into the Wake County radio system. The system is an 800 MHz system tied into the state VIPER system for radio operations.

Apex's emergency communications center handled a total of 44,891 incoming calls in the fiscal year and dispatched 37,521 calls. The city defines highest priority emergency calls as those with immediate life or property risk or in-progress calls.

Conditions Affecting Service, Performance, and Costs

Apex began participation in the benchmarking project in July 2011, with FY 2010–11 being the first reporting year.

The measure "percent of E-911 calls answered within twenty seconds" is a new measure added for FY 2009–10.

CAD entry for Apex does not begin immediately but is activated by operators.

Municipal Profile

Population (OSBM 2013)	40,925
Land Area (Square Miles)	16.25
Persons per Square Mile	2,518
Median Family Income U.S. Census 2010	$97,201
County	Wake

Service Profile

Primary or Secondary Answering Point	Secondary
Calls Dispatched	
Police	Yes
Fire	No
Other	Yes
FTE Positions	
Telecommunicators/Call-Takers	9.40
Other	0.85
Total Positions	10.25
Average Length of Service for Call-Takers	14.1 years
Total Incoming Calls	44,891
Total 911 Calls	3,369
Total Calls Dispatched	37,521
Outgoing Calls Other than Dispatch	14,504
Revenue from E-911 Fees	None

Full Cost Profile

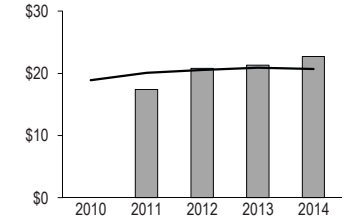
Cost Breakdown by Percentage	
Personal Services	80.1%
Operating Costs	16.7%
Capital Costs	3.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$743,523
Operating Costs	$154,738
Capital Costs	$30,486
TOTAL	$928,747

Apex Emergency Communications

Key: Apex ■ Benchmarking Average — Fiscal Years 2010 through 2014

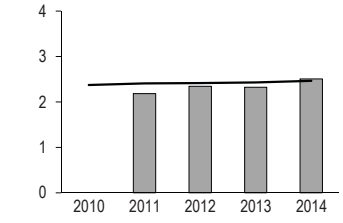
Resource Measures

Emergency Communications Services Costs per Capita



	2010	2011	2012	2013	2014
Apex		$17.41	$20.82	$21.32	$22.69
Average	$18.91	$20.09	$20.55	$20.90	$20.70

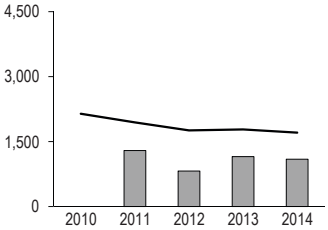
Emergency Communications FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Apex		2.19	2.35	2.33	2.50
Average	2.37	2.41	2.42	2.43	2.46

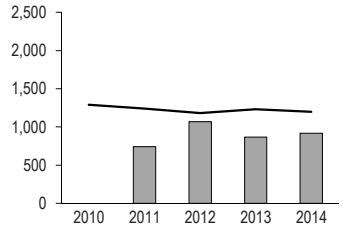
Workload Measures

Total Calls Answered per 1,000 Population



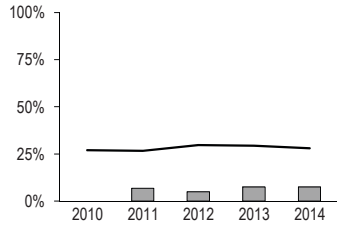
	2010	2011	2012	2013	2014
Apex		1,293	822	1,156	1,097
Average	2,141	1,941	1,757	1,784	1,709

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Apex		743	1,070	868	917
Average	1,291	1,242	1,183	1,233	1,200

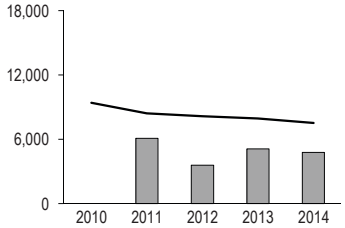
E-911 Calls as a Percentage of All Incoming Calls



	2010	2011	2012	2013	2014
Apex		6.9%	5.0%	7.5%	7.5%
Average	27.0%	26.7%	29.7%	29.4%	28.1%

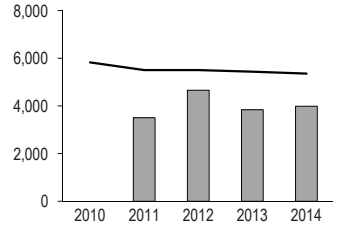
Efficiency Measures

Calls Answered per Telecommunicator



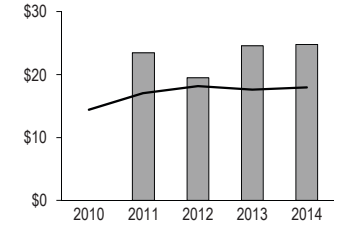
	2010	2011	2012	2013	2014
Apex		6,099	3,576	5,107	4,776
Average	9,404	8,402	8,157	7,950	7,508

Calls Dispatched per Telecommunicator



	2010	2011	2012	2013	2014
Apex		3,505	4,657	3,837	3,992
Average	5,824	5,509	5,502	5,445	5,358

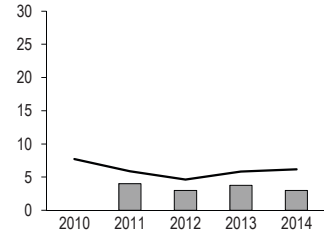
Emergency Communications Cost per Call Dispatched



	2010	2011	2012	2013	2014
Apex		$23.44	$19.47	$24.55	$24.75
Average	$14.39	$17.02	$18.15	$17.63	$17.96

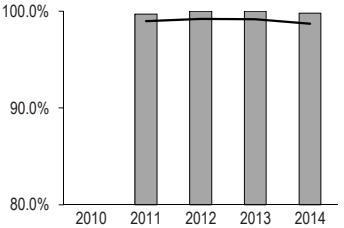
Effectiveness Measures

Number of Seconds from Initial Ring to Answer



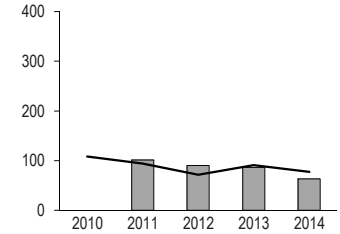
	2010	2011	2012	2013	2014
Apex		4	3	4	3
Average	8	6	5	6	6

Percent of E-911 Calls Answered within Twenty Seconds



	2010	2011	2012	2013	2014
Apex		99.7%	100.0%	100.0%	99.8%
Average		99.0%	99.2%	99.2%	98.7%

Average Time in Seconds from CAD Entry to Dispatch for Priority One Calls



	2010	2011	2012	2013	2014
Apex		101	90	86	63
Average	108	94	71	91	77

Asheville Emergency Communications

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Asheville's Communication Unit handles emergency calls for police and other assistance calls coming into its center from the city. The center is organizationally located in the Support Services Division of the police department. The city handles adminstrative calls, requests for police response, and E-911 calls.

The communications center operates twenty-four hours a day, seven days a week, using three rotating shifts. The communications center uses a call-taker for its E-911 emergency calls. Buncombe County takes such calls and directs them by computer to the city's communications center. Non-emergency calls, however, come directly into the city's communications center.

The city owns its communications infrastructure, consisting of three towers. One tower is used for repeated radio communications, while the other two towers are stand-alone sites which require officers/telecommunicators to manually switch channels. The city uses the Motorola Simulcast system.

Asheville's emergency communications center handled a total of 196,764 incoming calls in the fiscal year and dispatched 113,448 calls. The city defines highest priority emergency calls as crimes in progress and situations that are property- or life-threatening.

Conditions Affecting Service, Performance, and Costs

The measure "percent of E-911 calls answered within twenty seconds" is a new measure added for FY 2009–10.

Computer-aided dispatch (CAD) entry is an immediate action beginning when a telecommunicator hits "new call" or "new event."

Asheville's community policing initiative encourages citizens to report criminal activity, and this has generated more calls over time. The wider use of cell phones has also made it easier for citizens to respond immediately, which has probably increased calls as well.

Asheville's Communication Unit has made an effort to better categorize high priority calls, which has helped reduce the time between the start of CAD entry and dispatch.

Municipal Profile

Population (OSBM 2013)	88,003
Land Area (Square Miles)	45.52
Persons per Square Mile	1,933
Median Family Income U.S. Census 2010	$53,350
County	Buncombe

Service Profile

Primary or Secondary Answering Point	Secondary
Calls Dispatched	
Police	Yes
Fire	No
Other	Yes
FTE Positions	
Telecommunicators/Call-Takers	23.0
Other	1.0
Total Positions	24.0
Average Length of Service for Call-Takers	8.3 years
Total Incoming Calls	196,764
Total 911 Calls	31,498
Total Calls Dispatched	113,448
Outgoing Calls Other than Dispatch	37,689
Revenue from E-911 Fees	None

Full Cost Profile

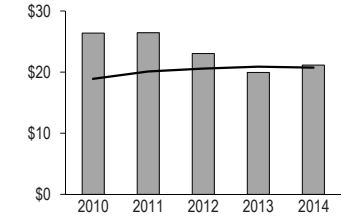
Cost Breakdown by Percentage	
Personal Services	58.0%
Operating Costs	40.2%
Capital Costs	1.8%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,080,709
Operating Costs	$747,823
Capital Costs	$33,719
TOTAL	$1,862,251

Asheville Emergency Communications

Key: Asheville ■ Benchmarking Average — Fiscal Years 2010 through 2014

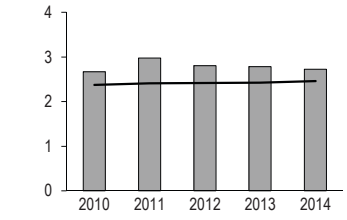
Resource Measures

Emergency Communications Services Costs per Capita



	2010	2011	2012	2013	2014
Asheville	$26.39	$26.45	$23.01	$19.94	$21.16
Average	$18.91	$20.09	$20.55	$20.90	$20.70

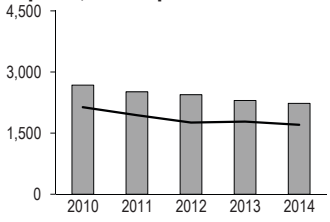
Emergency Communications FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Asheville	2.67	2.98	2.80	2.78	2.73
Average	2.37	2.41	2.42	2.43	2.46

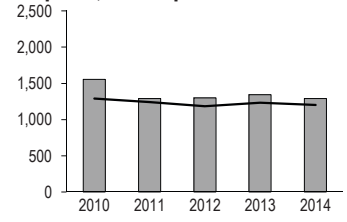
Workload Measures

Total Calls Answered per 1,000 Population



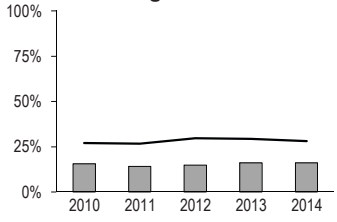
	2010	2011	2012	2013	2014
Asheville	2,677	2,519	2,448	2,301	2,236
Average	2,141	1,941	1,757	1,784	1,709

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Asheville	1,556	1,289	1,299	1,344	1,289
Average	1,291	1,242	1,183	1,233	1,200

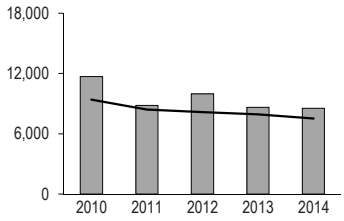
E-911 Calls as a Percentage of All Incoming Calls



	2010	2011	2012	2013	2014
Asheville	15.5%	14.2%	14.9%	16.1%	16.0%
Average	27.0%	26.7%	29.7%	29.4%	28.1%

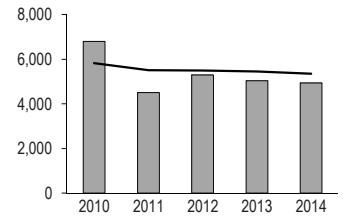
Efficiency Measures

Calls Answered per Telecommunicator



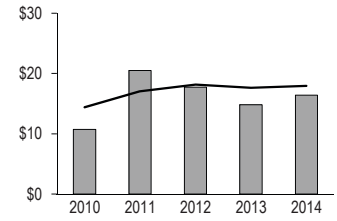
	2010	2011	2012	2013	2014
Asheville	11,702	8,814	9,983	8,623	8,555
Average	9,404	8,402	8,157	7,950	7,508

Calls Dispatched per Telecommunicator



	2010	2011	2012	2013	2014
Asheville	6,803	4,511	5,297	5,036	4,933
Average	5,824	5,509	5,502	5,445	5,358

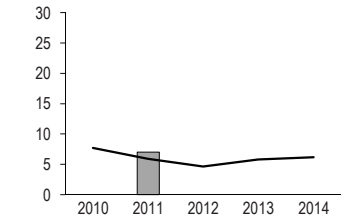
Emergency Communications Cost per Call Dispatched



	2010	2011	2012	2013	2014
Asheville	$10.72	$20.52	$17.72	$14.84	$16.42
Average	$14.39	$17.02	$18.15	$17.63	$17.96

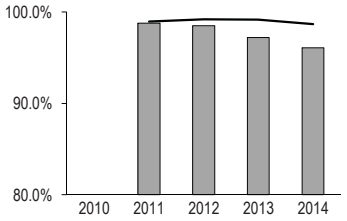
Effectiveness Measures

Number of Seconds from Initial Ring to Answer



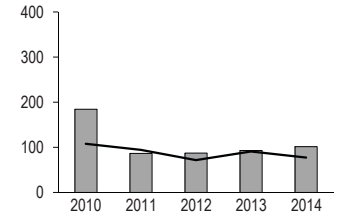
	2010	2011	2012	2013	2014
Asheville		7			
Average	8	6	5	6	6

Percent of E-911 Calls Answered within Twenty Seconds



	2010	2011	2012	2013	2014
Asheville		98.8%	98.5%	97.2%	96.1%
Average		99.0%	99.2%	99.2%	98.7%

Average Time in Seconds from CAD Entry to Dispatch for Priority One Calls



	2010	2011	2012	2013	2014
Asheville	184	86	87	93	101
Average	108	94	71	91	77

Burlington Emergency Communications

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The emergency communications center is a division within the Burlington Police Department. The unit is responsible for dispatching police and fire personnel for the city.

Burlington uses a mixed-mode analog/digital twenty-eight-channel trunked system with five towers shared with Greensboro and Guilford County. The communications infrastructure is a joint venture with Guilford County and the City of Greensboro. Burlington owns the subscriber units and infrastructure on its end of the system. The system is interfaced with the original Guilford/Greensboro system.

Burlington's communications center answered 108,586 incoming calls and dispatched 88,681 calls during the year. The city defines highest priority emergency calls as any report that relates to a significant threat of imminent injury to a person or substantial damage to property.

Conditions Affecting Service, Performance, and Costs

The measure "percent of E-911 calls answered within twenty seconds" is a new measure added for FY 2009–10.

Computer-aided dispatch (CAD) entry is an immediate action with a new call or command line keystroke initiation.

The drop in the measure "average time in seconds from CAD entry to dispatch " primarily reflects a change in reporting rather than service changes. In earlier years, some calls which did not require an emergency response were being included. The lastest data is a more accurate reflection, as it only includes calls for service requiring an emergency response.

Burlington was not able to provide the number of incoming or E-911 calls for FY 2012–13.

Municipal Profile

Population (OSBM 2013)	51,396
Land Area (Square Miles)	27.28
Persons per Square Mile	1,884
Median Family Income U.S. Census 2010	$46,461
County	Alamance

Service Profile

Primary or Secondary Answering Point	Secondary
Calls Dispatched	
Police	Yes
Fire	Yes
Other	Yes
FTE Positions	
Telecommunicators/Call-Takers	12.0
Other	2.0
Total Positions	14.0
Average Length of Service for Call-Takers	6.2 years
Total Incoming Calls	108,586
Total 911 Calls	21,059
Total Calls Dispatched	75,142
Outgoing Calls Other than Dispatch	NA
Revenue from E-911 Fees	None

Full Cost Profile

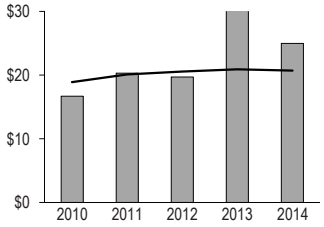
Cost Breakdown by Percentage	
Personal Services	58.5%
Operating Costs	35.8%
Capital Costs	5.7%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$750,015
Operating Costs	$458,743
Capital Costs	$73,006
TOTAL	$1,281,764

Burlington Emergency Communications

Key: Burlington ■ Benchmarking Average — Fiscal Years 2010 through 2014

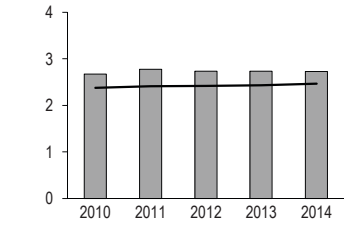
Resource Measures

Emergency Communications Services Costs per Capita



	2010	2011	2012	2013	2014
Burlington	$16.68	$20.29	$19.68	$30.23	$24.94
Average	$18.91	$20.09	$20.55	$20.90	$20.70

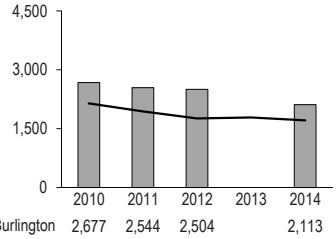
Emergency Communications FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Burlington	2.67	2.77	2.73	2.73	2.72
Average	2.37	2.41	2.42	2.43	2.46

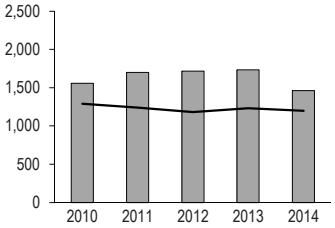
Workload Measures

Total Calls Answered per 1,000 Population



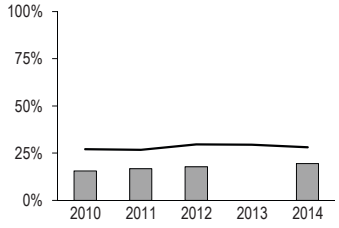
	2010	2011	2012	2013	2014
Burlington	2,677	2,544	2,504		2,113
Average	2,141	1,941	1,757	1,784	1,709

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Burlington	1,556	1,698	1,717	1,732	1,462
Average	1,291	1,242	1,183	1,233	1,200

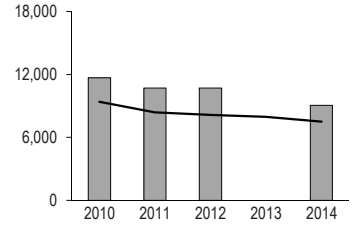
E-911 Calls as a Percentage of All Incoming Calls



	2010	2011	2012	2013	2014
Burlington	15.5%	16.8%	17.7%		19.4%
Average	27.0%	26.7%	29.7%	29.4%	28.1%

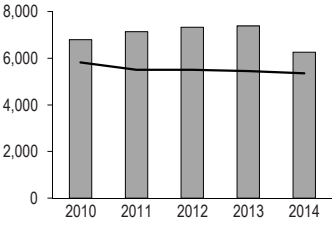
Efficiency Measures

Calls Answered per Telecommunicator



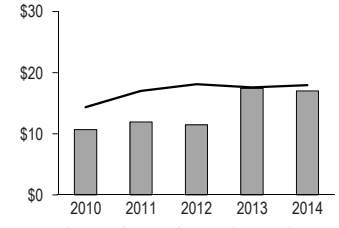
	2010	2011	2012	2013	2014
Burlington	11,702	10,699	10,699		9,049
Average	9,404	8,402	8,157	7,950	7,508

Calls Dispatched per Telecommunicator



	2010	2011	2012	2013	2014
Burlington	6,803	7,144	7,335	7,390	6,262
Average	5,824	5,509	5,502	5,445	5,358

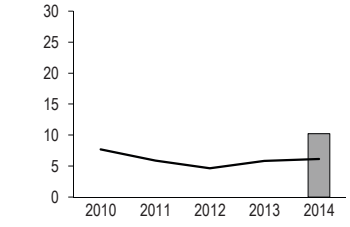
Emergency Communications Cost per Call Dispatched



	2010	2011	2012	2013	2014
Burlington	$10.72	$11.95	$11.46	$17.45	$17.06
Average	$14.39	$17.02	$18.15	$17.63	$17.96

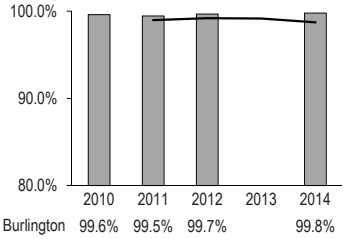
Effectiveness Measures

Number of Seconds from Initial Ring to Answer



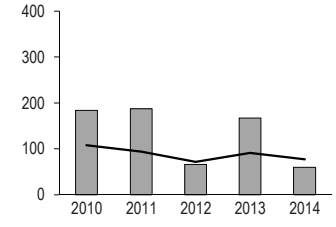
	2010	2011	2012	2013	2014
Burlington					10
Average	8	6	5	6	6

Percent of E-911 Calls Answered within Twenty Seconds



	2010	2011	2012	2013	2014
Burlington	99.6%	99.5%	99.7%		99.8%
Average		99.0%	99.2%	99.2%	98.7%

Average Time in Seconds from CAD Entry to Dispatch for Priority One



	2010	2011	2012	2013	2014
Burlington	184	187	66	167	59
Average	108	94	71	91	77

Cary Emergency Communications

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Cary Police Department handles all emergency and non-emergency communications for the town of Cary, dispatching all police and fire services for the town. The communications center is staffed with full-time telecommunicators, including five shift supervisors, who answer all emergency and non-emergency calls for service.

Cary uses the Motorola SmartNet 800 MHz radio system, with all the radio equipment being owned by the town. The town has two emergency back-up channels, one for police and one for fire. The transmission tower is located ten miles south of the communications center and is linked via microwave.

Cary's center handled a total of 161,702 incoming calls in the fiscal year, dispatching 141,107 calls. The city defines highest priority emergency calls as any report that relates to a significant threat of imminent injury to a person or substantial damage to property.

Cary received $443,455 in E-911 revenues to support system operations.

Conditions Affecting Service, Performance, and Costs

The measure "percent of E-911 calls answered within twenty seconds" is a new measure added for FY 2009–10.

During FY 2011, the Town of Cary switched to a new computer-assisted dispatch (CAD) system. The new CAD system has a manual dispatch, where the old system did this automatically. The process change has resulted in the average seconds for dispatch increasing over the prior year. As the telecommunicators have become familiar with the system, the average dispatch time is expected to come back down.

Municipal Profile

Population (OSBM 2013)	144,671
Land Area (Square Miles)	55.54
Persons per Square Mile	2,605
Median Family Income U.S. Census 2010	$108,956
County	Wake

Service Profile

Primary or Secondary Answering Point	Primary
Calls Dispatched	
Police	Yes
Fire	Yes
Other	Yes
FTE Positions	
Telecommunicators/Call-Takers	20.0
Other	7.0
Total Positions	27.0
Average Length of Service for Call-Takers	4.8 years
Total Incoming Calls	161,702
Total 911 Calls	64,475
Total Calls Dispatched	141,107
Outgoing Calls Other than Dispatch	45,247
Revenue from E-911 Fees	$443,455

Full Cost Profile

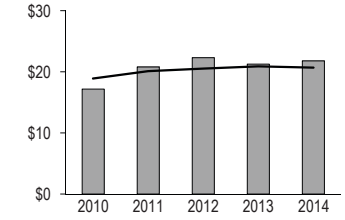
Cost Breakdown by Percentage	
Personal Services	69.5%
Operating Costs	25.3%
Capital Costs	5.2%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$2,191,397
Operating Costs	$799,034
Capital Costs	$163,533
TOTAL	$3,153,964

Cary Emergency Communications

Key: Cary ■ Benchmarking Average — Fiscal Years 2010 through 2014

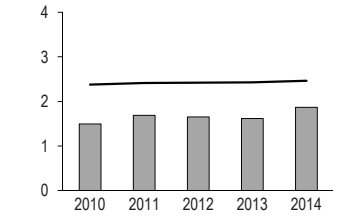
Resource Measures

Emergency Communications Services Costs per Capita



	2010	2011	2012	2013	2014
Cary	$17.17	$20.81	$22.29	$21.29	$21.80
Average	$18.91	$20.09	$20.55	$20.90	$20.70

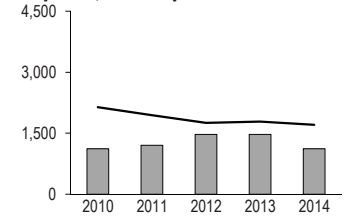
Emergency Communications FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Cary	1.49	1.69	1.65	1.62	1.87
Average	2.37	2.41	2.42	2.43	2.46

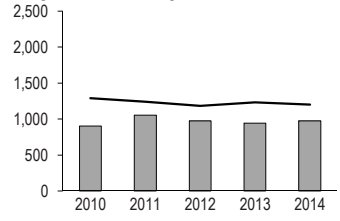
Workload Measures

Total Calls Answered per 1,000 Population



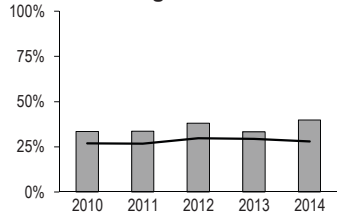
	2010	2011	2012	2013	2014
Cary	1,120	1,208	1,472	1,474	1,118
Average	2,141	1,941	1,757	1,784	1,709

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Cary	902	1,056	972	942	975
Average	1,291	1,242	1,183	1,233	1,200

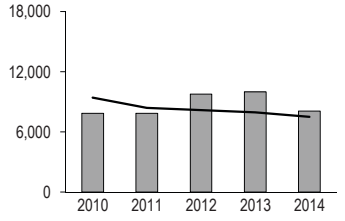
E-911 Calls as a Percentage of All Incoming Calls



	2010	2011	2012	2013	2014
Cary	33.4%	33.6%	38.1%	33.4%	39.9%
Average	27.0%	26.7%	29.7%	29.4%	28.1%

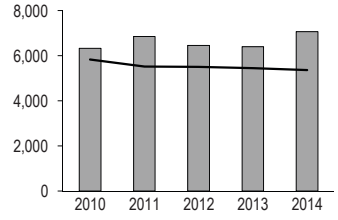
Efficiency Measures

Calls Answered per Telecommunicator



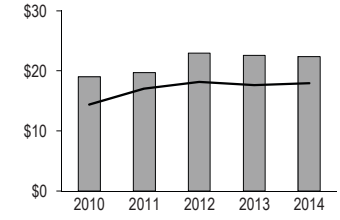
	2010	2011	2012	2013	2014
Cary	7,853	7,833	9,752	9,994	8,085
Average	9,404	8,402	8,157	7,950	7,508

Calls Dispatched per Telecommunicator



	2010	2011	2012	2013	2014
Cary	6,328	6,848	6,443	6,390	7,055
Average	5,824	5,509	5,502	5,445	5,358

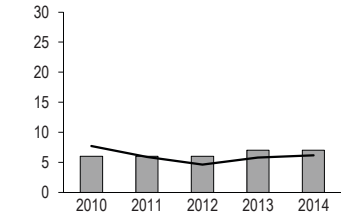
Emergency Communications Cost per Call Dispatched



	2010	2011	2012	2013	2014
Cary	$19.03	$19.71	$22.93	$22.59	$22.35
Average	$14.39	$17.02	$18.15	$17.63	$17.96

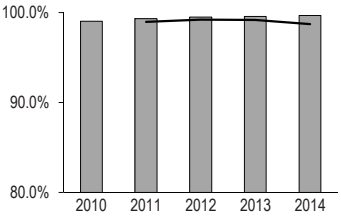
Effectiveness Measures

Number of Seconds from Initial Ring to Answer



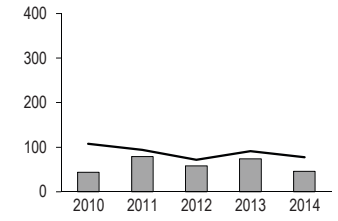
	2010	2011	2012	2013	2014
Cary	6	6	6	7	7
Average	8	6	5	6	6

Percent of E-911 Calls Answered within Twenty Seconds



	2010	2011	2012	2013	2014
Cary	99.0%	99.3%	99.5%	99.6%	99.7%
Average		99.0%	99.2%	99.2%	98.7%

Average Time in Seconds from CAD Entry to Dispatch for Priority One Calls



	2010	2011	2012	2013	2014
Cary	44	79	58	74	46
Average	108	94	71	91	77

Concord Emergency Communications

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Concord's emergency communications center handles E-911 and non-emergency calls for the city. The emergency communications function of the city is separate from the police and fire functions and does not answer or transfer administrative calls for those departments. The emergency communications center does answer calls for utility and other city departments after hours, which is reflected in the number of incoming calls.

The city uses an 800 MHz system, which is a twelve-channel, five-site system shared with Cabarrus County and the City of Kannapolis.

Concord's center handled a total of 109,382 calls in the fiscal year, dispatching 95,237 calls.

Conditions Affecting Service, Performance, and Costs

The measure "percent of E-911 calls answered within twenty seconds" is a new measure added for FY 2009–10.

Municipal Profile

Population (OSBM 2013)	83,279
Land Area (Square Miles)	60.93
Persons per Square Mile	1,367
Median Family Income U.S. Census 2010	$63,643
County	Cabarrus

Service Profile

Primary or Secondary Answering Point	Primary
Calls Dispatched	
Police	Yes
Fire	Yes
Other	Yes
FTE Positions	
Telecommunicators/Call-Takers	21.5
Other	1.0
Total Positions	22.5
Average Length of Service for Call-Takers	7.5 years
Total Incoming Calls	109,382
Total 911 Calls	31,915
Total Calls Dispatched	95,237
Outgoing Calls Other than Dispatch	38,326
Revenue from E-911 Fees	None

Full Cost Profile

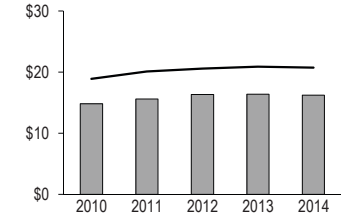
Cost Breakdown by Percentage	
Personal Services	83.4%
Operating Costs	15.1%
Capital Costs	1.6%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,125,198
Operating Costs	$203,289
Capital Costs	$20,964
TOTAL	$1,349,451

Concord Emergency Communications

Key: Concord ■ Benchmarking Average — Fiscal Years 2010 through 2014

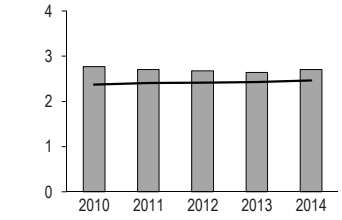
Resource Measures

Emergency Communications Services Costs per Capita



	2010	2011	2012	2013	2014
Concord	$14.78	$15.60	$16.30	$16.37	$16.20
Average	$18.91	$20.09	$20.55	$20.90	$20.70

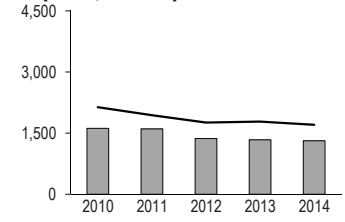
Emergency Communications FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Concord	2.77	2.70	2.67	2.64	2.70
Average	2.37	2.41	2.42	2.43	2.46

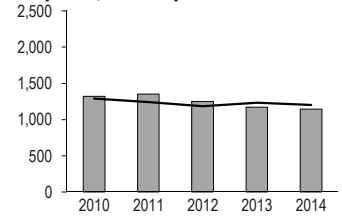
Workload Measures

Total Calls Answered per 1,000 Population



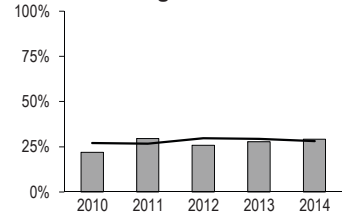
	2010	2011	2012	2013	2014
Concord	1,618	1,600	1,367	1,336	1,313
Average	2,141	1,941	1,757	1,784	1,709

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Concord	1,322	1,350	1,249	1,171	1,144
Average	1,291	1,242	1,183	1,233	1,200

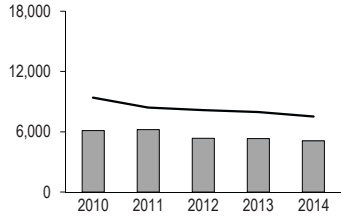
E-911 Calls as a Percentage of All Incoming Calls



	2010	2011	2012	2013	2014
Concord	21.9%	29.4%	25.7%	27.8%	29.2%
Average	27.0%	26.7%	29.7%	29.4%	28.1%

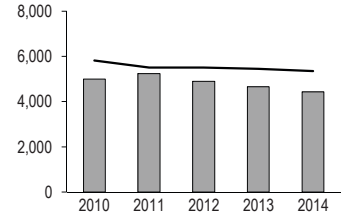
Efficiency Measures

Calls Answered per Telecommunicator



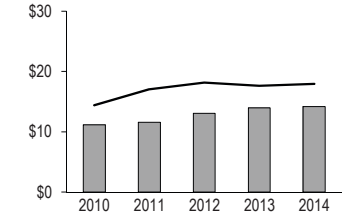
	2010	2011	2012	2013	2014
Concord	6,123	6,205	5,359	5,309	5,088
Average	9,404	8,402	8,157	7,950	7,508

Calls Dispatched per Telecommunicator



	2010	2011	2012	2013	2014
Concord	5,004	5,236	4,900	4,652	4,430
Average	5,824	5,509	5,502	5,445	5,358

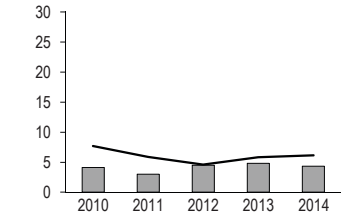
Emergency Communications Cost per Call Dispatched



	2010	2011	2012	2013	2014
Concord	$11.18	$11.56	$13.05	$13.98	$14.17
Average	$14.39	$17.02	$18.15	$17.63	$17.96

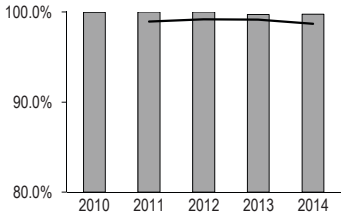
Effectiveness Measures

Number of Seconds from Initial Ring to Answer



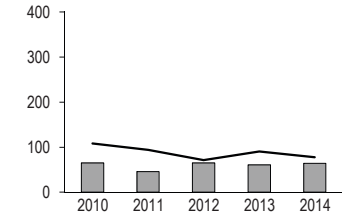
	2010	2011	2012	2013	2014
Concord	4	3	4	5	4
Average	8	6	5	6	6

Percent of E-911 Calls Answered within Twenty Seconds



	2010	2011	2012	2013	2014
Concord	100.0%	100.0%	100.0%	99.7%	99.8%
Average		99.0%	99.2%	99.2%	98.7%

Average Time in Seconds from CAD Entry to Dispatch for Priority One Calls



	2010	2011	2012	2013	2014
Concord	65	46	65	61	64
Average	108	94	71	91	77

Greensboro Emergency Communications

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Guilford Metro 911 operates under an interlocal agreement between the City of Greensboro and Guilford County. The public safety answering point serves as a separate department providing emergency communications for the City of Greensboro, Guilford County, and Gibsonville (except for the City of High Point Police and Fire departments). The services include dispatch and call intake for all law agencies, fire agencies, and EMS. The consolidation process enabled the first update of all 911 equipment in ten years and the creation of a back-up E-911 center to improve disaster preparedness. These changes contributed to slightly higher operational costs.

Guilford Metro 911 uses a twenty-eight-channel Motorola SmartNet 800 MHz radio system. The system has five tower sites and is jointly owned with Guilford County.

Greensboro's communications center handled a total of 608,440 incoming calls in the fiscal year, dispatching 456,463 calls. The city defines highest priority emergency calls as call types that require the fastest response, such as shootings, robberies, and domestic violence.

Greensboro received $2,607,288 in E-911 revenues to support system operations.

Conditions Affecting Service, Performance, and Costs

The measure "percent of E-911 calls answered within twenty seconds" is a new measure added for FY 2009–10.

Municipal Profile

Population (OSBM 2013)–Guilford County	507,419
Land Area (Square Miles)	649.42
Persons per Square Mile	781
Median Family Income U.S. Census 2010	$52,752
County	Guilford

Service Profile

Primary or Secondary Answering Point	Primary
Calls Dispatched	
Police	Yes
Fire	Yes
Other	Yes
FTE Positions	
Telecommunicators/Call-Takers	92.0
Other	12.0
Total Positions	104.0
Average Length of Service for Call-Takers	8.3 years
Total Incoming Calls	608,440
Total 911 Calls	324,084
Total Calls Dispatched	456,463
Outgoing Calls Other than Dispatch	165,977
Revenue from E-911 Fees	$2,607,288

Full Cost Profile

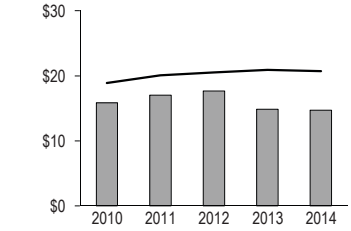
Cost Breakdown by Percentage	
Personal Services	81.4%
Operating Costs	18.6%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$6,075,212
Operating Costs	$1,390,700
Capital Costs	$0
TOTAL	$7,465,912

Greensboro Emergency Communications

Key: Greensboro ■ Benchmarking Average — Fiscal Years 2010 through 2014

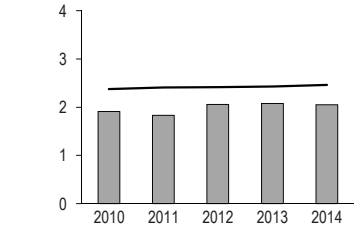
Resource Measures

Emergency Communications Services Costs per Capita



	2010	2011	2012	2013	2014
Greensboro	$15.84	$17.04	$17.69	$14.89	$14.71
Average	$18.91	$20.09	$20.55	$20.90	$20.70

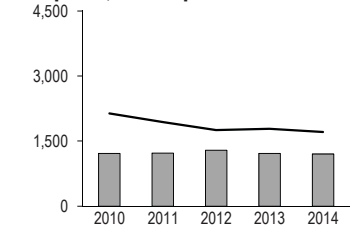
Emergency Communications FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greensboro	1.91	1.84	2.06	2.08	2.05
Average	2.37	2.41	2.42	2.43	2.46

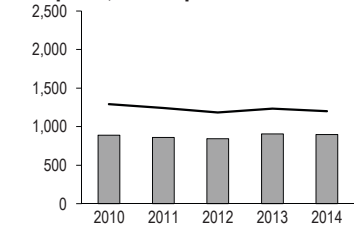
Workload Measures

Total Calls Answered per 1,000 Population



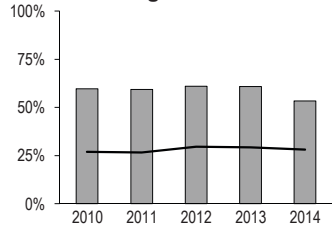
	2010	2011	2012	2013	2014
Greensboro	1,215	1,224	1,287	1,217	1,199
Average	2,141	1,941	1,757	1,784	1,709

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Greensboro	891	862	842	906	900
Average	1,291	1,242	1,183	1,233	1,200

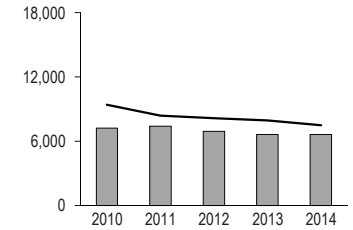
E-911 Calls as a Percentage of All Incoming Calls



	2010	2011	2012	2013	2014
Greensboro	59.6%	59.3%	60.9%	60.8%	53.3%
Average	27.0%	26.7%	29.7%	29.4%	28.1%

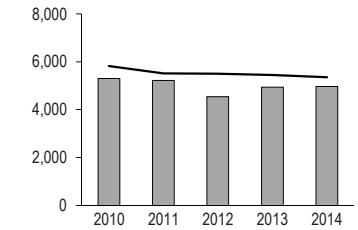
Efficiency Measures

Calls Answered per Telecommunicator



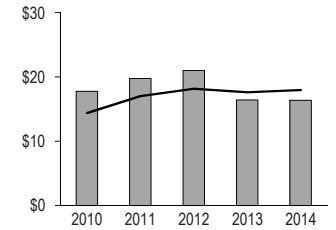
	2010	2011	2012	2013	2014
Greensboro	7,226	7,412	6,926	6,630	6,613
Average	9,404	8,402	8,157	7,950	7,508

Calls Dispatched per Telecommunicator



	2010	2011	2012	2013	2014
Greensboro	5,302	5,217	4,534	4,935	4,962
Average	5,824	5,509	5,502	5,445	5,358

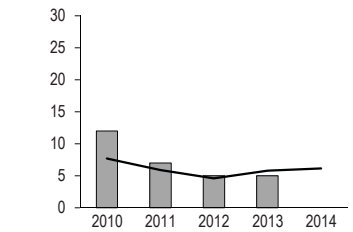
Emergency Communications Cost per Call Dispatched



	2010	2011	2012	2013	2014
Greensboro	$17.77	$19.77	$21.00	$16.43	$16.36
Average	$14.39	$17.02	$18.15	$17.63	$17.96

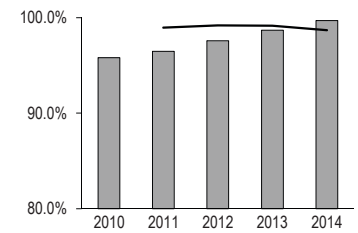
Effectiveness Measures

Number of Seconds from Initial Ring to Answer



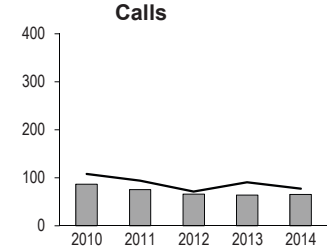
	2010	2011	2012	2013	2014
Greensboro	12	7	5	5	
Average	8	6	5	6	6

Percent of E-911 Calls Answered within Twenty Seconds



	2010	2011	2012	2013	2014
Greensboro	95.8%	96.5%	97.6%	98.7%	99.7%
Average		99.0%	99.2%	99.2%	98.7%

Average Time in Seconds from CAD Entry to Dispatch for Priority One Calls



	2010	2011	2012	2013	2014
Greensboro	86	75	66	64	65
Average	108	94	71	91	77

Greenville Emergency Communications

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Greenville's emergency communications center is a secondary public safety answering point, with Pitt County being the primary answering point. Pitt County initially receives all 911 calls and dispatches fire and EMS calls inside the city limits. All 911 calls for police services are transferred to the Greenville Police Department emergency communications center for dispatch. Calls can also be directly made to the police department over a dedicated emergency line.

The city does not own its own communications system and infrastructure. Greenville operates on the VIPER system maintained by the North Carolina State Highway Patrol. This system is fully maintained and operated by the state. The system has one tower located within the city limits and fully supports communication interoperability among all law enforcement agencies in Pitt County and with Greenville Fire/Rescue and East Care medical transport.

Greenville's center took in 104,352 incoming calls in the fiscal year and dispatched 89,235 calls.

Conditions Affecting Service, Performance, and Costs

The measure "percent of E-911 calls answered within twenty seconds" is a new measure added for FY 2009–10.

The emegency phone systems in Greenville and Pitt County were both changed during FY 2013–14. The city's tracking system lost two months of data on incoming calls which could not be retrieved. The drop in calls answered is a data issue rather than a change in service over the prior year. The problem did not affect calls dispatched. The new system will be able to more accurately track calls, particularly 911 calls.

Telecommunicators in Greenville are also tasked with overseeing public safety cameras through several large monitors. When needed, they are instructed to log events requiring a response as service calls. This video monitoring results in higher staffing needs in the emergency communications center.

Municipal Profile

Population (OSBM 2013)	87,241
Land Area (Square Miles)	34.85
Persons per Square Mile	2,503
Median Family Income U.S. Census 2010	$50,395
County	Pitt

Service Profile

Primary or Secondary Answering Point	Secondary
Calls Dispatched	
Police	Yes
Fire	No
Other	Yes
FTE Positions	
Telecommunicators/Call-Takers	16.0
Other	1.0
Total Positions	17.0
Average Length of Service for Call-Takers	10.0 years
Total Incoming Calls	104,352
Total 911 Calls	25,877
Total Calls Dispatched	89,235
Outgoing Calls Other than Dispatch	NA
Revenue from E-911 Fees	None

Full Cost Profile

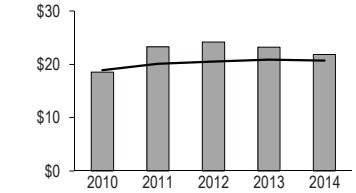
Cost Breakdown by Percentage	
Personal Services	53.0%
Operating Costs	43.9%
Capital Costs	3.1%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,010,958
Operating Costs	$836,429
Capital Costs	$59,685
TOTAL	$1,907,072

Greenville Emergency Communications

Key: Greenville ■ Benchmarking Average — Fiscal Years 2010 through 2014

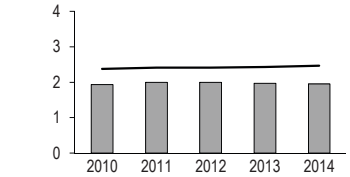
Resource Measures

Emergency Communications Services Costs per Capita



	2010	2011	2012	2013	2014
Greenville	$18.55	$23.27	$24.20	$23.23	$21.86
Average	$18.91	$20.09	$20.55	$20.90	$20.70

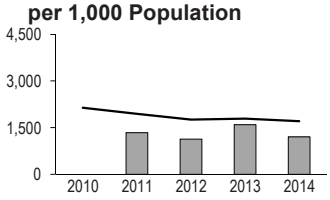
Emergency Communications FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greenville	1.94	2.00	2.00	1.97	1.95
Average	2.37	2.41	2.42	2.43	2.46

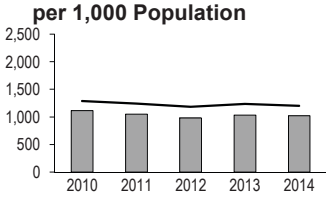
Workload Measures

Total Calls Answered per 1,000 Population



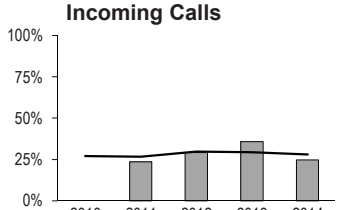
	2010	2011	2012	2013	2014
Greenville		1,336	1,133	1,589	1,196
Average	2,141	1,941	1,757	1,784	1,709

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Greenville	1,115	1,051	983	1,031	1,023
Average	1,291	1,242	1,183	1,233	1,200

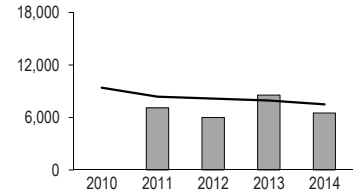
E-911 Calls as a Percentage of All Incoming Calls



	2010	2011	2012	2013	2014
Greenville		23.5%	29.1%	35.8%	24.8%
Average	27.0%	26.7%	29.7%	29.4%	28.1%

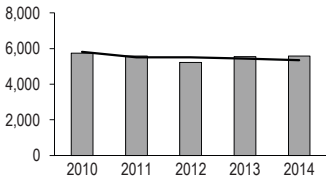
Efficiency Measures

Calls Answered per Telecommunicator



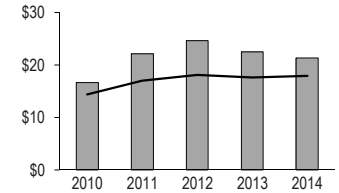
	2010	2011	2012	2013	2014
Greenville		7,108	6,021	8,555	6,522
Average	9,404	8,402	8,157	7,950	7,508

Calls Dispatched per Telecommunicator



	2010	2011	2012	2013	2014
Greenville	5,753	5,592	5,223	5,552	5,577
Average	5,824	5,509	5,502	5,445	5,358

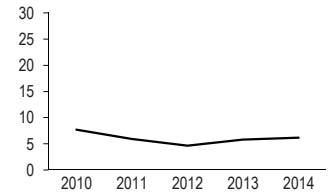
Emergency Communications Cost per Call Dispatched



	2010	2011	2012	2013	2014
Greenville	$16.64	$22.14	$24.63	$22.53	$21.37
Average	$14.39	$17.02	$18.15	$17.63	$17.96

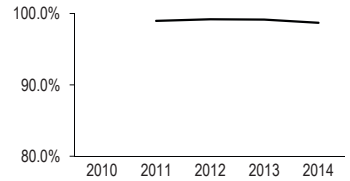
Effectiveness Measures

Number of Seconds from Initial Ring to Answer



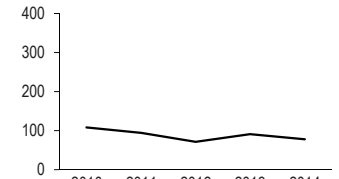
	2010	2011	2012	2013	2014
Greenville					
Average	8	6	5	6	6

Percent of E-911 Calls Answered within Twenty Seconds



	2010	2011	2012	2013	2014
Greenville					
Average		99.0%	99.2%	99.2%	98.7%

Average Time in Seconds from CAD Entry to Dispatch for Priority One Calls



	2010	2011	2012	2013	2014
Greenville					
Average	108	94	71	91	77

Hickory Emergency Communications

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Hickory's emergency communications center is a secondary public safety answering point, with Catawba County being the primary answering point. Catwaba County initially receives all 911 calls and dispatches fire and EMS calls inside the city limits. All 911 calls for police services are transferred to the emergency communications center for dispatch. Any emergency calls for other city services are transferred to the emergency communications center between 3:30 p.m. and 7:00 a.m.

The city owns its communications system and infrastructure. It uses an Ericson 800 MHz radio system. There is one 1,350-foot tower and antennas at two other sites. The system serves approximately 200 users in five city departments.

Hickory's communications center handled 102,290 incoming calls during the fiscal year, dispatching 73,396 calls.

Conditions Affecting Service, Performance, and Costs

During FY 2011–12, the software tracking emergency communication calls crashed, and the data for calls could not be recovered for the entire year.

The measure "percent of E-911 calls answered within twenty seconds" is a new measure added for FY 2009–10.

Incoming calls in Hickory are down because of changes in how calls are routed. Several special units now have their own administrative phones, so calls no longer come through the emergency communications center. Additionally, the animal control unit's operations were moved out of the police department, so their calls are now being fed through code enforcement.

Municipal Profile

Population (OSBM 2013)	40,222
Land Area (Square Miles)	29.83
Persons per Square Mile	1,348
Median Family Income U.S. Census 2010	$54,093
County	Catawba

Service Profile

Primary or Secondary Answering Point	Secondary
Calls Dispatched	
Police	Yes
Fire	No
Other	No
FTE Positions	
Telecommunicators/Call-Takers	14.0
Other	0.0
Total Positions	14.0
Average Length of Service for Call-Takers	8.6 years
Total Incoming Calls	102,290
Total 911 Calls	10,912
Total Calls Dispatched	73,396
Outgoing Calls Other than Dispatch	NA
Revenue from E-911 Fees	None

Full Cost Profile

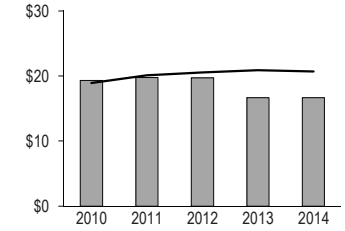
Cost Breakdown by Percentage	
Personal Services	81.3%
Operating Costs	16.8%
Capital Costs	1.9%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$544,959
Operating Costs	$112,397
Capital Costs	$12,963
TOTAL	$670,319

Hickory Emergency Communications

Key: Hickory ■ Benchmarking Average — Fiscal Years 2010 through 2014

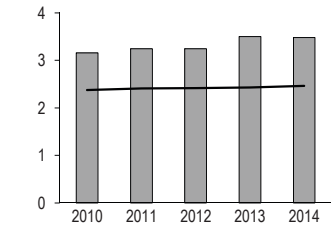
Resource Measures

Emergency Communications Services Costs per Capita



	2010	2011	2012	2013	2014
Hickory	$19.33	$19.77	$19.71	$16.67	$16.67
Average	$18.91	$20.09	$20.55	$20.90	$20.70

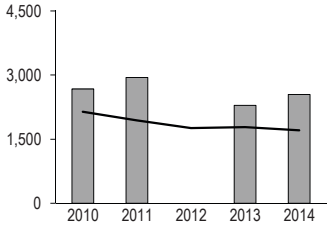
Emergency Communications FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Hickory	3.16	3.24	3.24	3.50	3.48
Average	2.37	2.41	2.42	2.43	2.46

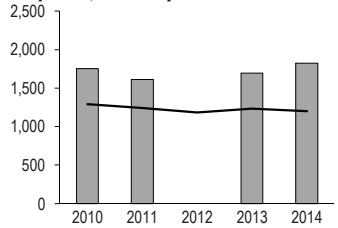
Workload Measures

Total Calls Answered per 1,000 Population



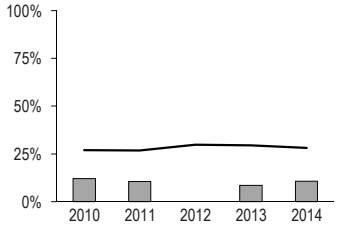
	2010	2011	2012	2013	2014
Hickory	2,670	2,947		2,291	2,543
Average	2,141	1,941	1,757	1,784	1,709

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Hickory	1,752	1,613		1,697	1,825
Average	1,291	1,242	1,183	1,233	1,200

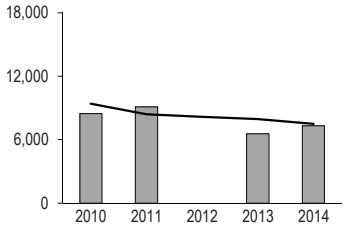
E-911 Calls as a Percentage of All Incoming Calls



	2010	2011	2012	2013	2014
Hickory	12.0%	10.4%		8.5%	10.7%
Average	27.0%	26.7%	29.7%	29.4%	28.1%

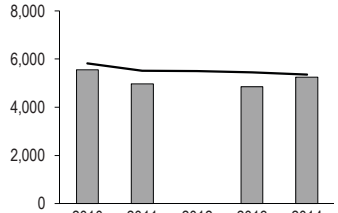
Efficiency Measures

Calls Answered per Telecommunicator



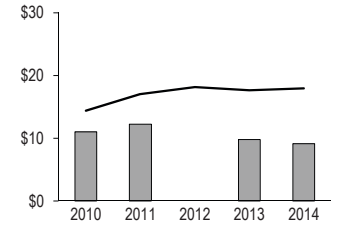
	2010	2011	2012	2013	2014
Hickory	8,450	9,086		6,553	7,306
Average	9,404	8,402	8,157	7,950	7,508

Calls Dispatched per Telecommunicator



	2010	2011	2012	2013	2014
Hickory	5,546	4,974		4,852	5,243
Average	5,824	5,509	5,502	5,445	5,358

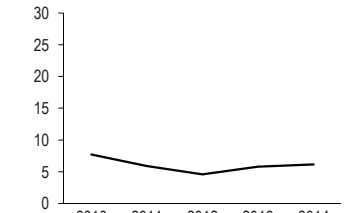
Emergency Communications Cost per Call Dispatched



	2010	2011	2012	2013	2014
Hickory	$11.03	$12.25		$9.82	$9.13
Average	$14.39	$17.02	$18.15	$17.63	$17.96

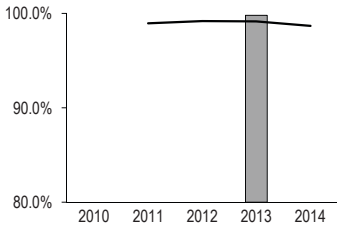
Effectiveness Measures

Number of Seconds from Initial Ring to Answer



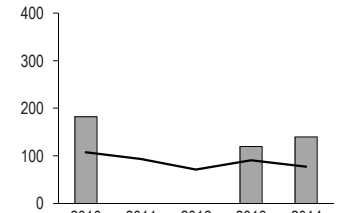
	2010	2011	2012	2013	2014
Hickory					
Average	8	6	5	6	6

Percent of E-911 Calls Answered within Twenty Seconds



	2010	2011	2012	2013	2014
Hickory				99.8%	
Average		99.0%	99.2%	99.2%	98.7%

Average Time in Seconds from CAD Entry to Dispatch for Priority One Calls



	2010	2011	2012	2013	2014
Hickory	182			120	140
Average	108	94	71	91	77

High Point Emergency Communications

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

High Point's emergency communications center is a civilian-staffed and city-managed department. The center functions as a primary public safety answering point, dispatching all police and fire calls within the city; medical calls are routed to Guilford County EMS.

The center has ten consoles, seven of which are dispatch positions. Operations are conducted by four teams of five telecommunicators and a supervisor. All telecommunicators are cross-trained in fire and police dispatch and function as call-takers and dispatchers. Personnel assigned to the center work rotating twelve-hour shifts.

The city of High Point owns its communications infrastructure. Communications utilizes an 800 MHz radio system that implements analog and digital talk groups. The city uses a Motorola SmartNet system with three towers.

High Point's center handled a total of 263,650 calls in the fiscal year, dispatching 136,020 calls. The city defines highest priority emergency calls as situations likely to result in loss of life, injury, or property damage and crimes in progress.

High Point received $437,475 in E-911 revenues to support system operations.

Conditions Affecting Service, Performance, and Costs

The measure "percent of E-911 calls answered within twenty seconds" is a new measure added for FY 2009–10.

High Point was unable to provide data on certain measures, given a change in technology.

There was a high volume of personnel exits in the police department during FY 2010–11 due to retirements and resignations, and because of a city-wide hiring freeze many positions were left vacant. As a result, there were fewer officers on the street to respond to dispatched calls, resulting in a higher dispatched response time.

Municipal Profile

Population (OSBM 2013)	107,652
Land Area (Square Miles)	54.73
Persons per Square Mile	1,967
Median Family Income U.S. Census 2010	$49,720
County	Guilford

Service Profile

Primary or Secondary Answering Point	Primary
Calls Dispatched	
Police	Yes
Fire	Yes
Other	No
FTE Positions	
Telecommunicators/Call-Takers	26.0
Other	1.0
Total Positions	27.0
Average Length of Service for Call-Takers	10.3 years
Total Incoming Calls	263,650
Total 911 Calls	80,508
Total Calls Dispatched	136,020
Outgoing Calls Other than Dispatch	NA
Revenue from E-911 Fees	$437,475

Full Cost Profile

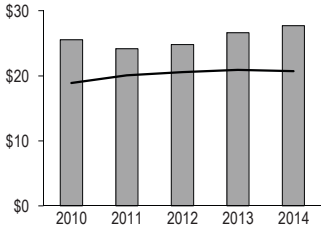
Cost Breakdown by Percentage	
Personal Services	72.0%
Operating Costs	24.4%
Capital Costs	3.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$2,148,913
Operating Costs	$728,514
Capital Costs	$105,739
TOTAL	$2,983,166

High Point Emergency Communications

Key: High Point ■ Benchmarking Average — Fiscal Years 2010 through 2014

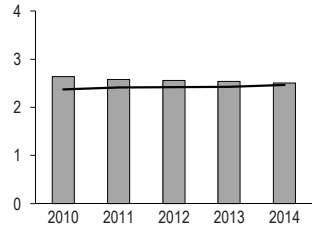
Resource Measures

Emergency Communications Services Costs per Capita



	2010	2011	2012	2013	2014
High Point	$25.53	$24.18	$24.81	$26.62	$27.71
Average	$18.91	$20.09	$20.55	$20.90	$20.70

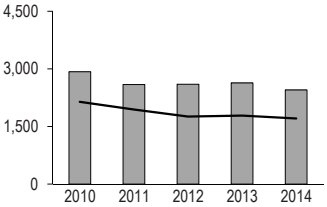
Emergency Communications FTEs per 10,000 Population



	2010	2011	2012	2013	2014
High Point	2.64	2.58	2.56	2.54	2.51
Average	2.37	2.41	2.42	2.43	2.46

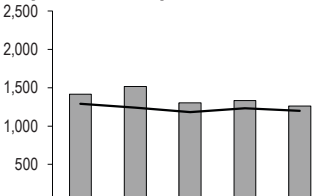
Workload Measures

Total Calls Answered per 1,000 Population



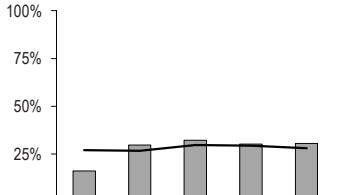
	2010	2011	2012	2013	2014
High Point	2,925	2,589	2,603	2,630	2,449
Average	2,141	1,941	1,757	1,784	1,709

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
High Point	1,415	1,517	1,305	1,334	1,264
Average	1,291	1,242	1,183	1,233	1,200

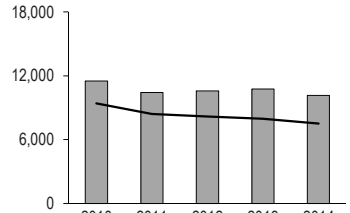
E-911 Calls as a Percentage of All Incoming Calls



	2010	2011	2012	2013	2014
High Point	16.2%	29.7%	32.3%	30.2%	30.5%
Average	27.0%	26.7%	29.7%	29.4%	28.1%

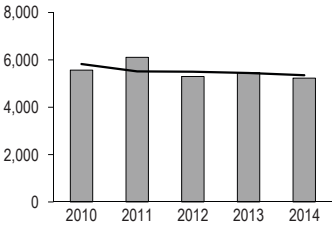
Efficiency Measures

Calls Answered per Telecommunicator



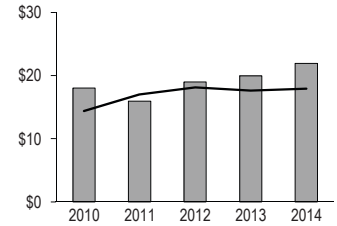
	2010	2011	2012	2013	2014
High Point	11,501	10,434	10,563	10,763	10,140
Average	9,404	8,402	8,157	7,950	7,508

Calls Dispatched per Telecommunicator



	2010	2011	2012	2013	2014
High Point	5,563	6,114	5,296	5,460	5,232
Average	5,824	5,509	5,502	5,445	5,358

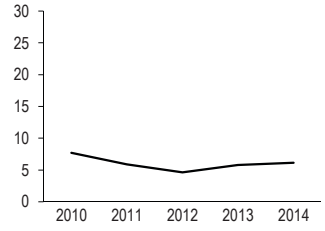
Emergency Communications Cost per Call Dispatched



	2010	2011	2012	2013	2014
High Point	$18.04	$15.94	$19.01	$19.95	$21.93
Average	$14.39	$17.02	$18.15	$17.63	$17.96

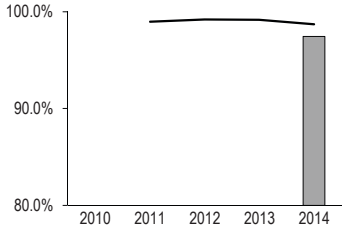
Effectiveness Measures

Number of Seconds from Initial Ring to Answer



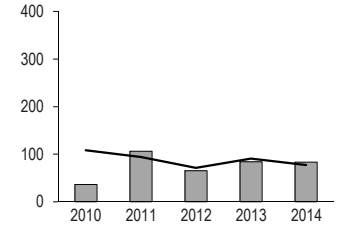
	2010	2011	2012	2013	2014
High Point					
Average	8	6	5	6	6

Percent of E-911 Calls Answered within Twenty Seconds



	2010	2011	2012	2013	2014
High Point					97.5%
Average		99.0%	99.2%	99.2%	98.7%

Average Time in Seconds from CAD Entry to Dispatch for Priority One Calls



	2010	2011	2012	2013	2014
High Point	36	106	65	84	83
Average	108	94	71	91	77

Winston-Salem Emergency Communications

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Winston-Salem's emergency communications center is part of the police department and handles 911 and non-emergency calls for police and fire. Calls received for EMS, the Sheriff's Office, county fire, and the highway patrol are transferred to the appropriate agency. All telecommunicators are hired and trained as call-takers and dispatchers.

The city owns the infrastructure but contracts with local vendors to provide telecommunications services. The City of Winston-Salem and Forsyth County implemented a voice radio system in October 2004. The Motorola ASTRO 800 MHz Trunked Simulcast system is made up of eight tower sites utilizing fifteen channels. The Winston-Salem Police Department uses a non-trunked 800 MHz system for the mobile data system, with one transmitter site using three channels.

Winston-Salem's center handled a total of 429,509 calls in the fiscal year, dispatching 282,884 calls. The city defines highest priority emergency calls as calls with a significant threat of imminent injury to persons or calls for crimes against persons that are in progress or have just occurred and the suspect is still there.

Conditions Affecting Service, Performance, and Costs

The measure "percent of E-911 calls answered within twenty seconds" is a new measure added for FY 2009–10.

Municipal Profile

Population (OSBM 2013)	235,527
Land Area (Square Miles)	132.45
Persons per Square Mile	1,778
Median Family Income U.S. Census 2010	$51,491
County	Forsyth

Service Profile

Primary or Secondary Answering Point	Primary
Calls Dispatched	
Police	Yes
Fire	Yes
Other	No
FTE Positions	
Telecommunicators/Call-Takers	48.0
Other	2.0
Total Positions	50.0
Average Length of Service for Call-Takers	9.2 years
Total Incoming Calls	429,509
Total 911 Calls	212,758
Total Calls Dispatched	282,884
Outgoing Calls Other than Dispatch	74,990
Revenue from E-911 Fees	$569,596

Full Cost Profile

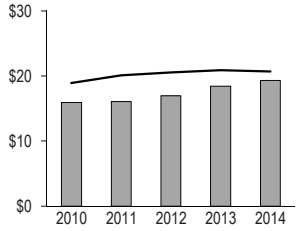
Cost Breakdown by Percentage	
Personal Services	69.5%
Operating Costs	26.5%
Capital Costs	4.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$3,160,089
Operating Costs	$1,202,409
Capital Costs	$182,085
TOTAL	$4,544,583

Winston-Salem Emergency Communications

Key: Winston-Salem ■ Benchmarking Average — Fiscal Years 2010 through 2014

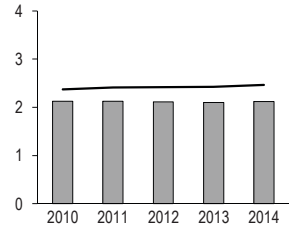
Resource Measures

Emergency Communications Services Costs per Capita



	2010	2011	2012	2013	2014
Winston-Salem	$15.93	$16.07	$16.96	$18.44	$19.30
Average	$18.91	$20.09	$20.55	$20.90	$20.70

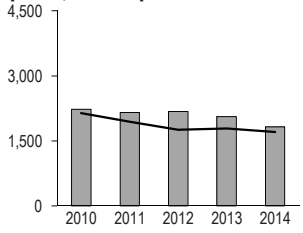
Emergency Communications FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	2.13	2.13	2.11	2.10	2.12
Average	2.37	2.41	2.42	2.43	2.46

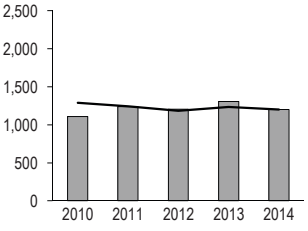
Workload Measures

Total Calls Answered per 1,000 Population



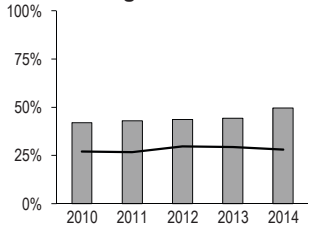
	2010	2011	2012	2013	2014
Winston-Salem	2,225	2,152	2,179	2,061	1,824
Average	2,141	1,941	1,757	1,784	1,709

Calls Dispatched per 1,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	1,108	1,240	1,207	1,307	1,201
Average	1,291	1,242	1,183	1,233	1,200

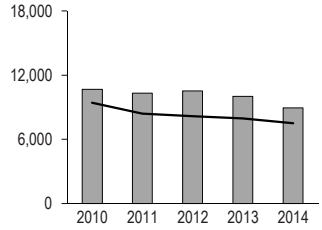
E-911 Calls as a Percentage of All Incoming Calls



	2010	2011	2012	2013	2014
Winston-Salem	41.9%	43.0%	43.6%	44.2%	49.5%
Average	27.0%	26.7%	29.7%	29.4%	28.1%

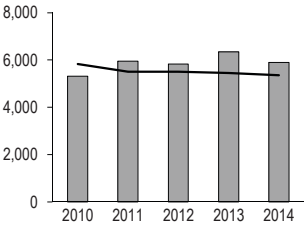
Efficiency Measures

Calls Answered per Telecommunicator



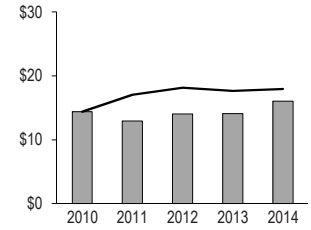
	2010	2011	2012	2013	2014
Winston-Salem	10,677	10,327	10,536	10,014	8,948
Average	9,404	8,402	8,157	7,950	7,508

Calls Dispatched per Telecommunicator



	2010	2011	2012	2013	2014
Winston-Salem	5,314	5,951	5,836	6,350	5,893
Average	5,824	5,509	5,502	5,445	5,358

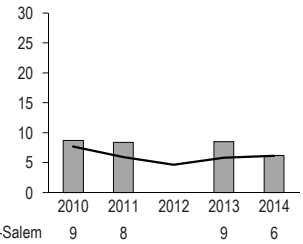
Emergency Communications Cost per Call Dispatched



	2010	2011	2012	2013	2014
Winston-Salem	$14.38	$12.96	$14.06	$14.11	$16.07
Average	$14.39	$17.02	$18.15	$17.63	$17.96

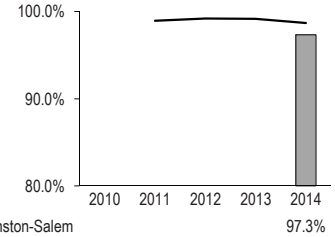
Effectiveness Measures

Number of Seconds from Initial Ring to Answer



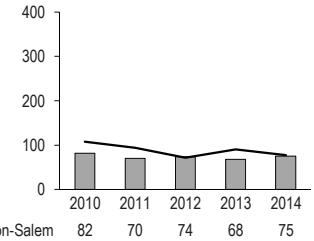
	2010	2011	2012	2013	2014
Winston-Salem	9	8		9	6
Average	8	6	5	6	6

Percent of E-911 Calls Answered within Twenty Seconds



	2010	2011	2012	2013	2014
Winston-Salem					97.3%
Average		99.0%	99.2%	99.2%	98.7%

Average Time in Seconds from CAD Entry to Dispatch for Priority One Calls



	2010	2011	2012	2013	2014
Winston-Salem	82	70	74	68	75
Average	108	94	71	91	77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GOVERNMENT

Performance and Cost Data

ASPHALT MAINTENANCE AND REPAIR

PERFORMANCE MEASURES FOR ASPHALT MAINTENANCE AND REPAIR

SERVICE DEFINITION

Asphalt Maintenance and Repair includes the activities of pothole repair, repaving, surface treatment, structure adjustments, milling, and utility cuts. It does not include reconstruction, handicap ramps, storm drainage, sidewalks, curb and gutter, right-of-way maintenance, street cleaning and sweeping, pavement marking, lane widening, unpaved street maintenance, or snow and ice removal.

NOTES ON PERFORMANCE MEASURES

1. Lane Miles Maintained

This measure refers to total lane miles that a municipality maintains, including state streets and municipal streets. The standard lane mile is 12 feet in width and 5,280 feet in length. Some jurisdictions do not track lane miles. Therefore, a methodology must be employed to calculate lane miles for participation.

2. Potholes and Utility Cuts per Lane Mile

Breaks in pavement due to potholes or to intentional utility cuts affects asphalt maintenance workload in the short term and long term because of breaks in the pavement integrity.

3. Cost of Road Treatment per Lane Mile

This is the cost of different types of asphalt treatment that a municipality may use to maintain or repair roads. Treatments include preservation work such as crack or slurry sealing; resurfacing, which is typically one to two inches of new asphalt; and rehabilitation, which combines resurfacing with milling work to repair more damaged roads.

4. Cost of Asphalt Maintenance and Repair

Total cost of asphalt maintenance and repair represents the total direct, indirect, and capital costs taken from the accounting form. “Cost of maintenance” represents total cost from the accounting form minus cost of any treatment efforts by contract and municipal crews.

5. Percentage of Street Segments Rated 85 or Better and Below 45

Many municipalities use standard rating systems for assessing street pavement condition. These systems apply professionally determined criteria and embody scales that provide relatively objective ratings. These measures indicate the proportion of street segments that are rated 85 or better, which is good condition, and those rated below 45, which is poor condition, on the most recent street pavement assessment.

6. Percentage of Potholes Repaired within Twenty-Four Hours

Repair of potholes in a timely manner is important for maintaining pavement integrity and minimizing further damage to the street and vehicle traffic.

Asphalt Maintenance and Repair

Summary of Key Dimensions of Service

			Total Lane Miles Treated by Type			Percent Treated			
City or Town	Lane Miles Maintained	Number of Registered Motor Vehicles	Preservation	Resurfacing	Rehabilitation	Preservation	Resurfacing	Rehabilitation	FTE Positions for City Staff
Apex	265.18	31,363	0.0	0.0	0.0	0.0%	0.0%	0.0%	9.0
Asheville	716.12	65,419	0.0	8.1	0.0	0.0%	1.1%	0.0%	17.1
Burlington	531.58	NA	7.3	3.2	4.3	1.4%	0.6%	0.8%	4.0
Cary	1,000.82	NA	0.0	18.5	0.5	0.0%	1.8%	0.0%	14.5
Charlotte	5,265.10	559,327	27.0	20.5	198.2	0.5%	0.4%	3.8%	125.0
Concord	685.86	61,478	0.0	11.1	8.2	0.0%	1.6%	1.2%	10.9
Greensboro	3,633.00	NA	14.6	28.0	0.0	0.4%	0.8%	0.0%	51.0
Greenville	537.30	NA	7.1	0.0	13.6	1.3%	0.0%	2.5%	9.0
Hickory	718.90	41,993	0.0	10.8	0.0	0.0%	1.5%	0.0%	7.0
High Point	1,310.60	58,761	10.6	6.0	11.6	0.8%	0.5%	0.9%	15.3
Salisbury	344.66	NA	0.0	0.0	4.8	0.0%	0.0%	1.4%	5.3
Wilson	694.47	35,816	3.9	4.5	0.0	0.6%	0.6%	0.0%	5.5
Winston-Salem	2,187.11	160,762	16.0	0.9	46.6	0.7%	0.0%	2.1%	43.0

EXPLANATORY FACTORS

These are factors that the project found affected asphalt maintenance and repair performance and cost in one or more of the municipalities:

Costs of materials in different cities
Weather conditions and terrain
Vehicle burden placed on streets
Age of street infrastructure
Depth of materials applied in repaving
Extent of contracting

Apex — Asphalt Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Town of Apex's Streets Department was responsible for maintaining approximately 265 lane miles during FY 2013–14. The Streets Department is part of the Public Works and Utilities Division for the town.

The town did not engage in any major road treatment projects for the fiscal year.

The city reported that 57 percent of its lane miles were rated 85 or better on the pavement condition rating. The rating was performed by US Infrastructure of Carolina, Inc. using surveying in 2014.

The number of potholes reported for FY 2013–14 was seventy.

The percentage of potholes repaired within twenty-four hours was approximately 50 percent. The town only repairs within one day those potholes which are considered large and dangerous. Smaller potholes are repaired when the streets crews can get to them.

The Streets Department also repaired forty-five utility cuts and made a large number of maintenance patches requiring ten tons of asphalt.

Conditions Affecting Service, Performance, and Costs

Apex began participation in the benchmarking project in July 2011, with FY 2010–11 being the first reporting year.

Beginning with the FY 2010–11 reporting year, new performance measures were added to this service area. These include "cost per lane mile for preservation treatment," "cost per lane mile for resurfacing treatment," "cost per lane mile for rehabilitation treatment," and "percent of lane miles rated below 45." In addition, the measure "cost of maintenance per lane mile maintained" has been altered to back out some treatment costs that were formerly counted as maintenance. This means that for some jurisdictions, the "cost of maintenance per lane mile maintained" has dropped in FY 2010–11 due to changes in the definition rather than actual drops in maintenance.

Municipal Profile

Population (OSBM 2013)	40,925
Land Area (Square Miles)	16.25
Persons per Square Mile	2,518
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow

Service Profile

FTE Positions—Crews	7.00
FTE Positions—Other	2.00
Lane Miles Maintained	265.2
Lane Miles Treated	
Preservation	0.0
Resurfacing	0.0
Rehabilitation	0.0
TOTAL	0.0
Total Costs for All Treatment Types	$0
Potholes Repaired	70
Number of Utility Cuts	45
Number of Maintenance Patches (exclusive of potholes and utility cuts)	5
Registered Vehicles	31,363
Registered Vehicles/Square Mile	1,930
Average Cost per Ton of Hot Asphalt during Year	$75.00

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	55.1%
Operating Costs	33.5%
Capital Costs	11.4%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$307,947
Operating Costs	$186,912
Capital Costs	$63,780
TOTAL	$558,639

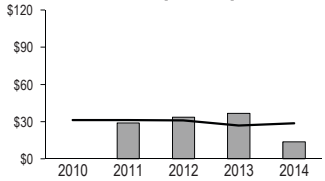
Apex

Asphalt Maintenance and Repair

Key: Apex ■ Benchmarking Average — Fiscal Years 2010 through 2014

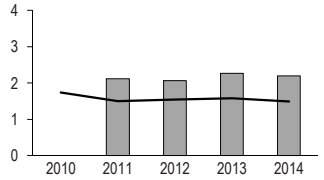
Resource Measures

Asphalt Maintenance and Repair Services Costs per Capita



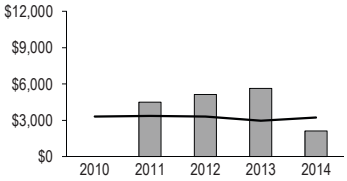
	2010	2011	2012	2013	2014
Apex		$29.02	$33.70	$36.72	$13.65
Average	$31.32	$31.28	$30.96	$26.99	$28.78

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Apex		2.12	2.07	2.26	2.20
Average	1.74	1.50	1.54	1.58	1.49

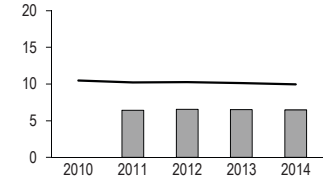
Service Costs per Lane Mile of Road Maintained



	2010	2011	2012	2013	2014
Apex		$4,509	$5,130	$5,643	$2,107
Average	$3,317	$3,351	$3,309	$2,960	$3,234

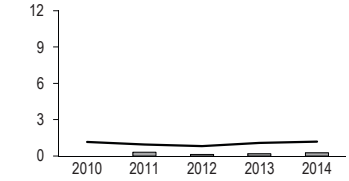
Workload Measures

Number of Lane Miles Maintained per 1,000 Population



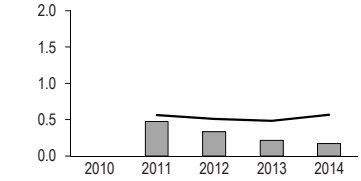
	2010	2011	2012	2013	2014
Apex		6.4	6.6	6.5	6.5
Average	10.5	10.2	10.3	10.1	10.0

Reported Potholes per Lane Mile Maintained



	2010	2011	2012	2013	2014
Apex		0.31	0.12	0.16	0.26
Average	1.14	0.94	0.80	1.08	1.17

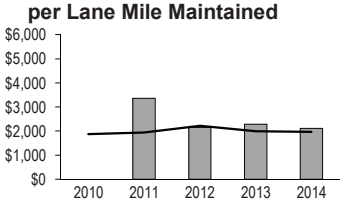
Repaired Utility Cuts per Lane Mile Maintained



	2010	2011	2012	2013	2014
Apex		0.47	0.33	0.21	0.17
Average		0.56	0.51	0.48	0.57

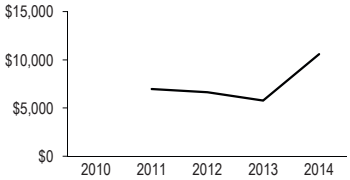
Efficiency Measures

Cost of Maintenance per Lane Mile Maintained



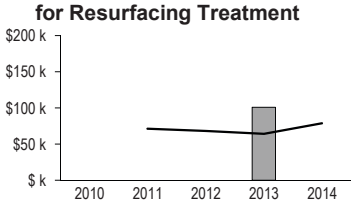
	2010	2011	2012	2013	2014
Apex		$3,358	$2,150	$2,287	$2,107
Average	$1,871	$1,936	$2,218	$1,986	$1,966

Cost per Lane Mile for Preservation Treatment



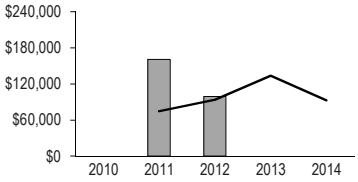
	2010	2011	2012	2013	2014
Apex					
Average		$6,972	$6,635	$5,779	$10,605

Cost per Lane Mile for Resurfacing Treatment



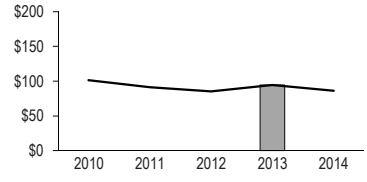
	2010	2011	2012	2013	2014
Apex				$101 k	
Average		$71 k	$68 k	$64 k	$79 k

Cost per Lane Mile for Rehabilitation Treatment



	2010	2011	2012	2013	2014
Apex		$161 k	$99 k		
Average		$75 k	$94 k	$134 k	$93 k

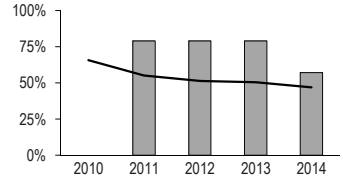
Cost per Ton for Contract Resurfacing



	2010	2011	2012	2013	2014
Apex				$94	
Average	$102	$91	$85	$95	$86

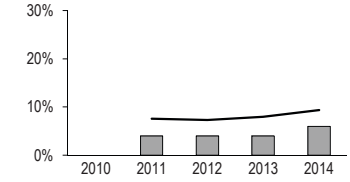
Effectiveness Measures

Percent of Lane Miles Rated 85 or Better



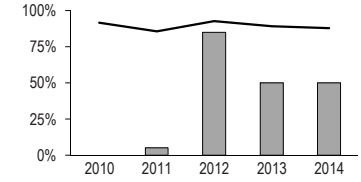
	2010	2011	2012	2013	2014
Apex		79%	79%	79%	57%
Average	66%	55%	51%	50%	47%

Percent of Lane Miles Rated Below 45



	2010	2011	2012	2013	2014
Apex		4.0%	4.0%	4.0%	6.0%
Average		7.6%	7.3%	8.0%	9.4%

Percentage of Potholes Repaired within 24 hours



	2010	2011	2012	2013	2014
Apex		5%	85%	50%	50%
Average	92%	86%	93%	89%	88%

Asheville — Asphalt Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Asheville was responsible for maintaining approximately 716 lane miles during FY 2013–14. The city treated 8.1 lane miles during the year, equating to approximately 1.1 percent of total lane miles.

The work done was resurfacing. All of the work completed was done by contractors. A total of 8,371 tons of asphalt was used, with an average depth laid of 1.5 inches by contractor crews.

The city reported that two percent of its lane miles were rated 85 or above on its most recent street pavement condition rating. This rating was done by in-house staff using the Institute for Transportation Research and Education (ITRE) system in 2009.

The number of potholes reported for FY 2013–14 was 3,950. The percentage of potholes repaired within twenty-four hours was approximately 99 percent.

The city has a permitting system for any utility cuts that must be made either by city or contractor crews. A total of 1,912 utility cuts were repaired during the year.

Conditions Affecting Service, Performance, and Costs

Due to the somewhat harsher mountain weather in Asheville compared to the other benchmarking partners, problems with pavement, such as potholes, tend to be more common.

Beginning with the FY 2010–11 reporting year, new performance measures were added to this service area. These include "cost per lane mile for preservation treatment," "cost per lane mile for resurfacing treatment," "cost per lane mile for rehabilitation treatment," and "percent of lane miles rated below 45." In addition, the measure "cost of maintenance per lane mile maintained" has been altered to back out some treatment costs that were formerly counted as maintenance. This means that for some jurisdictions, the "cost of maintenance per lane mile maintained" has dropped in FY 2010–11 due to changes in the definition rather than actual drops in maintenance.

The large number of construction utility cuts reduced the amount of preventive maintenance work that the street crews were able to manage during the year.

Municipal Profile

Population (OSBM 2013)	88,003
Land Area (Square Miles)	45.52
Persons per Square Mile	1,933
Topography	Hill, mountains
Climate	Moderate; ice and snow

Service Profile

FTE Positions—Crews	15.00
FTE Positions—Other	2.09
Lane Miles Maintained	716.1
Lane Miles Treated	
Preservation	0.0
Resurfacing	8.1
Rehabilitation	0.0
TOTAL	8.1
Total Costs for All Treatment Types	$1,084,491
Potholes Repaired	3,950
Number of Utility Cuts	1,912
Number of Maintenance Patches (exclusive of potholes and utility cuts)	28
Registered Vehicles	65,419
Registered Vehicles/Square Mile	1,437
Average Cost per Ton of Hot Asphalt during Year	$90.50

Full Cost Profile

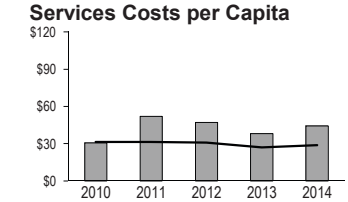
Cost Breakdown by Percentage	
Personal Services	26.8%
Operating Costs	65.1%
Capital Costs	8.1%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,041,953
Operating Costs	$2,529,405
Capital Costs	$314,123
TOTAL	$3,885,481

Asheville — Asphalt Maintenance and Repair

Key: Asheville ■ Benchmarking Average — Fiscal Years 2010 through 2014

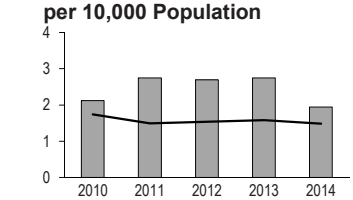
Resource Measures

Asphalt Maintenance and Repair Services Costs per Capita



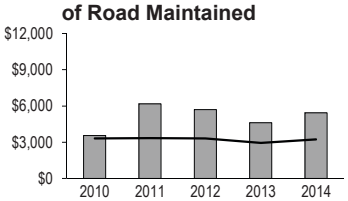
	2010	2011	2012	2013	2014
Asheville	$30.50	$51.90	$47.23	$38.09	$44.15
Average	$31.32	$31.28	$30.96	$26.99	$28.78

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Asheville	2.12	2.75	2.70	2.74	1.94
Average	1.74	1.50	1.54	1.58	1.49

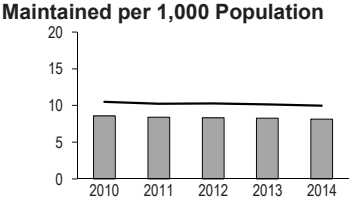
Service Costs per Lane Mile of Road Maintained



	2010	2011	2012	2013	2014
Asheville	$3,556	$6,183	$5,684	$4,605	$5,426
Average	$3,317	$3,351	$3,309	$2,960	$3,234

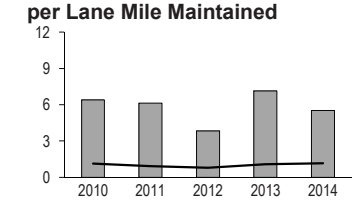
Workload Measures

Number of Lane Miles Maintained per 1,000 Population



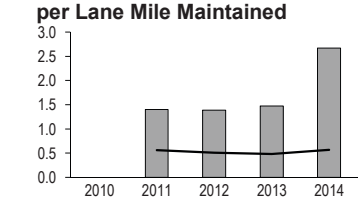
	2010	2011	2012	2013	2014
Asheville	8.6	8.4	8.3	8.3	8.1
Average	10.5	10.2	10.3	10.1	10.0

Reported Potholes per Lane Mile Maintained



	2010	2011	2012	2013	2014
Asheville	6.41	6.13	3.84	7.14	5.52
Average	1.14	0.94	0.80	1.08	1.17

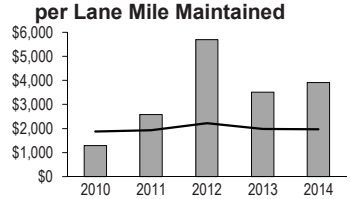
Repaired Utility Cuts per Lane Mile Maintained



	2010	2011	2012	2013	2014
Asheville		1.40	1.39	1.47	2.67
Average		0.56	0.51	0.48	0.57

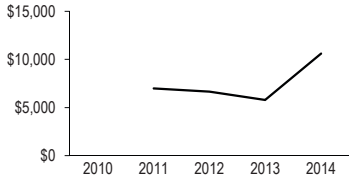
Efficiency Measures

Cost of Maintenance per Lane Mile Maintained



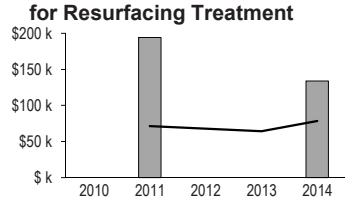
	2010	2011	2012	2013	2014
Asheville	$1,295	$2,582	$5,684	$3,506	$3,911
Average	$1,871	$1,936	$2,218	$1,986	$1,966

Cost per Lane Mile for Preservation Treatment



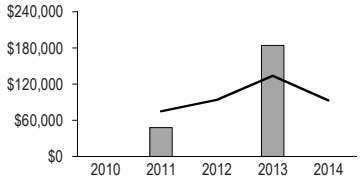
	2010	2011	2012	2013	2014
Asheville					
Average		$6,972	$6,635	$5,779	$10,605

Cost per Lane Mile for Resurfacing Treatment



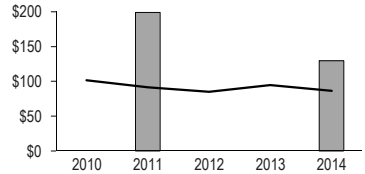
	2010	2011	2012	2013	2014
Asheville		$194 k			$134 k
Average		$71 k	$68 k	$64 k	$79 k

Cost per Lane Mile for Rehabilitation Treatment



	2010	2011	2012	2013	2014
Asheville		$48 k		$184 k	
Average		$75 k	$94 k	$134 k	$93 k

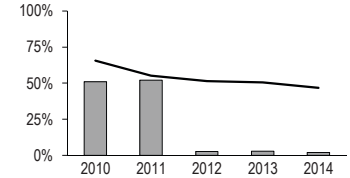
Cost per Ton for Contract Resurfacing



	2010	2011	2012	2013	2014
Asheville		$199			$130
Average	$102	$91	$85	$95	$86

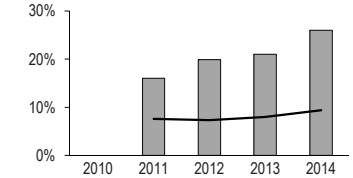
Effectiveness Measures

Percent of Lane Miles Rated 85 or Better



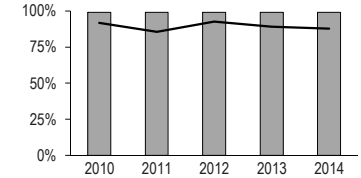
	2010	2011	2012	2013	2014
Asheville	51%	52%	3%	3%	2%
Average	66%	55%	51%	50%	47%

Percent of Lane Miles Rated Below 45



	2010	2011	2012	2013	2014
Asheville		16.0%	19.9%	21.0%	26.0%
Average		7.6%	7.3%	8.0%	9.4%

Percentage of Potholes Repaired within 24 hours



	2010	2011	2012	2013	2014
Asheville	99%	99%	99%	99%	99%
Average	92%	86%	93%	89%	88%

Burlington Asphalt Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Burlington was responsible for maintaining 532 lane miles during FY 2013–14. The city treated a total of 14.8 lane miles, equating to approximately 2.8 percent of total lane miles.

Of the street work done, 7.3 miles were given preservation treatment such as crack sealing or thin overlays. The preservation work was done by contractors and city crews. Resurfacing work was done on 3.2 miles. All of the work involving resurfacing was done by contractors. Rehabilitation work was done by contractors on 4.3 lane miles, with milling followed by resurfacing. The contractor used a total of 5,046 tons of asphalt.

The city reported that 76 percent of its street lane miles rated 85 or above on its most recent rating. The most recent study relied on US Infrastructure of Carolina, Inc. and the Institute for Transportation Research and Education (ITRE) system and was conducted in 2012.

The city reported a total of 172 potholes, with 100 percent of them repaired within twenty-four hours. The city takes a proactive approach and eliminates many potential potholes before they form. The city covers one-sixth of the city each month looking for potential problems. There were 113 utility cuts in roads repaired during the year, with the repairs being done by the city after private utilities got permits.

Conditions Affecting Service, Performance, and Costs

Beginning with the FY 2010–11 reporting year, new performance measures were added to this service area. These include "cost per lane mile for preservation treatment," "cost per lane mile for resurfacing treatment," "cost per lane mile for rehabilitation treatment," and "percent of lane miles rated below 45." In addition, the measure "cost of maintenance per lane mile maintained" has been altered to back out some treatment costs that were formerly counted as maintenance. This means that for some jurisdictions, the "cost of maintenance per lane mile maintained" has dropped in FY 2010–11 due to changes in the definition rather than actual drops in maintenance.

Municipal Profile

Population (OSBM 2013)	51,396
Land Area (Square Miles)	27.28
Persons per Square Mile	1,884
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow

Service Profile

FTE Positions—Crews	4.00
FTE Positions—Other	0.00
Lane Miles Maintained	531.6
Lane Miles Treated	
Preservation	7.3
Resurfacing	3.2
Rehabilitation	4.3
TOTAL	14.8
Total Costs for All Treatment Types	$415,192
Potholes Repaired	172
Number of Utility Cuts	113
Number of Maintenance Patches (exclusive of potholes and utility cuts)	NA
Registered Vehicles	NA
Registered Vehicles/Square Mile	NA
Average Cost per Ton of Hot Asphalt during Year	$69.49

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	14.4%
Operating Costs	48.1%
Capital Costs	37.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$196,981
Operating Costs	$658,648
Capital Costs	$513,618
TOTAL	$1,369,247

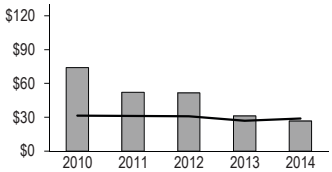
Burlington

Asphalt Maintenance and Repair

Key: Burlington ■ Benchmarking Average — Fiscal Years 2010 through 2014

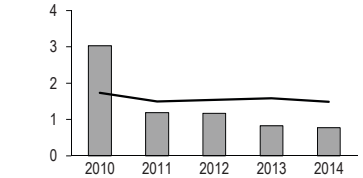
Resource Measures

Asphalt Maintenance and Repair Services Costs per Capita



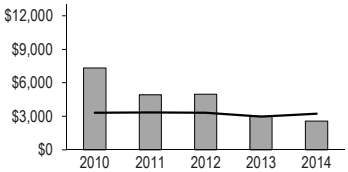
	2010	2011	2012	2013	2014
Burlington	$74.10	$52.07	$51.74	$31.14	$26.64
Average	$31.32	$31.28	$30.96	$26.99	$28.78

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Burlington	3.03	1.19	1.17	0.83	0.78
Average	1.74	1.50	1.54	1.58	1.49

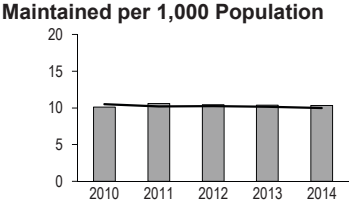
Service Costs per Lane Mile of Road Maintained



	2010	2011	2012	2013	2014
Burlington	$7,325	$4,922	$4,973	$2,999	$2,576
Average	$3,317	$3,351	$3,309	$2,960	$3,234

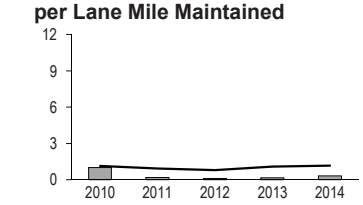
Workload Measures

Number of Lane Miles Maintained per 1,000 Population



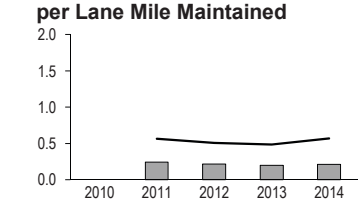
	2010	2011	2012	2013	2014
Burlington	10.1	10.6	10.4	10.4	10.3
Average	10.5	10.2	10.3	10.1	10.0

Reported Potholes per Lane Mile Maintained



	2010	2011	2012	2013	2014
Burlington	1.01	0.18	0.12	0.17	0.32
Average	1.14	0.94	0.80	1.08	1.17

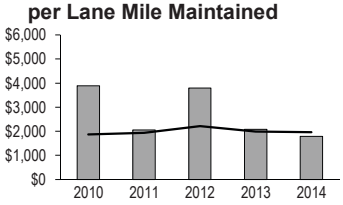
Repaired Utility Cuts per Lane Mile Maintained



	2010	2011	2012	2013	2014
Burlington		0.24	0.22	0.20	0.21
Average		0.56	0.51	0.48	0.57

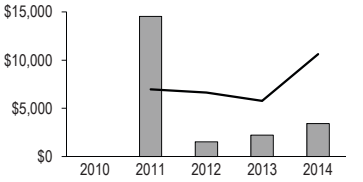
Efficiency Measures

Cost of Maintenance per Lane Mile Maintained



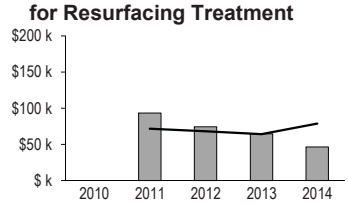
	2010	2011	2012	2013	2014
Burlington	$3,881	$2,060	$3,796	$2,080	$1,795
Average	$1,871	$1,936	$2,218	$1,986	$1,966

Cost per Lane Mile for Preservation Treatment



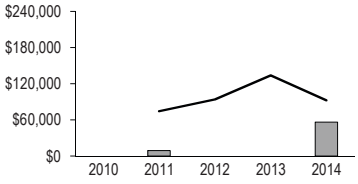
	2010	2011	2012	2013	2014
Burlington		$14,531	$1,515	$2,229	$3,399
Average		$6,972	$6,635	$5,779	$10,605

Cost per Lane Mile for Resurfacing Treatment



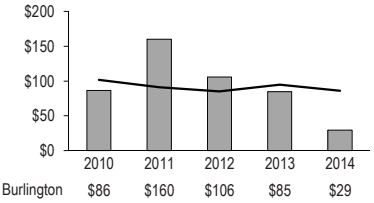
	2010	2011	2012	2013	2014
Burlington		$93 k	$74 k	$64 k	$46 k
Average		$71 k	$68 k	$64 k	$79 k

Cost per Lane Mile for Rehabilitation Treatment



	2010	2011	2012	2013	2014
Burlington		$9 k			$56 k
Average		$75 k	$94 k	$134 k	$93 k

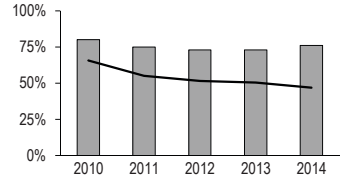
Cost per Ton for Contract Resurfacing



	2010	2011	2012	2013	2014
Burlington	$86	$160	$106	$85	$29
Average	$102	$91	$85	$95	$86

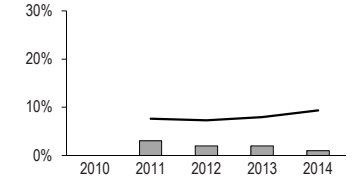
Effectiveness Measures

Percent of Lane Miles Rated 85 or Better



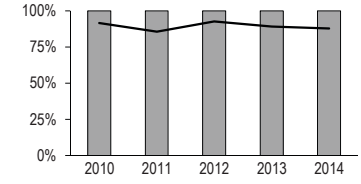
	2010	2011	2012	2013	2014
Burlington	80%	75%	73%	73%	76%
Average	66%	55%	51%	50%	47%

Percent of Lane Miles Rated Below 45



	2010	2011	2012	2013	2014
Burlington		3.0%	2.0%	2.0%	1.0%
Average		7.6%	7.3%	8.0%	9.4%

Percentage of Potholes Repaired within 24 hours



	2010	2011	2012	2013	2014
Burlington	100%	100%	100%	100%	100%
Average	92%	86%	93%	89%	88%

Cary — Asphalt Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Town of Cary was responsible for maintaining approximately 1,001 lane miles during FY 2013–14. A total of 19.0 lane miles received some form of repair work, equating to approximately 1.9 percent of total lane miles.

For repair work done, 18.5 lane miles were resurfaced by contract crews and an additional 0.5 lane miles were rehabilitated by contractors with milling followed by resurfacing. A total of 19,620 tons of asphalt was used during the fiscal year by contractors for these resurfacing projects.

The town reported that 37 percent of its street segments rated 85 or above on its most recent pavement condition rating. The most recent study relied on US Infrastructure of Carolina, Inc. using the Institute for Transportation Research and Education (ITRE) system and was conducted in 2013.

The number of potholes reported for FY 2013–14 was 131. The percentage of potholes repaired within twenty-four hours was 85 percent.

A total of 190 utility cuts were made and repaired during the year. The town repairs its own cuts within five days. Other planned utility cuts require a permit before breaking pavement.

A total of fifty-eight maintenance patches were also made during the year to fix problems other than utility cuts and potholes.

Conditions Affecting Service, Performance, and Costs

Beginning with the FY 2010–11 reporting year, new performance measures were added to this service area. These include "cost per lane mile for preservation treatment," "cost per lane mile for resurfacing treatment," "cost per lane mile for rehabilitation treatment," and "percent of lane miles rated below 45." In addition, the measure "cost of maintenance per lane mile maintained" has been altered to back out some treatment costs that were formerly counted as maintenance. This means that for some jurisdictions, the "cost of maintenance per lane mile maintained" has dropped in FY 2010–11 due to changes in the definition rather than actual drops in maintenance.

The number of potholes was up in FY 2013–14. The year had harsher winter weather with below freezing temperatures. The town made greater use of salt and brine to treat streets, which aggravated conditions leading to more potholes.

Municipal Profile

Population (OSBM 2013)	144,671
Land Area (Square Miles)	55.54
Persons per Square Mile	2,605
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow

Service Profile

FTE Positions—Crews	12.50
FTE Positions—Other	2.00
Lane Miles Maintained	1,000.8
Lane Miles Treated	
Preservation	0.0
Resurfacing	18.5
Rehabilitation	0.5
TOTAL	19.0
Total Costs for All Treatment Types	$3,228,783
Potholes Repaired	131
Number of Utility Cuts	190
Number of Maintenance Patches (exclusive of potholes and utility cuts)	58
Registered Vehicles	NA
Registered Vehicles/Square Mile	NA
Average Cost per Ton of Hot Asphalt during Year	$66.00

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	17.8%
Operating Costs	76.2%
Capital Costs	6.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$937,215
Operating Costs	$4,007,955
Capital Costs	$315,461
TOTAL	$5,260,631

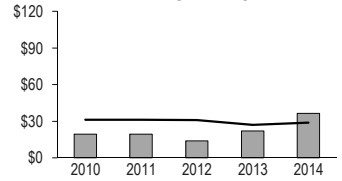
Cary

Asphalt Maintenance and Repair

Key: Cary ■ Benchmarking Average — Fiscal Years 2010 through 2014

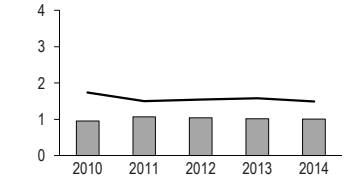
Resource Measures

Asphalt Maintenance and Repair Services Costs per Capita



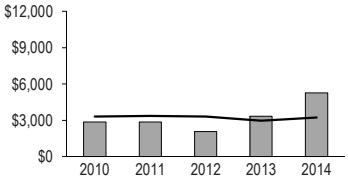
	2010	2011	2012	2013	2014
Cary	$19.39	$19.46	$13.84	$22.16	$36.36
Average	$31.32	$31.28	$30.96	$26.99	$28.78

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Cary	0.95	1.06	1.04	1.02	1.00
Average	1.74	1.50	1.54	1.58	1.49

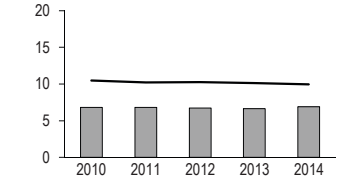
Service Costs per Lane Mile of Road Maintained



	2010	2011	2012	2013	2014
Cary	$2,848	$2,860	$2,058	$3,326	$5,256
Average	$3,317	$3,351	$3,309	$2,960	$3,234

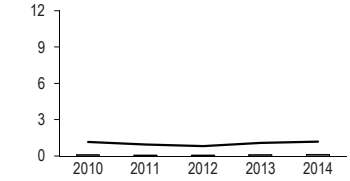
Workload Measures

Number of Lane Miles Maintained per 1,000 Population



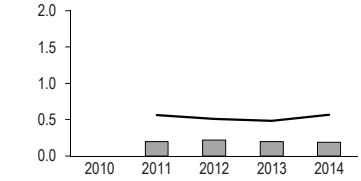
	2010	2011	2012	2013	2014
Cary	6.8	6.8	6.7	6.7	6.9
Average	10.5	10.2	10.3	10.1	10.0

Reported Potholes per Lane Mile Maintained



	2010	2011	2012	2013	2014
Cary	0.09	0.07	0.07	0.09	0.13
Average	1.14	0.94	0.80	1.08	1.17

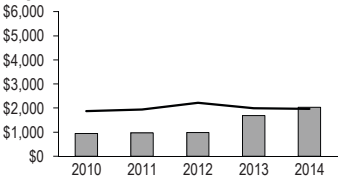
Repaired Utility Cuts per Lane Mile Maintained



	2010	2011	2012	2013	2014
Cary		0.20	0.22	0.20	0.19
Average		0.56	0.51	0.48	0.57

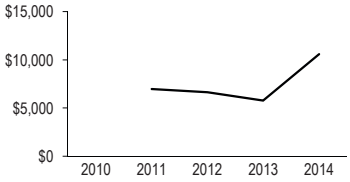
Efficiency Measures

Cost of Maintenance per Lane Mile Maintained



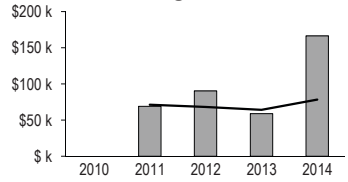
	2010	2011	2012	2013	2014
Cary	$947	$967	$987	$1,685	$2,030
Average	$1,871	$1,936	$2,218	$1,986	$1,966

Cost per Lane Mile for Preservation Treatment



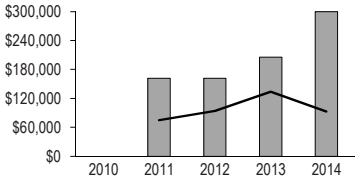
	2010	2011	2012	2013	2014
Cary					
Average		$6,972	$6,635	$5,779	$10,605

Cost per Lane Mile for Resurfacing Treatment



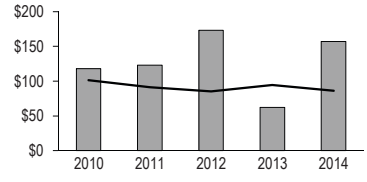
	2010	2011	2012	2013	2014
Cary		$69 k	$90 k	$59 k	$166 k
Average		$71 k	$68 k	$64 k	$79 k

Cost per Lane Mile for Rehabilitation Treatment



	2010	2011	2012	2013	2014
Cary		$162 k	$162 k	$205 k	$300 k
Average		$75 k	$94 k	$134 k	$93 k

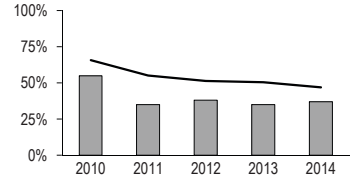
Cost per Ton for Contract Resurfacing



	2010	2011	2012	2013	2014
Cary	$118	$123	$173	$62	$157
Average	$102	$91	$85	$95	$86

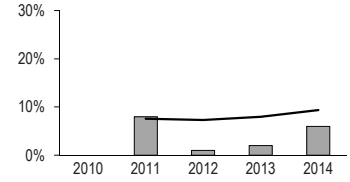
Effectiveness Measures

Percent of Lane Miles Rated 85 or Better



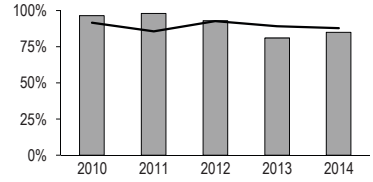
	2010	2011	2012	2013	2014
Cary	55%	35%	38%	35%	37%
Average	66%	55%	51%	50%	47%

Percent of Lane Miles Rated Below 45



	2010	2011	2012	2013	2014
Cary		8.0%	1.0%	2.0%	6.0%
Average		7.6%	7.3%	8.0%	9.4%

Percentage of Potholes Repaired within 24 hours



	2010	2011	2012	2013	2014
Cary	97%	98%	93%	81%	85%
Average	92%	86%	93%	89%	88%

Charlotte — Asphalt Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Charlotte Street Maintenance Division provides service in the areas of maintenance and repair of street drainage structures; sidewalks; storm debris clean-up; and specialty repair items such as brick walls, decorative pavers, fences, and guardrails. During FY 2013–14, the city was responsible for maintaining approximately 5,265 lane miles and treated 245.7 lane miles, equating to approximately 4.7 percent of total lane miles.

Of the treatment work done during the year, 27.0 lane miles received preservation work, completed by city crews, such as crack sealing or thin overlays. Resurfacing work covered 20.5 lane miles and was done by contractors and city crews. Additionally, 197.3 lane miles were rehabilitated by contractors with milling followed by resurfacing. City crews also rehabilitated 0.9 lane miles. A total of 125,694 tons of asphalt was used during the fiscal year for resurfacing by contractors and city crews.

The city reported that 53.5 percent of its lane miles rated 85 or above on its most recent pavement condition rating conducted in 2013. The roads were rated using the Hansen Pavement Management system relying on the Institute for Transportation Research and Education (ITRE) degradation curves.

The number of potholes reported for FY 2013–14 was 1,205. The percentage of potholes repaired within twenty-four hours was 85 percent. A total of 3,770 utility cuts were also repaired during the year by contractors and the Street Maintenance Division.

Conditions Affecting Service, Performance, and Costs

Beginning with the FY 2010–11 reporting year, new performance measures were added to this service area. These include "cost per lane mile for preservation treatment," "cost per lane mile for resurfacing treatment," "cost per lane mile for rehabilitation treatment," and "percent of lane miles rated below 45." In addition, the measure "cost of maintenance per lane mile maintained" has been altered to back out some treatment costs that were formerly counted as maintenance. This means that for some jurisdictions, the "cost of maintenance per lane mile maintained" has dropped in FY 2010–11 due to changes in the definition rather than actual drops in maintenance.

Municipal Profile

Population (OSBM 2013)	789,248
Land Area (Square Miles)	304.28
Persons per Square Mile	2,594
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow

Service Profile

FTE Positions—Crews	107.00
FTE Positions—Other	18.00
Lane Miles Maintained	5,265.1
Lane Miles Treated	
Preservation	27.0
Resurfacing	20.5
Rehabilitation	198.2
TOTAL	245.7
Total Costs for All Treatment Types	$12,261,223
Potholes Repaired	1,205
Number of Utility Cuts	3,770
Number of Maintenance Patches (exclusive of potholes and utility cuts)	NA
Registered Vehicles	559,327
Registered Vehicles/Square Mile	1,838
Average Cost per Ton of Hot Asphalt during Year	$54.73

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	22.0%
Operating Costs	66.5%
Capital Costs	11.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$6,933,086
Operating Costs	$20,991,841
Capital Costs	$3,626,625
TOTAL	$31,551,552

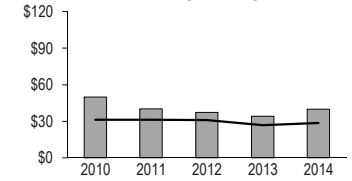
Charlotte

Asphalt Maintenance and Repair

Key: Charlotte ■ Benchmarking Average — Fiscal Years 2010 through 2014

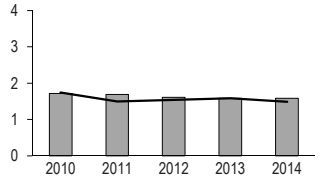
Resource Measures

Asphalt Maintenance and Repair Services Costs per Capita



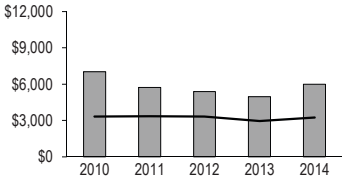
	2010	2011	2012	2013	2014
Charlotte	$49.95	$40.12	$37.45	$34.07	$39.98
Average	$31.32	$31.28	$30.96	$26.99	$28.78

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Charlotte	1.71	1.69	1.61	1.58	1.58
Average	1.74	1.50	1.54	1.58	1.49

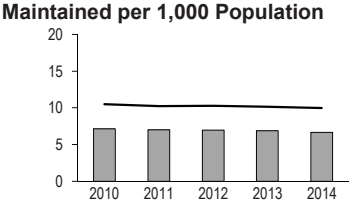
Service Costs per Lane Mile of Road Maintained



	2010	2011	2012	2013	2014
Charlotte	$7,007	$5,718	$5,369	$4,957	$5,993
Average	$3,317	$3,351	$3,309	$2,960	$3,234

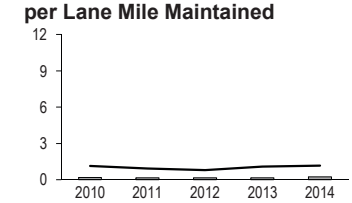
Workload Measures

Number of Lane Miles Maintained per 1,000 Population



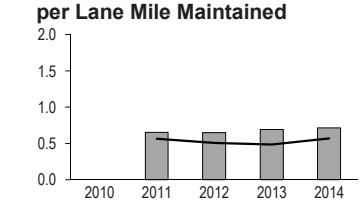
	2010	2011	2012	2013	2014
Charlotte	7.1	7.0	7.0	6.9	6.7
Average	10.5	10.2	10.3	10.1	10.0

Reported Potholes per Lane Mile Maintained



	2010	2011	2012	2013	2014
Charlotte	0.17	0.15	0.15	0.16	0.23
Average	1.14	0.94	0.80	1.08	1.17

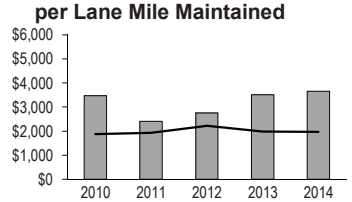
Repaired Utility Cuts per Lane Mile Maintained



	2010	2011	2012	2013	2014
Charlotte		0.65	0.65	0.69	0.72
Average		0.56	0.51	0.48	0.57

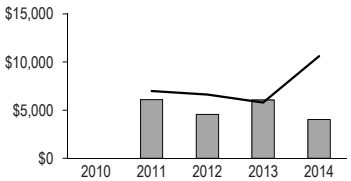
Efficiency Measures

Cost of Maintenance per Lane Mile Maintained



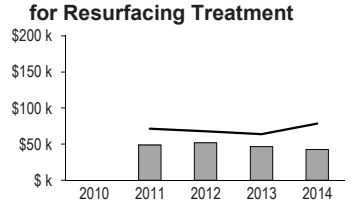
	2010	2011	2012	2013	2014
Charlotte	$3,477	$2,412	$2,757	$3,517	$3,664
Average	$1,871	$1,936	$2,218	$1,986	$1,966

Cost per Lane Mile for Preservation Treatment



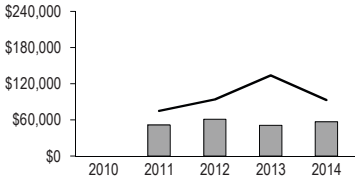
	2010	2011	2012	2013	2014
Charlotte		$6,078	$4,557	$6,042	$4,024
Average		$6,972	$6,635	$5,779	$10,605

Cost per Lane Mile for Resurfacing Treatment



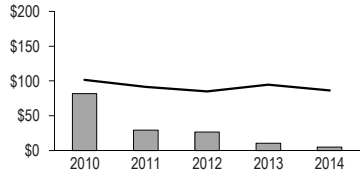
	2010	2011	2012	2013	2014
Charlotte		$49 k	$52 k	$47 k	$43 k
Average		$71 k	$68 k	$64 k	$79 k

Cost per Lane Mile for Rehabilitation Treatment



	2010	2011	2012	2013	2014
Charlotte		$52 k	$61 k	$51 k	$57 k
Average		$75 k	$94 k	$134 k	$93 k

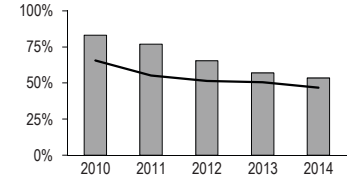
Cost per Ton for Contract Resurfacing



	2010	2011	2012	2013	2014
Charlotte	$82	$29	$26	$11	$5
Average	$102	$91	$85	$95	$86

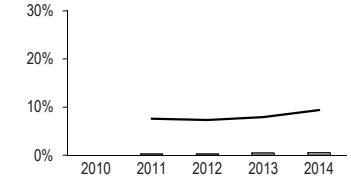
Effectiveness Measures

Percent of Lane Miles Rated 85 or Better



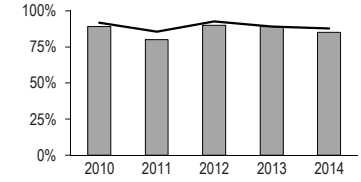
	2010	2011	2012	2013	2014
Charlotte	83%	77%	65%	57%	54%
Average	66%	55%	51%	50%	47%

Percent of Lane Miles Rated Below 45



	2010	2011	2012	2013	2014
Charlotte		0.3%	0.3%	0.5%	0.5%
Average		7.6%	7.3%	8.0%	9.4%

Percentage of Potholes Repaired within 24 hours



	2010	2011	2012	2013	2014
Charlotte	89%	80%	90%	89%	85%
Average	92%	86%	93%	89%	88%

Concord Asphalt Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Concord was responsible for maintaining approximately 686 lane miles during FY 2013–14. A total of 19.4 lane miles were treated during the fiscal year, equal to 2.8 percent of lane miles.

Contractors did the work on all of the lane miles receiving treatment. Eleven miles were resurfaced and 8.2 miles were given rehabilitation treatment, which includes milling work and then resurfacing. The contractor used 3,809 tons of asphalt to complete the work.

The city reported that 55 percent of its lane miles rated 85 or above on its most recent pavement condition rating, conducted in 2013 using a city system based on North Carolina Department of Transportation ratings.

The number of potholes reported for FY 2013–14 was thirty-nine, including those reported by citizens and the city. The percentage of potholes repaired within twenty-four hours was 95 percent. Concord also reported 200 utility cuts that were repaired and 114 maintenance patches for work other than potholes or utility cuts.

Conditions Affecting Service, Performance, and Costs

The costs associated with asphalt maintenance and resurfacing are influenced by competition among providers due to the location of three asphalt plants within the city limits.

Beginning with the FY 2010–11 reporting year, new performance measures were added to this service area. These include "cost per lane mile for preservation treatment," "cost per lane mile for resurfacing treatment," "cost per lane mile for rehabilitation treatment," and "percent of lane miles rated below 45." In addition, the measure "cost of maintenance per lane mile maintained" has been altered to back out some treatment costs that were formerly counted as maintenance. This means that for some jurisdictions, the "cost of maintenance per lane mile maintained" has dropped in FY 2010–11 due to changes in the definition rather than actual drops in maintenance.

The increase in roads rated below 45 percent increased in FY 2013–14 as a result of significant adverse winter weather taking a toll on streets around the city.

The drop in utility cuts with the rise in potholes in FY 2013–14 is due in part to better tracking and classification of repair work. Some repairs had previously been reported as utility cut repairs but were actually pothole repairs.

Municipal Profile

Population (OSBM 2013)	83,279
Land Area (Square Miles)	60.93
Persons per Square Mile	1,367
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow

Service Profile

FTE Positions—Crews	8.05
FTE Positions—Other	2.80
Lane Miles Maintained	685.9
Lane Miles Treated	
Preservation	0.0
Resurfacing	11.1
Rehabilitation	8.2
TOTAL	19.4
Total Costs for All Treatment Types	$936,550
Potholes Repaired	39
Number of Utility Cuts	200
Number of Maintenance Patches (exclusive of potholes and utility cuts)	114
Registered Vehicles	61,478
Registered Vehicles/Square Mile	1,009
Average Cost per Ton of Hot Asphalt during Year	$60.00

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	28.2%
Operating Costs	64.6%
Capital Costs	7.2%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$602,760
Operating Costs	$1,378,773
Capital Costs	$153,421
TOTAL	$2,134,954

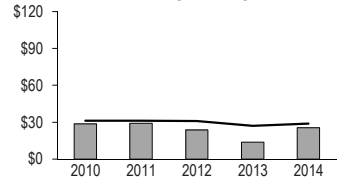
Concord

Asphalt Maintenance and Repair

Key: Concord ■ Benchmarking Average — Fiscal Years 2010 through 2014

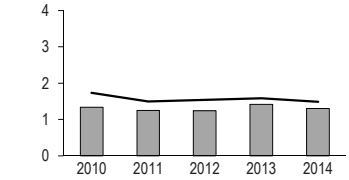
Resource Measures

Asphalt Maintenance and Repair Services Costs per Capita



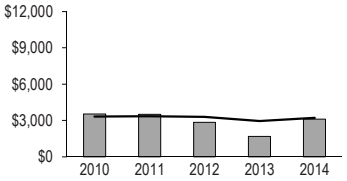
	2010	2011	2012	2013	2014
Concord	$28.63	$29.26	$23.73	$13.86	$25.64
Average	$31.32	$31.28	$30.96	$26.99	$28.78

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Concord	1.34	1.25	1.24	1.42	1.30
Average	1.74	1.50	1.54	1.58	1.49

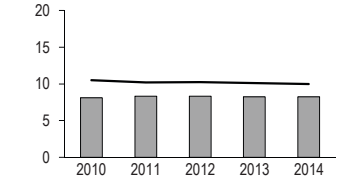
Service Costs per Lane Mile of Road Maintained



	2010	2011	2012	2013	2014
Concord	$3,529	$3,511	$2,846	$1,677	$3,113
Average	$3,317	$3,351	$3,309	$2,960	$3,234

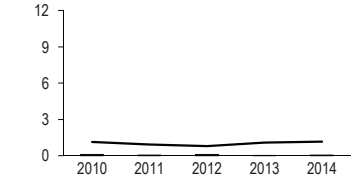
Workload Measures

Number of Lane Miles Maintained per 1,000 Population



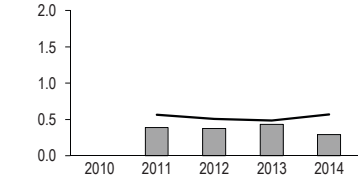
	2010	2011	2012	2013	2014
Concord	8.1	8.3	8.3	8.3	8.2
Average	10.5	10.2	10.3	10.1	10.0

Reported Potholes per Lane Mile Maintained



	2010	2011	2012	2013	2014
Concord	0.11	0.06	0.11	0.04	0.06
Average	1.14	0.94	0.80	1.08	1.17

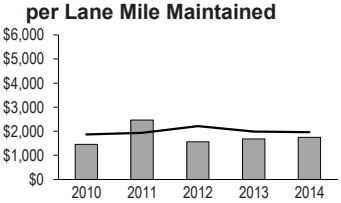
Repaired Utility Cuts per Lane Mile Maintained



	2010	2011	2012	2013	2014
Concord		0.39	0.38	0.43	0.29
Average		0.56	0.51	0.48	0.57

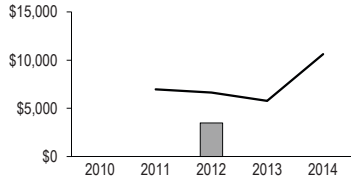
Efficiency Measures

Cost of Maintenance per Lane Mile Maintained



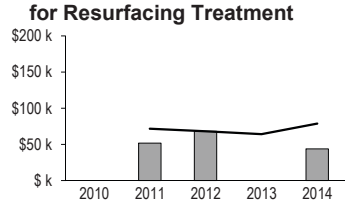
	2010	2011	2012	2013	2014
Concord	$1,453	$2,462	$1,562	$1,677	$1,747
Average	$1,871	$1,936	$2,218	$1,986	$1,966

Cost per Lane Mile for Preservation Treatment



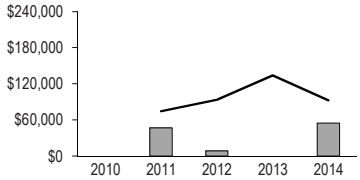
	2010	2011	2012	2013	2014
Concord			$3,469		
Average		$6,972	$6,635	$5,779	$10,605

Cost per Lane Mile for Resurfacing Treatment



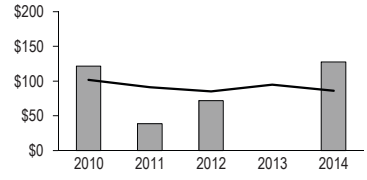
	2010	2011	2012	2013	2014
Concord		$52 k	$68 k		$44 k
Average		$71 k	$68 k	$64 k	$79 k

Cost per Lane Mile for Rehabilitation Treatment



	2010	2011	2012	2013	2014
Concord		$47 k	$9 k		$55 k
Average		$75 k	$94 k	$134 k	$93 k

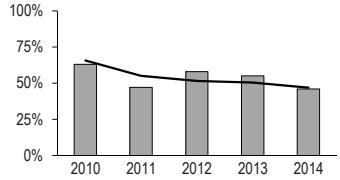
Cost per Ton for Contract Resurfacing



	2010	2011	2012	2013	2014
Concord	$122	$39	$72		$127
Average	$102	$91	$85	$95	$86

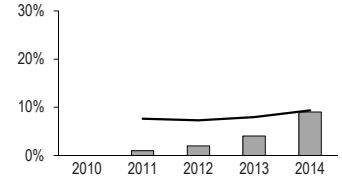
Effectiveness Measures

Percent of Lane Miles Rated 85 or Better



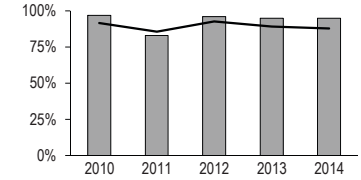
	2010	2011	2012	2013	2014
Concord	63%	47%	58%	55%	46%
Average	66%	55%	51%	50%	47%

Percent of Lane Miles Rated Below 45



	2010	2011	2012	2013	2014
Concord		1.0%	2.0%	4.0%	9.0%
Average		7.6%	7.3%	8.0%	9.4%

Percentage of Potholes Repaired within 24 hours



	2010	2011	2012	2013	2014
Concord	97%	83%	96%	95%	95%
Average	92%	86%	93%	89%	88%

Greensboro — Asphalt Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Greensboro was responsible for maintaining 3,633 lane miles during FY 2013–14. This includes 925 lane miles of state roads. Greensboro treated a total of 42.6 lane miles during the year, equating to about 1.2 percent of total lane miles.

Of the treatment work done on Greensboro's streets, 14.6 of the lane miles had preservation work such as crack sealing or thin overlays performed. All of this preservation work was done by city crews. Resurfacing work was done on 28 lane miles by contract crews. This resurfacing work required a total of 17,000 tons of asphalt and used an average resurfacing depth of 1.25 inches.

The city reported that 34 percent of its lane miles rated 85 or above on its most recent pavement condition rating, conducted in 2012 by a consultant using the Institute for Transportation Research and Education (ITRE) system.

The number of potholes reported for FY 2013–14 was 4,795. The percentage of potholes repaired within twenty-four hours was 65 percent. A total of 533 utility cuts were also repaired, with city crews repairing water and sewer cuts but private contractors repairing others after getting permits from the city. A further ninety-three maintenance patches were completed beyond potholes and utility cuts.

Conditions Affecting Service, Performance, and Costs

Changes in tracking software have improved the accuracy of potholes reported and asphalt used.

Beginning with the FY 2010–11 reporting year, new performance measures were added to this service area. These include "cost per lane mile for preservation treatment," "cost per lane mile for resurfacing treatment," "cost per lane mile for rehabilitation treatment," and "percent of lane miles rated below 45." In addition, the measure "cost of maintenance per lane mile maintained" has been altered to back out some treatment costs that were formerly counted as maintenance. This means that for some jurisdictions, the "cost of maintenance per lane mile maintained" has dropped in FY 2010–11 due to changes in the definition rather than actual drops in maintenance.

Municipal Profile

Population (OSBM 2013)	278,654
Land Area (Square Miles)	127.93
Persons per Square Mile	2,178
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow

Service Profile

FTE Positions—Crews	45.00
FTE Positions—Other	6.00
Lane Miles Maintained	3,633.0
Lane Miles Treated	
Preservation	14.6
Resurfacing	28.0
Rehabilitation	0.0
TOTAL	42.6
Total Costs for All Treatment Types	$2,260,200
Potholes Repaired	4,795
Number of Utility Cuts	533
Number of Maintenance Patches (exclusive of potholes and utility cuts)	93
Registered Vehicles	NA
Registered Vehicles/Square Mile	NA
Average Cost per Ton of Hot Asphalt during Year	NA

Full Cost Profile

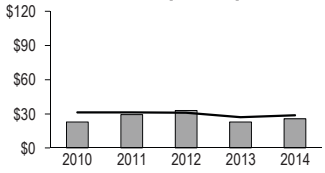
Cost Breakdown by Percentage	
Personal Services	28.5%
Operating Costs	71.5%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$2,050,600
Operating Costs	$5,145,558
Capital Costs	$0
TOTAL	$7,196,158

Greensboro — Asphalt Maintenance and Repair

Key: Greensboro ■ Benchmarking Average — Fiscal Years 2010 through 2014

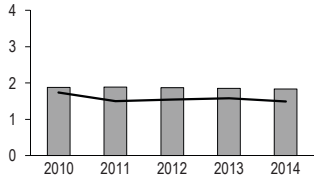
Resource Measures

Asphalt Maintenance and Repair Services Costs per Capita



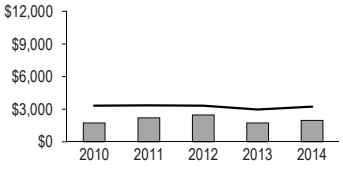
	2010	2011	2012	2013	2014
Greensboro	$22.90	$29.43	$33.09	$22.98	$25.82
Average	$31.32	$31.28	$30.96	$26.99	$28.78

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greensboro	1.88	1.89	1.87	1.85	1.83
Average	1.74	1.50	1.54	1.58	1.49

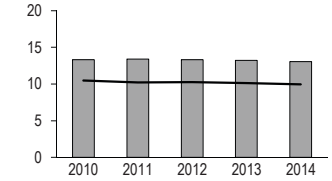
Service Costs per Lane Mile of Road Maintained



	2010	2011	2012	2013	2014
Greensboro	$1,719	$2,193	$2,482	$1,740	$1,981
Average	$3,317	$3,351	$3,309	$2,960	$3,234

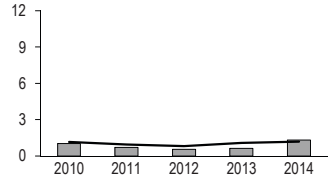
Workload Measures

Number of Lane Miles Maintained per 1,000 Population



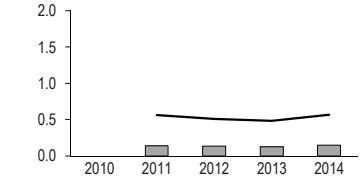
	2010	2011	2012	2013	2014
Greensboro	13.3	13.4	13.3	13.2	13.0
Average	10.5	10.2	10.3	10.1	10.0

Reported Potholes per Lane Mile Maintained



	2010	2011	2012	2013	2014
Greensboro	1.02	0.69	0.53	0.61	1.32
Average	1.14	0.94	0.80	1.08	1.17

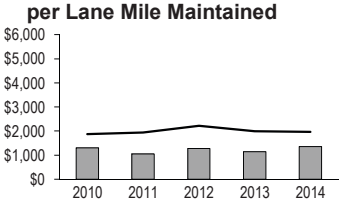
Repaired Utility Cuts per Lane Mile Maintained



	2010	2011	2012	2013	2014
Greensboro		0.14	0.14	0.12	0.15
Average		0.56	0.51	0.48	0.57

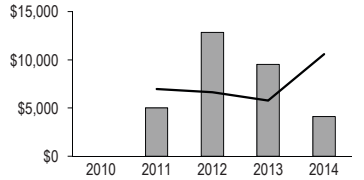
Efficiency Measures

Cost of Maintenance per Lane Mile Maintained



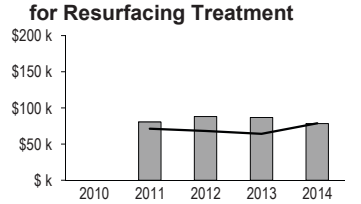
	2010	2011	2012	2013	2014
Greensboro	$1,305	$1,044	$1,280	$1,142	$1,359
Average	$1,871	$1,936	$2,218	$1,986	$1,966

Cost per Lane Mile for Preservation Treatment



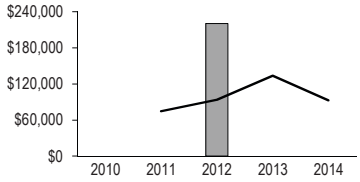
	2010	2011	2012	2013	2014
Greensboro		$5,000	$12,843	$9,519	$4,123
Average		$6,972	$6,635	$5,779	$10,605

Cost per Lane Mile for Resurfacing Treatment



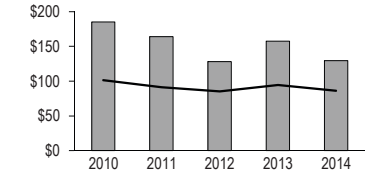
	2010	2011	2012	2013	2014
Greensboro		$81 k	$88 k	$87 k	$79 k
Average		$71 k	$68 k	$64 k	$79 k

Cost per Lane Mile for Rehabilitation Treatment



	2010	2011	2012	2013	2014
Greensboro			$220 k		
Average		$75 k	$94 k	$134 k	$93 k

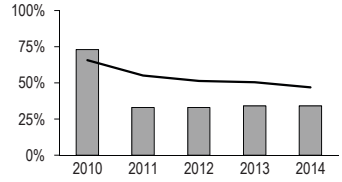
Cost per Ton for Contract Resurfacing



	2010	2011	2012	2013	2014
Greensboro	$185	$164	$128	$157	$129
Average	$102	$91	$85	$95	$86

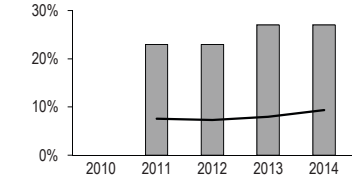
Effectiveness Measures

Percent of Lane Miles Rated 85 or Better



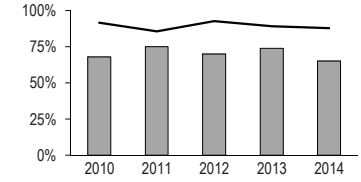
	2010	2011	2012	2013	2014
Greensboro	73%	33%	33%	34%	34%
Average	66%	55%	51%	50%	47%

Percent of Lane Miles Rated Below 45



	2010	2011	2012	2013	2014
Greensboro		23.0%	23.0%	27.0%	27.0%
Average		7.6%	7.3%	8.0%	9.4%

Percentage of Potholes Repaired within 24 hours



	2010	2011	2012	2013	2014
Greensboro	68%	75%	70%	74%	65%
Average	92%	86%	93%	89%	88%

Greenville — Asphalt Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Greenville was responsible for maintaining approximately 537 lane miles during FY 2013–14, all city streets. During the year, Greenville reported that 20.7 lane miles were given some form of treatment, equating to 3.9 percent of total lane miles.

Contract crews treated 7.1 lane miles with preservation techniques such as crack sealing and thin-layer overlays. Contract crews also used rehabilitation on 12.7 lane miles, which includes milling along with resurfacing. City crews also performed rehabilitation work on 0.9 lane miles during the year.

The number of potholes reported for FY 2013–14 was 546, including self-reported and citizen-reported potholes. The percentage of potholes repaired within twenty-four hours was reported as 100 percent. The streets division also repaired 268 utility cuts during the year. City crews also made sixty-one maintenance patches beyond potholes and utility cuts.

Greenville reported that 53.9 percent of lane miles were rated 85 or better on its most recent pavement condition rating, conducted in 2014 by a consultant.

Conditions Affecting Service, Performance, and Costs

Beginning with the FY 2010–11 reporting year, new performance measures were added to this service area. These include "cost per lane mile for preservation treatment," "cost per lane mile for resurfacing treatment," "cost per lane mile for rehabilitation treatment," and "percent of lane miles rated below 45." In addition, the measure "cost of maintenance per lane mile maintained" has been altered to back out some treatment costs that were formerly counted as maintenance. This means that for some jurisdictions, the "cost of maintenance per lane mile maintained" has dropped in FY 2010–11 due to changes in the definition rather than due to actual drops in maintenance.

Greenville did a special pilot project using a proprietary material for lane preservation work during FY 2013–14. This material is applied at a high rate over the asphalt service to be treated resulting in higher costs per lane mile for preservation work. The project will be evaluated over time to determine if the higher cost produces improved performance.

Municipal Profile

Population (OSBM 2013)	87,241
Land Area (Square Miles)	34.85
Persons per Square Mile	2,503
Topography	Flat
Climate	Temperate; little ice and snow

Service Profile

FTE Positions—Crews	8.00
FTE Positions—Other	1.00
Lane Miles Maintained	537.3
Lane Miles Treated	
Preservation	7.1
Resurfacing	0.0
Rehabilitation	13.6
TOTAL	20.7
Total Costs for All Treatment Types	$1,106,281
Potholes Repaired	546
Number of Utility Cuts	268
Number of Maintenance Patches (exclusive of potholes and utility cuts)	61
Registered Vehicles	NA
Registered Vehicles/Square Mile	NA
Average Cost per Ton of Hot Asphalt during Year	$82.00

Full Cost Profile

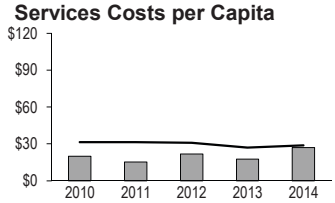
Cost Breakdown by Percentage	
Personal Services	23.5%
Operating Costs	64.7%
Capital Costs	11.8%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$554,532
Operating Costs	$1,528,080
Capital Costs	$279,689
TOTAL	$2,362,301

Greenville — Asphalt Maintenance and Repair

Key: Greenville ■ Benchmarking Average — Fiscal Years 2010 through 2014

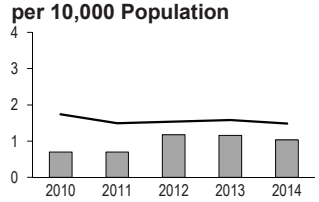
Resource Measures

Asphalt Maintenance and Repair Services Costs per Capita



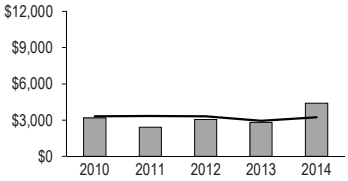
	2010	2011	2012	2013	2014
Greenville	$19.85	$15.30	$21.85	$17.64	$27.08
Average	$31.32	$31.28	$30.96	$26.99	$28.78

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greenville	0.70	0.70	1.18	1.16	1.03
Average	1.74	1.50	1.54	1.58	1.49

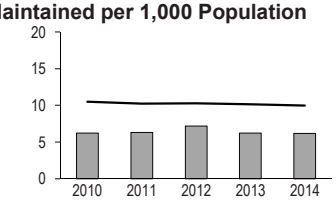
Service Costs per Lane Mile of Road Maintained



	2010	2011	2012	2013	2014
Greenville	$3,179	$2,431	$3,042	$2,828	$4,397
Average	$3,317	$3,351	$3,309	$2,960	$3,234

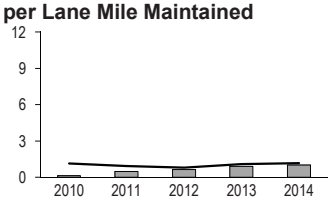
Workload Measures

Number of Lane Miles Maintained per 1,000 Population



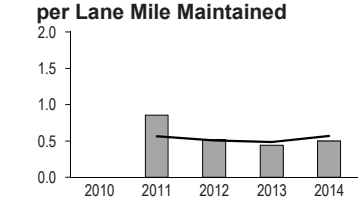
	2010	2011	2012	2013	2014
Greenville	6.2	6.3	7.2	6.2	6.2
Average	10.5	10.2	10.3	10.1	10.0

Reported Potholes per Lane Mile Maintained



	2010	2011	2012	2013	2014
Greenville	0.14	0.47	0.64	0.90	1.02
Average	1.14	0.94	0.80	1.08	1.17

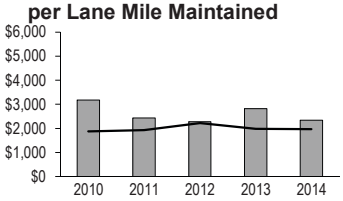
Repaired Utility Cuts per Lane Mile Maintained



	2010	2011	2012	2013	2014
Greenville		0.86	0.52	0.44	0.50
Average		0.56	0.51	0.48	0.57

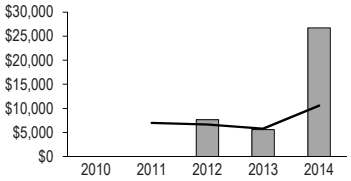
Efficiency Measures

Cost of Maintenance per Lane Mile Maintained



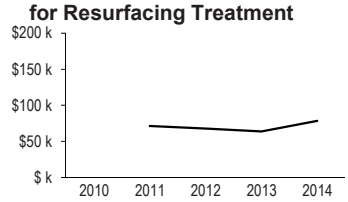
	2010	2011	2012	2013	2014
Greenville	$3,179	$2,431	$2,276	$2,821	$2,338
Average	$1,871	$1,936	$2,218	$1,986	$1,966

Cost per Lane Mile for Preservation Treatment



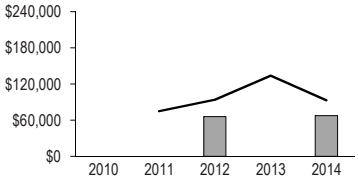
	2010	2011	2012	2013	2014
Greenville			$7,627	$5,597	$26,693
Average		$6,972	$6,635	$5,779	$10,605

Cost per Lane Mile for Resurfacing Treatment



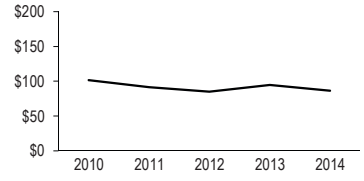
	2010	2011	2012	2013	2014
Greenville					
Average		$71 k	$68 k	$64 k	$79 k

Cost per Lane Mile for Rehabilitation Treatment



	2010	2011	2012	2013	2014
Greenville			$66 k		$67 k
Average		$75 k	$94 k	$134 k	$93 k

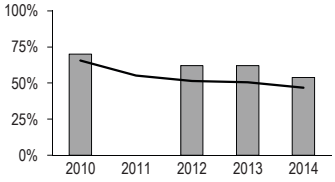
Cost per Ton for Contract Resurfacing



	2010	2011	2012	2013	2014
Greenville					
Average	$102	$91	$85	$95	$86

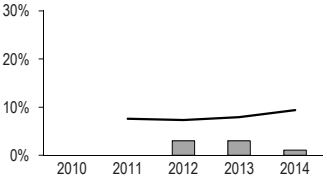
Effectiveness Measures

Percent of Lane Miles Rated 85 or Better



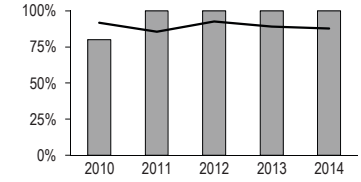
	2010	2011	2012	2013	2014
Greenville	70%		62%	62%	54%
Average	66%	55%	51%	50%	47%

Percent of Lane Miles Rated Below 45



	2010	2011	2012	2013	2014
Greenville			3.0%	3.0%	1.1%
Average		7.6%	7.3%	8.0%	9.4%

Percentage of Potholes Repaired within 24 hours



	2010	2011	2012	2013	2014
Greenville	80%	100%	100%	100%	100%
Average	92%	86%	93%	89%	88%

Hickory — Asphalt Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Hickory was responsible for maintaining approximately 719 lane miles during FY 2013–14, including 238.5 lane miles of state roads. The city treated a total of 10.8 lane miles with resurfacing, equating to 1.5 percent of total lane miles.

The city resurfaced 10.8 lane miles using contractors. A total of 6,274 tons of asphalt was used by the contractors. The average resurfacing depth used by the city was 1.5 inches.

The city reported that 39 percent of its lane miles rated 85 or above on its most recent pavement condition rating, conducted in 2007. The city used the Institute for Transportation Research and Education (ITRE) to conduct its rating system.

The number of potholes reported for FY 2013–14 was 298, including self-reported and citizen-reported potholes. The percentage of potholes repaired within twenty-four hours was 94 percent.

Conditions Affecting Service, Performance, and Costs

Beginning with the FY 2010–11 reporting year, new performance measures were added to this service area. These include "cost per lane mile for preservation treatment," "cost per lane mile for resurfacing treatment," "cost per lane mile for rehabilitation treatment," and "percent of lane miles rated below 45." In addition, the measure "cost of maintenance per lane mile maintained" has been altered to back out some treatment costs that were formerly counted as maintenance. This means that for some jurisdictions, the "cost of maintenance per lane mile maintained" has dropped in FY 2010–11 due to changes in the definition rather than actual drops in maintenance.

During FY 2011–2012, there were no snow events but a rainy winter led to an above average number of potholes and a smaller amount of crack sealing.

Municipal Profile

Population (OSBM 2013)	40,222
Land Area (Square Miles)	29.83
Persons per Square Mile	1,348
Topography	Gently rolling
Climate	Temperate; some ice and snow

Service Profile

FTE Positions—Crews	6.00
FTE Positions—Other	1.00
Lane Miles Maintained	718.9
Lane Miles Treated	
Preservation	0.0
Resurfacing	10.8
Rehabilitation	0.0
TOTAL	10.8
Total Costs for All Treatment Types	$480,000
Potholes Repaired	298
Number of Utility Cuts	NA
Number of Maintenance Patches (exclusive of potholes and utility cuts)	NA
Registered Vehicles	41,993
Registered Vehicles/Square Mile	1,408
Average Cost per Ton of Hot Asphalt during Year	$76.50

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	30.3%
Operating Costs	66.6%
Capital Costs	3.1%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$295,142
Operating Costs	$647,567
Capital Costs	$29,816
TOTAL	$972,525

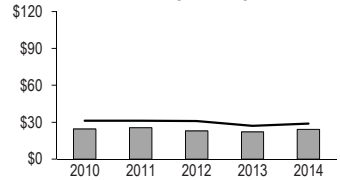
Hickory

Asphalt Maintenance and Repair

Key: Hickory ■ Benchmarking Average — Fiscal Years 2010 through 2014

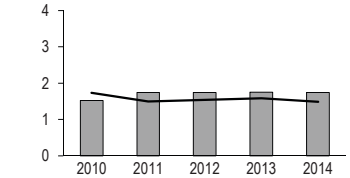
Resource Measures

Asphalt Maintenance and Repair Services Costs per Capita



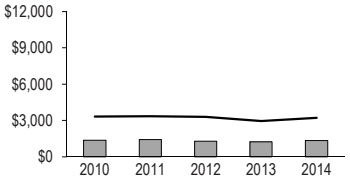
	2010	2011	2012	2013	2014
Hickory	$24.58	$25.44	$22.94	$22.16	$24.18
Average	$31.32	$31.28	$30.96	$26.99	$28.78

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Hickory	1.52	1.75	1.75	1.75	1.74
Average	1.74	1.50	1.54	1.58	1.49

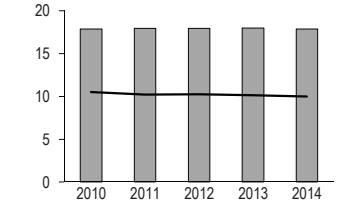
Service Costs per Lane Mile of Road Maintained



	2010	2011	2012	2013	2014
Hickory	$1,375	$1,418	$1,279	$1,234	$1,353
Average	$3,317	$3,351	$3,309	$2,960	$3,234

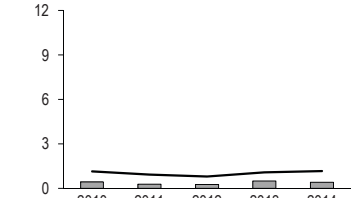
Workload Measures

Number of Lane Miles Maintained per 1,000 Population



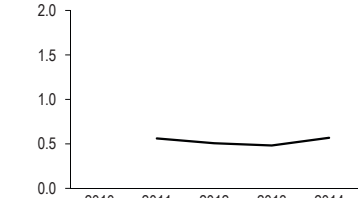
	2010	2011	2012	2013	2014
Hickory	17.9	17.9	17.9	18.0	17.9
Average	10.5	10.2	10.3	10.1	10.0

Reported Potholes per Lane Mile Maintained



	2010	2011	2012	2013	2014
Hickory	0.44	0.29	0.27	0.51	0.41
Average	1.14	0.94	0.80	1.08	1.17

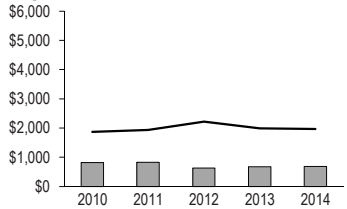
Repaired Utility Cuts per Lane Mile Maintained



	2010	2011	2012	2013	2014
Hickory					
Average		0.56	0.51	0.48	0.57

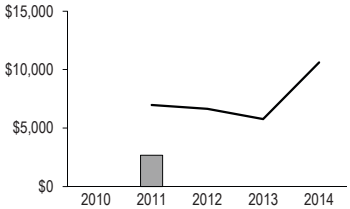
Efficiency Measures

Cost of Maintenance per Lane Mile Maintained



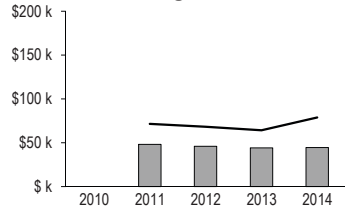
	2010	2011	2012	2013	2014
Hickory	$819	$824	$629	$678	$685
Average	$1,871	$1,936	$2,218	$1,986	$1,966

Cost per Lane Mile for Preservation Treatment



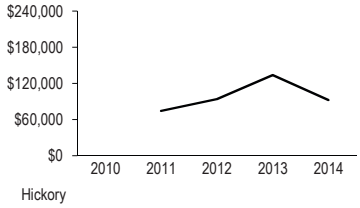
	2010	2011	2012	2013	2014
Hickory		$2,685			
Average		$6,972	$6,635	$5,779	$10,605

Cost per Lane Mile for Resurfacing Treatment



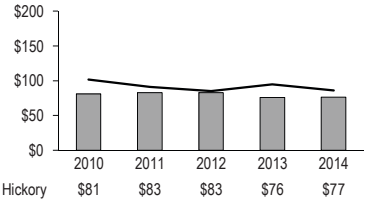
	2010	2011	2012	2013	2014
Hickory		$48 k	$46 k	$44 k	$44 k
Average		$71 k	$68 k	$64 k	$79 k

Cost per Lane Mile for Rehabilitation Treatment



	2010	2011	2012	2013	2014
Hickory					
Average		$75 k	$94 k	$134 k	$93 k

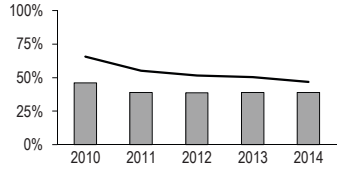
Cost per Ton for Contract Resurfacing



	2010	2011	2012	2013	2014
Hickory	$81	$83	$83	$76	$77
Average	$102	$91	$85	$95	$86

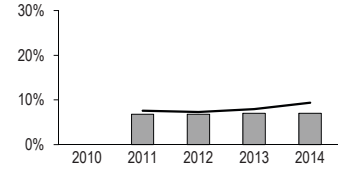
Effectiveness Measures

Percent of Lane Miles Rated 85 or Better



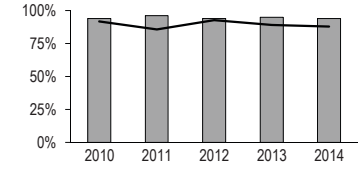
	2010	2011	2012	2013	2014
Hickory	46%	39%	39%	39%	39%
Average	66%	55%	51%	50%	47%

Percent of Lane Miles Rated Below 45



	2010	2011	2012	2013	2014
Hickory		6.8%	6.8%	7.0%	7.0%
Average		7.6%	7.3%	8.0%	9.4%

Percentage of Potholes Repaired within 24 hours



	2010	2011	2012	2013	2014
Hickory	94%	96%	94%	95%	94%
Average	92%	86%	93%	89%	88%

High Point — Asphalt Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of High Point was responsible for maintaining 1,311 lane miles during FY 2013–14, which includes 340 lane miles of state roads. The city treated 28.2 lane miles by various methods, equating to 2.2 percent of total lane miles.

The city used preservation techniques on 10.6 lane miles. This work was done by city crews. A total of 6.0 lane miles were resurfaced by a combination of city and contract crews. Additionally, 11.6 lane miles were given rehabilitation by city crews and contractors, which includes resurfacing preceded by milling work. A total of 12,011 tons of asphalt was used for resurfacing projects. The average resurfacing depth was 1.5 inches by city crews and 2.0 inches by contractors.

The city reported that 42 percent of its street segments rated 85 or above on its most recent pavement condition rating, conducted in 2014. The rating was done by a consultant using the Institute for Transportation Research and Education (ITRE) rating system.

The number of potholes reported for FY 2013–14 was 1,477, including self-reported and citizen-reported potholes. The percentage of potholes repaired within twenty-four hours was 90 percent.

A total of 284 utility cuts were made in the streets during the year. The Streets Division places asphalt in water-sewer utility cuts after the utility forces backfill and compacts. Material, equipment, and personnel costs are tracked for this repair. Funds are transferred from the Water-Sewer Mains Division to recover applicable expenses associated with patching.

Conditions Affecting Service, Performance, and Costs

Beginning with the FY 2010–11 reporting year, new performance measures were added to this service area. These include "cost per lane mile for preservation treatment," "cost per lane mile for resurfacing treatment," "cost per lane mile for rehabilitation treatment," and "percent of lane miles rated below 45." In addition, the measure "cost of maintenance per lane mile maintained" has been altered to back out some treatment costs that were formerly counted as maintenance. This means that for some jurisdictions, the "cost of maintenance per lane mile maintained" has dropped in FY 2010–11 due to changes in the definition rather than actual drops in maintenance.

Improvements in FY 2013–14 in the measurement and tracking of road segments in High Point has produced an estimate of fewer lane miles than in prior years. Rather than an actual drop in lane miles, the lower reported mileage reflects a more accurate tracking. The relative decrease in reported lane miles means that some of the performance measures saw an increase, which was due to this improvement in measurement rather than actual changes.

Municipal Profile

Population (OSBM 2013)	107,652
Land Area (Square Miles)	54.73
Persons per Square Mile	1,967
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow

Service Profile

FTE Positions—Crews	14.00
FTE Positions—Other	1.25
Lane Miles Maintained	1,310.6
Lane Miles Treated	
Preservation	10.6
Resurfacing	6.0
Rehabilitation	11.6
TOTAL	28.2
Total Costs for All Treatment Types	$1,624,872
Potholes Repaired	1,477
Number of Utility Cuts	284
Number of Maintenance Patches (exclusive of potholes and utility cuts)	33
Registered Vehicles	58,761
Registered Vehicles/Square Mile	1,074
Average Cost per Ton of Hot Asphalt during Year	$69.00

Full Cost Profile

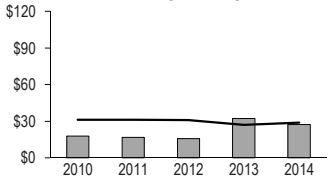
Cost Breakdown by Percentage	
Personal Services	24.4%
Operating Costs	68.8%
Capital Costs	6.8%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$716,603
Operating Costs	$2,022,393
Capital Costs	$201,407
TOTAL	$2,940,403

High Point Asphalt Maintenance and Repair

Key: High Point ■ Benchmarking Average — Fiscal Years 2010 through 2014

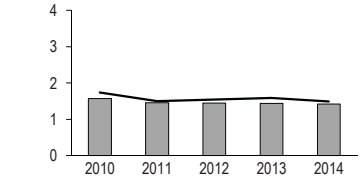
Resource Measures

Asphalt Maintenance and Repair Services Costs per Capita



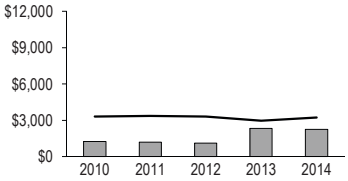
	2010	2011	2012	2013	2014
High Point	$17.79	$16.80	$15.75	$32.28	$27.31
Average	$31.32	$31.28	$30.96	$26.99	$28.78

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2010	2011	2012	2013	2014
High Point	1.57	1.46	1.45	1.43	1.42
Average	1.74	1.50	1.54	1.58	1.49

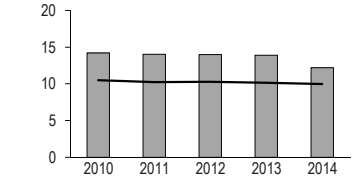
Service Costs per Lane Mile of Road Maintained



	2010	2011	2012	2013	2014
High Point	$1,253	$1,197	$1,125	$2,323	$2,244
Average	$3,317	$3,351	$3,309	$2,960	$3,234

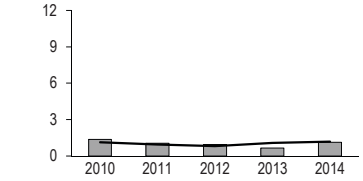
Workload Measures

Number of Lane Miles Maintained per 1,000 Population



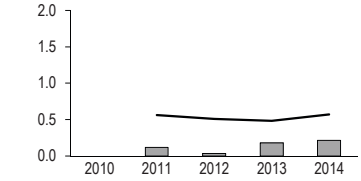
	2010	2011	2012	2013	2014
High Point	14.2	14.0	14.0	13.9	12.2
Average	10.5	10.2	10.3	10.1	10.0

Reported Potholes per Lane Mile Maintained



	2010	2011	2012	2013	2014
High Point	1.38	1.04	0.96	0.66	1.13
Average	1.14	0.94	0.80	1.08	1.17

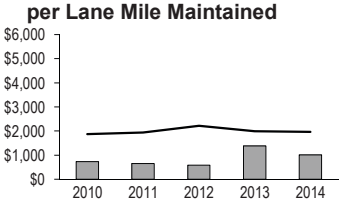
Repaired Utility Cuts per Lane Mile Maintained



	2010	2011	2012	2013	2014
High Point		0.12	0.03	0.18	0.22
Average		0.56	0.51	0.48	0.57

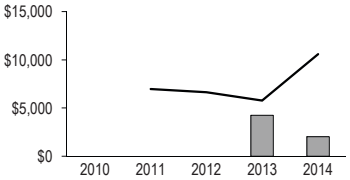
Efficiency Measures

Cost of Maintenance per Lane Mile Maintained



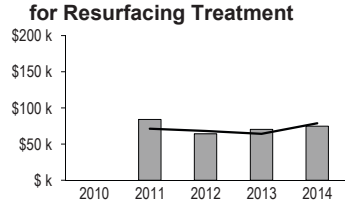
	2010	2011	2012	2013	2014
High Point	$729	$650	$589	$1,375	$1,004
Average	$1,871	$1,936	$2,218	$1,986	$1,966

Cost per Lane Mile for Preservation Treatment



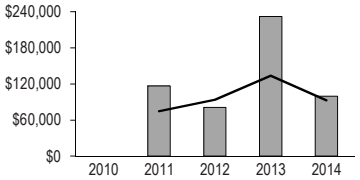
	2010	2011	2012	2013	2014
High Point				$4,243	$2,016
Average		$6,972	$6,635	$5,779	$10,605

Cost per Lane Mile for Resurfacing Treatment



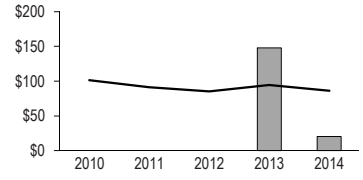
	2010	2011	2012	2013	2014
High Point		$84 k	$64 k	$70 k	$75 k
Average		$71 k	$68 k	$64 k	$79 k

Cost per Lane Mile for Rehabilitation Treatment



	2010	2011	2012	2013	2014
High Point		$117 k	$81 k	$232 k	$100 k
Average		$75 k	$94 k	$134 k	$93 k

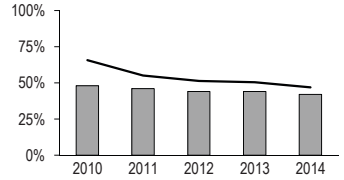
Cost per Ton for Contract Resurfacing



	2010	2011	2012	2013	2014
High Point				$148	$20
Average	$102	$91	$85	$95	$86

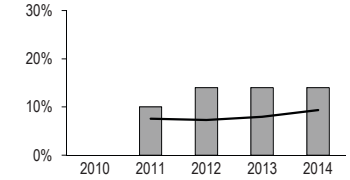
Effectiveness Measures

Percent of Lane Miles Rated 85 or Better



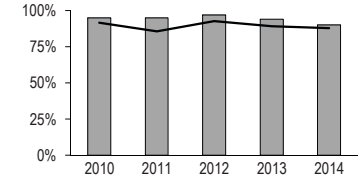
	2010	2011	2012	2013	2014
High Point	48%	46%	44%	44%	42%
Average	66%	55%	51%	50%	47%

Percent of Lane Miles Rated Below 45



	2010	2011	2012	2013	2014
High Point		10.0%	14.0%	14.0%	14.0%
Average		7.6%	7.3%	8.0%	9.4%

Percentage of Potholes Repaired within 24 hours



	2010	2011	2012	2013	2014
High Point	95%	95%	97%	94%	90%
Average	92%	86%	93%	89%	88%

Salisbury — Asphalt Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Salisbury was responsible for maintaining approximately 345 lane miles during FY 2013–14. The city treated a total of 4.8 lane miles, or 1.4 percent of total lane miles.

The city lane miles that were treated used rehabilitation, which includes resurfacing following milling. This work was done by contractors. The contractors used a total of 2,955 tons of asphalt, and the average resurfacing depth used by the contractors was 1.5 inches.

The city reported that 67 percent of its lane miles rated 85 or above on its most recent pavement condition rating, conducted in 2010. The city used a consultant for the rating, who relied on the Institute for Transportation Research and Education (ITRE) rating system.

The number of potholes reported for FY 2013–14 was 948. The percentage of potholes repaired within twenty-four hours was 100 percent. A total of 143 utility cuts were also made, with the city repairing all of these. Additionally, 245 maintenance patches were done, which are not included in the pothole or utility cut numbers.

Conditions Affecting Service, Performance, and Costs

Beginning with the FY 2010–11 reporting year, new performance measures were added to this service area. These include "cost per lane mile for preservation treatment," "cost per lane mile for resurfacing treatment," "cost per lane mile for rehabilitation treatment," and "percent of lane miles rated below 45." In addition, the measure "cost of maintenance per lane mile maintained" has been altered to back out some treatment costs that were formerly counted as maintenance. This means that for some jurisdictions, the "cost of maintenance per lane mile maintained" has dropped in FY 2010–11 due to changes in the definition rather than actual drops in maintenance.

Municipal Profile

Population (OSBM 2013)	33,726
Land Area (Square Miles)	22.18
Persons per Square Mile	1,521
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow

Service Profile

FTE Positions—Crews	5.00
FTE Positions—Other	0.25
Lane Miles Maintained	344.7
Lane Miles Treated	
Preservation	0.0
Resurfacing	0.0
Rehabilitation	4.8
TOTAL	4.8
Total Costs for All Treatment Types	$272,147
Potholes Repaired	948
Number of Utility Cuts	143
Number of Maintenance Patches (exclusive of potholes and utility cuts)	245
Registered Vehicles	NA
Registered Vehicles/Square Mile	NA
Average Cost per Ton of Hot Asphalt during Year	$59.00

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	10.7%
Operating Costs	55.0%
Capital Costs	34.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$112,182
Operating Costs	$574,426
Capital Costs	$358,111
TOTAL	$1,044,719

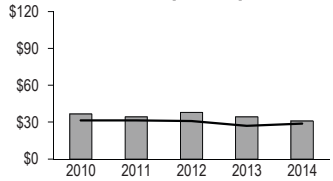
Salisbury

Asphalt Maintenance and Repair

Key: Salisbury ■ Benchmarking Average — Fiscal Years 2010 through 2014

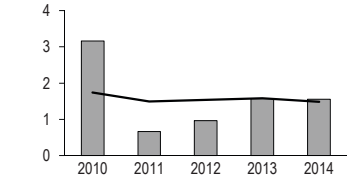
Resource Measures

Asphalt Maintenance and Repair Services Costs per Capita



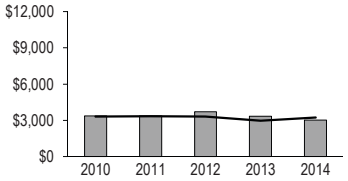
	2010	2011	2012	2013	2014
Salisbury	$36.72	$34.31	$37.92	$34.15	$30.98
Average	$31.32	$31.28	$30.96	$26.99	$28.78

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Salisbury	3.16	0.67	0.96	1.57	1.56
Average	1.74	1.50	1.54	1.58	1.49

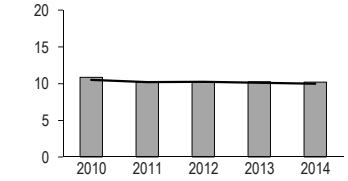
Service Costs per Lane Mile of Road Maintained



	2010	2011	2012	2013	2014
Salisbury	$3,378	$3,365	$3,717	$3,336	$3,031
Average	$3,317	$3,351	$3,309	$2,960	$3,234

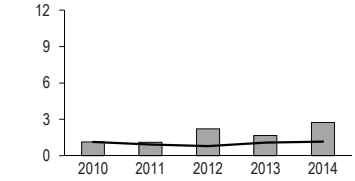
Workload Measures

Number of Lane Miles Maintained per 1,000 Population



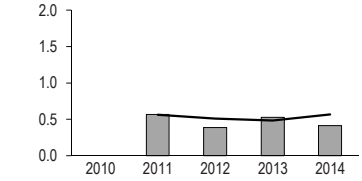
	2010	2011	2012	2013	2014
Salisbury	10.9	10.2	10.2	10.2	10.2
Average	10.5	10.2	10.3	10.1	10.0

Reported Potholes per Lane Mile Maintained



	2010	2011	2012	2013	2014
Salisbury	1.14	1.12	2.23	1.66	2.75
Average	1.14	0.94	0.80	1.08	1.17

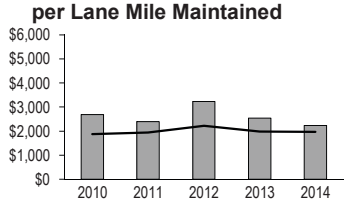
Repaired Utility Cuts per Lane Mile Maintained



	2010	2011	2012	2013	2014
Salisbury		0.57	0.39	0.53	0.41
Average		0.56	0.51	0.48	0.57

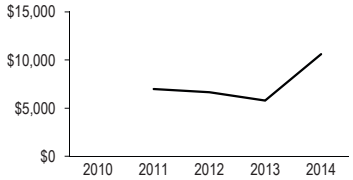
Efficiency Measures

Cost of Maintenance per Lane Mile Maintained



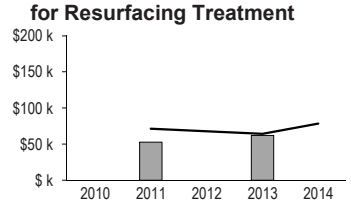
	2010	2011	2012	2013	2014
Salisbury	$2,686	$2,389	$3,227	$2,537	$2,242
Average	$1,871	$1,936	$2,218	$1,986	$1,966

Cost per Lane Mile for Preservation Treatment



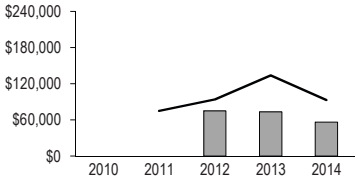
	2010	2011	2012	2013	2014
Salisbury					
Average		$6,972	$6,635	$5,779	$10,605

Cost per Lane Mile for Resurfacing Treatment



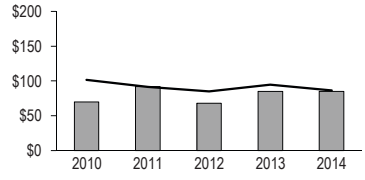
	2010	2011	2012	2013	2014
Salisbury		$53 k		$62 k	
Average		$71 k	$68 k	$64 k	$79 k

Cost per Lane Mile for Rehabilitation Treatment



	2010	2011	2012	2013	2014
Salisbury			$75 k	$73 k	$56 k
Average		$75 k	$94 k	$134 k	$93 k

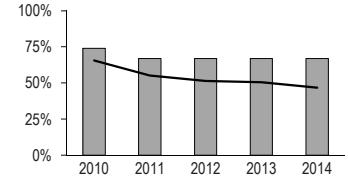
Cost per Ton for Contract Resurfacing



	2010	2011	2012	2013	2014
Salisbury	$70	$92	$68	$85	$85
Average	$102	$91	$85	$95	$86

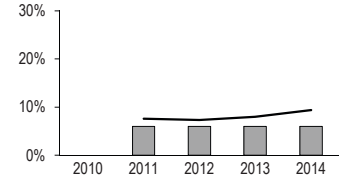
Effectiveness Measures

Percent of Lane Miles Rated 85 or Better



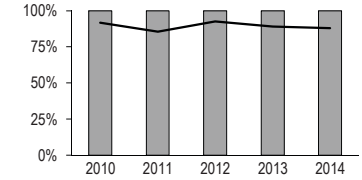
	2010	2011	2012	2013	2014
Salisbury	74%	67%	67%	67%	67%
Average	66%	55%	51%	50%	47%

Percent of Lane Miles Rated Below 45



	2010	2011	2012	2013	2014
Salisbury		6.0%	6.0%	6.0%	6.0%
Average		7.6%	7.3%	8.0%	9.4%

Percentage of Potholes Repaired within 24 hours



	2010	2011	2012	2013	2014
Salisbury	100%	100%	100%	100%	100%
Average	92%	86%	93%	89%	88%

Wilson — Asphalt Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Wilson was responsible for maintaining approximately 694 lane miles of city streets during FY 2013–14. The city treated a total of 8.4 lane miles during the year, or 1.2 percent of the total lane miles maintained.

Contract crews treated 3.9 lane miles with preservation techniques such as crack sealing or thin overlays. The city also did some preservation work with city crews but the lane miles for this work were not available. City and contract crews also resurfaced 4.5 lane miles during the year using 3,989 tons of asphalt.

The city reported that 53 percent of its lane miles rated 85 or above on its most recent pavement condition rating, conducted in 2014. The city relied on a consultant for the rating, who used a customized rating based on the Institute for Transportation Research and Education (ITRE) system.

The number of potholes reported for FY 2013–14 was 891. The percentage of potholes repaired within twenty-four hours was 99 percent. Repairs to 735 utility cuts were also made during the year.

Conditions Affecting Service, Performance, and Costs

The cost of asphalt and maintenance materials is directly related to fluctuations in the price of petroleum.

Beginning with the FY 2010–11 reporting year, new performance measures were added to this service area. These include "cost per lane mile for preservation treatment," "cost per lane mile for resurfacing treatment" "cost per lane mile for rehabilitation treatment," and "percent of lane miles rated below 45." In addition, the measure "cost of maintenance per lane mile maintained" has been altered to back out some treatment costs that were formerly counted as maintenance. This means that for some jurisdictions, the "cost of maintenance per lane mile maintained" has dropped in FY 2010–11 due to changes in the definition rather than actual drops in maintenance.

The winter during FY 2011–12 was milder than normal and generated few potholes. Additionally, crack sealing operations have helped reduce potholes.

Municipal Profile

Population (OSBM 2013)	49,097
Land Area (Square Miles)	30.48
Persons per Square Mile	1,611
Topography	Flat
Climate	Temperate; little ice and snow

Service Profile

FTE Positions—Crews	5.00
FTE Positions—Other	0.50
Lane Miles Maintained	694.5
Lane Miles Treated	
Preservation	3.9
Resurfacing	4.5
Rehabilitation	0.0
TOTAL	8.4
Total Costs for All Treatment Types	$535,466
Potholes Repaired	891
Number of Utility Cuts	735
Number of Maintenance Patches (exclusive of potholes and utility cuts)	NA
Registered Vehicles	35,816
Registered Vehicles/Square Mile	1,175
Average Cost per Ton of Hot Asphalt during Year	$73.50

Full Cost Profile

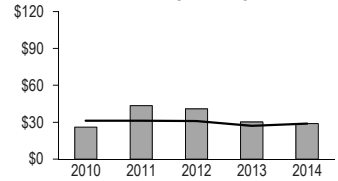
Cost Breakdown by Percentage	
Personal Services	24.1%
Operating Costs	69.9%
Capital Costs	6.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$342,272
Operating Costs	$995,016
Capital Costs	$85,475
TOTAL	$1,422,763

Wilson — Asphalt Maintenance and Repair

Key: Wilson ■ Benchmarking Average — Fiscal Years 2010 through 2014

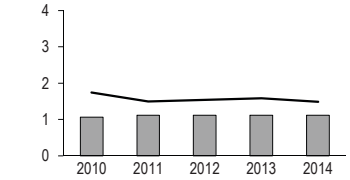
Resource Measures

Asphalt Maintenance and Repair Services Costs per Capita



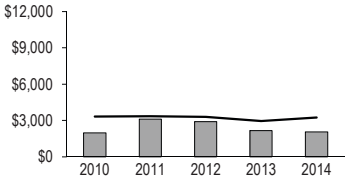
	2010	2011	2012	2013	2014
Wilson	$26.06	$43.36	$40.78	$30.25	$28.98
Average	$31.32	$31.28	$30.96	$26.99	$28.78

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Wilson	1.06	1.11	1.12	1.11	1.12
Average	1.74	1.50	1.54	1.58	1.49

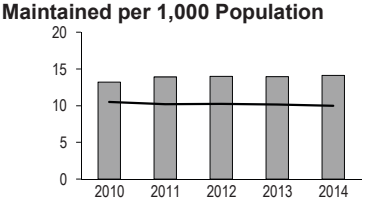
Service Costs per Lane Mile of Road Maintained



	2010	2011	2012	2013	2014
Wilson	$1,976	$3,116	$2,913	$2,171	$2,049
Average	$3,317	$3,351	$3,309	$2,960	$3,234

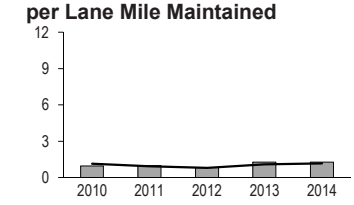
Workload Measures

Number of Lane Miles Maintained per 1,000 Population



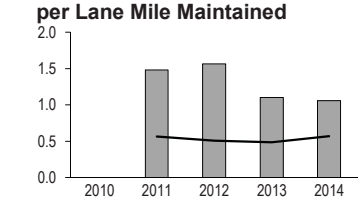
	2010	2011	2012	2013	2014
Wilson	13.2	13.9	14.0	13.9	14.1
Average	10.5	10.2	10.3	10.1	10.0

Reported Potholes per Lane Mile Maintained



	2010	2011	2012	2013	2014
Wilson	0.96	0.98	0.82	1.29	1.28
Average	1.14	0.94	0.80	1.08	1.17

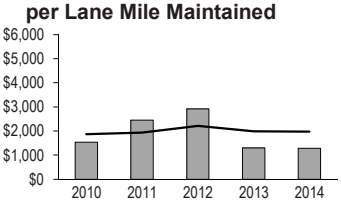
Repaired Utility Cuts per Lane Mile Maintained



	2010	2011	2012	2013	2014
Wilson		1.48	1.56	1.10	1.06
Average		0.56	0.51	0.48	0.57

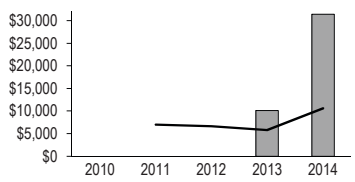
Efficiency Measures

Cost of Maintenance per Lane Mile Maintained



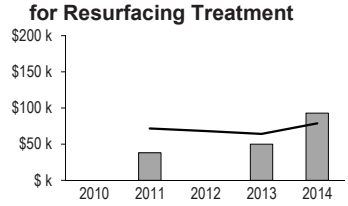
	2010	2011	2012	2013	2014
Wilson	$1,529	$2,450	$2,913	$1,296	$1,278
Average	$1,871	$1,936	$2,218	$1,986	$1,966

Cost per Lane Mile for Preservation Treatment



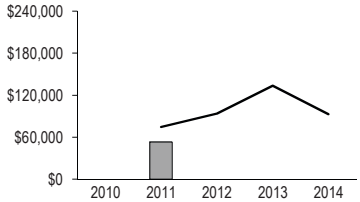
	2010	2011	2012	2013	2014
Wilson				$10,065	$31,387
Average		$6,972	$6,635	$5,779	$10,605

Cost per Lane Mile for Resurfacing Treatment



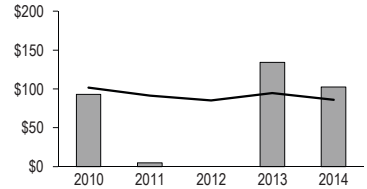
	2010	2011	2012	2013	2014
Wilson		$38 k		$50 k	$93 k
Average		$71 k	$68 k	$64 k	$79 k

Cost per Lane Mile for Rehabilitation Treatment



	2010	2011	2012	2013	2014
Wilson		$53 k			
Average		$75 k	$94 k	$134 k	$93 k

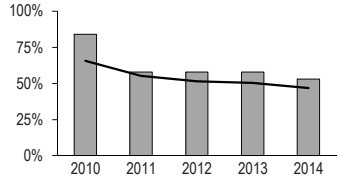
Cost per Ton for Contract Resurfacing



	2010	2011	2012	2013	2014
Wilson	$93	$5		$134	$103
Average	$102	$91	$85	$95	$86

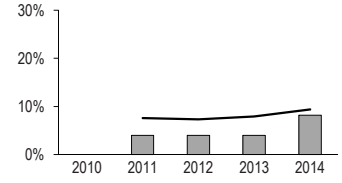
Effectiveness Measures

Percent of Lane Miles Rated 85 or Better



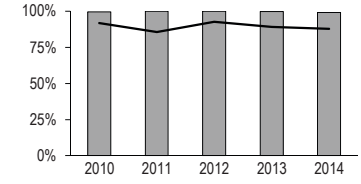
	2010	2011	2012	2013	2014
Wilson	84%	58%	58%	58%	53%
Average	66%	55%	51%	50%	47%

Percent of Lane Miles Rated Below 45



	2010	2011	2012	2013	2014
Wilson		4.0%	4.0%	4.0%	8.2%
Average		7.6%	7.3%	8.0%	9.4%

Percentage of Potholes Repaired within 24 hours



	2010	2011	2012	2013	2014
Wilson	100%	100%	100%	100%	99%
Average	92%	86%	93%	89%	88%

Winston-Salem Asphalt Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Winston-Salem was responsible for maintaining approximately 2,187 lane miles of city streets during FY 2013–14. The city treated 63.5 lane miles, or 2.9 percent of the total lane miles.

The city used a variety of treatment methods for repair of roads. A total of 16 lane miles were treated by contract crews with preservation methods such as crack sealing or thin overlays. A total of 0.9 lane miles had basic resurfacing done by city crews. Finally, 46.6 lane miles were rehabilitated by contract crews with milling followed by resurfacing. A total of 33,725 tons of asphalt was used by contracted and city crews for resurfacing.

The city reported that 49 percent of its lane miles rated 85 or above on its most recent pavement condition rating, conducted in 2014. The city used the Pavement Tracking System (PTS).

The city reported 1,836 potholes in FY 2013–14. The percentage of potholes repaired within twenty-four hours was estimated at 80 percent. City policy is to repair potholes within twenty-four hours, but the lower response level is a result of calls on weekends and sick or vacation time of repair crews.

Conditions Affecting Service, Performance, and Costs

The hard winter conditions in FY 2013–14 led to an increase in potholes. Snow, ice, and rain combined with the cold weather created more stress on the street paving and led to more failures. There was also a backlog of work after the winter due to the fact that most of the available asphalt plants were not operating due to inclement weather and colder temperatures.

Beginning with the FY 2010–11 reporting year, new performance measures were added to this service area. These include "cost per lane mile for preservation treatment," "cost per lane mile for resurfacing treatment," "cost per lane mile for rehabilitation treatment," and "percent of lane miles rated below 45." In addition, the measure "cost of maintenance per lane mile maintained" has been altered to back out some treatment costs that were formerly counted as maintenance. This means that for some jurisdictions, the "cost of maintenance per lane mile maintained" has dropped in FY 2010–11 due to changes in the definition rather than actual drops in maintenance.

The City introduced a mobile phone application called "See, Click, Fix" that allowed citizens to report potholes in a more convenient fashion. Along with more experience using the city's customer service line, City Link, there was an increase in reported potholes in FY 2013–14. Additionally the harsher winter was a factor in the number of increased potholes.

Municipal Profile

Population (OSBM 2013)	235,527
Land Area (Square Miles)	132.45
Persons per Square Mile	1,778
Topography	Gently rolling
Climate	Temperate; some ice and snow

Service Profile

FTE Positions—Crews	39.50
FTE Positions—Other	3.50
Lane Miles Maintained	2,187.1
Lane Miles Treated	
Preservation	16.0
Resurfacing	0.9
Rehabilitation	46.6
TOTAL	63.5
Total Costs for All Treatment Types	$2,445,355
Potholes Repaired	1,836
Number of Utility Cuts	525
Number of Maintenance Patches (exclusive of potholes and utility cuts)	125
Registered Vehicles	160,762
Registered Vehicles/Square Mile	1,214
Average Cost per Ton of Hot Asphalt during Year	$67.86

Full Cost Profile

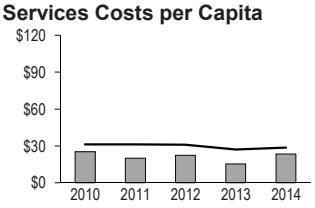
Cost Breakdown by Percentage	
Personal Services	21.6%
Operating Costs	73.8%
Capital Costs	4.6%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,193,173
Operating Costs	$4,069,772
Capital Costs	$252,175
TOTAL	$5,515,120

Winston-Salem Asphalt Maintenance and Repair

Key: Winston-Salem ■ Benchmarking Average — Fiscal Years 2010 through 2014

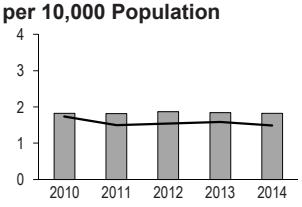
Resource Measures

Asphalt Maintenance and Repair Services Costs per Capita



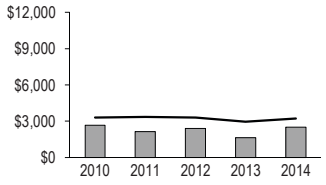
	2010	2011	2012	2013	2014
Winston-Salem	$25.35	$20.14	$22.49	$15.31	$23.42
Average	$31.32	$31.28	$30.96	$26.99	$28.78

Asphalt Maintenance and Repair FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	1.82	1.81	1.87	1.84	1.83
Average	1.74	1.50	1.54	1.58	1.49

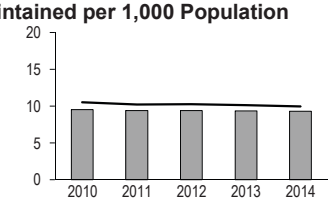
Service Costs per Lane Mile of Road Maintained



	2010	2011	2012	2013	2014
Winston-Salem	$2,657	$2,143	$2,394	$1,635	$2,522
Average	$3,317	$3,351	$3,309	$2,960	$3,234

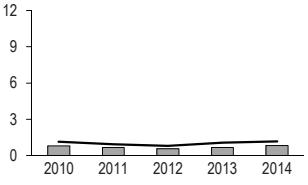
Workload Measures

Number of Lane Miles Maintained per 1,000 Population



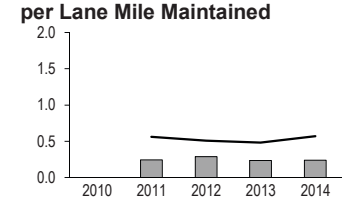
	2010	2011	2012	2013	2014
Winston-Salem	9.5	9.4	9.4	9.4	9.3
Average	10.5	10.2	10.3	10.1	10.0

Reported Potholes per Lane Mile Maintained



	2010	2011	2012	2013	2014
Winston-Salem	0.82	0.67	0.58	0.68	0.84
Average	1.14	0.94	0.80	1.08	1.17

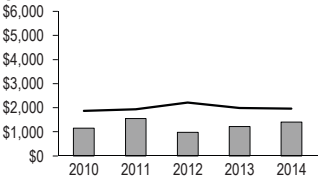
Repaired Utility Cuts per Lane Mile Maintained



	2010	2011	2012	2013	2014
Winston-Salem		0.25	0.29	0.24	0.24
Average		0.56	0.51	0.48	0.57

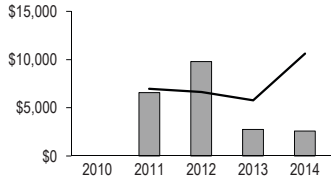
Efficiency Measures

Cost of Maintenance per Lane Mile Maintained



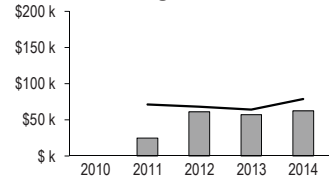
	2010	2011	2012	2013	2014
Winston-Salem	$1,150	$1,546	$986	$1,217	$1,404
Average	$1,871	$1,936	$2,218	$1,986	$1,966

Cost per Lane Mile for Preservation Treatment



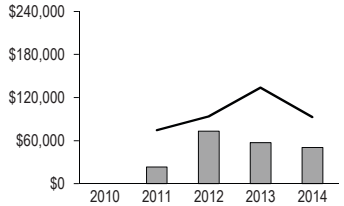
	2010	2011	2012	2013	2014
Winston-Salem		$6,566	$9,796	$2,759	$2,591
Average		$6,972	$6,635	$5,779	$10,605

Cost per Lane Mile for Resurfacing Treatment



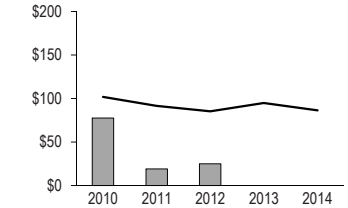
	2010	2011	2012	2013	2014
Winston-Salem		$25 k	$61 k	$57 k	$62 k
Average		$71 k	$68 k	$64 k	$79 k

Cost per Lane Mile for Rehabilitation Treatment



	2010	2011	2012	2013	2014
Winston-Salem		$23 k	$73 k	$57 k	$50 k
Average		$75 k	$94 k	$134 k	$93 k

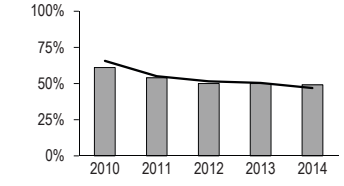
Cost per Ton for Contract Resurfacing



	2010	2011	2012	2013	2014
Winston-Salem	$78	$19	$25		
Average	$102	$91	$85	$95	$86

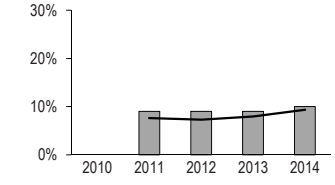
Effectiveness Measures

Percent of Lane Miles Rated 85 or Better



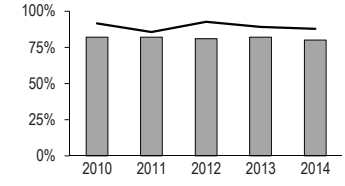
	2010	2011	2012	2013	2014
Winston-Salem	61%	54%	50%	50%	49%
Average	66%	55%	51%	50%	47%

Percent of Lane Miles Rated Below 45



	2010	2011	2012	2013	2014
Winston-Salem		9.0%	9.0%	9.0%	10.0%
Average		7.6%	7.3%	8.0%	9.4%

Percentage of Potholes Repaired within 24 hours



	2010	2011	2012	2013	2014
Winston-Salem	82%	82%	81%	82%	80%
Average	92%	86%	93%	89%	88%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Performance and Cost Data

FIRE SERVICES


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PERFORMANCE MEASURES FOR FIRE SERVICES

SERVICE DEFINITION

Fire Services refers to activities and programs relating to the prevention and suppression of fires, responses to calls for service, rescue service (if provided), fire inspections (if provided), responses to hazardous materials calls (if provided), and fire education services. The services provided by fire departments vary from city to city, but the common goal remains the same: to protect the lives and property of the community served.

NOTES ON PERFORMANCE MEASURES

1. Number of Actual Fires per 1,000 Population

The total number of actual fires includes all types of fires, including structural fires.

2. Fire Inspections Completed per 1,000 Population

Fire inspections include Level I, II, and III inspections.

3. Number of Fire Department Responses per 1,000 Population

Responses include those to fires, medical emergencies, false alarms, and other types of situations that result in mobilization of fire equipment and personnel.

4. Cost per Fire Department Response

The cost represents the total cost of fire services and is calculated using a full cost accounting model that captures direct, indirect, and capital costs. Response is as defined above.

5. Number of Inspections Completed per Fire Inspector FTE

One full-time equivalent (FTE) position equals 2,080 hours of work per year. Any combination of employees providing 2,080 hours of work per year is counted as one FTE.

6. Average Turnout and Travel Time for First Unit Dispatched under "Priority One" Situations

Fast response is a critical determinant in how successful fire responders will be. Response time is calculated by adding both the turnout time (the time the dispatch is received until the first unit is out the door) and the travel time (the time the first unit is out the door until the unit arrives on the scene).

7. Percentage of Full Responses within Eight Minutes

The speed of fire department responses can be judged both by the time for the first unit arriving and also by how long it takes a full complement of trucks and personnel to respond to an emergency. The percentage within eight minutes takes into account travel time.

8. Percentage of Fires Confined to Object or Room of Origin

Containment of fires to as small an area as possible limits total damages. The degree of containment depends on how quickly the fire department is called and also is an effectiveness measure that is reported to the state.

9. Percentage of Fires for Which Cause Is Determined

Investigation of the causes of fires can be an important part of prevention and suppression efforts. While the cause of all fires cannot always be determined, being able to identify causes is important if lessons are to be learned from the investigations.

10. Percentage of Fire Code Violations "Cleared" by Correction or Imposition of Penalty within Ninety Days

Fire code violations are violations of state and local laws and regulations as found through fire inspections. The violators are given time to correct the violation before a penalty is imposed. This is an effectiveness measure that provides an indication of timeliness of follow-up.

11. Percentage of Cases with Lost Pulse Where Pulse Is Recovered at Time of Transfer for Transport

Fire departments frequently are the first responders to medical calls, including cases where an individual has no pulse either at the time of arrival or during the response. This effectiveness measure reports the percentage of these cases where the patient has recovered a pulse by the time responsibility for care has been transferred to emergency responders who will transport the patient to a hospital. Many patients cannot be saved, and recovery of pulse does not guarantee survival at the hospital.

Fire Services

Summary of Key Dimensions of Service

City or Town	Population Served	Land Area Served (in Square Miles)	Value of Property in Service Area (in Billions)	Total Number of Fire Department Responses	Fire Code Violations Found	Number of Community Fire Stations	Number of Fire Services FTEs	ISO* Rating
Apex	99,329	66.6	$12.3	2,635	254	4	61	3—town 6—outlying
Asheville	93,314	59.5	$11.8	16,575	11,900	12	257	3
Burlington	51,396	27.3	$4.5	8,065	2,146	5	92	3
Cary	146,202	56.9	$22.3	7,593	4,348	8	225	3
Charlotte	803,875	312.0	$91.4	103,474	41,042	41	1,171	3
Concord	86,579	67.4	$9.7	9,300	1,291	9	191	2
Greensboro	287,426	139.2	$25.8	33,803	11,049	24	551	1
Greenville	114,084	66.6	$7.5	17,761	2,145	6	158	3
Hickory	45,242	42.8	$5.3	6,186	3,968	6	136	3
High Point	117,028	66.7	$9.8	12,189	2,525	14	224	2
Salisbury	33,726	22.2	$2.8	5,040	3,196	5	77	2
Wilson	49,097	30.5	$4.1	3,893	3,659	5	97	2
Winston-Salem	235,527	132.4	$19.9	20,698	10,381	19	343	3

NOTES

*ISO—Insurance Service Office

EXPLANATORY FACTORS

These are factors that the project found affected fire services performance and cost in one or more of the municipalities:

Population and area served
Value of property area protected in service area
Number of engine companies
Number of fire department responses
Fire code violations
ISO rating
Age of housing stock

Apex Fire Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The mission of the Apex Fire Department is to protect life, property, and the environment from fire, medical emergencies, natural disasters, and other emergencies for those who live, work, and travel in and through the town and surrounding area. In addition to the town, the fire department serves an additional sixty-two square miles in surrounding fire districts.

The fire department uses a shift schedule with one twenty-four-hour shift on schedule and one off every three days, followed by a four-day break. On average, shift personnel work ten to eleven days per twenty-eight-day cycle.

The area within the Town of Apex has an ISO rating of 3, while the surrounding fire districts served have an ISO rating of 6. The rating was done during 2013 and was an upgrade from the prior rating for both areas.

The Apex Fire Department conducted 666 fire maintenance, construction, and reinspections during FY 2013–14. The fire department handles all inspections within town limits and coordinates with the Wake County Fire Marshal for joint inspections in the extra-territorial jurisdiction for new construction, fire alarms, and sprinkler reviews and inspections. Apex has a fire marshal and one inspector.

All fire investigations in Apex are handled by the Wake County Fire Marshal. Apex assists in investigations but does not provide the investigative reports.

Conditions Affecting Service, Performance, and Costs

Apex began participation in the benchmarking project in July 2011, with FY 2010–11 being the first reporting year.

Municipal Profile

Service Population	99,329
Land Area (Square Miles)	66.62
Persons per Square Mile	1,491
Median Family Income U.S. Census 2010	$97,201

Service Profile

FTE Positions—Firefighters	51.0
FTE Positions—Other	10.0
Fire Stations	4
First-Line Fire Apparatus	
Pumpers	3
Aerial Trucks	2
Quints	0
Squads	0
Rescue	1
Other	7
Fire Department Responses	2,635
Responses for Fires	108
Structural Fires Reported	27
Inspections Completed for Maintenance, Construction, and Reinspections	666
Fire Code Violations Reported	254
Estimated Fire Loss (millions)	$2.00
Amount of Property Protected in Service Area (millions)	$12,317
Number of Fire Education Programs or Events	150

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	69.7%
Operating Costs	19.4%
Capital Costs	10.9%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$4,430,304
Operating Costs	$1,231,303
Capital Costs	$690,865
TOTAL	$6,352,472

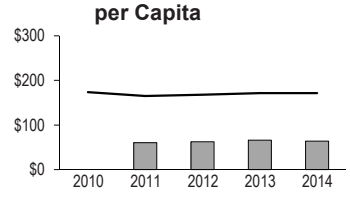
Apex

Fire Services

Key: Apex ■ Benchmarking Average — Fiscal Years 2010 through 2014

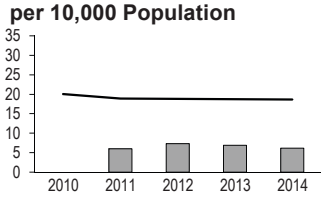
Resource Measures

Fire Services Costs per Capita



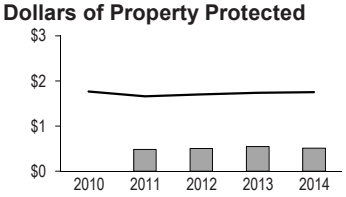
	2010	2011	2012	2013	2014
Apex		$61	$62	$66	$64
Average	$173	$165	$168	$172	$171

Fire Services Total FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Apex		6.0	7.3	6.9	6.1
Average	20.1	18.9	18.8	18.7	18.7

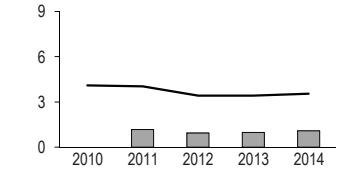
Fire Services Cost per Thousand Dollars of Property Protected



	2010	2011	2012	2013	2014
Apex		$0.49	$0.50	$0.55	$0.52
Average	$1.77	$1.66	$1.70	$1.74	$1.76

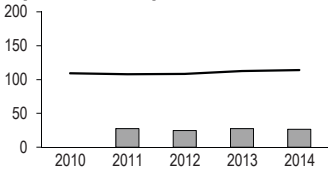
Workload Measures

Actual Fires per 1,000 Population



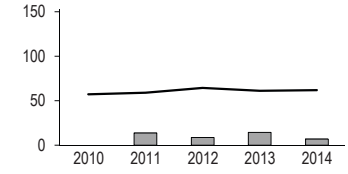
	2010	2011	2012	2013	2014
Apex		1.17	0.94	0.98	1.09
Average	4.10	4.04	3.42	3.42	3.56

Fire Department Responses per 1,000 Population



	2010	2011	2012	2013	2014
Apex		28	25	28	27
Average	109	108	108	113	114

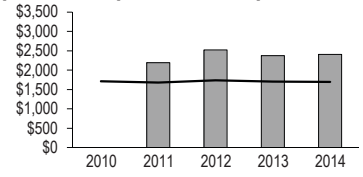
Fire Inspections Completed per 1,000 Population



	2010	2011	2012	2013	2014
Apex		14	9	14	7
Average	57	59	64	61	62

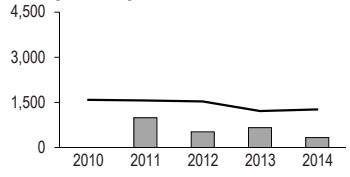
Efficiency Measures

Fire Services Cost per Fire Department Response



	2010	2011	2012	2013	2014
Apex		$2,194	$2,527	$2,376	$2,411
Average	$1,711	$1,682	$1,735	$1,707	$1,700

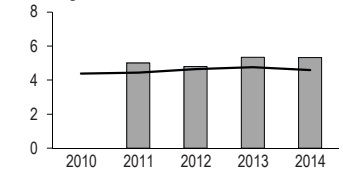
Inspections Completed per Inspector FTE



	2010	2011	2012	2013	2014
Apex		994	516	663	333
Average	1,588	1,569	1,529	1,217	1,262

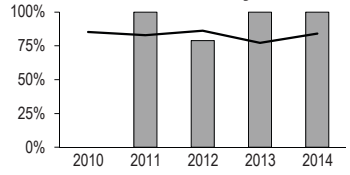
Effectiveness Measures

Average Response Time to Priority One Calls in Minutes



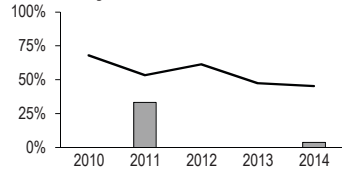
	2010	2011	2012	2013	2014
Apex		5.0	4.8	5.3	5.3
Average	4.4	4.4	4.6	4.8	4.6

Percentage of Fire Code Violations Cleared within 90 Days



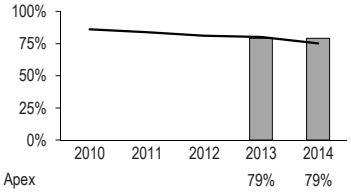
	2010	2011	2012	2013	2014
Apex		100%	79%	100%	100%
Average	85%	83%	86%	77%	84%

Percentage of Fires Confined to Rooms or Objects Involved on Arrival



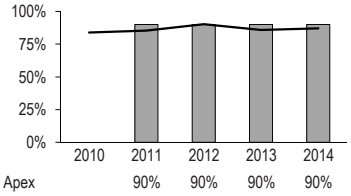
	2010	2011	2012	2013	2014
Apex		33%	0%	0%	4%
Average	68%	53%	61%	47%	45%

Percentage of Fires for Which Cause Was Determined



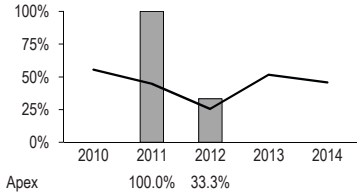
	2010	2011	2012	2013	2014
Apex				79%	79%
Average	86%	84%	81%	80%	75%

Percentage of Full Response within 8 Minutes Travel Time



	2010	2011	2012	2013	2014
Apex		90%	90%	90%	90%
Average	84%	85%	90%	86%	87%

Percentage of Lost Pulse Cases Recovered Pulse at Transfer of Care



	2010	2011	2012	2013	2014
Apex		100.0%	33.3%		
Average	55.6%	44.8%	25.6%	51.6%	45.9%

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The mission of the Asheville Fire and Rescue Department is to protect the lives, property, and environment of all people within Asheville and the town of Biltmore Forest by preventing the occurrence and minimizing the adverse effects of fires, accidents, and all other emergencies.

The fire department contains the following divisions: administration, emergency response, fire marshal's office, and professional standards.

The fire department uses a modified shift schedule that includes twenty-four hours on duty and twenty-four hours off duty, averaging fifty-six hours per week. The work schedule is as follows: twenty-four hours on, twenty-four hours off; twenty-four hours on, forty-eight hours off; twenty-four hours on, twenty-four hours off; twenty-four hours on, ninety-six hours off. This works out to an average work week of fifty-six hours.

The city has an ISO rating of 3, as rated in 2007. The Asheville Fire and Rescue Department has been accredited since 2005.

The fire and rescue department conducted 8,999 fire maintenance, construction, and reinspections during FY 2013–14. The fire marshal's office is comprised of two sections. One section is responsible for existing construction and another for new construction. Deputy fire marshals (DFMs) are responsible for conducting periodic fire prevention inspections inside the corporate limits of the City of Asheville, as required by the N.C. Office of the State Fire Marshal. The Asheville city council adopted a fee schedule for periodic fire inspections. These fees are based on a cost recovery basis. Each DFM conducts fire inspections of every commercial premise located within Asheville. Most personnel work a day shift, while several work a twenty-four-hour shift. These DFMs are liaisons to the other divisions on matters regarding code enforcement, fire investigations, and pre-incident planning.

Conditions Affecting Service, Performance, and Costs

Fire inspections in Asheville were down in FY 2009–10 due to a drop in new construction.

Municipal Profile

Service Population	93,314
Land Area (Square Miles)	59.52
Persons per Square Mile	1,568
Median Family Income U.S. Census 2010	$53,350

Service Profile

FTE Positions—Firefighters	232.0
FTE Positions—Other	25.0
Fire Stations	12
First-Line Fire Apparatus	
Pumpers	8
Aerial Trucks	3
Quints	2
Squads	1
Rescue	1
Other	37
Fire Department Responses	16,575
Responses for Fires	408
Structural Fires Reported	194
Inspections Completed for Maintenance, Construction, and Reinspections	8,999
Fire Code Violations Reported	11,900
Estimated Fire Loss (millions)	$2.39
Amount of Property Protected in Service Area (millions)	$11,778
Number of Fire Education Programs or Events	288

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	70.4%
Operating Costs	18.3%
Capital Costs	11.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$17,820,125
Operating Costs	$4,637,257
Capital Costs	$2,869,931
TOTAL	$25,327,313

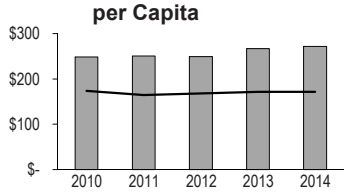
Asheville

Fire Services

Key: Asheville ■ Benchmarking Average — Fiscal Years 2010 through 2014

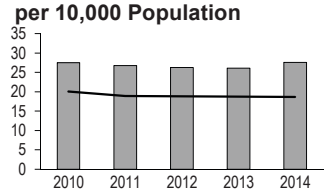
Resource Measures

Fire Services Costs per Capita



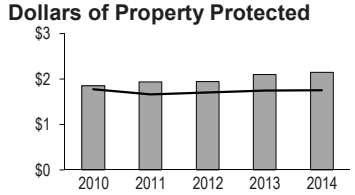
	2010	2011	2012	2013	2014
Asheville	$248.50	$250.37	$249.34	$267	$271
Average	$173	$165	$168	$172	$171

Fire Services Total FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Asheville	27.5	26.8	26.2	26.1	27.5
Average	20.1	18.9	18.8	18.7	18.7

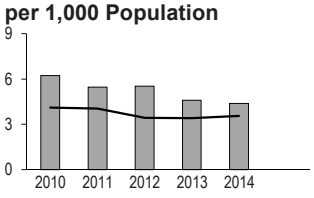
Fire Services Cost per Thousand Dollars of Property Protected



	2010	2011	2012	2013	2014
Asheville	$1.85	$1.94	$1.95	$2.10	$2.15
Average	$1.77	$1.66	$1.70	$1.74	$1.76

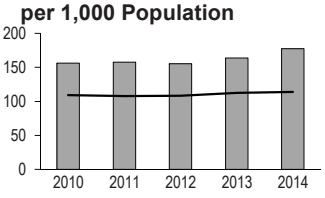
Workload Measures

Actual Fires per 1,000 Population



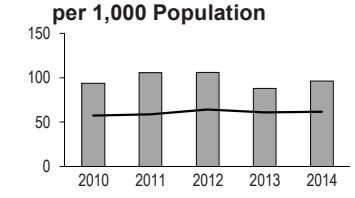
	2010	2011	2012	2013	2014
Asheville	6.23	5.46	5.52	4.60	4.37
Average	4.10	4.04	3.42	3.42	3.56

Fire Department Responses per 1,000 Population



	2010	2011	2012	2013	2014
Asheville	156	158	155	164	178
Average	109	108	108	113	114

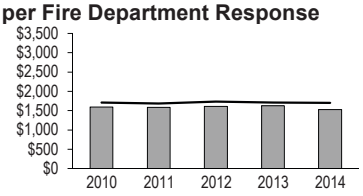
Fire Inspections Completed per 1,000 Population



	2010	2011	2012	2013	2014
Asheville	94	106	106	88	96
Average	57	59	64	61	62

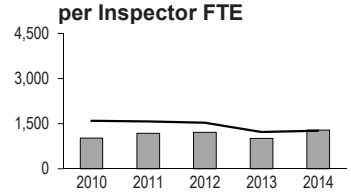
Efficiency Measures

Fire Services Cost per Fire Department Response



	2010	2011	2012	2013	2014
Asheville	$1,591	$1,588	$1,607	$1,629	$1,528
Average	$1,711	$1,682	$1,735	$1,707	$1,700

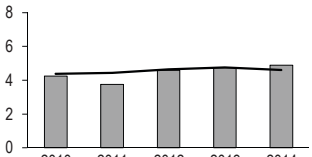
Inspections Completed per Inspector FTE



	2010	2011	2012	2013	2014
Asheville	1,018	1,180	1,208	1,010	1,286
Average	1,588	1,569	1,529	1,217	1,262

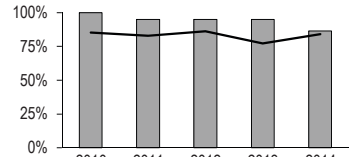
Effectiveness Measures

Average Response Time to Priority One Calls in Minutes



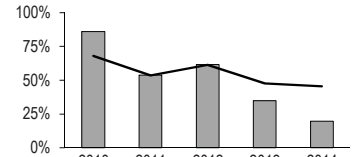
	2010	2011	2012	2013	2014
Asheville	4.3	3.8	4.6	4.7	4.9
Average	4.4	4.4	4.6	4.8	4.6

Percentage of Fire Code Violations Cleared within 90 Days



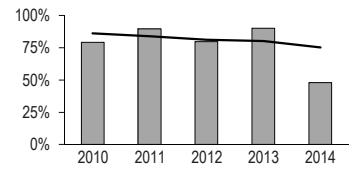
	2010	2011	2012	2013	2014
Asheville	100%	95%	95%	95%	86%
Average	85%	83%	86%	77%	84%

Percentage of Fires Confined to Rooms or Objects Involved on Arrival



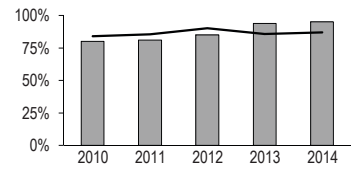
	2010	2011	2012	2013	2014
Asheville	86%	54%	62%	35%	20%
Average	68%	53%	61%	47%	45%

Percentage of Fires for Which Cause Was Determined



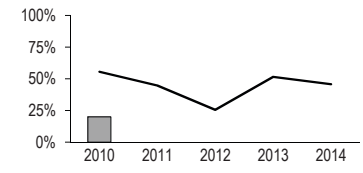
	2010	2011	2012	2013	2014
Asheville	79%	90%	80%	90%	48%
Average	86%	84%	81%	80%	75%

Percentage of Full Response within 8 Minutes Travel Time



	2010	2011	2012	2013	2014
Asheville	80%	81%	85%	94%	95%
Average	84%	85%	90%	86%	87%

Percentage of Lost Pulse Cases Recovered Pulse at Transfer of Care



	2010	2011	2012	2013	2014
Asheville	20.0%				
Average	55.6%	44.8%	25.6%	51.6%	45.9%

Burlington Fire Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The mission of the City of Burlington Fire Department is to protect the lives, property, and environment of all people within Burlington by preventing the occurrence and minimizing the adverse effects of fires, accidents, and all other emergencies. The department is divided into three areas: suppression, fire prevention, and training.

Burlington uses three shifts for staffing fire houses. All shift personnel work on a rotating schedule, twenty-four hours on, followed by forty-eight hours off.

The city has an ISO rating of 3, as rated in 2005.

The fire department conducted 2,565 fire maintenance, construction, and reinspections during FY 2013–14. Fire Prevention Bureau personnel conduct general fire inspections as well as inspections for fireworks, blasting, tank installations/removals, and night inspections for overcrowding/exit obstructions for assembly occupancies. Apartment complexes generate one file.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Service Population	51,396
Land Area (Square Miles)	27.28
Persons per Square Mile	1,884
Median Family Income U.S. Census 2010	$46,461

Service Profile

FTE Positions—Firefighters	81.0
FTE Positions—Other	10.5
Fire Stations	5
First-Line Fire Apparatus	
Pumpers	4
Aerial Trucks	1
Quints	1
Squads	1
Rescue	1
Other	1
Fire Department Responses	8,065
Responses for Fires	231
Structural Fires Reported	54
Inspections Completed for Maintenance, Construction, and Reinspections	2,565
Fire Code Violations Reported	2,146
Estimated Fire Loss (millions)	$4.04
Amount of Property Protected in Service Area (millions)	$4,480
Number of Fire Education Programs or Events	513

Full Cost Profile

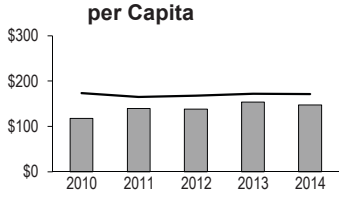
Cost Breakdown by Percentage	
Personal Services	73.8%
Operating Costs	14.5%
Capital Costs	11.6%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$5,601,664
Operating Costs	$1,103,761
Capital Costs	$882,750
TOTAL	$7,588,175

Burlington — Fire Services

Key: Burlington ■ Benchmarking Average — Fiscal Years 2010 through 2014

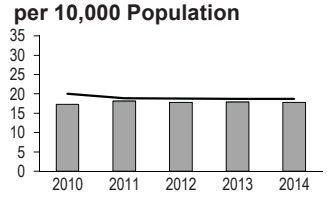
Resource Measures

Fire Services Costs per Capita



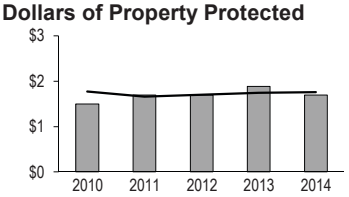
	2010	2011	2012	2013	2014
Burlington	$118	$139	$138	$154	$148
Average	$173	$165	$168	$172	$171

Fire Services Total FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Burlington	17.3	18.1	17.8	17.9	17.8
Average	20.1	18.9	18.8	18.7	18.7

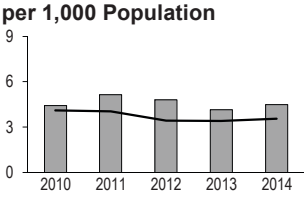
Fire Services Cost per Thousand Dollars of Property Protected



	2010	2011	2012	2013	2014
Burlington	$1.50	$1.69	$1.70	$1.89	$1.69
Average	$1.77	$1.66	$1.70	$1.74	$1.76

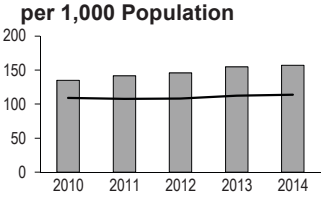
Workload Measures

Actual Fires per 1,000 Population



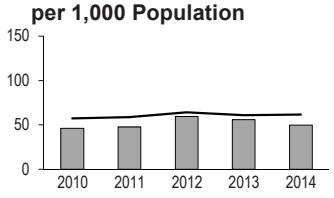
	2010	2011	2012	2013	2014
Burlington	4.43	5.13	4.80	4.14	4.49
Average	4.10	4.04	3.42	3.42	3.56

Fire Department Responses per 1,000 Population



	2010	2011	2012	2013	2014
Burlington	135	141	146	155	157
Average	109	108	108	113	114

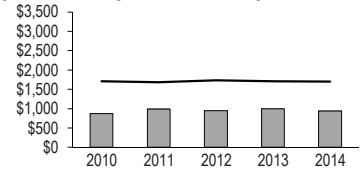
Fire Inspections Completed per 1,000 Population



	2010	2011	2012	2013	2014
Burlington	46	48	59	56	50
Average	57	59	64	61	62

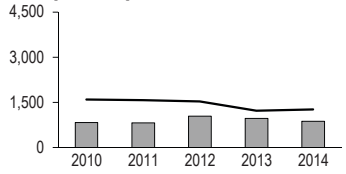
Efficiency Measures

Fire Services Cost per Fire Department Response



	2010	2011	2012	2013	2014
Burlington	$874	$984	$946	$994	$941
Average	$1,711	$1,682	$1,735	$1,707	$1,700

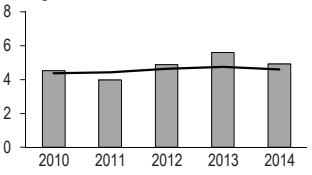
Inspections Completed per Inspector FTE



	2010	2011	2012	2013	2014
Burlington	825	815	1,033	968	869
Average	1,588	1,569	1,529	1,217	1,262

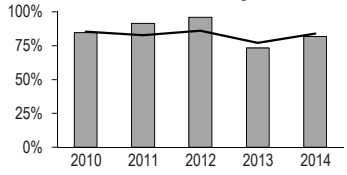
Effectiveness Measures

Average Response Time to Priority One Calls in Minutes



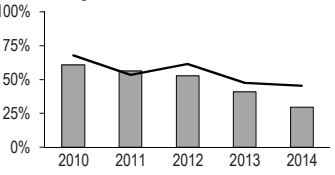
	2010	2011	2012	2013	2014
Burlington	4.5	4.0	4.9	5.6	4.9
Average	4.4	4.4	4.6	4.8	4.6

Percentage of Fire Code Violations Cleared within 90 Days



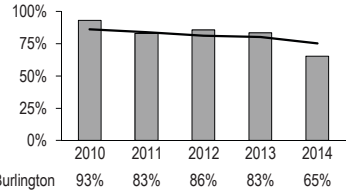
	2010	2011	2012	2013	2014
Burlington	85%	92%	96%	73%	82%
Average	85%	83%	86%	77%	84%

Percentage of Fires Confined to Rooms or Objects Involved on Arrival



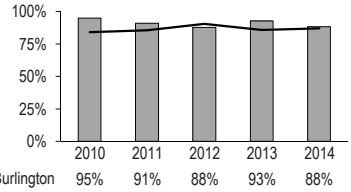
	2010	2011	2012	2013	2014
Burlington	61%	56%	53%	41%	30%
Average	68%	53%	61%	47%	45%

Percentage of Fires for Which Cause Was Determined



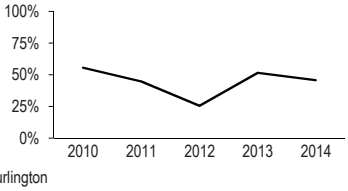
	2010	2011	2012	2013	2014
Burlington	93%	83%	86%	83%	65%
Average	86%	84%	81%	80%	75%

Percentage of Full Response within 8 Minutes Travel Time



	2010	2011	2012	2013	2014
Burlington	95%	91%	88%	93%	88%
Average	84%	85%	90%	86%	87%

Percentage of Lost Pulse Cases Recovered Pulse at Transfer of Care



	2010	2011	2012	2013	2014
Burlington					
Average	55.6%	44.8%	25.6%	51.6%	45.9%

Cary Fire Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Town of Cary Fire Department provides fire protection, emergency medical services (EMS), technical rescue (except hazmat technician and specialist level service), fire code enforcement services, and plans review.

All emergency services (shift) personnel are trained and certified as "NC FFII," "EMT–with defibrillator," and rescue technicians. Emergency services staff members work from eight fire stations on three twenty-four-hour shifts. Each shift is divided into two battalions, each supervised by a battalion chief. Currently each battalion consists of three or four fire stations, each having an engine company and either a ladder truck or light rescue company.

The town has an ISO rating of 3, as rated in 2010. The Cary Fire Department has been accredited since 1999.

The town conducted 5,802 fire maintenance, construction, and reinspections during FY 2013–14. The Cary Fire Department's Risk Management Division utilizes the state mandated one-, two-, and three-year inspection schedule as its goal for providing inspection services. It conducts inspections on all projects for which a permit is issued. For all violations found during routine inspections, follow-up inspections are used until the violation is resolved. For apartment complexes, each separate building that requires an inspection has a file for that particular building, and each building is counted as one separate inspection. The Risk Management Division also conducts follow-up inspections for all alarm malfunctions and false alarms in businesses. It issues the charges for permits outlined in the fire code and charges a penalty/fine for alarm malfunctions and false alarms.

All risk management personnel are certified as Standard Level 3 inspectors. The fire marshal, who currently manages the division, reviews various site, building, and systems plans and serves as the direct supervisor for the inspection staff. In addition to plans review and code enforcement services, the division provides public education services through a public educator.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Service Population	146,202
Land Area (Square Miles)	56.86
Persons per Square Mile	2,571
Median Family Income U.S. Census 2010	$108,956

Service Profile

FTE Positions—Firefighters	210.0
FTE Positions—Other	15.0
Fire Stations	8
First-Line Fire Apparatus	
Pumpers	8
Aerial Trucks	4
Quints	0
Squads	0
Rescue	3
Other	10
Fire Department Responses	7,593
Responses for Fires	303
Structural Fires Reported	56
Inspections Completed for Maintenance, Construction, and Reinspections	5,802
Fire Code Violations Reported	4,348
Estimated Fire Loss (millions)	$3.03
Amount of Property Protected in Service Area (millions)	$22,331
Number of Fire Education Programs or Events	348

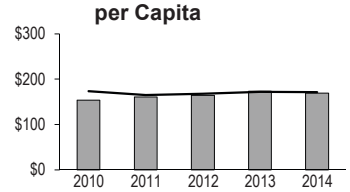
Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	73.1%
Operating Costs	17.9%
Capital Costs	9.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$18,098,890
Operating Costs	$4,427,244
Capital Costs	$2,229,789
TOTAL	$24,755,923

Key: Cary ■ Benchmarking Average — Fiscal Years 2010 through 2014

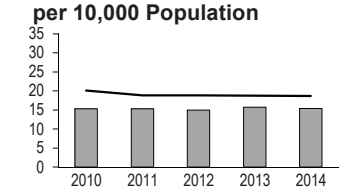
Resource Measures

Fire Services Costs per Capita



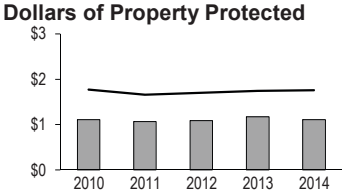
	2010	2011	2012	2013	2014
Cary	$154	$161	$164	$174	$169
Average	$173	$165	$168	$172	$171

Fire Services Total FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Cary	15.3	15.4	15.0	15.8	15.4
Average	20.1	18.9	18.8	18.7	18.7

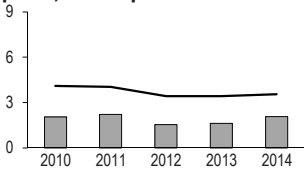
Fire Services Cost per Thousand Dollars of Property Protected



	2010	2011	2012	2013	2014
Cary	$1.11	$1.07	$1.08	$1.17	$1.11
Average	$1.77	$1.66	$1.70	$1.74	$1.76

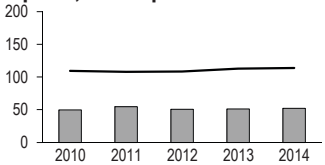
Workload Measures

Actual Fires per 1,000 Population



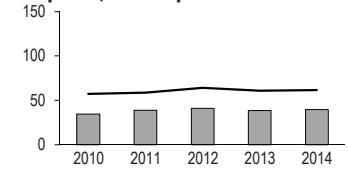
	2010	2011	2012	2013	2014
Cary	2.05	2.22	1.55	1.62	2.07
Average	4.10	4.04	3.42	3.42	3.56

Fire Department Responses per 1,000 Population



	2010	2011	2012	2013	2014
Cary	50	54	51	51	52
Average	109	108	108	113	114

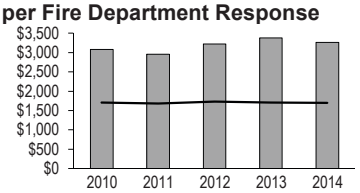
Fire Inspections Completed per 1,000 Population



	2010	2011	2012	2013	2014
Cary	35	39	41	38	40
Average	57	59	64	61	62

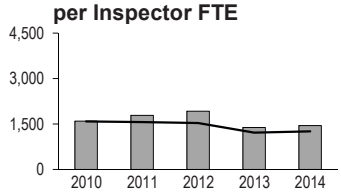
Efficiency Measures

Fire Services Cost per Fire Department Response



	2010	2011	2012	2013	2014
Cary	$3,079	$2,960	$3,226	$3,382	$3,260
Average	$1,711	$1,682	$1,735	$1,707	$1,700

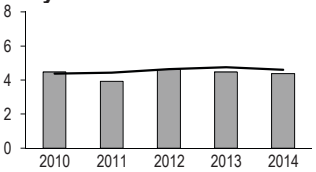
Inspections Completed per Inspector FTE



	2010	2011	2012	2013	2014
Cary	1,597	1,788	1,920	1,382	1,451
Average	1,588	1,569	1,529	1,217	1,262

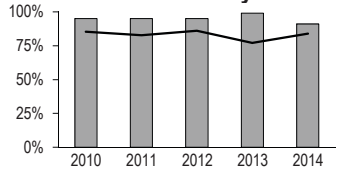
Effectiveness Measures

Average Response Time to Priority One Calls in Minutes



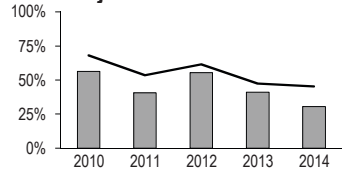
	2010	2011	2012	2013	2014
Cary	4.5	3.9	4.6	4.5	4.4
Average	4.4	4.4	4.6	4.8	4.6

Percentage of Fire Code Violations Cleared within 90 Days



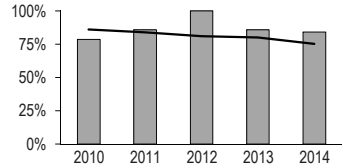
	2010	2011	2012	2013	2014
Cary	95%	95%	95%	99%	91%
Average	85%	83%	86%	77%	84%

Percentage of Fires Confined to Rooms or Objects Involved on Arrival



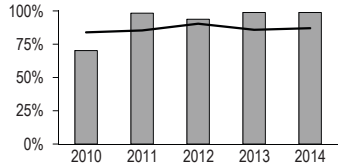
	2010	2011	2012	2013	2014
Cary	56%	41%	55%	41%	30%
Average	68%	53%	61%	47%	45%

Percentage of Fires for Which Cause Was Determined



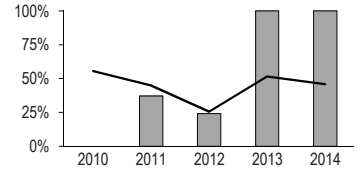
	2010	2011	2012	2013	2014
Cary	79%	86%	100%	86%	84%
Average	86%	84%	81%	80%	75%

Percentage of Full Response within 8 Minutes Travel Time



	2010	2011	2012	2013	2014
Cary	70%	98%	94%	99%	99%
Average	84%	85%	90%	86%	87%

Percentage of Lost Pulse Cases Recovered Pulse at Transfer of Care



	2010	2011	2012	2013	2014
Cary		37.1%	24.1%	100.0%	100.0%
Average	55.6%	44.8%	25.6%	51.6%	45.9%

Charlotte Fire Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The mission of the Charlotte Fire Department is to minimize the risk of fire and other hazards to the life and property of the citizens of Charlotte. To accomplish this mission, the department provides response to and mitigation of fires, medical emergencies, hazardous materials incidents, aircraft emergencies, technical rescues, and other emergencies as they arise. These services are provided immediately to any person who has a need anywhere within the corporate limits of Charlotte.

The divisions of the Charlotte Fire Department are operations (A, B, C), training, administration, communications, logistics, fire prevention, and fire investigation.

The city uses a modified twenty-four-hour/forty-eight-hour shift schedule, using four twenty-four-hour shifts in a twelve-day cycle. The cycle is on one day, off one day, on one day, off two days, on one day, off one day, on one day, off four days. In addition, firefighters receive a Kelley day (ten hours) off and a Kelley night (fourteen hours) off every seven weeks to maintain the number of hours worked per week at fifty-two.

The city has an ISO rating of 3. The Charlotte Fire Department has been accredited since 2000.

The fire department conducted 29,532 fire maintenance, construction, and reinspections during FY 2013–14. All inspections are performed by certified fire inspectors who are employees of the Fire Prevention Bureau. The inspectors handle certificate of occupancy inspections, permit inspections and issuances, regular code enforcement inspections, and reinspections. The Bureau currently uses separate inspections on each building of an apartment complex.

Conditions Affecting Service, Performance, and Costs

Charlotte staffs a fire station at the airport in addition to forty-one community fire stations.

Municipal Profile

Service Population	803,875
Land Area (Square Miles)	312.04
Persons per Square Mile	2,576
Median Family Income U.S. Census 2010	$61,405

Service Profile

FTE Positions—Firefighters	1026.0
FTE Positions—Other	145.0
Fire Stations	42
First-Line Fire Apparatus	
Pumpers	41
Aerial Trucks	0
Quints	15
Squads	0
Rescue	2
Other	36
Fire Department Responses	103,474
Responses for Fires	2,094
Structural Fires Reported	463
Inspections Completed for Maintenance, Construction, and Reinspections	29,532
Fire Code Violations Reported	41,042
Estimated Fire Loss (millions)	$15.10
Amount of Property Protected in Service Area (millions)	$91,363
Number of Fire Education Programs or Events	434

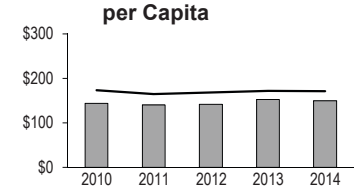
Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	77.4%
Operating Costs	14.8%
Capital Costs	7.9%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$92,900,007
Operating Costs	$17,745,089
Capital Costs	$9,455,186
TOTAL	$120,100,282

Key: Charlotte ■ Benchmarking Average — Fiscal Years 2010 through 2014

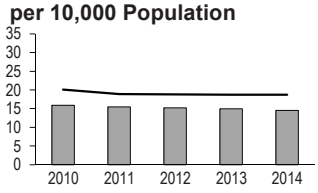
Resource Measures

Fire Services Costs per Capita



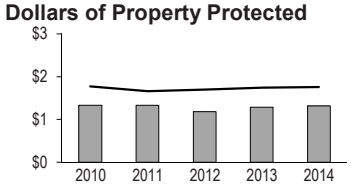
	2010	2011	2012	2013	2014
Charlotte	$144	$140	$142	$152	$149
Average	$173	$165	$168	$172	$171

Fire Services Total FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Charlotte	15.9	15.5	15.2	15.0	14.6
Average	20.1	18.9	18.8	18.7	18.7

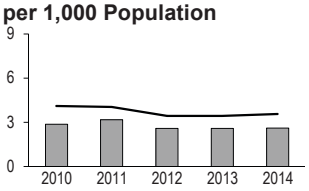
Fire Services Cost per Thousand Dollars of Property Protected



	2010	2011	2012	2013	2014
Charlotte	$1.33	$1.33	$1.18	$1.29	$1.31
Average	$1.77	$1.66	$1.70	$1.74	$1.76

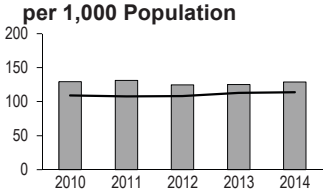
Workload Measures

Actual Fires per 1,000 Population



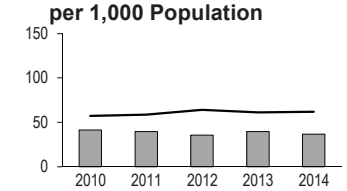
	2010	2011	2012	2013	2014
Charlotte	2.85	3.17	2.58	2.57	2.60
Average	4.10	4.04	3.42	3.42	3.56

Fire Department Responses per 1,000 Population



	2010	2011	2012	2013	2014
Charlotte	129	131	125	125	129
Average	109	108	108	113	114

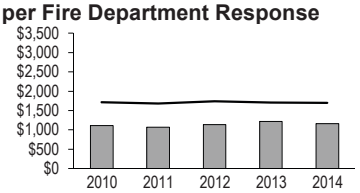
Fire Inspections Completed per 1,000 Population



	2010	2011	2012	2013	2014
Charlotte	41	40	35	40	37
Average	57	59	64	61	62

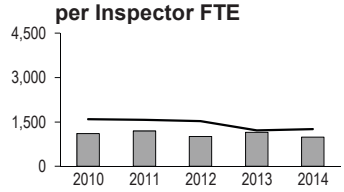
Efficiency Measures

Fire Services Cost per Fire Department Response



	2010	2011	2012	2013	2014
Charlotte	$1,112	$1,066	$1,139	$1,219	$1,161
Average	$1,711	$1,682	$1,735	$1,707	$1,700

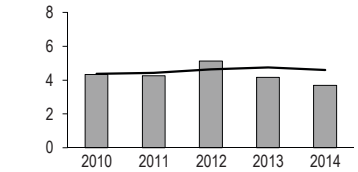
Inspections Completed per Inspector FTE



	2010	2011	2012	2013	2014
Charlotte	1,101	1,195	1,007	1,146	984
Average	1,588	1,569	1,529	1,217	1,262

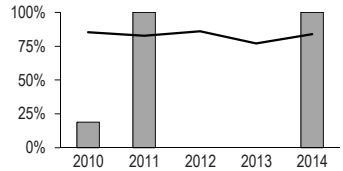
Effectiveness Measures

Average Response Time to Priority One Calls in Minutes



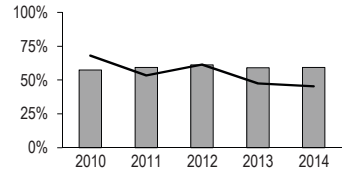
	2010	2011	2012	2013	2014
Charlotte	4.3	4.3	5.1	4.2	3.7
Average	4.4	4.4	4.6	4.8	4.6

Percentage of Fire Code Violations Cleared within 90 Days



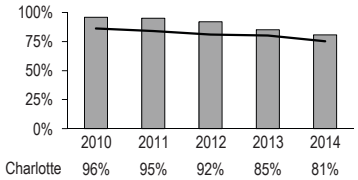
	2010	2011	2012	2013	2014
Charlotte	19%	100%			100%
Average	85%	83%	86%	77%	84%

Percentage of Fires Confined to Rooms or Objects Involved on Arrival



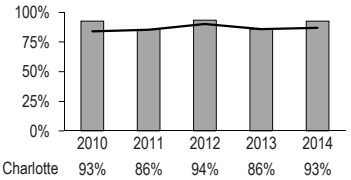
	2010	2011	2012	2013	2014
Charlotte	58%	59%	61%	59%	59%
Average	68%	53%	61%	47%	45%

Percentage of Fires for Which Cause Was Determined



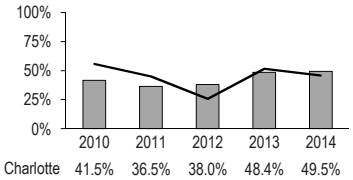
	2010	2011	2012	2013	2014
Charlotte	96%	95%	92%	85%	81%
Average	86%	84%	81%	80%	75%

Percentage of Full Response within 8 Minutes Travel Time



	2010	2011	2012	2013	2014
Charlotte	93%	86%	94%	86%	93%
Average	84%	85%	90%	86%	87%

Percentage of Lost Pulse Cases Recovered Pulse at Transfer of Care



	2010	2011	2012	2013	2014
Charlotte	41.5%	36.5%	38.0%	48.4%	49.5%
Average	55.6%	44.8%	25.6%	51.6%	45.9%

Concord Fire Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Concord Fire Department is committed to providing a positive work environment to enable the department and its personnel to strive for and achieve excellence in fire protection services.

The department is committed to the following: providing leadership through a management/employee team organizational concept that is dedicated to modern-day management principles and practices; providing the citizens with the best possible modern-day fire protection and life safety services in a courteous, professional, and cost-effective manner; providing equal opportunity for all employees to excel in their job performance and career development; striving to continually increase the public's awareness through fire prevention activities, public education, and community-based services; maintaining and striving to improve on an open, informative flow of correct information so that all employees and employee teams reach their goals and objectives; subscribing to departmental values of honesty, professionalism, teamwork, loyalty, dedication, and commitment to serving the public; and planning for change to develop and prepare the department to always strive for excellence.

The fire department in Concord contains the following divisions: administration, suppression, operations, training and career development, fire-risk management, and emergency management.

The fire department utilizes a shift schedule that includes twenty-four hours on and forty-eight hours off.

The city has an ISO rating of 2, as rated in 2013. This represented an improvement from the prior rating.

The fire department conducted 6,906 fire maintenance, construction, and reinspections during FY 2013–14. Inspections are conducted by the Fire-Risk Management Division. Each inspector has an assigned area of the city and a specific number of inspections to complete. Each occupancy is counted separately in the inspections number. An apartment complex would be considered as one occupancy. Reinspections are conducted within forty-five days to confirm corrections.

Conditions Affecting Service, Performance, and Costs

Concord staffs a fire station at the airport in addition to nine community fire stations.

Municipal Profile

Service Population	86,579
Land Area (Square Miles)	67.38
Persons per Square Mile	1,285
Median Family Income U.S. Census 2010	$63,643

Service Profile

FTE Positions—Firefighters	174.0
FTE Positions—Other	17.0
Fire Stations	10
First-Line Fire Apparatus	
Pumpers	9
Aerial Trucks	3
Quints	0
Squads	0
Rescue	1
Other	10
Fire Department Responses	9,300
Responses for Fires	313
Structural Fires Reported	61
Inspections Completed for Maintenance, Construction, and Reinspections	6,906
Fire Code Violations Reported	1,291
Estimated Fire Loss (millions)	$1.44
Amount of Property Protected in Service Area (millions)	$9,654
Number of Fire Education Programs or Events	739

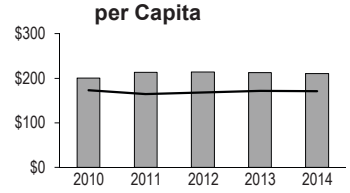
Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	70.5%
Operating Costs	17.8%
Capital Costs	11.7%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$12,866,668
Operating Costs	$3,253,021
Capital Costs	$2,132,491
TOTAL	$18,252,180

Key: Concord ■ Benchmarking Average — Fiscal Years 2010 through 2014

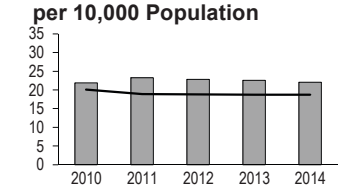
Resource Measures

Fire Services Costs per Capita



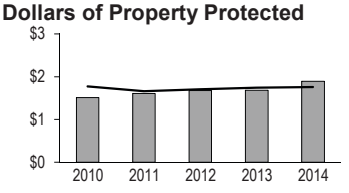
	2010	2011	2012	2013	2014
Concord	$201	$214	$214	$213	$211
Average	$173	$165	$168	$172	$171

Fire Services Total FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Concord	21.9	23.2	22.8	22.5	22.1
Average	20.1	18.9	18.8	18.7	18.7

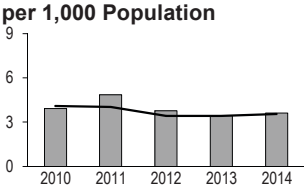
Fire Services Cost per Thousand Dollars of Property Protected



	2010	2011	2012	2013	2014
Concord	$1.51	$1.61	$1.68	$1.69	$1.89
Average	$1.77	$1.66	$1.70	$1.74	$1.76

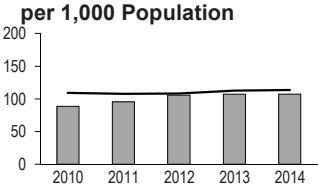
Workload Measures

Actual Fires per 1,000 Population



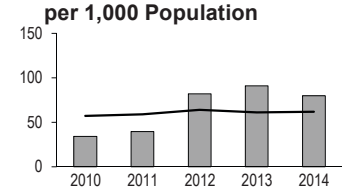
	2010	2011	2012	2013	2014
Concord	3.92	4.86	3.77	3.45	3.62
Average	4.10	4.04	3.42	3.42	3.56

Fire Department Responses per 1,000 Population



	2010	2011	2012	2013	2014
Concord	89	96	106	107	107
Average	109	108	108	113	114

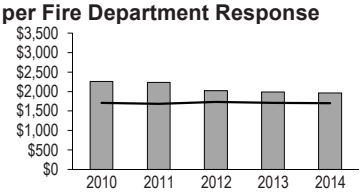
Fire Inspections Completed per 1,000 Population



	2010	2011	2012	2013	2014
Concord	34	40	82	91	80
Average	57	59	64	61	62

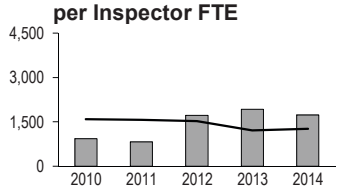
Efficiency Measures

Fire Services Cost per Fire Department Response



	2010	2011	2012	2013	2014
Concord	$2,261	$2,232	$2,023	$1,984	$1,963
Average	$1,711	$1,682	$1,735	$1,707	$1,700

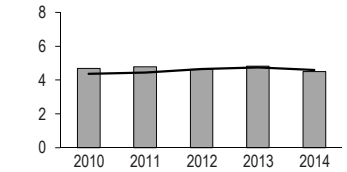
Inspections Completed per Inspector FTE



	2010	2011	2012	2013	2014
Concord	934	820	1,717	1,926	1,727
Average	1,588	1,569	1,529	1,217	1,262

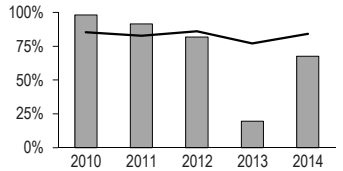
Effectiveness Measures

Average Response Time to Priority One Calls in Minutes



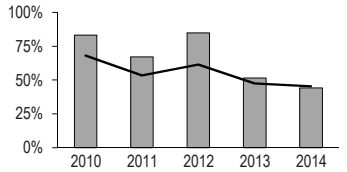
	2010	2011	2012	2013	2014
Concord	4.7	4.8	4.6	4.8	4.5
Average	4.4	4.4	4.6	4.8	4.6

Percentage of Fire Code Violations Cleared within 90 Days



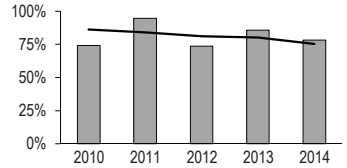
	2010	2011	2012	2013	2014
Concord	98%	92%	82%	20%	68%
Average	85%	83%	86%	77%	84%

Percentage of Fires Confined to Rooms or Objects Involved on Arrival



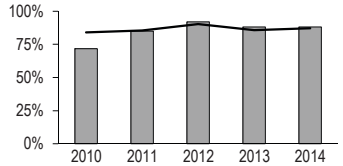
	2010	2011	2012	2013	2014
Concord	83%	67%	85%	52%	44%
Average	68%	53%	61%	47%	45%

Percentage of Fires for Which Cause Was Determined



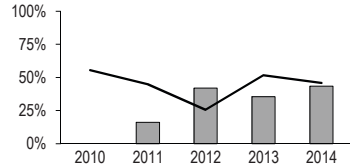
	2010	2011	2012	2013	2014
Concord	74%	95%	74%	86%	78%
Average	86%	84%	81%	80%	75%

Percentage of Full Response within 8 Minutes Travel Time



	2010	2011	2012	2013	2014
Concord	72%	85%	92%	88%	88%
Average	84%	85%	90%	86%	87%

Percentage of Lost Pulse Cases Recovered Pulse at Transfer of Care



	2010	2011	2012	2013	2014
Concord		16.3%	42.1%	35.6%	43.3%
Average	55.6%	44.8%	25.6%	51.6%	45.9%

Greensboro Fire Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The mission of the Greensboro Fire Department is to provide the public the best possible service in a courteous, professional, and cost-effective manner; to provide leadership through a well-defined management team committed to the departmental management philosophy; to provide equal opportunity for all employees in job performance and career development; to enhance public awareness through education, activities, and services; to maintain an open, informative flow of information so that all municipal departments may reach their goals and objectives; and to subscribe to honesty, integrity, and fairness.

The fire department contains two branches: emergency services and support services.

The fire department utilizes a shift schedule that includes twenty-four hours on and forty-eight hours off. For Fair Labor Standards Act (FLSA) purposes, the department utilizes a twenty-seven-day cycle.

The city has an ISO rating of 1, the highest rating possible, as rated in 2012. The Greensboro Fire Department has been accredited since 1997.

The fire department in Greensboro conducted 10,494 fire maintenance, construction, and reinspections during FY 2013–14. General inspections are performed according to the mandated inspection schedule, which is based on occupancy type established in the International Fire Code. Complaints are addressed within twenty-four hours and are handled twenty-four hours a day as shift personnel are available. Inspectors generally work in districts and work in specialized areas, including educational, institutional, high rise, privilege licenses, and certificates of compliance. Apartment complexes are assigned one file number for the entire complex.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Service Population	287,426
Land Area (Square Miles)	139.16
Persons per Square Mile	2,065
Median Family Income U.S. Census 2010	$52,752

Service Profile

FTE Positions—Firefighters	492.0
FTE Positions—Other	59.0
Fire Stations	24
First-Line Fire Apparatus	
Pumpers	23
Aerial Trucks	0
Quints	10
Squads	0
Rescue	1
Other	0
Fire Department Responses	33,803
Responses for Fires	1,111
Structural Fires Reported	275
Inspections Completed for Maintenance, Construction, and Reinspections	10,494
Fire Code Violations Reported	11,049
Estimated Fire Loss (millions)	$5.75
Amount of Property Protected in Service Area (millions)	$25,769
Number of Fire Education Programs or Events	1,349

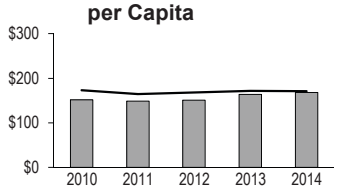
Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	77.4%
Operating Costs	22.6%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$37,340,983
Operating Costs	$10,930,850
Capital Costs	$0
TOTAL	$48,271,833

Key: Greensboro ■ Benchmarking Average — Fiscal Years 2010 through 2014

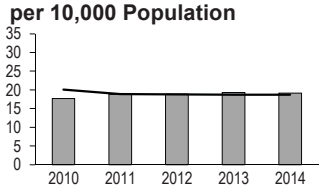
Resource Measures

Fire Services Costs per Capita



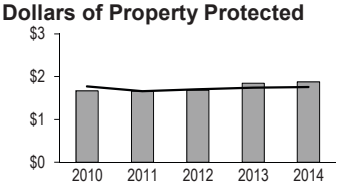
	2010	2011	2012	2013	2014
Greensboro	$152	$149	$151	$164	$168
Average	$173	$165	$168	$172	$171

Fire Services Total FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greensboro	17.7	18.8	18.8	19.3	19.2
Average	20.1	18.9	18.8	18.7	18.7

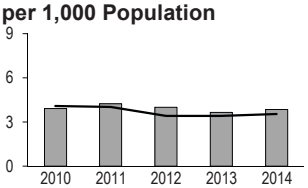
Fire Services Cost per Thousand Dollars of Property Protected



	2010	2011	2012	2013	2014
Greensboro	$1.67	$1.66	$1.68	$1.85	$1.87
Average	$1.77	$1.66	$1.70	$1.74	$1.76

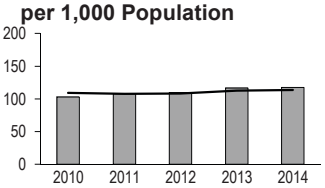
Workload Measures

Actual Fires per 1,000 Population



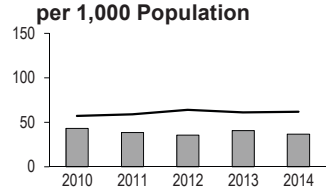
	2010	2011	2012	2013	2014
Greensboro	3.92	4.25	4.02	3.66	3.87
Average	4.10	4.04	3.42	3.42	3.56

Fire Department Responses per 1,000 Population



	2010	2011	2012	2013	2014
Greensboro	103	108	110	116	118
Average	109	108	108	113	114

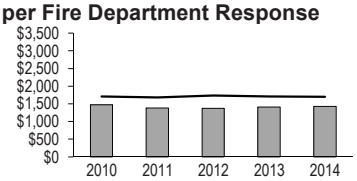
Fire Inspections Completed per 1,000 Population



	2010	2011	2012	2013	2014
Greensboro	43	38	35	41	37
Average	57	59	64	61	62

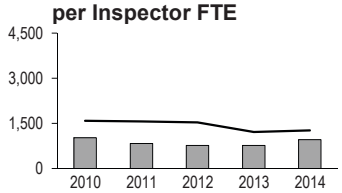
Efficiency Measures

Fire Services Cost per Fire Department Response



	2010	2011	2012	2013	2014
Greensboro	$1,471	$1,382	$1,375	$1,410	$1,428
Average	$1,711	$1,682	$1,735	$1,707	$1,700

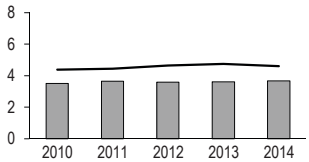
Inspections Completed per Inspector FTE



	2010	2011	2012	2013	2014
Greensboro	1,021	831	764	767	954
Average	1,588	1,569	1,529	1,217	1,262

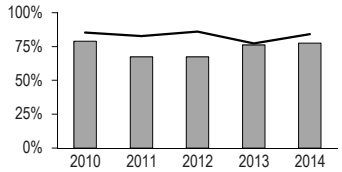
Effectiveness Measures

Average Response Time to Priority One Calls in Minutes



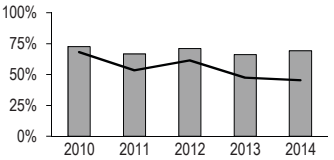
	2010	2011	2012	2013	2014
Greensboro	3.5	3.7	3.6	3.6	3.7
Average	4.4	4.4	4.6	4.8	4.6

Percentage of Fire Code Violations Cleared within 90 Days



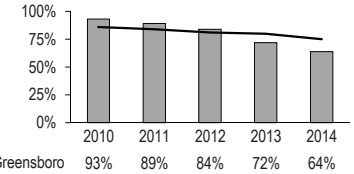
	2010	2011	2012	2013	2014
Greensboro	79%	67%	67%	76%	78%
Average	85%	83%	86%	77%	84%

Percentage of Fires Confined to Rooms or Objects Involved on Arrival



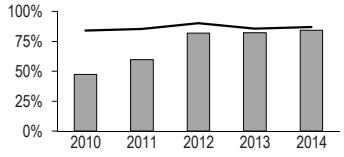
	2010	2011	2012	2013	2014
Greensboro	73%	67%	71%	66%	69%
Average	68%	53%	61%	47%	45%

Percentage of Fires for Which Cause Was Determined



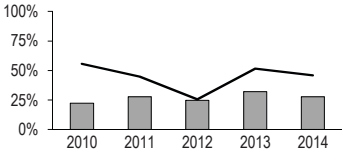
	2010	2011	2012	2013	2014
Greensboro	93%	89%	84%	72%	64%
Average	86%	84%	81%	80%	75%

Percentage of Full Response within 8 Minutes Travel Time



	2010	2011	2012	2013	2014
Greensboro	47%	60%	82%	82%	84%
Average	84%	85%	90%	86%	87%

Percentage of Lost Pulse Cases Recovered Pulse at Transfer of Care



	2010	2011	2012	2013	2014
Greensboro	22.4%	27.6%	24.8%	32.1%	27.6%
Average	55.6%	44.8%	25.6%	51.6%	45.9%

Greenville Fire Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The primary goals of the Greenville Fire and Rescue Department are to prevent fires and save lives and property by providing emergency response services for fires or medical emergencies.

Emergency personnel work a 24.25-hour shift followed by 47.75 hours off.

The city has an ISO rating of 3, as rated in 2007.

The fire department in Greenville conducted 1,579 fire maintenance, construction, and reinspections during FY 2013–14. The Life Safety Services Division handles all inspection-related matters following the International Fire Code.

Conditions Affecting Service, Performance, and Costs

Greenville is one of only two cities in the benchmarking project that have emergency medical services (EMS) provided through the city fire department. In the other jurisdictions, EMS is provided by county departments.

Complications with data tracking prevented Greenville from being able to submit numbers on fire incidents and several other measures for earlier fiscal years.

Municipal Profile

Service Population	114,084
Land Area (Square Miles)	66.55
Persons per Square Mile	1,714
Median Family Income U.S. Census 2010	$50,395

Service Profile

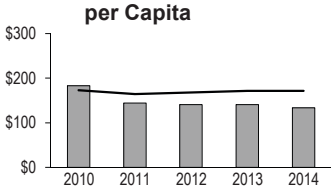
FTE Positions—Firefighters	142.0
FTE Positions—Other	16.0
Fire Stations	6
First-Line Fire Apparatus	
Pumpers	1
Aerial Trucks	1
Quints	5
Squads	1
Rescue	1
Other	7
Fire Department Responses	17,761
Responses for Fires	332
Structural Fires Reported	109
Inspections Completed for Maintenance, Construction, and Reinspections	1,579
Fire Code Violations Reported	2,145
Estimated Fire Loss (millions)	$2.00
Amount of Property Protected in Service Area (millions)	$7,512
Number of Fire Education Programs or Events	229

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	74.9%
Operating Costs	20.8%
Capital Costs	4.4%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$11,436,344
Operating Costs	$3,171,983
Capital Costs	$665,369
TOTAL	$15,273,696

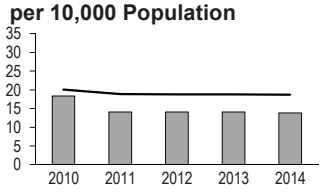
Resource Measures

Fire Services Costs per Capita



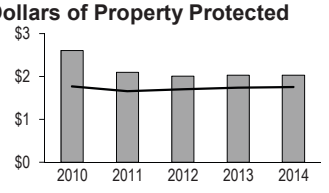
	2010	2011	2012	2013	2014
Greenville	$183	$144	$141	$141	$134
Average	$173	$165	$168	$172	$171

Fire Services Total FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greenville	18.3	14.1	14.1	14.1	13.8
Average	20.1	18.9	18.8	18.7	18.7

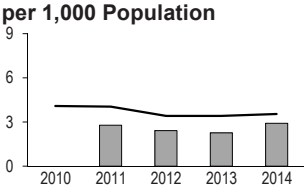
Fire Services Cost per Thousand Dollars of Property Protected



	2010	2011	2012	2013	2014
Greenville	$2.61	$2.10	$2.01	$2.03	$2.03
Average	$1.77	$1.66	$1.70	$1.74	$1.76

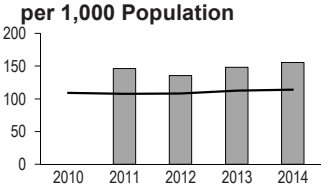
Workload Measures

Actual Fires per 1,000 Population



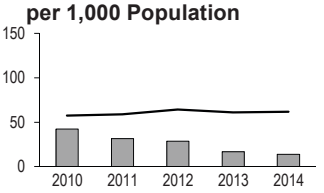
	2010	2011	2012	2013	2014
Greenville		2.79	2.42	2.26	2.91
Average	4.10	4.04	3.42	3.42	3.56

Fire Department Responses per 1,000 Population



	2010	2011	2012	2013	2014
Greenville		146	135	148	156
Average	109	108	108	113	114

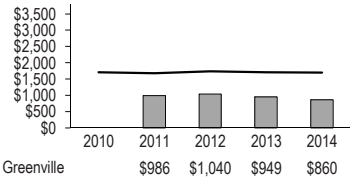
Fire Inspections Completed per 1,000 Population



	2010	2011	2012	2013	2014
Greenville	42	31	28	17	14
Average	57	59	64	61	62

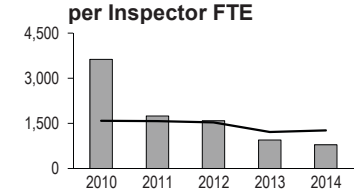
Efficiency Measures

Fire Services Cost per Fire Department Response



	2010	2011	2012	2013	2014
Greenville		$986	$1,040	$949	$860
Average	$1,711	$1,682	$1,735	$1,707	$1,700

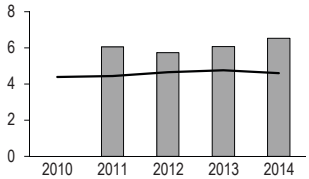
Inspections Completed per Inspector FTE



	2010	2011	2012	2013	2014
Greenville	3,625	1,745	1,585	941	790
Average	1,588	1,569	1,529	1,217	1,262

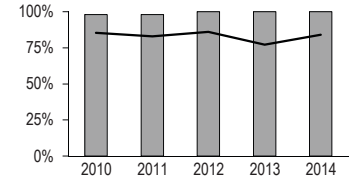
Effectiveness Measures

Average Response Time to Priority One Calls in Minutes



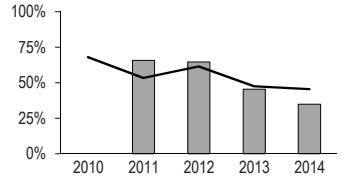
	2010	2011	2012	2013	2014
Greenville		6.1	5.7	6.1	6.5
Average	4.4	4.4	4.6	4.8	4.6

Percentage of Fire Code Violations Cleared within 90 Days



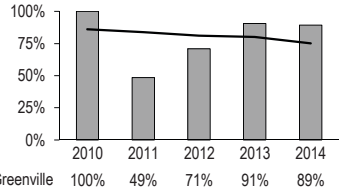
	2010	2011	2012	2013	2014
Greenville	98%	98%	100%	100%	100%
Average	85%	83%	86%	77%	84%

Percentage of Fires Confined to Rooms or Objects Involved on Arrival



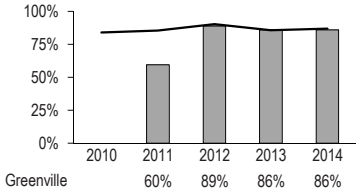
	2010	2011	2012	2013	2014
Greenville		66%	65%	45%	35%
Average	68%	53%	61%	47%	45%

Percentage of Fires for Which Cause Was Determined



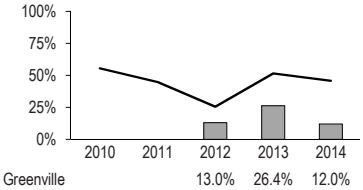
	2010	2011	2012	2013	2014
Greenville	100%	49%	71%	91%	89%
Average	86%	84%	81%	80%	75%

Percentage of Full Response within 8 Minutes Travel Time



	2010	2011	2012	2013	2014
Greenville		60%	89%	86%	86%
Average	84%	85%	90%	86%	87%

Percentage of Lost Pulse Cases Recovered Pulse at Transfer of Care



	2010	2011	2012	2013	2014
Greenville			13.0%	26.4%	12.0%
Average	55.6%	44.8%	25.6%	51.6%	45.9%

Hickory Fire Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The goal of Hickory Fire Department is to provide high quality emergency services, education, and prevention that protects the community through professional coworkers focused on customer service, compassion, commitment, and innovation.

The fire department contains the following divisions: administration, fire and life safety, training, maintenance, and fire suppression.

Fire suppression personnel work a twenty-four-hour shift with forty-eight hours off between shifts. The twenty-four-hour shift begins at 8 a.m.

The city has an ISO rating of 3, as rated in 2005.

The fire department in Hickory conducted 5,563 fire maintenance, construction, and reinspections during FY 2013–14. Fire prevention inspectors are assigned Level I, Level II, and Level III inspections. They also review construction and fire protection plans and inspect the installation of fire protection systems. The inspectors also accompany building inspectors during certificate of occupancy inspections and are responsible for conducting fire investigations, fire hydrant flow tests, occupancy and site visits, and other activities as assigned.

Conditions Affecting Service, Performance, and Costs

Hickory has a fire station staffed at the regional airport in addition to the six community fire stations.

Municipal Profile

Service Population	45,242
Land Area (Square Miles)	42.75
Persons per Square Mile	1,058
Median Family Income U.S. Census 2010	$54,093

Service Profile

FTE Positions—Firefighters	117.0
FTE Positions—Other	19.0
Fire Stations	7
First-Line Fire Apparatus	
Pumpers	6
Aerial Trucks	2
Quints	0
Squads	0
Rescue	1
Other	3
Fire Department Responses	6,186
Responses for Fires	205
Structural Fires Reported	59
Inspections Completed for Maintenance, Construction, and Reinspections	5,563
Fire Code Violations Reported	3,968
Estimated Fire Loss (millions)	$1.56
Amount of Property Protected in Service Area (millions)	$5,254
Number of Fire Education Programs or Events	348

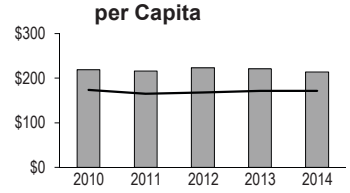
Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	81.7%
Operating Costs	15.0%
Capital Costs	3.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$7,905,803
Operating Costs	$1,455,943
Capital Costs	$319,963
TOTAL	$9,681,709

Key: Hickory ■ Benchmarking Average — Fiscal Years 2010 through 2014

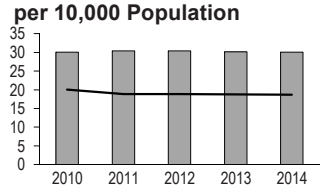
Resource Measures

Fire Services Costs per Capita



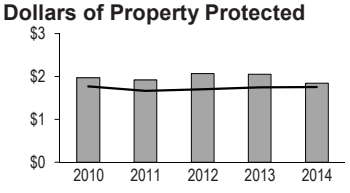
	2010	2011	2012	2013	2014
Hickory	$219	$216	$223	$221	$214
Average	$173	$165	$168	$172	$171

Fire Services Total FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Hickory	30.0	30.4	30.4	30.2	30.1
Average	20.1	18.9	18.8	18.7	18.7

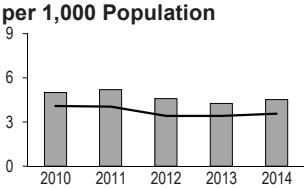
Fire Services Cost per Thousand Dollars of Property Protected



	2010	2011	2012	2013	2014
Hickory	$1.97	$1.91	$2.07	$2.05	$1.84
Average	$1.77	$1.66	$1.70	$1.74	$1.76

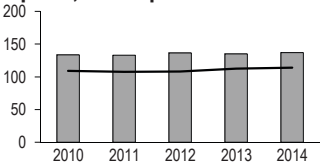
Workload Measures

Actual Fires per 1,000 Population



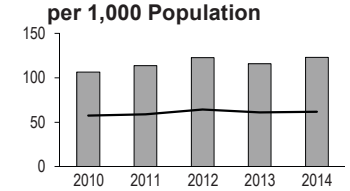
	2010	2011	2012	2013	2014
Hickory	5.01	5.19	4.59	4.26	4.53
Average	4.10	4.04	3.42	3.42	3.56

Fire Department Responses per 1,000 Population



	2010	2011	2012	2013	2014
Hickory	134	133	136	135	137
Average	109	108	108	113	114

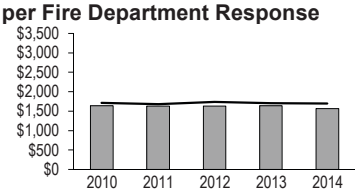
Fire Inspections Completed per 1,000 Population



	2010	2011	2012	2013	2014
Hickory	107	114	123	116	123
Average	57	59	64	61	62

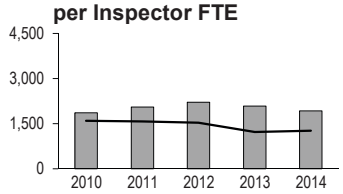
Efficiency Measures

Fire Services Cost per Fire Department Response



	2010	2011	2012	2013	2014
Hickory	$1,639	$1,629	$1,635	$1,637	$1,565
Average	$1,711	$1,682	$1,735	$1,707	$1,700

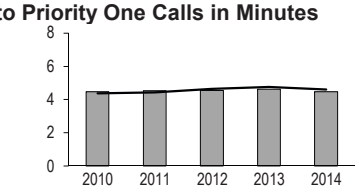
Inspections Completed per Inspector FTE



	2010	2011	2012	2013	2014
Hickory	1,863	2,052	2,215	2,086	1,918
Average	1,588	1,569	1,529	1,217	1,262

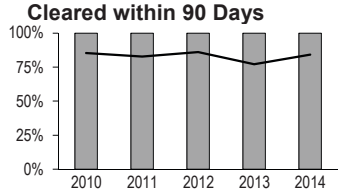
Effectiveness Measures

Average Response Time to Priority One Calls in Minutes



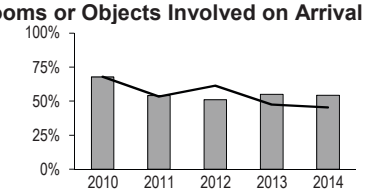
	2010	2011	2012	2013	2014
Hickory	4.5	4.5	4.6	4.6	4.5
Average	4.4	4.4	4.6	4.8	4.6

Percentage of Fire Code Violations Cleared within 90 Days



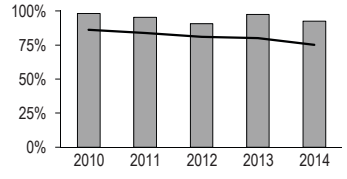
	2010	2011	2012	2013	2014
Hickory	100%	100%	100%	100%	100%
Average	85%	83%	86%	77%	84%

Percentage of Fires Confined to Rooms or Objects Involved on Arrival



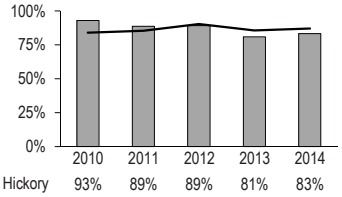
	2010	2011	2012	2013	2014
Hickory	68%	54%	51%	55%	54%
Average	68%	53%	61%	47%	45%

Percentage of Fires for Which Cause Was Determined



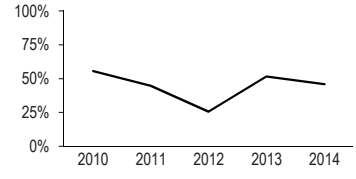
	2010	2011	2012	2013	2014
Hickory	98%	95%	91%	97%	93%
Average	86%	84%	81%	80%	75%

Percentage of Full Response within 8 Minutes Travel Time



	2010	2011	2012	2013	2014
Hickory	93%	89%	89%	81%	83%
Average	84%	85%	90%	86%	87%

Percentage of Lost Pulse Cases Recovered Pulse at Transfer of Care



	2010	2011	2012	2013	2014
Hickory					
Average	55.6%	44.8%	25.6%	51.6%	45.9%

High Point Fire Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The High Point Fire Department provides the following functions: firefighting, emergency medical response, rescue response, hazardous material technician response, inspection, fleet/vehicle maintenance, departmental technical services, and public life safety education and community relations.

The fire department contains the following divisions: administration, operations, and technical services.

Firefighters work three rotating shifts. A shift cycle alternates three twenty-four-hour shifts on duty with one twenty-four break between each scheduled shift day. This is then followed by a four day break. This averages to a fifty-six hour work week over a twenty-seven day period.

The city has an ISO rating of 2, as rated in 2005.

The fire department in High Point conducted 6,847 fire maintenance, construction, and reinspections during FY 2013–14. All Level I inspections are conducted by fire suppression personnel. They are responsible for making the first inspection on an occupancy as well as conducting the first reinspection for that occupancy within thirty days. If code violations are not corrected, the case is turned over to fire prevention personnel for follow-up. All Level II and Level III inspections are conducted by fire prevention staff. All reinspections are conducted on thirty-day cycles.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Service Population	117,028
Land Area (Square Miles)	66.73
Persons per Square Mile	1,754
Median Family Income U.S. Census 2010	$49,720

Service Profile

FTE Positions—Firefighters	201.0
FTE Positions—Other	23.0
Fire Stations	14
First-Line Fire Apparatus	
Pumpers	14
Aerial Trucks	4
Quints	0
Squads	0
Rescue	1
Other	9
Fire Department Responses	12,189
Responses for Fires	464
Structural Fires Reported	121
Inspections Completed for Maintenance, Construction, and Reinspections	6,847
Fire Code Violations Reported	2,525
Estimated Fire Loss (millions)	$9.04
Amount of Property Protected in Service Area (millions)	$9,802
Number of Fire Education Programs or Events	279

Full Cost Profile

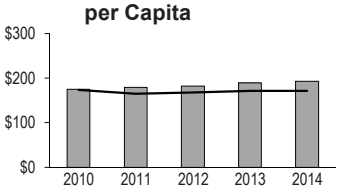
Cost Breakdown by Percentage	
Personal Services	71.3%
Operating Costs	18.5%
Capital Costs	10.2%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$16,093,028
Operating Costs	$4,185,905
Capital Costs	$2,299,903
TOTAL	$22,578,836

High Point — Fire Services

Key: High Point ■ Benchmarking Average — Fiscal Years 2010 through 2014

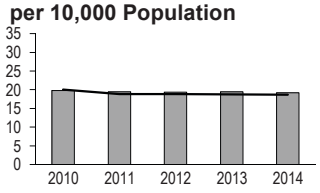
Resource Measures

Fire Services Costs per Capita



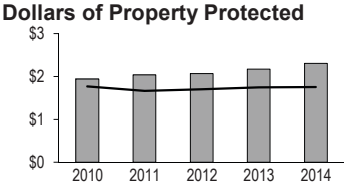
	2010	2011	2012	2013	2014
High Point	$175	$180	$182	$190	$193
Average	$173	$165	$168	$172	$171

Fire Services Total FTEs per 10,000 Population



	2010	2011	2012	2013	2014
High Point	19.8	19.5	19.3	19.5	19.1
Average	20.1	18.9	18.8	18.7	18.7

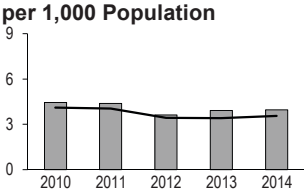
Fire Services Cost per Thousand Dollars of Property Protected



	2010	2011	2012	2013	2014
High Point	$1.94	$2.04	$2.07	$2.17	$2.30
Average	$1.77	$1.66	$1.70	$1.74	$1.76

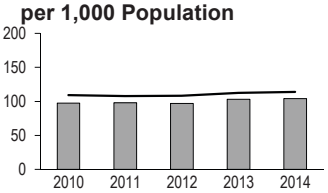
Workload Measures

Actual Fires per 1,000 Population



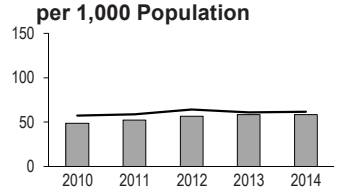
	2010	2011	2012	2013	2014
High Point	4.45	4.38	3.62	3.93	3.96
Average	4.10	4.04	3.42	3.42	3.56

Fire Department Responses per 1,000 Population



	2010	2011	2012	2013	2014
High Point	97	98	97	103	104
Average	109	108	108	113	114

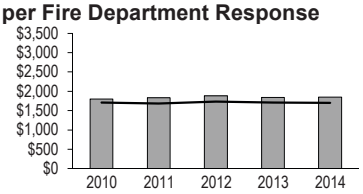
Fire Inspections Completed per 1,000 Population



	2010	2011	2012	2013	2014
High Point	49	52	57	58	59
Average	57	59	64	61	62

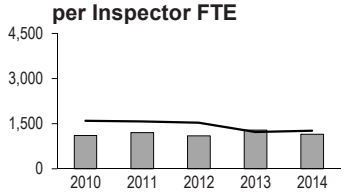
Efficiency Measures

Fire Services Cost per Fire Department Response



	2010	2011	2012	2013	2014
High Point	$1,797	$1,836	$1,884	$1,840	$1,852
Average	$1,711	$1,682	$1,735	$1,707	$1,700

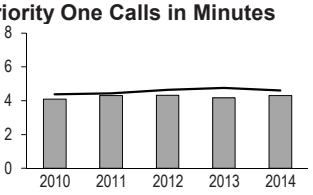
Inspections Completed per Inspector FTE



	2010	2011	2012	2013	2014
High Point	1,105	1,201	1,087	1,288	1,141
Average	1,588	1,569	1,529	1,217	1,262

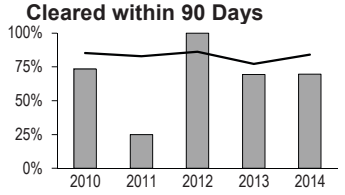
Effectiveness Measures

Average Response Time to Priority One Calls in Minutes



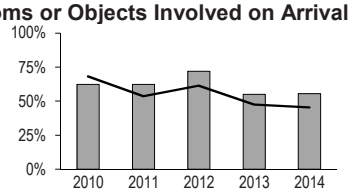
	2010	2011	2012	2013	2014
High Point	4.1	4.3	4.3	4.2	4.3
Average	4.4	4.4	4.6	4.8	4.6

Percentage of Fire Code Violations Cleared within 90 Days



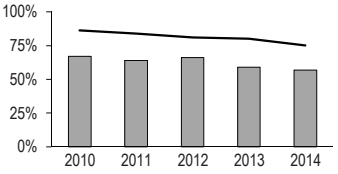
	2010	2011	2012	2013	2014
High Point	73%	25%	100%	69%	70%
Average	85%	83%	86%	77%	84%

Percentage of Fires Confined to Rooms or Objects Involved on Arrival



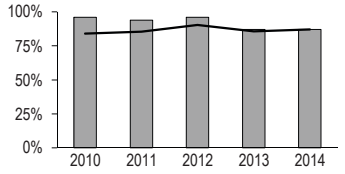
	2010	2011	2012	2013	2014
High Point	62%	62%	72%	55%	55%
Average	68%	53%	61%	47%	45%

Percentage of Fires for Which Cause Was Determined



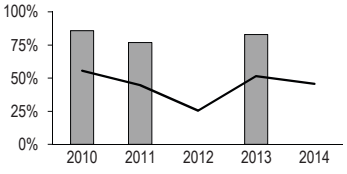
	2010	2011	2012	2013	2014
High Point	67%	64%	66%	59%	57%
Average	86%	84%	81%	80%	75%

Percentage of Full Response within 8 Minutes Travel Time



	2010	2011	2012	2013	2014
High Point	96%	94%	96%	87%	87%
Average	84%	85%	90%	86%	87%

Percentage of Lost Pulse Cases Recovered Pulse at Transfer of Care



	2010	2011	2012	2013	2014
High Point	85.7%	76.9%	0.0%	82.9%	
Average	55.6%	44.8%	25.6%	51.6%	45.9%

Salisbury — Fire Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The purpose of the Salisbury Fire Department is to provide capable, well-trained personnel and necessary equipment to suppress fires and effectively manage hazardous chemical accidents that may occur in the community related to transportation or industry; to provide rescue services as needed and basic life support through an updated First Responder Program; and to work toward a more fire-safe community through loss prevention activities, including inspections, code enforcement, minimum housing activities, and public education programs.

The fire department contains the following divisions: fire control, loss prevention, training, and logistics.

The shift schedule for the fire department is twenty-four hours on and forty-eight hours off for three cycles. There are three shifts. Captains and firefighters get a twenty-four-hour Kelley day plus four hours off for any twenty-eight-day cycle exceeding 212 hours worked. The city has some part-time personnel working to fill vacant spots on the shifts due to Kelley days. Salisbury now is a quint system of deployment and duty. The quint trucks combine the duties of an engine and a truck company into a single company.

The city has an ISO rating of 2, as rated in 2008.

The fire department in Salisbury conducted 3,258 fire maintenance, construction, and reinspections in FY 2013–14. The city follows or exceeds the state guidelines for frequency of inspections for all occupancies. Apartment buildings have one file number. Reinspections are performed at thirty-day intervals. Fees are assessed at the third inspection.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Service Population	33,726
Land Area (Square Miles)	22.18
Persons per Square Mile	1,521
Median Family Income U.S. Census 2010	$40,192

Service Profile

FTE Positions—Firefighters	69.0
FTE Positions—Other	8.0
Fire Stations	5
First-Line Fire Apparatus	
Pumpers	1
Aerial Trucks	1
Quints	3
Squads	1
Rescue	0
Other	4
Fire Department Responses	5,040
Responses for Fires	148
Structural Fires Reported	54
Inspections Completed for Maintenance, Construction, and Reinspections	3,258
Fire Code Violations Reported	3,196
Estimated Fire Loss (millions)	$0.62
Amount of Property Protected in Service Area (millions)	$2,765
Number of Fire Education Programs or Events	101

Full Cost Profile

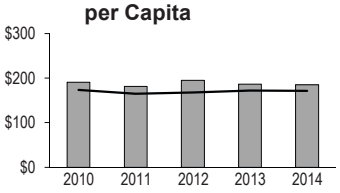
Cost Breakdown by Percentage	
Personal Services	66.5%
Operating Costs	20.0%
Capital Costs	13.6%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$4,153,586
Operating Costs	$1,249,133
Capital Costs	$847,711
TOTAL	$6,250,430

Salisbury — Fire Services

Key: Salisbury ■ Benchmarking Average — Fiscal Years 2010 through 2014

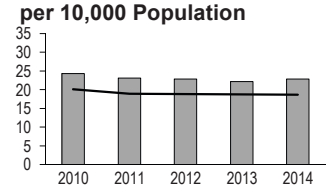
Resource Measures

Fire Services Costs per Capita



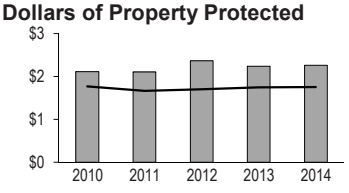
	2010	2011	2012	2013	2014
Salisbury	$191	$181	$195	$186	$185
Average	$173	$165	$168	$172	$171

Fire Services Total FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Salisbury	24.3	23.1	22.8	22.1	22.8
Average	20.1	18.9	18.8	18.7	18.7

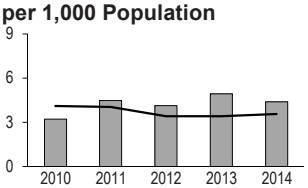
Fire Services Cost per Thousand Dollars of Property Protected



	2010	2011	2012	2013	2014
Salisbury	$2.11	$2.11	$2.36	$2.24	$2.26
Average	$1.77	$1.66	$1.70	$1.74	$1.76

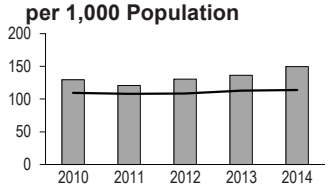
Workload Measures

Actual Fires per 1,000 Population



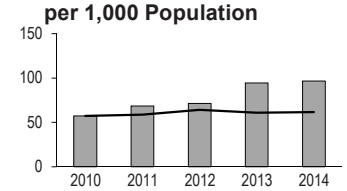
	2010	2011	2012	2013	2014
Salisbury	3.22	4.48	4.12	4.93	4.39
Average	4.10	4.04	3.42	3.42	3.56

Fire Department Responses per 1,000 Population



	2010	2011	2012	2013	2014
Salisbury	130	121	131	136	149
Average	109	108	108	113	114

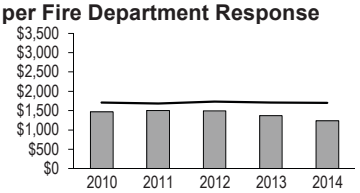
Fire Inspections Completed per 1,000 Population



	2010	2011	2012	2013	2014
Salisbury	58	68	71	95	97
Average	57	59	64	61	62

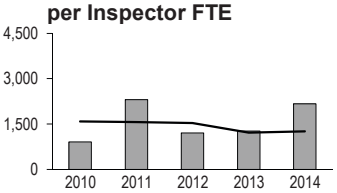
Efficiency Measures

Fire Services Cost per Fire Department Response



	2010	2011	2012	2013	2014
Salisbury	$1,472	$1,500	$1,494	$1,368	$1,240
Average	$1,711	$1,682	$1,735	$1,707	$1,700

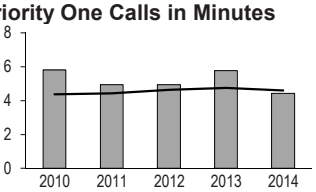
Inspections Completed per Inspector FTE



	2010	2011	2012	2013	2014
Salisbury	910	2,308	1,201	1,265	2,172
Average	1,588	1,569	1,529	1,217	1,262

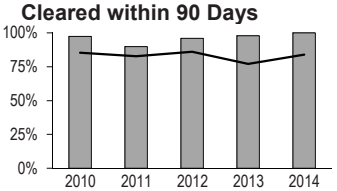
Effectiveness Measures

Average Response Time to Priority One Calls in Minutes



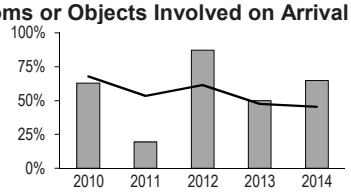
	2010	2011	2012	2013	2014
Salisbury	5.8	4.9	4.9	5.8	4.4
Average	4.4	4.4	4.6	4.8	4.6

Percentage of Fire Code Violations Cleared within 90 Days



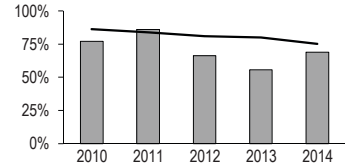
	2010	2011	2012	2013	2014
Salisbury	98%	90%	96%	98%	100%
Average	85%	83%	86%	77%	84%

Percentage of Fires Confined to Rooms or Objects Involved on Arrival



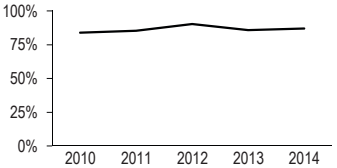
	2010	2011	2012	2013	2014
Salisbury	63%	19%	87%	50%	65%
Average	68%	53%	61%	47%	45%

Percentage of Fires for Which Cause Was Determined



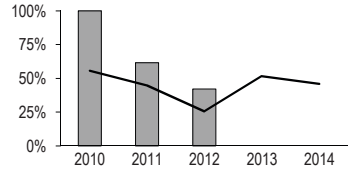
	2010	2011	2012	2013	2014
Salisbury	77%	86%	66%	56%	69%
Average	86%	84%	81%	80%	75%

Percentage of Full Response within 8 Minutes Travel Time



	2010	2011	2012	2013	2014
Salisbury					
Average	84%	85%	90%	86%	87%

Percentage of Lost Pulse Cases Recovered Pulse at Transfer of Care



	2010	2011	2012	2013	2014
Salisbury	100.0%	61.5%	42.1%		
Average	55.6%	44.8%	25.6%	51.6%	45.9%

Wilson Fire Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Wilson Fire/Rescue Services is a public safety organization whose mission is to assist the public in the protection of life and property by minimizing the impact of fire, medical emergencies, and potential disasters or events that affect the community and the environment.

Wilson Fire/Rescue Services has two major divisions. Operations handles emergency responses and equipment maintenance. Support Services handles fire prevention and education, facility maintenance, IM/GIS, and budget.

Firefighters work twenty-four hours on and twenty-four hours off. Each work cycle consists of three twenty-four-hour shifts with a day off between shifts. A four-day break is then provided before the cycle repeats itself.

The city has an ISO rating of 2, as rated in 2005. The Wilson Fire Department has been accredited since 2002.

The fire department in Wilson conducted 5,462 fire maintenance, construction, and reinspections during FY 2013–14. Fire inspections are conducted by the Fire Prevention Bureau on a daily basis. Each inspector is assigned a district in which he or she handles all inspections. A charge is made on the third reinspection.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Service Population	49,097
Land Area (Square Miles)	30.48
Persons per Square Mile	1,611
Median Family Income U.S. Census 2010	$43,442

Service Profile

FTE Positions—Firefighters	84.0
FTE Positions—Other	13.0
Fire Stations	5
First-Line Fire Apparatus	
Pumpers	4
Aerial Trucks	1
Quints	1
Squads	0
Rescue	0
Other	1
Fire Department Responses	3,893
Responses for Fires	228
Structural Fires Reported	53
Inspections Completed for Maintenance, Construction, and Reinspections	5,462
Fire Code Violations Reported	3,659
Estimated Fire Loss (millions)	$2.80
Amount of Property Protected in Service Area (millions)	$4,061
Number of Fire Education Programs or Events	890

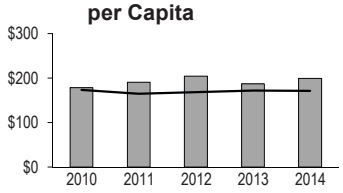
Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	74.4%
Operating Costs	18.8%
Capital Costs	6.8%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$7,276,481
Operating Costs	$1,835,442
Capital Costs	$663,594
TOTAL	$9,775,517

Key: Wilson ■ Benchmarking Average — Fiscal Years 2010 through 2014

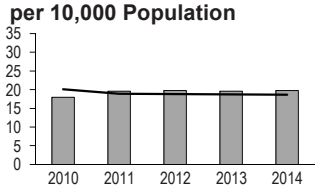
Resource Measures

Fire Services Costs per Capita



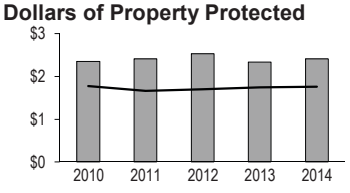
	2010	2011	2012	2013	2014
Wilson	$178	$191	$204	$187	$199
Average	$173	$165	$168	$172	$171

Fire Services Total FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Wilson	18.0	19.6	19.7	19.6	19.8
Average	20.1	18.9	18.8	18.7	18.7

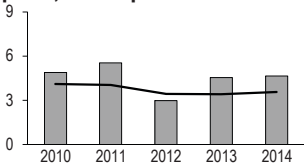
Fire Services Cost per Thousand Dollars of Property Protected



	2010	2011	2012	2013	2014
Wilson	$2.35	$2.41	$2.53	$2.34	$2.41
Average	$1.77	$1.66	$1.70	$1.74	$1.76

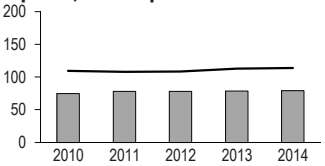
Workload Measures

Actual Fires per 1,000 Population



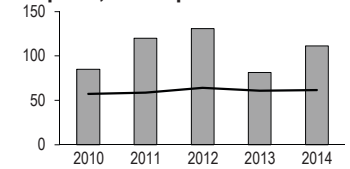
	2010	2011	2012	2013	2014
Wilson	4.89	5.54	2.97	4.53	4.64
Average	4.10	4.04	3.42	3.42	3.56

Fire Department Responses per 1,000 Population



	2010	2011	2012	2013	2014
Wilson	75	78	78	78	79
Average	109	108	108	113	114

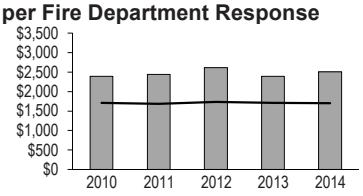
Fire Inspections Completed per 1,000 Population



	2010	2011	2012	2013	2014
Wilson	85	120	131	82	111
Average	57	59	64	61	62

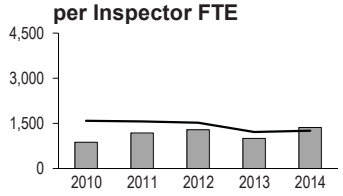
Efficiency Measures

Fire Services Cost per Fire Department Response



	2010	2011	2012	2013	2014
Wilson	$2,391	$2,446	$2,617	$2,389	$2,511
Average	$1,711	$1,682	$1,735	$1,707	$1,700

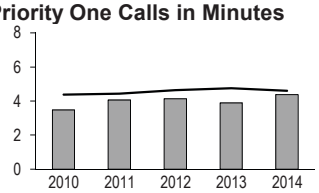
Inspections Completed per Inspector FTE



	2010	2011	2012	2013	2014
Wilson	880	1,184	1,287	1,008	1,366
Average	1,588	1,569	1,529	1,217	1,262

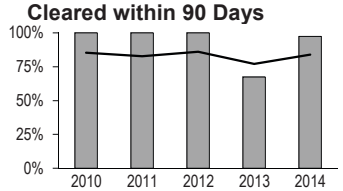
Effectiveness Measures

Average Response Time to Priority One Calls in Minutes



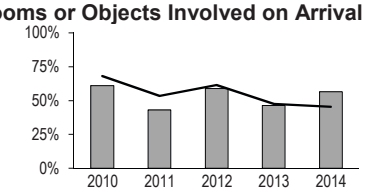
	2010	2011	2012	2013	2014
Wilson	3.5	4.1	4.1	3.9	4.4
Average	4.4	4.4	4.6	4.8	4.6

Percentage of Fire Code Violations Cleared within 90 Days



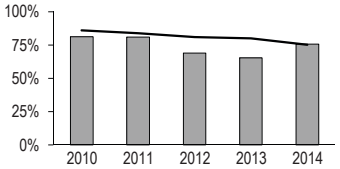
	2010	2011	2012	2013	2014
Wilson	100%	100%	100%	67%	97%
Average	85%	83%	86%	77%	84%

Percentage of Fires Confined to Rooms or Objects Involved on Arrival



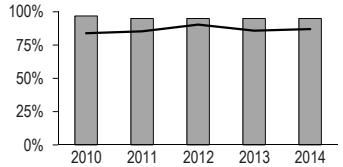
	2010	2011	2012	2013	2014
Wilson	61%	43%	59%	46%	57%
Average	68%	53%	61%	47%	45%

Percentage of Fires for Which Cause Was Determined



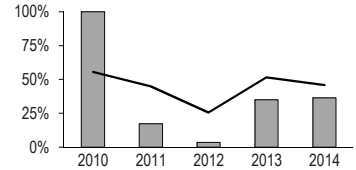
	2010	2011	2012	2013	2014
Wilson	81%	81%	69%	65%	76%
Average	86%	84%	81%	80%	75%

Percentage of Full Response within 8 Minutes Travel Time



	2010	2011	2012	2013	2014
Wilson	97%	95%	95%	95%	95%
Average	84%	85%	90%	86%	87%

Percentage of Lost Pulse Cases Recovered Pulse at Transfer of Care



	2010	2011	2012	2013	2014
Wilson	100.0%	17.1%	3.4%	34.9%	36.4%
Average	55.6%	44.8%	25.6%	51.6%	45.9%

Winston-Salem Fire Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The mission of the Winston-Salem Fire Department is to protect the lives and property of all people within Winston-Salem by reducing the occurrence and minimizing the effects of fires.

The Winston-Salem Fire Department contains the following six divisions: fire suppression, vehicle maintenance, planning, community education, fire prevention, and administration.

Fire suppression personnel work a twenty-one-day cycle with an average of fifty-six hours per week.

The city has an ISO rating of 3, as rated in 2006.

The fire department in Winston-Salem conducted 12,697 fire maintenance, construction, and reinspections during FY 2012–13. The fire department inspection program includes inspections that (1) ensure reasonable life safety conditions within a structure; (2) identify fire hazards; and (3) determine the proper installation, operation, and maintenance of fire protection features, systems, and appliances within buildings. The fire department inspection program involves both the Fire Prevention Bureau and the fire engine companies. Similar to the Fire Prevention Bureau, all fire stations have inspection responsibilities and conduct building inspections within their assigned territories. Each business within the city limits is inspected annually and receives as many return visits as necessary for fire code compliance.

Conditions Affecting Service, Performance, and Costs

Winston-Salem has a high number of inspections per inspector full-time equivalent (FTE) when compared to the other jurisdictions due to the fact that many inspections are performed by fire company personnel. The city defines an inspection as a site interior and/or exterior survey of a building, operation, event, condition, and/or activity for the purpose of verifying fire and building code compliance.

Winston-Salem made a policy change for medical call responses which lowered the total number of incidents which the fire department responded to during FY 2013–14. The city worked through the dispatch protocol to eliminate certain "non-life threatening" calls, which lowered the number of medical calls.

Municipal Profile

Service Population	235,527
Land Area (Square Miles)	132.45
Persons per Square Mile	1,778
Median Family Income U.S. Census 2010	$51,491

Service Profile

FTE Positions—Firefighters	316.2
FTE Positions—Other	26.8
Fire Stations	19
First-Line Fire Apparatus	
Pumpers	19
Aerial Trucks	5
Quints	0
Squads	0
Rescue	2
Other	14
Fire Department Responses	20,698
Responses for Fires	869
Structural Fires Reported	280
Inspections Completed for Maintenance, Construction, and Reinspections	12,697
Fire Code Violations Reported	10,381
Estimated Fire Loss (millions)	$7.33
Amount of Property Protected in Service Area (millions)	$19,898
Number of Fire Education Programs or Events	752

Full Cost Profile

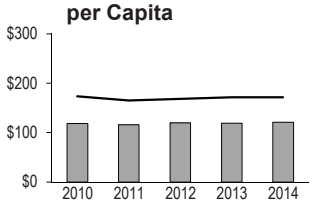
Cost Breakdown by Percentage	
Personal Services	80.2%
Operating Costs	12.3%
Capital Costs	7.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$22,841,775
Operating Costs	$3,504,672
Capital Costs	$2,149,079
TOTAL	$28,495,526

Winston-Salem Fire Services

Key: Winston-Salem ■ Benchmarking Average — Fiscal Years 2010 through 2014

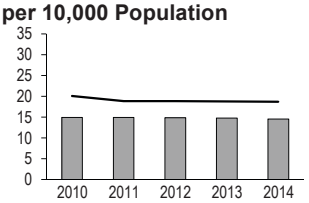
Resource Measures

Fire Services Costs per Capita



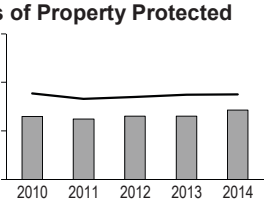
	2010	2011	2012	2013	2014
Winston-Salem	$119	$116	$120	$119	$121
Average	$173	$165	$168	$172	$171

Fire Services Total FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	14.9	14.9	14.8	14.7	14.6
Average	20.1	18.9	18.8	18.7	18.7

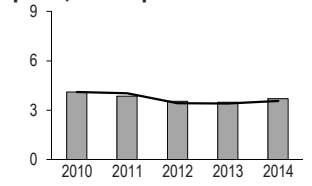
Fire Services Cost per Thousand Dollars of Property Protected



	2010	2011	2012	2013	2014
Winston-Salem	$1.30	$1.25	$1.31	$1.31	$1.43
Average	$1.77	$1.66	$1.70	$1.74	$1.76

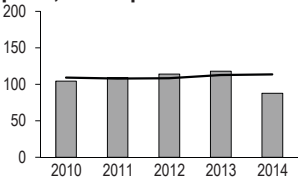
Workload Measures

Actual Fires per 1,000 Population



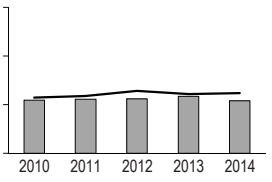
	2010	2011	2012	2013	2014
Winston-Salem	4.11	3.85	3.55	3.48	3.69
Average	4.10	4.04	3.42	3.42	3.56

Fire Department Responses per 1,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	104	109	114	118	88
Average	109	108	108	113	114

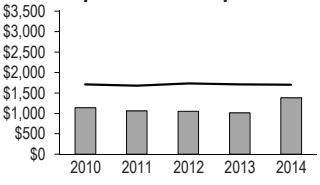
Fire Inspections Completed per 1,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	55	56	56	59	54
Average	57	59	64	61	62

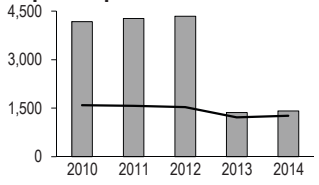
Efficiency Measures

Fire Services Cost per Fire Department Response



	2010	2011	2012	2013	2014
Winston-Salem	$1,135	$1,057	$1,048	$1,009	$1,377
Average	$1,711	$1,682	$1,735	$1,707	$1,700

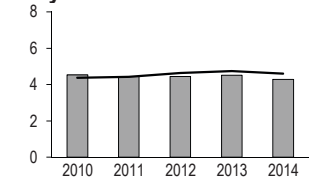
Inspections Completed per Inspector FTE



	2010	2011	2012	2013	2014
Winston-Salem	4,180	4,280	4,341	1,368	1,411
Average	1,588	1,569	1,529	1,217	1,262

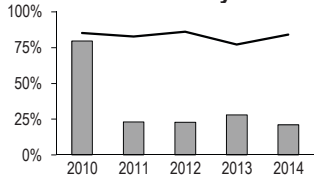
Effectiveness Measures

Average Response Time to Priority One Calls in Minutes



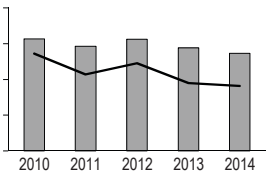
	2010	2011	2012	2013	2014
Winston-Salem	4.5	4.5	4.5	4.5	4.3
Average	4.4	4.4	4.6	4.8	4.6

Percentage of Fire Code Violations Cleared within 90 Days



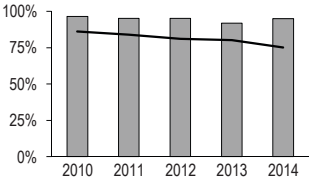
	2010	2011	2012	2013	2014
Winston-Salem	80%	23%	23%	28%	21%
Average	85%	83%	86%	77%	84%

Percentage of Fires Confined to Rooms or Objects Involved on Arrival



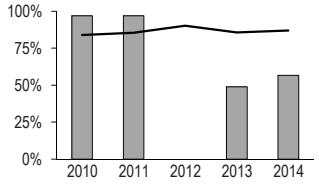
	2010	2011	2012	2013	2014
Winston-Salem	78%	73%	78%	72%	68%
Average	68%	53%	61%	47%	45%

Percentage of Fires for Which Cause Was Determined



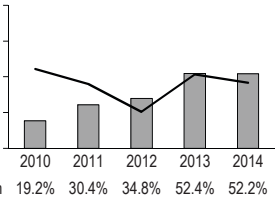
	2010	2011	2012	2013	2014
Winston-Salem	97%	95%	95%	92%	95%
Average	86%	84%	81%	80%	75%

Percentage of Full Response within 8 Minutes Travel Time



	2010	2011	2012	2013	2014
Winston-Salem	97%	97%		49%	57%
Average	84%	85%	90%	86%	87%

Percentage of Lost Pulse Cases Recovered Pulse at Transfer of Care



	2010	2011	2012	2013	2014
Winston-Salem	19.2%	30.4%	34.8%	52.4%	52.2%
Average	55.6%	44.8%	25.6%	51.6%	45.9%


UNC
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Performance and Cost Data

BUILDING INSPECTIONS


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PERFORMANCE MEASURES FOR BUILDING INSPECTIONS

SERVICE DEFINITION

Building inspection services refers to permit issuance and inspections for building, electrical, mechanical (including heating and cooling), and plumbing work on new residential and commercial construction or additions and alterations to enforce the North Carolina State Building Code and related local building regulations. The inspection process includes the receipt of permit applications, review of plans and specifications, issuance of permits, and follow-up field inspections to ensure compliance. Excluded are the enforcement of zoning and subdivision regulations, fire codes, minimum housing codes, erosion and sedimentation control regulations, watershed regulations, historic preservation ordinances, and other development regulations or plans.

NOTES ON PERFORMANCE MEASURES

1. Building Inspections per 1,000 Population

Building inspections are those required by the North Carolina State Building Code for general building, electrical, mechanical (including heating and cooling), and plumbing work associated with construction projects. Inspections include reinspections. They do not include non–building code inspections or consultation visits.

2. Value of Total Building Permits as Percentage of Tax Base of Area Served

When a building permit is issued, the dollar amount of the work specified in the contract(s) authorizing the work is recorded as the value of the building permit. Tax base refers to the taxable valuation used for levying the fiscal year property tax for the area served.

3. Value of Commercial Permits as Percentage of Tax Base of Area Served

Commercial building permits are issued for construction of business, manufacturing, institutional, and other nonresidential buildings or improvements. Tax base is defined above.

4. Cost per Building Inspection and Inspections per Day per Inspector

Building inspections are defined above. Cost is determined using the project's full cost accounting model, including direct, indirect, and capital costs. An inspector full-time equivalent (FTE) is calculated using a work year of 235 days. Inspector FTEs include permanent, temporary, part-time, and full-time inspectors.

5. Value of Building Permits per FTE

Value of building permits is defined above. Inspectors must be certified by the state to enforce the state building code and be able to review plans and conduct inspections to enforce that code. Inspector FTEs exclude supervisors, who may be certified but who spend less than 50 percent of their time performing inspections. Inspector FTEs also exclude support personnel who are not certified.

6. Number of Plan Reviews per Reviewer FTE

The state building code requires that plans and specifications for most commercial and residential construction be reviewed before permits are issued for such construction. Reviewer FTEs are calculated using a 2,080-hour work year, the actual number of plan reviews conducted during the fiscal year, and the number of plan reviewers.

7. Percentage of Inspection Responses within One Working Day of Request

A request for inspection may be made by phone, in person, or in writing. A response refers to at least beginning an inspection, regardless of whether approval of the work occurs. The majority of inspections are completed the same day as initiated. A response to a request within one working day means that the inspection is initiated before the end of the workday following the day on which the request is made.

8. Percentage of Inspections That Are Reinspections

A reinspection occurs when a building inspector must inspect work that has previously been inspected. A reinspection can occur due to problems found in the original inspection or for other reasons.

Building Inspections

Summary of Key Dimensions of Service

City or Town	Area Served (in Square Miles)	Population Growth from 2000 to 2012	Building Inspections by Trade					Number of Plan Reviews	Building Inspector FTEs	Total Staff FTEs
			Building	Electrical	Mechanical	Plumbing	Total			
Apex	34.8	91.5%	11,011	7,007	5,568	5,767	29,353	2	5.0	12.0
Asheville	45.8	24.3%	11,270	6,851	4,378	4,907	27,406	5	12.0	28.0
Burlington	43.9	14.1%	2,056	3,197	2,070	1,601	8,924	1	5.00	9.00
Cary	66.9	47.2%	28,752	16,718	15,985	12,166	73,621	4	21.0	45.6
Greensboro	133.1	21.6%	20,733	13,663	11,239	9,229	54,864	5	13.0	28.0
Greenville	66.8	39.0%	4,143	3,592	3,461	2,427	13,623	0	5.0	8.0
High Point	60.2	22.9%	11,090	6,523	5,260	3,688	26,561	2	10.0	18.0
Wilson	58.4	10.6%	1,525	1,398	1,692	919	5,534	1	3.0	6.0
Winston-Salem	396.0	25.0%	15,560	12,353	14,921	9,678	52,512	4	14.0	26.9

EXPLANATORY FACTORS

These are factors that the project found affected building inspection performance and cost in one or more of the municipalities:

Rate of growth and development in city
Size and complexity of construction projects
Geographic area served by county building inspections
Inspectors' enforcement of local development regulations
Emphasis given to plan review in each jurisdiction
Inspector specialization
Organization of the building inspection function

Apex Building Inspections

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Town of Apex provides building inspection services though the Building Inspections and Permits Department. The department is organized into two major divisions, building inspections and engineering. The department provides inspections for all of Apex and nearly nineteen square miles of area in its extra-territorial jurisdiction (ETJ).

All building inspectors in Apex serve each of the major trades. The department enforces the North Carolina State Building Code.

The department has a goal of having all inspectors fully qualified for the technical, administrative, and customer service aspects of their job. Training is accomplished primarily by offsite seminars and conferences offered by state-approved sponsors.

Apex has a standard that all inspection requests recorded by a permit technician or the permit office voicemail by 3 a.m. are to be performed on the next business day.

Total revenue received from inspection fees amounted to $910,477 for FY 2013–14.

Conditions Affecting Service, Performance, and Costs

Apex began participation in the benchmarking project in July 2011, with FY 2010–11 being the first reporting year.

The population served is calculated by adding the population of Apex with the population of the ETJ. The tax base served is calculated by adding the tax base of Apex with the tax base of the ETJ. The population and the tax base of the ETJ are calculated by taking the population and tax base per square mile of Wake County and multiplying them by the square miles of the ETJ.

Apex does not track multi-family as a category of reporting for inspections or plan reviews. Instead, townhomes are included with residential, and condos and apartments are included with commercial.

Municipal Profile

Population Served	61,286
Land Area Inspected (Square Miles)	34.82
Persons per Square Mile	1,760
Estimated Tax Base in Service Area (billions)	$7.39
Median Family Income U.S. Census 2010	$97,201

Service Profile

FTE Inspectors	
Building	0.0
Electrical	0.0
Mechanical	0.0
Plumbing	0.0
All Trades	5.0
Total Inspectors	5.0
FTE Plan Reviewers	2.0
Other FTE Positions	5.0
Total of All Positions	12.0
Number of Inspections by Type	
Building	11,011
Electrical	7,007
Mechanical	5,568
Plumbing	5,767
TOTAL	29,353
Building Permit Values	
Residential	$100,721,217
Multi-Family	$5,000,000
Commercial	$17,538,539
TOTAL	$123,259,756
Inspection Fee Revenue	$914,477

Full Cost Profile

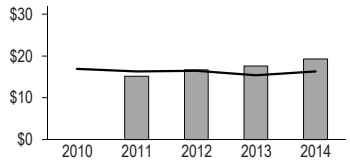
Cost Breakdown by Percentage	
Personal Services	80.7%
Operating Costs	13.3%
Capital Costs	6.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$953,592
Operating Costs	$157,221
Capital Costs	$71,428
TOTAL	$1,182,241

Apex — Building Inspections

Key: Apex ■ Benchmarking Average — Fiscal Years 2010 through 2014

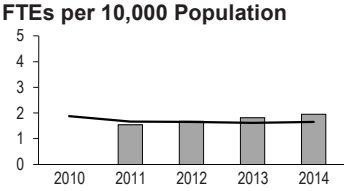
Resource Measures

Building Inspections Services Costs per Capita



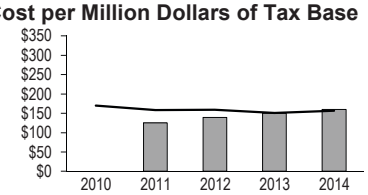
	2010	2011	2012	2013	2014
Apex		$15.15	$16.69	$17.57	$19.29
Average	$16.95	$16.33	$16.43	$15.40	$16.27

Building Inspections Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Apex		1.54	1.68	1.81	1.96
Average	1.88	1.66	1.65	1.62	1.66

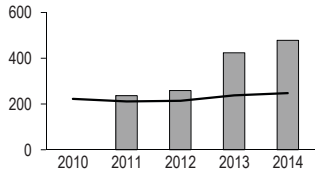
Building Inspections Services Cost per Million Dollars of Tax Base



	2010	2011	2012	2013	2014
Apex		$126	$139	$150	$160
Average	$170	$158	$159	$151	$157

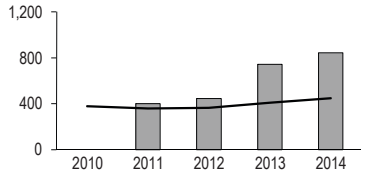
Workload Measures

Inspections per 1,000 Population in Service Area



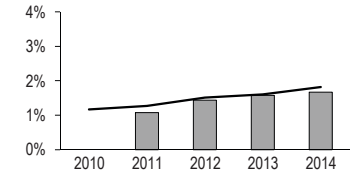
	2010	2011	2012	2013	2014
Apex		237	259	425	479
Average	222	211	214	238	248

Inspections per Square Mile in Service Area



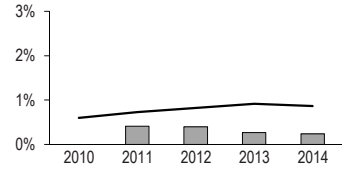
	2010	2011	2012	2013	2014
Apex		400	445	743	843
Average	378	358	364	410	448

Value of Building Permits as Percentage of Tax Base of Area Served



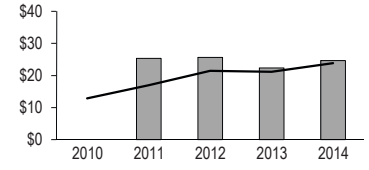
	2010	2011	2012	2013	2014
Apex		1.08%	1.44%	1.57%	1.67%
Average	1.17%	1.27%	1.51%	1.60%	1.82%

Value of Commercial Permits as Percentage of Tax Base of Area Served



	2010	2011	2012	2013	2014
Apex		0.41%	0.40%	0.27%	0.24%
Average	0.60%	0.73%	0.82%	0.92%	0.87%

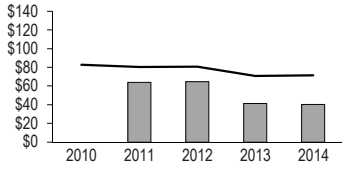
Value of Building Permits per Inspector FTE in Millions of Dollars



	2010	2011	2012	2013	2014
Apex		$25.3	$25.6	$22.3	$24.7
Average	$12.9	$17.0	$21.5	$21.2	$23.8

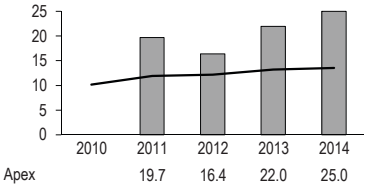
Efficiency Measures

Building Services Cost per Inspection—All Types



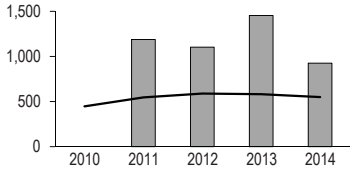
	2010	2011	2012	2013	2014
Apex		$63.80	$64.41	$41.38	$40.28
Average	$82.71	$80.41	$80.55	$70.67	$71.25

Inspections per Day per Inspector FTE



	2010	2011	2012	2013	2014
Apex		19.7	16.4	22.0	25.0
Average	10.2	11.9	12.2	13.2	13.5

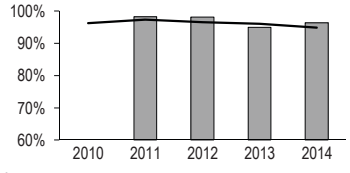
Plan Reviews per Year per Reviewer FTE



	2010	2011	2012	2013	2014
Apex		1,188	1,102	1,452	926
Average	446	546	587	579	548

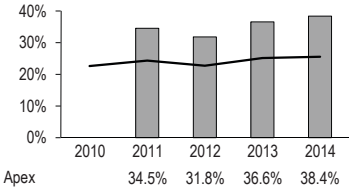
Effectiveness Measures

Percentage of Inspection Responses within One Working Day of Request



	2010	2011	2012	2013	2014
Apex		98.2%	98.1%	95.0%	96.4%
Average	96.2%	97.3%	96.5%	96.1%	94.9%

Percentage of Inspections That Are Reinspections



	2010	2011	2012	2013	2014
Apex		34.5%	31.8%	36.6%	38.4%
Average	22.7%	24.4%	22.7%	25.2%	25.6%

Asheville — Building Inspections

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Asheville Building Safety Department provides building inspection and permitting services to all areas within the Asheville city limits.

Inspectors include those who function in all trades and those who are certified in one of the following four trades: building, electrical, plumbing, or mechanical. The city is divided into two geographic areas for commericial inspections, with an inspector from each trade assigned to each area. The city is divided into six areas for inspection of one- and two-family dwellings, with one inspector assigned for each area performing all trades. The Building Safety Department enforces the North Carolina State Building Code and the Asheville Minimum Housing Code. The costs and the positions associated with enforcing the housing code are excluded from the project's performance and cost data.

The department has a goal of twelve training days per inspector per year. Inspectors are required to obtain certification in their primary trade plus two others. A career ladder encourages inspectors to work toward obtaining Level III certification in their primary trade and Level II certification in two other trades. Training is a high priority for the department, with an emphasis on code consistency. Training for contractors and designers also is a high priority for the department.

Asheville's policy is that all calls received for inspection before 7:30 a.m. receive same-day inspection.

Total revenue received from inspection fees amounted to $3.3 million for FY 2013–14. The fee schedule separates fees for each type of permit, with specific fees depending on type of work, cost, square footage, and other factors. One free reinspection is granted per trade per project. Additional inspections are provided for a fee of $75 that must be paid prior to the inspection.

Conditions Affecting Service, Performance, and Costs

The city has many old and historic buildings that are difficult to renovate and bring into compliance with the state code. The city also has days during which snow and ice impact service delivery for this city function.

Municipal Profile

Population Served	88,003
Land Area Inspected (Square Miles)	45.79
Persons per Square Mile	1,922
Estimated Tax Base in Service Area (billions)	$11.17
Median Family Income U.S. Census 2010	$53,350

Service Profile

FTE Inspectors	
Building	0.0
Electrical	0.0
Mechanical	0.0
Plumbing	0.0
All Trades	12.0
Total Inspectors	12.0
FTE Plan Reviewers	5.0
Other FTE Positions	11.0
Total of All Positions	28.0
Number of Inspections by Type	
Building	11,270
Electrical	6,851
Mechanical	4,378
Plumbing	4,907
TOTAL	27,406
Building Permit Values	
Residential	$77,897,575
Multi-Family	$68,321,410
Commercial	$160,000,885
TOTAL	$306,219,870
Inspection Fee Revenue	$3,309,817

Full Cost Profile

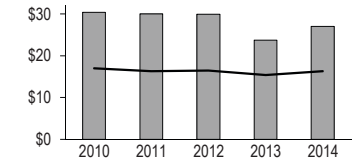
Cost Breakdown by Percentage	
Personal Services	67.1%
Operating Costs	27.1%
Capital Costs	5.8%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,597,392
Operating Costs	$644,358
Capital Costs	$138,021
TOTAL	$2,379,771

Asheville — Building Inspections

Key: Asheville ■ Benchmarking Average — Fiscal Years 2010 through 2014

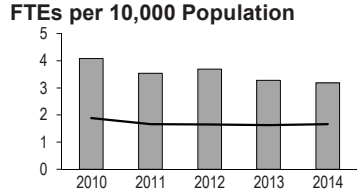
Resource Measures

Building Inspections Services Costs per Capita



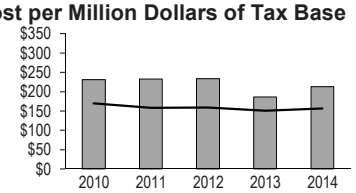
	2010	2011	2012	2013	2014
Asheville	$30.37	$29.99	$29.92	$23.71	$27.04
Average	$16.95	$16.33	$16.43	$15.40	$16.27

Building Inspections Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Asheville	4.08	3.54	3.69	3.28	3.18
Average	1.88	1.66	1.65	1.62	1.66

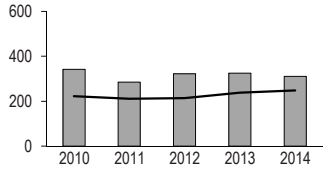
Building Inspections Services Cost per Million Dollars of Tax Base



	2010	2011	2012	2013	2014
Asheville	$231	$232	$234	$186	$213
Average	$170	$158	$159	$151	$157

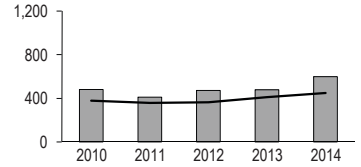
Workload Measures

Inspections per 1,000 Population in Service Area



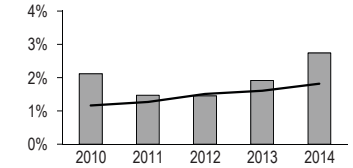
	2010	2011	2012	2013	2014
Asheville	343	285	323	325	311
Average	222	211	214	238	248

Inspections per Square Mile in Service Area



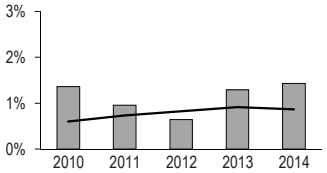
	2010	2011	2012	2013	2014
Asheville	482	410	471	478	599
Average	378	358	364	410	448

Value of Building Permits as Percentage of Tax Base of Area Served



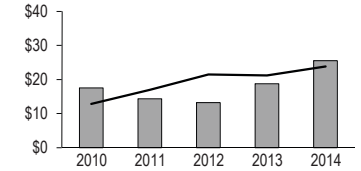
	2010	2011	2012	2013	2014
Asheville	2.12%	1.48%	1.45%	1.91%	2.74%
Average	1.17%	1.27%	1.51%	1.60%	1.82%

Value of Commercial Permits as Percentage of Tax Base of Area Served



	2010	2011	2012	2013	2014
Asheville	1.36%	0.95%	0.64%	1.29%	1.43%
Average	0.60%	0.73%	0.82%	0.92%	0.87%

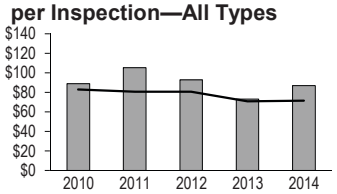
Value of Building Permits per Inspector FTE in Millions of Dollars



	2010	2011	2012	2013	2014
Asheville	$17.5	$14.3	$13.2	$18.8	$25.5
Average	$12.9	$17.0	$21.5	$21.2	$23.8

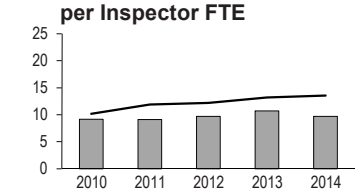
Efficiency Measures

Building Services Cost per Inspection—All Types



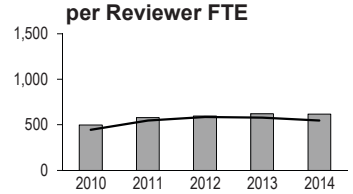
	2010	2011	2012	2013	2014
Asheville	$88.62	$105.08	$92.76	$72.87	$86.83
Average	$82.71	$80.41	$80.55	$70.67	$71.25

Inspections per Day per Inspector FTE



	2010	2011	2012	2013	2014
Asheville	9.2	9.1	9.7	10.7	9.7
Average	10.2	11.9	12.2	13.2	13.5

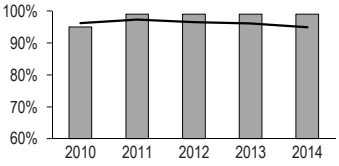
Plan Reviews per Year per Reviewer FTE



	2010	2011	2012	2013	2014
Asheville	500	578	598	622	616
Average	446	546	587	579	548

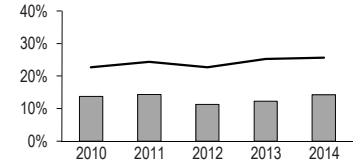
Effectiveness Measures

Percentage of Inspection Responses within One Working Day of Request



	2010	2011	2012	2013	2014
Asheville	95.0%	99.0%	99.0%	99.0%	99.0%
Average	96.2%	97.3%	96.5%	96.1%	94.9%

Percentage of Inspections That Are Reinspections



	2010	2011	2012	2013	2014
Asheville	13.7%	14.3%	11.3%	12.3%	14.2%
Average	22.7%	24.4%	22.7%	25.2%	25.6%

Burlington Building Inspections

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Burlington Building Inspections Division is under the Public Works Department. The division provides commercial and residential inspections within city limits and the extra-territorial zoning district properties covering about fourteen square miles outside city boundaries.

The inspections division uses inspectors certified in individual building trades. Training meets the state requirement of six hours a year for each trade.

Burlington does not currently have any standards for the length of time between a request for an inspection and the actual inspection.

Total revenue received from inspection fees amounted to $494,491 for FY 2013–14. The fee schedule separates fees for the type of work. Burlington charges $50 for a third reinspection, $75 for a fourth reinspection, and $100 for any additional reinspections. The number of reinspections for the year was not available.

Conditions Affecting Service, Performance, and Costs

The population served is calculated by adding the population of Burlington with the population of the extra-territorial jurisdiction (ETJ). The tax base served is calculated by adding the tax base of Burlington with the tax base of the ETJ. The population and the tax base of the ETJ are calculated by taking the population and tax base per square mile of Alamance County and multiplying them by the square miles of the ETJ.

Burlington started residential plan reviews on June 1, 2009.

Burlington had a large one-time charge for contracted services in FY 2014 which pushed costs up over the prior year.

The broad downturn in the economy over the last several years has reduced building activity and the number of requests for inspections.

Municipal Profile

Population Served	56,143
Land Area Inspected (Square Miles)	43.91
Persons per Square Mile	1,279
Estimated Tax Base in Service Area (billions)	$4.87
Median Family Income U.S. Census 2010	$46,461

Service Profile

FTE Inspectors	
Building	0.0
Electrical	0.0
Mechanical	0.0
Plumbing	0.0
All Trades	5.0
Total Inspectors	5.0
FTE Plan Reviewers	1.0
Other FTE Positions	3.0
Total of All Positions	9.0
Number of Inspections by Type	
Building	2,056
Electrical	3,197
Mechanical	2,070
Plumbing	1,601
TOTAL	8,924
Building Permit Values	
Residential	$29,817,354
Multi-Family	$8,459,134
Commercial	$45,276,785
TOTAL	$83,553,273
Inspection Fee Revenue	$494,491

Full Cost Profile

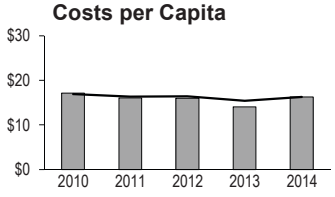
Cost Breakdown by Percentage	
Personal Services	67.3%
Operating Costs	23.5%
Capital Costs	9.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$615,362
Operating Costs	$214,773
Capital Costs	$84,698
TOTAL	$914,833

Burlington — Building Inspections

Key: Burlington ■ Benchmarking Average — Fiscal Years 2010 through 2014

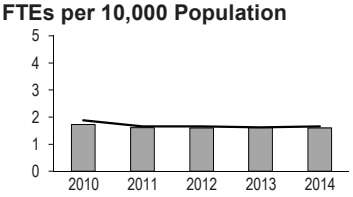
Resource Measures

Building Inspections Services Costs per Capita



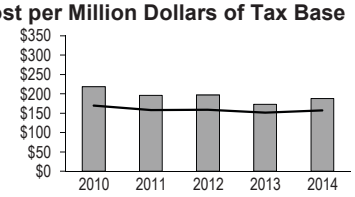
	2010	2011	2012	2013	2014
Burlington	$17.11	$16.07	$16.00	$14.04	$16.29
Average	$16.95	$16.33	$16.43	$15.40	$16.27

Building Inspections Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Burlington	1.73	1.61	1.60	1.61	1.60
Average	1.88	1.66	1.65	1.62	1.66

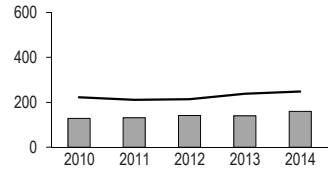
Building Inspections Services Cost per Million Dollars of Tax Base



	2010	2011	2012	2013	2014
Burlington	$218	$196	$197	$173	$188
Average	$170	$158	$159	$151	$157

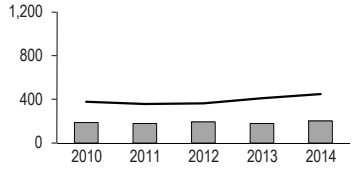
Workload Measures

Inspections per 1,000 Population in Service Area



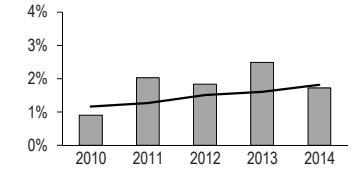
	2010	2011	2012	2013	2014
Burlington	128	131	140	140	159
Average	222	211	214	238	248

Inspections per Square Mile in Service Area



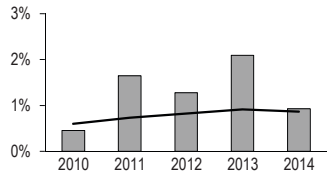
	2010	2011	2012	2013	2014
Burlington	187	178	192	178	203
Average	378	358	364	410	448

Value of Building Permits as Percentage of Tax Base of Area Served



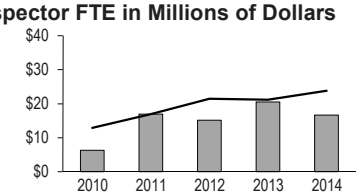
	2010	2011	2012	2013	2014
Burlington	0.91%	2.03%	1.84%	2.49%	1.72%
Average	1.17%	1.27%	1.51%	1.60%	1.82%

Value of Commercial Permits as Percentage of Tax Base of Area Served



	2010	2011	2012	2013	2014
Burlington	0.45%	1.65%	1.28%	2.10%	0.93%
Average	0.60%	0.73%	0.82%	0.92%	0.87%

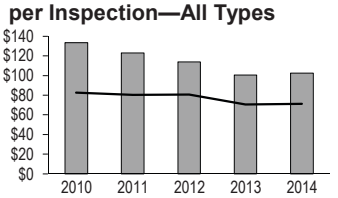
Value of Building Permits per Inspector FTE in Millions of Dollars



	2010	2011	2012	2013	2014
Burlington	$6.3	$17.0	$15.2	$20.5	$16.7
Average	$12.9	$17.0	$21.5	$21.2	$23.8

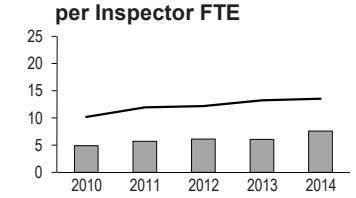
Efficiency Measures

Building Services Cost per Inspection—All Types



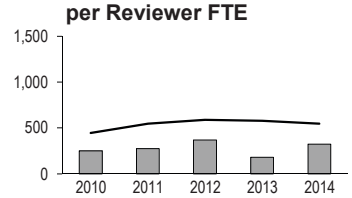
	2010	2011	2012	2013	2014
Burlington	$133.40	$122.83	$113.99	$100.42	$102.51
Average	$82.71	$80.41	$80.55	$70.67	$71.25

Inspections per Day per Inspector FTE



	2010	2011	2012	2013	2014
Burlington	4.8	5.7	6.1	6.1	7.6
Average	10.2	11.9	12.2	13.2	13.5

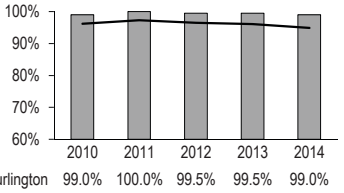
Plan Reviews per Year per Reviewer FTE



	2010	2011	2012	2013	2014
Burlington	252	276	370	182	324
Average	446	546	587	579	548

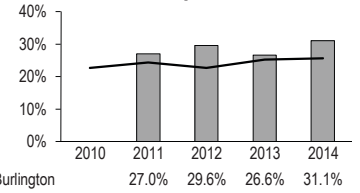
Effectiveness Measures

Percentage of Inspection Responses within One Working Day of Request



	2010	2011	2012	2013	2014
Burlington	99.0%	100.0%	99.5%	99.5%	99.0%
Average	96.2%	97.3%	96.5%	96.1%	94.9%

Percentage of Inspections That Are Reinspections



	2010	2011	2012	2013	2014
Burlington		27.0%	29.6%	26.6%	31.1%
Average	22.7%	24.4%	22.7%	25.2%	25.6%

Cary Building Inspections

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Town of Cary provides building inspection services within its corporate limits and extra-territorial jurisdiction (ETJ) through its inspections and permits department. The department is a full-service entity, meeting all requirements mandated by the N.C. General Statutes. The department consists of two main divisions. The permitting division processes all construction-related permits and related fees. Associated functions include plans review, assigning property addresses, and zoning set-back review. The inspections division performs construction-related inspections to ensure compliance with the North Carolina State Building Code and the building regulations listed in the Town of Cary Code of Ordinances. The town has both single-trade inspectors and all-trade inspectors.

The building permit and inspection process includes the receipt of permit applications, review of plans and specifications, issuance of permits, and follow-up field inspections to ensure compliance. Excluded are the enforcement of zoning and subdivision regulations, fire codes, minimum housing codes, erosion and sedimentation control regulations, watershed regulations, historic preservation ordinances, and other development regulations or plans.

Cary supports both in-house and state-sponsored training classes for inspectors on a regular basis. While in-house field training revolves around peer mentoring, the town's Human Resources Department offers a wide variety of customer service–related classes. The Town's Technology Services Department also supports code enforcement officials by offering regular computer classes through a state-of-the-art computer lab. Code enforcement officials also attend annual workshops and seminars sponsored by the various inspections trade groups.

Total revenue received from inspection fees amounted to $3.6.million for FY 2013–14. The fee schedule separates fees for each type of permit, with specific fees depending on a minimum amount, square footage, and other factors. Reinspection fees are charged if a violation has been cited and not corrected on the next inspection or if an inspection is scheduled and the work has not been completed.

Conditions Affecting Service, Performance, and Costs

The population served is calculated by adding the population of Cary with the population of the ETJ. The tax base served is calculated by adding the tax base of Cary with the tax base of the ETJ. The population and the tax base of the ETJ are calculated by taking the population and tax base per square mile of Wake County and multiplying them by the square miles of the ETJ.

The broad downturn in the economy has reduced building activity and the number of requests for inspections.

Municipal Profile

Population Served	155,536
Land Area Inspected (Square Miles)	66.93
Persons per Square Mile	2,324
Estimated Tax Base in Service Area (billions)	$23.54
Median Family Income U.S. Census 2010	$108,956

Service Profile

FTE Inspectors	
Building	7.0
Electrical	3.0
Mechanical	4.0
Plumbing	3.0
All Trades	4.0
Total Inspectors	21.0
FTE Plan Reviewers	4.0
Other FTE Positions	20.6
Total of All Positions	45.6
Number of Inspections by Type	
Building	28,752
Electrical	16,718
Mechanical	15,985
Plumbing	12,166
TOTAL	73,621
Building Permit Values	
Residential	$240,889,791
Multi-Family	$50,663,642
Commercial	$159,753,487
TOTAL	$451,306,920
Inspection Fee Revenue	$3,553,692

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	73.4%
Operating Costs	22.8%
Capital Costs	3.9%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$3,541,235
Operating Costs	$1,098,383
Capital Costs	$187,988
TOTAL	$4,827,606

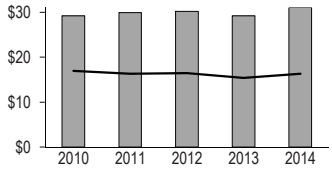
Cary

Building Inspections

Key: Cary ■ Benchmarking Average — Fiscal Years 2010 through 2014

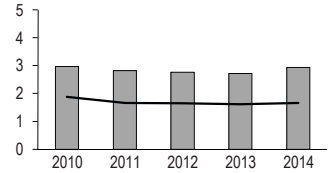
Resource Measures

Building Inspections Services Costs per Capita



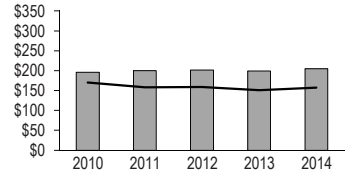
	2010	2011	2012	2013	2014
Cary	$29.23	$29.92	$30.17	$29.19	$31.04
Average	$16.95	$16.33	$16.43	$15.40	$16.27

Building Inspections Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Cary	2.97	2.82	2.76	2.71	2.93
Average	1.88	1.66	1.65	1.62	1.66

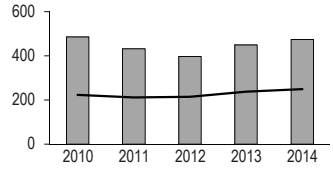
Building Inspections Services Cost per Million Dollars of Tax Base



	2010	2011	2012	2013	2014
Cary	$196	$200	$201	$199	$205
Average	$170	$158	$159	$151	$157

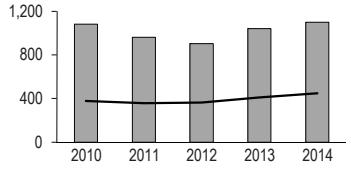
Workload Measures

Inspections per 1,000 Population in Service Area



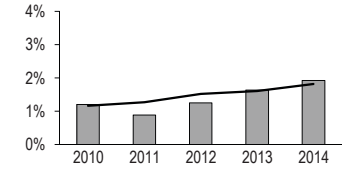
	2010	2011	2012	2013	2014
Cary	485	431	397	449	473
Average	222	211	214	238	248

Inspections per Square Mile in Service Area



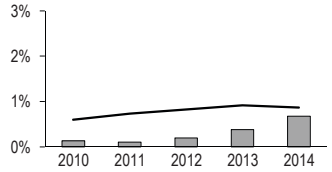
	2010	2011	2012	2013	2014
Cary	1,080	963	902	1,040	1,100
Average	378	358	364	410	448

Value of Building Permits as Percentage of Tax Base of Area Served



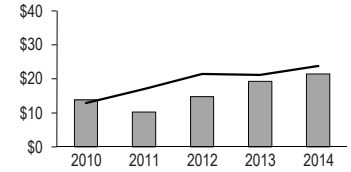
	2010	2011	2012	2013	2014
Cary	1.20%	0.89%	1.24%	1.63%	1.92%
Average	1.17%	1.27%	1.51%	1.60%	1.82%

Value of Commercial Permits as Percentage of Tax Base of Area Served



	2010	2011	2012	2013	2014
Cary	0.14%	0.10%	0.20%	0.38%	0.68%
Average	0.60%	0.73%	0.82%	0.92%	0.87%

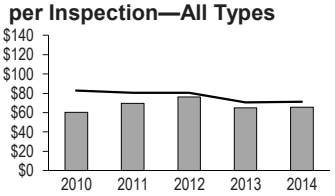
Value of Building Permits per Inspector FTE in Millions of Dollars



	2010	2011	2012	2013	2014
Cary	$13.9	$10.3	$14.8	$19.3	$21.5
Average	$12.9	$17.0	$21.5	$21.2	$23.8

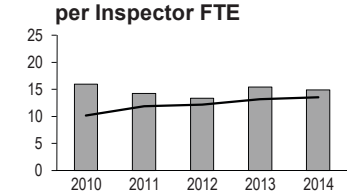
Efficiency Measures

Building Services Cost per Inspection—All Types



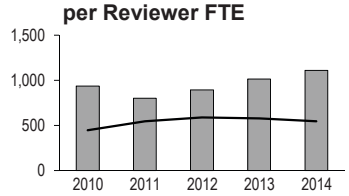
	2010	2011	2012	2013	2014
Cary	$60.30	$69.45	$76.07	$64.98	$65.57
Average	$82.71	$80.41	$80.55	$70.67	$71.25

Inspections per Day per Inspector FTE



	2010	2011	2012	2013	2014
Cary	16.0	14.2	13.4	15.4	14.9
Average	10.2	11.9	12.2	13.2	13.5

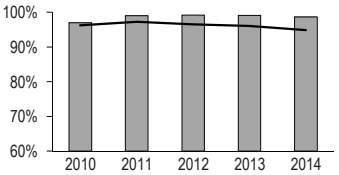
Plan Reviews per Year per Reviewer FTE



	2010	2011	2012	2013	2014
Cary	936	801	893	1,014	1,109
Average	446	546	587	579	548

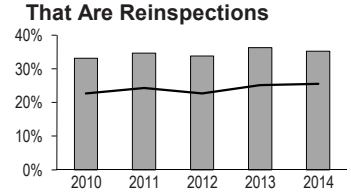
Effectiveness Measures

Percentage of Inspection Responses within One Working Day of Request



	2010	2011	2012	2013	2014
Cary	97.0%	99.0%	99.2%	99.1%	98.7%
Average	96.2%	97.3%	96.5%	96.1%	94.9%

Percentage of Inspections That Are Reinspections



	2010	2011	2012	2013	2014
Cary	33.2%	34.7%	33.9%	36.3%	35.3%
Average	22.7%	24.4%	22.7%	25.2%	25.6%

Greensboro Building Inspections

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Inspections is a division of the Engineering and Inspections Department of the City of Greensboro. The inspections division consists of plans review, building inspections, plumbing inspections, mechanical inspections, electrical inspections, and local code enforcement. The city services the incorporated portion of the city but not the extra-territorial jurisdiction areas.

Trade inspectors are required to attain a Level III certification of their primary building trade within two years. Mechanical and plumbing inspectors are required to attain a secondary certification. Local ordinance inspectors are required to attain a Level I certification. All certified inspectors are required to take and pass a law and administrative course.

All requests for inspections are responded to within forty-eight hours or less. Nearly all requests are called into the city's automated system or entered via its website.

Total revenue received from inspection fees amounted to $2.1 million for FY 2013–14. If a request for inspection is made and the job is not ready or corrections have not been made, a $45 fee for each reinspection is assessed.

Conditions Affecting Service, Performance, and Costs

The broad downturn in the economy has reduced building activity and the number of requests for inspections.

Municipal Profile

Population Served	278,654
Land Area Inspected (Square Miles)	133.08
Persons per Square Mile	2,094
Estimated Tax Base in Service Area (billions)	$24.97
Median Family Income U.S. Census 2010	$52,752

Service Profile

FTE Inspectors	
Building	5.0
Electrical	3.0
Mechanical	2.0
Plumbing	3.0
All Trades	0.0
Total Inspectors	13.0
FTE Plan Reviewers	4.5
Other FTE Positions	10.5
Total of All Positions	28.0
Number of Inspections by Type	
Building	20,733
Electrical	13,663
Mechanical	11,239
Plumbing	9,229
TOTAL	54,864
Building Permit Values	
Residential	$91,370,899
Multi-Family	$93,501,097
Commercial	$188,892,158
TOTAL	$373,764,154
Inspection Fee Revenue	$2,150,168

Full Cost Profile

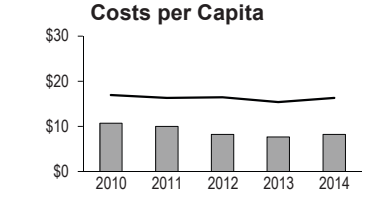
Cost Breakdown by Percentage	
Personal Services	76.8%
Operating Costs	23.2%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,756,421
Operating Costs	$531,718
Capital Costs	$0
TOTAL	$2,288,139

Greensboro — Building Inspections

Key: Greensboro ■ Benchmarking Average — Fiscal Years 2010 through 2014

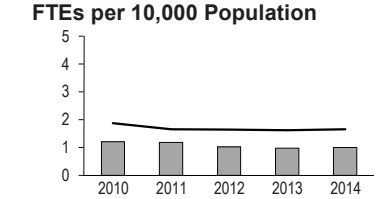
Resource Measures

Building Inspections Services Costs per Capita



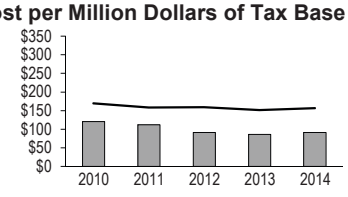
	2010	2011	2012	2013	2014
Greensboro	$10.72	$10.00	$8.21	$7.65	$8.21
Average	$16.95	$16.33	$16.43	$15.40	$16.27

Building Inspections Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greensboro	1.21	1.18	1.03	0.98	1.00
Average	1.88	1.66	1.65	1.62	1.66

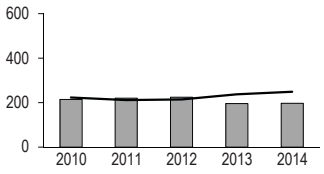
Building Inspections Services Cost per Million Dollars of Tax Base



	2010	2011	2012	2013	2014
Greensboro	$120	$112	$92	$86	$92
Average	$170	$158	$159	$151	$157

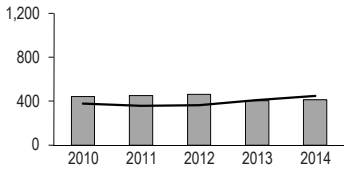
Workload Measures

Inspections per 1,000 Population in Service Area



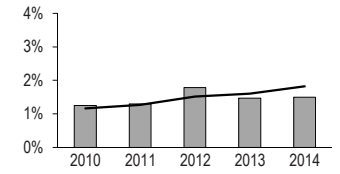
	2010	2011	2012	2013	2014
Greensboro	214	220	224	195	197
Average	222	211	214	238	248

Inspections per Square Mile in Service Area



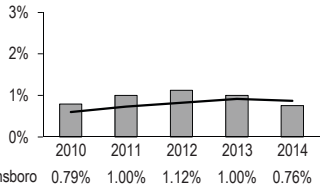
	2010	2011	2012	2013	2014
Greensboro	441	451	461	404	412
Average	378	358	364	410	448

Value of Building Permits as Percentage of Tax Base of Area Served



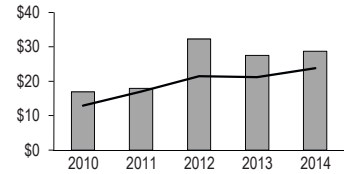
	2010	2011	2012	2013	2014
Greensboro	1.25%	1.30%	1.78%	1.47%	1.50%
Average	1.17%	1.27%	1.51%	1.60%	1.82%

Value of Commercial Permits as Percentage of Tax Base of Area Served



	2010	2011	2012	2013	2014
Greensboro	0.79%	1.00%	1.12%	1.00%	0.76%
Average	0.60%	0.73%	0.82%	0.92%	0.87%

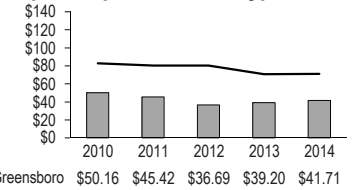
Value of Building Permits per Inspector FTE in Millions of Dollars



	2010	2011	2012	2013	2014
Greensboro	$16.9	$17.9	$32.2	$27.5	$28.8
Average	$12.9	$17.0	$21.5	$21.2	$23.8

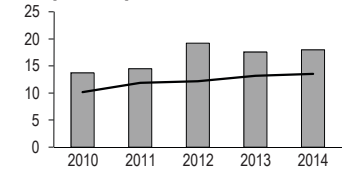
Efficiency Measures

Building Services Cost per Inspection—All Types



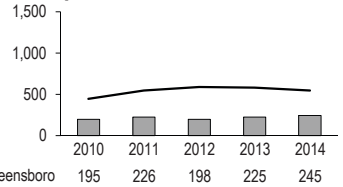
	2010	2011	2012	2013	2014
Greensboro	$50.16	$45.42	$36.69	$39.20	$41.71
Average	$82.71	$80.41	$80.55	$70.67	$71.25

Inspections per Day per Inspector FTE



	2010	2011	2012	2013	2014
Greensboro	13.7	14.5	19.2	17.6	18.0
Average	10.2	11.9	12.2	13.2	13.5

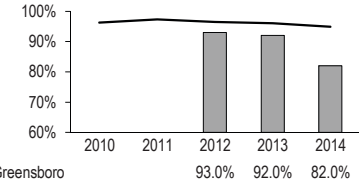
Plan Reviews per Year per Reviewer FTE



	2010	2011	2012	2013	2014
Greensboro	195	226	198	225	245
Average	446	546	587	579	548

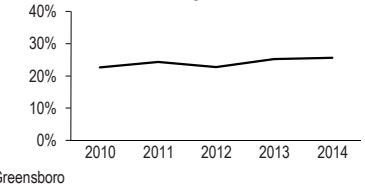
Effectiveness Measures

Percentage of Inspection Responses within One Working Day of Request



	2010	2011	2012	2013	2014
Greensboro			93.0%	92.0%	82.0%
Average	96.2%	97.3%	96.5%	96.1%	94.9%

Percentage of Inspections That Are Reinspections



	2010	2011	2012	2013	2014
Greensboro					
Average	22.7%	24.4%	22.7%	25.2%	25.6%

Greenville Building Inspections

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Greenville provides detailed inspections services within city limits and its extra-territorial jurisdiction (ETJ). The city provides building, plumbing, electrical, and mechanical code enforcement services.

Total revenue received from inspection fees amounted to $713,009 for FY 2013–14. Inspection and permit fees depend on the type of construction or work, value of construction, and other factors.

Conditions Affecting Service, Performance, and Costs

The population served is calculated by adding the population of Greenville with the population of the ETJ. The tax base served is calculated by adding the tax base of Greenville with the tax base of the ETJ. The population and the tax base of the ETJ are calculated by taking the population and tax base per square mile of Pitt County and multiplying them by the square miles of the ETJ.

Plan reviews are being done by inspectors as the plan review position has been cut from the budget.

The downturn in the economy over the past several years has decreased the demand for inspections services.

Municipal Profile

Population Served	113,703
Land Area Inspected (Square Miles)	66.78
Persons per Square Mile	1,703
Estimated Tax Base in Service Area (billions)	$7.49
Median Family Income U.S. Census 2010	$50,395

Service Profile

FTE Inspectors	
Building	0.0
Electrical	0.0
Mechanical	0.0
Plumbing	0.0
All Trades	5.0
Total Inspectors	5.0
FTE Plan Reviewers	0.0
Other FTE Positions	3.0
Total of All Positions	8.0
Number of Inspections by Type	
Building	4,143
Electrical	3,592
Mechanical	3,461
Plumbing	2,427
TOTAL	13,623
Building Permit Values	
Residential	$39,847,926
Multi-Family	$36,413,735
Commercial	$86,493,506
TOTAL	$162,755,167
Inspection Fee Revenue	$713,009

Full Cost Profile

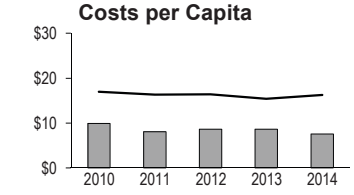
Cost Breakdown by Percentage	
Personal Services	76.9%
Operating Costs	17.6%
Capital Costs	5.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$662,988
Operating Costs	$151,660
Capital Costs	$47,696
TOTAL	$862,344

Greenville — Building Inspections

Key: Greenville ■ Benchmarking Average — Fiscal Years 2010 through 2014

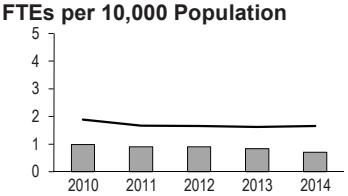
Resource Measures

Building Inspections Services Costs per Capita



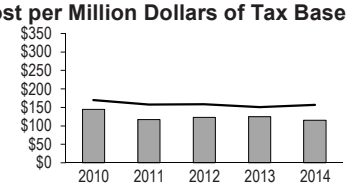
	2010	2011	2012	2013	2014
Greenville	$9.89	$8.04	$8.61	$8.64	$7.58
Average	$16.95	$16.33	$16.43	$15.40	$16.27

Building Inspections Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greenville	0.99	0.90	0.90	0.83	0.70
Average	1.88	1.66	1.65	1.62	1.66

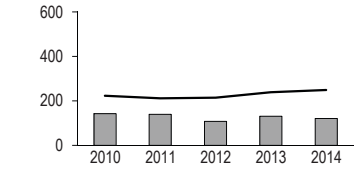
Building Inspections Services Cost per Million Dollars of Tax Base



	2010	2011	2012	2013	2014
Greenville	$145	$117	$123	$125	$115
Average	$170	$158	$159	$151	$157

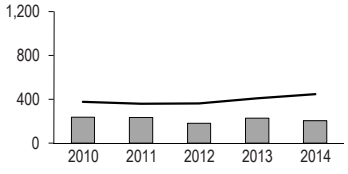
Workload Measures

Inspections per 1,000 Population in Service Area



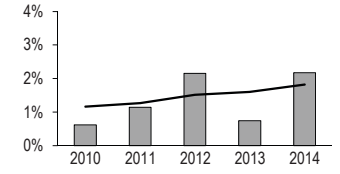
	2010	2011	2012	2013	2014
Greenville	142	139	108	130	120
Average	222	211	214	238	248

Inspections per Square Mile in Service Area



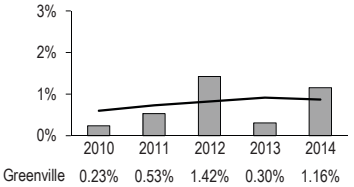
	2010	2011	2012	2013	2014
Greenville	237	234	182	228	204
Average	378	358	364	410	448

Value of Building Permits as Percentage of Tax Base of Area Served



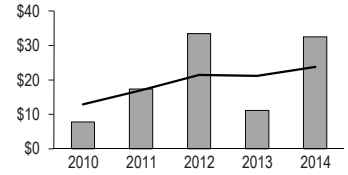
	2010	2011	2012	2013	2014
Greenville	0.61%	1.14%	2.15%	0.74%	2.17%
Average	1.17%	1.27%	1.51%	1.60%	1.82%

Value of Commercial Permits as Percentage of Tax Base of Area Served



	2010	2011	2012	2013	2014
Greenville	0.23%	0.53%	1.42%	0.30%	1.16%
Average	0.60%	0.73%	0.82%	0.92%	0.87%

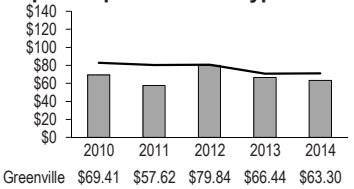
Value of Building Permits per Inspector FTE in Millions of Dollars



	2010	2011	2012	2013	2014
Greenville	$7.7	$17.4	$33.5	$11.1	$32.6
Average	$12.9	$17.0	$21.5	$21.2	$23.8

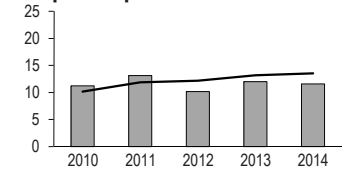
Efficiency Measures

Building Services Cost per Inspection—All Types



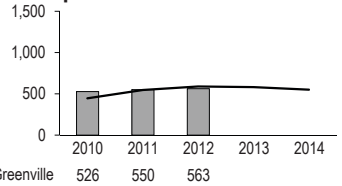
	2010	2011	2012	2013	2014
Greenville	$69.41	$57.62	$79.84	$66.44	$63.30
Average	$82.71	$80.41	$80.55	$70.67	$71.25

Inspections per Day per Inspector FTE



	2010	2011	2012	2013	2014
Greenville	11.2	13.1	10.2	12.0	11.6
Average	10.2	11.9	12.2	13.2	13.5

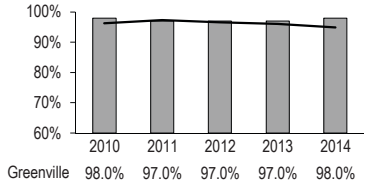
Plan Reviews per Year per Reviewer FTE



	2010	2011	2012	2013	2014
Greenville	526	550	563		
Average	446	546	587	579	548

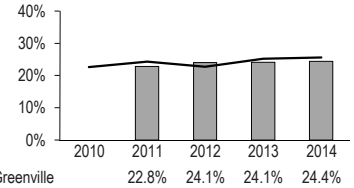
Effectiveness Measures

Percentage of Inspection Responses within One Working Day of Request



	2010	2011	2012	2013	2014
Greenville	98.0%	97.0%	97.0%	97.0%	98.0%
Average	96.2%	97.3%	96.5%	96.1%	94.9%

Percentage of Inspections That Are Reinspections



	2010	2011	2012	2013	2014
Greenville		22.8%	24.1%	24.1%	24.4%
Average	22.7%	24.4%	22.7%	25.2%	25.6%

High Point Building Inspections

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The inspections department of High Point provides building, plumbing, electrical, and mechanical code enforcement services to the incorporated area of the city in addition to a small portion of the rural/suburban extra-territorial jurisdiction (ETJ) within Guilford County.

Fire inspections and permit records are maintained by the inspections department, but fire inspections are performed by fire marshals. The department also has a local codes division, which enforces zoning, housing, public nuisance, and vehicle codes. This staff was not included in this report.

Inspectors are required to complete a level of training prior to receiving individual assignments. Prior to completing the required training, employees must work under the direct supervision of their supervisor or assigned employees. Training includes formal classroom and on-the-job training in code enforcement, technical codes, related state and local code laws, safety, and personnel regulations. All inspection requests received by midnight are inspected the next business day.

Total revenue received from inspection fees amounted to $907,873 for FY 2013–14. Inspection and permit fees depend on the type of construction or work, value of construction, and other factors.

Conditions Affecting Service, Performance, and Costs

The population served is calculated by adding the population of High Point with the population of the ETJ. The tax base served is calculated by adding the tax base of High Point with the tax base of the ETJ. The population and the tax base of the ETJ are calculated by taking the population and tax base per square mile of Guilford County and multiplying them by the square miles of the ETJ.

The broad downturn in the economy has reduced building activity and the number of requests for inspections.

Municipal Profile

Population Served	110,645
Land Area Inspected (Square Miles)	60.24
Persons per Square Mile	1,837
Estimated Tax Base in Service Area (billions)	$9.22
Median Family Income U.S. Census 2010	$49,720

Service Profile

FTE Inspectors	
Building	3.5
Electrical	2.5
Mechanical	2.5
Plumbing	1.5
All Trades	0.0
Total Inspectors	10.0
FTE Plan Reviewers	2.0
Other FTE Positions	6.0
Total of All Positions	18.0
Number of Inspections by Type	
Building	11,090
Electrical	6,523
Mechanical	5,260
Plumbing	3,688
TOTAL	26,561
Building Permit Values	
Residential	$69,462,089
Multi-Family	In commercial
Commercial	$137,900,023
TOTAL	$207,362,112
Inspection Fee Revenue	$907,873

Full Cost Profile

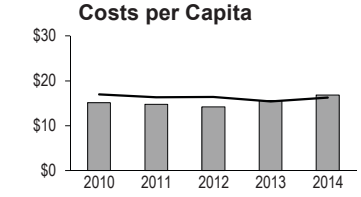
Cost Breakdown by Percentage	
Personal Services	75.3%
Operating Costs	19.4%
Capital Costs	5.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,400,817
Operating Costs	$360,192
Capital Costs	$99,254
TOTAL	$1,860,263

High Point — Building Inspections

Key: High Point ■ Benchmarking Average — Fiscal Years 2010 through 2014

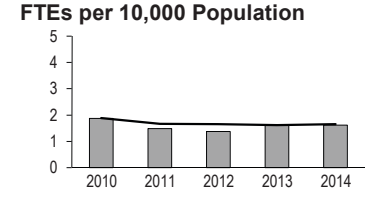
Resource Measures

Building Inspections Services Costs per Capita



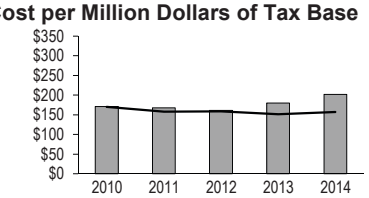
	2010	2011	2012	2013	2014
High Point	$15.12	$14.74	$14.18	$15.64	$16.81
Average	$16.95	$16.33	$16.43	$15.40	$16.27

Building Inspections Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
High Point	1.88	1.49	1.38	1.62	1.63
Average	1.88	1.66	1.65	1.62	1.66

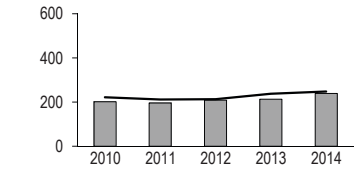
Building Inspections Services Cost per Million Dollars of Tax Base



	2010	2011	2012	2013	2014
High Point	$171	$168	$161	$179	$202
Average	$170	$158	$159	$151	$157

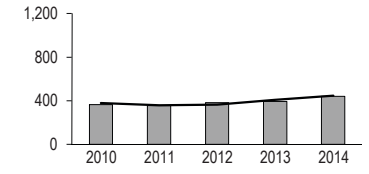
Workload Measures

Inspections per 1,000 Population in Service Area



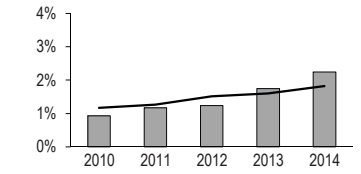
	2010	2011	2012	2013	2014
High Point	202	196	209	213	240
Average	222	211	214	238	248

Inspections per Square Mile in Service Area



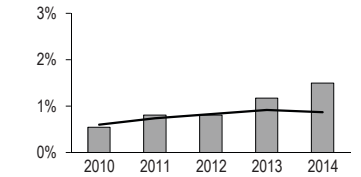
	2010	2011	2012	2013	2014
High Point	364	357	382	393	441
Average	378	358	364	410	448

Value of Building Permits as Percentage of Tax Base of Area Served



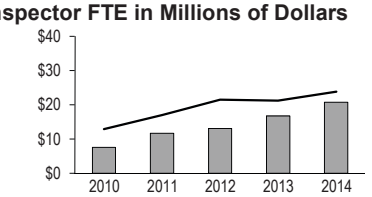
	2010	2011	2012	2013	2014
High Point	0.92%	1.17%	1.23%	1.75%	2.25%
Average	1.17%	1.27%	1.51%	1.60%	1.82%

Value of Commercial Permits as Percentage of Tax Base of Area Served



	2010	2011	2012	2013	2014
High Point	0.54%	0.81%	0.80%	1.17%	1.50%
Average	0.60%	0.73%	0.82%	0.92%	0.87%

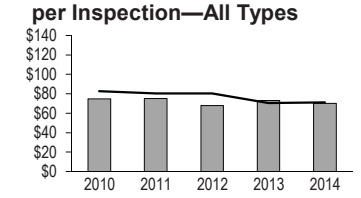
Value of Building Permits per Inspector FTE in Millions of Dollars



	2010	2011	2012	2013	2014
High Point	$7.6	$11.6	$13.1	$16.7	$20.7
Average	$12.9	$17.0	$21.5	$21.2	$23.8

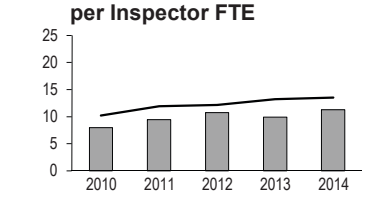
Efficiency Measures

Building Services Cost per Inspection—All Types



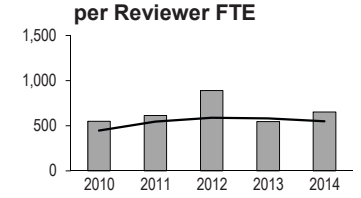
	2010	2011	2012	2013	2014
High Point	$74.72	$75.12	$67.87	$73.31	$70.04
Average	$82.71	$80.41	$80.55	$70.67	$71.25

Inspections per Day per Inspector FTE



	2010	2011	2012	2013	2014
High Point	8.0	9.5	10.7	9.9	11.3
Average	10.2	11.9	12.2	13.2	13.5

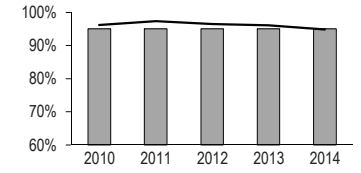
Plan Reviews per Year per Reviewer FTE



	2010	2011	2012	2013	2014
High Point	549	611	890	544	653
Average	446	546	587	579	548

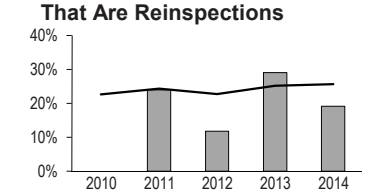
Effectiveness Measures

Percentage of Inspection Responses within One Working Day of Request



	2010	2011	2012	2013	2014
High Point	95.0%	95.0%	95.0%	95.0%	95.0%
Average	96.2%	97.3%	96.5%	96.1%	94.9%

Percentage of Inspections That Are Reinspections



	2010	2011	2012	2013	2014
High Point		23.9%	11.8%	29.0%	19.1%
Average	22.7%	24.4%	22.7%	25.2%	25.6%

Wilson — Building Inspections

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Wilson's inspection team serves the area within the city's corporate limits and the extra-territorial zoning jurisdiction (ETJ) that is approximately one mile beyond city limits.

Inspection services are currently provided by three inspectors, one field supervisor, and the inspections divisions manager. Two permit technicians provide support to this function. For commercial jobs, each inspector is assigned a primary inspection field. For residential jobs, inspectors hold certificates in all trade areas. Fire inspections are typically handled by certified inspectors in the fire department but are occasionally conducted by building inspectors who have fire inspection certification.

It is the policy of the inspection work team to respond to an inspection request on the same working day if the request is made prior to 8:30 a.m. and to respond to an inspection request by the following working day if the request is made after 8:30 a.m. Most inspections are completed on the same day the request is made.

Total revenue received from inspection fees was $330,860 for FY 2013–14. Inspection and permit fees depend on the type of construction or work, the value of construction, and other factors. A reinspection fee is assessed when making an inspection for the same trade that had been previously rejected.

Conditions Affecting Service, Performance, and Costs

The population served is calculated by adding the population of Wilson with the population of the ETJ. The tax base served is calculated by adding the tax base of Wilson with the tax base of the ETJ. The population and the tax base of the ETJ are calculated by taking the population and tax base per square mile of Wilson County and multiplying them by the square miles of the ETJ.

The broad downturn in the economy had reduced building activity and the number of requests for inspections.

Municipal Profile

Population Served	55,043
Land Area Inspected (Square Miles)	58.38
Persons per Square Mile	943
Estimated Tax Base in Service Area (billions)	$4.54
Median Family Income U.S. Census 2010	$43,442

Service Profile

FTE Inspectors	
Building	0.0
Electrical	0.0
Mechanical	0.0
Plumbing	0.0
All Trades	3.0
Total Inspectors	3.0
FTE Plan Reviewers	1.0
Other FTE Positions	2.0
Total of All Positions	6.0
Number of Inspections by Type	
Building	1,525
Electrical	1,398
Mechanical	1,692
Plumbing	919
TOTAL	5,534
Building Permit Values	
Residential	$17,499,597
Multi-Family	$9,512,753
Commercial	$26,439,471
TOTAL	$53,451,821
Inspection Fee Revenue	$330,860

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	74.1%
Operating Costs	19.0%
Capital Costs	6.9%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$480,540
Operating Costs	$123,067
Capital Costs	$44,929
TOTAL	$648,536

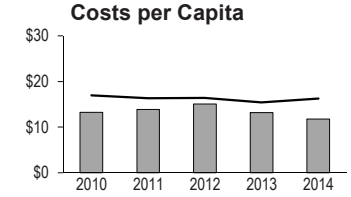
Wilson

Building Inspections

Key: Wilson ■ Benchmarking Average — Fiscal Years 2010 through 2014

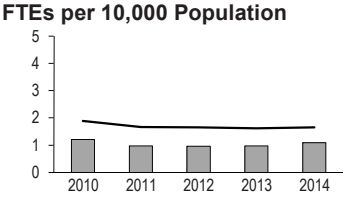
Resource Measures

Building Inspections Services Costs per Capita



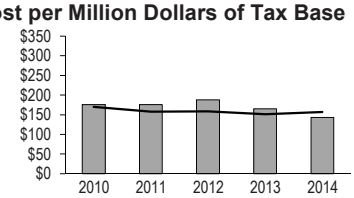
	2010	2011	2012	2013	2014
Wilson	$13.26	$13.91	$15.11	$13.19	$11.78
Average	$16.95	$16.33	$16.43	$15.40	$16.27

Building Inspections Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Wilson	1.21	0.97	0.97	0.97	1.09
Average	1.88	1.66	1.65	1.62	1.66

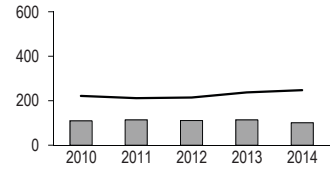
Building Inspections Services Cost per Million Dollars of Tax Base



	2010	2011	2012	2013	2014
Wilson	$175	$176	$188	$165	$143
Average	$170	$158	$159	$151	$157

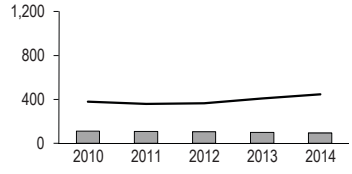
Workload Measures

Inspections per 1,000 Population in Service Area



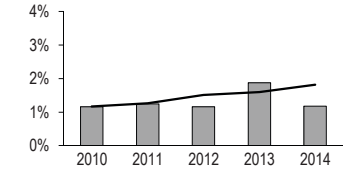
	2010	2011	2012	2013	2014
Wilson	110	114	111	114	101
Average	222	211	214	238	248

Inspections per Square Mile in Service Area



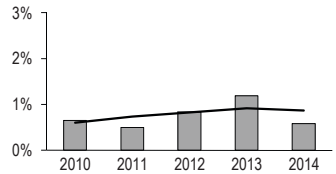
	2010	2011	2012	2013	2014
Wilson	110	109	106	99	95
Average	378	358	364	410	448

Value of Building Permits as Percentage of Tax Base of Area Served



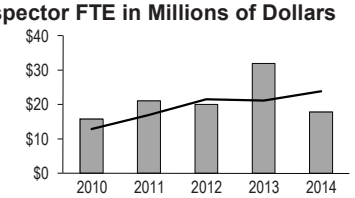
	2010	2011	2012	2013	2014
Wilson	1.16%	1.25%	1.16%	1.87%	1.18%
Average	1.17%	1.27%	1.51%	1.60%	1.82%

Value of Commercial Permits as Percentage of Tax Base of Area Served



	2010	2011	2012	2013	2014
Wilson	0.65%	0.50%	0.83%	1.19%	0.58%
Average	0.60%	0.73%	0.82%	0.92%	0.87%

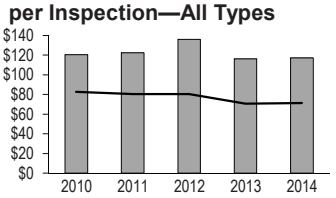
Value of Building Permits per Inspector FTE in Millions of Dollars



	2010	2011	2012	2013	2014
Wilson	$15.8	$21.1	$20.0	$31.9	$17.8
Average	$12.9	$17.0	$21.5	$21.2	$23.8

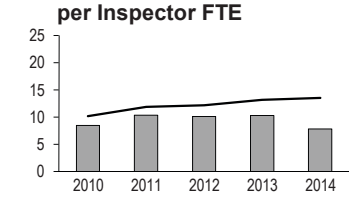
Efficiency Measures

Building Services Cost per Inspection—All Types



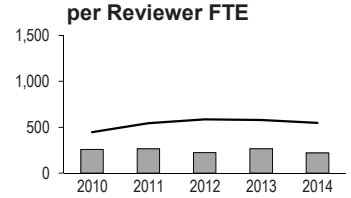
	2010	2011	2012	2013	2014
Wilson	$120.39	$122.46	$136.23	$116.09	$117.19
Average	$82.71	$80.41	$80.55	$70.67	$71.25

Inspections per Day per Inspector FTE



	2010	2011	2012	2013	2014
Wilson	8.5	10.3	10.2	10.3	7.8
Average	10.2	11.9	12.2	13.2	13.5

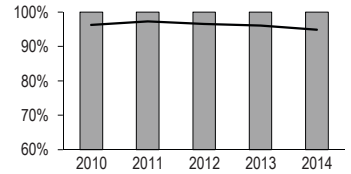
Plan Reviews per Year per Reviewer FTE



	2010	2011	2012	2013	2014
Wilson	260	265	224	265	221
Average	446	546	587	579	548

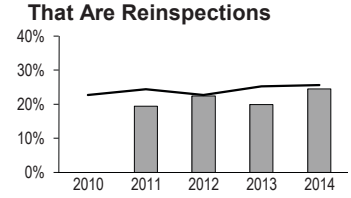
Effectiveness Measures

Percentage of Inspection Responses within One Working Day of Request



	2010	2011	2012	2013	2014
Wilson	100.0%	100.0%	100.0%	100.0%	100.0%
Average	96.2%	97.3%	96.5%	96.1%	94.9%

Percentage of Inspections That Are Reinspections



	2010	2011	2012	2013	2014
Wilson		19.4%	22.4%	19.9%	24.5%
Average	22.7%	24.4%	22.7%	25.2%	25.6%

Winston-Salem Building Inspections

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Inspections Division is a combined program for Winston-Salem and Forsyth County, providing building inspections services for all areas of the county, with the exception of the Town of Kernersville.

Inspectors are certified in one of the following four trades: building, electrical, mechanical, or plumbing. Inspectors drive to and from inspection sites in city-owned vehicles. Besides the North Carolina State Building Code, the Inspections Division enforces zoning codes and soil and sedimentation control regulations. Full-time equivalent positions and costs for these responsibilities are excluded from the project's figures for building inspections.

It is the policy of the Inspections Division to respond to inspection requests within one working day; 90 percent of the time it achieves this goal.

Total revenue received from inspection fees amounted to $3.2 million for FY 2013–14. Inspection and permit fees depend on the type of construction or work, value of the construction, and other factors. An extra trip charge of $40 is assessed for each reinspection due to a second and subsequent failed inspection on each permit.

Conditions Affecting Service, Performance, and Costs

The broad downturn in the economy has reduced building activity and the number of requests for inspections.

Municipal Profile

Population Served	336,505
Land Area Inspected (Square Miles)	396.00
Persons per Square Mile	850
Estimated Tax Base in Service Area (billions)	$29.51
Median Family Income U.S. Census 2010	$51,491

Service Profile

FTE Inspectors	
Building	3.0
Electrical	4.0
Mechanical	4.0
Plumbing	3.0
All Trades	0.0
Total Inspectors	14.0
FTE Plan Reviewers	4.0
Other FTE Positions	8.9
Total of All Positions	26.9
Number of Inspections by Type	
Building	15,560
Electrical	12,353
Mechanical	14,921
Plumbing	9,678
TOTAL	52,512
Building Permit Values	
Residential	$204,380,069
Multi-Family	In residential
Commercial	$161,465,269
TOTAL	$365,845,338
Inspection Fee Revenue	$3,185,108

Full Cost Profile

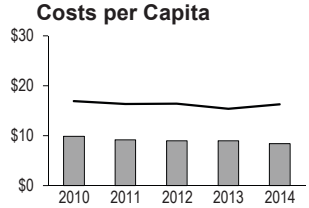
Cost Breakdown by Percentage	
Personal Services	57.0%
Operating Costs	35.5%
Capital Costs	7.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,610,120
Operating Costs	$1,003,089
Capital Costs	$211,133
TOTAL	$2,824,342

Winston-Salem Building Inspections

Key: Winston-Salem ■ Benchmarking Average — Fiscal Years 2010 through 2014

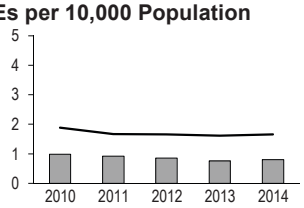
Resource Measures

Building Inspections Services Costs per Capita



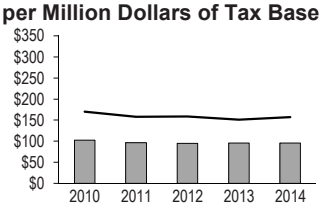
	2010	2011	2012	2013	2014
Winston-Salem	$9.90	$9.19	$8.95	$8.99	$8.39
Average	$16.95	$16.33	$16.43	$15.40	$16.27

Building Inspections Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	0.99	0.92	0.86	0.76	0.80
Average	1.88	1.66	1.65	1.62	1.66

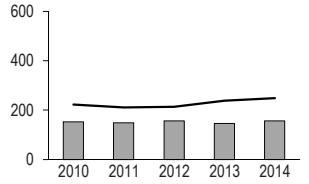
Building Inspections Services Cost per Million Dollars of Tax Base



	2010	2011	2012	2013	2014
Winston-Salem	$102	$96	$95	$96	$96
Average	$170	$158	$159	$151	$157

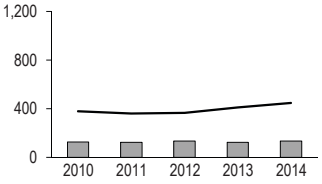
Workload Measures

Inspections per 1,000 Population in Service Area



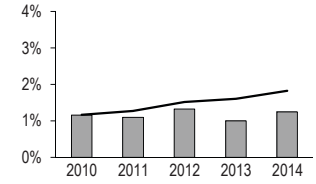
	2010	2011	2012	2013	2014
Winston-Salem	153	148	157	147	156
Average	222	211	214	238	248

Inspections per Square Mile in Service Area



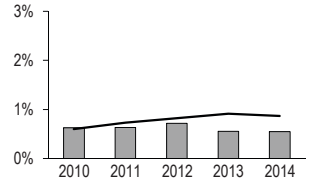
	2010	2011	2012	2013	2014
Winston-Salem	125	123	133	124	133
Average	378	358	364	410	448

Value of Building Permits as Percentage of Tax Base of Area Served



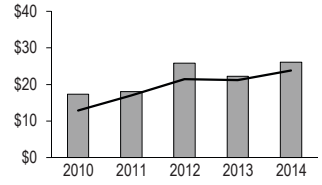
	2010	2011	2012	2013	2014
Winston-Salem	1.16%	1.09%	1.32%	0.99%	1.24%
Average	1.17%	1.27%	1.51%	1.60%	1.82%

Value of Commercial Permits as Percentage of Tax Base of Area Served



	2010	2011	2012	2013	2014
Winston-Salem	0.63%	0.63%	0.72%	0.55%	0.55%
Average	0.60%	0.73%	0.82%	0.92%	0.87%

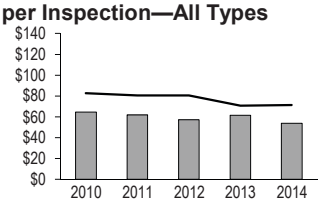
Value of Building Permits per Inspector FTE in Millions of Dollars



	2010	2011	2012	2013	2014
Winston-Salem	$17.3	$18.0	$25.8	$22.2	$26.1
Average	$12.9	$17.0	$21.5	$21.2	$23.8

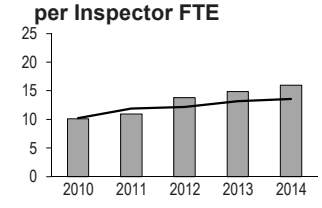
Efficiency Measures

Building Services Cost per Inspection—All Types



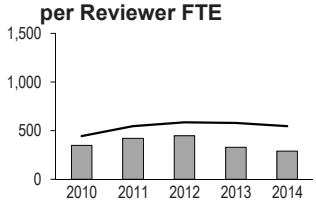
	2010	2011	2012	2013	2014
Winston-Salem	$64.66	$61.89	$57.09	$61.35	$53.78
Average	$82.71	$80.41	$80.55	$70.67	$71.25

Inspections per Day per Inspector FTE



	2010	2011	2012	2013	2014
Winston-Salem	10.1	10.9	13.8	14.9	16.0
Average	10.2	11.9	12.2	13.2	13.5

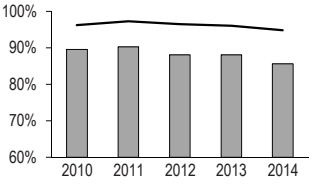
Plan Reviews per Year per Reviewer FTE



	2010	2011	2012	2013	2014
Winston-Salem	349	421	447	331	290
Average	446	546	587	579	548

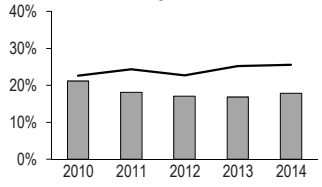
Effectiveness Measures

Percentage of Inspection Responses within One Working Day of Request



	2010	2011	2012	2013	2014
Winston-Salem	89.6%	90.3%	88.0%	88.0%	85.7%
Average	96.2%	97.3%	96.5%	96.1%	94.9%

Percentage of Inspections That Are Reinspections



	2010	2011	2012	2013	2014
Winston-Salem	21.1%	18.1%	17.0%	16.8%	17.9%
Average	22.7%	24.4%	22.7%	25.2%	25.6%


UNC
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GOVERNMENT

Performance and Cost Data

FLEET MAINTENANCE


UNC
SCHOOL OF
GOVERNMENT

PERFORMANCE MEASURES FOR FLEET MAINTENANCE

SERVICE DEFINITION

Fleet maintenance represents the scheduled and unscheduled maintenance of rolling stock performed by the central garage and contractual work assigned by the central garage. This includes preventive, predictive, corrective, and breakdown maintenance. Excluded from this definition are rolling stock not maintained by the central garage and the broader activities of fleet services, such as rolling stock replacement and disposal, fuel station operation, and pool vehicle management.

NOTES ON PERFORMANCE MEASURES

1. Number of Vehicle Equivalent Units (VEUs) per Technician FTE

Vehicle Equivalent Units (VEUs) are a weighted measure of the maintenance effort associated with different classes of vehicles. A normal-use car is considered equal to one VEU. Vehicles such as fire trucks or police cars have higher VEUs, reflecting greater expected levels of maintenance effort. The number of VEUs in a municipality is determined by taking the number of rolling stock units in different classes of vehicles and multiplying them by a class weight for that category of vehicle. Vehicle categories include cars; light, medium, and heavy vehicles; trailed equipment; off-road/construction/tractor units; and buses. The number of full-time equivalent (FTE) positions for technicians is the number of employees directly involved in providing the maintenance services for the municipality's rolling stock as approved in the annual operating budget for the fiscal year.

2. Number of Preventive Maintenances Completed In-House per Technician FTE

The number of preventive maintenance jobs (PMs) completed in-house is the total number completed for the fiscal year ending June 30 that are done by the municipality's staff. The number of FTE positions for technicians is the same as defined above.

3. Cost per Work Order

This measure represents the total cost of fleet maintenance and is calculated using the full cost accounting model that captures direct, indirect, and capital costs. Work orders include the total number of work orders produced, including those related to contractual work, for the fiscal year ending June 30.

4. Cost per Vehicle Equivalent Unit (VEU)

This measure represents the total cost of fleet maintenance and is calculated using the full cost accounting model that captures direct, indirect, and capital costs. VEUs are calculated as defined above for the fiscal year ending June 30.

5. Hours Billed as a Percentage of Total Hours
The total number of billable hours includes all hours for technicians available for work during the fiscal year. Billable hours are calculated by multiplying 2,080 (hours in a normal working year) by the number of FTE positions for technicians as defined above. However, this number of FTEs is adjusted for vacancies. Hours billed represents actual hours billed during the fiscal year by the central garage to departments, divisions, and programs.

6. Preventive Maintenances (PMs) as a Percentage of All Work Orders
This measure is based on the total number of PMs (done in-house or by outside contractors) completed during the fiscal year divided by the total number of work orders (including contractual work) completed during the fiscal year for that jurisdiction.

7. Percentage of PMs Completed on Schedule
Based on the total number of PMs as defined above, this measure represents the percentage of PMs completed as scheduled as defined by the respective jurisdiction's standards.

8. Percentage of Work Orders Completed within Twenty-Four Hours
Based on the total number of work orders as defined above, this measure represents the percentage of work orders completed during the fiscal year within twenty-four hours of being received.

9. Percentage of Rolling Stock Available per Day
Based on the total number of rolling stock units as defined above, this measure represents the average percentage of rolling stock available for use per working day of the jurisdiction.

10. Percentage of Work Orders Requiring Repeat Repair within Thirty Days
Based on the total number of work orders as defined above, this measure represents the percentage of works orders (completed work on a unit of rolling stock) requiring repeat repair for the same problem within thirty days.

Fleet Maintenance

Summary of Key Dimensions of Service

City or Town	Number of Rolling Stock Maintained	Average Age of Rolling Stock (in Years)	Number of Work Orders	Number of Preventive Maintenances	Number of Work Bays	Authorized Technician FTEs	Labor Rate (per Hour)	Parts Inventory Turnover per Year	Fund Type
Apex	343	8.6	1,903	1,335	6	4.5	NA	4.0	General Fund
Asheville	812	7.7	4,879	1,515	16	9.0	$50—Cars and Small Trucks $60—Large Truck and Off-Road	1.4	General Fund
Burlington	515	10.9	3,604	2,209	19	8.0	$55—Heavy Equipment $45—Auto/Light Truck $35—Small Engine/Mowers	0.7	General Fund
Cary	852	7.0	6,076	1,902	6	8.0	$60.00	58.4	Internal Service
Charlotte	4,970	5.6	34,196	13,519	90	74.8	$65.81	9.2	General Fund
Concord	804	8.1	3,921	1,727	8	7.5	$60.00	8.3	General Fund
Greensboro	1,634	6.0	12,248	5,312	34	32.0	$52.00	2.1	Internal Service
Greenville	563	7.2	6,912	2,188	12	13.0	$60.00	2.2	Internal Service
Hickory	554	10.9	5,762	1,352	14	7.0	$49.00	5.0	Internal Service
High Point	922	8.6	4,691	2,146	18	11.0	$60.00	5.0	Internal Service
Salisbury	491	10.5	5,564	1,790	14	10.0	NA	2.1	General Fund
Wilson	775	9.3	6,808	1,380	15	12.0	$44.00	2.0	General Fund
Winston-Salem	1,790	8.8	8,887	4,114	31	18.0	$50.00	2.7	Internal Service

EXPLANATORY FACTORS

These are factors that the project found affected fleet maintenance performance and cost in one or more of the municipalities:

Number of vehicles maintained
Types of vehicles maintained
Fleet replacement plan
Average age of vehicles by type
Average miles driven for each type of vehicle
Preventive maintenance classification system
Preventive maintenance schedule

Apex Fleet Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery
Fleet Services is a division of the Facility and Fleet Services Department in the Town of Apex. The activities for this operation are accounted for in the general fund.

The town does not charge departments for labor but does track time technicians spend on work orders. There is no charge to departments for parts or sublet work. Parts inventory turned over approximately four times during the fiscal year.

The following services were contracted out:

- transmission repairs
- extended repair order work
- major engine repairs
- body work
- EMS ambulance body service work
- electric line truck repairs
- major hydraulic cylinder repairs
- fire truck pump repairs.

Conditions Affecting Service, Performance, and Costs
Apex began participation in the benchmarking project in July 2011, with FY 2010–11 being the first reporting year.

Vehicle Equivalent Units (VEUs) are a weighted measure of the maintenance effort associated with different classes of vehicles. A normal-use car is considered equal to one VEU. Vehicles such as fire trucks or police cars have higher VEUs, reflecting greater expected levels of maintenance.

The measure "hours billed as a percentage of total hours" is based on a work year of 2,080 hours and only counts those positions that were filled. It should be noted that technicians have responsibilities that do not result in billable hours and they take normal vacation and sick leave. Therefore this percentage should not be expected to be near 100 percent.

In Apex the preventive maintenance (PM) completion standard for "percentage of PMs completed as scheduled" is within thirty days of the scheduled date or within mileage parameters.

In addition to rolling stock, Apex's fleet services has maintenance responsibilities for other pieces of equipment, including asphalt rollers, whacker and roller tamps, portable generators, ballfield conditioners, various types of ATVs, weedeaters, lawnmowers, chainsaws, sump pumps, water pumps, snow plows, flail mowers, boat motors, light towers, and stump grinders.

The Apex Fleet Services supervisor provides technician support on an as needed basis.

Municipal Profile

Population (OSBM 2013)	40,925
Land Area (Square Miles)	16.25
Persons per Square Mile	2,518

Service Profile

FTE Positions—Technician	4.5
FTE Positions—Other	1.5
Work Bays	6

Rolling Stock Maintained	No.	Average Age
Cars—Normal Usage	4	4.0 Years
Cars—Severe Usage	48	6.0 Years
Light Vehicles	103	7.0 Years
Medium Vehicles	28	10.0 Years
Heavy—Sanitation	0	NA
Heavy—Sewer	1	5.0 Years
Heavy—Fire Apparatus	11	11.0 Years
Heavy—Other	20	7.0 Years
Trailed Equipment	81	10.5 Years
Off-Road/Construction/Tractors	47	11.6 Years
Buses	0	NA
TOTAL	343	

Vehicle Equivalent Units (VEUs)	996
Average Rolling Stock Units Available per Day	338
Hours Billed	7,119
Work Orders	1,903
Repeat Repairs within 30 Days	47
Work Orders Completed within 24 hours	1,532
Preventive Maintenance Jobs (PMs)	1,335
PMs Completed as Scheduled	1,202

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	30.1%
Operating Costs	62.4%
Capital Costs	7.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$222,121
Operating Costs	$461,036
Capital Costs	$55,688
TOTAL	$738,845

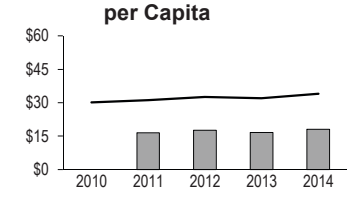
Apex

Fleet Maintenance

Key: Apex ■ Benchmarking Average — Fiscal Years 2010 through 2014

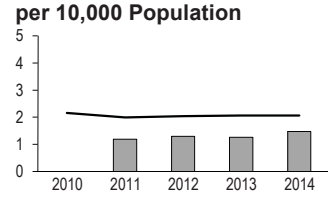
Resource Measures

Fleet Maintenance Services Cost per Capita



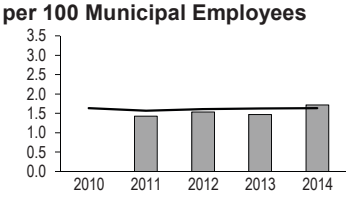
	2010	2011	2012	2013	2014
Apex		$16.49	$17.63	$16.65	$18.05
Average	$30.10	$31.17	$32.64	$32.04	$33.96

Fleet Maintenance FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Apex		1.19	1.29	1.26	1.47
Average	2.16	1.99	2.03	2.06	2.06

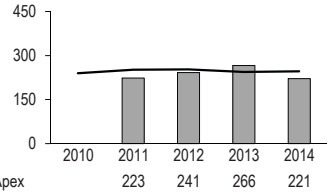
Fleet Maintenance FTEs per 100 Municipal Employees



	2010	2011	2012	2013	2014
Apex		1.42	1.54	1.47	1.72
Average	1.64	1.56	1.61	1.62	1.63

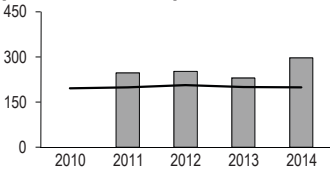
Workload Measures

Number of Vehicle Equivalent Units (VEUs) per Technician FTE



	2010	2011	2012	2013	2014
Apex		223	241	266	221
Average	239	251	253	244	246

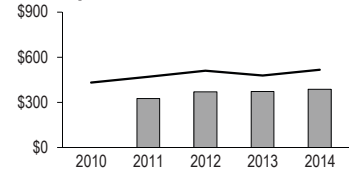
Preventive Maintenances (PMs) Completed In-House per Tech FTE



	2010	2011	2012	2013	2014
Apex		247	252	229	297
Average	195	199	207	200	199

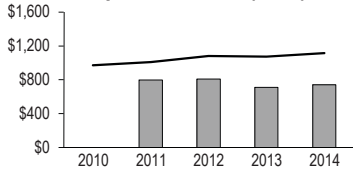
Efficiency Measures

Fleet Maintenance Cost per Work Order



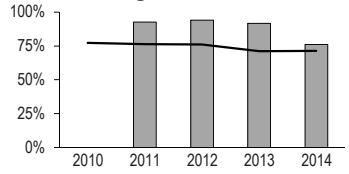
	2010	2011	2012	2013	2014
Apex		$325	$371	$372	$388
Average	$433	$471	$510	$480	$517

Fleet Maintenance Cost per Vehicle Equivalent Unit (VEU)



	2010	2011	2012	2013	2014
Apex		$799	$808	$712	$742
Average	$970	$1,009	$1,080	$1,073	$1,117

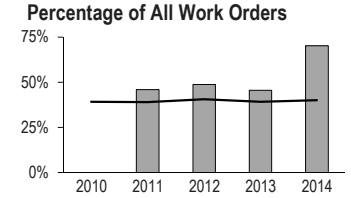
Hours Billed as a Percentage of Total Hours



	2010	2011	2012	2013	2014
Apex		93%	94%	92%	76%
Average	77%	76%	76%	71%	71%

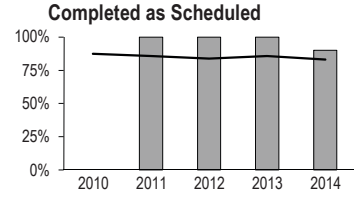
Effectiveness Measures

Preventive Maintenances (PMs) as a Percentage of All Work Orders



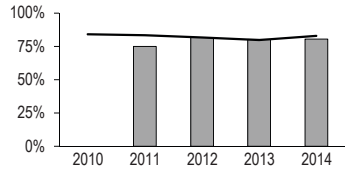
	2010	2011	2012	2013	2014
Apex		46%	49%	46%	70%
Average	39%	39%	40%	39%	40%

Percentage of Preventive Maintenances (PMs) Completed as Scheduled



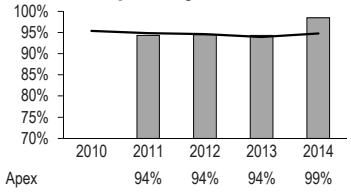
	2010	2011	2012	2013	2014
Apex		100%	100%	100%	90%
Average	87%	86%	84%	86%	83%

Percentage of Work Orders Completed within 24 Hours



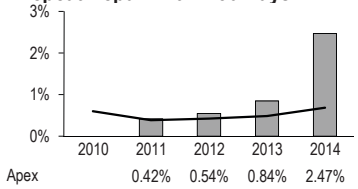
	2010	2011	2012	2013	2014
Apex		75%	82%	80%	81%
Average	84%	83%	82%	80%	83%

Percentage of Rolling Stock Available per Day



	2010	2011	2012	2013	2014
Apex		94%	94%	94%	99%
Average	95%	95%	95%	94%	95%

Percentage of Work Orders Requiring Repeat Repair within 30 Days



	2010	2011	2012	2013	2014
Apex		0.42%	0.54%	0.84%	2.47%
Average	0.60%	0.39%	0.42%	0.49%	0.68%

Asheville — Fleet Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Fleet management is a division of the Asheville General Services Department, consisting of the fleet maintenance garage and a fueling station. The activities for this operation are accounted for in the general fund.

Charges for maintenance services included a $50-an-hour labor rate for passenger cars and light trucks up to one ton in weight and a $60-an-hour labor rate for vehicles over one ton in weight and off-road vehicles, a 30 percent markup on parts, and a 5 percent markup on sublet work.

The following services were contracted out:

- major automatic and manual transmission repairs
- front-end alignments
- major emergency generator repairs
- aerial inspections
- paint and body repairs
- tire repairs on trucks over one ton
- major hydraulic cylinder repairs.

Conditions Affecting Service, Performance, and Costs

Vehicle Equivalent Units (VEUs) are a weighted measure of the maintenance effort associated with different classes of vehicles. A normal-use car is considered equal to one VEU. Vehicles such as fire trucks or police cars have higher VEUs, reflecting greater expected levels of maintenance.

The measure "hours billed as a percentage of total hours" is based on a work year of 2,080 hours and only counts those positions that were filled. It should be noted that technicians have responsibilities that do not result in billable hours and they take normal vacation and sick leave. Therefore this percentage should not be expected to be near 100 percent.

In Asheville, the preventive maintenance (PM) completion standard for "percentage of PMs completed as scheduled" is within the same calendar month as the scheduled date.

In addition to rolling stock, Asheville's fleet services has maintenance responsibilities for other pieces of equipment, including snow plows, sand spreaders, emergency generators, water pumps, chain saws, a pressure washer, a curb builder, and other city equipment.

Municipal Profile

Population (OSBM 2013)	88,003
Land Area (Square Miles)	45.52
Persons per Square Mile	1,933

Service Profile

FTE Positions—Technician	9.0
FTE Positions—Other	6.0
Work Bays	16

Rolling Stock Maintained	No.	Average Age
Cars—Normal Usage	26	6.3 Years
Cars—Severe Usage	162	6.1 Years
Light Vehicles	280	6.9 Years
Medium Vehicles	25	7.4 Years
Heavy—Sanitation	16	5.7 Years
Heavy—Sewer	3	5.1 Years
Heavy—Fire Apparatus	30	12.2 Years
Heavy—Other	62	8.0 Years
Trailed Equipment	116	9.4 Years
Off-Road/Construction/Tractors	88	9.9 Years
Buses	4	3.6 Years
TOTAL	812	

Vehicle Equivalent Units (VEUs)	2,686
Average Rolling Stock Units Available per Day	787
Hours Billed	12,110
Work Orders	4,879
Repeat Repairs within 30 Days	58
Work Orders Completed within 24 hours	3,512
Preventive Maintenance Jobs (PMs)	1,515
PMs Completed as Scheduled	1,440

Full Cost Profile

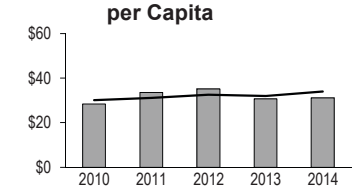
Cost Breakdown by Percentage	
Personal Services	30.5%
Operating Costs	63.9%
Capital Costs	5.6%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$834,929
Operating Costs	$1,746,135
Capital Costs	$153,348
TOTAL	$2,734,412

Asheville — Fleet Maintenance

Key: Asheville ■ Benchmarking Average — Fiscal Years 2010 through 2014

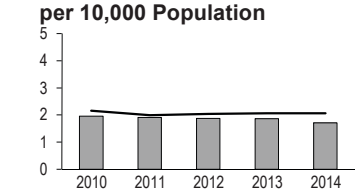
Resource Measures

Fleet Maintenance Services Cost per Capita



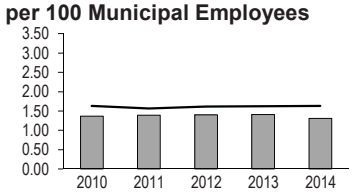
	2010	2011	2012	2013	2014
Asheville	$28.42	$33.59	$35.16	$30.74	$31.07
Average	$30.10	$31.17	$32.64	$32.04	$33.96

Fleet Maintenance FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Asheville	1.95	1.91	1.87	1.86	1.70
Average	2.16	1.99	2.03	2.06	2.06

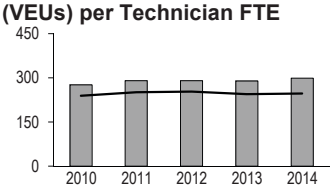
Fleet Maintenance FTEs per 100 Municipal Employees



	2010	2011	2012	2013	2014
Asheville	1.36	1.40	1.40	1.41	1.31
Average	1.64	1.56	1.61	1.62	1.63

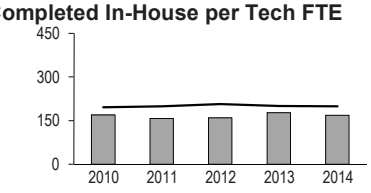
Workload Measures

Number of Vehicle Equivalent Units (VEUs) per Technician FTE



	2010	2011	2012	2013	2014
Asheville	276	290	290	289	298
Average	239	251	253	244	246

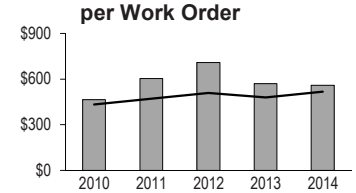
Preventive Maintenances (PMs) Completed In-House per Tech FTE



	2010	2011	2012	2013	2014
Asheville	170	157	159	177	168
Average	195	199	207	200	199

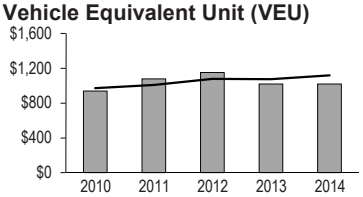
Efficiency Measures

Fleet Maintenance Cost per Work Order



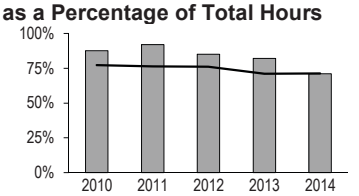
	2010	2011	2012	2013	2014
Asheville	$466	$604	$708	$571	$560
Average	$433	$471	$510	$480	$517

Fleet Maintenance Cost per Vehicle Equivalent Unit (VEU)



	2010	2011	2012	2013	2014
Asheville	$938	$1,079	$1,153	$1,019	$1,018
Average	$970	$1,009	$1,080	$1,073	$1,117

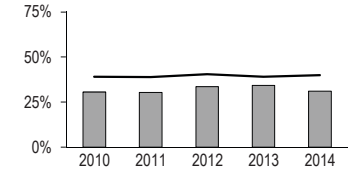
Hours Billed as a Percentage of Total Hours



	2010	2011	2012	2013	2014
Asheville	88%	92%	85%	82%	71%
Average	77%	76%	76%	71%	71%

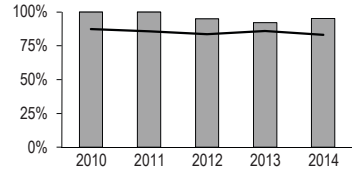
Effectiveness Measures

Preventive Maintenances (PMs) as a Percentage of All Work Orders



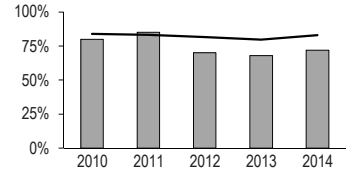
	2010	2011	2012	2013	2014
Asheville	31%	30%	34%	34%	31%
Average	39%	39%	40%	39%	40%

Percentage of Preventive Maintenances (PMs) Completed as Scheduled



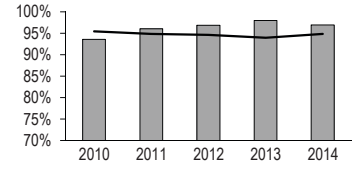
	2010	2011	2012	2013	2014
Asheville	100%	100%	95%	92%	95%
Average	87%	86%	84%	86%	83%

Percentage of Work Orders Completed within 24 Hours



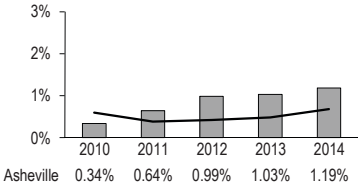
	2010	2011	2012	2013	2014
Asheville	80%	85%	70%	68%	72%
Average	84%	83%	82%	80%	83%

Percentage of Rolling Stock Available per Day



	2010	2011	2012	2013	2014
Asheville	94%	96%	97%	98%	97%
Average	95%	95%	95%	94%	95%

Percentage of Work Orders Requiring Repeat Repair within 30 Days



	2010	2011	2012	2013	2014
Asheville	0.34%	0.64%	0.99%	1.03%	1.19%
Average	0.60%	0.39%	0.42%	0.49%	0.68%

Burlington Fleet Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Burlington's fleet maintenance is performed by the Equipment Services Division of the Public Works Department. The activities for this operation were accounted for in the general fund.

There are no charges for hourly labor, but a tracking fee is used for internal purposes. There is a 5 percent markup on parts but no markup on sublet work.

The following services were contracted out:

- bodywork
- alignments
- major transmission repairs
- machine work
- windshield replacement
- upholstery work
- aerial inspections
- wrecker service
- two-way radio work.

Conditions Affecting Service, Performance, and Costs

Vehicle Equivalent Units (VEUs) are a weighted measure of the maintenance effort associated with different classes of vehicles. A normal-use car is considered equal to one VEU. Vehicles such as fire trucks or police cars have higher VEUs, reflecting greater expected levels of maintenance.

In Burlington, the preventive maintenance (PM) completion standard for "percentage of PMs completed as scheduled" is based on mileage parameters. While most PMs are done within twenty-four hours of arrival at the fleet shop, not all vehicles are brought in by departments on time to allow completion on schedule.

In addition to rolling stock, Burlington's Equipment Services Division has maintenance responsibility for bush hogs, edgers, pavers, pressure washers, riding mowers, generators, chain saws, push mowers, grinders, paint machines, spreaders, aerators, directional signs, and other city equipment.

Municipal Profile

Population (OSBM 2013)	51,396
Land Area (Square Miles)	27.28
Persons per Square Mile	1,884

Service Profile

FTE Positions—Technician	8.0
FTE Positions—Other	6.0
Work Bays	19

Rolling Stock Maintained	No.	Average Age
Cars—Normal Usage	43	6.3 Years
Cars—Severe Usage	106	6.0 Years
Light Vehicles	140	9.4 Years
Medium Vehicles	38	13.4 Years
Heavy—Sanitation	22	7.1 Years
Heavy—Sewer	4	13.3 Years
Heavy—Fire Apparatus	9	8.7 Years
Heavy—Other	8	15.9 Years
Trailed Equipment	93	17.3 Years
Off-Road/Construction/Tractors	49	16.7 Years
Buses	3	10.0 Years
TOTAL	515	

Vehicle Equivalent Units (VEUs)	1,597
Average Rolling Stock Units Available per Day	428
Hours Billed	10,702
Work Orders	3,604
Repeat Repairs within 30 Days	0
Work Orders Completed within 24 hours	2,204
Preventive Maintenance Jobs (PMs)	2,209
PMs Completed as Scheduled	811

Full Cost Profile

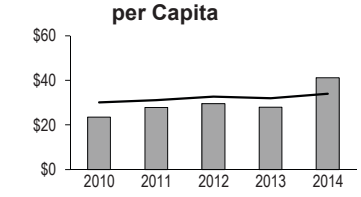
Cost Breakdown by Percentage	
Personal Services	27.1%
Operating Costs	70.5%
Capital Costs	2.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$573,817
Operating Costs	$1,493,560
Capital Costs	$51,938
TOTAL	$2,119,315

Burlington — Fleet Maintenance

Key: Burlington ■ Benchmarking Average — Fiscal Years 2010 through 2014

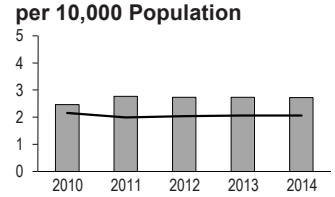
Resource Measures

Fleet Maintenance Services Cost per Capita



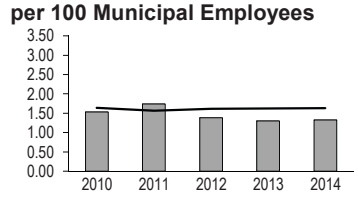
	2010	2011	2012	2013	2014
Burlington	$23.45	$27.79	$29.57	$27.90	$41.24
Average	$30.10	$31.17	$32.64	$32.04	$33.96

Fleet Maintenance FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Burlington	2.46	2.77	2.73	2.73	2.72
Average	2.16	1.99	2.03	2.06	2.06

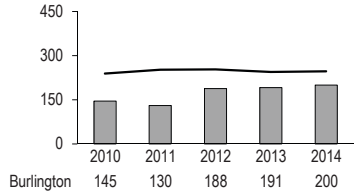
Fleet Maintenance FTEs per 100 Municipal Employees



	2010	2011	2012	2013	2014
Burlington	1.53	1.74	1.39	1.30	1.33
Average	1.64	1.56	1.61	1.62	1.63

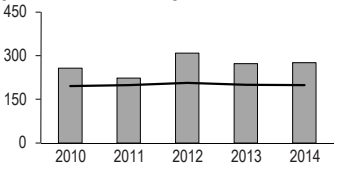
Workload Measures

Number of Vehicle Equivalent Units (VEUs) per Technician FTE



	2010	2011	2012	2013	2014
Burlington	145	130	188	191	200
Average	239	251	253	244	246

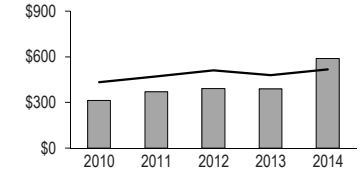
Preventive Maintenances (PMs) Completed In-House per Tech FTE



	2010	2011	2012	2013	2014
Burlington	257	223	309	272	276
Average	195	199	207	200	199

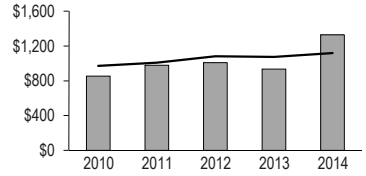
Efficiency Measures

Fleet Maintenance Cost per Work Order



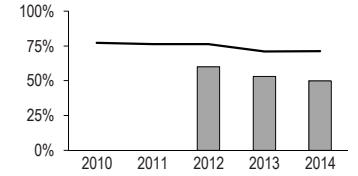
	2010	2011	2012	2013	2014
Burlington	$314	$370	$392	$389	$588
Average	$433	$471	$510	$480	$517

Fleet Maintenance Cost per Vehicle Equivalent Unit (VEU)



	2010	2011	2012	2013	2014
Burlington	$853	$977	$1,010	$935	$1,327
Average	$970	$1,009	$1,080	$1,073	$1,117

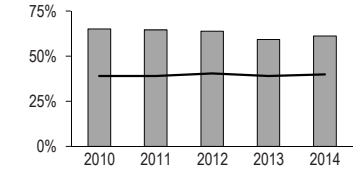
Hours Billed as a Percentage of Total Hours



	2010	2011	2012	2013	2014
Burlington			60%	53%	50%
Average	77%	76%	76%	71%	71%

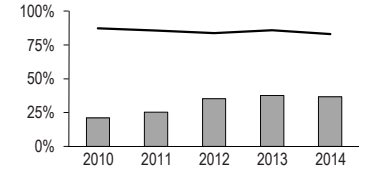
Effectiveness Measures

Preventive Maintenances (PMs) as a Percentage of All Work Orders



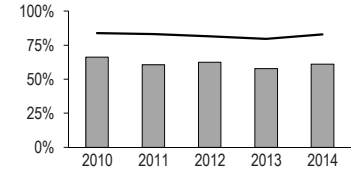
	2010	2011	2012	2013	2014
Burlington	65%	65%	64%	59%	61%
Average	39%	39%	40%	39%	40%

Percentage of Preventive Maintenances (PMs) Completed as Scheduled



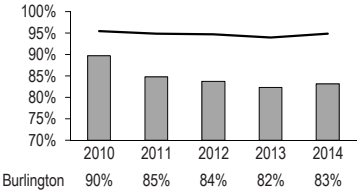
	2010	2011	2012	2013	2014
Burlington	21%	25%	35%	38%	37%
Average	87%	86%	84%	86%	83%

Percentage of Work Orders Completed within 24 Hours



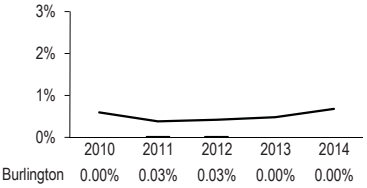
	2010	2011	2012	2013	2014
Burlington	66%	61%	63%	58%	61%
Average	84%	83%	82%	80%	83%

Percentage of Rolling Stock Available per Day



	2010	2011	2012	2013	2014
Burlington	90%	85%	84%	82%	83%
Average	95%	95%	95%	94%	95%

Percentage of Work Orders Requiring Repeat Repair within 30 Days



	2010	2011	2012	2013	2014
Burlington	0.00%	0.03%	0.03%	0.00%	0.00%
Average	0.60%	0.39%	0.42%	0.49%	0.68%

Cary Fleet Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Cary's Fleet Division is located in the Public Works and Utilities Department. It operates as an internal service fund where departments are charged according to actual usage and all expenses and revenues are tracked separately from the general fund.

The division charges $60 an hour for labor on all vehicle types and a 19 percent markup on parts sold. A flat fee of $19 is charged on sublet work.

Cary has a contract with the retail store NAPA where space is provided for a parts warehouse, but parts are only sold to Cary when used. Parts are stocked based on an annual review of parts used and maintenance requirements. NAPA does not charge a stocking/restocking fee. Based on this the estimated turnover in parts was 58.41 times during the year.

The following services were contracted out:

- body work
- tire replacement (tires over 16 inches)
- some major transmission work
- some engine overhaul
- striping/decal work for law enforcement and fire vehicles only.

Conditions Affecting Service, Performance, and Costs

Vehicle Equivalent Units (VEUs) are a weighted measure of the maintenance effort associated with different classes of vehicles. A normal-use car is considered equal to one VEU. Vehicles such as fire trucks or police cars have higher VEUs, reflecting greater expected levels of maintenance.

The measure "hours billed as a percentage of total hours" is based on a work year of 2,080 hours and only counts those positions that were filled. It should be noted that technicians have responsibilities that do not result in billable hours and they take normal vacation and sick leave. Therefore this percentage should not be expected to be near 100 percent.

In Cary, the preventive maintenance (PM) completion standard for "percentage of PMs completed as scheduled" is within the same calendar month as the scheduled date or within mileage parameters.

In addition to rolling stock, Cary's fleet services has maintenance responsibilities for riding mowers, weedwhackers, rotor tillers, tamps, saws, chippers, rollers, excavators, loaders, salt spreaders, concrete mixers, seeders, aerators, generators, an asphalt heater and trench master, and other town equipment.

Municipal Profile

Population (OSBM 2013)	144,671
Land Area (Square Miles)	55.54
Persons per Square Mile	2,605

Service Profile

FTE Positions—Technician	8.0
FTE Positions—Other	3.0
Work Bays	6

Rolling Stock Maintained	No.	Average Age
Cars—Normal Usage	37	7.0 Years
Cars—Severe Usage	121	5.2 Years
Light Vehicles	265	6.2 Years
Medium Vehicles	76	8.0 Years
Heavy—Sanitation	33	4.5 Years
Heavy—Sewer	4	5.8 Years
Heavy—Fire Apparatus	22	8.7 Years
Heavy—Other	14	4.2 Years
Trailed Equipment	72	9.4 Years
Off-Road/Construction/Tractors	208	8.4 Years
Buses	0	NA
TOTAL	852	

Vehicle Equivalent Units (VEUs)	3,004
Average Rolling Stock Units Available per Day	835
Hours Billed	9,164
Work Orders	6,076
Repeat Repairs within 30 Days	18
Work Orders Completed within 24 hours	5,465
Preventive Maintenance Jobs (PMs)	1,902
PMs Completed as Scheduled	1,788

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	22.3%
Operating Costs	72.9%
Capital Costs	4.8%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$763,873
Operating Costs	$2,500,025
Capital Costs	$164,397
TOTAL	$3,428,295

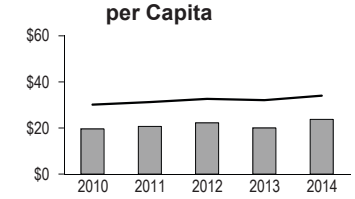
Cary

Fleet Maintenance

Key: Cary ■ Benchmarking Average — Fiscal Years 2010 through 2014

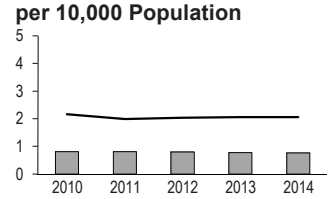
Resource Measures

Fleet Maintenance Services Cost per Capita



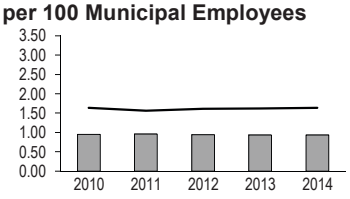
	2010	2011	2012	2013	2014
Cary	$19.52	$20.59	$22.13	$20.00	$23.70
Average	$30.10	$31.17	$32.64	$32.04	$33.96

Fleet Maintenance FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Cary	0.81	0.81	0.79	0.77	0.76
Average	2.16	1.99	2.03	2.06	2.06

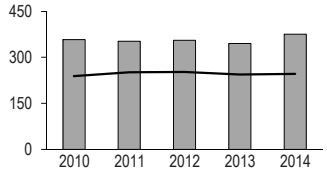
Fleet Maintenance FTEs per 100 Municipal Employees



	2010	2011	2012	2013	2014
Cary	0.95	0.96	0.94	0.93	0.93
Average	1.64	1.56	1.61	1.62	1.63

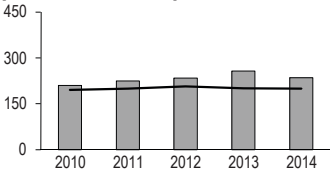
Workload Measures

Number of Vehicle Equivalent Units (VEUs) per Technician FTE



	2010	2011	2012	2013	2014
Cary	357	353	356	345	375
Average	239	251	253	244	246

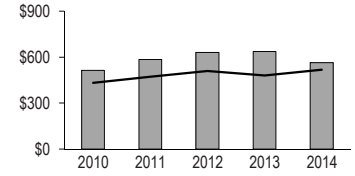
Preventive Maintenances (PMs) Completed In-House per Tech FTE



	2010	2011	2012	2013	2014
Cary	210	224	235	257	235
Average	195	199	207	200	199

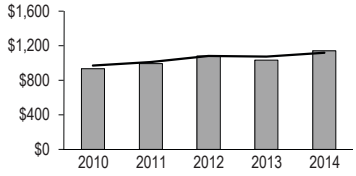
Efficiency Measures

Fleet Maintenance Cost per Work Order



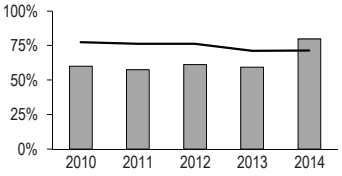
	2010	2011	2012	2013	2014
Cary	$513	$584	$630	$636	$564
Average	$433	$471	$510	$480	$517

Fleet Maintenance Cost per Vehicle Equivalent Unit (VEU)



	2010	2011	2012	2013	2014
Cary	$933	$993	$1,081	$1,032	$1,141
Average	$970	$1,009	$1,080	$1,073	$1,117

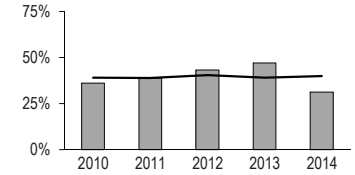
Hours Billed as a Percentage of Total Hours



	2010	2011	2012	2013	2014
Cary	60%	58%	61%	59%	80%
Average	77%	76%	76%	71%	71%

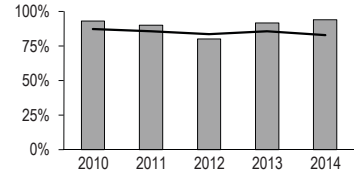
Effectiveness Measures

Preventive Maintenances (PMs) as a Percentage of All Work Orders



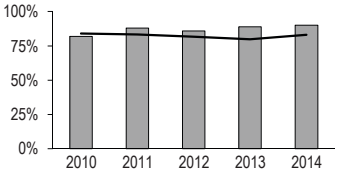
	2010	2011	2012	2013	2014
Cary	36%	39%	43%	47%	31%
Average	39%	39%	40%	39%	40%

Percentage of Preventive Maintenances (PMs) Completed as Scheduled



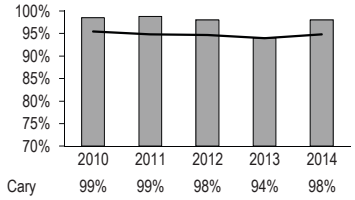
	2010	2011	2012	2013	2014
Cary	93%	90%	80%	92%	94%
Average	87%	86%	84%	86%	83%

Percentage of Work Orders Completed within 24 Hours



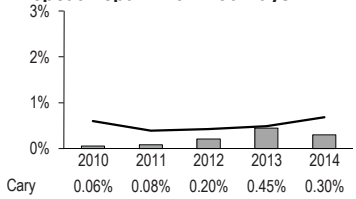
	2010	2011	2012	2013	2014
Cary	82%	88%	86%	89%	90%
Average	84%	83%	82%	80%	83%

Percentage of Rolling Stock Available per Day



	2010	2011	2012	2013	2014
Cary	99%	99%	98%	94%	98%
Average	95%	95%	95%	94%	95%

Percentage of Work Orders Requiring Repeat Repair within 30 Days



	2010	2011	2012	2013	2014
Cary	0.06%	0.08%	0.20%	0.45%	0.30%
Average	0.60%	0.39%	0.42%	0.49%	0.68%

Charlotte — Fleet Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Charlotte and the County of Mecklenburg merged fleet maintenance services under a city-operated program beginning July 1, 2009. The data reported here are inclusive of both fleets. The services are provided by Charlotte's Equipment Management Division, which is part of Business Support Services. All activities for this operation are accounted for in the general fund. The Equipment Management Division currently charges an administrative fee per unit to compensate for the overhead of administrative staff, including tags and title work, specification writing, and fleet analysis.

Charges for maintenance services included a $65.81-per-hour labor rate, a 22.27 percent markup charge on parts sold, and a 20.78 percent markup charge on sublet work. Part caps are negotiated individually, based on very special and specific needs. All sublet transactions are subject to a $500 cap.

The following services were contracted out during the year: accident repair, body work, spring repairs, front-end alignment, glass replacement, fuel system repair, engine overhauls, transmission overhauls, towing, some tire service, police car preparation, heavy tire replacement and repair, some light-vehicle preventive maintenance, painting/graphic installation, and radio/computer installation or removal.

Conditions Affecting Service, Performance, and Costs

Vehicle Equivalent Units (VEUs) are a weighted measure of the maintenance effort associated with different classes of vehicles. A normal-use car is considered equal to one VEU. Vehicles such as fire trucks or police cars have higher VEUs, reflecting greater expected levels of maintenance.

The measure "hours billed as a percentage of total hours" is based on a work year of 2,080 hours and only counts those positions that were filled. It should be noted that technicians have responsibilities that do not result in billable hours and they take normal vacation and sick leave. Therefore this percentage should not be expected to be near 100 percent. Charlotte indicated that 73.0 technician full-time equivalents (FTEs) were actually available for work during the fiscal year for this calculation.

In Charlotte the preventive maintenance (PM) completion standard for "percentage of PMs completed as scheduled" is within thirty days of the scheduled date and within mileage parameters.

In addition to rolling stock, Charlotte's fleet services had maintenance responsibilities for generators, mowers, weedwhackers, compressors, saws, blowers, fans, asphalt-tar/kettles, edgers, snow plows, spreaders, tamps, mixers, chippers, posthole diggers, grinders, pressure washers, and other city equipment.

Municipal Profile

Population (OSBM 2013)	789,248
Land Area (Square Miles)	304.28
Persons per Square Mile	2,594

Service Profile

FTE Positions—Technician	74.75
FTE Positions—Other	47.25
Work Bays	90

Rolling Stock Maintained	No.	Average Age
Cars—Normal Usage	887	4.5 Years
Cars—Severe Usage	861	3.7 Years
Light Vehicles	1,645	5.5 Years
Medium Vehicles	176	8.0 Years
Heavy—Sanitation	146	4.0 Years
Heavy—Sewer	27	5.0 Years
Heavy—Fire Apparatus	95	6.9 Years
Heavy—Other	140	8.7 Years
Trailed Equipment	508	8.9 Years
Off-Road/Construction/Tractors	459	6.7 Years
Buses	26	5.4 Years
TOTAL	4,970	

Vehicle Equivalent Units (VEUs)	14,284
Average Rolling Stock Units Available per Day	4,284
Hours Billed	111,641
Work Orders	34,196
Repeat Repairs within 30 Days	NA
Work Orders Completed within 24 hours	33,707
Preventive Maintenance Jobs (PMs)	13,519
PMs Completed as Scheduled	7,392

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	38.1%
Operating Costs	60.0%
Capital Costs	1.9%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$8,247,382
Operating Costs	$12,985,510
Capital Costs	$420,739
TOTAL	$21,653,631

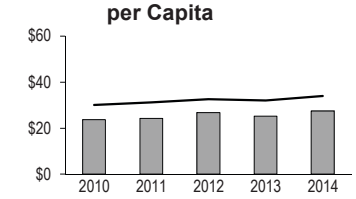
Charlotte

Fleet Maintenance

Key: Charlotte ■ Benchmarking Average — Fiscal Years 2010 through 2014

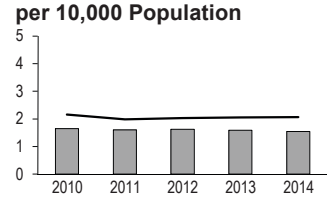
Resource Measures

Fleet Maintenance Services Cost per Capita



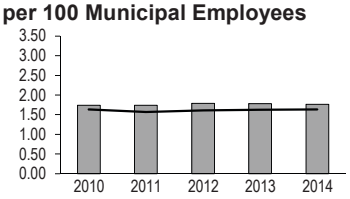
	2010	2011	2012	2013	2014
Charlotte	$23.72	$24.21	$26.79	$25.20	$27.44
Average	$30.10	$31.17	$32.64	$32.04	$33.96

Fleet Maintenance FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Charlotte	1.65	1.60	1.62	1.59	1.55
Average	2.16	1.99	2.03	2.06	2.06

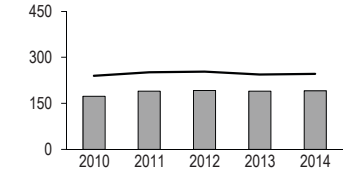
Fleet Maintenance FTEs per 100 Municipal Employees



	2010	2011	2012	2013	2014
Charlotte	1.74	1.74	1.79	1.78	1.76
Average	1.64	1.56	1.61	1.62	1.63

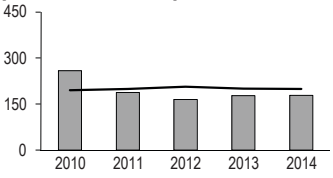
Workload Measures

Number of Vehicle Equivalent Units (VEUs) per Technician FTE



	2010	2011	2012	2013	2014
Charlotte	173	190	192	190	191
Average	239	251	253	244	246

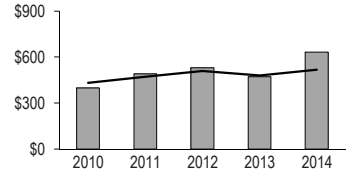
Preventive Maintenances (PMs) Completed In-House per Tech FTE



	2010	2011	2012	2013	2014
Charlotte	258	188	165	178	179
Average	195	199	207	200	199

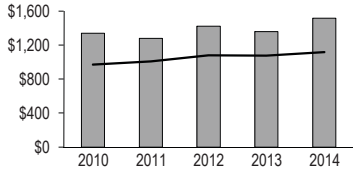
Efficiency Measures

Fleet Maintenance Cost per Work Order



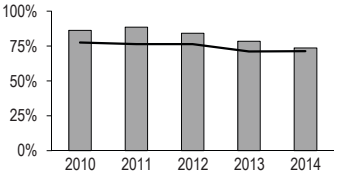
	2010	2011	2012	2013	2014
Charlotte	$399	$490	$529	$471	$633
Average	$433	$471	$510	$480	$517

Fleet Maintenance Cost per Vehicle Equivalent Unit (VEU)



	2010	2011	2012	2013	2014
Charlotte	$1,337	$1,277	$1,421	$1,357	$1,516
Average	$970	$1,009	$1,080	$1,073	$1,117

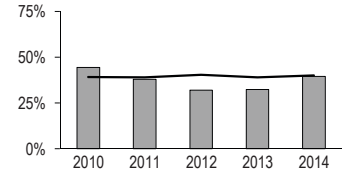
Hours Billed as a Percentage of Total Hours



	2010	2011	2012	2013	2014
Charlotte	86%	88%	84%	78%	74%
Average	77%	76%	76%	71%	71%

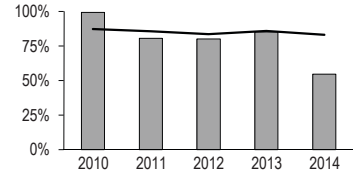
Effectiveness Measures

Preventive Maintenances (PMs) as a Percentage of All Work Orders



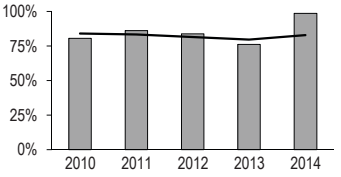
	2010	2011	2012	2013	2014
Charlotte	44%	38%	32%	32%	40%
Average	39%	39%	40%	39%	40%

Percentage of Preventive Maintenances (PMs) Completed as Scheduled



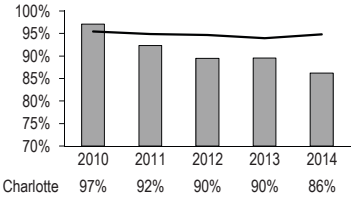
	2010	2011	2012	2013	2014
Charlotte	99%	81%	80%	85%	55%
Average	87%	86%	84%	86%	83%

Percentage of Work Orders Completed within 24 Hours



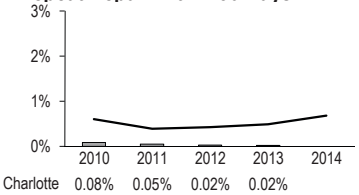
	2010	2011	2012	2013	2014
Charlotte	80%	86%	84%	76%	99%
Average	84%	83%	82%	80%	83%

Percentage of Rolling Stock Available per Day



	2010	2011	2012	2013	2014
Charlotte	97%	92%	90%	90%	86%
Average	95%	95%	95%	94%	95%

Percentage of Work Orders Requiring Repeat Repair within 30 Days



	2010	2011	2012	2013	2014
Charlotte	0.08%	0.05%	0.02%	0.02%	
Average	0.60%	0.39%	0.42%	0.49%	0.68%

Concord — Fleet Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Concord's Fleet Department operates as a separate city department through an internal service fund, charging other departments for services rendered.

A labor rate of $60 per hour is charged for all maintenance services. There is a 25 percent markup charge for parts and a 10 percent markup on sublet work.

The following services were contracted out:

- body repairs
- aerial device repairs
- front-end alignments.

Conditions Affecting Service, Performance, and Costs

Vehicle Equivalent Units (VEUs) are a weighted measure of the maintenance effort associated with different classes of vehicles. A normal-use car is considered equal to one VEU. Vehicles such as fire trucks or police cars have higher VEUs, reflecting greater expected levels of maintenance.

The measure "hours billed as a percentage of total hours" is based on a work year of 2,080 hours and only counts those positions that were filled. It should be noted that technicians have responsibilities that do not result in billable hours and they take normal vacation and sick leave. Therefore this percentage should not be expected to be near 100 percent. Concord indicated that 6.99 technician full-time equivalents (FTEs) were actually working during the fiscal year for this calculation.

In Concord, the preventive maintenance (PM) completion standard for "percentage of PMs completed as scheduled" is within thirty days of the scheduled date.

In addition to rolling stock, Concord's fleet services has maintenance responsibilities for generators, mowers, weedeaters, chainsaws, chop saws, leaf blowers, tamps, pumps, power washers, and other city equipment.

A drop in repeat repairs was driven by analysis which showed that a large portion of comebacks were due to A/C and charging system issues. Better equipment was purchased for these repairs and a Master Mechanic was hired to do most of the A/C repair work, leading to lower repeat repairs.

Municipal Profile

Population (OSBM 2013)	83,279
Land Area (Square Miles)	60.93
Persons per Square Mile	1,367

Service Profile

FTE Positions—Technician	7.50
FTE Positions—Other	5.5
Work Bays	8

Rolling Stock Maintained	No.	Average Age
Cars—Normal Usage	11	11.8 Years
Cars—Severe Usage	166	4.9 Years
Light Vehicles	224	7.8 Years
Medium Vehicles	47	8.7 Years
Heavy—Sanitation	12	6.7 Years
Heavy—Sewer	3	6.6 Years
Heavy—Fire Apparatus	23	11.5 Years
Heavy—Other	56	7.3 Years
Trailed Equipment	155	11.1 Years
Off-Road/Construction/Tractors	91	8.8 Years
Buses	16	5.1 Years
TOTAL	804	

Vehicle Equivalent Units (VEUs)	2,591
Average Rolling Stock Units Available per Day	792
Hours Billed	9,179
Work Orders	3,921
Repeat Repairs within 30 Days	12
Work Orders Completed within 24 hours	3,865
Preventive Maintenance Jobs (PMs)	1,727
PMs Completed as Scheduled	1,661

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	43.5%
Operating Costs	52.4%
Capital Costs	4.1%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$885,633
Operating Costs	$1,067,739
Capital Costs	$83,001
TOTAL	$2,036,373

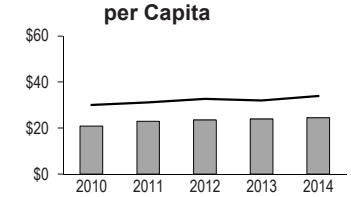
Concord

Fleet Maintenance

Key: Concord ■ Benchmarking Average — Fiscal Years 2010 through 2014

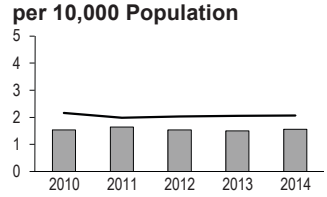
Resource Measures

Fleet Maintenance Services Cost per Capita



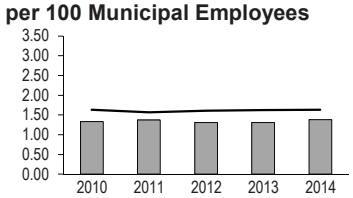
	2010	2011	2012	2013	2014
Concord	$20.94	$22.91	$23.58	$23.94	$24.45
Average	$30.10	$31.17	$32.64	$32.04	$33.96

Fleet Maintenance FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Concord	1.53	1.63	1.53	1.50	1.56
Average	2.16	1.99	2.03	2.06	2.06

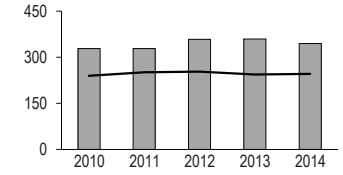
Fleet Maintenance FTEs per 100 Municipal Employees



	2010	2011	2012	2013	2014
Concord	1.33	1.37	1.31	1.31	1.38
Average	1.64	1.56	1.61	1.62	1.63

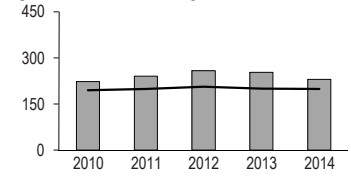
Workload Measures

Number of Vehicle Equivalent Units (VEUs) per Technician FTE



	2010	2011	2012	2013	2014
Concord	328	328	358	359	346
Average	239	251	253	244	246

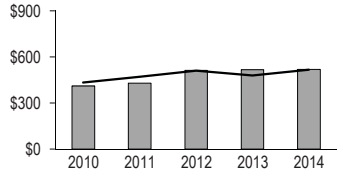
Preventive Maintenances (PMs) Completed In-House per Tech FTE



	2010	2011	2012	2013	2014
Concord	224	241	259	253	230
Average	195	199	207	200	199

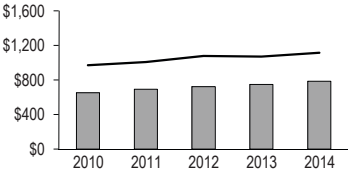
Efficiency Measures

Fleet Maintenance Cost per Work Order



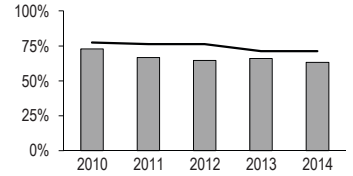
	2010	2011	2012	2013	2014
Concord	$412	$430	$514	$516	$519
Average	$433	$471	$510	$480	$517

Fleet Maintenance Cost per Vehicle Equivalent Unit (VEU)



	2010	2011	2012	2013	2014
Concord	$652	$694	$725	$748	$786
Average	$970	$1,009	$1,080	$1,073	$1,117

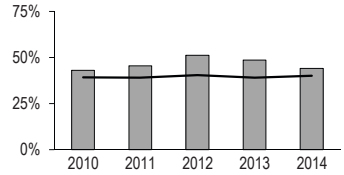
Hours Billed as a Percentage of Total Hours



	2010	2011	2012	2013	2014
Concord	73%	67%	64%	66%	63%
Average	77%	76%	76%	71%	71%

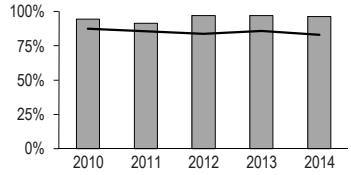
Effectiveness Measures

Preventive Maintenances (PMs) as a Percentage of All Work Orders



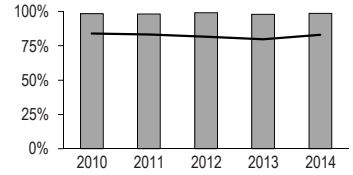
	2010	2011	2012	2013	2014
Concord	43%	46%	51%	49%	44%
Average	39%	39%	40%	39%	40%

Percentage of Preventive Maintenances (PMs) Completed as Scheduled



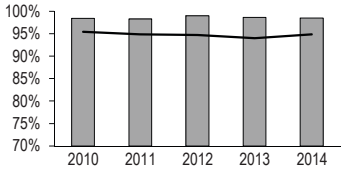
	2010	2011	2012	2013	2014
Concord	94%	91%	97%	97%	96%
Average	87%	86%	84%	86%	83%

Percentage of Work Orders Completed within 24 Hours



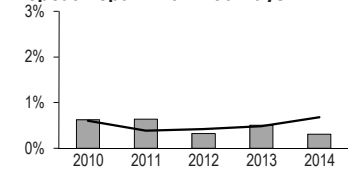
	2010	2011	2012	2013	2014
Concord	98%	98%	99%	98%	99%
Average	84%	83%	82%	80%	83%

Percentage of Rolling Stock Available per Day



	2010	2011	2012	2013	2014
Concord	98%	98%	99%	99%	99%
Average	95%	95%	95%	94%	95%

Percentage of Work Orders Requiring Repeat Repair within 30 Days



	2010	2011	2012	2013	2014
Concord	0.63%	0.64%	0.33%	0.50%	0.31%
Average	0.60%	0.39%	0.42%	0.49%	0.68%

Greensboro — Fleet Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Greensboro's fleet maintenance operation is housed within the Equipment Services Division of the Finance Department. The division consists of four sections: administration, services, parts, and tires. All activities for this operation are accounted for in an internal service fund, with other departments and programs charged for its maintenance services on a cost recovery basis.

The labor rate for the fiscal year was $52 an hour. Charges included a 25 percent markup for parts sold and a 5 percent markup for sublet work.

The following services were contracted out:

- body work
- glass repair
- upholstery repair
- most automotive and light-duty oil changes
- other repairs when workload exceeded in-house capacity.

Conditions Affecting Service, Performance, and Costs

Vehicle Equivalent Units (VEUs) are a weighted measure of the maintenance effort associated with different classes of vehicles. A normal-use car is considered equal to one VEU. Vehicles such as fire trucks or police cars have higher VEUs, reflecting greater expected levels of maintenance.

The measure "hours billed as a percentage of total hours" is based on a work year of 2,080 hours and only counts those positions that were filled. It should be noted that technicians have responsibilities that do not result in billable hours and they take normal vacation and sick leave. Therefore this percentage should not be expected to be near 100 percent.

In Greensboro, the preventive maintenance (PM) completion standard for "percentage of PMs completed as scheduled" uses mileage parameters and scheduled dates within the calendar month or within thirty days of schedule.

The measure "number of repeat repairs within thirty days" is tracked by city fleet management software. This data reflects an inflated number of repeat repairs within thirty days due to repair type coding on the parts and/or shop maintenance that can incorrectly attribute additional maintenance as a repeat repair. This data will be tracked manually going forward starting with the current year. The average monthly repeat repairs in FY 2010–11 suggest that past reported data may be inflated by an average of 300 repairs annually.

In addition to rolling stock, Greensboro's fleet services has maintenance responsibilities for generators, saws, blowers, various police equipment, asphalt pavers, sprayers, hydraulic hammers, a motor mixer, pumps, snow plows, spreaders, and other equipment.

Municipal Profile

Population (OSBM 2013)	278,654
Land Area (Square Miles)	127.93
Persons per Square Mile	2,178

Service Profile

FTE Positions—Technician	32.0
FTE Positions—Other	17.0
Work Bays	34

Rolling Stock Maintained	No.	Average Age
Cars—Normal Usage	166	5.0 Years
Cars—Severe Usage	371	4.0 Years
Light Vehicles	416	6.0 Years
Medium Vehicles	114	6.0 Years
Heavy—Sanitation	89	6.0 Years
Heavy—Sewer	7	5.0 Years
Heavy—Fire Apparatus	0	NA
Heavy—Other	114	9.0 Years
Trailed Equipment	223	7.0 Years
Off-Road/Construction/Tractors	131	9.0 Years
Buses	3	12.0 Years
TOTAL	1,634	

Vehicle Equivalent Units (VEUs)	5,280
Average Rolling Stock Units Available per Day	1,520
Hours Billed	54,791
Work Orders	12,248
Repeat Repairs within 30 Days	26
Work Orders Completed within 24 hours	11,476
Preventive Maintenance Jobs (PMs)	5,312
PMs Completed as Scheduled	5,312

Full Cost Profile

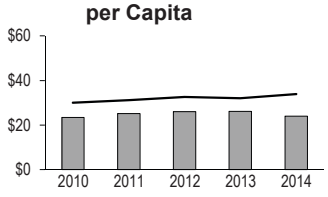
Cost Breakdown by Percentage	
Personal Services	49.2%
Operating Costs	50.8%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$3,297,536
Operating Costs	$3,399,312
Capital Costs	$0
TOTAL	$6,696,848

Greensboro — Fleet Maintenance

Key: Greensboro ■ Benchmarking Average — Fiscal Years 2010 through 2014

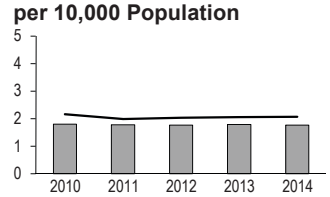
Resource Measures

Fleet Maintenance Services Cost per Capita



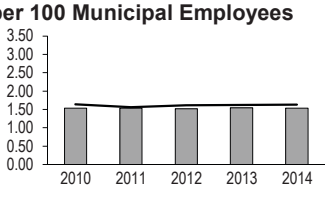
	2010	2011	2012	2013	2014
Greensboro	$23.37	$25.16	$26.05	$26.18	$24.03
Average	$30.10	$31.17	$32.64	$32.04	$33.96

Fleet Maintenance FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greensboro	1.80	1.78	1.76	1.78	1.76
Average	2.16	1.99	2.03	2.06	2.06

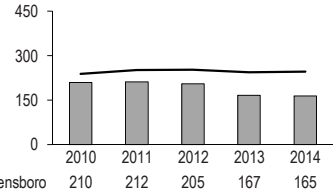
Fleet Maintenance FTEs per 100 Municipal Employees



	2010	2011	2012	2013	2014
Greensboro	1.54	1.54	1.51	1.54	1.54
Average	1.64	1.56	1.61	1.62	1.63

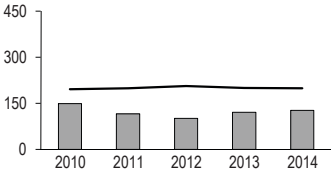
Workload Measures

Number of Vehicle Equivalent Units (VEUs) per Technician FTE



	2010	2011	2012	2013	2014
Greensboro	210	212	205	167	165
Average	239	251	253	244	246

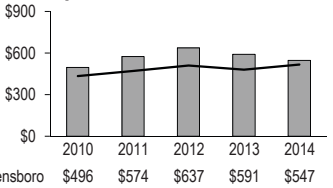
Preventive Maintenances (PMs) Completed In-House per Tech FTE



	2010	2011	2012	2013	2014
Greensboro	149	116	101	121	127
Average	195	199	207	200	199

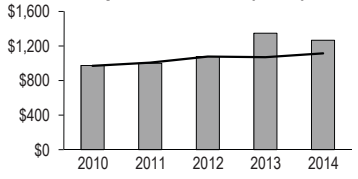
Efficiency Measures

Fleet Maintenance Cost per Work Order



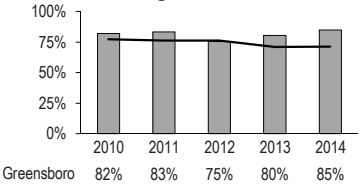
	2010	2011	2012	2013	2014
Greensboro	$496	$574	$637	$591	$547
Average	$433	$471	$510	$480	$517

Fleet Maintenance Cost per Vehicle Equivalent Unit (VEU)



	2010	2011	2012	2013	2014
Greensboro	$976	$1,000	$1,080	$1,348	$1,268
Average	$970	$1,009	$1,080	$1,073	$1,117

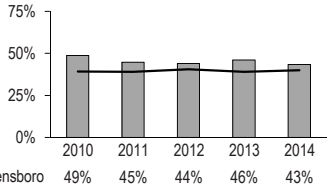
Hours Billed as a Percentage of Total Hours



	2010	2011	2012	2013	2014
Greensboro	82%	83%	75%	80%	85%
Average	77%	76%	76%	71%	71%

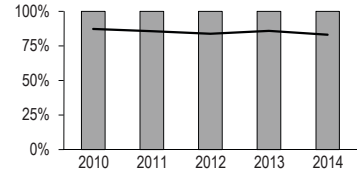
Effectiveness Measures

Preventive Maintenances (PMs) as a Percentage of All Work Orders



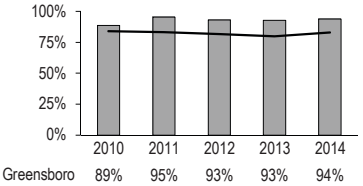
	2010	2011	2012	2013	2014
Greensboro	49%	45%	44%	46%	43%
Average	39%	39%	40%	39%	40%

Percentage of Preventive Maintenances (PMs) Completed as Scheduled



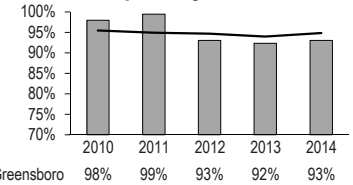
	2010	2011	2012	2013	2014
Greensboro	100%	100%	100%	100%	100%
Average	87%	86%	84%	86%	83%

Percentage of Work Orders Completed within 24 Hours



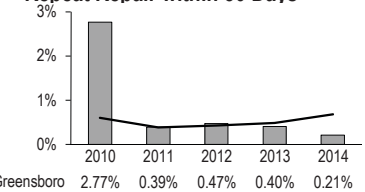
	2010	2011	2012	2013	2014
Greensboro	89%	95%	93%	93%	94%
Average	84%	83%	82%	80%	83%

Percentage of Rolling Stock Available per Day



	2010	2011	2012	2013	2014
Greensboro	98%	99%	93%	92%	93%
Average	95%	95%	95%	94%	95%

Percentage of Work Orders Requiring Repeat Repair within 30 Days



	2010	2011	2012	2013	2014
Greensboro	2.77%	0.39%	0.47%	0.40%	0.21%
Average	0.60%	0.39%	0.42%	0.49%	0.68%

Greenville — Fleet Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Fleet Division is a part of Greenville's Public Works Department. All activities for this operation are accounted for as part of the city's general fund.

The division charges the Transit and Sanitation departments a $60-per-hour labor rate for maintenance services and has a 15 percent markup on parts and a 15 percent markup on sublet work.

The following services were contracted out:

- alignments
- major body and paint repair
- two-way radio installs
- emergency light installs
- exhaust repair
- glass repair or replacement
- transmission overhaul
- major engine repair
- warranty repairs
- towing.

Conditions Affecting Service, Performance, and Costs

Vehicle Equivalent Units (VEUs) are a weighted measure of the maintenance effort associated with different classes of vehicles. A normal-use car is considered equal to one VEU. Vehicles such as fire trucks or police cars have higher VEUs, reflecting greater expected levels of maintenance.

In Greenville, the preventive maintenance (PM) completion standard for "percentage of PMs completed as scheduled" is within thirty days of the scheduled date or mileage parameters.

In addition to rolling stock, Greenville's fleet division has maintenance responsibilities for generators, lawnmowers, blowers, weedeaters, light towers, tampers, chainsaws, golf carts, utility carts, bush hogs, sprayers, fog machines, tractors, salt spreaders, leaf vacuums, concrete saws, an asphalt melter, rollers, a stump grinder, trail mowers, and other equipment.

Municipal Profile

Population (OSBM 2013)	87,241
Land Area (Square Miles)	34.85
Persons per Square Mile	2,503

Service Profile

FTE Positions—Technician	13.0
FTE Positions—Other	5.0
Work Bays	12

Rolling Stock Maintained	No.	Average Age
Cars—Normal Usage	20	8.5 Years
Cars—Severe Usage	150	5.0 Years
Light Vehicles	171	8.5 Years
Medium Vehicles	16	8.5 Years
Heavy—Sanitation	42	7.0 Years
Heavy—Sewer	1	14.0 Years
Heavy—Fire Apparatus	17	11.0 Years
Heavy—Other	24	7.0 Years
Trailed Equipment	65	13.0 Years
Off-Road/Construction/Tractors	42	19.0 Years
Buses	15	NA
TOTAL	563	

Vehicle Equivalent Units (VEUs)	2,214
Average Rolling Stock Units Available per Day	NA
Hours Billed	14,043
Work Orders	6,912
Repeat Repairs within 30 Days	NA
Work Orders Completed within 24 hours	NA
Preventive Maintenance Jobs (PMs)	2,188
PMs Completed as Scheduled	1,010

Full Cost Profile

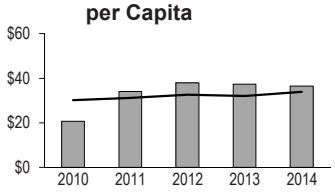
Cost Breakdown by Percentage	
Personal Services	41.6%
Operating Costs	50.3%
Capital Costs	8.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,327,615
Operating Costs	$1,605,556
Capital Costs	$255,857
TOTAL	$3,189,028

Greenville — Fleet Maintenance

Key: Greenville ■ Benchmarking Average — Fiscal Years 2010 through 2014

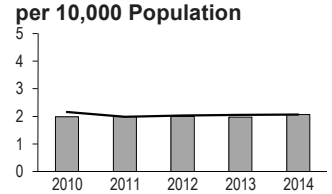
Resource Measures

Fleet Maintenance Services Cost per Capita



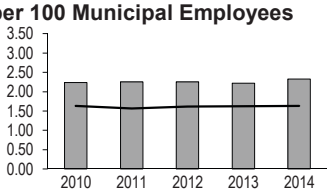
	2010	2011	2012	2013	2014
Greenville	$20.66	$34.11	$37.85	$37.41	$36.55
Average	$30.10	$31.17	$32.64	$32.04	$33.96

Fleet Maintenance FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greenville	1.98	2.00	2.00	1.97	2.06
Average	2.16	1.99	2.03	2.06	2.06

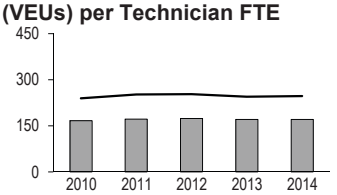
Fleet Maintenance FTEs per 100 Municipal Employees



	2010	2011	2012	2013	2014
Greenville	2.24	2.25	2.25	2.22	2.33
Average	1.64	1.56	1.61	1.62	1.63

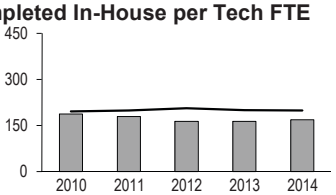
Workload Measures

Number of Vehicle Equivalent Units (VEUs) per Technician FTE



	2010	2011	2012	2013	2014
Greenville	167	172	174	171	170
Average	239	251	253	244	246

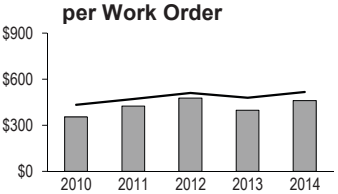
Preventive Maintenances (PMs) Completed In-House per Tech FTE



	2010	2011	2012	2013	2014
Greenville	187	179	164	164	168
Average	195	199	207	200	199

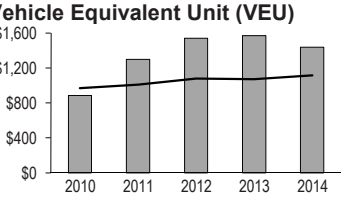
Efficiency Measures

Fleet Maintenance Cost per Work Order



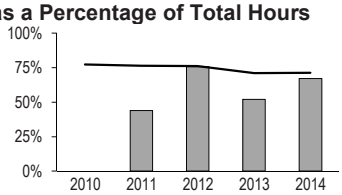
	2010	2011	2012	2013	2014
Greenville	$354	$426	$476	$398	$461
Average	$433	$471	$510	$480	$517

Fleet Maintenance Cost per Vehicle Equivalent Unit (VEU)



	2010	2011	2012	2013	2014
Greenville	$886	$1,301	$1,544	$1,571	$1,440
Average	$970	$1,009	$1,080	$1,073	$1,117

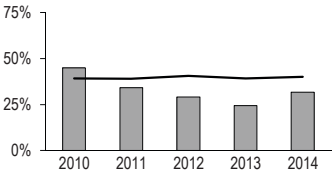
Hours Billed as a Percentage of Total Hours



	2010	2011	2012	2013	2014
Greenville		44%	76%	52%	67%
Average	77%	76%	76%	71%	71%

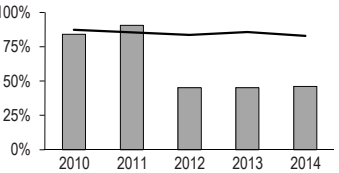
Effectiveness Measures

Preventive Maintenances (PMs) as a Percentage of All Work Orders



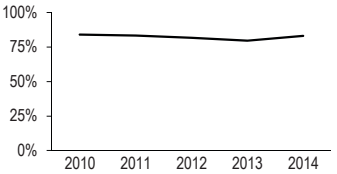
	2010	2011	2012	2013	2014
Greenville	45%	34%	29%	24%	32%
Average	39%	39%	40%	39%	40%

Percentage of Preventive Maintenances (PMs) Completed as Scheduled



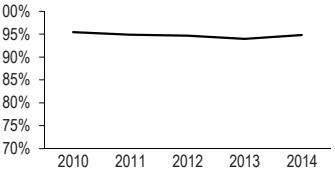
	2010	2011	2012	2013	2014
Greenville	84%	91%	45%	45%	46%
Average	87%	86%	84%	86%	83%

Percentage of Work Orders Completed within 24 Hours



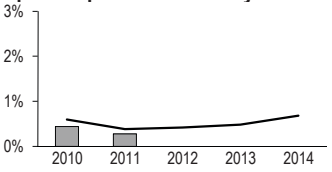
	2010	2011	2012	2013	2014
Greenville					
Average	84%	83%	82%	80%	83%

Percentage of Rolling Stock Available per Day



	2010	2011	2012	2013	2014
Greenville					
Average	95%	95%	95%	94%	95%

Percentage of Work Orders Requiring Repeat Repair within 30 Days



	2010	2011	2012	2013	2014
Greenville	0.44%	0.28%			
Average	0.60%	0.39%	0.42%	0.49%	0.68%

Hickory — Fleet Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Fleet Maintenance is a division of Hickory's Public Services Department and consists of a garage office, a parts warehouse, a welding shop, a maintenance shop, a fleet wash station, a fuel station, and a compressed natural gas station. All activities for this operation are accounted for in an internal service fund.

The division charges a $49-per-hour labor rate for maintenance services and a 25 percent markup charge on parts sold. There is no markup charge for sublet work.

The following services were contracted out:

- alignments
- body work
- large wrecker service
- special machine work
- starter/alternator repair
- glass repair or replacement
- transmission repairs.

Conditions Affecting Service, Performance, and Costs

Vehicle Equivalent Units (VEUs) are a weighted measure of the maintenance effort associated with different classes of vehicles. A normal-use car is considered equal to one VEU. Vehicles such as fire trucks or police cars have higher VEUs, reflecting greater expected levels of maintenance.

The measure "hours billed as a percentage of total hours" is based on a work year of 2,080 hours and only counts those positions that were filled. It should be noted that technicians have responsibilities that do not result in billable hours and they take normal vacation and sick leave. Therefore this percentage should not be expected to be near 100 percent.

In Hickory, the preventive maintenance (PM) completion standard for "percentage of PMs completed as scheduled" is within thirty days of the scheduled date.

In addition to rolling stock, Hickory's fleet services has maintenance responsibilities for electronic signs, saws, weedeaters, sewer machines, hole piercing tools, boring machines, pumps, mowers, edgers, a sand blaster, pressure washers, blowers, mules, spreaders, generators, tamps, vacuums, airport equipment, grinders, a fleet wash station, a compressed natural gas fuel station, a gasoline and diesel fuel station, and other equipment.

Municipal Profile

Population (OSBM 2013)	40,222
Land Area (Square Miles)	29.83
Persons per Square Mile	1,348

Service Profile

FTE Positions—Technician	7.0
FTE Positions—Other	4.0
Work Bays	14

Rolling Stock Maintained	No.	Average Age
Cars—Normal Usage	22	10.2 Years
Cars—Severe Usage	147	6.9 Years
Light Vehicles	104	8.9 Years
Medium Vehicles	36	13.3 Years
Heavy—Sanitation	29	7.5 Years
Heavy—Sewer	6	10.8 Years
Heavy—Fire Apparatus	0	NA
Heavy—Other	19	13.7 Years
Trailed Equipment	55	10.6 Years
Off-Road/Construction/Tractors	136	16.7 Years
Buses	0	NA
TOTAL	554	

Vehicle Equivalent Units (VEUs)	1,928
Average Rolling Stock Units Available per Day	537
Hours Billed	12,012
Work Orders	5,762
Repeat Repairs within 30 Days	NA
Work Orders Completed within 24 hours	NA
Preventive Maintenance Jobs (PMs)	1,352
PMs Completed as Scheduled	1,352

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	39.1%
Operating Costs	60.4%
Capital Costs	0.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$607,597
Operating Costs	$938,915
Capital Costs	$7,524
TOTAL	$1,554,036

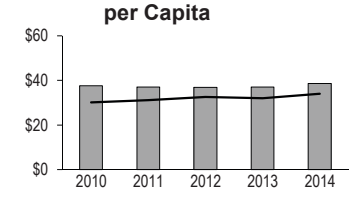
Hickory

Fleet Maintenance

Key: Hickory ■ Benchmarking Average — Fiscal Years 2010 through 2014

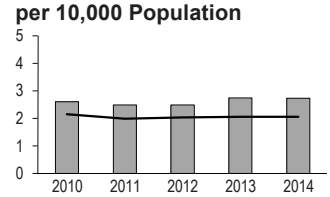
Resource Measures

Fleet Maintenance Services Cost per Capita



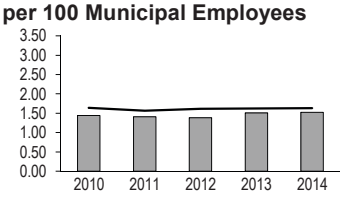
	2010	2011	2012	2013	2014
Hickory	$37.66	$37.07	$36.88	$37.00	$38.64
Average	$30.10	$31.17	$32.64	$32.04	$33.96

Fleet Maintenance FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Hickory	2.61	2.49	2.49	2.75	2.73
Average	2.16	1.99	2.03	2.06	2.06

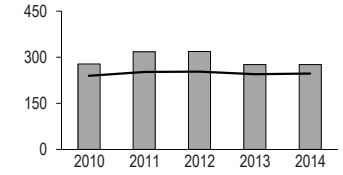
Fleet Maintenance FTEs per 100 Municipal Employees



	2010	2011	2012	2013	2014
Hickory	1.44	1.40	1.38	1.51	1.53
Average	1.64	1.56	1.61	1.62	1.63

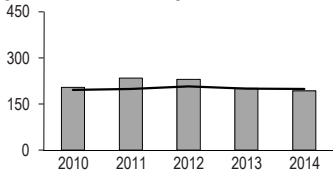
Workload Measures

Number of Vehicle Equivalent Units (VEUs) per Technician FTE



	2010	2011	2012	2013	2014
Hickory	278	318	318	275	275
Average	239	251	253	244	246

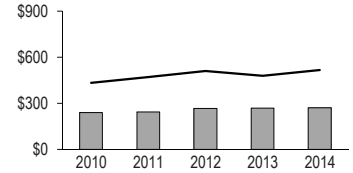
Preventive Maintenances (PMs) Completed In-House per Tech FTE



	2010	2011	2012	2013	2014
Hickory	204	234	230	201	193
Average	195	199	207	200	199

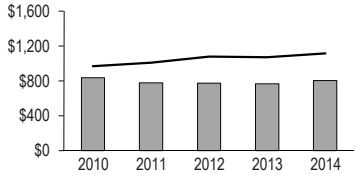
Efficiency Measures

Fleet Maintenance Cost per Work Order



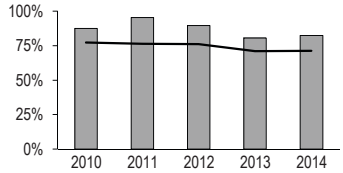
	2010	2011	2012	2013	2014
Hickory	$239	$243	$266	$268	$270
Average	$433	$471	$510	$480	$517

Fleet Maintenance Cost per Vehicle Equivalent Unit (VEU)



	2010	2011	2012	2013	2014
Hickory	$838	$780	$774	$768	$806
Average	$970	$1,009	$1,080	$1,073	$1,117

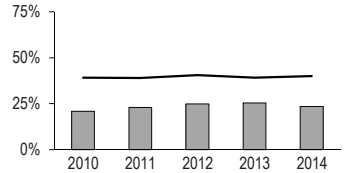
Hours Billed as a Percentage of Total Hours



	2010	2011	2012	2013	2014
Hickory	88%	95%	90%	81%	83%
Average	77%	76%	76%	71%	71%

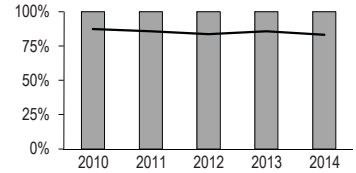
Effectiveness Measures

Preventive Maintenances (PMs) as a Percentage of All Work Orders



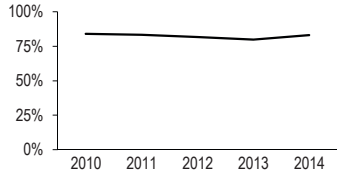
	2010	2011	2012	2013	2014
Hickory	21%	23%	25%	25%	23%
Average	39%	39%	40%	39%	40%

Percentage of Preventive Maintenances (PMs) Completed as Scheduled



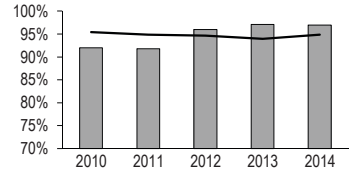
	2010	2011	2012	2013	2014
Hickory	100%	100%	100%	100%	100%
Average	87%	86%	84%	86%	83%

Percentage of Work Orders Completed within 24 Hours



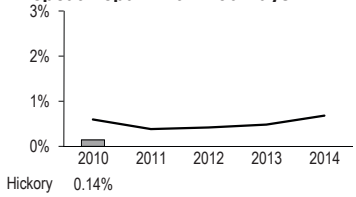
	2010	2011	2012	2013	2014
Hickory					
Average	84%	83%	82%	80%	83%

Percentage of Rolling Stock Available per Day



	2010	2011	2012	2013	2014
Hickory	92%	92%	96%	97%	97%
Average	95%	95%	95%	94%	95%

Percentage of Work Orders Requiring Repeat Repair within 30 Days



	2010	2011	2012	2013	2014
Hickory	0.14%				
Average	0.60%	0.39%	0.42%	0.49%	0.68%

High Point — Fleet Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

High Point's Fleet Maintenance Department consists of a director, administrative staff, support staff, and technicians. All activities in this operation are accounted for in an internal service fund, where costs are recovered through maintenance and service charges to other city departments.

Labor is billed at $60 per hour. There is no markup charge on parts sold or sublet work. Parts inventory turned over five times during the fiscal year.

The following services were contracted out:

- body work
- windshield/glass replacements
- front-end alignment
- mufflers/exhaust systems
- after-hours towing
- car washes
- refurbishing special equipment
- upholstery repairs
- hydraulic cylinder and pump rebuilds
- 50 percent of engine and transmission overhauls
- tire repairs for heavy equipment
- maintenance and repairs covered under manufacturer warranty.

Conditions Affecting Service, Performance, and Costs

Vehicle Equivalent Units (VEUs) are a weighted measure of the maintenance effort associated with different classes of vehicles. A normal-use car is considered equal to one VEU. Vehicles such as fire trucks or police cars have higher VEUs, reflecting greater expected levels of maintenance.

In High Point, the preventive maintenance (PM) completion standard for "percentage of PMs completed as scheduled" is within certain mileage parameters or every three months, whichever comes first.

Municipal Profile

Population (OSBM 2013)	107,652
Land Area (Square Miles)	54.73
Persons per Square Mile	1,967

Service Profile

FTE Positions—Technician	11.0
FTE Positions—Other	9.0
Work Bays	18

Rolling Stock Maintained	No.	Average Age
Cars—Normal Usage	28	8.0 Years
Cars—Severe Usage	215	8.0 Years
Light Vehicles	259	8.0 Years
Medium Vehicles	23	10.0 Years
Heavy—Sanitation	26	8.0 Years
Heavy—Sewer	3	8.0 Years
Heavy—Fire Apparatus	25	NA
Heavy—Other	64	10.0 Years
Trailed Equipment	123	10.0 Years
Off-Road/Construction/Tractors	156	10.0 Years
Buses	0	NA
TOTAL	922	

Vehicle Equivalent Units (VEUs)	3,096
Average Rolling Stock Units Available per Day	885
Hours Billed	12,039
Work Orders	4,691
Repeat Repairs within 30 Days	47
Work Orders Completed within 24 hours	NA
Preventive Maintenance Jobs (PMs)	2,146
PMs Completed as Scheduled	2,082

Full Cost Profile

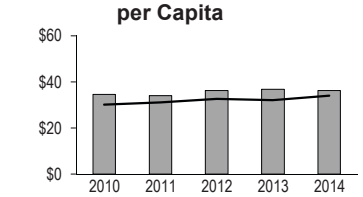
Cost Breakdown by Percentage	
Personal Services	35.0%
Operating Costs	60.4%
Capital Costs	4.6%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,365,473
Operating Costs	$2,354,249
Capital Costs	$181,210
TOTAL	$3,900,932

High Point — Fleet Maintenance

Key: High Point ■ Benchmarking Average — Fiscal Years 2010 through 2014

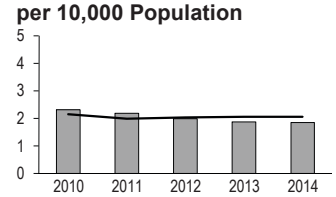
Resource Measures

Fleet Maintenance Services Cost per Capita



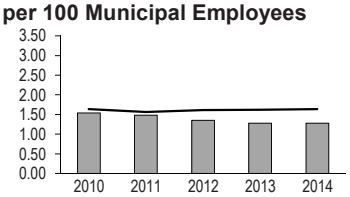
	2010	2011	2012	2013	2014
High Point	$34.54	$34.05	$36.30	$36.75	$36.24
Average	$30.10	$31.17	$32.64	$32.04	$33.96

Fleet Maintenance FTEs per 10,000 Population



	2010	2011	2012	2013	2014
High Point	2.32	2.19	1.99	1.88	1.86
Average	2.16	1.99	2.03	2.06	2.06

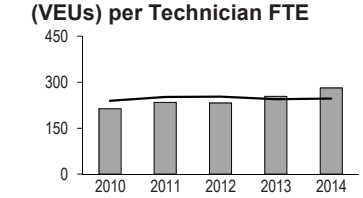
Fleet Maintenance FTEs per 100 Municipal Employees



	2010	2011	2012	2013	2014
High Point	1.54	1.48	1.35	1.28	1.28
Average	1.64	1.56	1.61	1.62	1.63

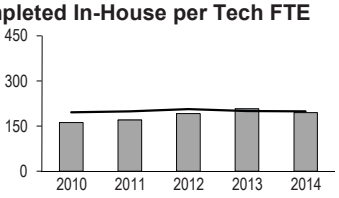
Workload Measures

Number of Vehicle Equivalent Units (VEUs) per Technician FTE



	2010	2011	2012	2013	2014
High Point	213	234	232	253	281
Average	239	251	253	244	246

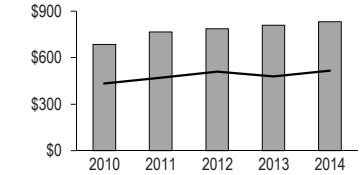
Preventive Maintenances (PMs) Completed In-House per Tech FTE



	2010	2011	2012	2013	2014
High Point	162	170	191	207	195
Average	195	199	207	200	199

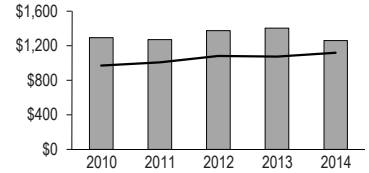
Efficiency Measures

Fleet Maintenance Cost per Work Order



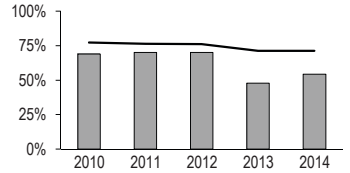
	2010	2011	2012	2013	2014
High Point	$686	$767	$786	$809	$832
Average	$433	$471	$510	$480	$517

Fleet Maintenance Cost per Vehicle Equivalent Unit (VEU)



	2010	2011	2012	2013	2014
High Point	$1,292	$1,272	$1,374	$1,403	$1,260
Average	$970	$1,009	$1,080	$1,073	$1,117

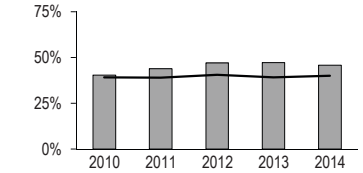
Hours Billed as a Percentage of Total Hours



	2010	2011	2012	2013	2014
High Point	69%	70%	70%	48%	54%
Average	77%	76%	76%	71%	71%

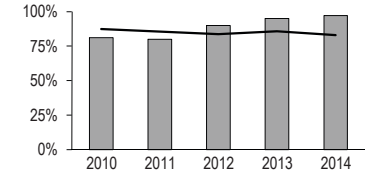
Effectiveness Measures

Preventive Maintenances (PMs) as a Percentage of All Work Orders



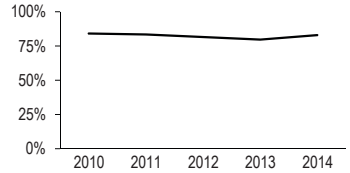
	2010	2011	2012	2013	2014
High Point	40%	44%	47%	47%	46%
Average	39%	39%	40%	39%	40%

Percentage of Preventive Maintenances (PMs) Completed as Scheduled



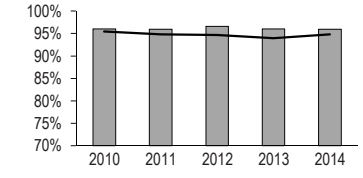
	2010	2011	2012	2013	2014
High Point	81%	80%	90%	95%	97%
Average	87%	86%	84%	86%	83%

Percentage of Work Orders Completed within 24 Hours



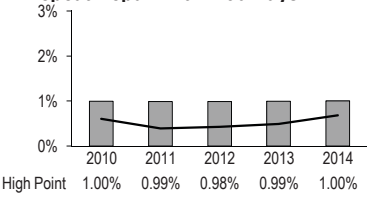
	2010	2011	2012	2013	2014
High Point					
Average	84%	83%	82%	80%	83%

Percentage of Rolling Stock Available per Day



	2010	2011	2012	2013	2014
High Point	96%	96%	97%	96%	96%
Average	95%	95%	95%	94%	95%

Percentage of Work Orders Requiring Repeat Repair within 30 Days



	2010	2011	2012	2013	2014
High Point	1.00%	0.99%	0.98%	0.99%	1.00%
Average	0.60%	0.39%	0.42%	0.49%	0.68%

Salisbury — Fleet Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Fleet Maintenance is a division of the Public Services Department and operates the fleet and transit shops. All activities in this operation are accounted for in Salisbury's general fund.

There is no markup on any parts sold or sublet work performed on city vehicles. However, for work done on vehicles owned by other local governments, such as the county, the city charges for labor and includes a markup on parts and sublet work.

The following services were contracted out:

- body work
- exhaust system repairs
- towing.

Conditions Affecting Service, Performance, and Costs

Vehicle Equivalent Units (VEUs) are a weighted measure of the maintenance effort associated with different classes of vehicles. A normal-use car is considered equal to one VEU. Vehicles such as fire trucks or police cars have higher VEUs, reflecting greater expected levels of maintenance.

In Salisbury, the preventive maintenance (PM) completion standard for "percentage of PMs completed as scheduled" is within thirty days of scheduled maintenance or within defined mileage parameters.

In addition to maintenance responsibilities for the city's rolling stock, the fleet maintenance division also maintains vehicles for Rowan County and two trolleys for downtown Salisbury. The division also has responsibility for equipment, including generators, water pumps, hydraulic power units, mowers, tamps, weedwhackers, jack hammers, rescue equipment, air compressors, sidewalk sweepers, thermo plastic equipment, hydraulic hammers, pavement saws, chain saws, and other city equipment.

Municipal Profile

Population (OSBM 2013)	33,726
Land Area (Square Miles)	22.18
Persons per Square Mile	1,521

Service Profile

FTE Positions—Technician	10.0
FTE Positions—Other	3.0
Work Bays	14

Rolling Stock Maintained	No.	Average Age
Cars—Normal Usage	12	9.3 Years
Cars—Severe Usage	77	5.8 Years
Light Vehicles	138	8.9 Years
Medium Vehicles	28	10.3 Years
Heavy—Sanitation	12	9.7 Years
Heavy—Sewer	3	10.3 Years
Heavy—Fire Apparatus	13	15.6 Years
Heavy—Other	26	11.8 Years
Trailed Equipment	90	14.9 Years
Off-Road/Construction/Tractors	82	11.8 Years
Buses	10	10.8 Years
TOTAL	491	

Vehicle Equivalent Units (VEUs)	1,634
Average Rolling Stock Units Available per Day	474
Hours Billed	NA
Work Orders	5,564
Repeat Repairs within 30 Days	9
Work Orders Completed within 24 hours	NA
Preventive Maintenance Jobs (PMs)	1,790
PMs Completed as Scheduled	1,727

Full Cost Profile

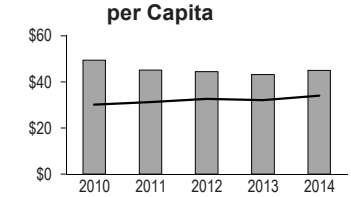
Cost Breakdown by Percentage	
Personal Services	43.3%
Operating Costs	52.7%
Capital Costs	4.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$656,721
Operating Costs	$797,981
Capital Costs	$60,633
TOTAL	$1,515,335

Salisbury — Fleet Maintenance

Key: Salisbury ■ Benchmarking Average — Fiscal Years 2010 through 2014

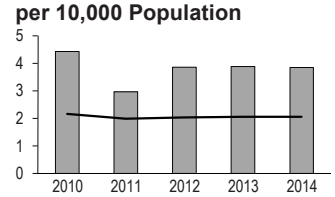
Resource Measures

Fleet Maintenance Services Cost per Capita



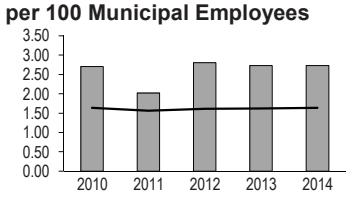
	2010	2011	2012	2013	2014
Salisbury	$49.40	$45.16	$44.40	$43.13	$44.93
Average	$30.10	$31.17	$32.64	$32.04	$33.96

Fleet Maintenance FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Salisbury	4.43	2.97	3.86	3.89	3.85
Average	2.16	1.99	2.03	2.06	2.06

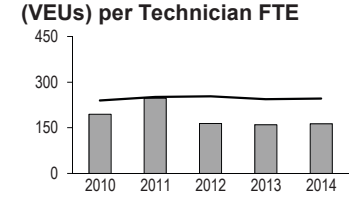
Fleet Maintenance FTEs per 100 Municipal Employees



	2010	2011	2012	2013	2014
Salisbury	2.71	2.02	2.81	2.73	2.73
Average	1.64	1.56	1.61	1.62	1.63

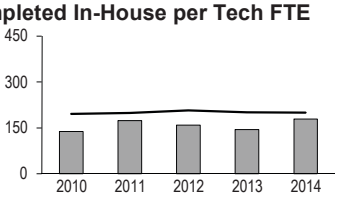
Workload Measures

Number of Vehicle Equivalent Units (VEUs) per Technician FTE



	2010	2011	2012	2013	2014
Salisbury	194	247	164	160	163
Average	239	251	253	244	246

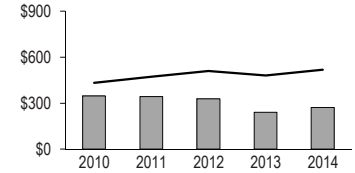
Preventive Maintenances (PMs) Completed In-House per Tech FTE



	2010	2011	2012	2013	2014
Salisbury	139	174	159	144	179
Average	195	199	207	200	199

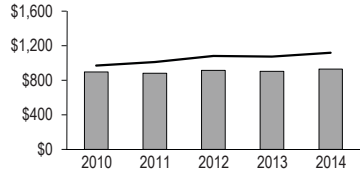
Efficiency Measures

Fleet Maintenance Cost per Work Order



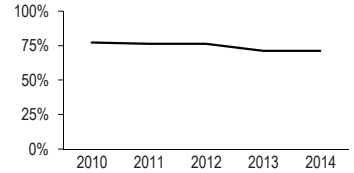
	2010	2011	2012	2013	2014
Salisbury	$347	$343	$328	$240	$272
Average	$433	$471	$510	$480	$517

Fleet Maintenance Cost per Vehicle Equivalent Unit (VEU)



	2010	2011	2012	2013	2014
Salisbury	$894	$880	$913	$902	$928
Average	$970	$1,009	$1,080	$1,073	$1,117

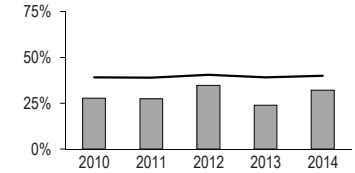
Hours Billed as a Percentage of Total Hours



	2010	2011	2012	2013	2014
Salisbury					
Average	77%	76%	76%	71%	71%

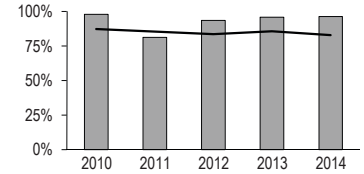
Effectiveness Measures

Preventive Maintenances (PMs) as a Percentage of All Work Orders



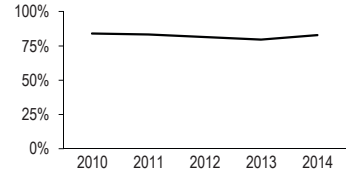
	2010	2011	2012	2013	2014
Salisbury	28%	27%	35%	24%	32%
Average	39%	39%	40%	39%	40%

Percentage of Preventive Maintenances (PMs) Completed as Scheduled



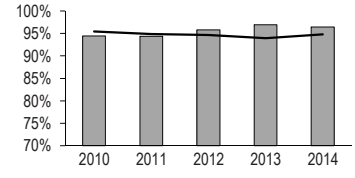
	2010	2011	2012	2013	2014
Salisbury	98%	81%	94%	96%	96%
Average	87%	86%	84%	86%	83%

Percentage of Work Orders Completed within 24 Hours



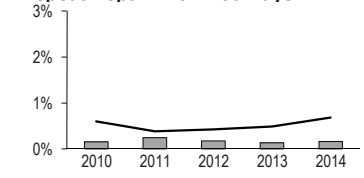
	2010	2011	2012	2013	2014
Salisbury					
Average	84%	83%	82%	80%	83%

Percentage of Rolling Stock Available per Day



	2010	2011	2012	2013	2014
Salisbury	94%	94%	96%	97%	96%
Average	95%	95%	95%	94%	95%

Percentage of Work Orders Requiring Repeat Repair within 30 Days



	2010	2011	2012	2013	2014
Salisbury	0.16%	0.25%	0.18%	0.13%	0.16%
Average	0.60%	0.39%	0.42%	0.49%	0.68%

Wilson Fleet Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Fleet maintenance is a division housed within the Department of Public Services. All activities in this operation are accounted for in the general fund.

Charges for maintenance services included a $44-per-hour labor rate, a 25 percent markup charge on parts sold, and a 5 percent markup charge on sublet work.

The following services were contracted out:

- body repairs
- paint work
- wrecker service
- radiator repairs
- alignment
- muffler repairs.

Conditions Affecting Service, Performance, and Costs

Vehicle Equivalent Units (VEUs) are a weighted measure of the maintenance effort associated with different classes of vehicles. A normal-use car is considered equal to one VEU. Vehicles such as fire trucks or police cars have higher VEUs, reflecting greater expected levels of maintenance.

The measure "hours billed as a percentage of total hours" is based on a work year of 2,080 hours and only counts those positions that were filled. It should be noted that technicians have responsibilities that do not result in billable hours and they take normal vacation and sick leave. Therefore this percentage should not be expected to be near 100 percent.

In Wilson, the preventive maintenance (PM) completion standard for "percentage of PMs completed as scheduled" varies, including both calendar and mileage standards.

In addition to rolling stock, Wilson's fleet services has maintenance responsibilities for generators, mowers, tamps, leaf machines, water pumps, and other city equipment.

Municipal Profile

Population (OSBM 2013)	49,097
Land Area (Square Miles)	30.48
Persons per Square Mile	1,611

Service Profile

FTE Positions—Technician	12.0
FTE Positions—Other	5.0
Work Bays	15

Rolling Stock Maintained	No.	Average Age
Cars—Normal Usage	33	11.6 Years
Cars—Severe Usage	114	6.5 Years
Light Vehicles	181	9.6 Years
Medium Vehicles	36	12.0 Years
Heavy—Sanitation	33	8.9 Years
Heavy—Sewer	6	8.0 Years
Heavy—Fire Apparatus	10	12.1 Years
Heavy—Other	63	10.3 Years
Trailed Equipment	141	9.3 Years
Off-Road/Construction/Tractors	152	9.4 Years
Buses	6	7.5 Years
TOTAL	775	

Vehicle Equivalent Units (VEUs)	2,674
Average Rolling Stock Units Available per Day	736
Hours Billed	19,963
Work Orders	6,808
Repeat Repairs within 30 Days	34
Work Orders Completed within 24 hours	5,786
Preventive Maintenance Jobs (PMs)	1,380
PMs Completed as Scheduled	1,242

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	32.4%
Operating Costs	62.9%
Capital Costs	4.7%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,180,859
Operating Costs	$2,294,720
Capital Costs	$172,897
TOTAL	$3,648,476

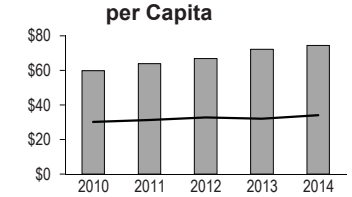
Wilson

Fleet Maintenance

Key: Wilson ■ Benchmarking Average — Fiscal Years 2010 through 2014

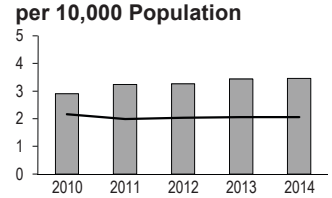
Resource Measures

Fleet Maintenance Services Cost per Capita



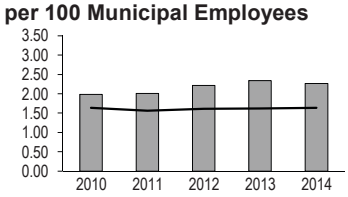
	2010	2011	2012	2013	2014
Wilson	$59.69	$63.76	$66.83	$72.24	$74.31
Average	$30.10	$31.17	$32.64	$32.04	$33.96

Fleet Maintenance FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Wilson	2.90	3.24	3.26	3.44	3.46
Average	2.16	1.99	2.03	2.06	2.06

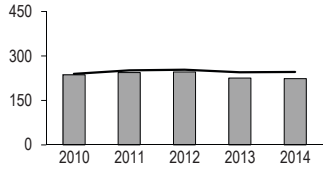
Fleet Maintenance FTEs per 100 Municipal Employees



	2010	2011	2012	2013	2014
Wilson	1.98	2.01	2.22	2.34	2.27
Average	1.64	1.56	1.61	1.62	1.63

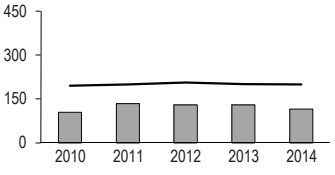
Workload Measures

Number of Vehicle Equivalent Units (VEUs) per Technician FTE



	2010	2011	2012	2013	2014
Wilson	236	244	246	226	223
Average	239	251	253	244	246

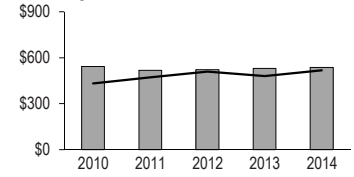
Preventive Maintenances (PMs) Completed In-House per Tech FTE



	2010	2011	2012	2013	2014
Wilson	105	134	130	130	115
Average	195	199	207	200	199

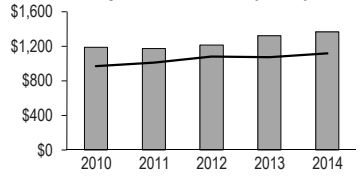
Efficiency Measures

Fleet Maintenance Cost per Work Order



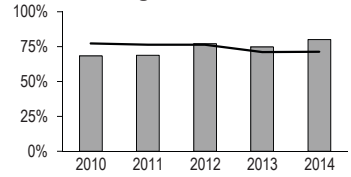
	2010	2011	2012	2013	2014
Wilson	$542	$517	$522	$531	$536
Average	$433	$471	$510	$480	$517

Fleet Maintenance Cost per Vehicle Equivalent Unit (VEU)



	2010	2011	2012	2013	2014
Wilson	$1,187	$1,175	$1,212	$1,320	$1,364
Average	$970	$1,009	$1,080	$1,073	$1,117

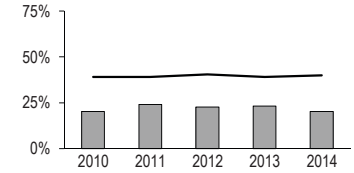
Hours Billed as a Percentage of Total Hours



	2010	2011	2012	2013	2014
Wilson	68%	69%	77%	75%	80%
Average	77%	76%	76%	71%	71%

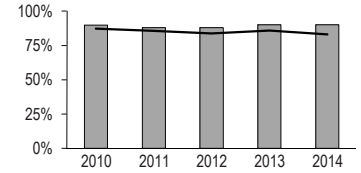
Effectiveness Measures

Preventive Maintenances (PMs) as a Percentage of All Work Orders



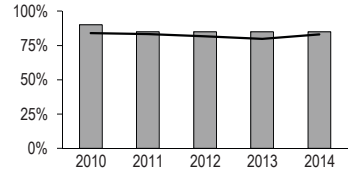
	2010	2011	2012	2013	2014
Wilson	20%	24%	23%	23%	20%
Average	39%	39%	40%	39%	40%

Percentage of Preventive Maintenances (PMs) Completed as Scheduled



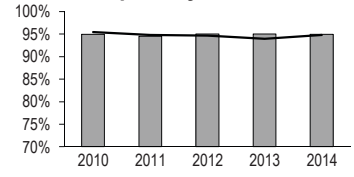
	2010	2011	2012	2013	2014
Wilson	90%	88%	88%	90%	90%
Average	87%	86%	84%	86%	83%

Percentage of Work Orders Completed within 24 Hours



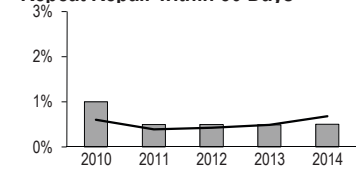
	2010	2011	2012	2013	2014
Wilson	90%	85%	85%	85%	85%
Average	84%	83%	82%	80%	83%

Percentage of Rolling Stock Available per Day



	2010	2011	2012	2013	2014
Wilson	95%	95%	95%	95%	95%
Average	95%	95%	95%	94%	95%

Percentage of Work Orders Requiring Repeat Repair within 30 Days



	2010	2011	2012	2013	2014
Wilson	1.00%	0.49%	0.49%	0.49%	0.50%
Average	0.60%	0.39%	0.42%	0.49%	0.68%

Winston-Salem Fleet Maintenance

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Fleet Services is a division of the Property and Facilities Management Department, consisting of eight units: vehicle maintenance administration, contract monitoring administration, heavy equipment, service station, vehicle leasing, parts, light equipment, and tire shop. All activities in this operation are accounted for in an internal service fund.

Charges for maintenance services included a $50-per-hour labor rate, a 26 percent markup charge for parts sold, and a 13 percent markup charge for sublet work.

The following services were contracted out:

- body work
- welding
- hydraulic cylinder and pump repair
- glass repair
- towing
- transmission repair.

Conditions Affecting Service, Performance, and Costs

Vehicle Equivalent Units (VEUs) are a weighted measure of the maintenance effort associated with different classes of vehicles. A normal-use car is considered equal to one VEU. Vehicles such as fire trucks or police cars have higher VEUs, reflecting greater expected levels of maintenance.

The measure "hours billed as a percentage of total hours" is based on a work year of 2,080 hours and only counts those positions that were filled. It should be noted that technicians have responsibilities that do not result in billable hours and they take normal vacation and sick leave. Therefore this percentage should not be expected to be near 100 percent. Winston-Salem indicated that seventeen technician FTEs were actually working during the fiscal year for this calculation.

Results for the measures "percentage of PMs completed as scheduled" and "percentage of work orders requiring repeat repairs within 30 days" were not available.

In addition to rolling stock, Winston-Salem's Fleet Services has maintenance responsibilities for mowers, weedeaters, water pumps, chain saws, whacker tamps, pavement stripers, tractor implements, leaf blowers, power trimmers, salt spreaders, snow plows, and other city equipment.

Municipal Profile

Population (OSBM 2013)	235,527
Land Area (Square Miles)	132.45
Persons per Square Mile	1,778

Service Profile

FTE Positions—Technician	18.0
FTE Positions—Other	13.0
Work Bays	31

Rolling Stock Maintained	No.	Average Age
Cars—Normal Usage	272	5.9 Years
Cars—Severe Usage	446	5.3 Years
Light Vehicles	409	7.8 Years
Medium Vehicles	136	10.5 Years
Heavy—Sanitation	63	8.6 Years
Heavy—Sewer	8	8.9 Years
Heavy—Fire Apparatus	0	NA
Heavy—Other	53	8.5 Years
Trailed Equipment	145	17.6 Years
Off-Road/Construction/Tractors	258	13.7 Years
Buses	0	NA
TOTAL	1,790	

Vehicle Equivalent Units (VEUs)	5,319
Average Rolling Stock Units Available per Day	1,778
Hours Billed	25,984
Work Orders	8,887
Repeat Repairs within 30 Days	NA
Work Orders Completed within 24 hours	5,968
Preventive Maintenance Jobs (PMs)	4,114
PMs Completed as Scheduled	NA

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	27.1%
Operating Costs	71.4%
Capital Costs	1.4%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,332,884
Operating Costs	$3,506,212
Capital Costs	$70,745
TOTAL	$4,909,841

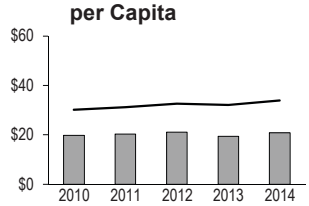
Winston-Salem

Fleet Maintenance

Key: Winston-Salem ■ Benchmarking Average — Fiscal Years 2010 through 2014

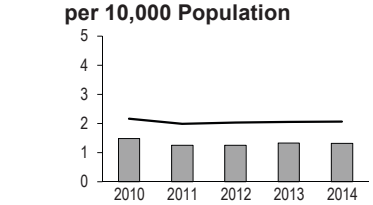
Resource Measures

Fleet Maintenance Services Cost per Capita



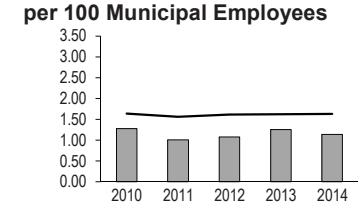
	2010	2011	2012	2013	2014
Winston-Salem	$19.82	$20.27	$21.10	$19.35	$20.85
Average	$30.10	$31.17	$32.64	$32.04	$33.96

Fleet Maintenance FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	1.48	1.26	1.25	1.33	1.32
Average	2.16	1.99	2.03	2.06	2.06

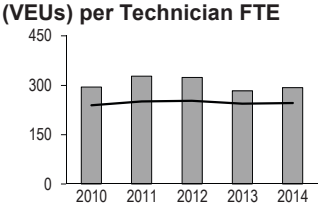
Fleet Maintenance FTEs per 100 Municipal Employees



	2010	2011	2012	2013	2014
Winston-Salem	1.28	1.01	1.08	1.25	1.14
Average	1.64	1.56	1.61	1.62	1.63

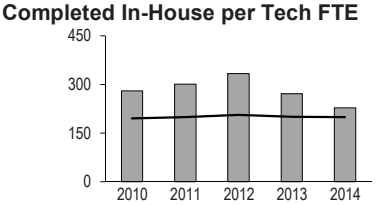
Workload Measures

Number of Vehicle Equivalent Units (VEUs) per Technician FTE



	2010	2011	2012	2013	2014
Winston-Salem	294	328	324	283	293
Average	239	251	253	244	246

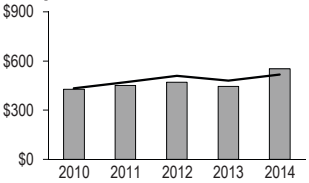
Preventive Maintenances (PMs) Completed In-House per Tech FTE



	2010	2011	2012	2013	2014
Winston-Salem	280	302	334	271	229
Average	195	199	207	200	199

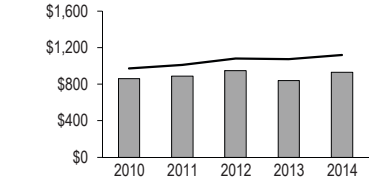
Efficiency Measures

Fleet Maintenance Cost per Work Order



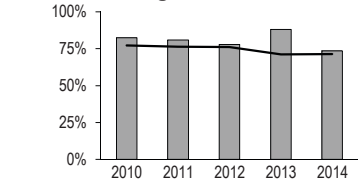
	2010	2011	2012	2013	2014
Winston-Salem	$428	$452	$470	$446	$552
Average	$433	$471	$510	$480	$517

Fleet Maintenance Cost per Vehicle Equivalent Unit (VEU)



	2010	2011	2012	2013	2014
Winston-Salem	$859	$889	$946	$839	$931
Average	$970	$1,009	$1,080	$1,073	$1,117

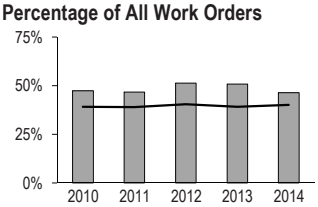
Hours Billed as a Percentage of Total Hours



	2010	2011	2012	2013	2014
Winston-Salem	82%	81%	78%	88%	73%
Average	77%	76%	76%	71%	71%

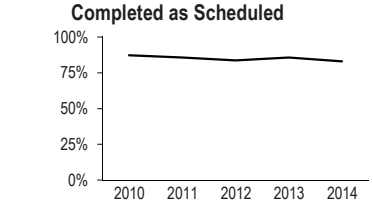
Effectiveness Measures

Preventive Maintenances (PMs) as a Percentage of All Work Orders



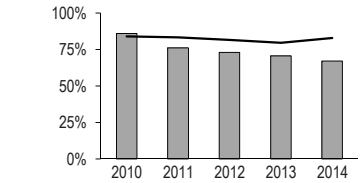
	2010	2011	2012	2013	2014
Winston-Salem	47%	47%	51%	51%	46%
Average	39%	39%	40%	39%	40%

Percentage of Preventive Maintenances (PMs) Completed as Scheduled



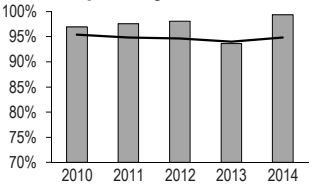
	2010	2011	2012	2013	2014
Winston-Salem					
Average	87%	86%	84%	86%	83%

Percentage of Work Orders Completed within 24 Hours



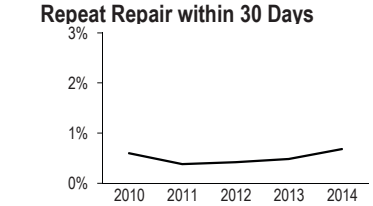
	2010	2011	2012	2013	2014
Winston-Salem	86%	76%	73%	70%	67%
Average	84%	83%	82%	80%	83%

Percentage of Rolling Stock Available per Day



	2010	2011	2012	2013	2014
Winston-Salem	97%	98%	98%	94%	99%
Average	95%	95%	95%	94%	95%

Percentage of Work Orders Requiring Repeat Repair within 30 Days



	2010	2011	2012	2013	2014
Winston-Salem					
Average	0.60%	0.39%	0.42%	0.49%	0.68%


UNC
SCHOOL OF
GOVERNMENT

Performance and Cost Data

CENTRAL HUMAN RESOURCES


UNC
SCHOOL OF
GOVERNMENT

PERFORMANCE MEASURES FOR CENTRAL HUMAN RESOURCES

SERVICE DEFINITION

Central human resources represents an internal support service. It is characterized by various functions related to the daily management of human capital or personnel, including compensation analysis; position classification; benefits administration; management of employee training and development; employee relations; position control; employee performance evaluations; recruitment and selection; occupational health, wellness, and safety programs; administration of a Human Resources Information System (HRIS); and general administration of the central human resources office. Excluded from the counts here are staff who may be assisting with certain human resource functions but who are not in the central human resources department, such as employees who might be assigned to individual departments. Also excluded from this service area is risk financing, including general liability insurance and workers' compensation.

NOTES ON PERFORMANCE MEASURES

1. Total Workforce FTEs per 10,000 Population

The number of full-time equivalent (FTE) positions includes all permanent full-time and permanent part-time employees budgeted for the municipality. One FTE equates to 2,080 hours of work per year. Any combination of employees providing 2,080 hours of annual work equals one FTE.

2. Number of Applications Received per 100 Employees

Human resources is responsible for the recruitment and selection of applicants to fill new or vacant positions.

3. Number of Position Requisitions per 100 Employees

Position requisitions are submitted to the human resources office by departments seeking to fill vacant positions.

4. Cost per Employee

This measure represents the total cost of human resources for the fiscal year ending June 30 and is calculated using the project's full cost accounting model, which captures direct, indirect, and capital costs. Cost per employee is the primary measure of cost efficiency for this service area.

5. Ratio of Human Resources Staff to Total Workforce

This is a calculation of human resource FTEs divided by the total number of permanent municipal workforce, including full- and part-time staff.

6. Probationary Period Completion Rate (New Hires)

Most organizations require that new employees complete a probationary employment period, typically lasting three to eighteen months from the hire date, depending on the job classification. This effectiveness measure is calculated by dividing the total number of employees that completed the probationary period by the number of employees eligible to complete the probationary period during the fiscal year.

7. Employee Total Turnover Rate
The employee turnover rate is calculated by dividing the total number of separated staff during the fiscal year by the total number of authorized positions.

8. Employee Voluntary Turnover Rate
The voluntary employee turnover rate is calculated by dividing the number of voluntarily separated staff during the fiscal year by the total number of authorized positions. Voluntary separations include retirements and resignations.

9. Percentage of Grievances Resolved at Department Level
Most jurisdictions have a process in place for handling formal grievances filed by employees. This effectiveness measure is calculated by dividing the number of formal grievances that were resolved within the respective department (prior to going to a higher level or third party for resolution) by the total number of grievances filed during the fiscal year.

10. Average Number of Days from Position Post Date to Hire Date
This includes the number of working days from the date a job is posted to the hire date (first day of employment). It includes only recruitments for permanent full-time and part-time positions that were completed during the fiscal year. This measure excludes recruitment of temporary workers.

Central Human Resources

Summary of Key Dimensions of Service

City or Town	Total Number of Authorized Municipal Positions	Average Length of Service (in Years)	Number of Position Requisitions	Number of Employment Applications Processed	Number of Retirees Serviced	Probationary Period	Turnover Rate	Number of HR FTEs
Apex	349	8.8	56	4,263	17	6 & 12 months	8.0%	2.8
Asheville	1,146	9.7	164	12,488	203	6 months	12.2%	16.0
Burlington	1,056	11.6	42	1,320	15	6 & 12 months	14.2%	3.5
Cary	1,209	10.8	402	13,799	195	6 & 12 months	5.8%	13.6
Charlotte	6,915	11.3	461	84,463	2,000	6 & 12 months	7.3%	37.0
Concord	939	10.6	17	2,918	272	6 & 12 months	2.9%	7.0
Greensboro	3,185	11.7	294	17,603	1,532	6 & 12 months	8.5%	34.0
Greenville	772	11.5	78	8,930	233	6 & 12 months	7.8%	9.0
Hickory	721	9.8	73	4,715	44	12 months	8.5%	5.0
High Point	1,563	11.8	320	2,952	88	12 months	7.9%	12.5
Salisbury	476	11.0	54	922	66	6 & 12 months	13.0%	7.0
Wilson	750	10.2	68	2,056	350	12 months	11.6%	4.5
Winston-Salem	2,809	11.6	514	21,420	425	None	9.0%	18.8

NOTES

For municipalities with varying probationary periods, typically fire and/or police personnel have longer probationary periods.

11.5

EXPLANATORY FACTORS

These are factors that the project found affected human resources performance and cost in one or more of the municipalities:

Decentralization of HR functions
Personnel policies
External economic climate
Unemployment rate
Extent of contracting out for services
Departmental discretion regarding vacancies
Hiring freezes
State and/or federal mandates

Apex Central Human Resources

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Human Resources Department for Apex provides a comprehensive assortment of services, including occupational health and wellness, benefits, recruitment and selection, compensation, employee relations, and training and development programs.

One employee compensation study was completed during the fiscal year covering thirty-two postions. The Town of Apex tries to study one-third of the job classifications every three years and uses a consultant to assist in this process.

The town's probationary period for new employees is six months for general employees and twelve months for sworn police, fire, and EMS personnel.

Conditions Affecting Service, Performance, and Costs

Apex began participation in the benchmarking project in July 2011, with FY 2010–11 being the first reporting year.

Municipal Profile

Population (OSBM 2013)	40,925
Land Area (Square Miles)	16.25
Persons per Square Mile	2,518
Median Family Income U.S. Census 2010	$97,201
County Unemployment Rate (2013) N.C. Employment Security Commission	6.6%

Service Profile

Central HR FTE Positions	
Administration	1.0
Generalist/Specialist	1.0
Staff Support/Clerical	0.75
Total Authorized Workforce	349.0
Authorized FTEs	347.8
Average Length of Service (Months)	105
Number of Position Requisitions	56
Employment Applications Processed	4,263
Length of Probationary Employment Period	6 or 12 months
Compensation Studies Completed	1
Positions Studied	78
Employee Turnover	
Voluntary Separations	20
Involuntary Separations	8
TOTAL SEPARATIONS	28
Formal Grievances Filed by Employees	0
Equal Employment Opportunity Commission (EEOC) Complaints Filed	0

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	62.9%
Operating Costs	34.8%
Capital Costs	2.2%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$269,405
Operating Costs	$148,972
Capital Costs	$9,620
TOTAL	$427,997

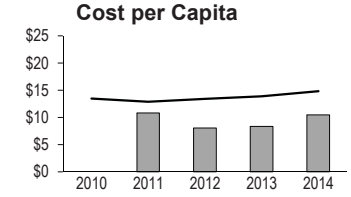
Apex

Central Human Resources

Key: Apex ■ Benchmarking Average — Fiscal Years 2010 through 2014

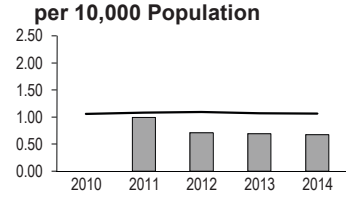
Resource Measures

Human Resources Services Cost per Capita



	2010	2011	2012	2013	2014
Apex		$10.83	$8.05	$8.36	$10.46
Average	$13.45	$12.88	$13.43	$13.90	$14.80

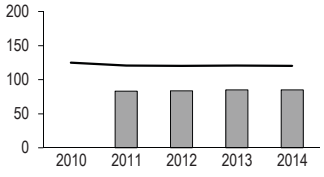
Human Resources FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Apex		0.99	0.71	0.69	0.67
Average	1.06	1.08	1.09	1.07	1.07

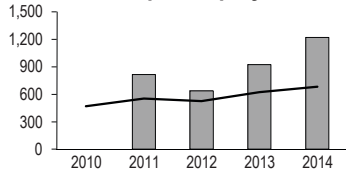
Workload Measures

Total Municipal FTEs per 10,000 Population



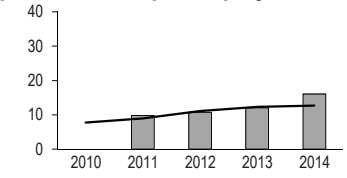
	2010	2011	2012	2013	2014
Apex		83	84	85	85
Average	125	121	120	121	120

Applications Processed per 100 Municipal Employees



	2010	2011	2012	2013	2014
Apex		814	638	925	1,221
Average	471	553	525	622	684

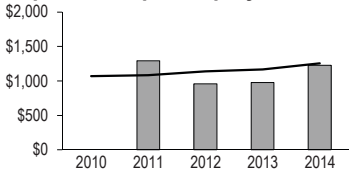
Position Requisitions per 100 Municipal Employees



	2010	2011	2012	2013	2014
Apex		9.8	10.8	12.1	16.0
Average	7.8	9.0	11.1	12.3	12.7

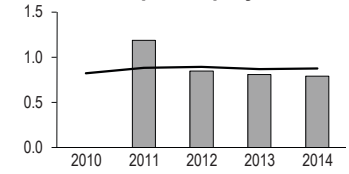
Efficiency Measures

Human Resources Cost per Municipal Employee



	2010	2011	2012	2013	2014
Apex		$1,293	$958	$978	$1,226
Average	$1,072	$1,083	$1,139	$1,169	$1,255

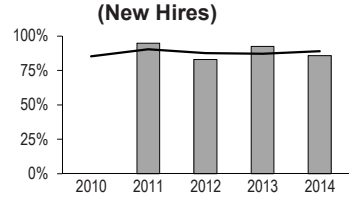
Ratio of Human Resources Staff to 100 Municipal Employees



	2010	2011	2012	2013	2014
Apex		1.19	0.85	0.81	0.79
Average	0.82	0.88	0.89	0.87	0.88

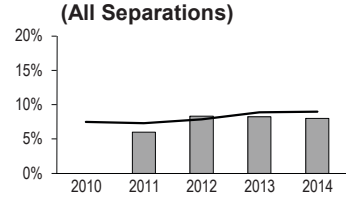
Effectiveness Measures

Probationary Period Completion Rate (New Hires)



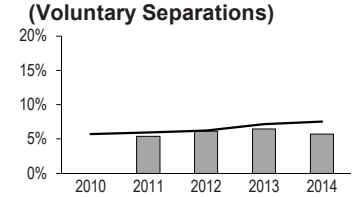
	2010	2011	2012	2013	2014
Apex		95%	83%	93%	86%
Average	85%	90%	88%	87%	89%

Employee Turnover Rate (All Separations)



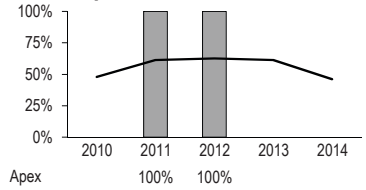
	2010	2011	2012	2013	2014
Apex		6.0%	8.3%	8.2%	8.0%
Average	7.5%	7.3%	7.9%	8.9%	9.0%

Employee Turnover Rate (Voluntary Separations)



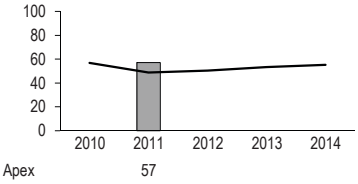
	2010	2011	2012	2013	2014
Apex		5.4%	6.2%	6.5%	5.7%
Average	5.7%	6.0%	6.2%	7.2%	7.5%

Percentage of Grievances Resolved at Department Level



	2010	2011	2012	2013	2014
Apex		100%	100%		
Average	48%	61%	63%	61%	46%

Average Days from Post Date to Hire Date (First Day of Employment)



	2010	2011	2012	2013	2014
Apex		57			
Average	57	49	50	53	55

Asheville — Central Human Resources

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Human Resources Department provides a comprehensive assortment of services, including occupational health and wellness, benefits, recruitment and selection, compensation, employee relations, and youth development programs.

The city's probationary period for new employees is six months.

Conditions Affecting Service, Performance, and Costs

The city's data include the following positions (and related costs) as part of the city's Human Resources Department: Health Services Supervisor, registered nurse, and administrative staff.

Employee relations issues are resolved through the city's administration.

All advertising costs for vacant positions are now paid for out of the Human Resources budget, with the exception of industry-specific websites or publications specifically requested by the individual departments.

Municipal Profile

Population (OSBM 2013)	88,003
Land Area (Square Miles)	45.52
Persons per Square Mile	1,933
Median Family Income U.S. Census 2010	$53,350
County Unemployment Rate (2013) N.C. Employment Security Commission	6.4%

Service Profile

Central HR FTE Positions	
Administration	4.95
Generalist/Specialist	7.40
Staff Support/Clerical	3.63
Total Authorized Workforce	1,145.9
Authorized FTEs	1,145.9
Average Length of Service (Months)	116
Number of Position Requisitions	164
Employment Applications Processed	12,488
Length of Probationary Employment Period	6 months
Compensation Studies Completed	0
Positions Studied	0
Employee Turnover	
Voluntary Separations	130
Involuntary Separations	10
TOTAL SEPARATIONS	140
Formal Grievances Filed by Employees	10
Equal Employment Opportunity Commission (EEOC) Complaints Filed	7

Full Cost Profile

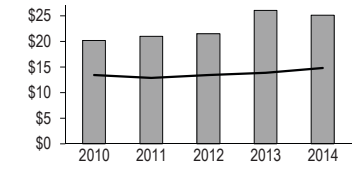
Cost Breakdown by Percentage	
Personal Services	56.0%
Operating Costs	42.8%
Capital Costs	1.2%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,238,018
Operating Costs	$945,262
Capital Costs	$27,018
TOTAL	$2,210,298

Asheville — Central Human Resources

Key: Asheville ■ Benchmarking Average — Fiscal Years 2010 through 2014

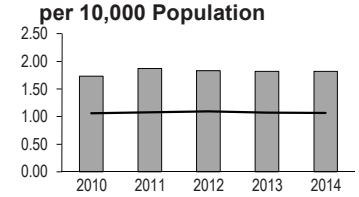
Resource Measures

Human Resources Services Cost per Capita



	2010	2011	2012	2013	2014
Asheville	$20.20	$20.99	$21.48	$26.04	$25.12
Average	$13.45	$12.88	$13.43	$13.90	$14.80

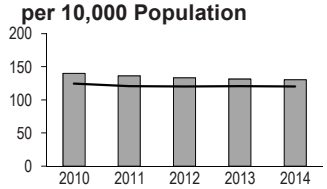
Human Resources FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Asheville	1.73	1.87	1.83	1.82	1.82
Average	1.06	1.08	1.09	1.07	1.07

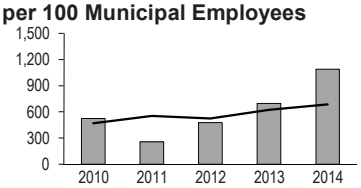
Workload Measures

Total Municipal FTEs per 10,000 Population



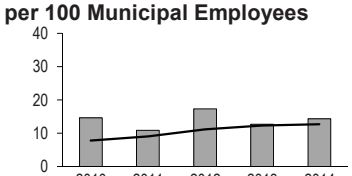
	2010	2011	2012	2013	2014
Asheville	140	136	133	131	130
Average	125	121	120	121	120

Applications Processed per 100 Municipal Employees



	2010	2011	2012	2013	2014
Asheville	524	255	478	697	1,090
Average	471	553	525	622	684

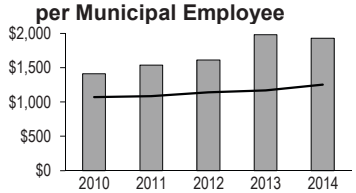
Position Requisitions per 100 Municipal Employees



	2010	2011	2012	2013	2014
Asheville	14.7	10.9	17.3	12.7	14.3
Average	7.8	9.0	11.1	12.3	12.7

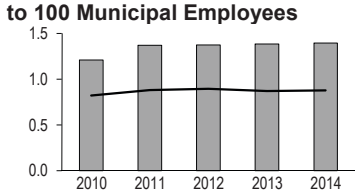
Efficiency Measures

Human Resources Cost per Municipal Employee



	2010	2011	2012	2013	2014
Asheville	$1,410	$1,539	$1,614	$1,981	$1,929
Average	$1,072	$1,083	$1,139	$1,169	$1,255

Ratio of Human Resources Staff to 100 Municipal Employees



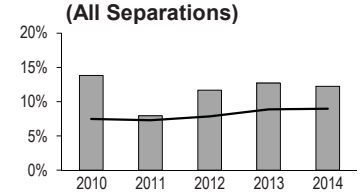
	2010	2011	2012	2013	2014
Asheville	1.21	1.37	1.38	1.38	1.39
Average	0.82	0.88	0.89	0.87	0.88

Effectiveness Measures

Probationary Period Completion Rate (New Hires)

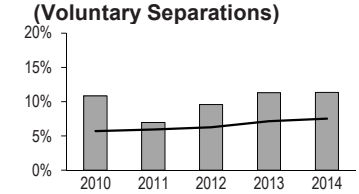
	2010	2011	2012	2013	2014
Asheville	91%	100%	77%	81%	93%
Average	85%	90%	88%	87%	89%

Employee Turnover Rate (All Separations)



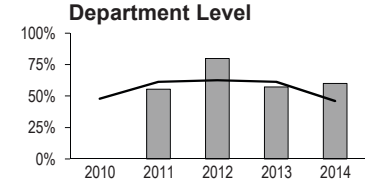
	2010	2011	2012	2013	2014
Asheville	13.8%	7.9%	11.7%	12.7%	12.2%
Average	7.5%	7.3%	7.9%	8.9%	9.0%

Employee Turnover Rate (Voluntary Separations)



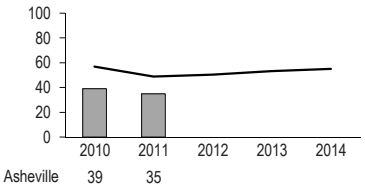
	2010	2011	2012	2013	2014
Asheville	10.8%	7.0%	9.6%	11.3%	11.3%
Average	5.7%	6.0%	6.2%	7.2%	7.5%

Percentage of Grievances Resolved at Department Level



	2010	2011	2012	2013	2014
Asheville		56%	80%	57%	60%
Average	48%	61%	63%	61%	46%

Average Days from Post Date to Hire Date (First Day of Employment)



	2010	2011	2012	2013	2014
Asheville	39	35			
Average	57	49	50	53	55

Burlington — Central Human Resources

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Burlington's Human Resources (HR) Department is a separate department consisting of four full-time positions: an HR director, two HR specialists, and a staff support person.

The city's probationary period for new employees is twelve months for police and six months for all other employees.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Population (OSBM 2013)	51,396
Land Area (Square Miles)	27.28
Persons per Square Mile	1,884
Median Family Income U.S. Census 2010	$46,461
County Unemployment Rate (2013) N.C. Employment Security Commission	8.4%

Service Profile

Central HR FTE Positions	
Administration	1.0
Generalist/Specialist	2.0
Staff Support/Clerical	0.5
Total Authorized Workforce	1,056.0
Authorized FTEs	804.0
Average Length of Service (Months)	140
Number of Position Requisitions	164
Employment Applications Processed	1,320
Length of Probationary Employment Period	6 or 12 months
Compensation Studies Completed	1
Positions Studied	244
Employee Turnover	
Voluntary Separations	130
Involuntary Separations	20
TOTAL SEPARATIONS	150
Formal Grievances Filed by Employees	0
Equal Employment Opportunity Commission (EEOC) Complaints Filed	1

Full Cost Profile

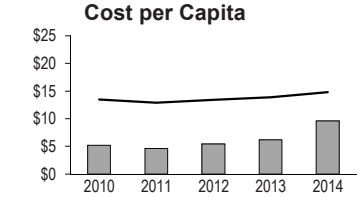
Cost Breakdown by Percentage	
Personal Services	51.1%
Operating Costs	45.6%
Capital Costs	3.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$251,479
Operating Costs	$224,530
Capital Costs	$16,018
TOTAL	$492,027

Burlington — Central Human Resources

Key: Burlington ■ Benchmarking Average — Fiscal Years 2010 through 2014

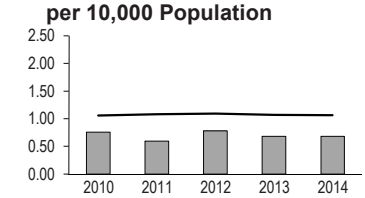
Resource Measures

Human Resources Services Cost per Capita



	2010	2011	2012	2013	2014
Burlington	$5.22	$4.59	$5.45	$6.17	$9.57
Average	$13.45	$12.88	$13.43	$13.90	$14.80

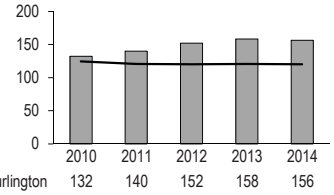
Human Resources FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Burlington	0.76	0.59	0.78	0.68	0.68
Average	1.06	1.08	1.09	1.07	1.07

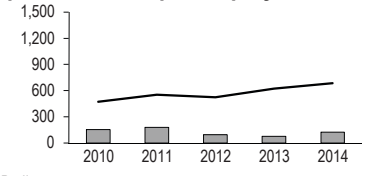
Workload Measures

Total Municipal FTEs per 10,000 Population



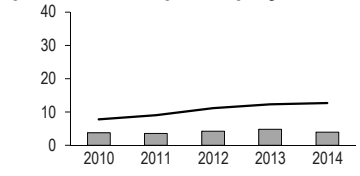
	2010	2011	2012	2013	2014
Burlington	132	140	152	158	156
Average	125	121	120	121	120

Applications Processed per 100 Municipal Employees



	2010	2011	2012	2013	2014
Burlington	152	179	94	77	125
Average	471	553	525	622	684

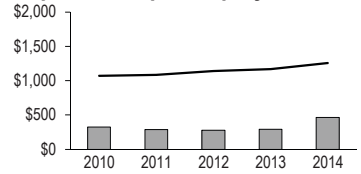
Position Requisitions per 100 Municipal Employees



	2010	2011	2012	2013	2014
Burlington	3.8	3.6	4.3	4.8	4.0
Average	7.8	9.0	11.1	12.3	12.7

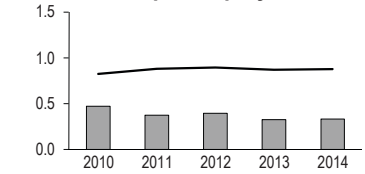
Efficiency Measures

Human Resources Cost per Municipal Employee



	2010	2011	2012	2013	2014
Burlington	$324	$288	$276	$293	$466
Average	$1,072	$1,083	$1,139	$1,169	$1,255

Ratio of Human Resources Staff to 100 Municipal Employees



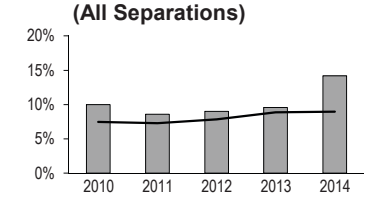
	2010	2011	2012	2013	2014
Burlington	0.47	0.37	0.40	0.33	0.33
Average	0.82	0.88	0.89	0.87	0.88

Effectiveness Measures

Probationary Period Completion Rate (New Hires)

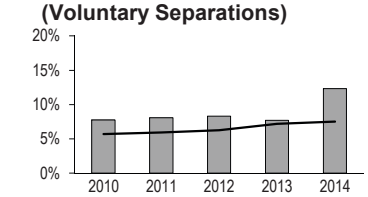
	2010	2011	2012	2013	2014
Burlington	77%	100%	95%	100%	87%
Average	85%	90%	88%	87%	89%

Employee Turnover Rate (All Separations)



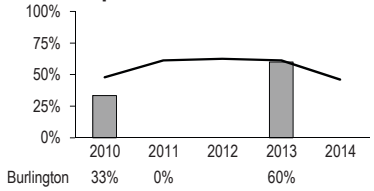
	2010	2011	2012	2013	2014
Burlington	10.0%	8.6%	9.0%	9.6%	14.2%
Average	7.5%	7.3%	7.9%	8.9%	9.0%

Employee Turnover Rate (Voluntary Separations)



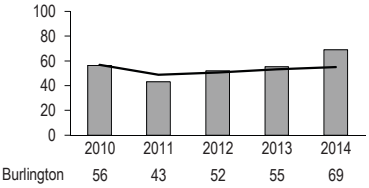
	2010	2011	2012	2013	2014
Burlington	7.8%	8.1%	8.3%	7.7%	12.3%
Average	5.7%	6.0%	6.2%	7.2%	7.5%

Percentage of Grievances Resolved at Department Level



	2010	2011	2012	2013	2014
Burlington	33%	0%		60%	
Average	48%	61%	63%	61%	46%

Average Days from Post Date to Hire Date (First Day of Employment)



	2010	2011	2012	2013	2014
Burlington	56	43	52	55	69
Average	57	49	50	53	55

Cary Central Human Resources

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Town of Cary's Human Resources (HR) Department includes the following: a director, an employee relations manager, an employee benefits manager, an employee compensation and recruitment manager, and an employee safety coordinator as part of the HR management team. A number of other consultants, assistants, and specialists provide support and services in carrying out the work performed by HR.

The town conducted one compensation study during FY 2013–14 that involved the study of 223 positions.

The town's probationary period for new employees is six months for non–public safety employees and twelve months for public safety employees.

Conditions Affecting Service, Performance, and Costs

The employee benefits manager also administers workers' compensation. In many other organizations, this function is performed within a risk-management department. The HR assistants also handle many payroll tasks which in other organizations might be handled within the finance department.

Municipal Profile

Population (OSBM 2013)	144,671
Land Area (Square Miles)	55.54
Persons per Square Mile	2,605
Median Family Income U.S. Census 2010	$108,956
County Unemployment Rate (2013) N.C. Employment Security Commission	6.6%

Service Profile

Central HR FTE Positions	
Administration	5.0
Generalist/Specialist	5.0
Staff Support/Clerical	3.63
Total Authorized Workforce	1,209.0
Authorized FTEs	1,200.3
Average Length of Service (Months)	129
Number of Position Requisitions	402
Employment Applications Processed	13,799
Length of Probationary Employment Period	6 or 12 months
Compensation Studies Completed	1
Positions Studied	223
Employee Turnover	
Voluntary Separations	68
Involuntary Separations	2
TOTAL SEPARATIONS	70
Formal Grievances Filed by Employees	2
Equal Employment Opportunity Commission (EEOC) Complaints Filed	1

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	59.2%
Operating Costs	39.4%
Capital Costs	1.4%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,342,160
Operating Costs	$892,674
Capital Costs	$30,752
TOTAL	$2,265,586

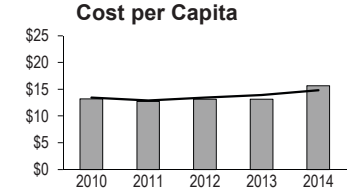
Cary

Central Human Resources

Key: Cary ■ Benchmarking Average — Fiscal Years 2010 through 2014

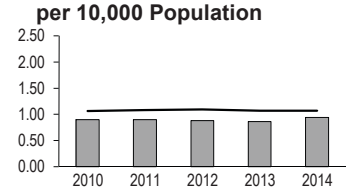
Resource Measures

Human Resources Services Cost per Capita



	2010	2011	2012	2013	2014
Cary	$13.19	$12.71	$13.13	$13.12	$15.66
Average	$13.45	$12.88	$13.43	$13.90	$14.80

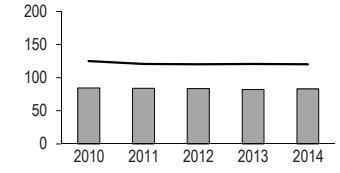
Human Resources FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Cary	0.90	0.90	0.88	0.86	0.94
Average	1.06	1.08	1.09	1.07	1.07

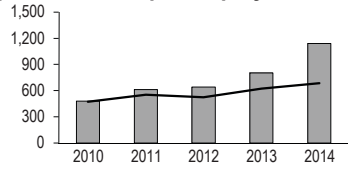
Workload Measures

Total Municipal FTEs per 10,000 Population



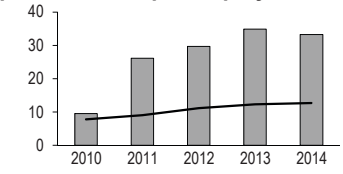
	2010	2011	2012	2013	2014
Cary	84	84	83	82	83
Average	125	121	120	121	120

Applications Processed per 100 Municipal Employees



	2010	2011	2012	2013	2014
Cary	480	613	640	801	1,141
Average	471	553	525	622	684

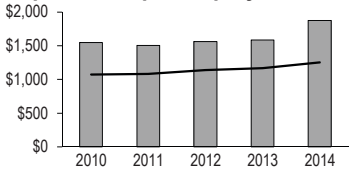
Position Requisitions per 100 Municipal Employees



	2010	2011	2012	2013	2014
Cary	9.5	26.2	29.7	34.9	33.3
Average	7.8	9.0	11.1	12.3	12.7

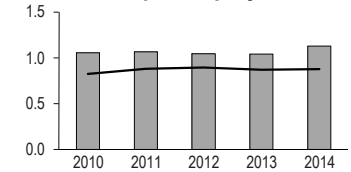
Efficiency Measures

Human Resources Cost per Municipal Employee



	2010	2011	2012	2013	2014
Cary	$1,549	$1,505	$1,559	$1,586	$1,874
Average	$1,072	$1,083	$1,139	$1,169	$1,255

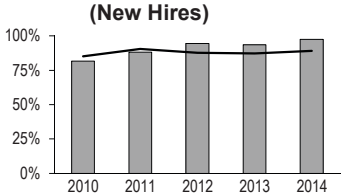
Ratio of Human Resources Staff to 100 Municipal Employees



	2010	2011	2012	2013	2014
Cary	1.05	1.07	1.05	1.04	1.13
Average	0.82	0.88	0.89	0.87	0.88

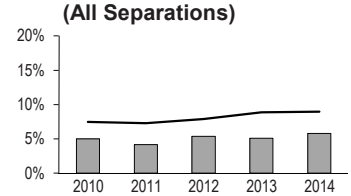
Effectiveness Measures

Probationary Period Completion Rate (New Hires)



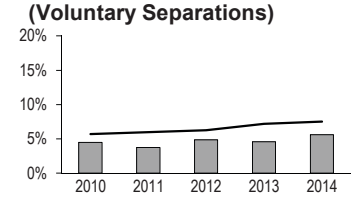
	2010	2011	2012	2013	2014
Cary	82%	88%	94%	93%	98%
Average	85%	90%	88%	87%	89%

Employee Turnover Rate (All Separations)



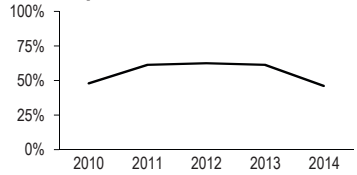
	2010	2011	2012	2013	2014
Cary	5.0%	4.2%	5.4%	5.1%	5.8%
Average	7.5%	7.3%	7.9%	8.9%	9.0%

Employee Turnover Rate (Voluntary Separations)



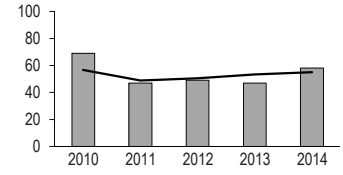
	2010	2011	2012	2013	2014
Cary	4.5%	3.7%	4.9%	4.6%	5.6%
Average	5.7%	6.0%	6.2%	7.2%	7.5%

Percentage of Grievances Resolved at Department Level



	2010	2011	2012	2013	2014
Cary	0%	0%			
Average	48%	61%	63%	61%	46%

Average Days from Post Date to Hire Date (First Day of Employment)



	2010	2011	2012	2013	2014
Cary	69	47	49	47	58
Average	57	49	50	53	55

Charlotte — Central Human Resources

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Charlotte's Human Resources Business Unit is organized into five core services: benefits, compensations, business unit services, HRMS/payroll, and organizational development and learning. These functional areas perform a variety of strategic, tactical, and transactional services. Some of the transactional services are outsourced.

During FY 2013–14, ten compensation studies were conducted covering 121 positions. Surveys were done on the basis of national, regional, and other larger city comparisons. There were 84,463 applications processed electronically or online. All applicants (except sworn police and fire positions) must use the PeopleSoft online job application software for each position for which they wish to apply.

The city is self-insured for medical and dental insurance, and third-party administrators are retained to administer the plans. The wellness program, Wellness Works, includes a number of programs, such as tobacco cessation, annual flu shots, blood pressure screenings, onsite education programs, and weight loss programs. The city partners with Provant to administer health coaching and health risk assessments. New in 2011, the city offered a premium differential to employees who take a health screening, complete a health assessment, and engage with a health coach on an ongoing basis.

Conditions Affecting Service, Performance, and Costs

Charlotte has a very robust wellness program. Many resources are devoted to the success of this program. There are wellness ambassadors in every department in the city.

The payroll function in many cities is located in finance; it resides in Human Resources in Charlotte. The computation of indirect costs for Human Resources was changed in Fiscal Year 2011–2012, resulting in somewhat higher total costs than would have been the case using the method from prior years.

Municipal Profile

Population (OSBM 2013)	789,248
Land Area (Square Miles)	304.28
Persons per Square Mile	2,594
Median Family Income U.S. Census 2010	$61,405
County Unemployment Rate (2013) N.C. Employment Security Commission	8.5%

Service Profile

Central HR FTE Positions	
Administration	7.0
Generalist/Specialist	29.0
Staff Support/Clerical	1.0
Total Authorized Workforce	6,915.0
Authorized FTEs	6,906.25
Average Length of Service (Months)	135
Number of Position Requisitions	461
Employment Applications Processed	84,463
Length of Probationary Employment Period	6 or 12 months
Compensation Studies Completed	10
Positions Studied	121
Employee Turnover	
Voluntary Separations	420
Involuntary Separations	84
TOTAL SEPARATIONS	504
Formal Grievances Filed by Employees	10
Equal Employment Opportunity Commission (EEOC) Complaints Filed	15

Full Cost Profile

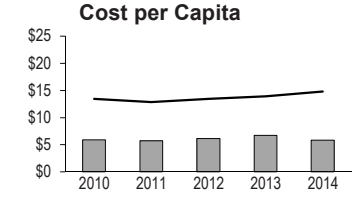
Cost Breakdown by Percentage	
Personal Services	69.3%
Operating Costs	27.6%
Capital Costs	3.1%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$3,213,652
Operating Costs	$1,278,092
Capital Costs	$143,521
TOTAL	$4,635,265

Charlotte — Central Human Resources

Key: Charlotte ■ Benchmarking Average — Fiscal Years 2010 through 2014

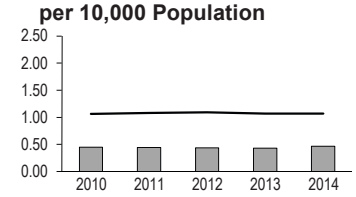
Resource Measures

Human Resources Services Cost per Capita



	2010	2011	2012	2013	2014
Charlotte	$5.94	$5.74	$6.15	$6.72	$5.87
Average	$13.45	$12.88	$13.43	$13.90	$14.80

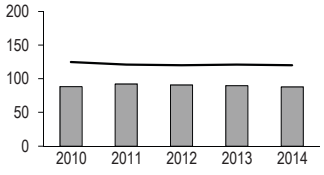
Human Resources FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Charlotte	0.45	0.44	0.44	0.43	0.47
Average	1.06	1.08	1.09	1.07	1.07

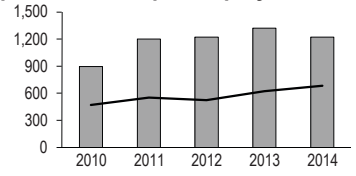
Workload Measures

Total Municipal FTEs per 10,000 Population



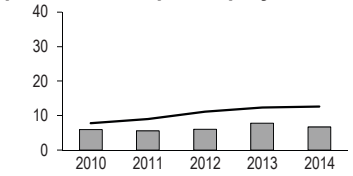
	2010	2011	2012	2013	2014
Charlotte	88	92	90	89	88
Average	125	121	120	121	120

Applications Processed per 100 Municipal Employees



	2010	2011	2012	2013	2014
Charlotte	895	1,202	1,221	1,322	1,221
Average	471	553	525	622	684

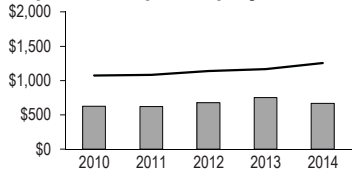
Position Requisitions per 100 Municipal Employees



	2010	2011	2012	2013	2014
Charlotte	5.9	5.6	6.1	7.8	6.7
Average	7.8	9.0	11.1	12.3	12.7

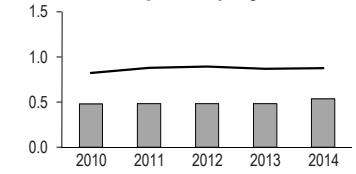
Efficiency Measures

Human Resources Cost per Municipal Employee



	2010	2011	2012	2013	2014
Charlotte	$627	$623	$678	$750	$670
Average	$1,072	$1,083	$1,139	$1,169	$1,255

Ratio of Human Resources Staff to 100 Municipal Employees



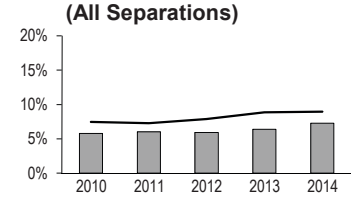
	2010	2011	2012	2013	2014
Charlotte	0.48	0.48	0.48	0.48	0.54
Average	0.82	0.88	0.89	0.87	0.88

Effectiveness Measures

Probationary Period Completion Rate (New Hires)

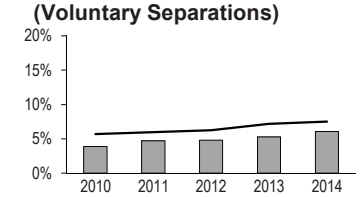
	2010	2011	2012	2013	2014
Charlotte	83%	93%	90%	83%	86%
Average	85%	90%	88%	87%	89%

Employee Turnover Rate (All Separations)



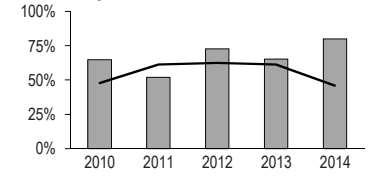
	2010	2011	2012	2013	2014
Charlotte	5.8%	6.0%	5.9%	6.4%	7.3%
Average	7.5%	7.3%	7.9%	8.9%	9.0%

Employee Turnover Rate (Voluntary Separations)



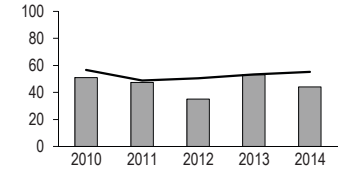
	2010	2011	2012	2013	2014
Charlotte	3.9%	4.7%	4.8%	5.3%	6.1%
Average	5.7%	6.0%	6.2%	7.2%	7.5%

Percentage of Grievances Resolved at Department Level



	2010	2011	2012	2013	2014
Charlotte	65%	52%	73%	65%	80%
Average	48%	61%	63%	61%	46%

Average Days from Post Date to Hire Date (First Day of Employment)



	2010	2011	2012	2013	2014
Charlotte	51	47	35	53	44
Average	57	49	50	53	55

Concord Central Human Resources

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Human Resources Department for the City of Concord is responsible for the following functions: departmental management, policy design and administration, classification and compensation design and administration, benefits plan design and administration, employee relations, grievance and disciplinary actions, and employee rewards.

The department conducted three compensation studies during FY 2013–14 covering 148 positions.

The city's probationary period for new employees is six months for non–public safety employees and twelve months for public safety employees.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Population (OSBM 2013)	83,279
Land Area (Square Miles)	60.93
Persons per Square Mile	1,367
Median Family Income U.S. Census 2010	$63,643
County Unemployment Rate (2013) N.C. Employment Security Commission	7.8%

Service Profile

Central HR FTE Positions	
Administration	2.0
Generalist/Specialist	3.0
Staff Support/Clerical	2.0
Total Authorized Workforce	939.0
Authorized FTEs	916..2
Average Length of Service (Months)	127
Number of Position Requisitions	17
Employment Applications Processed	2,918
Length of Probationary Employment Period	6 or 12 months
Compensation Studies Completed	3
Positions Studied	148
Employee Turnover	
Voluntary Separations	19
Involuntary Separations	8
TOTAL SEPARATIONS	27
Formal Grievances Filed by Employees	NA
Equal Employment Opportunity Commission (EEOC) Complaints Filed	NA

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	39.5%
Operating Costs	58.7%
Capital Costs	1.7%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$671,829
Operating Costs	$998,928
Capital Costs	$29,659
TOTAL	$1,700,416

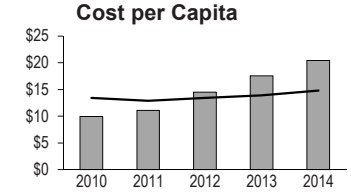
Concord

Central Human Resources

Key: Concord ■ Benchmarking Average — Fiscal Years 2010 through 2014

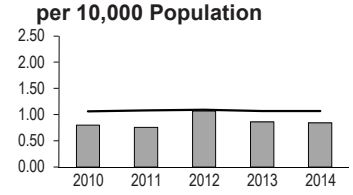
Resource Measures

Human Resources Services Cost per Capita



	2010	2011	2012	2013	2014
Concord	$9.98	$11.10	$14.51	$17.54	$20.42
Average	$13.45	$12.88	$13.43	$13.90	$14.80

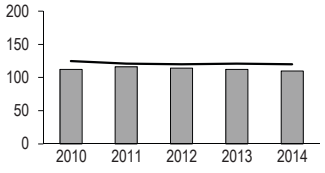
Human Resources FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Concord	0.80	0.75	1.07	0.86	0.84
Average	1.06	1.08	1.09	1.07	1.07

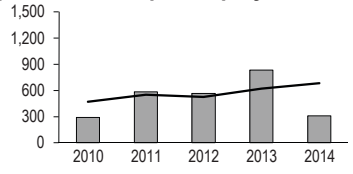
Workload Measures

Total Municipal FTEs per 10,000 Population



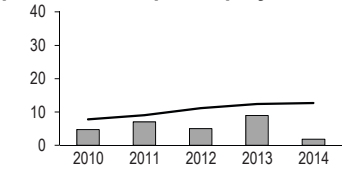
	2010	2011	2012	2013	2014
Concord	112	116	114	112	110
Average	125	121	120	121	120

Applications Processed per 100 Municipal Employees



	2010	2011	2012	2013	2014
Concord	293	584	565	835	311
Average	471	553	525	622	684

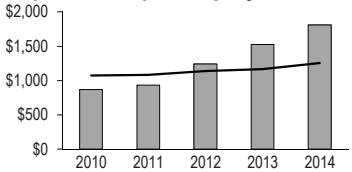
Position Requisitions per 100 Municipal Employees



	2010	2011	2012	2013	2014
Concord	4.7	7.0	5.0	9.0	1.8
Average	7.8	9.0	11.1	12.3	12.7

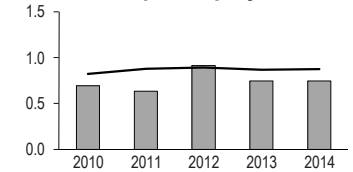
Efficiency Measures

Human Resources Cost per Municipal Employee



	2010	2011	2012	2013	2014
Concord	$868	$932	$1,241	$1,523	$1,811
Average	$1,072	$1,083	$1,139	$1,169	$1,255

Ratio of Human Resources Staff to 100 Municipal Employees



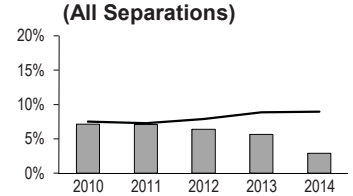
	2010	2011	2012	2013	2014
Concord	0.69	0.63	0.91	0.75	0.75
Average	0.82	0.88	0.89	0.87	0.88

Effectiveness Measures

Probationary Period Completion Rate (New Hires)

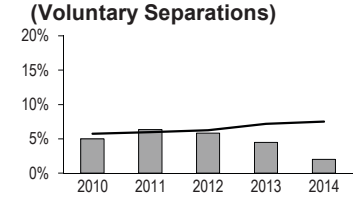
	2010	2011	2012	2013	2014
Concord	90%	100%	81%	98%	100%
Average	85%	90%	88%	87%	89%

Employee Turnover Rate (All Separations)



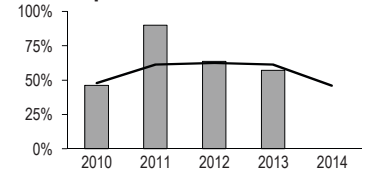
	2010	2011	2012	2013	2014
Concord	7.1%	7.1%	6.4%	5.7%	2.9%
Average	7.5%	7.3%	7.9%	8.9%	9.0%

Employee Turnover Rate (Voluntary Separations)



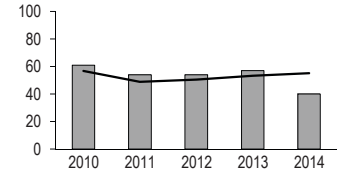
	2010	2011	2012	2013	2014
Concord	5.0%	6.3%	5.9%	4.5%	2.0%
Average	5.7%	6.0%	6.2%	7.2%	7.5%

Percentage of Grievances Resolved at Department Level



	2010	2011	2012	2013	2014
Concord	46%	90%	64%	57%	
Average	48%	61%	63%	61%	46%

Average Days from Post Date to Hire Date (First Day of Employment)



	2010	2011	2012	2013	2014
Concord	61	54	54	57	40
Average	57	49	50	53	55

Greensboro Central Human Resources

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Human Resources Department for the City of Greensboro provides comprehensive personnel services, including recruitment and selection, compensation, benefits, employee relations, safety, and occupational health and wellness. The total number of full-time equivalent (FTE) positions includes staff from the Training Division, which is housed in a separate department from Human Resources. The HR department has a staff attorney who is able to provide legal consultation on a variety of issues confronting the HR department.

The city conducted one compensation study during the year covering 118 positions.

The city's probationary period for new employees is six months for non–public safety employees and twelve months for public safety employees.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Population (OSBM 2013)	278,654
Land Area (Square Miles)	127.93
Persons per Square Mile	2,178
Median Family Income U.S. Census 2010	$52,752
County Unemployment Rate (2013) N.C. Employment Security Commission	8.7%

Service Profile

Central HR FTE Positions	
Administration	9.0
Generalist/Specialist	21.0
Staff Support/Clerical	4.0
Total Authorized Workforce	3,185.0
Authorized FTEs	3,169.0
Average Length of Service (Months)	140
Number of Position Requisitions	294
Employment Applications Processed	17,603
Length of Probationary Employment Period	6 or 12 months
Compensation Studies Completed	1
Positions Studied	118
Employee Turnover	
Voluntary Separations	218
Involuntary Separations	52
TOTAL SEPARATIONS	270
Formal Grievances Filed by Employees	41
Equal Employment Opportunity Commission (EEOC) Complaints Filed	12

Full Cost Profile

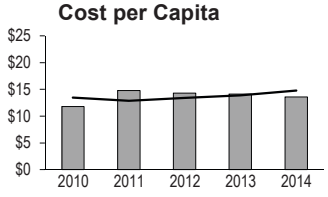
Cost Breakdown by Percentage	
Personal Services	74.7%
Operating Costs	25.3%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$2,827,401
Operating Costs	$956,754
Capital Costs	$0
TOTAL	$3,784,155

Greensboro — Central Human Resources

Key: Greensboro ■ Benchmarking Average — Fiscal Years 2010 through 2014

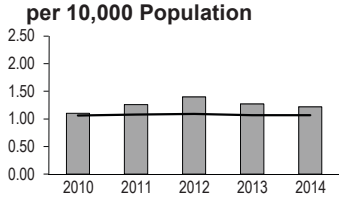
Resource Measures

Human Resources Services Cost per Capita



	2010	2011	2012	2013	2014
Greensboro	$11.81	$14.82	$14.31	$14.11	$13.58
Average	$13.45	$12.88	$13.43	$13.90	$14.80

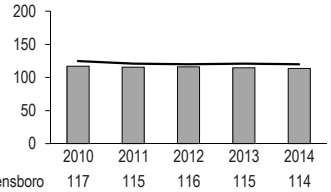
Human Resources FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greensboro	1.10	1.26	1.40	1.27	1.22
Average	1.06	1.08	1.09	1.07	1.07

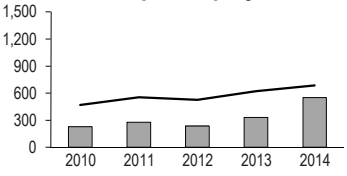
Workload Measures

Total Municipal FTEs per 10,000 Population



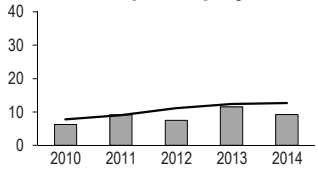
	2010	2011	2012	2013	2014
Greensboro	117	115	116	115	114
Average	125	121	120	121	120

Applications Processed per 100 Municipal Employees



	2010	2011	2012	2013	2014
Greensboro	230	280	237	332	553
Average	471	553	525	622	684

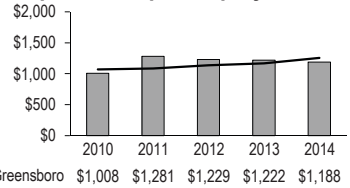
Position Requisitions per 100 Municipal Employees



	2010	2011	2012	2013	2014
Greensboro	6.2	9.1	7.5	11.5	9.2
Average	7.8	9.0	11.1	12.3	12.7

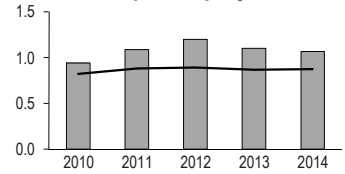
Efficiency Measures

Human Resources Cost per Municipal Employee



	2010	2011	2012	2013	2014
Greensboro	$1,008	$1,281	$1,229	$1,222	$1,188
Average	$1,072	$1,083	$1,139	$1,169	$1,255

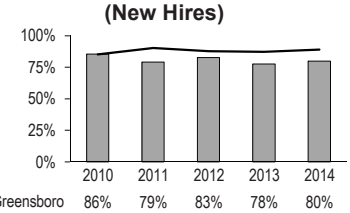
Ratio of Human Resources Staff to 100 Municipal Employees



	2010	2011	2012	2013	2014
Greensboro	0.94	1.09	1.20	1.10	1.07
Average	0.82	0.88	0.89	0.87	0.88

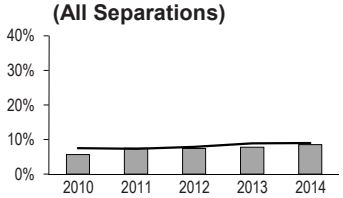
Effectiveness Measures

Probationary Period Completion Rate (New Hires)



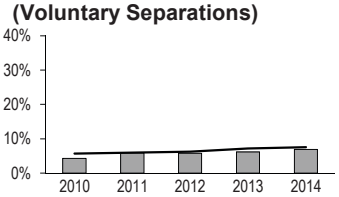
	2010	2011	2012	2013	2014
Greensboro	86%	79%	83%	78%	80%
Average	85%	90%	88%	87%	89%

Employee Turnover Rate (All Separations)



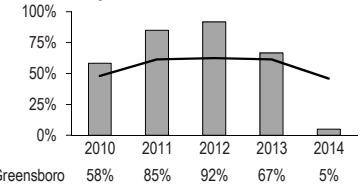
	2010	2011	2012	2013	2014
Greensboro	5.6%	7.5%	7.4%	7.7%	8.5%
Average	7.5%	7.3%	7.9%	8.9%	9.0%

Employee Turnover Rate (Voluntary Separations)



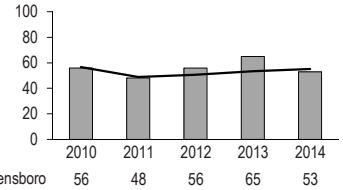
	2010	2011	2012	2013	2014
Greensboro	4.2%	5.9%	5.8%	6.2%	6.8%
Average	5.7%	6.0%	6.2%	7.2%	7.5%

Percentage of Grievances Resolved at Department Level



	2010	2011	2012	2013	2014
Greensboro	58%	85%	92%	67%	5%
Average	48%	61%	63%	61%	46%

Average Days from Post Date to Hire Date (First Day of Employment)



	2010	2011	2012	2013	2014
Greensboro	56	48	56	65	53
Average	57	49	50	53	55

Greenville Central Human Resources

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Human Resources Department for the City of Greenville is responsible for recruitment and selection, salary and benefits administration, position classification, employee relations, affirmative action and equal employment opportunity, training and development, risk administration, and safety.

The city's probationary period is twelve months for all law enforcement personnel and employees in a trainee status, such as fire/rescue trainees. All other employees serve a six-month probationary period.

Nearly all employment applications are processed online. The Human Resources Department screens applications to ensure that applicants meet the position minimum qualifications. Applications are only accepted for positions that are open for recruitment.

Greenville has a voluntary wellness program focusing on education, fitness, mental health, nutrition, weight management, personal health, and personal safety. A safety specialist provides technical safety and occupational illness and injury prevention training.

A formal grievance by an employee in Greenville requires a written notice given to a supervisor appealing a disciplinary action. The grievance process is an internal one, moving up the chain of command with specific timeframes for responses and appeals to the next level.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Population (OSBM 2013)	87,241
Land Area (Square Miles)	34.85
Persons per Square Mile	2,503
Median Family Income U.S. Census 2010	$50,395
County Unemployment Rate (2013) N.C. Employment Security Commission	8.5%

Service Profile

Central HR FTE Positions	
Administration	3.0
Generalist/Specialist	3.0
Staff Support/Clerical	3.0
Total Authorized Workforce	772.0
Authorized FTEs	765.75
Average Length of Service (Months)	164
Number of Position Requisitions	78
Employment Applications Processed	6,650
Length of Probationary Employment Period	6 or 12 months
Compensation Studies Completed	0
Positions Studied	0
Employee Turnover	
Voluntary Separations	53
Involuntary Separations	7
TOTAL SEPARATIONS	60
Formal Grievances Filed by Employees	6
Equal Employment Opportunity Commission (EEOC) Complaints Filed	1

Full Cost Profile

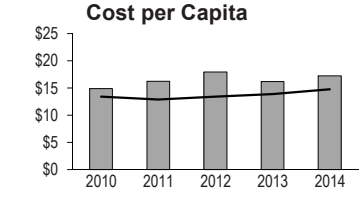
Cost Breakdown by Percentage	
Personal Services	60.1%
Operating Costs	39.4%
Capital Costs	0.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$904,042
Operating Costs	$592,604
Capital Costs	$7,050
TOTAL	$1,503,696

Greenville — Central Human Resources

Key: Greenville ■ Benchmarking Average — Fiscal Years 2010 through 2014

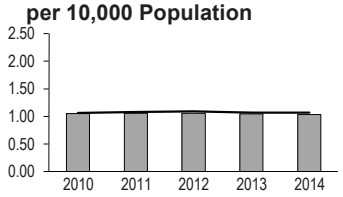
Resource Measures

Human Resources Services Cost per Capita



	2010	2011	2012	2013	2014
Greenville	$14.92	$16.27	$17.98	$16.19	$17.24
Average	$13.45	$12.88	$13.43	$13.90	$14.80

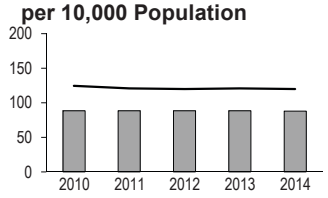
Human Resources FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greenville	1.05	1.06	1.06	1.04	1.03
Average	1.06	1.08	1.09	1.07	1.07

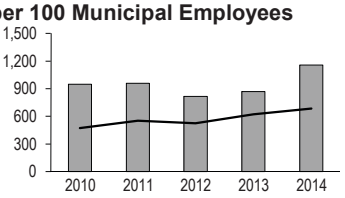
Workload Measures

Total Municipal FTEs per 10,000 Population



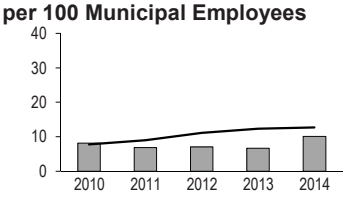
	2010	2011	2012	2013	2014
Greenville	88	88	88	88	88
Average	125	121	120	121	120

Applications Processed per 100 Municipal Employees



	2010	2011	2012	2013	2014
Greenville	950	957	816	869	1,157
Average	471	553	525	622	684

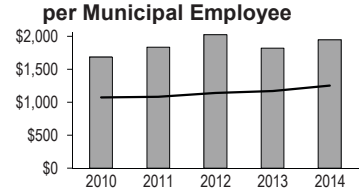
Position Requisitions per 100 Municipal Employees



	2010	2011	2012	2013	2014
Greenville	8.2	6.9	7.0	6.7	10.1
Average	7.8	9.0	11.1	12.3	12.7

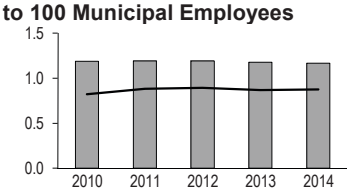
Efficiency Measures

Human Resources Cost per Municipal Employee



	2010	2011	2012	2013	2014
Greenville	$1,685	$1,835	$2,026	$1,823	$1,948
Average	$1,072	$1,083	$1,139	$1,169	$1,255

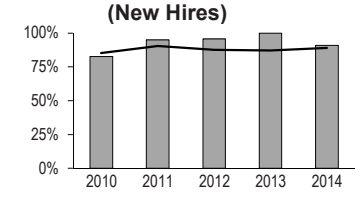
Ratio of Human Resources Staff to 100 Municipal Employees



	2010	2011	2012	2013	2014
Greenville	1.19	1.19	1.19	1.18	1.17
Average	0.82	0.88	0.89	0.87	0.88

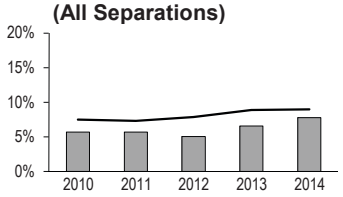
Effectiveness Measures

Probationary Period Completion Rate (New Hires)



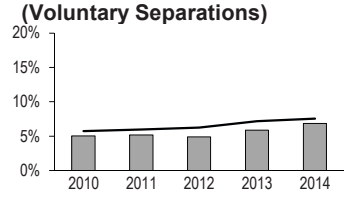
	2010	2011	2012	2013	2014
Greenville	83%	95%	96%	100%	91%
Average	85%	90%	88%	87%	89%

Employee Turnover Rate (All Separations)



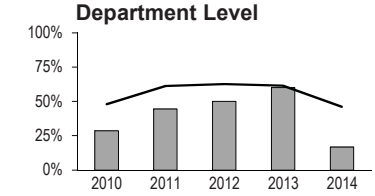
	2010	2011	2012	2013	2014
Greenville	5.7%	5.7%	5.0%	6.5%	7.8%
Average	7.5%	7.3%	7.9%	8.9%	9.0%

Employee Turnover Rate (Voluntary Separations)



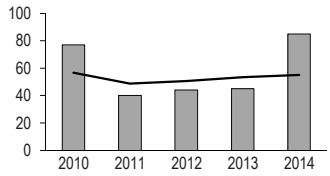
	2010	2011	2012	2013	2014
Greenville	5.0%	5.2%	4.9%	5.9%	6.9%
Average	5.7%	6.0%	6.2%	7.2%	7.5%

Percentage of Grievances Resolved at Department Level



	2010	2011	2012	2013	2014
Greenville	29%	44%	50%	60%	17%
Average	48%	61%	63%	61%	46%

Average Days from Post Date to Hire Date (First Day of Employment)



	2010	2011	2012	2013	2014
Greenville	77	40	44	45	85
Average	57	49	50	53	55

Hickory — Central Human Resources

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The human resources function for the City of Hickory contains a director, an organizational development coordinator, a city nurse, two human resources analysts (one oversees benefits administration and the other oversees general employment), and one clerical position. Risk management is a division of the human resources function, which includes a risk manager and a clerical support position.

The city's probationary period is twelve months for all new city employees. The city conducted eight compensation studies during the year for eight different positions.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Population (OSBM 2013)	40,222
Land Area (Square Miles)	29.83
Persons per Square Mile	1,348
Median Family Income U.S. Census 2010	$54,093
County Unemployment Rate (2013) N.C. Employment Security Commission	9.6%

Service Profile

Central HR FTE Positions	
Administration	0.25
Generalist/Specialist	4.0
Staff Support/Clerical	0.75
Total Authorized Workforce	721.0
Authorized FTEs	683.0
Average Length of Service (Months)	118
Number of Position Requisitions	73
Employment Applications Processed	4,715
Length of Probationary Employment Period	12 months
Compensation Studies Completed	8
Positions Studied	8
Employee Turnover	
Voluntary Separations	53
Involuntary Separations	8
TOTAL SEPARATIONS	61
Formal Grievances Filed by Employees	4
Equal Employment Opportunity Commission (EEOC) Complaints Filed	0

Full Cost Profile

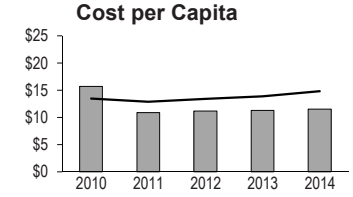
Cost Breakdown by Percentage	
Personal Services	70.7%
Operating Costs	27.8%
Capital Costs	1.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$328,708
Operating Costs	$129,105
Capital Costs	$7,090
TOTAL	$464,903

Hickory — Central Human Resources

Key: Hickory ■ Benchmarking Average — Fiscal Years 2010 through 2014

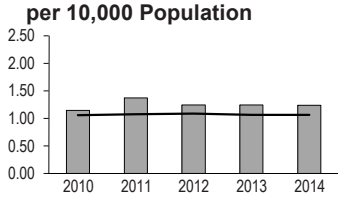
Resource Measures

Human Resources Services Cost per Capita



	2010	2011	2012	2013	2014
Hickory	$15.71	$10.86	$11.18	$11.29	$11.56
Average	$13.45	$12.88	$13.43	$13.90	$14.80

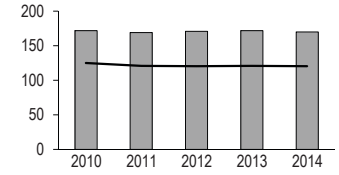
Human Resources FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Hickory	1.15	1.37	1.25	1.25	1.24
Average	1.06	1.08	1.09	1.07	1.07

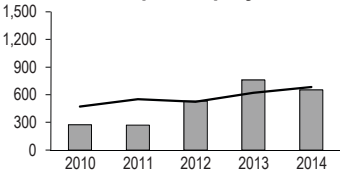
Workload Measures

Total Municipal FTEs per 10,000 Population



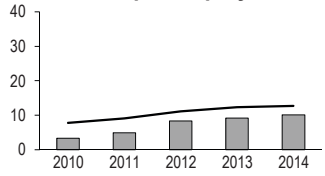
	2010	2011	2012	2013	2014
Hickory	172	169	171	172	170
Average	125	121	120	121	120

Applications Processed per 100 Municipal Employees



	2010	2011	2012	2013	2014
Hickory	274	271	532	759	654
Average	471	553	525	622	684

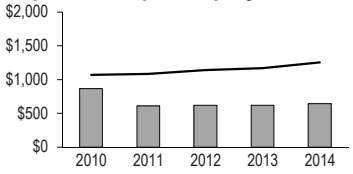
Position Requisitions per 100 Municipal Employees



	2010	2011	2012	2013	2014
Hickory	3.3	4.9	8.3	9.2	10.1
Average	7.8	9.0	11.1	12.3	12.7

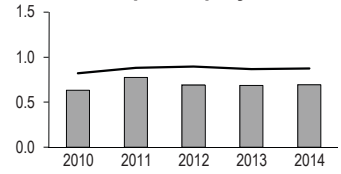
Efficiency Measures

Human Resources Cost per Municipal Employee



	2010	2011	2012	2013	2014
Hickory	$867	$611	$618	$620	$645
Average	$1,072	$1,083	$1,139	$1,169	$1,255

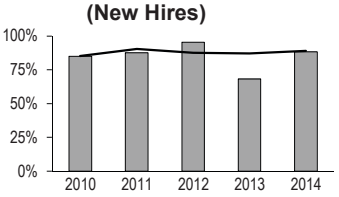
Ratio of Human Resources Staff to 100 Municipal Employees



	2010	2011	2012	2013	2014
Hickory	0.63	0.77	0.69	0.69	0.69
Average	0.82	0.88	0.89	0.87	0.88

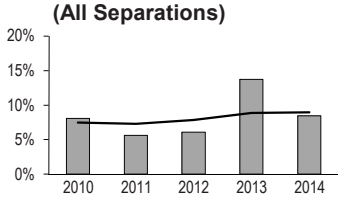
Effectiveness Measures

Probationary Period Completion Rate (New Hires)



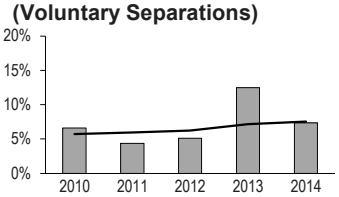
	2010	2011	2012	2013	2014
Hickory	85%	88%	95%	68%	88%
Average	85%	90%	88%	87%	89%

Employee Turnover Rate (All Separations)



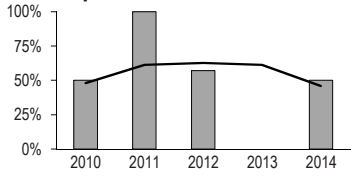
	2010	2011	2012	2013	2014
Hickory	8.1%	5.6%	6.1%	13.7%	8.5%
Average	7.5%	7.3%	7.9%	8.9%	9.0%

Employee Turnover Rate (Voluntary Separations)



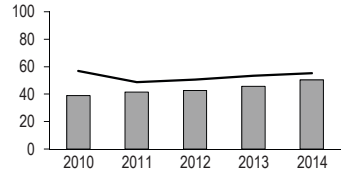
	2010	2011	2012	2013	2014
Hickory	6.6%	4.4%	5.1%	12.5%	7.4%
Average	5.7%	6.0%	6.2%	7.2%	7.5%

Percentage of Grievances Resolved at Department Level



	2010	2011	2012	2013	2014
Hickory	50%	100%	57%		50%
Average	48%	61%	63%	61%	46%

Average Days from Post Date to Hire Date (First Day of Employment)



	2010	2011	2012	2013	2014
Hickory	39	41	43	46	50
Average	57	49	50	53	55

High Point Central Human Resources

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of High Point Human Resources Department is organized into two divisions. The Administrative Division's organizational objectives consist of personnel and fringe benefits budgeting; workforce planning; recruitment, selection, and EEO, ADA, FMLA, FLSA, and HIPPA compliance; fringe benefit competitiveness and cost containment; employee benefits education and awareness; maintaining a competitive and equitable salary and classification plan; offering professional training opportunities for employees; development of intervention strategies to address workplace problems; and facilitation services to employee groups. The director of human resources reports directly to the city manager.

The Safety and Health Division's organizational objectives consist of assisting city departments in providing a safe work environment, promoting a healthier workforce through job fitness assessments and wellness programs, coordination of the city's substance abuse program, workers' compensation cost containment and compliance with OSHA, HIPPA, EPA, and DOT regulations; and compliance with North Carolina workers' compensation regulations.

One compensation study was conducted in FY 2013–14 covering 499 positions.

The city's probationary period is twelve months for new employees. Department directors may extend probationary periods for up to ninety additional days if approved by the human resources director.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Population (OSBM 2013)	107,652
Land Area (Square Miles)	54.73
Persons per Square Mile	1,967
Median Family Income U.S. Census 2010	$49,720
County Unemployment Rate (2013) N.C. Employment Security Commission	8.7%

Service Profile

Central HR FTE Positions	
Administration	5.0
Generalist/Specialist	6.5
Staff Support/Clerical	1.0
Total Authorized Workforce	1,563.0
Authorized FTEs	1,436.0
Average Length of Service (Months)	141
Number of Position Requisitions	320
Employment Applications Processed	2,952
Length of Probationary Employment Period	12 months
Compensation Studies Completed	1
Positions Studied	499
Employee Turnover	
Voluntary Separations	96
Involuntary Separations	27
TOTAL SEPARATIONS	123
Formal Grievances Filed by Employees	2
Equal Employment Opportunity Commission (EEOC) Complaints Filed	3

Full Cost Profile

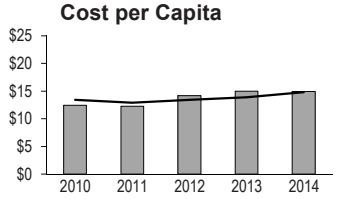
Cost Breakdown by Percentage	
Personal Services	65.4%
Operating Costs	33.1%
Capital Costs	1.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,052,529
Operating Costs	$532,083
Capital Costs	$24,237
TOTAL	$1,608,849

High Point — Central Human Resources

Key: High Point ■ Benchmarking Average — Fiscal Years 2010 through 2014

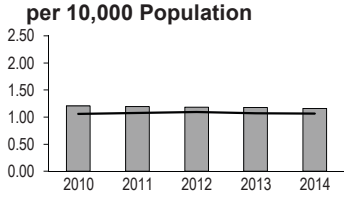
Resource Measures

Human Resources Services Cost per Capita



	2010	2011	2012	2013	2014
High Point	$12.45	$12.27	$14.19	$14.97	$14.94
Average	$13.45	$12.88	$13.43	$13.90	$14.80

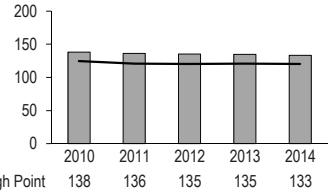
Human Resources FTEs per 10,000 Population



	2010	2011	2012	2013	2014
High Point	1.21	1.19	1.18	1.17	1.16
Average	1.06	1.08	1.09	1.07	1.07

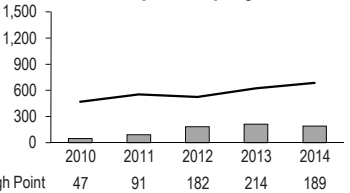
Workload Measures

Total Municipal FTEs per 10,000 Population



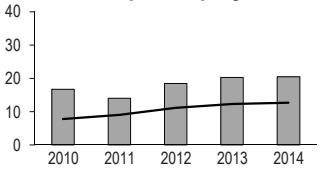
	2010	2011	2012	2013	2014
High Point	138	136	135	135	133
Average	125	121	120	121	120

Applications Processed per 100 Municipal Employees



	2010	2011	2012	2013	2014
High Point	47	91	182	214	189
Average	471	553	525	622	684

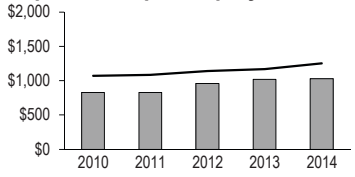
Position Requisitions per 100 Municipal Employees



	2010	2011	2012	2013	2014
High Point	16.7	14.0	18.5	20.3	20.5
Average	7.8	9.0	11.1	12.3	12.7

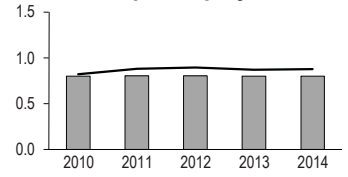
Efficiency Measures

Human Resources Cost per Municipal Employee



	2010	2011	2012	2013	2014
High Point	$827	$828	$961	$1,019	$1,029
Average	$1,072	$1,083	$1,139	$1,169	$1,255

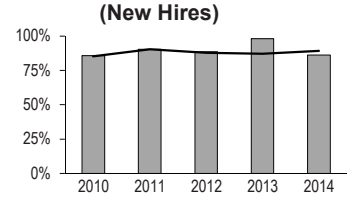
Ratio of Human Resources Staff to 100 Municipal Employees



	2010	2011	2012	2013	2014
High Point	0.80	0.80	0.80	0.80	0.80
Average	0.82	0.88	0.89	0.87	0.88

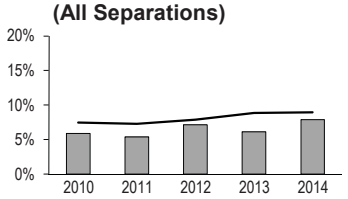
Effectiveness Measures

Probationary Period Completion Rate (New Hires)



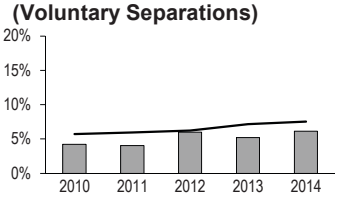
	2010	2011	2012	2013	2014
High Point	86%	90%	89%	98%	86%
Average	85%	90%	88%	87%	89%

Employee Turnover Rate (All Separations)



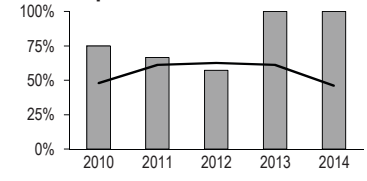
	2010	2011	2012	2013	2014
High Point	5.9%	5.4%	7.1%	6.1%	7.9%
Average	7.5%	7.3%	7.9%	8.9%	9.0%

Employee Turnover Rate (Voluntary Separations)



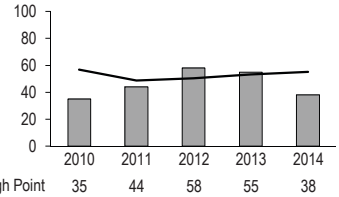
	2010	2011	2012	2013	2014
High Point	4.2%	4.1%	6.0%	5.2%	6.1%
Average	5.7%	6.0%	6.2%	7.2%	7.5%

Percentage of Grievances Resolved at Department Level



	2010	2011	2012	2013	2014
High Point	75%	67%	57%	100%	100%
Average	48%	61%	63%	61%	46%

Average Days from Post Date to Hire Date (First Day of Employment)



	2010	2011	2012	2013	2014
High Point	35	44	58	55	38
Average	57	49	50	53	55

Salisbury Central Human Resources

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The human resources function in Salisbury is a centralized unit that provides internal support and assistance with six staff members: the director (administration, equal employment opportunity and grievance, and special investigations), an analyst II (benefits administration, HRIS, policy interpretation, and wellness), an analyst II (training and development), an analyst I (recruitment, compensation, classification, and position control), an analyst I (multiculturalism program), and a technician (applicant flow, administrative support, budget preparation, and corporate giving).

The human resources department has been the lead agency in the development of customer service provisions identified by the city council as the top priority for the city.

The city's probationary period for new general employees is six months and twelve months for police and fire employees.

Four compensation studies covering four positions were conducted during the fiscal year.

Conditions Affecting Service, Performance, and Costs

Municipal Profile

Population (OSBM 2013)	33,726
Land Area (Square Miles)	22.18
Persons per Square Mile	1,521
Median Family Income U.S. Census 2010	$40,192
County Unemployment Rate (2013) N.C. Employment Security Commission	8.6%

Service Profile

Central HR FTE Positions	
Administration	2.0
Generalist/Specialist	4.0
Staff Support/Clerical	1.0
Total Authorized Workforce	476.0
Authorized FTEs	473.0
Average Length of Service (Months)	132
Number of Position Requisitions	54
Employment Applications Processed	922
Length of Probationary Employment Period	6 or 12 months
Compensation Studies Completed	4
Positions Studied	4
Employee Turnover	
Voluntary Separations	52
Involuntary Separations	10
TOTAL SEPARATIONS	62
Formal Grievances Filed by Employees	7
Equal Employment Opportunity Commission (EEOC) Complaints Filed	0

Full Cost Profile

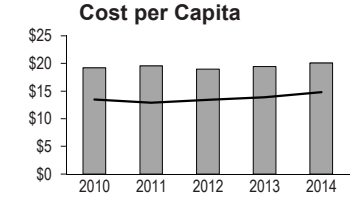
Cost Breakdown by Percentage	
Personal Services	77.4%
Operating Costs	22.6%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$524,149
Operating Costs	$153,241
Capital Costs	$0
TOTAL	$677,390

Salisbury — Central Human Resources

Key: Salisbury ■ Benchmarking Average — Fiscal Years 2010 through 2014

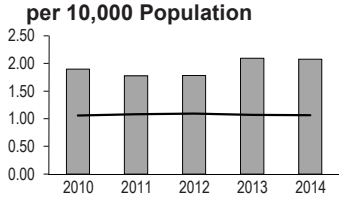
Resource Measures

Human Resources Services Cost per Capita



	2010	2011	2012	2013	2014
Salisbury	$19.22	$19.58	$19.00	$19.45	$20.09
Average	$13.45	$12.88	$13.43	$13.90	$14.80

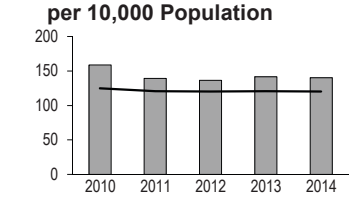
Human Resources FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Salisbury	1.90	1.78	1.78	2.09	2.08
Average	1.06	1.08	1.09	1.07	1.07

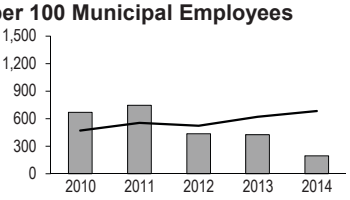
Workload Measures

Total Municipal FTEs per 10,000 Population



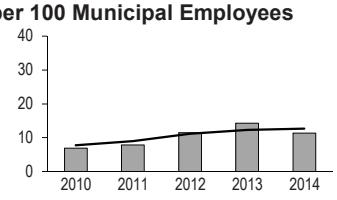
	2010	2011	2012	2013	2014
Salisbury	159	139	136	141	140
Average	125	121	120	121	120

Applications Processed per 100 Municipal Employees



	2010	2011	2012	2013	2014
Salisbury	671	747	435	424	194
Average	471	553	525	622	684

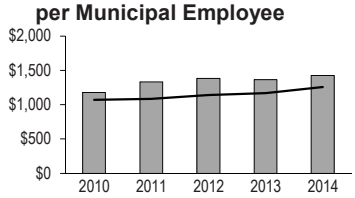
Position Requisitions per 100 Municipal Employees



	2010	2011	2012	2013	2014
Salisbury	7.0	7.9	11.4	14.3	11.3
Average	7.8	9.0	11.1	12.3	12.7

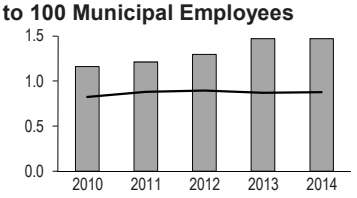
Efficiency Measures

Human Resources Cost per Municipal Employee



	2010	2011	2012	2013	2014
Salisbury	$1,176	$1,334	$1,383	$1,366	$1,423
Average	$1,072	$1,083	$1,139	$1,169	$1,255

Ratio of Human Resources Staff to 100 Municipal Employees



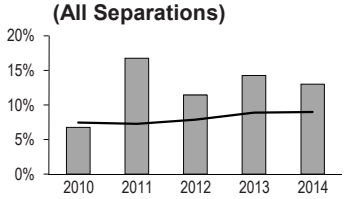
	2010	2011	2012	2013	2014
Salisbury	1.16	1.21	1.30	1.47	1.47
Average	0.82	0.88	0.89	0.87	0.88

Effectiveness Measures

Probationary Period Completion Rate (New Hires)

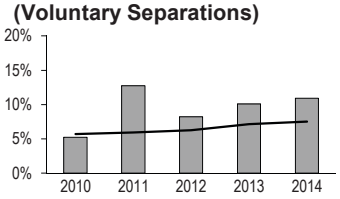
	2010	2011	2012	2013	2014
Salisbury	92%	67%	68%	85%	79%
Average	85%	90%	88%	87%	89%

Employee Turnover Rate (All Separations)



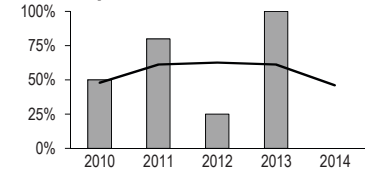
	2010	2011	2012	2013	2014
Salisbury	6.8%	16.8%	11.4%	14.3%	13.0%
Average	7.5%	7.3%	7.9%	8.9%	9.0%

Employee Turnover Rate (Voluntary Separations)



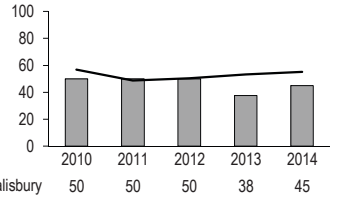
	2010	2011	2012	2013	2014
Salisbury	5.2%	12.7%	8.2%	10.1%	10.9%
Average	5.7%	6.0%	6.2%	7.2%	7.5%

Percentage of Grievances Resolved at Department Level



	2010	2011	2012	2013	2014
Salisbury	50%	80%	25%	100%	0%
Average	48%	61%	63%	61%	46%

Average Days from Post Date to Hire Date (First Day of Employment)



	2010	2011	2012	2013	2014
Salisbury	50	50	50	38	45
Average	57	49	50	53	55

Wilson — Central Human Resources

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Wilson has a centralized Human Resources Department comprised of policy development and implementation, classification and pay administration, recruitment and selection, benefits administration, and employee relations. The safety and health program is a function of the Risk Management Division under another department. Occupational health needs are met through a contract with the Wilson Medical Center.

The city conducted no compensation studies during FY 2013–14.

The city's probationary period is twelve months for new city employees.

Conditions Affecting Service, Performance, and Costs

Wilson switched several contract positions working in HR to become city employees in FY 2013–14 causing a modest rise in service costs.

Municipal Profile

Population (OSBM 2013)	49,097
Land Area (Square Miles)	30.48
Persons per Square Mile	1,611
Median Family Income U.S. Census 2010	$43,442
County Unemployment Rate (2013) N.C. Employment Security Commission	11.7%

Service Profile

Central HR FTE Positions	
Administration	0.5
Generalist/Specialist	3.0
Staff Support/Clerical	1.0
Total Authorized Workforce	750.0
Authorized FTEs	745.0
Average Length of Service (Months)	122
Number of Position Requisitions	68
Employment Applications Processed	2,056
Length of Probationary Employment Period	12 months
Compensation Studies Completed	0
Positions Studied	0
Employee Turnover	
Voluntary Separations	67
Involuntary Separations	20
TOTAL SEPARATIONS	87
Formal Grievances Filed by Employees	0
Equal Employment Opportunity Commission (EEOC) Complaints Filed	2

Full Cost Profile

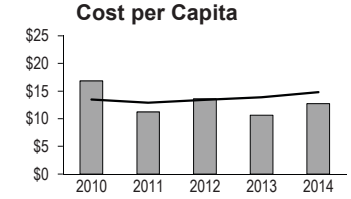
Cost Breakdown by Percentage	
Personal Services	80.1%
Operating Costs	17.6%
Capital Costs	2.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$499,712
Operating Costs	$109,774
Capital Costs	$14,402
TOTAL	$623,888

Wilson — Central Human Resources

Key: Wilson ■ Benchmarking Average — Fiscal Years 2010 through 2014

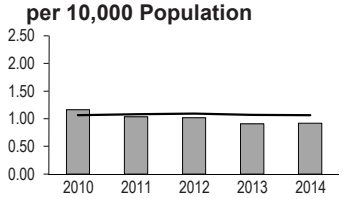
Resource Measures

Human Resources Services Cost per Capita



	2010	2011	2012	2013	2014
Wilson	$16.85	$11.22	$13.60	$10.64	$12.71
Average	$13.45	$12.88	$13.43	$13.90	$14.80

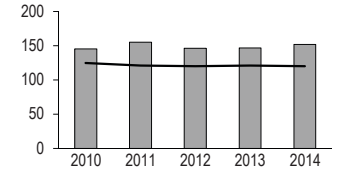
Human Resources FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Wilson	1.16	1.03	1.02	0.91	0.92
Average	1.06	1.08	1.09	1.07	1.07

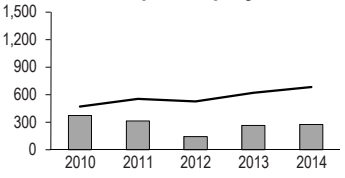
Workload Measures

Total Municipal FTEs per 10,000 Population



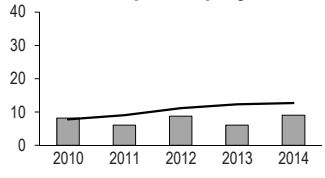
	2010	2011	2012	2013	2014
Wilson	145	155	146	146	152
Average	125	121	120	121	120

Applications Processed per 100 Municipal Employees



	2010	2011	2012	2013	2014
Wilson	374	315	142	264	274
Average	471	553	525	622	684

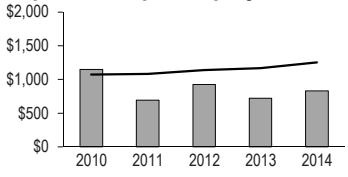
Position Requisitions per 100 Municipal Employees



	2010	2011	2012	2013	2014
Wilson	8.2	6.0	8.7	6.1	9.1
Average	7.8	9.0	11.1	12.3	12.7

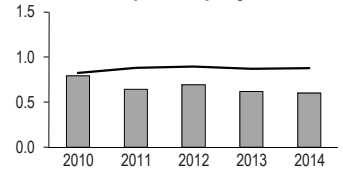
Efficiency Measures

Human Resources Cost per Municipal Employee



	2010	2011	2012	2013	2014
Wilson	$1,151	$696	$926	$724	$832
Average	$1,072	$1,083	$1,139	$1,169	$1,255

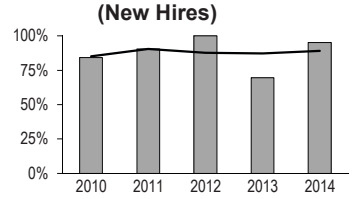
Ratio of Human Resources Staff to 100 Municipal Employees



	2010	2011	2012	2013	2014
Wilson	0.79	0.64	0.69	0.62	0.60
Average	0.82	0.88	0.89	0.87	0.88

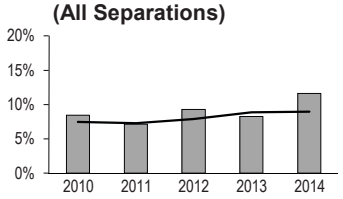
Effectiveness Measures

Probationary Period Completion Rate (New Hires)



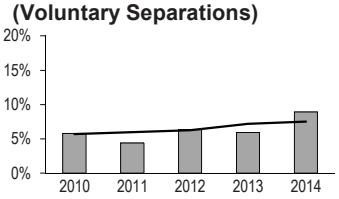
	2010	2011	2012	2013	2014
Wilson	84%	91%	100%	70%	95%
Average	85%	90%	88%	87%	89%

Employee Turnover Rate (All Separations)



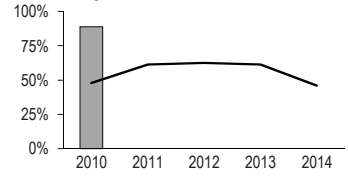
	2010	2011	2012	2013	2014
Wilson	8.5%	7.2%	9.3%	8.3%	11.6%
Average	7.5%	7.3%	7.9%	8.9%	9.0%

Employee Turnover Rate (Voluntary Separations)



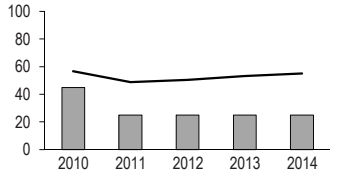
	2010	2011	2012	2013	2014
Wilson	5.8%	4.4%	6.4%	5.9%	8.9%
Average	5.7%	6.0%	6.2%	7.2%	7.5%

Percentage of Grievances Resolved at Department Level



	2010	2011	2012	2013	2014
Wilson	89%			0%	
Average	48%	61%	63%	61%	46%

Average Days from Post Date to Hire Date (First Day of Employment)



	2010	2011	2012	2013	2014
Wilson	45	25	25	25	25
Average	57	49	50	53	55

Winston-Salem Central Human Resources

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The human resources function is housed under two separate departments: Human Resources (HR) and Finance. The finance department is responsible for benefits administration and employee safety. The human resources department has three separate sections: general human resources management, employee health, and employee training.

The city conducted three compensation studies during FY 2013–14 covering 441 positions.

Winston-Salem did not use a probationary period. As a result, no data are available for the measure "probationary period completion rate (new hires)."

Conditions Affecting Service, Performance, and Costs

Winston-Salem now requires all job applications to be submitted online. This process has made it substantially easier to apply for jobs, pushing up the number of applications.

The city has two health insurance plans: a basic plan and the Basic Plus Plan, which has richer benefits and more expensive premiums for employees.

The City Attorney's Office handles all Equal Employment Opportunity Commission (EEOC) charges.

Winston-Salem's HR department manually calculates the time from post date to hire by subtracting the "approved for posting date" from the actual hire date as noted in the department's system. Certain current policies can effectively stretch this time period, which accounts for the long time reported in the length of time to hire new employees. For example, graduates from the fire academy may sometimes require five months before all evaluations are completed. There were also a number of positions that were posted but then held vacant for administrative reasons before being allowed to be filled.

Municipal Profile

Population (OSBM 2013)	235,527
Land Area (Square Miles)	132.45
Persons per Square Mile	1,778
Median Family Income U.S. Census 2010	$51,491
County Unemployment Rate (2013) N.C. Employment Security Commission	8.0%

Service Profile

Central HR FTE Positions	
Administration	3.0
Generalist/Specialist	10.8
Staff Support/Clerical	5.0
Total Authorized Workforce	2,723.0
Authorized FTEs	2,394.0
Average Length of Service (Months)	139
Number of Position Requisitions	514
Employment Applications Processed	21,420
Length of Probationary Employment Period	No probation
Compensation Studies Completed	3
Positions Studied	441
Employee Turnover	
Voluntary Separations	213
Involuntary Separations	41
TOTAL SEPARATIONS	254
Formal Grievances Filed by Employees	64
Equal Employment Opportunity Commission (EEOC) Complaints Filed	0

Full Cost Profile

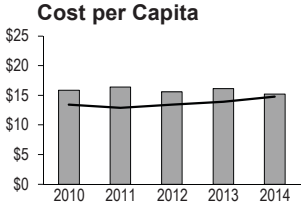
Cost Breakdown by Percentage	
Personal Services	34.2%
Operating Costs	61.2%
Capital Costs	4.6%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,223,786
Operating Costs	$2,190,180
Capital Costs	$166,062
TOTAL	$3,580,028

Winston-Salem — Central Human Resources

Key: Winston-Salem ■ Benchmarking Average — Fiscal Years 2010 through 2014

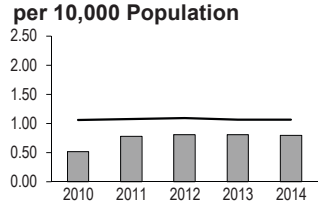
Resource Measures

Human Resources Services Cost per Capita



	2010	2011	2012	2013	2014
Winston-Salem	$15.87	$16.42	$15.59	$16.13	$15.20
Average	$13.45	$12.88	$13.43	$13.90	$14.80

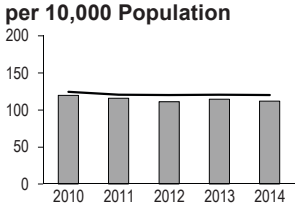
Human Resources FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	0.52	0.78	0.81	0.81	0.80
Average	1.06	1.08	1.09	1.07	1.07

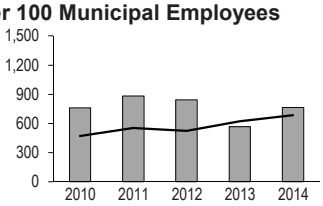
Workload Measures

Total Municipal FTEs per 10,000 Population



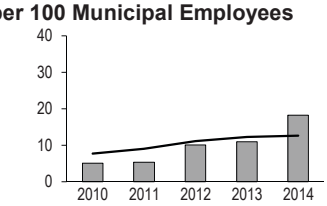
	2010	2011	2012	2013	2014
Winston-Salem	120	116	111	115	112
Average	125	121	120	121	120

Applications Processed per 100 Municipal Employees



	2010	2011	2012	2013	2014
Winston-Salem	762	883	843	567	763
Average	471	553	525	622	684

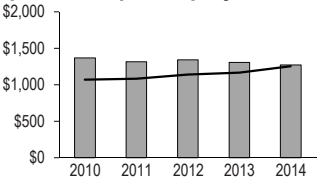
Position Requisitions per 100 Municipal Employees



	2010	2011	2012	2013	2014
Winston-Salem	5.1	5.4	10.1	11.0	18.3
Average	7.8	9.0	11.1	12.3	12.7

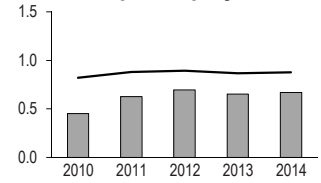
Efficiency Measures

Human Resources Cost per Municipal Employee



	2010	2011	2012	2013	2014
Winston-Salem	$1,367	$1,316	$1,342	$1,308	$1,274
Average	$1,072	$1,083	$1,139	$1,169	$1,255

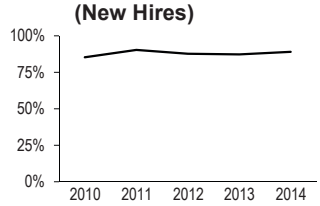
Ratio of Human Resources Staff to 100 Municipal Employees



	2010	2011	2012	2013	2014
Winston-Salem	0.45	0.63	0.70	0.65	0.67
Average	0.82	0.88	0.89	0.87	0.88

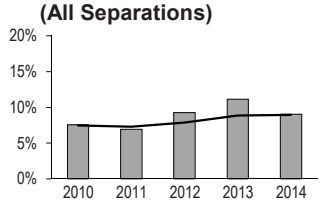
Effectiveness Measures

Probationary Period Completion Rate (New Hires)



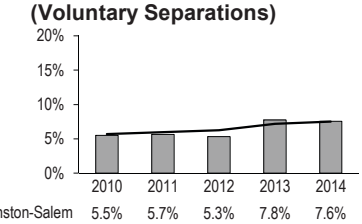
	2010	2011	2012	2013	2014
Winston-Salem					
Average	85%	90%	88%	87%	89%

Employee Turnover Rate (All Separations)



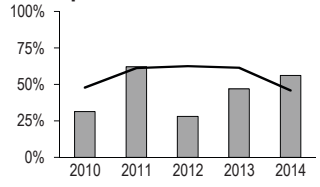
	2010	2011	2012	2013	2014
Winston-Salem	7.6%	6.9%	9.3%	11.2%	9.0%
Average	7.5%	7.3%	7.9%	8.9%	9.0%

Employee Turnover Rate (Voluntary Separations)



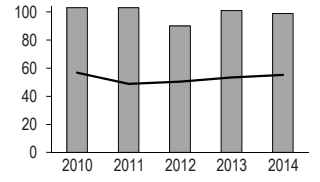
	2010	2011	2012	2013	2014
Winston-Salem	5.5%	5.7%	5.3%	7.8%	7.6%
Average	5.7%	6.0%	6.2%	7.2%	7.5%

Percentage of Grievances Resolved at Department Level



	2010	2011	2012	2013	2014
Winston-Salem	31%	62%	28%	47%	56%
Average	48%	61%	63%	61%	46%

Average Days from Post Date to Hire Date (First Day of Employment)



	2010	2011	2012	2013	2014
Winston-Salem	103	103	90	101	99
Average	57	49	50	53	55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Performance and Cost Data

WATER SERVICES


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PERFORMANCE MEASURES FOR WATER SERVICES

SERVICE DEFINITION

This service area includes the collection, treatment, distribution, and billing related to drinking water services. It includes reservoirs where appropriate, pumping stations, pipes to and from treatment plants, storage tanks, and treatment plants. Activities and costs include the operation, maintenance, and installation of infrastructure. Also included are costs and activities associated with the installation, upkeep, and reading of meters; billing and collection costs for drinking water services; and administrative activities such as planning, engineering, and testing. Excluded are reclaimed water, sewer collection, and wastewater treatment services.

NOTES ON PERFORMANCE MEASURES

1. Thousands of Gallons Billed Water per Meter

This workload measure captures the amount of water provided per meter in the system. Water that does not make it to customer taps is not included.

2. Miles of Main Line Pipe per Square Mile of Service Area

The amount of pipe per square mile shows the density of the pipe infrastructure to be maintained relative to the geographic size of the area served.

3. Total Cost per 1,000 Gallons of Billed Water

This efficiency measure shows the total system costs per 1,000 gallons of water that is actually billed to customers.

4. Million Gallons of Billed Water per All Staff FTEs

Large numbers of staff are required to bring drinking water to customer taps, including treatment staff, line maintenance staff, meter readers, billing staff, and others. Based on all staff who help support the delivery of drinking water to customers, this efficiency measure shows how much billable water is produced per full-time equivalent (FTE) staff member.

5. Billed Water as a Percentage of Finished Water

Not all water produced at treatment plants makes it to customer meters. Some water is lost through leaks or breaks in the system. Other water is unbilled but authorized for uses such as fighting fires or flushing lines. This efficiency measure shows the percentage of water produced that makes it to customer taps.

6. Percentage of Existing Pipeline Renewed

Replacement or rehabilitation of existing pipeline is needed to ensure that the distribution infrastructure can continue to function. This effectiveness measure shows the percentage of existing water lines that are renewed each year.

7. Percentage of Bills Not Collected
Collection of water bills sent to customers is necessary to ensure revenues for system operation. Adjustments to bills reflecting water loss adjustments are not included in the amount of billings.

8. Peak Daily Demand as a Percentage of Treatment Capacity
A water system needs sufficient capacity to not only meet average demands, but also peak demands. This measure looks at peak historical demand relative to the water system treatment capacity in a day.

9. Breaks and Leaks per Mile of Main Line Pipe
Breaks or leaks in water distribution lines mean the loss of treated water.

10. Customer Complaints about Water Quality per 1,000 Meters
Concerns for the adequacy of water are matched with the quality of the water delivered to customers. This effectiveness measure assesses customers' perceptions about their water quality.

Water Services

Summary of Key Dimensions of Service

City or Town	Estimated Residential Population in Service Area	Service Area (in Square Miles)	Average Daily Demand for Water (in MGD)	Operating Treatment Plants	Total Treatment Capacity for Finished Water (in MGD)	Miles of Water Main Lines	Number of Water Meters	Water System FTE Positions
Apex	42,920	19.5	3.3	Shared with Cary	NA	194.2	14,798	23.0
Asheville	124,300	183.0	19.7	3	43.5	1,673.9	57,516	148.0
Burlington	53,510	43.9	10.3	2	34.0	418.7	23,275	50.0
Cary	172,762	75.5	13.8	1	40.0	994.0	62,613	76.4
Charlotte	990,977	546.0	100.6	3	242.0	4,209.0	276,450	363.0
Concord	87,654	169.0	9.3	2	24.0	686.6	37,647	76.0
Greensboro	278,093	148.0	32.2	2	54.0	1,486.3	103,051	160.0
Hickory	92,000	326.0	11.2	1	32.0	918.9	28,570	57.5
High Point	109,270	64.0	12.2	1	24.0	613.4	41,847	57.5
Salisbury	52,850	47.2	8.7	1	25.0	418.6	18,890	45.0
Wilson	51,600	39.0	8.8	2	22.0	420.0	22,179	40.0
Winston-Salem	366,243	366.0	34.7	3	91.0	2,266.3	124,497	169.0

NOTES

MGD stands for millions of gallons per day.

EXPLANATORY FACTORS

These are factors that the project found affected water services performance and cost in one or more of the municipalities:

Topography
Water quality of source water
Size of service area
Population density
Age of infrastructure
Growth of population and businesses

Apex Water Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Town of Apex Water Distribution Division is housed within the Department of Public Works. It consists of repairs, preventive maintenance, meter installation and replacement, and testing. The town is co-owner of the Cary/Apex water treatment facility, which draws raw water from Jordan Lake. The Town of Cary provides the operational staff for the treatment plant but Apex shares in the costs of operation and capital.

Apex bases replacement of water lines on customer complaints, frequency of repairs, street rehabilitation needs, age and material of pipes, and flow concerns.

Currently, about 86 percent of water meters are read by various automatic means. Replacement of meters is based on a combination of factors, as is water line replacement.

Conditions Affecting Service, Performance, and Costs

Apex began participation in the benchmarking project in July 2011, with FY 2010–11 being the first reporting year.

The costs of water services as captured here do not include debt service but do capture depreciation.

Municipal Profile

Estimated Service Population	42,920
Service Land Area (Square Miles)	19.5
Persons per Square Mile	2,201
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow
Median Family Income U.S. Census 2010	$97,201

Service Profile

FTE Staff Positions	
Treatment Plant	0.0
Line Crews	14.0
Meter Readers	3.0
Billing/Collection	4.0
Other	2.0
Total	23.0
Number of Treatment Plants	NA
Total Treatment Capacity	NA
Average Daily Demand	3.3 MG
Miles of Main Line Pipe	194
Average Age of Main Line Pipe	35 years
Number of Breaks/Leaks	38
Number of Water Meters	14,798
Percent of Meters Read Automatically	86.0%
Total Revenues Collected	$7,103,998

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	28.1%
Operating Costs	44.0%
Capital Costs	27.9%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,453,180
Operating Costs	$2,272,769
Capital Costs	$1,441,377
TOTAL	$5,167,326

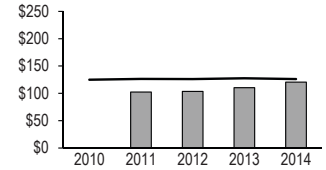
Apex

Water Services

Key: Apex ■ Benchmarking Average — Fiscal Years 2010 through 2014

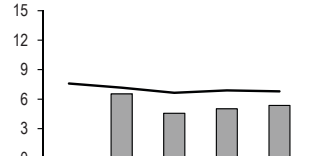
Resource Measures

Water Services Cost per Capita



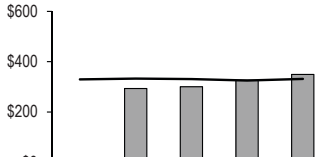
	2010	2011	2012	2013	2014
Apex		$102	$103	$110	$120
Average	$125	$126	$126	$127	$126

Water Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Apex		6.5	4.6	5.0	5.4
Average	7.6	7.2	6.7	6.9	6.8

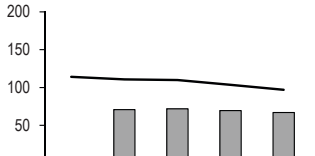
Water Services Cost per Meter



	2010	2011	2012	2013	2014
Apex		$294	$300	$327	$349
Average	$330	$333	$331	$325	$332

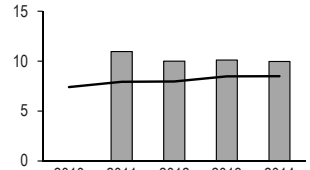
Workload Measures

Thousands of Gallons of Billed Water per Meter



	2010	2011	2012	2013	2014
Apex		70.7	71.9	69.4	67.0
Average	114.2	110.6	109.9	103.7	96.9

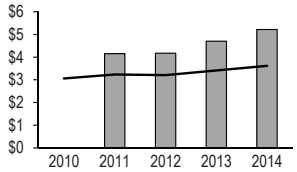
Miles of Main Line Pipe per Square Mile of Service Area



	2010	2011	2012	2013	2014
Apex		11.0	10.0	10.1	10.0
Average	7.4	7.9	8.0	8.5	8.5

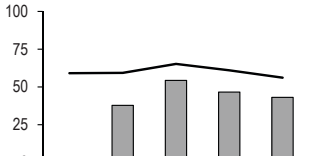
Efficiency Measures

Total Cost per Thousand Gallons of Billed Water



	2010	2011	2012	2013	2014
Apex		$4.15	$4.17	$4.70	$5.21
Average	$3.06	$3.24	$3.20	$3.41	$3.62

Million Gallons of Billed Water per Water Services FTEs



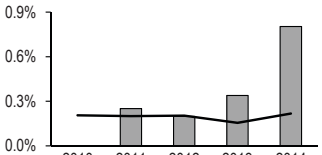
	2010	2011	2012	2013	2014
Apex		37.8	54.3	46.6	43.1
Average	59.1	59.3	65.3	61.0	56.2

Billed Water as a Percentage of Finished Water

	2010	2011	2012	2013	2014
Apex					91%
Average	82%	83%	85%	84%	84%

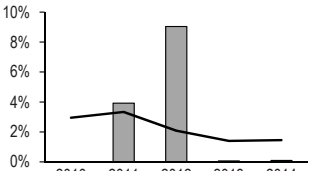
Effectiveness Measures

Percentage of Existing Pipeline Replaced or Rehabbed



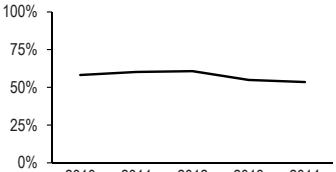
	2010	2011	2012	2013	2014
Apex		0.25%	0.20%	0.34%	0.80%
Average	0.21%	0.20%	0.20%	0.15%	0.22%

Percentage of Water Bills Not Collected



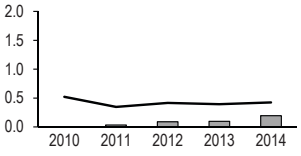
	2010	2011	2012	2013	2014
Apex		3.92%	9.04%	0.06%	0.10%
Average	2.94%	3.33%	2.08%	1.40%	1.45%

Peak Daily Demand as a Percentage of Treatment Capacity



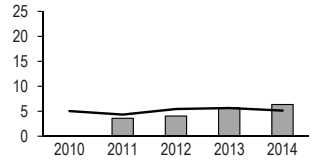
	2010	2011	2012	2013	2014
Apex					
Average	58%	60%	61%	55%	53%

Breaks and Leaks per Mile of Main Line Pipe



	2010	2011	2012	2013	2014
Apex		0.03	0.09	0.10	0.20
Average	0.52	0.35	0.42	0.39	0.42

Customer Complaints about Water Quality per 1,000 Meters



	2010	2011	2012	2013	2014
Apex		3.59	4.05	5.67	6.35
Average	5.03	4.34	5.45	5.67	5.14

Asheville Water Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Asheville Water Resources Department is a publicly owned water utility that produces and supplies water for residential, business, industrial, and wholesale bulk customers. The utility serves the city of Asheville, approximately 27 percent of Buncombe County, and approximately 2 percent of Henderson County. Approximately 124,000 people are served over a 183-square-mile area.

Asheville has three water treatment plants drawing from a city reservoir, the Mills River, and may also take water from the French Broad River as needed. The estimated safe yield for water is 35 million gallons per day.

Asheville has an asset management program in place to assist with identifying replacement and refurbishment needs. The goal is for water main lines to be replaced every eighty years.

Currently about 96.5 percent of water meters are read by various automatic systems, including radio-read and touch-read meters. The goal is to replace all meters in the next few years years with radio-read meters.

Conditions Affecting Service, Performance, and Costs

The costs of water services as captured here do not include debt service but do capture depreciation.

The topography and climate in Asheville creates a number of problems for water systems operation. The mountainous terrain makes it difficult to install water lines. The utility has thirty-eight pressure zones, ranging from 20 to 643 psi, with an average from 180 to 200 psi. Colder temperatures can also make maintenance harder to complete and lead to breaks due to freezing. Due to the Sullivan Acts, Asheville is not allowed to refuse water line installation in any areas of Buncombe County or to charge differential rates.

The number of breaks and leaks in the system has been declining. The Water Resources Department has worked actively to better identify situations with repeated leaks in time and, when identified, to replace pipe for a more permanent solution.

In February 2011, there was a major break on a large transmission line which affected water quality for a period. Additionally, there was a water quality problem near downtown. Complaints about water quality were much higher due to these two problems.

Municipal Profile

Estimated Service Population	124,300
Service Land Area (Square Miles)	183.0
Persons per Square Mile	679
Topography	Flat; gently rolling
Climate	Moderate; ice and snow
Median Family Income U.S. Census 2010	$53,350

Service Profile

FTE Staff Positions	
Treatment Plant	41.0
Line Crews	49.0
Meter Readers	2.0
Billing/Collection	23.0
Other	33.0
Total	148.0
Number of Treatment Plants	3
Total Treatment Capacity	43.5 MG
Average Daily Demand	19.7 MG
Miles of Main Line Pipe	1,674
Average Age of Main Line Pipe	54 years
Number of Breaks/Leaks	946
Number of Water Meters	57,516
Percent of Meters Read Automatically	96.5%
Total Revenues Collected	$34,137,247

Full Cost Profile

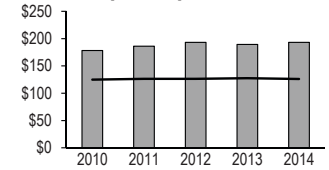
Cost Breakdown by Percentage	
Personal Services	33.8%
Operating Costs	36.7%
Capital Costs	29.6%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$8,103,227
Operating Costs	$8,798,382
Capital Costs	$7,093,318
TOTAL	$23,994,927

Asheville — Water Services

Key: Asheville ■ Benchmarking Average — Fiscal Years 2010 through 2014

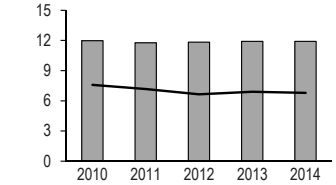
Resource Measures

Water Services Cost per Capita



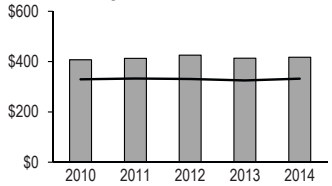
	2010	2011	2012	2013	2014
Asheville	$178	$186	$193	$189	$193
Average	$125	$126	$126	$127	$126

Water Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Asheville	12.0	11.8	11.8	11.9	11.9
Average	7.6	7.2	6.7	6.9	6.8

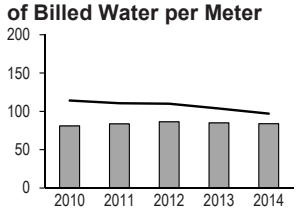
Water Services Cost per Meter



	2010	2011	2012	2013	2014
Asheville	$407	$413	$426	$413	$417
Average	$330	$333	$331	$325	$332

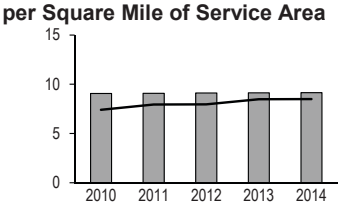
Workload Measures

Thousands of Gallons of Billed Water per Meter



	2010	2011	2012	2013	2014
Asheville	80.9	83.7	86.5	85.0	84.0
Average	114.2	110.6	109.9	103.7	96.9

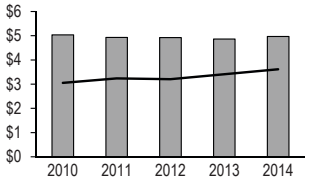
Miles of Main Line Pipe per Square Mile of Service Area



	2010	2011	2012	2013	2014
Asheville	9.1	9.1	9.1	9.1	9.1
Average	7.4	7.9	8.0	8.5	8.5

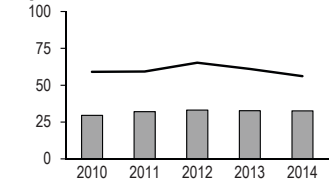
Efficiency Measures

Total Cost per Thousand Gallons of Billed Water



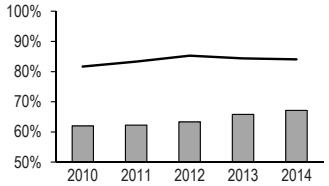
	2010	2011	2012	2013	2014
Asheville	$5.03	$4.93	$4.92	$4.86	$4.97
Average	$3.06	$3.24	$3.20	$3.41	$3.62

Million Gallons of Billed Water per Water Services FTEs



	2010	2011	2012	2013	2014
Asheville	29.6	32.1	33.2	32.7	32.6
Average	59.1	59.3	65.3	61.0	56.2

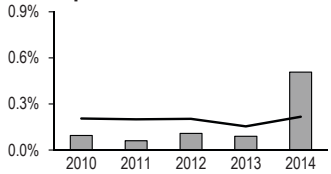
Billed Water as a Percentage of Finished Water



	2010	2011	2012	2013	2014
Asheville	62%	62%	63%	66%	67%
Average	82%	83%	85%	84%	84%

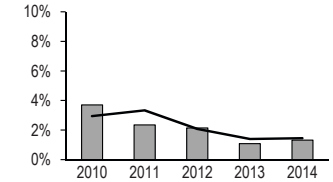
Effectiveness Measures

Percentage of Existing Pipeline Replaced or Rehabbed



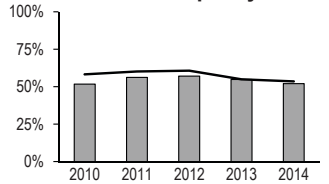
	2010	2011	2012	2013	2014
Asheville	0.09%	0.06%	0.11%	0.09%	0.51%
Average	0.21%	0.20%	0.20%	0.15%	0.22%

Percentage of Water Bills Not Collected



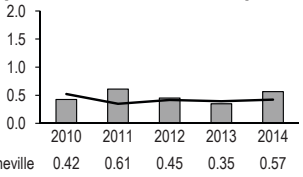
	2010	2011	2012	2013	2014
Asheville	3.70%	2.34%	2.14%	1.08%	1.32%
Average	2.94%	3.33%	2.08%	1.40%	1.45%

Peak Daily Demand as a Percentage of Treatment Capacity



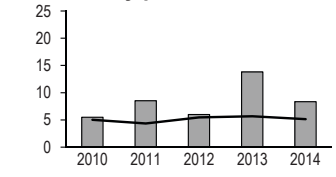
	2010	2011	2012	2013	2014
Asheville	52%	56%	57%	55%	52%
Average	58%	60%	61%	55%	53%

Breaks and Leaks per Mile of Main Line Pipe



	2010	2011	2012	2013	2014
Asheville	0.42	0.61	0.45	0.35	0.57
Average	0.52	0.35	0.42	0.39	0.42

Customer Complaints about Water Quality per 1,000 Meters



	2010	2011	2012	2013	2014
Asheville	5.49	8.53	5.99	13.81	8.33
Average	5.03	4.34	5.45	5.67	5.14

Burlington Water Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Water services are housed in the Water Resources Department within the City of Burlington. Meter reading, revenue collection, IT, and engineering are housed in other departments receiving fund transfers from the Water and Sewer Enterprise Fund. Approximately 54,000 people are served by the system over a 44-square-mile area.

Burlington gets its water from two city-owned reservoirs in the upper Cape Fear River basin. The city also owns a third water storage reservoir. The estimated safe yield of the system is 48 million gallons per day.

The city has two treatment plants with a total treatment capacity of 34 million gallons per day. The plants use conventional treatment with alum coagulation, dual media filtration, and chlorine disinfection.

The city sells water to several other systems, including Greensboro, Gibsonville, Elon, the Village of Alamance, and Haw River. Three of Burlington's top five water users are now other cities. The city has emergency connections with Greensboro and Graham.

The city reads meters on a monthly basis, with about 10 percent of meters being read by automatic means. Meters are replaced approximately every twelve to fifteen years.

Conditions Affecting Service, Performance, and Costs

The costs of water services as captured here do not include debt service but do capture depreciation.

Burlington's water system planning in the 1970s was developed to support a growing industrial base, particularly textiles. As the textile industry declined, Burlington has been left with a large supply infrastructure. Burlington has extended water lines to Greensboro to offset the industrial base decline and to assist Greensboro. Greensboro is now Burlington's largest water customer.

Municipal Profile

Estimated Service Population	53,510
Service Land Area (Square Miles)	43.9
Persons per Square Mile	1,219
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow
Median Family Income U.S. Census 2010	$46,461

Service Profile

FTE Staff Positions	
Treatment Plant	20.0
Line Crews	10.0
Meter Readers	4.0
Billing/Collection	10.0
Other	6.0
Total	50.0
Number of Treatment Plants	2
Total Treatment Capacity	34.0 MG
Average Daily Demand	10.3 MG
Miles of Main Line Pipe	419
Average Age of Main Line Pipe	47 years
Number of Breaks/Leaks	70
Number of Water Meters	23,275
Percent of Meters Read Automatically	10.2%
Total Revenues Collected	$9,334,127

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	21.4%
Operating Costs	40.3%
Capital Costs	38.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,400,379
Operating Costs	$2,446,558
Capital Costs	$2,388,480
TOTAL	$6,235,417

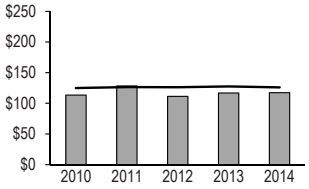
Burlington

Water Services

Key: Burlington ■ Benchmarking Average — Fiscal Years 2010 through 2014

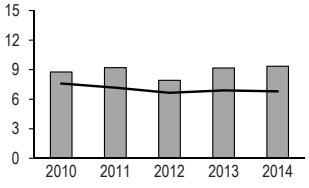
Resource Measures

Water Services Cost per Capita



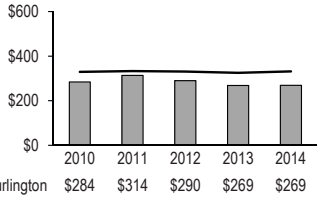
	2010	2011	2012	2013	2014
Burlington	$114	$128	$111	$117	$117
Average	$125	$126	$126	$127	$126

Water Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Burlington	8.8	9.2	7.9	9.2	9.3
Average	7.6	7.2	6.7	6.9	6.8

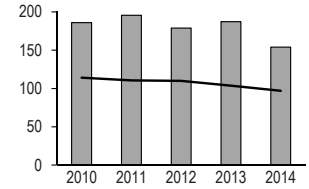
Water Services Cost per Meter



	2010	2011	2012	2013	2014
Burlington	$284	$314	$290	$269	$269
Average	$330	$333	$331	$325	$332

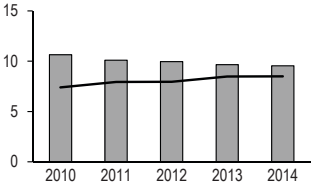
Workload Measures

Thousands of Gallons of Billed Water per Meter



	2010	2011	2012	2013	2014
Burlington	186.0	195.7	179.0	187.2	154.0
Average	114.2	110.6	109.9	103.7	96.9

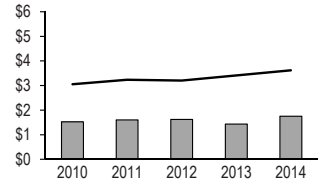
Miles of Main Line Pipe per Square Mile of Service Area



	2010	2011	2012	2013	2014
Burlington	10.6	10.1	10.0	9.7	9.5
Average	7.4	7.9	8.0	8.5	8.5

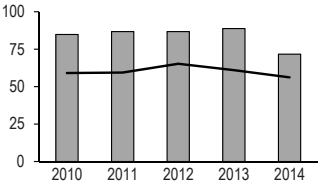
Efficiency Measures

Total Cost per Thousand Gallons of Billed Water



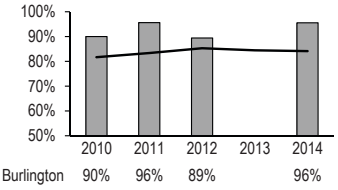
	2010	2011	2012	2013	2014
Burlington	$1.53	$1.60	$1.62	$1.43	$1.75
Average	$3.06	$3.24	$3.20	$3.41	$3.62

Million Gallons of Billed Water per Water Services FTEs



	2010	2011	2012	2013	2014
Burlington	84.8	86.7	86.7	88.7	71.7
Average	59.1	59.3	65.3	61.0	56.2

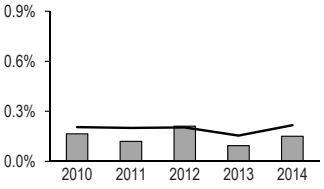
Billed Water as a Percentage of Finished Water



	2010	2011	2012	2013	2014
Burlington	90%	96%	89%		96%
Average	82%	83%	85%	84%	84%

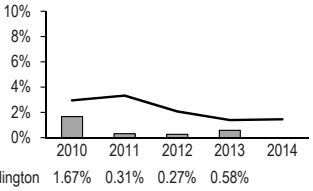
Effectiveness Measures

Percentage of Existing Pipeline Replaced or Rehabbed



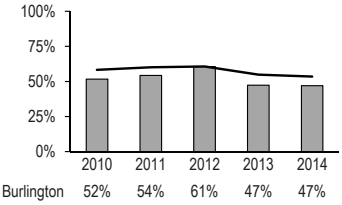
	2010	2011	2012	2013	2014
Burlington	0.16%	0.12%	0.21%	0.09%	0.15%
Average	0.21%	0.20%	0.20%	0.15%	0.22%

Percentage of Water Bills Not Collected



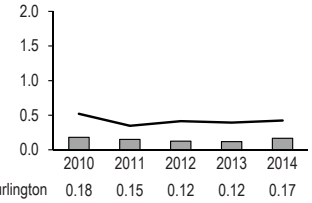
	2010	2011	2012	2013	2014
Burlington	1.67%	0.31%	0.27%	0.58%	
Average	2.94%	3.33%	2.08%	1.40%	1.45%

Peak Daily Demand as a Percentage of Treatment Capacity



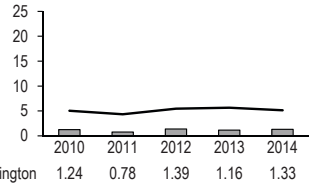
	2010	2011	2012	2013	2014
Burlington	52%	54%	61%	47%	47%
Average	58%	60%	61%	55%	53%

Breaks and Leaks per Mile of Main Line Pipe



	2010	2011	2012	2013	2014
Burlington	0.18	0.15	0.12	0.12	0.17
Average	0.52	0.35	0.42	0.39	0.42

Customer Complaints about Water Quality per 1,000 Meters



	2010	2011	2012	2013	2014
Burlington	1.24	0.78	1.39	1.16	1.33
Average	5.03	4.34	5.45	5.67	5.14

Cary Water Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Water services in Cary are provided by the Utilities Division of the Department of Public Works and Utilities. The Utilities Division includes pre-treatment, water treatment, wastewater treatment, and various distribution system operations. Only those operations connected to supplying water are captured in the data. Approximately 173,000 people are served by the system, covering an area of seventy-five square miles.

Cary gets its water from Jordan Lake in the Haw River subbasin. The estimated fifty-year safe yield is 30.5 million gallons per day.

Cary's single water treatment plant is jointly owned with the Town of Apex. Apex pays 23 percent of the operating and capital costs and Cary staffs the plant. Cary also provides water to residents of the Town of Morrisville (as customers of the Cary water system but with a different operating and capital fee schedule). Cary further provides water to the Raleigh-Durham Airport Authority.

The city reads meters on a monthly basis, with approximately 98 percent of meters being read automatically with a Sensus Flexnet system. Meters are replaced approximately every seventeen years.

Conditions Affecting Service, Performance, and Costs

Cary began participating in water services benchmarking with the FY 2010–2011 report.

The costs of water services as captured here do not include debt service but do capture depreciation.

Cary's combined water and sewer utility operations make it difficult to separate out some revenues between the two service areas. The Town of Morrisville water and sewer system was merged with the Town of Cary system in 2006. As part of the merger agreement, merger-related costs were recovered through rate differentials that were in effect through the end of FY 2012. In FY 2013, Morrisville residents will begin to pay the same rates as Cary customers. Finally, the data show a small decrease in water staff that primarily reflects a shift in the counting of meter readers and accounting staff from water to sewer, which is a more accurate assessment from the earlier year.

Municipal Profile

Estimated Service Population	172,762
Service Land Area (Square Miles)	75.0
Persons per Square Mile	2,303
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow
Median Family Income U.S. Census 2010	$108,956

Service Profile

FTE Staff Positions	
Treatment Plant	24.0
Line Crews	35.9
Meter Readers	0.0
Billing/Collection	9.3
Other	7.3
Total	76.4
Number of Treatment Plants	1
Total Treatment Capacity	40.0 MG
Average Daily Demand	13.8 MG
Miles of Main Line Pipe	994
Average Age of Main Line Pipe	NA
Number of Breaks/Leaks	149
Number of Water Meters	62,613
Percent of Meters Read Automatically	98.2%
Total Revenues Collected	$25,009,970

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	29.4%
Operating Costs	35.5%
Capital Costs	35.1%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$5,230,453
Operating Costs	$6,311,598
Capital Costs	$6,244,330
TOTAL	$17,786,381

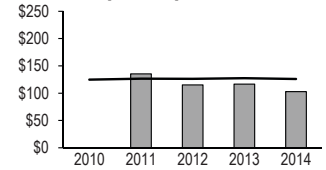
Cary

Water Services

Key: Cary ■ Benchmarking Average — Fiscal Years 2010 through 2014

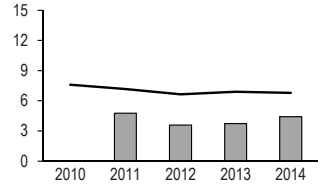
Resource Measures

Water Services Cost per Capita



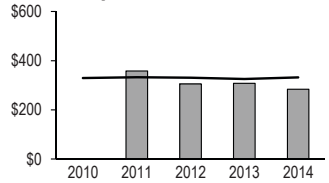
	2010	2011	2012	2013	2014
Cary		$135	$115	$117	$103
Average	$125	$126	$126	$127	$126

Water Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Cary		4.8	3.6	3.7	4.4
Average	7.6	7.2	6.7	6.9	6.8

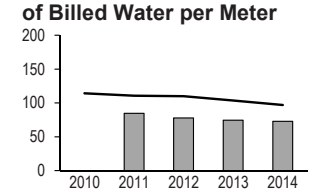
Water Services Cost per Meter



	2010	2011	2012	2013	2014
Cary		$358	$306	$308	$284
Average	$330	$333	$331	$325	$332

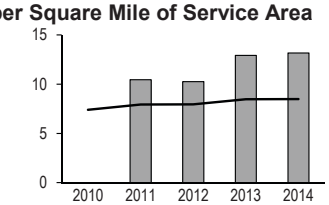
Workload Measures

Thousands of Gallons of Billed Water per Meter



	2010	2011	2012	2013	2014
Cary		84.6	77.8	74.5	72.9
Average	114.2	110.6	109.9	103.7	96.9

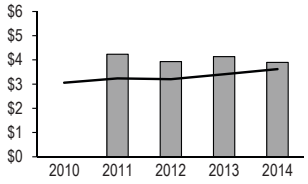
Miles of Main Line Pipe per Square Mile of Service Area



	2010	2011	2012	2013	2014
Cary		10.5	10.3	12.9	13.2
Average	7.4	7.9	8.0	8.5	8.5

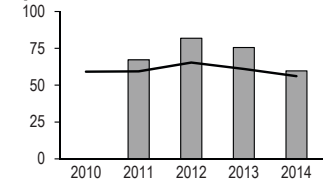
Efficiency Measures

Total Cost per Thousand Gallons of Billed Water



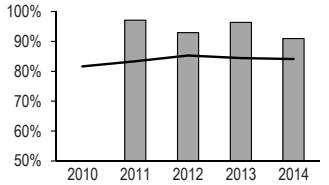
	2010	2011	2012	2013	2014
Cary		$4.23	$3.93	$4.13	$3.90
Average	$3.06	$3.24	$3.20	$3.41	$3.62

Million Gallons of Billed Water per Water Services FTEs



	2010	2011	2012	2013	2014
Cary		67.1	81.8	75.5	59.7
Average	59.1	59.3	65.3	61.0	56.2

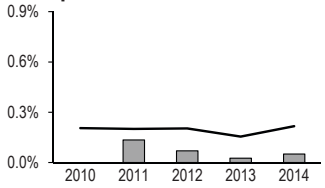
Billed Water as a Percentage of Finished Water



	2010	2011	2012	2013	2014
Cary		97%	93%	96%	91%
Average	82%	83%	85%	84%	84%

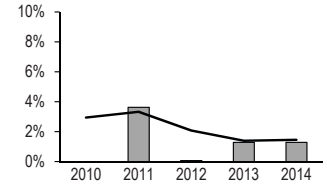
Effectiveness Measures

Percentage of Existing Pipeline Replaced or Rehabbed



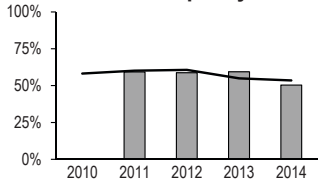
	2010	2011	2012	2013	2014
Cary		0.14%	0.07%	0.03%	0.05%
Average	0.21%	0.20%	0.20%	0.15%	0.22%

Percentage of Water Bills Not Collected



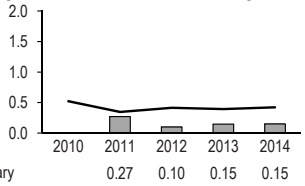
	2010	2011	2012	2013	2014
Cary		3.63%	0.06%	1.28%	1.28%
Average	2.94%	3.33%	2.08%	1.40%	1.45%

Peak Daily Demand as a Percentage of Treatment Capacity



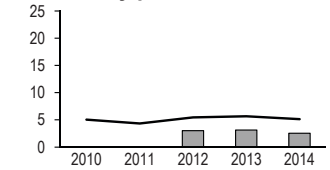
	2010	2011	2012	2013	2014
Cary		59%	59%	59%	50%
Average	58%	60%	61%	55%	53%

Breaks and Leaks per Mile of Main Line Pipe



	2010	2011	2012	2013	2014
Cary		0.27	0.10	0.15	0.15
Average	0.52	0.35	0.42	0.39	0.42

Customer Complaints about Water Quality per 1,000 Meters



	2010	2011	2012	2013	2014
Cary			3.00	3.12	2.56
Average	5.03	4.34	5.45	5.67	5.14

Charlotte — Water Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Charlotte-Mecklenburg Utilities (CMU) is a combined water and sewer operation. The utility is a consolidated business unit of Mecklenburg County and the City of Charlotte. The utility is an official City of Charlotte Key Business Unit, Charlotte's term for city department.

The area served is generally considered to be Mecklenburg County but also includes a small number of metered drinking water interconnections with the City of Concord and the counties of Union in North Carolina and Lancaster and York in South Carolina. The service area covers approximately 546 square miles and serves over 991,000 people.

Source water for the system is drawn from two impounded lakes on the Catawba River, Lake Norman and Mountain Island Lake, which are operated by Duke Energy. The combined estimated safe yield is between 376 and 503 million gallons per day. The system operates three treatment plants with a combined treatment capacity of 242 million gallons per day. The treatment plants are conventional facilities using rapid mix, flocculation, settling, filtration, and chemical application.

The estimated average age of main line pipes in the system is twenty-nine years. CMU's replacement policy for pipe is based on flow and quality standards.

All meters are now read automatically. CMU uses a system that allows vans traveling the city to read meters as they drive by. The replacement standard is every fifteen years for water meters.

Conditions Affecting Service, Performance, and Costs

The costs of water services as captured here do not include debt service but do capture depreciation.

The reduction in reported leaks and breaks over time is in large part due to improvements in tracking and data reporting. CMU staff worked on improving how the work order system is used to determine the number of leaks or breaks in the water system.

Municipal Profile

Estimated Service Population	990,977
Service Land Area (Square Miles)	546.0
Persons per Square Mile	1,815
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow
Median Family Income U.S. Census 2010	$61,405

Service Profile

FTE Staff Positions	
Treatment Plant	67.0
Line Crews	146.0
Meter Readers	4.5
Billing/Collection	6.0
Other	139.5
Total	363.0
Number of Treatment Plants	3
Total Treatment Capacity	242.0 MG
Average Daily Demand	100.6 MG
Miles of Main Line Pipe	4,209
Average Age of Main Line Pipe	29 years
Number of Breaks/Leaks	4,167
Number of Water Meters	276,450
Percent of Meters Read Automatically	100.0%
Total Revenues Collected	$130,364,040

Full Cost Profile

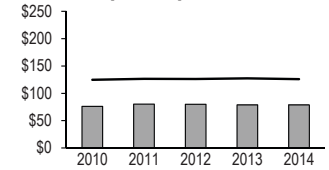
Cost Breakdown by Percentage	
Personal Services	20.3%
Operating Costs	31.7%
Capital Costs	48.1%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$15,834,002
Operating Costs	$24,704,573
Capital Costs	$37,504,582
TOTAL	$78,043,157

Charlotte — Water Services

Key: Charlotte ■ Benchmarking Average — Fiscal Years 2010 through 2014

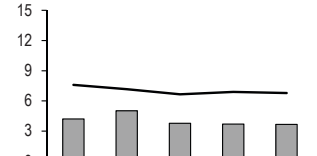
Resource Measures

Water Services Cost per Capita



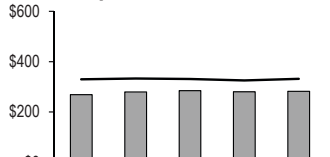
	2010	2011	2012	2013	2014
Charlotte	$76	$80	$80	$79	$79
Average	$125	$126	$126	$127	$126

Water Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Charlotte	4.2	5.0	3.8	3.7	3.7
Average	7.6	7.2	6.7	6.9	6.8

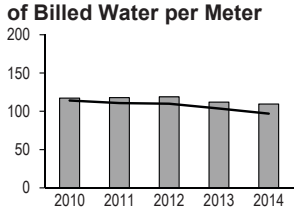
Water Services Cost per Meter



	2010	2011	2012	2013	2014
Charlotte	$269	$280	$285	$280	$282
Average	$330	$333	$331	$325	$332

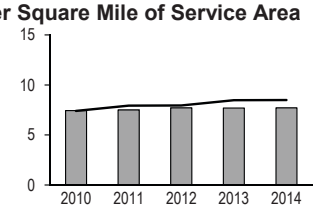
Workload Measures

Thousands of Gallons of Billed Water per Meter



	2010	2011	2012	2013	2014
Charlotte	117.3	117.9	118.9	112.1	109.6
Average	114.2	110.6	109.9	103.7	96.9

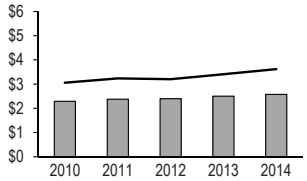
Miles of Main Line Pipe per Square Mile of Service Area



	2010	2011	2012	2013	2014
Charlotte	7.4	7.5	7.7	7.7	7.7
Average	7.4	7.9	8.0	8.5	8.5

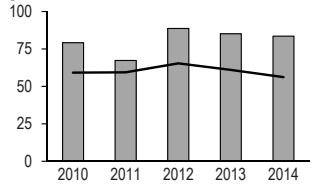
Efficiency Measures

Total Cost per Thousand Gallons of Billed Water



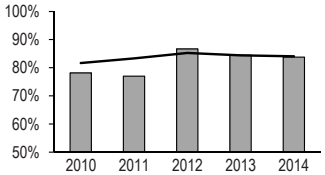
	2010	2011	2012	2013	2014
Charlotte	$2.29	$2.37	$2.39	$2.50	$2.58
Average	$3.06	$3.24	$3.20	$3.41	$3.62

Million Gallons of Billed Water per Water Services FTEs



	2010	2011	2012	2013	2014
Charlotte	79.1	67.3	88.6	85.2	83.5
Average	59.1	59.3	65.3	61.0	56.2

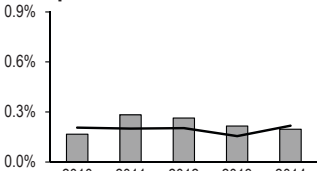
Billed Water as a Percentage of Finished Water



	2010	2011	2012	2013	2014
Charlotte	78%	77%	87%	84%	84%
Average	82%	83%	85%	84%	84%

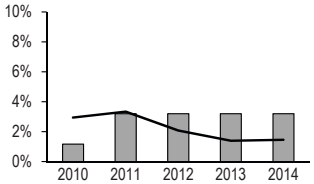
Effectiveness Measures

Percentage of Existing Pipeline Replaced or Rehabbed



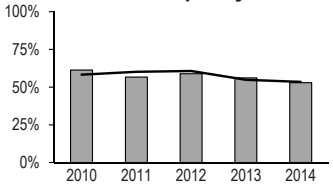
	2010	2011	2012	2013	2014
Charlotte	0.17%	0.28%	0.26%	0.22%	0.20%
Average	0.21%	0.20%	0.20%	0.15%	0.22%

Percentage of Water Bills Not Collected



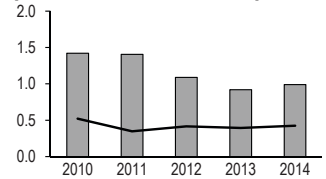
	2010	2011	2012	2013	2014
Charlotte	1.17%	3.20%	3.20%	3.20%	3.20%
Average	2.94%	3.33%	2.08%	1.40%	1.45%

Peak Daily Demand as a Percentage of Treatment Capacity



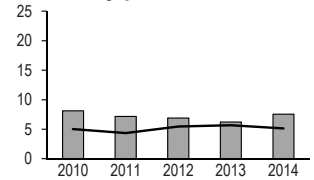
	2010	2011	2012	2013	2014
Charlotte	61%	57%	59%	56%	53%
Average	58%	60%	61%	55%	53%

Breaks and Leaks per Mile of Main Line Pipe



	2010	2011	2012	2013	2014
Charlotte	1.42	1.40	1.09	0.92	0.99
Average	0.52	0.35	0.42	0.39	0.42

Customer Complaints about Water Quality per 1,000 Meters



	2010	2011	2012	2013	2014
Charlotte	8.12	7.17	6.89	6.21	7.55
Average	5.03	4.34	5.45	5.67	5.14

Concord Water Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Concord Water Resources Department is a water-only utility. The department has three divisions, one for operations and maintenance, and one for each of two treatment plants. Meter reading, billing, and collections are handled by the city Finance Department.

Concord's system serves approximately 88,000 people and covers the City of Concord, the Town of Midland, and approximately one-fourth of Cabarrus County. Water sources for the system are Lake Fisher, owned by the city, and Lakes Howell and Concord, reservoirs owned by the Water and Sewer Authority of Cabarrus County. The combined estimated safe yield is 24 million gallons per day.

The city operates two treatment plants with a combined treatment capacity of 24 million gallons per day. Concord has emergency connections with the City of Charlotte and the City of Kannapolis and sells small amounts of water to the Town of Harrisburg and the Town of Midland.

The estimated average age of main line pipes in the system is thirty-two years. Water meters are read monthly, and nearly all meters are read using automatic means. The replacement standard for water meters is fifteen years.

Conditions Affecting Service, Performance, and Costs

The costs of water services as captured here do not include debt service but do capture depreciation.

The difficult weather, including drought conditions in FY 2009–10, produced more breaks in main lines. An improvement in the weather helped to lower the "breaks and leaks per mile of main line pipe" measure.

Municipal Profile

Estimated Service Population	87,654
Service Land Area (Square Miles)	169.0
Persons per Square Mile	519
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow
Median Family Income U.S. Census 2010	$63,643

Service Profile

FTE Staff Positions	
Treatment Plant	26.0
Line Crews	25.0
Meter Readers	4.0
Billing/Collection	10.0
Other	11.0
Total	76.0
Number of Treatment Plants	2
Total Treatment Capacity	24.0 MG
Average Daily Demand	9.3 MG
Miles of Main Line Pipe	687
Average Age of Main Line Pipe	32 years
Number of Breaks/Leaks	980
Number of Water Meters	37,647
Percent of Meters Read Automatically	98.3%
Total Revenues Collected	$19,858,793

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	33.5%
Operating Costs	41.4%
Capital Costs	25.1%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$4,293,143
Operating Costs	$5,298,574
Capital Costs	$3,215,711
TOTAL	$12,807,428

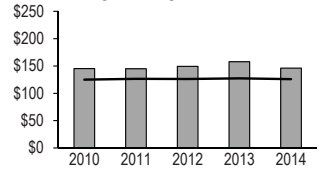
Concord

Water Services

Key: Concord ■ Benchmarking Average — Fiscal Years 2010 through 2014

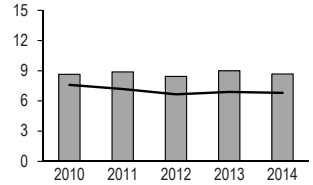
Resource Measures

Water Services Cost per Capita



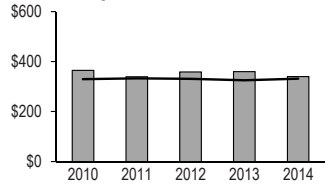
	2010	2011	2012	2013	2014
Concord	$145	$145	$149	$158	$146
Average	$125	$126	$126	$127	$126

Water Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Concord	8.7	8.9	8.4	9.0	8.7
Average	7.6	7.2	6.7	6.9	6.8

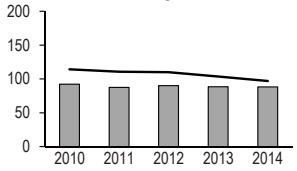
Water Services Cost per Meter



	2010	2011	2012	2013	2014
Concord	$365	$340	$358	$360	$340
Average	$330	$333	$331	$325	$332

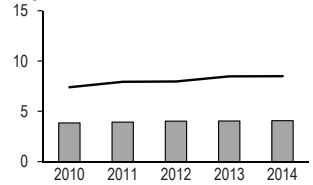
Workload Measures

Thousands of Gallons of Billed Water per Meter



	2010	2011	2012	2013	2014
Concord	92.3	87.6	90.2	88.4	88.2
Average	114.2	110.6	109.9	103.7	96.9

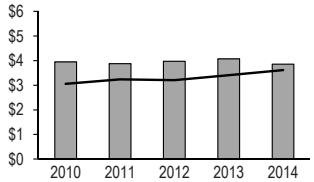
Miles of Main Line Pipe per Square Mile of Service Area



	2010	2011	2012	2013	2014
Concord	3.8	3.9	4.0	4.0	4.1
Average	7.4	7.9	8.0	8.5	8.5

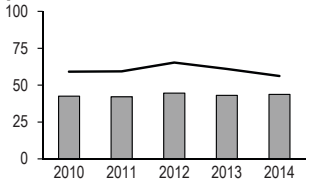
Efficiency Measures

Total Cost per Thousand Gallons of Billed Water



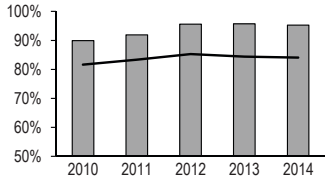
	2010	2011	2012	2013	2014
Concord	$3.95	$3.88	$3.97	$4.07	$3.86
Average	$3.06	$3.24	$3.20	$3.41	$3.62

Million Gallons of Billed Water per Water Services FTEs



	2010	2011	2012	2013	2014
Concord	42.5	42.1	44.6	43.1	43.7
Average	59.1	59.3	65.3	61.0	56.2

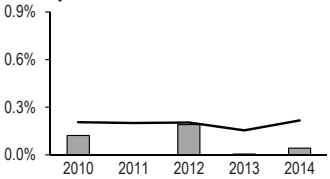
Billed Water as a Percentage of Finished Water



	2010	2011	2012	2013	2014
Concord	90%	92%	96%	96%	95%
Average	82%	83%	85%	84%	84%

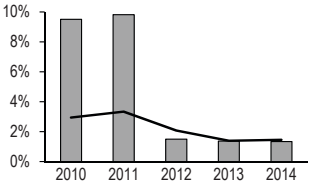
Effectiveness Measures

Percentage of Existing Pipeline Replaced or Rehabbed



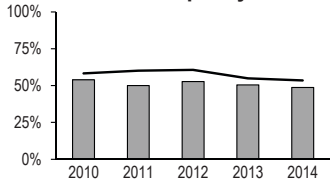
	2010	2011	2012	2013	2014
Concord	0.12%	0.00%	0.19%	0.01%	0.04%
Average	0.21%	0.20%	0.20%	0.15%	0.22%

Percentage of Water Bills Not Collected



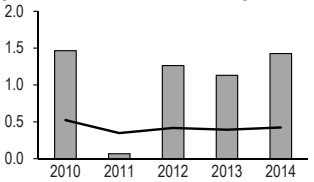
	2010	2011	2012	2013	2014
Concord	9.51%	9.81%	1.50%	1.37%	1.34%
Average	2.94%	3.33%	2.08%	1.40%	1.45%

Peak Daily Demand as a Percentage of Treatment Capacity



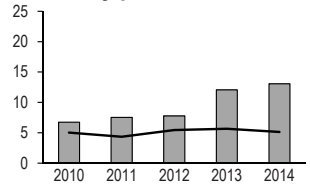
	2010	2011	2012	2013	2014
Concord	54%	50%	53%	50%	49%
Average	58%	60%	61%	55%	53%

Breaks and Leaks per Mile of Main Line Pipe



	2010	2011	2012	2013	2014
Concord	1.47	0.07	1.26	1.13	1.43
Average	0.52	0.35	0.42	0.39	0.42

Customer Complaints about Water Quality per 1,000 Meters



	2010	2011	2012	2013	2014
Concord	6.75	7.52	7.76	12.07	13.07
Average	5.03	4.34	5.45	5.67	5.14

Greensboro Water Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Greensboro's drinking water is provided by the Water Supply Division, which is part of the Water Resources Department, which also includes wastewater and stormwater services. The water system serves approximately 278,000 people in an area covering about 148 square miles. In addition to City of Greensboro residents, the system serves many addresses in Guilford County in areas adjacent to the city limits.

Water sources for the system are three city-owned reservoirs in the Haw River basin, which is part of the Upper Cape Fear River basin. The estimated safe yield of the system is 42 million gallons per day, based on a fifty-year esimate as certified by engineers. The system has emergency connections with High Point, Burlington, Reidsville, and Winston-Salem.

The city runs two treatment plants with a combined capacity of 54 million gallons. Both plants use conventional surface water treatment.

The estimated average age of main line pipes in the system is thirty-eight years. Greensboro has begun a spending program on water line rehabilitation and plans to increase funding for this activity for the next several years.

Water meters are read and billed monthly. All meters are read automatically using a radio system. Greensboro started the conversion to radio-read meters in 2006 and completed this conversion in the spring of 2009.

Conditions Affecting Service, Performance, and Costs

Greensboro has a very high collection rate for water bills. The city has a lien law, so only a small portion of billed amounts goes unpaid. The lien law was changed during FY 2010–11 so that it now only includes owners and not tenants.

Greensboro has a large public education program to encourage water conservation.

The costs of water services as captured here do not include debt service but do capture depreciation.

Water complaints in Greensboro rose in part due to a change in the method of disinfection being used, which led some customers to call the city. The change in the disinfection method also led to additional flushing of water lines and, consequently, some water could not be billed.

Municipal Profile

Estimated Service Population	278,093
Service Land Area (Square Miles)	148.0
Persons per Square Mile	1,879
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow
Median Family Income U.S. Census 2010	$52,752

Service Profile

FTE Staff Positions	
Treatment Plant	54.0
Line Crews	67.0
Meter Readers	15.0
Billing/Collection	9.0
Other	15.0
Total	160.0
Number of Treatment Plants	2
Total Treatment Capacity	54.0 MG
Average Daily Demand	32.2 MG
Miles of Main Line Pipe	1,486
Average Age of Main Line Pipe	38 years
Number of Breaks/Leaks	252
Number of Water Meters	103,051
Percent of Meters Read Automatically	100.0%
Total Revenues Collected	$44,872,386

Full Cost Profile

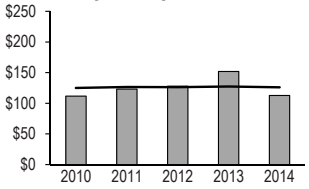
Cost Breakdown by Percentage	
Personal Services	17.1%
Operating Costs	66.4%
Capital Costs	16.4%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$5,372,361
Operating Costs	$20,841,642
Capital Costs	$5,151,489
TOTAL	$31,365,492

Greensboro — Water Services

Key: Greensboro ■ Benchmarking Average — Fiscal Years 2010 through 2014

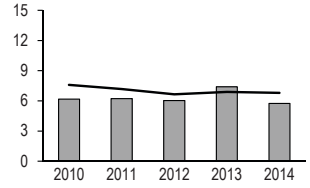
Resource Measures

Water Services Cost per Capita



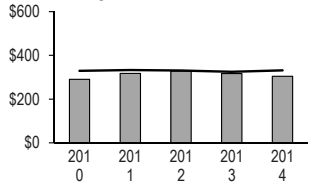
	2010	2011	2012	2013	2014
Greensboro	$112	$123	$128	$152	$113
Average	$125	$126	$126	$127	$126

Water Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Greensboro	6.2	6.2	6.0	7.4	5.8
Average	7.6	7.2	6.7	6.9	6.8

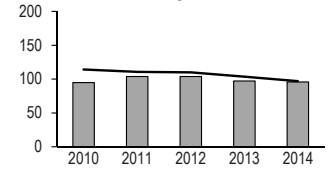
Water Services Cost per Meter



	2010	2011	2012	2013	2014
Greensboro	$291	$318	$328	$317	$304
Average	$330	$333	$331	$325	$332

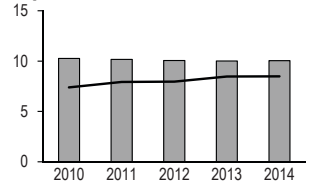
Workload Measures

Thousands of Gallons of Billed Water per Meter



	2010	2011	2012	2013	2014
Greensboro	94.9	103.8	103.8	97.1	95.8
Average	114.2	110.6	109.9	103.7	96.9

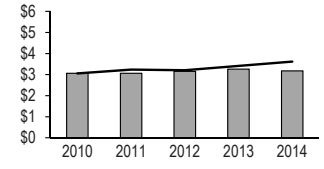
Miles of Main Line Pipe per Square Mile of Service Area



	2010	2011	2012	2013	2014
Greensboro	10.3	10.2	10.1	10.0	10.0
Average	7.4	7.9	8.0	8.5	8.5

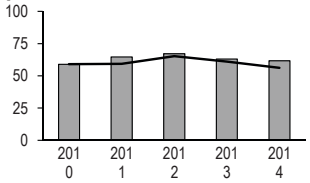
Efficiency Measures

Total Cost per Thousand Gallons of Billed Water



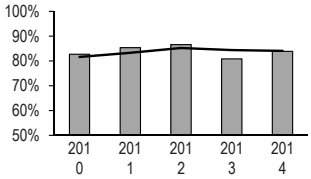
	2010	2011	2012	2013	2014
Greensboro	$3.06	$3.06	$3.16	$3.26	$3.18
Average	$3.06	$3.24	$3.20	$3.41	$3.62

Million Gallons of Billed Water per Water Services FTEs



	2010	2011	2012	2013	2014
Greensboro	59.0	64.7	67.1	63.0	61.7
Average	59.1	59.3	65.3	61.0	56.2

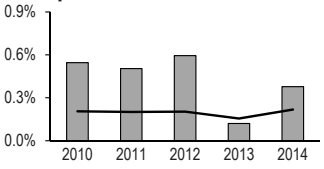
Billed Water as a Percentage of Finished Water



	2010	2011	2012	2013	2014
Greensboro	83%	85%	87%	81%	84%
Average	82%	83%	85%	84%	84%

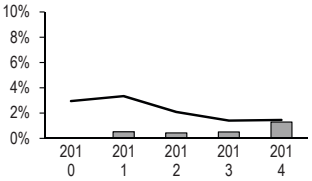
Effectiveness Measures

Percentage of Existing Pipeline Replaced or Rehabbed



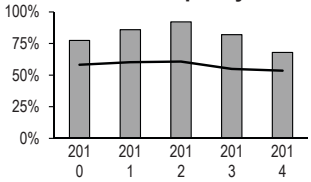
	2010	2011	2012	2013	2014
Greensboro	0.55%	0.50%	0.59%	0.12%	0.38%
Average	0.21%	0.20%	0.20%	0.15%	0.22%

Percentage of Water Bills Not Collected



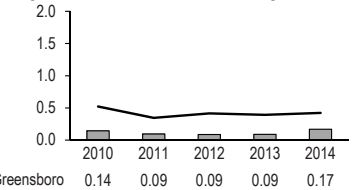
	2010	2011	2012	2013	2014
Greensboro	0.03%	0.51%	0.43%	0.50%	1.28%
Average	2.94%	3.33%	2.08%	1.40%	1.45%

Peak Daily Demand as a Percentage of Treatment Capacity



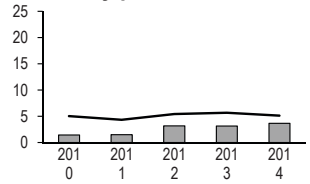
	2010	2011	2012	2013	2014
Greensboro	77%	86%	92%	82%	68%
Average	58%	60%	61%	55%	53%

Breaks and Leaks per Mile of Main Line Pipe



	2010	2011	2012	2013	2014
Greensboro	0.14	0.09	0.09	0.09	0.17
Average	0.52	0.35	0.42	0.39	0.42

Customer Complaints about Water Quality per 1,000 Meters



	2010	2011	2012	2013	2014
Greensboro	1.43	1.50	3.19	3.15	3.67
Average	5.03	4.34	5.45	5.67	5.14

Hickory — Water Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Water services in Hickory are provided by a combined water distribution division under the Public Services Department. The water system services an area covering roughly 326 square miles and approximately 92,000 people. Water is provided for the city of Hickory and also for the towns of Hildenbran, Brookford, and Catawba; the Sherrill's Ford, Mountain View, and Cooksville communities of Catawba County; and the Bethlehem, Sugarloaf, and Highway 16 communities of Alexander County.

Source water is from the Catawba River basin, with an estimated safe yield of 54 million gallons per day. Hickory sells water to the systems in Conover, Claremont, and Icard Township. The system has one treatment plant with a capacity of 32 million gallons per day.

Water meters are read monthly. Hickory's replacement standard for water meters is twenty years. About 8.9 percent of water meters in the system are read by automatic means.

Conditions Affecting Service, Performance, and Costs

The costs of water services as captured here do not include debt service but do capture depreciation.

The increase in water quality complaints in FY 2011–2012 was due to an abnormal increase in iron and manganese in the water source during the first quarter of the year. Approximately 600 "dirty water" calls were received during this period, but this was not a safety issue for the water.

Municipal Profile

Estimated Service Population	92,000
Service Land Area (Square Miles)	326.0
Persons per Square Mile	282
Topography	Flat; gently rolling
Climate	Temperate; some ice and snow
Median Family Income (U.S. Census 2010)	$54,093

Service Profile

FTE Staff Positions	
Treatment Plant	12.0
Line Crews	35.0
Meter Readers	6.0
Billing/Collection	2.5
Other	2.0
Total	57.5
Number of Treatment Plants	1
Total Treatment Capacity	32.0 MG
Average Daily Demand	11.2 MG
Miles of Main Line Pipe	919
Average Age of Main Line Pipe	40 years
Number of Breaks/Leaks	201
Number of Water Meters	28,570
Percent of Meters Read Automatically	8.9%
Total Revenues Collected	$13,046,244

Full Cost Profile

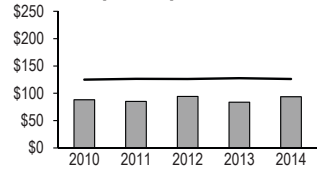
Cost Breakdown by Percentage	
Personal Services	29.8%
Operating Costs	56.1%
Capital Costs	14.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$2,570,979
Operating Costs	$4,842,655
Capital Costs	$1,211,382
TOTAL	$8,625,016

Hickory — Water Services

Key: Hickory ■ Benchmarking Average — Fiscal Years 2010 through 2014

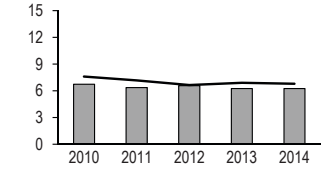
Resource Measures

Water Services Cost per Capita



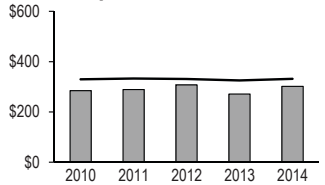
	2010	2011	2012	2013	2014
Hickory	$88	$85	$94	$84	$94
Average	$125	$126	$126	$127	$126

Water Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Hickory	6.7	6.4	6.6	6.3	6.3
Average	7.6	7.2	6.7	6.9	6.8

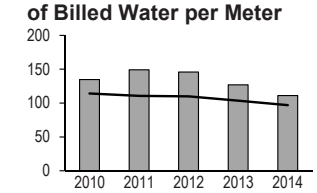
Water Services Cost per Meter



	2010	2011	2012	2013	2014
Hickory	$285	$289	$307	$271	$302
Average	$330	$333	$331	$325	$332

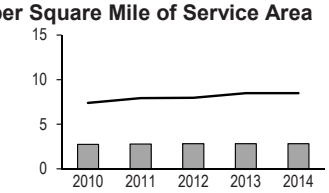
Workload Measures

Thousands of Gallons of Billed Water per Meter



	2010	2011	2012	2013	2014
Hickory	134.8	149.2	146.0	127.0	111.0
Average	114.2	110.6	109.9	103.7	96.9

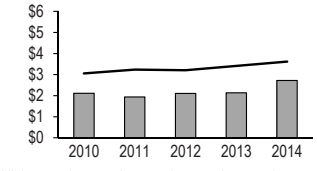
Miles of Main Line Pipe per Square Mile of Service Area



	2010	2011	2012	2013	2014
Hickory	2.7	2.8	2.8	2.8	2.8
Average	7.4	7.9	8.0	8.5	8.5

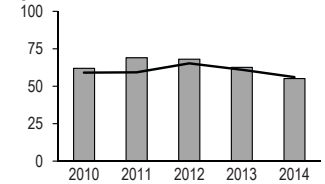
Efficiency Measures

Total Cost per Thousand Gallons of Billed Water



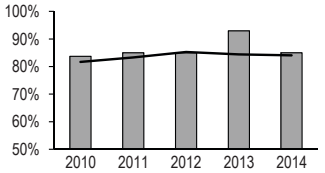
	2010	2011	2012	2013	2014
Hickory	$2.11	$1.94	$2.10	$2.14	$2.72
Average	$3.06	$3.24	$3.20	$3.41	$3.62

Million Gallons of Billed Water per Water Services FTEs



	2010	2011	2012	2013	2014
Hickory	62.0	69.0	68.0	62.6	55.2
Average	59.1	59.3	65.3	61.0	56.2

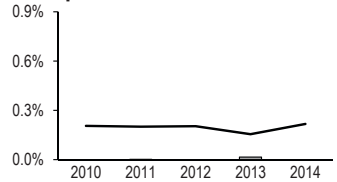
Billed Water as a Percentage of Finished Water



	2010	2011	2012	2013	2014
Hickory	84%	85%	85%	93%	85%
Average	82%	83%	85%	84%	84%

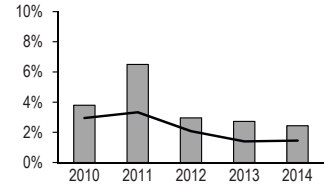
Effectiveness Measures

Percentage of Existing Pipeline Replaced or Rehabbed



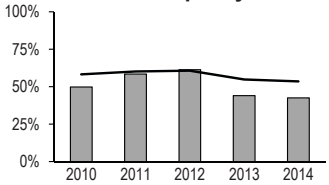
	2010	2011	2012	2013	2014
Hickory	0.00%	0.00%	0.00%	0.02%	0.00%
Average	0.21%	0.20%	0.20%	0.15%	0.22%

Percentage of Water Bills Not Collected



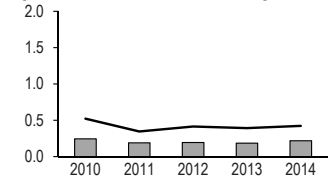
	2010	2011	2012	2013	2014
Hickory	3.80%	6.50%	2.96%	2.73%	2.44%
Average	2.94%	3.33%	2.08%	1.40%	1.45%

Peak Daily Demand as a Percentage of Treatment Capacity



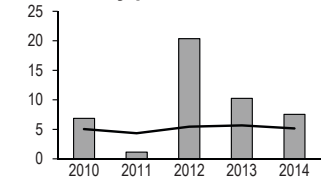
	2010	2011	2012	2013	2014
Hickory	50%	58%	61%	44%	43%
Average	58%	60%	61%	55%	53%

Breaks and Leaks per Mile of Main Line Pipe



	2010	2011	2012	2013	2014
Hickory	0.24	0.19	0.19	0.19	0.22
Average	0.52	0.35	0.42	0.39	0.42

Customer Complaints about Water Quality per 1,000 Meters



	2010	2011	2012	2013	2014
Hickory	6.87	1.14	20.35	10.26	7.53
Average	5.03	4.34	5.45	5.67	5.14

High Point Water Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of High Point's drinking water services are part of a combined Water/Sewer Division under the Public Services Department. The system covers sixty-four square miles and serves approximately 109,000 people.

Water sources for the system are two city-owned reservoirs located in the Deep River basin and the Piedmont Triad Regional Water Authority. The estimated safe yield of the system is 22 million gallons per day. The system has one treatment plant and uses an upflow clarification process and a super "U" pulsator with a treatment capacity of 24 million gallons per day.

Water meters are read monthly. Approximately 14 percent of meters are read by automatic means. The city has a standard to replace water meters every ten years on average.

Conditions Affecting Service, Performance, and Costs

High Point has a very high collection rate for water bills. The city participates in the State of North Carolina's debt set-off program. The program is in place to garnish a person's state tax return if he or she does not pay his or her bill. In addition, High Point performs a credit check with Equifax based on the customer's payment history.

The costs of water services as captured here do not include debt service but do capture depreciation.

High Point is a partner in the Piedmont Triad Regional Water Authority. It received several millions gallons per day through the partnership. This has changed the High Point system from a single-pressure zone system to a double-pressure zone system.

Municipal Profile

Estimated Service Population	109,270
Service Land Area (Square Miles)	64.0
Persons per Square Mile	1,707
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow
Median Family Income U.S. Census 2010	$49,720

Service Profile

FTE Staff Positions	
Treatment Plant	13.0
Line Crews	19.0
Meter Readers	5.0
Billing/Collection	6.0
Other	14.5
Total	57.5
Number of Treatment Plants	1
Total Treatment Capacity	24.0 MG
Average Daily Demand	12.2 MG
Miles of Main Line Pipe	613
Average Age of Main Line Pipe	38 years
Number of Breaks/Leaks	216
Number of Water Meters	41,847
Percent of Meters Read Automatically	14.3%
Total Revenues Collected	$16,417,279

Full Cost Profile

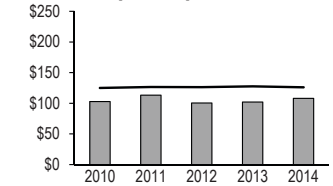
Cost Breakdown by Percentage	
Personal Services	28.3%
Operating Costs	40.2%
Capital Costs	31.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$3,344,446
Operating Costs	$4,744,375
Capital Costs	$3,720,436
TOTAL	$11,809,257

High Point — Water Services

Key: High Point ■ Benchmarking Average — Fiscal Years 2010 through 2014

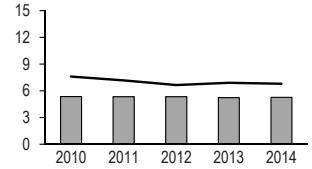
Resource Measures

Water Services Cost per Capita



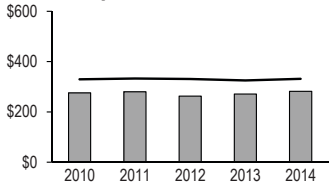
	2010	2011	2012	2013	2014
High Point	$103	$113	$100	$102	$108
Average	$125	$126	$126	$127	$126

Water Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
High Point	5.4	5.3	5.3	5.2	5.3
Average	7.6	7.2	6.7	6.9	6.8

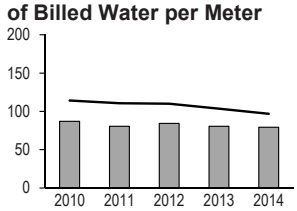
Water Services Cost per Meter



	2010	2011	2012	2013	2014
High Point	$276	$280	$263	$271	$282
Average	$330	$333	$331	$325	$332

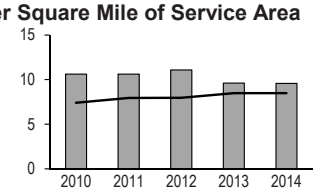
Workload Measures

Thousands of Gallons of Billed Water per Meter



	2010	2011	2012	2013	2014
High Point	87.0	80.6	84.3	80.5	79.2
Average	114.2	110.6	109.9	103.7	96.9

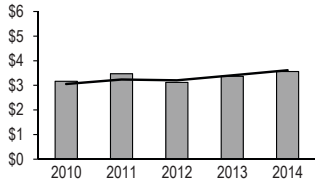
Miles of Main Line Pipe per Square Mile of Service Area



	2010	2011	2012	2013	2014
High Point	10.6	10.6	11.1	9.6	9.6
Average	7.4	7.9	8.0	8.5	8.5

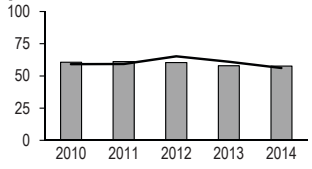
Efficiency Measures

Total Cost per Thousand Gallons of Billed Water



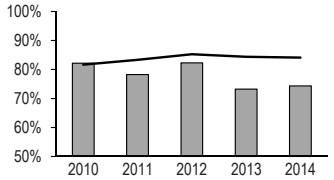
	2010	2011	2012	2013	2014
High Point	$3.17	$3.47	$3.12	$3.37	$3.56
Average	$3.06	$3.24	$3.20	$3.41	$3.62

Million Gallons of Billed Water per Water Services FTEs



	2010	2011	2012	2013	2014
High Point	60.7	61.2	60.5	57.9	57.7
Average	59.1	59.3	65.3	61.0	56.2

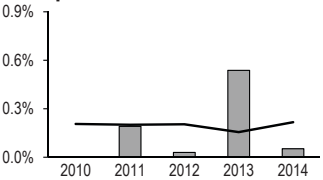
Billed Water as a Percentage of Finished Water



	2010	2011	2012	2013	2014
High Point	82%	78%	82%	73%	74%
Average	82%	83%	85%	84%	84%

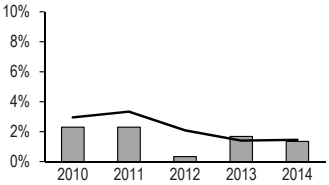
Effectiveness Measures

Percentage of Existing Pipeline Replaced or Rehabbed



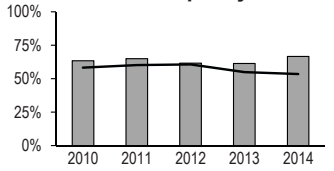
	2010	2011	2012	2013	2014
High Point	0.00%	0.19%	0.03%	0.54%	0.05%
Average	0.21%	0.20%	0.20%	0.15%	0.22%

Percentage of Water Bills Not Collected



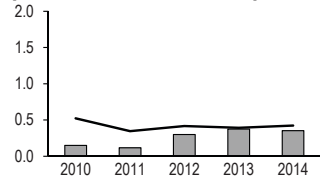
	2010	2011	2012	2013	2014
High Point	2.30%	2.30%	0.33%	1.67%	1.35%
Average	2.94%	3.33%	2.08%	1.40%	1.45%

Peak Daily Demand as a Percentage of Treatment Capacity



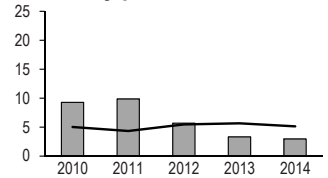
	2010	2011	2012	2013	2014
High Point	63%	65%	62%	61%	67%
Average	58%	60%	61%	55%	53%

Breaks and Leaks per Mile of Main Line Pipe



	2010	2011	2012	2013	2014
High Point	0.15	0.12	0.30	0.37	0.35
Average	0.52	0.35	0.42	0.39	0.42

Customer Complaints about Water Quality per 1,000 Meters



	2010	2011	2012	2013	2014
High Point	9.27	9.87	5.68	3.30	2.94
Average	5.03	4.34	5.45	5.67	5.14

Salisbury — Water Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Salisbury provides water service through an enterprise fund department. This department is known as Salisbury-Rowan Utilities. The system covers 47.2 square miles and covers much of Rowan County. Approximately 53,000 people are served. In the late 1990s and early 2000s, Salisbury assumed ownership of the water and sewer systems of the towns of Spencer, Granite Quarry, and Rockwell, followed by China Grove in 2011. Rowan County turned over its water assets to Salisbury in 2004. Salisbury also sells bulk water to the towns of East Spencer, China Grove, Landis, and to the City of Kannapolis.

The water source for the system is the Yadkin River. The estimated safe yield for the system is 108 million gallons per day. The system has one treatment plant with a capacity of 25 million gallons per day. The plant uses an Actiflo pre-treatment process followed by a conventional sedimentation and filtration treatment process.

Water meters are read once per month. Currently, approximately 10 percent of meters are read by automatic means. The standard for meter replacement is fifteen years.

Conditions Affecting Service, Performance, and Costs

The costs of water services as captured here do not include debt service but do capture depreciation.

Municipal Profile

Estimated Service Population	52,850
Service Land Area (Square Miles)	47.2
Persons per Square Mile	1,120
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow
Median Family Income (U.S. Census 2010)	$40,192

Service Profile

FTE Staff Positions	
Treatment Plant	8.0
Line Crews	13.0
Meter Readers	11.0
Billing/Collection	5.0
Other	8.0
Total	45.0
Number of Treatment Plants	1
Total Treatment Capacity	25.0 MG
Average Daily Demand	8.7 MG
Miles of Main Line Pipe	419
Average Age of Main Line Pipe	47 years
Number of Breaks/Leaks	165
Number of Water Meters	18,890
Percent of Meters Read Automatically	9.6%
Total Revenues Collected	$12,172,331

Full Cost Profile

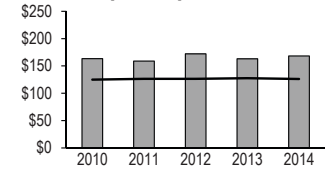
Cost Breakdown by Percentage	
Personal Services	30.1%
Operating Costs	42.6%
Capital Costs	27.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$2,674,503
Operating Costs	$3,794,578
Capital Costs	$2,430,248
TOTAL	$8,899,329

Salisbury — Water Services

Key: Salisbury ■ Benchmarking Average — Fiscal Years 2010 through 2014

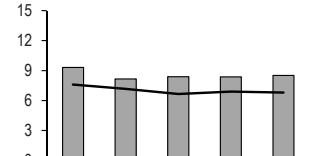
Resource Measures

Water Services Cost per Capita



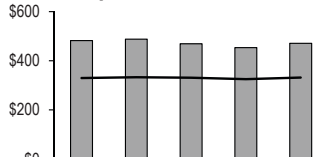
	2010	2011	2012	2013	2014
Salisbury	$163	$159	$172	$163	$168
Average	$125	$126	$126	$127	$126

Water Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Salisbury	9.3	8.2	8.4	8.4	8.5
Average	7.6	7.2	6.7	6.9	6.8

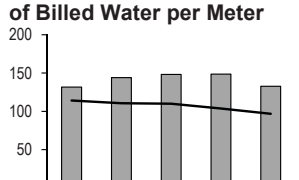
Water Services Cost per Meter



	2010	2011	2012	2013	2014
Salisbury	$482	$488	$469	$453	$471
Average	$330	$333	$331	$325	$332

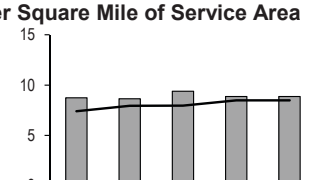
Workload Measures

Thousands of Gallons of Billed Water per Meter



	2010	2011	2012	2013	2014
Salisbury	131.7	144.0	148.1	148.6	132.8
Average	114.2	110.6	109.9	103.7	96.9

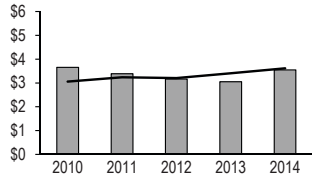
Miles of Main Line Pipe per Square Mile of Service Area



	2010	2011	2012	2013	2014
Salisbury	8.7	8.6	9.4	8.9	8.9
Average	7.4	7.9	8.0	8.5	8.5

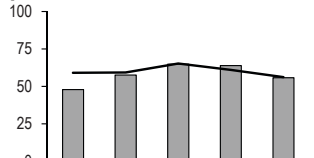
Efficiency Measures

Total Cost per Thousand Gallons of Billed Water



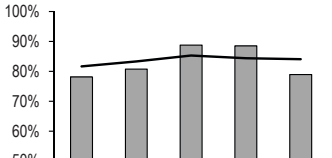
	2010	2011	2012	2013	2014
Salisbury	$3.66	$3.39	$3.17	$3.05	$3.55
Average	$3.06	$3.24	$3.20	$3.41	$3.62

Million Gallons of Billed Water per Water Services FTEs



	2010	2011	2012	2013	2014
Salisbury	47.9	57.6	64.9	63.9	55.8
Average	59.1	59.3	65.3	61.0	56.2

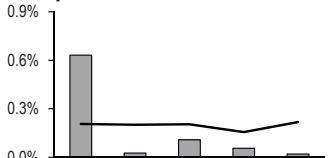
Billed Water as a Percentage of Finished Water



	2010	2011	2012	2013	2014
Salisbury	78%	81%	89%	89%	79%
Average	82%	83%	85%	84%	84%

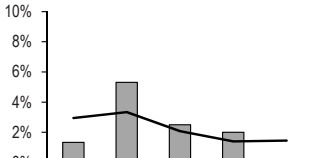
Effectiveness Measures

Percentage of Existing Pipeline Replaced or Rehabbed



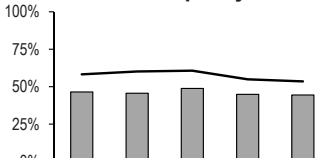
	2010	2011	2012	2013	2014
Salisbury	0.63%	0.03%	0.11%	0.06%	0.02%
Average	0.21%	0.20%	0.20%	0.15%	0.22%

Percentage of Water Bills Not Collected



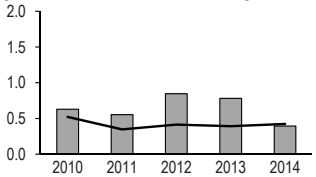
	2010	2011	2012	2013	2014
Salisbury	1.33%	5.31%	2.50%	2.00%	
Average	2.94%	3.33%	2.08%	1.40%	1.45%

Peak Daily Demand as a Percentage of Treatment Capacity



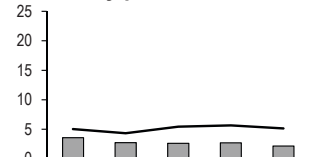
	2010	2011	2012	2013	2014
Salisbury	46%	46%	49%	45%	44%
Average	58%	60%	61%	55%	53%

Breaks and Leaks per Mile of Main Line Pipe



	2010	2011	2012	2013	2014
Salisbury	0.63	0.55	0.85	0.78	0.39
Average	0.52	0.35	0.42	0.39	0.42

Customer Complaints about Water Quality per 1,000 Meters



	2010	2011	2012	2013	2014
Salisbury	3.57	2.73	2.62	2.70	2.17
Average	5.03	4.34	5.45	5.67	5.14

Wilson — Water Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Water services in Wilson are handled by a combined water/sewer division under the Department of Public Works. Billing services are handled by the Wilson Finance Department. The water system serves approximately 52,000 people over 39 square miles.

Source water for the system comes from four city-owned reservoirs. Water is also pumped from two different reservoirs in the Neuse River basin. The estimated safe yield for the system is 29 million gallons per day.

The system has two treatment plants with a combined treatment capacity of 22 million gallons per day. The plants use conventional surface water treatment with flocculation, sedimentation, and filtration.

Water meters are read once per month in Wilson. Approximately 23 percent of the water meters in the system are read by automatic remote means using a radio system by Itron.

Conditions Affecting Service, Performance, and Costs

The costs of water services as captured here do not include debt service but do capture depreciation. Large capital improvements are being made to the Buckhorn Lake Dam and Wastewater Projects, which have been required to meet advanced nutrient removal.

Due to better mapping accuracy, the reported service area decreased from 99 to 39 square miles. The improved mapping more precisely defined which areas were in the service area and excluded broader areas that were previously included in the area calculations. This apparent jump in the miles of pipe per square mile in FY 2012–13 is a result of this improved accuracy of the area served and not due to the laying of more pipe.

Municipal Profile

Estimated Service Population	51,600
Service Land Area (Square Miles)	39.0
Persons per Square Mile	1,323
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow
Median Family Income U.S. Census 2010	$43,442

Service Profile

FTE Staff Positions	
Treatment Plant	17.0
Line Crews	18.0
Meter Readers	2.0
Billing/Collection	2.0
Other	1.0
Total	40.0
Number of Treatment Plants	2
Total Treatment Capacity	22.0 MG
Average Daily Demand	8.8 MG
Miles of Main Line Pipe	420
Average Age of Main Line Pipe	42 years
Number of Breaks/Leaks	106
Number of Water Meters	22,179
Percent of Meters Read Automatically	23.0%
Total Revenues Collected	$13,756,150

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	33.5%
Operating Costs	44.4%
Capital Costs	22.1%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$3,302,264
Operating Costs	$4,367,656
Capital Costs	$2,176,311
TOTAL	$9,846,231

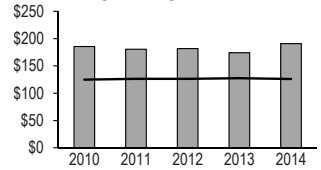
Wilson

Water Services

Key: Wilson ■ Benchmarking Average — Fiscal Years 2010 through 2014

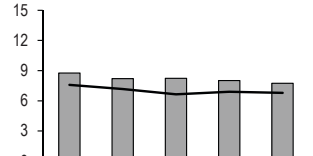
Resource Measures

Water Services Cost per Capita



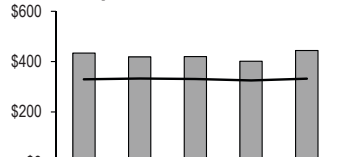
	2010	2011	2012	2013	2014
Wilson	$185	$180	$182	$174	$191
Average	$125	$126	$126	$127	$126

Water Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Wilson	8.8	8.2	8.2	8.0	7.8
Average	7.6	7.2	6.7	6.9	6.8

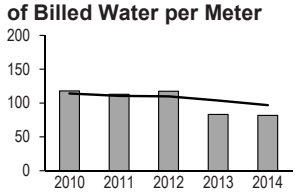
Water Services Cost per Meter



	2010	2011	2012	2013	2014
Wilson	$434	$418	$420	$401	$444
Average	$330	$333	$331	$325	$332

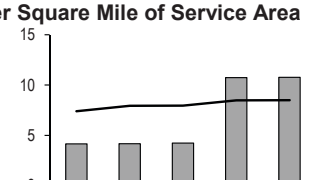
Workload Measures

Thousands of Gallons of Billed Water per Meter



	2010	2011	2012	2013	2014
Wilson	117.9	112.9	117.5	83.1	81.6
Average	114.2	110.6	109.9	103.7	96.9

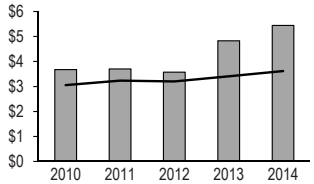
Miles of Main Line Pipe per Square Mile of Service Area



	2010	2011	2012	2013	2014
Wilson	4.2	4.2	4.2	10.7	10.8
Average	7.4	7.9	8.0	8.5	8.5

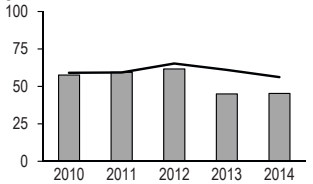
Efficiency Measures

Total Cost per Thousand Gallons of Billed Water



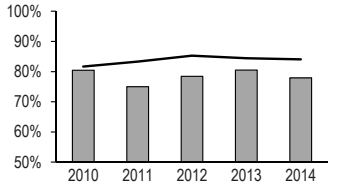
	2010	2011	2012	2013	2014
Wilson	$3.68	$3.70	$3.57	$4.83	$5.44
Average	$3.06	$3.24	$3.20	$3.41	$3.62

Million Gallons of Billed Water per Water Services FTEs



	2010	2011	2012	2013	2014
Wilson	57.6	59.4	61.7	45.0	45.3
Average	59.1	59.3	65.3	61.0	56.2

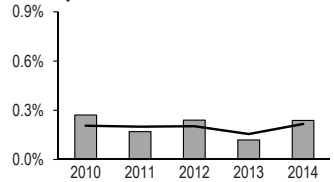
Billed Water as a Percentage of Finished Water



	2010	2011	2012	2013	2014
Wilson	80%	75%	78%	80%	78%
Average	82%	83%	85%	84%	84%

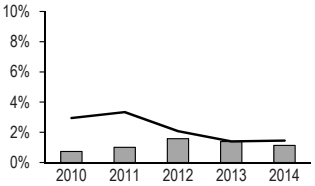
Effectiveness Measures

Percentage of Existing Pipeline Replaced or Rehabbed



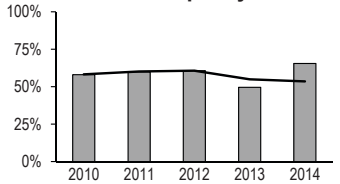
	2010	2011	2012	2013	2014
Wilson	0.27%	0.17%	0.24%	0.12%	0.24%
Average	0.21%	0.20%	0.20%	0.15%	0.22%

Percentage of Water Bills Not Collected



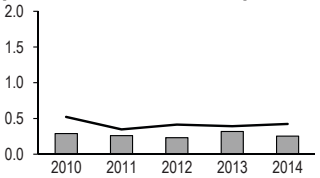
	2010	2011	2012	2013	2014
Wilson	0.73%	1.00%	1.57%	1.39%	1.13%
Average	2.94%	3.33%	2.08%	1.40%	1.45%

Peak Daily Demand as a Percentage of Treatment Capacity



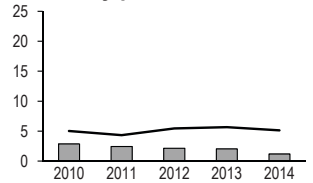
	2010	2011	2012	2013	2014
Wilson	58%	60%	61%	50%	65%
Average	58%	60%	61%	55%	53%

Breaks and Leaks per Mile of Main Line Pipe



	2010	2011	2012	2013	2014
Wilson	0.29	0.26	0.23	0.32	0.25
Average	0.52	0.35	0.42	0.39	0.42

Customer Complaints about Water Quality per 1,000 Meters



	2010	2011	2012	2013	2014
Wilson	2.87	2.45	2.13	2.03	1.17
Average	5.03	4.34	5.45	5.67	5.14

Winston-Salem Water Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Winston-Salem and Forsyth County Utilities Division operates a combined water and sewer system that covers the city and most of the remaining population of Forsyth County. Approximately 336,000 people are served in an area covering roughly 366 square miles.

The system has an eleven-member utility commission that was created by an interlocal agreement between the City of Winston-Salem and Forsyth County. The commission sets policy for publicly owned water, wastewater, and solid waste disposal facilities. The commission is also charged with the responsibility for long-range planning, authorizing funding for projects, operation and maintenance of facilities, and setting policies and rate structures. The commission is not authorized to issue bonds to finance capital improvements.

Water sources for the system are drawn from two separate points on the Yadkin River. The city also uses Salem Lake as a water source. The estimated safe yield for the system is 100 million gallons per day.

The city uses three treatment plants. During FY 2010–11, the R.A. Thomas Water Treatment Plant construction was completed, beginning operations in the spring of 2011 and replacing a plant built in the 1930s. With the three plants, daily treatment capacity is 91 million gallons. The plants all use conventional treatment employing coagulation, flocculation, and sedimentation followed by rapid sand filtration and then chlorine treatment for disinfection.

The system has 2,266 miles of pipeline with an estimated average age of fifty years. The replacement goal for pipes is seventy-five years.

Water meters are read both monthly and bi-monthly depending on the account type. Currently the system has a small number of meters read by automatic means, totaling approximately 10 percent. The replacement standard for water meters is approximately every ten years. The goal is to have completely switched to automatically read meters within ten years.

Conditions Affecting Service, Performance, and Costs

The costs of water services as captured here do not include debt service but do capture depreciation.

Municipal Profile

Estimated Service Population	336,243
Service Land Area (Square Miles)	366.0
Persons per Square Mile	919
Topography	Gently rolling
Climate	Temperate; some ice and snow
Median Family Income U.S. Census 2010	$51,491

Service Profile

FTE Staff Positions	
Treatment Plant	49.0
Line Crews	74.0
Meter Readers	13.0
Billing/Collection	8.0
Other	25.0
Total	169.0
Number of Treatment Plants	3
Total Treatment Capacity	91.0 MG
Average Daily Demand	34.7 MG
Miles of Main Line Pipe	2,266
Average Age of Main Line Pipe	50 years
Number of Breaks/Leaks	444
Number of Water Meters	124,497
Percent of Meters Read Automatically	9.8%
Total Revenues Collected	$51,174,680

Full Cost Profile

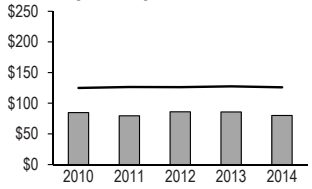
Cost Breakdown by Percentage	
Personal Services	25.1%
Operating Costs	37.9%
Capital Costs	37.1%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$7,334,662
Operating Costs	$11,079,663
Capital Costs	$10,847,856
TOTAL	$29,262,181

Winston-Salem — Water Services

Key: Winston-Salem ■ Benchmarking Average — Fiscal Years 2010 through 2014

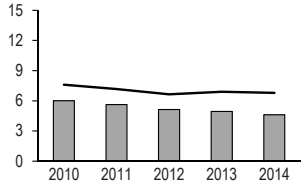
Resource Measures

Water Services Cost per Capita



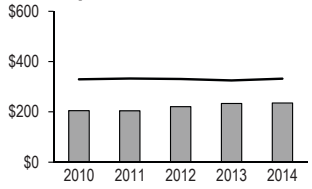
	2010	2011	2012	2013	2014
Winston-Salem	$85	$80	$86	$86	$80
Average	$125	$126	$126	$127	$126

Water Services FTEs per 10,000 Population



	2010	2011	2012	2013	2014
Winston-Salem	6.0	5.6	5.1	4.9	4.6
Average	7.6	7.2	6.7	6.9	6.8

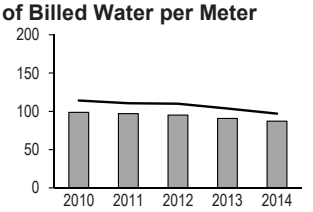
Water Services Cost per Meter



	2010	2011	2012	2013	2014
Winston-Salem	$205	$204	$220	$233	$235
Average	$330	$333	$331	$325	$332

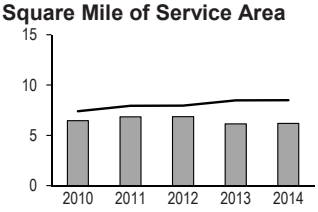
Workload Measures

Thousands of Gallons of Billed Water per Meter



	2010	2011	2012	2013	2014
Winston-Salem	98.7	97.0	95.2	90.8	87.1
Average	114.2	110.6	109.9	103.7	96.9

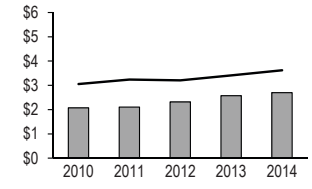
Miles of Main Line Pipe per Square Mile of Service Area



	2010	2011	2012	2013	2014
Winston-Salem	6.5	6.8	6.9	6.1	6.2
Average	7.4	7.9	8.0	8.5	8.5

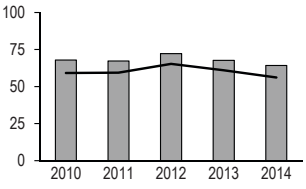
Efficiency Measures

Total Cost per Thousand Gallons of Billed Water



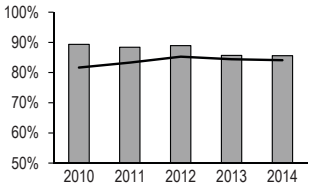
	2010	2011	2012	2013	2014
Winston-Salem	$2.07	$2.10	$2.32	$2.57	$2.70
Average	$3.06	$3.24	$3.20	$3.41	$3.62

Million Gallons of Billed Water per Water Services FTEs



	2010	2011	2012	2013	2014
Winston-Salem	67.9	67.2	72.2	67.6	64.2
Average	59.1	59.3	65.3	61.0	56.2

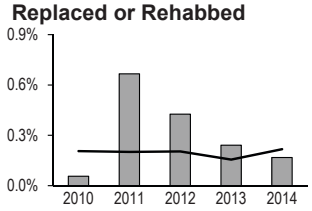
Billed Water as a Percentage of Finished Water



	2010	2011	2012	2013	2014
Winston-Salem	89%	88%	89%	86%	86%
Average	82%	83%	85%	84%	84%

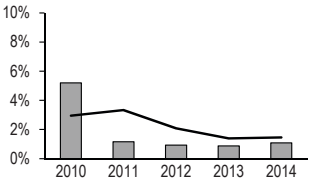
Effectiveness Measures

Percentage of Existing Pipeline Replaced or Rehabbed



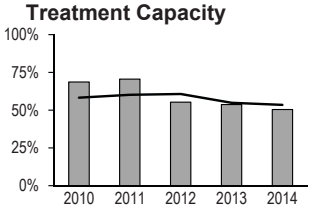
	2010	2011	2012	2013	2014
Winston-Salem	0.06%	0.67%	0.43%	0.24%	0.17%
Average	0.21%	0.20%	0.20%	0.15%	0.22%

Percentage of Water Bills Not Collected



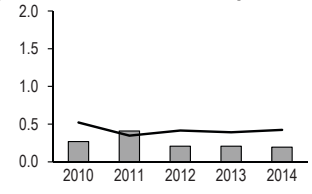
	2010	2011	2012	2013	2014
Winston-Salem	5.20%	1.16%	0.93%	0.87%	1.08%
Average	2.94%	3.33%	2.08%	1.40%	1.45%

Peak Daily Demand as a Percentage of Treatment Capacity



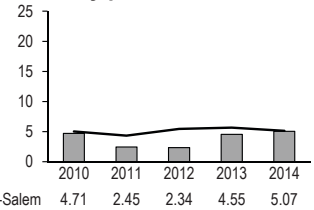
	2010	2011	2012	2013	2014
Winston-Salem	69%	71%	55%	54%	50%
Average	58%	60%	61%	55%	53%

Breaks and Leaks per Mile of Main Line Pipe



	2010	2011	2012	2013	2014
Winston-Salem	0.27	0.41	0.21	0.21	0.20
Average	0.52	0.35	0.42	0.39	0.42

Customer Complaints about Water Quality per 1,000 Meters



	2010	2011	2012	2013	2014
Winston-Salem	4.71	2.45	2.34	4.55	5.07
Average	5.03	4.34	5.45	5.67	5.14


UNC
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Performance and Cost Data

WASTEWATER SERVICES


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PERFORMANCE MEASURES FOR WASTEWATER SERVICES

SERVICE DEFINITION

Wastewater Services includes the collection, treatment, wastewater discharge, solids disposal, and billing related to sewer services. This service area includes the collection system after leaving the customer's outlet, lift stations, pretreatment, and treatment plants. Activities and costs include the operation, maintenance, and installation of infrastructure. Also included are costs and activities associated with billing and collection for sewer services and administrative activities such as planning, engineering, and testing. This includes wastewater treated for reuse at the plant site and for other purposes. Excluded are potable water systems and stormwater systems.

NOTES ON PERFORMANCE MEASURES

1. Volume of Sewage per Account

This workload measure captures the amount of wastewater generated and received at the treatment plant relative to the number of customers.

2. Miles of Sewer Main Line Pipe per Square Mile of Service Area

The amount of sewer main line pipe per square mile shows the density of the pipe infrastructure to be maintained relative to the geographic size of the area served.

3. Number of Lift Stations per 1,000 Accounts

This workload measure provides some idea of the amount of reliance on pumping in a system to supplement gravity-fed delivery. Lift stations also generate additional maintenance workload.

4. Cost per 1,000 Gallons of Collected and Treated Wastewater

This efficiency measure shows total system costs relative to the volume of wastewater reaching treatment plants. Some wastewater does not make it to treatment plants.

5. Wastewater Volume in Millions of Gallons per FTE

This efficiency measure captures the number of workers the system is using relative to the volume of wastewater treated.

6. Customer Accounts per FTE

The number of customer accounts relative to the number of workers is another efficiency measure showing how many customers are being served per worker.

7. Percentage of Bills Collected
Collection of wastewater bills sent to customers is necessary to ensure revenues for system operation. Bills not collected reflect potential lost revenue to the system, but some loss is unavoidable.

8. Average Daily Treatment as a Percent of Permitted Capacity
A wastewater system needs sufficient capacity to not only meet average demands, but also peak demands. This measure looks at average daily demand relative to the wastewater system treatment capacity in a day. Some excess capacity is needed to allow for daily service variations and also to plan for future expansion needs.

9. Percent of Existing Main Line Pipe Rehabilitated or Replaced
As the wastewater systems ages, pipe needs to be replaced to ensure that service will not be interrupted. This effectiveness measure captures the amount of current stock being replaced or rehabilitated during a given year.

10. Overflows Per 100 Miles of Main Line Pipe
Sanitary system overflows may be due to blockages or breaks in pipe. Keeping these breaks to a low level is an important measure of the effectiveness of preventive maintenance and system upkeep. Overflows, if large enough, may also represent a public health concern.

11. Sewer Backups per 100 Miles of Main Line Pipe
Backups in sewer pipes are another measure of potential maintenance concerns, not to mention being a public health concern. Backups may also be a sign of insufficient maintenance.

12. Billed Sewer Effluents as a Percent of Treated Effluent
The volume of wastewater that is billed for relative to the volume received at the treatment plant is an effectiveness measure that points to potential losses in the collection system. Some loss is inevitable in sewer systems, and not all drinking water billed for is used in such a way that it should make it back to the wastewater treatment plant. But comparisons may reveal excessive infiltration or leakage.

Wastewater Services

Summary of Key Dimensions of Service

City or Town	Estimated Residential Population in Service Area	Service Area (in Square Miles)	Operating Treatment Plants	Average Daily Flow of Wastewater at Plants (in MGD)	Total Treatment Capacity for Wastewater (in MGD)	Miles of Gravity and Forced Main Lines	Number of Wastewater Accounts	Sewer System FTE Positions
Apex	42,920	17.4	1	2.7	3.6	188.2	13,840	27.0
Cary	172,762	75.5	2	12.3	24.8	914.3	56,162	110.7
Charlotte	990,977	546.0	5	83.2	123.0	4,320.0	242,973	428.0
Concord	83,506	109.6	0	NA	NA	553.2	32,596	40.0
Greensboro	278,093	148.0	2	30.3	56.0	1,482.7	100,125	165.0
Hickory	37,478	51.2	3	5.9	15.2	500.0	14,992	44.0
High Point	109,270	64.0	2	17.1	32.2	670.7	40,193	92.5
Salisbury	51,800	45.3	2	7.4	12.5	428.6	16,092	55.5
Wilson	53,600	34.0	1	9.6	14.0	355.0	20,241	64.0
Winston-Salem	366,243	366.0	2	32.4	51.0	1,781.4	95,255	177.0

NOTES

MGD stands for millions of gallons per day.

EXPLANATORY FACTORS

These are factors that the project found affected wastewater services performance and cost in one or more of the municipalities:

Topography
Size of service area
Population density
Age of infrastructure
Growth of population and businesses

Apex Wastewater Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Wastewater services for the Town of Apex are managed by the Water Reclamation and Wastewater Collections Division under the Department of Public Works. The system covers the area within the municipal limits.

Apex has one treatment plant, which uses bar screens, grit removal, biological nutrient removal (BNR), oxidation ditches, secondary clarifiers, sand filters, ultraviolet disinfection, aerobic sludge digestion, and rotary drum sludge dewatering as part of its treatment process. The Apex wastewater system has nutrient limits in place which restrict what can be discharged from the plant to protect water quality. Apex uses land application for biosolids resulting from treatment and also dries some biosolids as fertilizer pellets.

The town's system had three regulatory violations for the fiscal year, one for the treatment system and two for the collection system.

Conditions Affecting Service, Performance, and Costs

Wastewater Services was added as a new service area for the benchmarking project beginning with FY 2011–12. The costs of wastewater or sewer services as captured here do not include debt service but do capture depreciation of capital.

Municipal Profile

Estimated Service Population	42,920
Service Land Area (Square Miles)	17.4
Persons per Square Mile	2,467
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow
Median Family Income U.S. Census 2010	$97,201

Service Profile

FTE Staff Positions	
Treatment Plant	9.0
Line Crews	14.0
Billing/Collection	2.0
Other	2.0
Number of Treatment Plants	1
Total Treatment Capacity	3.6 MGD
Average Daily Flow	2.7 MGD
River Basin into Which System Discharges	Neuse
Miles of Gravity Main Line Pipe	156
Miles of Forced Main Line Pipe	32
Average Age of Main Line Pipe	18 years
Blocks in Sewer Mains	40
Number of System Breaks	1
Sanitary System Overflows	2
Number of Customer Accounts	13,840
Total Revenues Collected	$9,074,728

Full Cost Profile

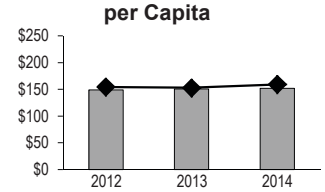
Cost Breakdown by Percentage	
Personal Services	35.9%
Operating Costs	39.8%
Capital Costs	24.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$2,340,444
Operating Costs	$2,596,719
Capital Costs	$1,588,199
TOTAL	$6,525,362

Apex — Wastewater Services

Key: Apex ■ Benchmarking Average ◆ Fiscal Years 2012 through 2014

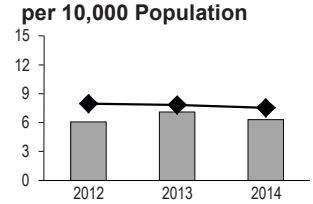
Resource Measures

Wastewater Services Cost per Capita



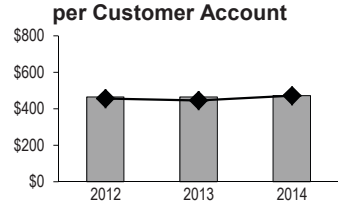
	2012	2013	2014
Apex	$149	$151	$152
Average	$154	$153	$159

Waterwater Services FTEs per 10,000 Population



	2012	2013	2014
Apex	6.1	7.1	6.3
Average	8.0	7.8	7.5

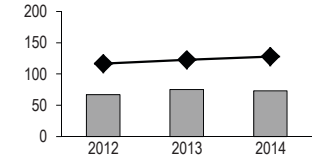
Waterwaste Services Cost per Customer Account



	2012	2013	2014
Apex	$464	$464	$471
Average	$457	$445	$472

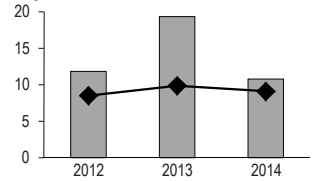
Workload Measures

Thousands of Gallons of Wastewater per Account



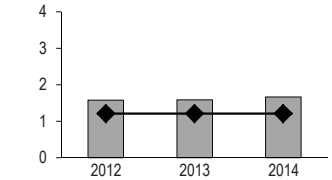
	2012	2013	2014
Apex	66.9	75.0	72.8
Average	116.6	122.8	127.9

Miles of Sewer Main Line Pipe per Square Mile of Service Area



	2012	2013	2014
Apex	11.8	19.3	10.8
Average	8.5	9.9	9.1

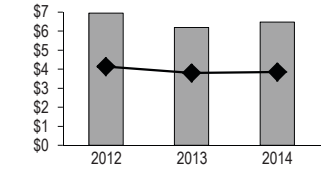
Number of Lift Stations per 1,000 Accounts



	2012	2013	2014
Apex	1.57	1.59	1.66
Average	1.21	1.21	1.21

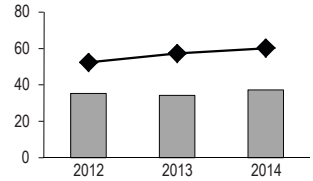
Efficiency Measures

Total Cost per 1,000 Gallons of Treated Wastewater



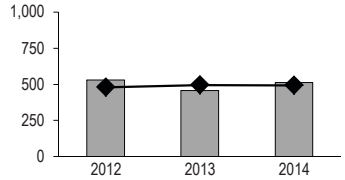
	2012	2013	2014
Apex	$6.94	$6.19	$6.47
Average	$4.13	$3.80	$3.85

Million Gallons of Wastewater per Wastewater Services FTE



	2012	2013	2014
Apex	35.4	34.3	37.3
Average	52.4	57.3	60.2

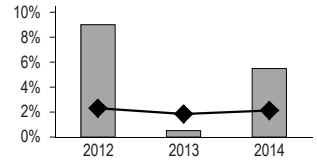
Customer Accounts per Wastewater Services FTE



	2012	2013	2014
Apex	530	457	513
Average	479	495	493

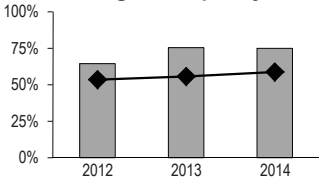
Effectiveness Measures

Percentage of Wastewater Bills Not Collected



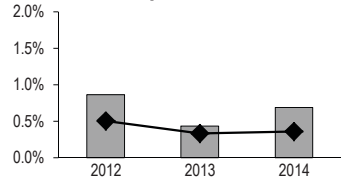
	2012	2013	2014
Apex	9.00%	0.50%	5.48%
Average	2.31%	1.84%	2.11%

Average Daily Treatment as a Percentage of Capacity



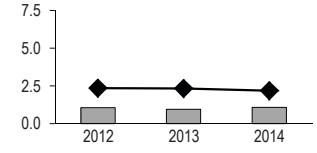
	2012	2013	2014
Apex	64.5%	75.6%	75.0%
Average	53.6%	55.7%	58.9%

Percent of Main Line Rehabbed or Replaced



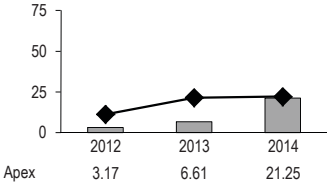
	2012	2013	2014
Apex	0.86%	0.44%	0.69%
Average	0.51%	0.33%	0.36%

Overflows per 100 Miles of Main Line Pipe



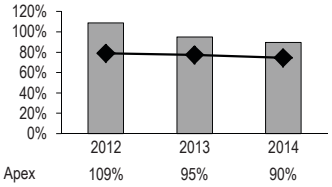
	2012	2013	2014
Apex	1.06	0.94	1.06
Average	2.34	2.32	2.18

Backups per 100 Miles of Main Line Pipe



	2012	2013	2014
Apex	3.17	6.61	21.25
Average	11.16	21.36	22.11

Billed Wastewater as a Percent of Treated Effluent



	2012	2013	2014
Apex	109%	95%	90%
Average	79%	77%	75%

Cary Wastewater Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Wastewater services for the Town of Cary are provided by the Public Works and Utilities Department. Divisions within the department are divided by functions, including pretreatment, collection system maintenance, and wastewater treatment. Billing and customer service are the responsibility of the Customer Accounting Division located in the Finance Department. The Engineering Department also provides support for the installation and upgrading of utility infrastructure.

The system in Cary covers not only the Town of Cary but also the Town of Morrisville, RDU Airport, and the Wake County portion of the Research Triangle Park. A small portion of this area only receives sewer (but not water) services from the Town of Cary.

Cary has two treatment plants with a total daily treatment capacity of 24.8 million gallons. The treatment plants rely on biological nutrient removal. The wastewater system in Cary has nutrient limits in place which regulate the nutrient loads that can be discharged from the treatment plants to protect water quality. In addition to wastewater discharged after treatment, the system produces dried class A biosolids of a high quality which are used as fertilizer and sold to a third-party company.

During the fiscal year, the system in Cary had no regulatory violations related to treatment but did have two violations associated with the collection system. These collection violations were due to sanitary system overflows.

Conditions Affecting Service, Performance, and Costs

Wastewater Services was added as a new service area for the benchmarking project beginning with FY 2011–12. The costs of wastewater or sewer services as captured here do not include debt service but do capture depreciation of capital.

Municipal Profile

Estimated Service Population	172,762
Service Land Area (Square Miles)	75
Persons per Square Mile	2,303
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow
Median Family Income U.S. Census 2010	$108,956

Service Profile

FTE Staff Positions	
Treatment Plant	35.0
Line Crews	55.2
Billing/Collection	9.3
Other	11.3
Number of Treatment Plants	2
Total Treatment Capacity	24.8 MGD
Average Daily Flow	12.3 MGD
River Basin into Which System Discharges	Neuse and Cape Fear
Miles of Gravity Main Line Pipe	836
Miles of Forced Main Line Pipe	79
Average Age of Main Line Pipe	NA
Blocks in Sewer Mains	482
Number of System Breaks	8
Sanitary System Overflows	16
Number of Customer Accounts	56,162
Total Revenues Collected	$42,177,222

Full Cost Profile

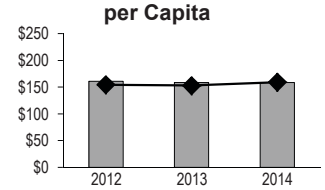
Cost Breakdown by Percentage	
Personal Services	29.4%
Operating Costs	45.9%
Capital Costs	24.6%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$8,059,705
Operating Costs	$12,572,495
Capital Costs	$6,748,690
TOTAL	$27,380,890

Cary — Wastewater Services

Key: Cary ■ Benchmarking Average ◆ Fiscal Years 2012 through 2014

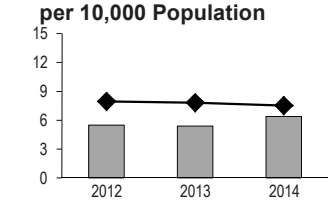
Resource Measures

Wastewater Services Cost per Capita



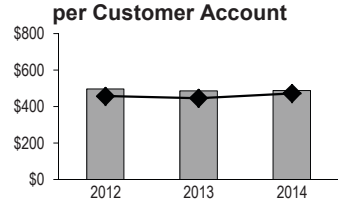
	2012	2013	2014
Cary	$161	$158	$158
Average	$154	$153	$159

Waterwater Services FTEs per 10,000 Population



	2012	2013	2014
Cary	5.5	5.4	6.4
Average	8.0	7.8	7.5

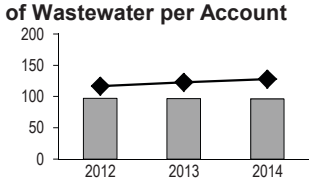
Waterwaste Services Cost per Customer Account



	2012	2013	2014
Cary	$496	$485	$488
Average	$457	$445	$472

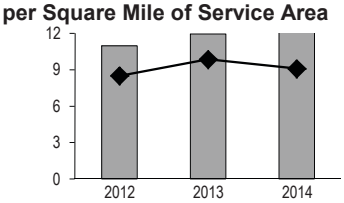
Workload Measures

Thousands of Gallons of Wastewater per Account



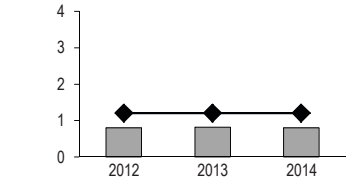
	2012	2013	2014
Cary	97.2	96.4	96.3
Average	116.6	122.8	127.9

Miles of Sewer Main Line Pipe per Square Mile of Service Area



	2012	2013	2014
Cary	11.0	11.9	12.1
Average	8.5	9.9	9.1

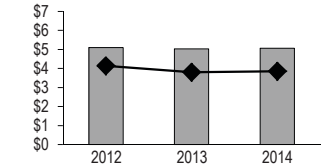
Number of Lift Stations per 1,000 Accounts



	2012	2013	2014
Cary	0.80	0.82	0.80
Average	1.21	1.21	1.21

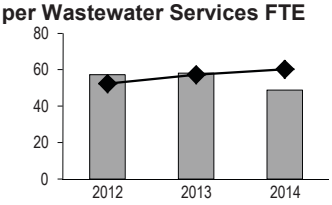
Efficiency Measures

Total Cost per 1,000 Gallons of Treated Wastewater



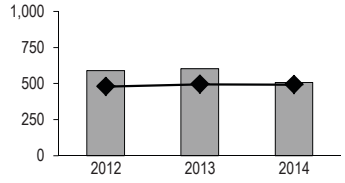
	2012	2013	2014
Cary	$5.10	$5.04	$5.06
Average	$4.13	$3.80	$3.85

Million Gallons of Wastewater per Wastewater Services FTE



	2012	2013	2014
Cary	57.2	58.2	48.9
Average	52.4	57.3	60.2

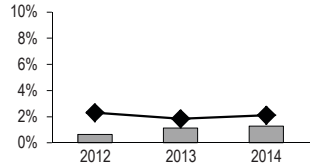
Customer Accounts per Wastewater Services FTE



	2012	2013	2014
Cary	589	604	508
Average	479	495	493

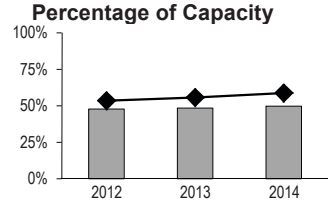
Effectiveness Measures

Percentage of Wastewater Bills Not Collected



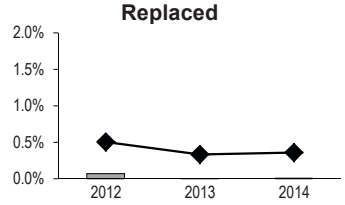
	2012	2013	2014
Cary	0.65%	1.14%	1.28%
Average	2.31%	1.84%	2.11%

Average Daily Treatment as a Percentage of Capacity



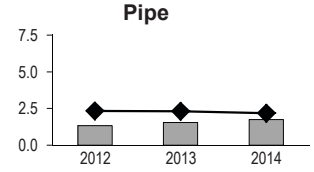
	2012	2013	2014
Cary	47.7%	48.5%	49.8%
Average	53.6%	55.7%	58.9%

Percent of Main Line Rehabbed or Replaced



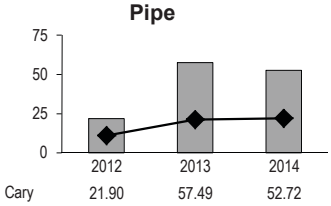
	2012	2013	2014
Cary	0.07%	0.00%	0.01%
Average	0.51%	0.33%	0.36%

Overflows per 100 Miles of Main Line Pipe



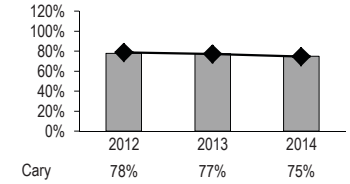
	2012	2013	2014
Cary	1.34	1.55	1.75
Average	2.34	2.32	2.18

Backups per 100 Miles of Main Line Pipe



	2012	2013	2014
Cary	21.90	57.49	52.72
Average	11.16	21.36	22.11

Billed Wastewater as a Percent of Treated Effluent



	2012	2013	2014
Cary	78%	77%	75%
Average	79%	77%	75%

Charlotte — Wastewater Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Wastewater collection and treatment is handled by the Charlotte-Mecklenburg Utilities Department (CMUD). This is a combined water and sewer utility which is a consolidated business unit for Mecklenburg County and the City of Charlotte. The department is run as an official City of Charlotte department. The service area corresponds roughly to the boundaries of Mecklenburg County.

The wastewater portion of the utility has five separate treatment plants. Three of the plants are activated sludge facilities. The largest plant is a biological phosphorous removal facility. The fifth plant is a five-stage Bardenflo biological nutrient facility. All five plants include tertiary filtration. The system does have regulatory limits in place on nutrient loads, which can be discharged in order to protect water quality. In addition to the treatment of wastewater, the system handles biosolids, most of which are applied to land (unless non-conforming) and then are taken to the landfill.

The system had six regulatory violations connected to treatment issues and 174 regulatory violations connected to the collection portion of the system during the year, primarily sanitary system overflows.

Conditions Affecting Service, Performance, and Costs

Wastewater Services was added as a new service area for the benchmarking project beginning with FY 2011–12. The costs of wastewater or sewer services as captured here do not include debt service but do capture depreciation of capital.

Municipal Profile

Estimated Service Population	990,977
Service Land Area (Square Miles)	546
Persons per Square Mile	1,815
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow
Median Family Income U.S. Census 2010	$61,405

Service Profile

FTE Staff Positions	
Treatment Plant	123.00
Line Crews	146.00
Billing/Collection	6.00
Other	153.00
Number of Treatment Plants	5
Total Treatment Capacity	123.0 MGD
Average Daily Flow	83.2 MGD
River Basin into Which System Discharges	Cabarrus and Yadkin
Miles of Gravity Main Line Pipe	4,189
Miles of Forced Main Line Pipe	131
Average Age of Main Line Pipe	31 years
Blocks in Sewer Mains	133
Number of System Breaks	270
Sanitary System Overflows	247
Number of Customer Accounts	242,973
Total Revenues Collected	$191,582,613

Full Cost Profile

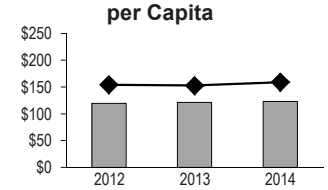
Cost Breakdown by Percentage	
Personal Services	14.9%
Operating Costs	36.3%
Capital Costs	48.8%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$18,180,118
Operating Costs	$44,232,339
Capital Costs	$59,479,986
TOTAL	$121,892,443

Charlotte — Wastewater Services

Key: Charlotte ■ Benchmarking Average ◆ Fiscal Years 2012 through 2014

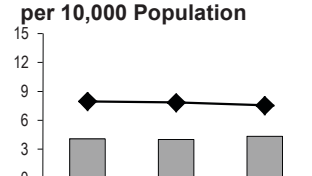
Resource Measures

Wastewater Services Cost per Capita



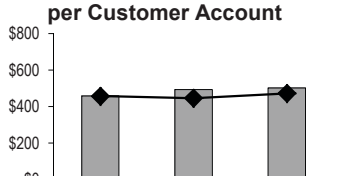
	2012	2013	2014
Charlotte	$119	$121	$123
Average	$154	$153	$159

Waterwater Services FTEs per 10,000 Population



	2012	2013	2014
Charlotte	4.1	4.0	4.3
Average	8.0	7.8	7.5

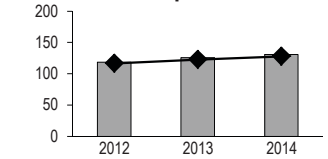
Waterwaste Services Cost per Customer Account



	2012	2013	2014
Charlotte	$457	$492	$502
Average	$457	$445	$472

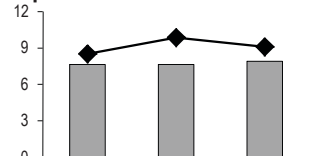
Workload Measures

Thousands of Gallons of Wastewater per Account



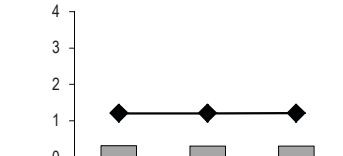
	2012	2013	2014
Charlotte	118.5	125.7	130.6
Average	116.6	122.8	127.9

Miles of Sewer Main Line Pipe per Square Mile of Service Area



	2012	2013	2014
Charlotte	7.7	7.6	7.9
Average	8.5	9.9	9.1

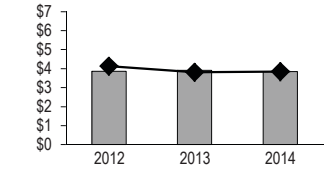
Number of Lift Stations per 1,000 Accounts



	2012	2013	2014
Charlotte	0.32	0.31	0.31
Average	1.21	1.21	1.21

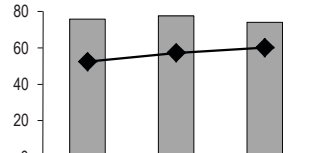
Efficiency Measures

Total Cost per 1,000 Gallons of Treated Wastewater



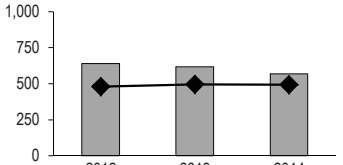
	2012	2013	2014
Charlotte	$3.86	$3.91	$3.84
Average	$4.13	$3.80	$3.85

Million Gallons of Wastewater per Wastewater Services FTE



	2012	2013	2014
Charlotte	75.9	77.6	74.1
Average	52.4	57.3	60.2

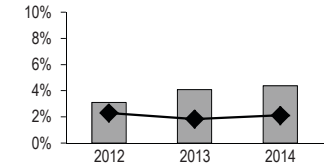
Customer Accounts per Wastewater Services FTE



	2012	2013	2014
Charlotte	640	617	568
Average	479	495	493

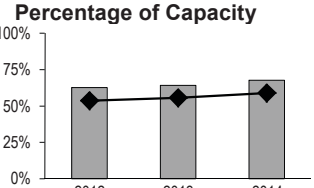
Effectiveness Measures

Percentage of Wastewater Bills Not Collected



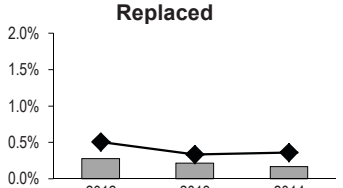
	2012	2013	2014
Charlotte	3.09%	4.09%	4.38%
Average	2.31%	1.84%	2.11%

Average Daily Treatment as a Percentage of Capacity



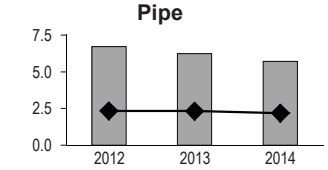
	2012	2013	2014
Charlotte	62.7%	64.1%	67.6%
Average	53.6%	55.7%	58.9%

Percent of Main Line Rehabbed or Replaced



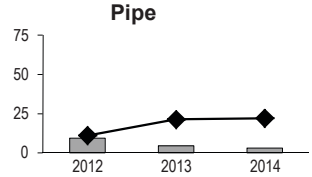
	2012	2013	2014
Charlotte	0.28%	0.21%	0.17%
Average	0.51%	0.33%	0.36%

Overflows per 100 Miles of Main Line Pipe



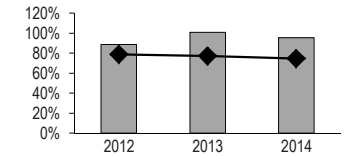
	2012	2013	2014
Charlotte	6.72	6.24	5.72
Average	2.34	2.32	2.18

Backups per 100 Miles of Main Line Pipe



	2012	2013	2014
Charlotte	9.52	4.51	3.08
Average	11.16	21.36	22.11

Billed Wastewater as a Percent of Treated Effluent



	2012	2013	2014
Charlotte	89%	101%	95%
Average	79%	77%	75%

Concord Wastewater Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Concord has a Wastewater Department that focuses on the inspection, maintenance, and repair of the wastewater collection system. Concord does not have its own treatment plant. Instead, treatment is handled by the Water and Sewer Authority of Cabarrus County, a regional sytem. All treatment and disposal of wastewater and biosolids is handled by the regional authority using two treatment plants.

The Concord wastewater collection system had no regulatory violations during the fiscal year.

Conditions Affecting Service, Performance, and Costs

Wastewater Services was added as a new service area for the benchmarking project beginning with FY 2011–12. The costs of wastewater or sewer services as captured here do not include debt service but do capture depreciation of capital.

Municipal Profile

Estimated Service Population	83,506
Service Land Area (Square Miles)	110
Persons per Square Mile	759
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow
Median Family Income U.S. Census 2010	$63,643

Service Profile

FTE Staff Positions	
Treatment Plant	0.0
Line Crews	25.0
Billing/Collection	10.0
Other	5.0
Number of Treatment Plants	0
Total Treatment Capacity	NA
Average Daily Flow	10.0 MGD
River Basin into Which System Discharges	Yadkin-Pee Dee
Miles of Gravity Main Line Pipe	539
Miles of Forced Main Line Pipe	14
Average Age of Main Line Pipe	37 years
Blocks in Sewer Mains	11
Number of System Breaks	220
Sanitary System Overflows	5
Number of Customer Accounts	32,596
Total Revenues Collected	$15,264,998

Full Cost Profile

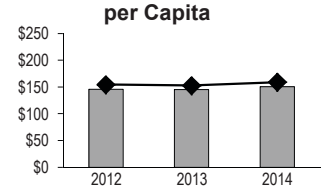
Cost Breakdown by Percentage	
Personal Services	16.4%
Operating Costs	62.5%
Capital Costs	21.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$2,067,202
Operating Costs	$7,861,972
Capital Costs	$2,642,507
TOTAL	$12,571,681

Concord — Wastewater Services

Key: Concord ■ Benchmarking Average ◆ Fiscal Years 2012 through 2014

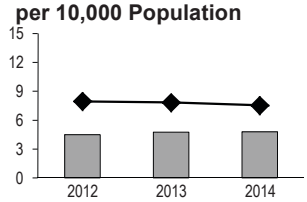
Resource Measures

Wastewater Services Cost per Capita



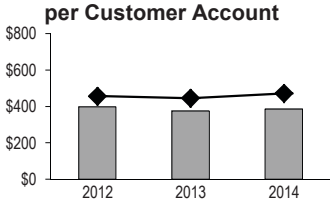
	2012	2013	2014
Concord	$146	$145	$151
Average	$154	$153	$159

Waterwater Services FTEs per 10,000 Population



	2012	2013	2014
Concord	4.5	4.7	4.8
Average	8.0	7.8	7.5

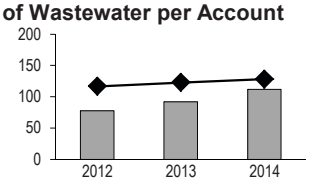
Waterwaste Services Cost per Customer Account



	2012	2013	2014
Concord	$397	$374	$386
Average	$457	$445	$472

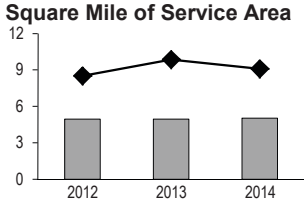
Workload Measures

Thousands of Gallons of Wastewater per Account



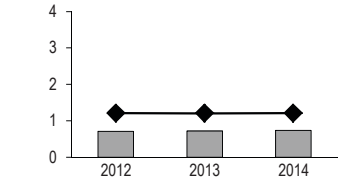
	2012	2013	2014
Concord	77.4	91.8	112.0
Average	116.6	122.8	127.9

Miles of Sewer Main Line Pipe per Square Mile of Service Area



	2012	2013	2014
Concord	5.0	5.0	5.0
Average	8.5	9.9	9.1

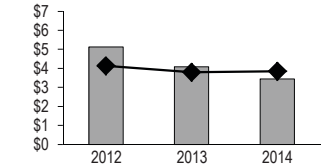
Number of Lift Stations per 1,000 Accounts



	2012	2013	2014
Concord	0.71	0.72	0.74
Average	1.21	1.21	1.21

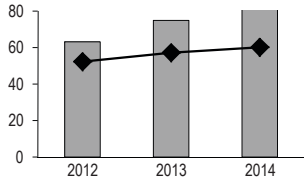
Efficiency Measures

Total Cost per 1,000 Gallons of Treated Wastewater



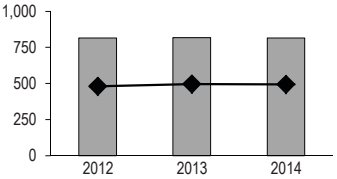
	2012	2013	2014
Concord	$5.13	$4.08	$3.44
Average	$4.13	$3.80	$3.85

Million Gallons of Wastewater per Wastewater Services FTE



	2012	2013	2014
Concord	63.2	75.0	91.3
Average	52.4	57.3	60.2

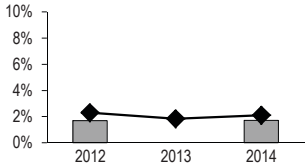
Customer Accounts per Wastewater Services FTE



	2012	2013	2014
Concord	816	817	815
Average	479	495	493

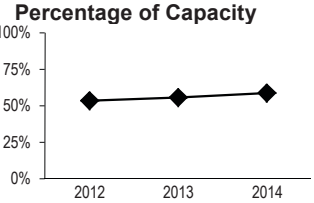
Effectiveness Measures

Percentage of Wastewater Bills Not Collected



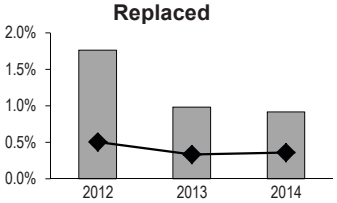
	2012	2013	2014
Concord	1.69%		1.72%
Average	2.31%	1.84%	2.11%

Average Daily Treatment as a Percentage of Capacity



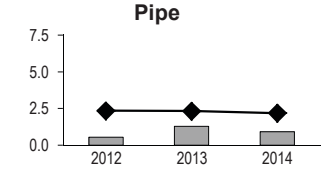
	2012	2013	2014
Concord			
Average	53.6%	55.7%	58.9%

Percent of Main Line Rehabbed or Replaced



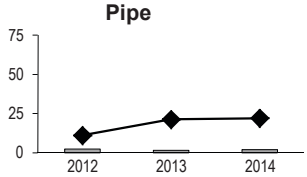
	2012	2013	2014
Concord	1.76%	0.98%	0.92%
Average	0.51%	0.33%	0.36%

Overflows per 100 Miles of Main Line Pipe



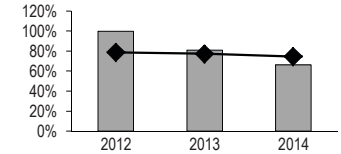
	2012	2013	2014
Concord	0.55	1.29	0.90
Average	2.34	2.32	2.18

Backups per 100 Miles of Main Line Pipe



	2012	2013	2014
Concord	2.58	1.66	1.99
Average	11.16	21.36	22.11

Billed Wastewater as a Percent of Treated Effluent



	2012	2013	2014
Concord	100%	81%	66%
Average	79%	77%	75%

Greensboro Wastewater Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Wastewater treatment in Greensboro is handled by the Water Reclamation Division. This is part of the Water Resources Department, which also includes stormwater and drinking water services. The Director of Water Resources reports to the city manager. Services are provided to most of the City of Greensboro and to some addresses outside city limits within Guilford County.

Wastewater treatment in Greensboro is handled by two treatment plants. These plants used advanced tertiary treatment. The system has nutrient regulatory limits in place that restrict what can be discharged in order to protect water quality. All biosolids produced by the Greensboro treatment plants are incinerated.

During the fiscal year, the system had six regulatory violations connected to the treatment portion of the system and seven violations connected to the collection portion of the system.

Conditions Affecting Service, Performance, and Costs

Wastewater Services was added as a new service area for the benchmarking project beginning with FY 2011–12. The costs of wastewater or sewer services as captured here do not include debt service but do capture depreciation of capital.

Municipal Profile

Estimated Service Population	278,093
Service Land Area (Square Miles)	148
Persons per Square Mile	1,879
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow
Median Family Income U.S. Census 2010	$52,752

Service Profile

FTE Staff Positions	
Treatment Plant	54.0
Line Crews	87.0
Billing/Collection	9.0
Other	15.0
Number of Treatment Plants	2
Total Treatment Capacity	56.0 MGD
Average Daily Flow	30.3 MGD
River Basin into Which System Discharges	Cape Fear
Miles of Gravity Main Line Pipe	1,410
Miles of Forced Main Line Pipe	73
Average Age of Main Line Pipe	45 years
Blocks in Sewer Mains	1,050
Number of System Breaks	4
Sanitary System Overflows	7
Number of Customer Accounts	100,125
Total Revenues Collected	$49,356,244

Full Cost Profile

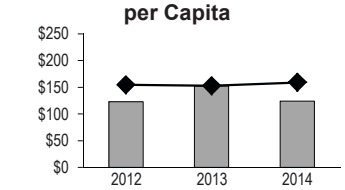
Cost Breakdown by Percentage	
Personal Services	19.0%
Operating Costs	55.4%
Capital Costs	25.6%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$6,577,052
Operating Costs	$19,132,380
Capital Costs	$8,829,067
TOTAL	$34,538,499

Greensboro — Wastewater Services

Key: Greensboro ■ Benchmarking Average ◆ Fiscal Years 2012 through 2014

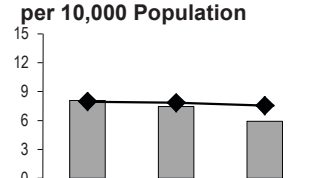
Resource Measures

Wastewater Services Cost per Capita



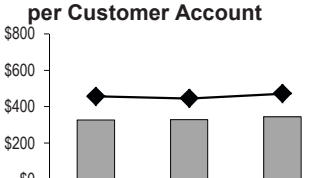
	2012	2013	2014
Greensboro	$123	$152	$124
Average	$154	$153	$159

Waterwater Services FTEs per 10,000 Population



	2012	2013	2014
Greensboro	8.1	7.5	5.9
Average	8.0	7.8	7.5

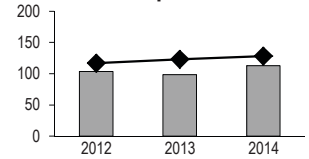
Waterwaste Services Cost per Customer Account



	2012	2013	2014
Greensboro	$327	$329	$345
Average	$457	$445	$472

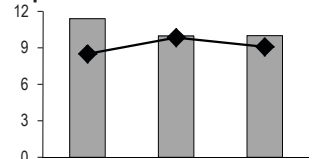
Workload Measures

Thousands of Gallons of Wastewater per Account



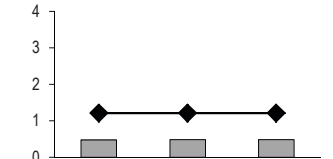
	2012	2013	2014
Greensboro	103.5	98.6	112.6
Average	116.6	122.8	127.9

Miles of Sewer Main Line Pipe per Square Mile of Service Area



	2012	2013	2014
Greensboro	11.4	10.0	10.0
Average	8.5	9.9	9.1

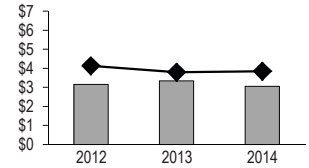
Number of Lift Stations per 1,000 Accounts



	2012	2013	2014
Greensboro	0.47	0.48	0.48
Average	1.21	1.21	1.21

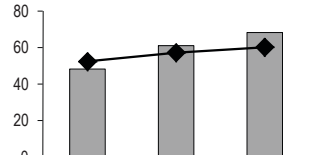
Efficiency Measures

Total Cost per 1,000 Gallons of Treated Wastewater



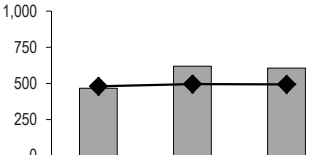
	2012	2013	2014
Greensboro	$3.16	$3.34	$3.06
Average	$4.13	$3.80	$3.85

Million Gallons of Wastewater per Wastewater Services FTE



	2012	2013	2014
Greensboro	48.3	61.1	68.4
Average	52.4	57.3	60.2

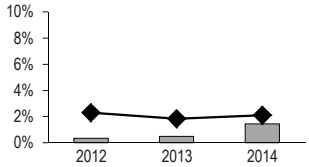
Customer Accounts per Wastewater Services FTE



	2012	2013	2014
Greensboro	467	619	607
Average	479	495	493

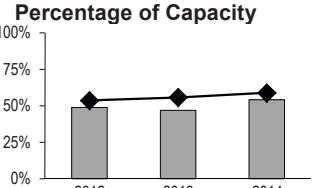
Effectiveness Measures

Percentage of Wastewater Bills Not Collected



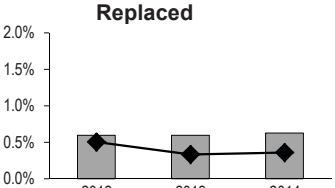
	2012	2013	2014
Greensboro	0.34%	0.50%	1.44%
Average	2.31%	1.84%	2.11%

Average Daily Treatment as a Percentage of Capacity



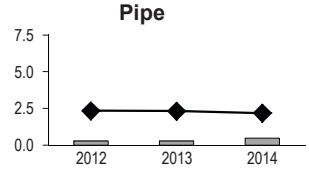
	2012	2013	2014
Greensboro	48.9%	47.0%	54.1%
Average	53.6%	55.7%	58.9%

Percent of Main Line Rehabbed or Replaced



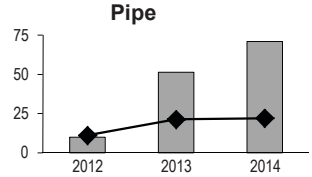
	2012	2013	2014
Greensboro	0.60%	0.60%	0.63%
Average	0.51%	0.33%	0.36%

Overflows per 100 Miles of Main Line Pipe



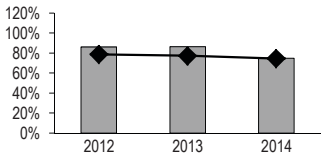
	2012	2013	2014
Greensboro	0.27	0.27	0.47
Average	2.34	2.32	2.18

Backups per 100 Miles of Main Line Pipe



	2012	2013	2014
Greensboro	10.02	51.28	70.82
Average	11.16	21.36	22.11

Billed Wastewater as a Percent of Treated Effluent



	2012	2013	2014
Greensboro	86%	86%	75%
Average	79%	77%	75%

Hickory Wastewater Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Wastewater is handled by the City of Hickory's Collection Division, which is part of Public Utilities under the Public Services Department. The service area covers the City of Hickory and several adjoining areas in Catawba County.

The system relies on three treatment plants to handle wastewater. One plant uses activated sludge biological nutrient removal (BNR), the second uses oxidation ditch activated sludge BNR, and the third uses conventional activated sludge. The entire system does not have nutrient limits in place at this time. Biosolids generated are handled as Class A compost.

The system in Hickory had one regulatory violation connected to the treatment portion of the system and six violations connected to the collection portion of the system during the fiscal year.

Conditions Affecting Service, Performance, and Costs

Wastewater Services was added as a new service area for the benchmarking project beginning with FY 2011–12. The costs of wastewater or sewer services as captured here do not include debt service but do capture depreciation of capital.

Municipal Profile

Estimated Service Population	37,478
Service Land Area (Square Miles)	51.2
Persons per Square Mile	732
Topography	Gently rolling
Climate	Temperate; some ice and snow
Median Family Income U.S. Census 2010	$54,093

Service Profile

FTE Staff Positions	
Treatment Plant	29.0
Line Crews	10.0
Billing/Collection	2.5
Other	2.5
Number of Treatment Plants	3
Total Treatment Capacity	15.2 MGD
Average Daily Flow	5.9 MGD
River Basin into Which System Discharges	Catawba
Miles of Gravity Main Line Pipe	480
Miles of Forced Main Line Pipe	20
Average Age of Main Line Pipe	42 years
Blocks in Sewer Mains	180
Number of System Breaks	10
Sanitary System Overflows	6
Number of Customer Accounts	14,992
Total Revenues Collected	$9,254,598

Full Cost Profile

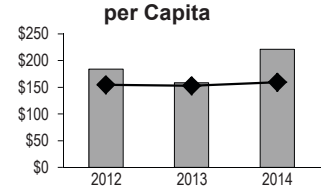
Cost Breakdown by Percentage	
Personal Services	31.0%
Operating Costs	48.8%
Capital Costs	20.2%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$2,570,979
Operating Costs	$4,046,105
Capital Costs	$1,674,256
TOTAL	$8,291,340

Hickory — Wastewater Services

Key: Hickory ■ Benchmarking Average ◆ Fiscal Years 2012 through 2014

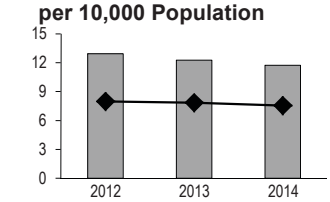
Resource Measures

Wastewater Services Cost per Capita



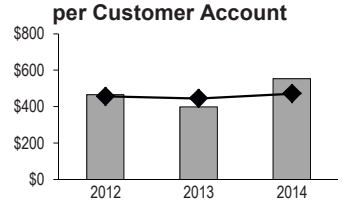
	2012	2013	2014
Hickory	$184	$158	$221
Average	$154	$153	$159

Waterwater Services FTEs per 10,000 Population



	2012	2013	2014
Hickory	12.9	12.3	11.7
Average	8.0	7.8	7.5

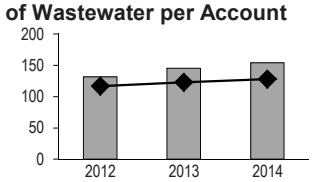
Waterwaste Services Cost per Customer Account



	2012	2013	2014
Hickory	$466	$399	$553
Average	$457	$445	$472

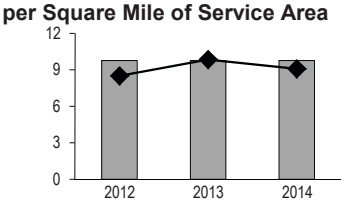
Workload Measures

Thousands of Gallons of Wastewater per Account



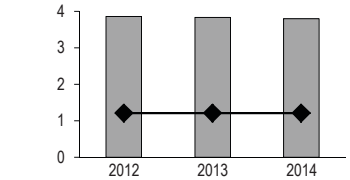
	2012	2013	2014
Hickory	131.9	145.3	154.2
Average	116.6	122.8	127.9

Miles of Sewer Main Line Pipe per Square Mile of Service Area



	2012	2013	2014
Hickory	9.8	9.8	9.8
Average	8.5	9.9	9.1

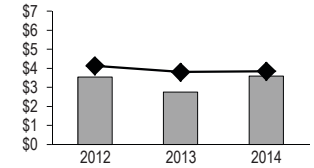
Number of Lift Stations per 1,000 Accounts



	2012	2013	2014
Hickory	3.86	3.83	3.80
Average	1.21	1.21	1.21

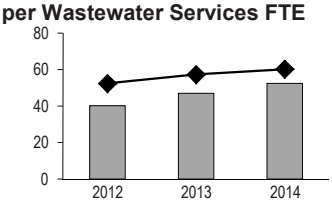
Efficiency Measures

Total Cost per 1,000 Gallons of Treated Wastewater



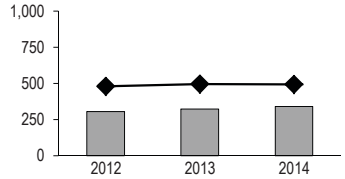
	2012	2013	2014
Hickory	$3.54	$2.74	$3.59
Average	$4.13	$3.80	$3.85

Million Gallons of Wastewater per Wastewater Services FTE



	2012	2013	2014
Hickory	40.1	47.0	52.5
Average	52.4	57.3	60.2

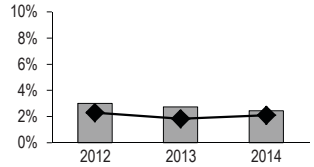
Customer Accounts per Wastewater Services FTE



	2012	2013	2014
Hickory	304	323	341
Average	479	495	493

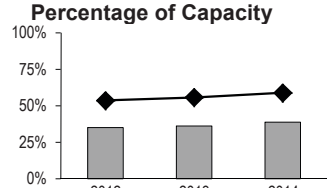
Effectiveness Measures

Percentage of Wastewater Bills Not Collected



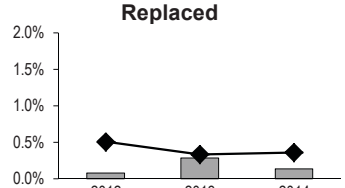
	2012	2013	2014
Hickory	3.00%	2.73%	2.44%
Average	2.31%	1.84%	2.11%

Average Daily Treatment as a Percentage of Capacity



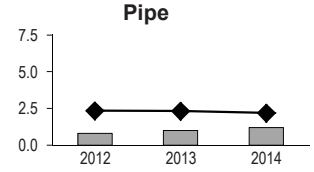
	2012	2013	2014
Hickory	35.0%	36.2%	38.8%
Average	53.6%	55.7%	58.9%

Percent of Main Line Rehabbed or Replaced



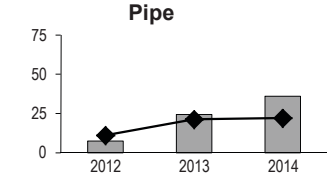
	2012	2013	2014
Hickory	0.08%	0.28%	0.13%
Average	0.51%	0.33%	0.36%

Overflows per 100 Miles of Main Line Pipe



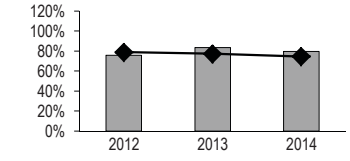
	2012	2013	2014
Hickory	0.80	1.00	1.20
Average	2.34	2.32	2.18

Backups per 100 Miles of Main Line Pipe



	2012	2013	2014
Hickory	7.60	24.40	36.00
Average	11.16	21.36	22.11

Billed Wastewater as a Percent of Treated Effluent



	2012	2013	2014
Hickory	76%	83%	80%
Average	79%	77%	75%

High Point Wastewater Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of High Point wastewater system is part of a combined Water/Sewer Division under the Public Services Department. The system covers the City of High Point and several adjoining areas in Guilford and Davidson counties.

Wastewater is treated at two treatment plants. One plant uses biological nutrient removal, while the second plant uses extended aeration with chemical phosphorous removal. The system has regulatory nutrient limits in place that are designed to protect water quality in local waters. Biosolids left over after treatment are primarily handled by incineration, with landfill disposal as a backup.

During the fiscal year, the sytem had one regulatory violation connected to the treatment portion of the system and seventeen violations connected to the collection portion of the system.

Conditions Affecting Service, Performance, and Costs

Wastewater Services was added as a new service area for the benchmarking project beginning with FY 2011–12. The costs of wastewater or sewer service as captured here do not include debt services but do capture depreciation of capital.

Municipal Profile

Estimated Service Population	109,270
Service Land Area (Square Miles)	64
Persons per Square Mile	1,707
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow
Median Family Income U.S. Census 2010	$49,720

Service Profile

FTE Staff Positions	
Treatment Plant	30.0
Line Crews	36.0
Billing/Collection	6.0
Other	20.5
Number of Treatment Plants	2
Total Treatment Capacity	32.2 MGD
Average Daily Flow	17.1 MGD
River Basin into Which System Discharges	Yadkin-Pee Dee and Cape Fear
Miles of Gravity Main Line Pipe	655
Miles of Forced Main Line Pipe	16
Average Age of Main Line Pipe	35 years
Blocks in Sewer Mains	106
Number of System Breaks	34
Sanitary System Overflows	17
Number of Customer Accounts	40,193
Total Revenues Collected	$27,882,689

Full Cost Profile

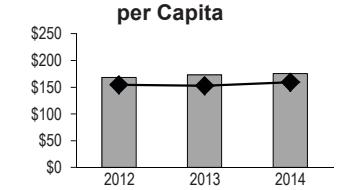
Cost Breakdown by Percentage	
Personal Services	29.5%
Operating Costs	37.1%
Capital Costs	33.4%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$5,656,992
Operating Costs	$7,115,031
Capital Costs	$6,394,464
TOTAL	$19,166,487

High Point Wastewater Services

Key: High Point ■ Benchmarking Average ◆ Fiscal Years 2012 through 2014

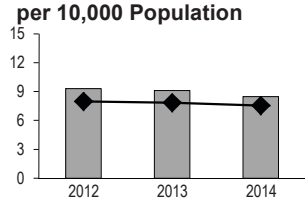
Resource Measures

Wastewater Services Cost per Capita



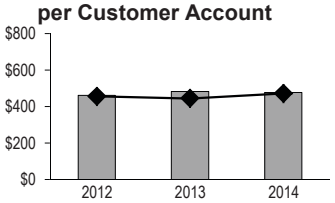
	2012	2013	2014
High Point	$168	$173	$175
Average	$154	$153	$159

Waterwater Services FTEs per 10,000 Population



	2012	2013	2014
High Point	9.3	9.1	8.5
Average	8.0	7.8	7.5

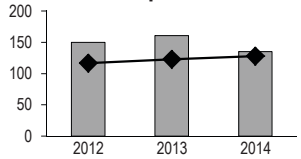
Waterwaste Services Cost per Customer Account



	2012	2013	2014
High Point	$462	$484	$477
Average	$457	$445	$472

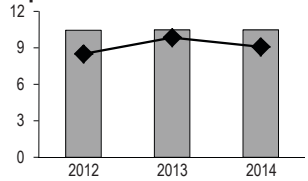
Workload Measures

Thousands of Gallons of Wastewater per Account



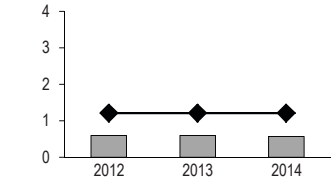
	2012	2013	2014
High Point	150.0	160.8	135.4
Average	116.6	122.8	127.9

Miles of Sewer Main Line Pipe per Square Mile of Service Area



	2012	2013	2014
High Point	10.5	10.5	10.5
Average	8.5	9.9	9.1

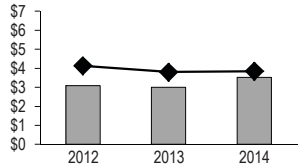
Number of Lift Stations per 1,000 Accounts



	2012	2013	2014
High Point	0.60	0.59	0.57
Average	1.21	1.21	1.21

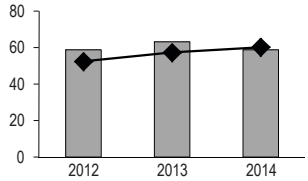
Efficiency Measures

Total Cost per 1,000 Gallons of Treated Wastewater



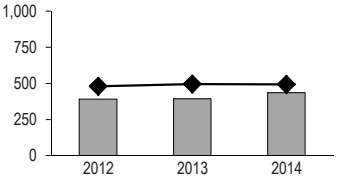
	2012	2013	2014
High Point	$3.08	$3.01	$3.52
Average	$4.13	$3.80	$3.85

Million Gallons of Wastewater per Wastewater Services FTE



	2012	2013	2014
High Point	58.8	63.1	58.8
Average	52.4	57.3	60.2

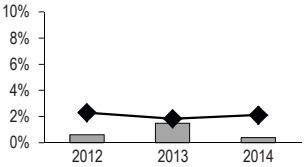
Customer Accounts per Wastewater Services FTE



	2012	2013	2014
High Point	392	392	435
Average	479	495	493

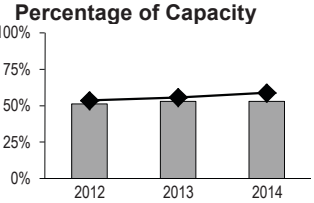
Effectiveness Measures

Percentage of Wastewater Bills Not Collected



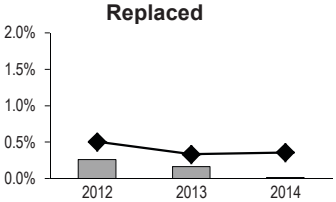
	2012	2013	2014
High Point	0.60%	1.48%	0.38%
Average	2.31%	1.84%	2.11%

Average Daily Treatment as a Percentage of Capacity



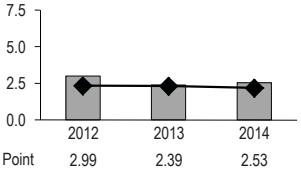
	2012	2013	2014
High Point	51.3%	53.0%	53.0%
Average	53.6%	55.7%	58.9%

Percent of Main Line Rehabbed or Replaced



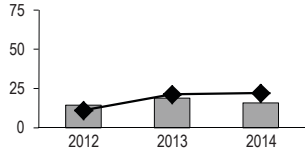
	2012	2013	2014
High Point	0.26%	0.16%	0.02%
Average	0.51%	0.33%	0.36%

Overflows per 100 Miles of Main Line Pipe



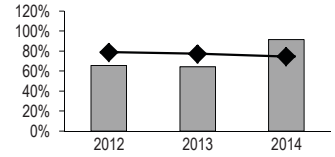
	2012	2013	2014
High Point	2.99	2.39	2.53
Average	2.34	2.32	2.18

Backups per 100 Miles of Main Line Pipe



	2012	2013	2014
High Point	14.35	18.81	15.80
Average	11.16	21.36	22.11

Billed Wastewater as a Percent of Treated Effluent



	2012	2013	2014
High Point	65%	64%	91%
Average	79%	77%	75%

Salisbury Wastewater Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Salisbury provides water and sewer service through a combined enterprise fund department known as the Salisbury-Rowan Utilities. The system covers Salisbury and much of Rowan County as well.

Wastewater is treated at two plants. Both plants use biological activated sludge process for treatment. The treatment process includes mechanical bar screens, grit removal chambers, primary and secondary clarifiers, aeration basins, and liquid chlorine disinfection. The system does not currently have nutrient regulatory limits. Biosolids produced as a result of treatment are applied to farmland in Rowan County.

The system had three regulatory violations during the year for issues related to treatment and no violations connected to collections.

Conditions Affecting Service, Performance, and Costs

Wastewater Services was added as a new service area for the benchmarking project beginning with FY 2011–12. The costs of wastewater or sewer services as captured here do not include debt service but do capture depreciation of capital.

Municipal Profile

Estimated Service Population	51,800
Service Land Area (Square Miles)	45.3
Persons per Square Mile	1,143
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow
Median Family Income U.S. Census 2010	$40,192

Service Profile

FTE Staff Positions	
Treatment Plant	19.0
Line Crews	17.0
Billing/Collection	5.0
Other	14.5
Number of Treatment Plants	2
Total Treatment Capacity	12.5 MGD
Average Daily Flow	7.4 MGD
River Basin into Which System Discharges	Yadkin
Miles of Gravity Main Line Pipe	397
Miles of Forced Main Line Pipe	32
Average Age of Main Line Pipe	42 years
Blocks in Sewer Mains	17
Number of System Breaks	0
Sanitary System Overflows	7
Number of Customer Accounts	16,092
Total Revenues Collected	$12,543,776

Full Cost Profile

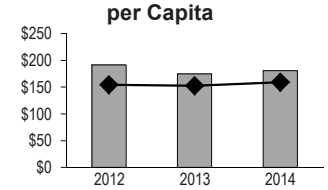
Cost Breakdown by Percentage	
Personal Services	30.7%
Operating Costs	43.3%
Capital Costs	25.9%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$2,877,820
Operating Costs	$4,059,155
Capital Costs	$2,430,248
TOTAL	$9,367,223

Salisbury — Wastewater Services

Key: Salisbury ■ Benchmarking Average ◆ Fiscal Years 2012 through 2014

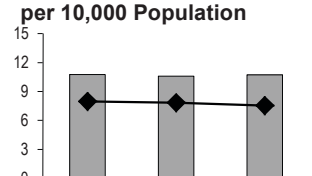
Resource Measures

Wastewater Services Cost per Capita



	2012	2013	2014
Salisbury	$191	$175	$181
Average	$154	$153	$159

Waterwater Services FTEs per 10,000 Population



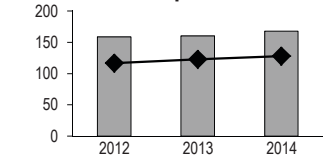
	2012	2013	2014
Salisbury	10.8	10.6	10.7
Average	8.0	7.8	7.5

Waterwaste Services Cost per Customer Account

	2012	2013	2014
Salisbury	$613	$559	$582
Average	$457	$445	$472

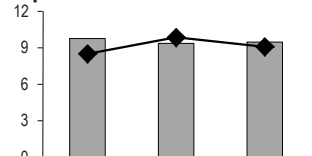
Workload Measures

Thousands of Gallons of Wastewater per Account



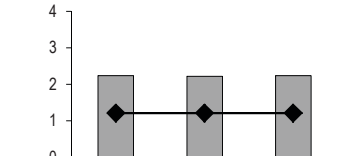
	2012	2013	2014
Salisbury	158.5	160.0	168.0
Average	116.6	122.8	127.9

Miles of Sewer Main Line Pipe per Square Mile of Service Area



	2012	2013	2014
Salisbury	9.8	9.4	9.5
Average	8.5	9.9	9.1

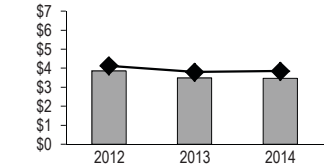
Number of Lift Stations per 1,000 Accounts



	2012	2013	2014
Salisbury	2.23	2.22	2.24
Average	1.21	1.21	1.21

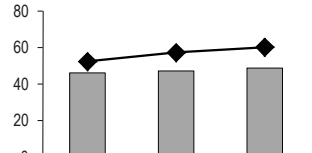
Efficiency Measures

Total Cost per 1,000 Gallons of Treated Wastewater



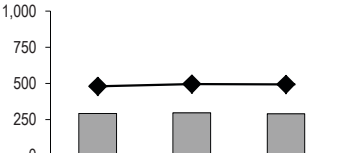
	2012	2013	2014
Salisbury	$3.86	$3.49	$3.47
Average	$4.13	$3.80	$3.85

Million Gallons of Wastewater per Wastewater Services FTE



	2012	2013	2014
Salisbury	46.0	47.1	48.7
Average	52.4	57.3	60.2

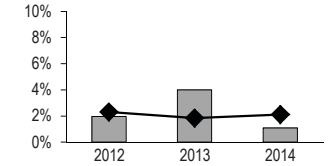
Customer Accounts per Wastewater Services FTE



	2012	2013	2014
Salisbury	290	295	290
Average	479	495	493

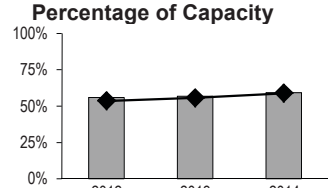
Effectiveness Measures

Percentage of Wastewater Bills Not Collected



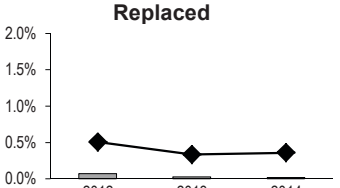
	2012	2013	2014
Salisbury	1.97%	4.00%	1.09%
Average	2.31%	1.84%	2.11%

Average Daily Treatment as a Percentage of Capacity



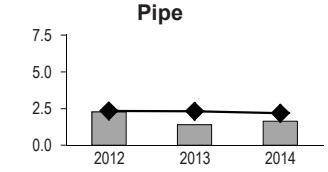
	2012	2013	2014
Salisbury	56.0%	56.8%	59.2%
Average	53.6%	55.7%	58.9%

Percent of Main Line Rehabbed or Replaced



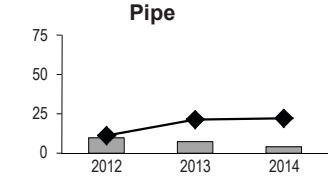
	2012	2013	2014
Salisbury	0.07%	0.03%	0.02%
Average	0.51%	0.33%	0.36%

Overflows per 100 Miles of Main Line Pipe



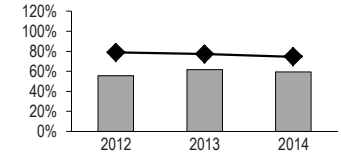
	2012	2013	2014
Salisbury	2.27	1.41	1.63
Average	2.34	2.32	2.18

Backups per 100 Miles of Main Line Pipe



	2012	2013	2014
Salisbury	9.75	7.31	3.97
Average	11.16	21.36	22.11

Billed Wastewater as a Percent of Treated Effluent



	2012	2013	2014
Salisbury	55%	62%	59%
Average	79%	77%	75%

Wilson — Wastewater Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

Wastewater in Wilson is handled by the Water Reclamation and Wastewater Collection Division, which is part of Water Resources in the Public Services Department. Billing for large customers is handled by Water Resources, but residential customer billing is handled by the Customer Services Division in the Finance Department. The system covers the City of Wilson and several small adjoining areas outside the city in Wilson County.

Waterwater treatment is handled by one plant. The treatment plant uses advanced five-stage biological nutrient removal with deep-bed filters with methanol and biological and chemical phosphorous reduction. The system had very stringent nutrient limits in place to protect water quality on the Neuse River basin. The system produced Class A and B biosolids, with most of this solid waste being composted. A small portion is applied on city land or other permitted farmland.

The system had reported regulatory violations for either the treatment portion of the system or for the collection portion of the system during the fiscal year.

Conditions Affecting Service, Performance, and Costs

Wastewater Services was added as a new service area for the benchmarking project beginning with FY 2011–12. The costs of wastewater or sewer services as captured here do not include debt service but do capture depreciation of capital.

Large capital improvements are being made to the Buckhorn Lake Dam and Wastewater Projects, which have been required to meet advanced nutrient removal standards.

Municipal Profile

Estimated Service Population	53,600
Service Land Area (Square Miles)	34
Persons per Square Mile	1,576
Topography	Flat
Climate	Temperate; little ice and snow
Median Family Income U.S. Census 2010	$43,442

Service Profile

FTE Staff Positions	
Treatment Plant	31.0
Line Crews	30.0
Billing/Collection	2.0
Other	1.0
Number of Treatment Plants	1
Total Treatment Capacity	14.0 MGD
Average Daily Flow	9.6 MGD
River Basin into Which System Discharges	Neuse
Miles of Gravity Main Line Pipe	349
Miles of Forced Main Line Pipe	6
Average Age of Main Line Pipe	40 years
Blocks in Sewer Mains	2
Number of System Breaks	38
Sanitary System Overflows	7
Number of Customer Accounts	20,241
Total Revenues Collected	$11,442,809

Full Cost Profile

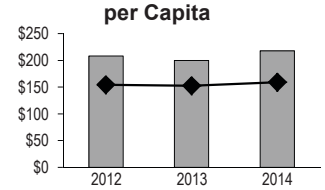
Cost Breakdown by Percentage	
Personal Services	35.4%
Operating Costs	41.4%
Capital Costs	23.2%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$4,131,030
Operating Costs	$4,830,966
Capital Costs	$2,710,719
TOTAL	$11,672,715

Wilson — Wastewater Services

Key: Wilson ■ Benchmarking Average ◆ Fiscal Years 2012 through 2014

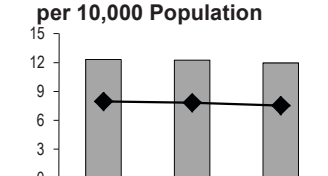
Resource Measures

Wastewater Services Cost per Capita



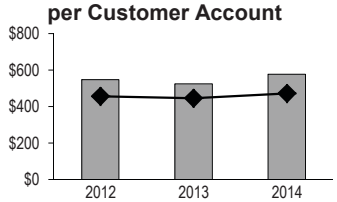
	2012	2013	2014
Wilson	$208	$200	$218
Average	$154	$153	$159

Waterwater Services FTEs per 10,000 Population



	2012	2013	2014
Wilson	12.3	12.2	11.9
Average	8.0	7.8	7.5

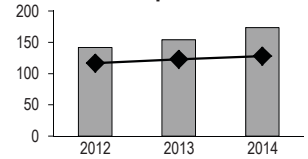
Waterwaste Services Cost per Customer Account



	2012	2013	2014
Wilson	$548	$524	$577
Average	$457	$445	$472

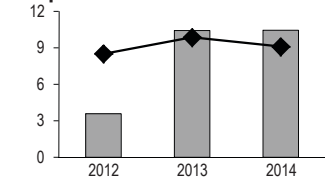
Workload Measures

Thousands of Gallons of Wastewater per Account



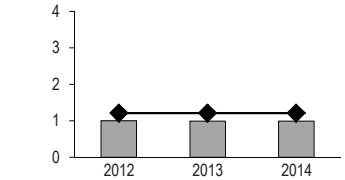
	2012	2013	2014
Wilson	141.8	154.2	173.3
Average	116.6	122.8	127.9

Miles of Sewer Main Line Pipe per Square Mile of Service Area



	2012	2013	2014
Wilson	3.6	10.4	10.4
Average	8.5	9.9	9.1

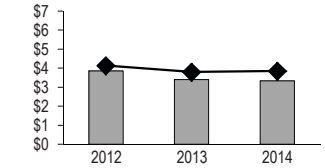
Number of Lift Stations per 1,000 Accounts



	2012	2013	2014
Wilson	1.00	0.99	0.99
Average	1.21	1.21	1.21

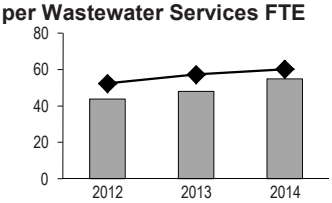
Efficiency Measures

Total Cost per 1,000 Gallons of Treated Wastewater



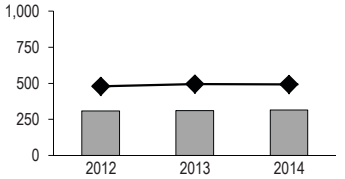
	2012	2013	2014
Wilson	$3.86	$3.40	$3.33
Average	$4.13	$3.80	$3.85

Million Gallons of Wastewater per Wastewater Services FTE



	2012	2013	2014
Wilson	43.9	48.0	54.8
Average	52.4	57.3	60.2

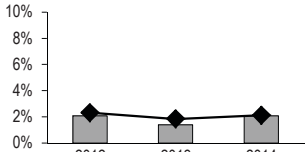
Customer Accounts per Wastewater Services FTE



	2012	2013	2014
Wilson	309	311	316
Average	479	495	493

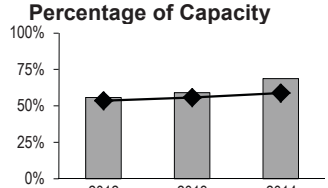
Effectiveness Measures

Percentage of Wastewater Bills Not Collected



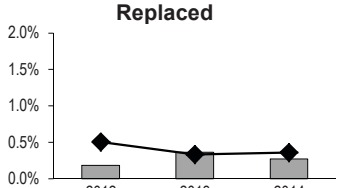
	2012	2013	2014
Wilson	2.07%	1.40%	2.07%
Average	2.31%	1.84%	2.11%

Average Daily Treatment as a Percentage of Capacity



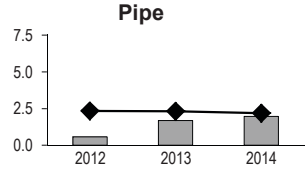
	2012	2013	2014
Wilson	55.8%	59.1%	68.6%
Average	53.6%	55.7%	58.9%

Percent of Main Line Rehabbed or Replaced



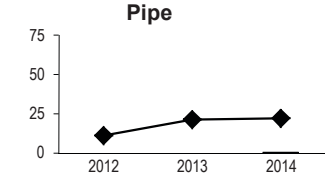
	2012	2013	2014
Wilson	0.18%	0.36%	0.27%
Average	0.51%	0.33%	0.36%

Overflows per 100 Miles of Main Line Pipe



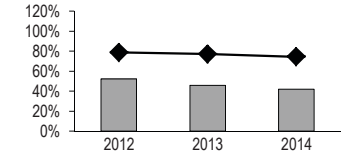
	2012	2013	2014
Wilson	0.56	1.69	1.97
Average	2.34	2.32	2.18

Backups per 100 Miles of Main Line Pipe



	2012	2013	2014
Wilson			0.56
Average	11.16	21.36	22.11

Billed Wastewater as a Percent of Treated Effluent



	2012	2013	2014
Wilson	52%	46%	42%
Average	79%	77%	75%

Winston-Salem Wastewater Services

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Winston-Salem and Forsyth County Utilities Division operates a combined water and sewer system that covers the city and most of the remaining population of Forsyth County. The system also serves several adjoining areas in Davie and Davidson counties. Beyond water and wastewater, the Utilities Division also handles solid waste disposal. Operations are divided among several divisions by function.

The system has two separate treatment plants. The plants use conventional activated sludge with anaerobic digestion for treatment. The system currently does not have regulatory nutrient limits in place. Biosolids produced are disposed of after first using thermal drying with subsequent reuse as a soil amendment.

During the fiscal year, the system had no regulatory violations connected to the treatment portion of the system and eighty-two reported violations for the collection portion of the system.

Conditions Affecting Service, Performance, and Costs

Wastewater Services was added as a new service area for the benchmarking project beginning with FY 2011–12. The costs of wastewater or sewer services as captured here do not include debt service but do capture depreciation of capital.

The city has used improvements in its GIS mapping systems and incident records to change the process by which the Division ranks and proactively cleans pipes. This process is expected to lower the number of breaks and overflows.

Municipal Profile

Estimated Service Population	336,243
Service Land Area (Square Miles)	366
Persons per Square Mile	919
Topography	Gently rolling
Climate	Temperate; some ice and snow
Median Family Income U.S. Census 2010	$51,491

Service Profile

FTE Staff Positions	
Treatment Plant	85.0
Line Crews	66.0
Billing/Collection	7.0
Other	19.0
Number of Treatment Plants	2
Total Treatment Capacity	51.0 MGD
Average Daily Flow	32.4 MGD
River Basin into Which System Discharges	Yadkin
Miles of Gravity Main Line Pipe	1,748
Miles of Forced Main Line Pipe	33
Average Age of Main Line Pipe	50 years
Blocks in Sewer Mains	265
Number of System Breaks	98
Sanitary System Overflows	82
Number of Customer Accounts	95,255
Total Revenues Collected	$44,849,074

Full Cost Profile

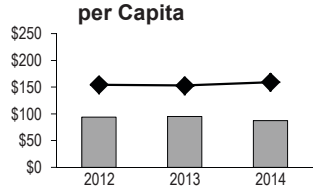
Cost Breakdown by Percentage	
Personal Services	26.6%
Operating Costs	33.9%
Capital Costs	39.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$8,531,214
Operating Costs	$10,850,471
Capital Costs	$12,646,117
TOTAL	$32,027,802

Winston-Salem Wastewater Services

Key: Winston-Salem ■ Benchmarking Average ◆ Fiscal Years 2012 through 2014

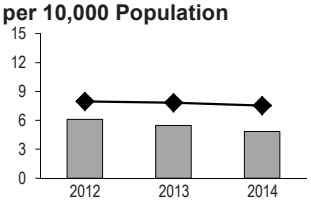
Resource Measures

Wastewater Services Cost per Capita



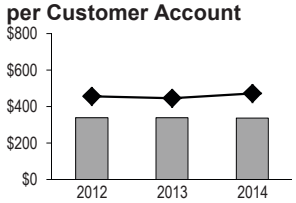
	2012	2013	2014
Winston-Salem	$94	$95	$87
Average	$154	$153	$159

Waterwater Services FTEs per 10,000 Population



	2012	2013	2014
Winston-Salem	6.1	5.5	4.8
Average	8.0	7.8	7.5

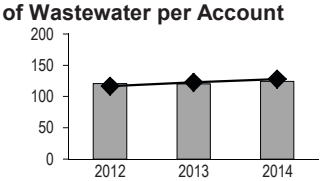
Waterwaste Services Cost per Customer Account



	2012	2013	2014
Winston-Salem	$338	$339	$336
Average	$457	$445	$472

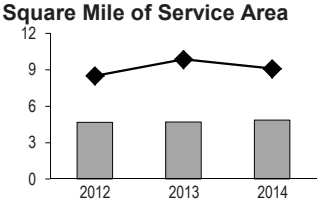
Workload Measures

Thousands of Gallons of Wastewater per Account



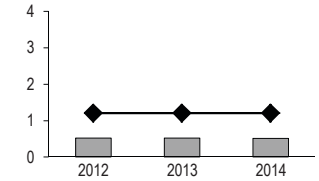
	2012	2013	2014
Winston-Salem	120.5	120.0	124.3
Average	116.6	122.8	127.9

Miles of Sewer Main Line Pipe per Square Mile of Service Area



	2012	2013	2014
Winston-Salem	4.7	4.7	4.9
Average	8.5	9.9	9.1

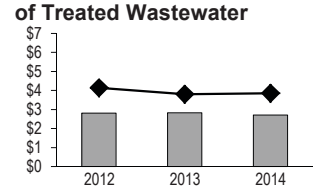
Number of Lift Stations per 1,000 Accounts



	2012	2013	2014
Winston-Salem	0.52	0.52	0.51
Average	1.21	1.21	1.21

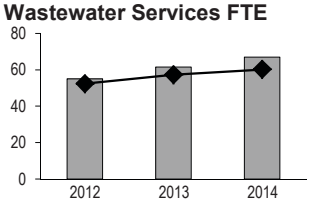
Efficiency Measures

Total Cost per 1,000 Gallons of Treated Wastewater



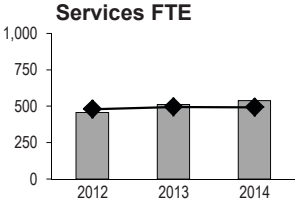
	2012	2013	2014
Winston-Salem	$2.80	$2.82	$2.71
Average	$4.13	$3.80	$3.85

Million Gallons of Wastewater per Wastewater Services FTE



	2012	2013	2014
Winston-Salem	55.1	61.6	66.9
Average	52.4	57.3	60.2

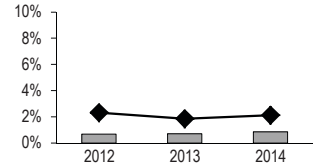
Customer Accounts per Wastewater Services FTE



	2012	2013	2014
Winston-Salem	457	513	538
Average	479	495	493

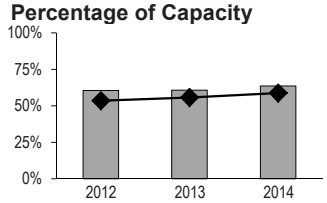
Effectiveness Measures

Percentage of Wastewater Bills Not Collected



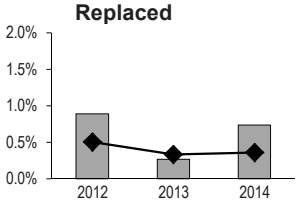
	2012	2013	2014
Winston-Salem	0.67%	0.71%	0.85%
Average	2.31%	1.84%	2.11%

Average Daily Treatment as a Percentage of Capacity



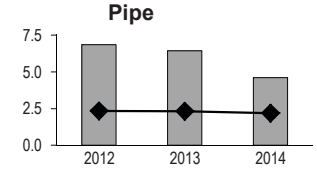
	2012	2013	2014
Winston-Salem	60.5%	60.9%	63.6%
Average	53.6%	55.7%	58.9%

Percent of Main Line Rehabbed or Replaced



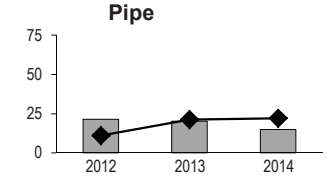
	2012	2013	2014
Winston-Salem	0.89%	0.27%	0.74%
Average	0.51%	0.33%	0.36%

Overflows per 100 Miles of Main Line Pipe



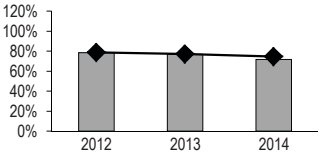
	2012	2013	2014
Winston-Salem	6.84	6.44	4.60
Average	2.34	2.32	2.18

Backups per 100 Miles of Main Line Pipe



	2012	2013	2014
Winston-Salem	21.53	20.19	14.88
Average	11.16	21.36	22.11

Billed Wastewater as a Percent of Treated Effluent



	2012	2013	2014
Winston-Salem	79%	77%	72%
Average	79%	77%	75%


UNC
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Performance and Cost Data

CORE PARKS AND RECREATION


UNC
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GOVERNMENT

PERFORMANCE MEASURES FOR CORE PARKS AND RECREATION SERVICES

SERVICE DEFINITION

Parks and Recreation includes both passive and active recreation opportunities maintained and operated by a local government. For the purposes of this benchmarking effort, this will include core operational functions such as parks, multi-purpose recreation facilities, athletic facilities, greenways, and trails. This also includes programs and events.

However, Parks and Recreation departments frequently may include a variety of other activities and facilities. To support reasonable comparisons, this service benchmarking excludes these secondary recreational activities, including performance venues, museums, historic sites, golf courses, marinas/boat ramps, and professional stadiums. Also excluded are other non-recreational activities sometimes performed by parks and recreation departments, such as care of cemeteries; maintenance of right-of-ways along city streets; maintenance of facilities owned by a municipality but not parks-related; and maintenance of city lots. The dollars and people associated with these secondary and non-park activities are excluded.

Parks and Recreation does offer an important difference from many of the other services provided by local governments. Much of the objective of this service area is to provide facilities for the use of citizens. Use of many of these facilities is not easily tracked. Many of the measures shown for this service area are accordingly measures of facility availability rather than the traditional workload type of measures seen in other service areas.

NOTES ON PERFORMANCE MEASURES

1. Land Acres of All Municipal Parks per 10,000 Population

This resource measure captures the amount of park land that is available relative to the population in the communities.

2. Recreation Centers per 10,000 Population

Recreation centers provide space for a variety of indoor recreational activities. This measure shows the number of centers relative to the population.

3. Swimming Pools per 10,000 Population

Indoor and outdoor pools are a desirable recreational facility. This resource measure captures the number of pools relative to the population.

4. Athletic Fields per 10,000 Population

Outdoor athletic fields are used for organized and informal recreation. This measure counts the number of formal athletic fields, including rectangular fields such as those for football and soccer, diamond fields as for baseball, and non-designated fields which can be used for multiple activities. The count includes both natural grass and artificial-surface fields, where available.

5. Playgrounds per 10,000 Population
Formal playgrounds include a variety of fixed equipment such as swings, jungle gyms, slides, and other apparatus. This measure captures these playgrounds relative to the population.

6. Miles of Trails per 10,000 Population
Outdoor trails of all types represent an important type of active recreation. This measure captures the total miles of trails in a community relative to the population. The miles total includes paved and unpaved trails and covers various types of trails, such as those for walking, bike riding, and equestrian riding.

7. Total Core Parks and Recreation Costs
This efficiency measure represents the level of spending relative to the park acreage in a community. Although funds may be spent on facilities and activities, this measure provides some comparison on the intensity of spending.

8. Acres of Park Maintained per Maintenance Full-Time Equivalent (FTE)
This efficiency measure compares the amount of acres in the park system relative to the number of FTEs used by a jurisdiction to provide maintenance.

9. Volunteer Hours in FTEs as a Percent of Paid Staff FTEs
Volunteers represent an important resource to help support Parks and Recreation activities. This efficiency measure compares the estimated amount of volunteer labor relative to the paid staff in order to provide a measure of the benefit these volunteers bring to a community.

10. Revenue Gained as a Percent of Total Core Parks and Recreation Costs
Parks and Recreation is a service that is primarily supported by general funding from a local government budget. But gaining additional revenues in the form of user fees, grants, donations, and sponsorships helps to leverage spending and provide services. This effectiveness measure shows how much revenue has been raised from these other sources relative to the total costs reported.

11. Acts of Vandalism per 10,000 Population
Vandalism damages parks and recreation facilities, making them unavailable or less useful to citizens. This effectiveness measure compares the number of acts of vandalism relative to the population to indicate the extent of this problem.

Core Parks and Recreation

Summary of Key Dimensions of Service

City or Town	Municipal Population as of July 1 2013	Core Parks and Recreation FTEs	Number of Parks	Park Land Acreage	Number of Recreation and Senior Centers	Number of Playgrounds	Number of Athletic Fields	Miles of Trails
Apex	40,925	25.0	11	443.0	1	11	26	9.4
Asheville	88,003	99.4	47	869.0	13	24	27	5.5
Burlington	51,396	65.5	22	631.5	7	21	42	10.5
Cary	144,671	132.3	27	2,541.7	4	18	60	82.2
Concord	83,279	23.0	8	363.0	3	13	22	7.1
Greensboro	278,654	191.8	616	6,380.0	12	104	112	85.0
Greenville	87,241	116.5	26	1,309.6	8	17	22	6.5
Hickory	40,222	55.0	25	504.0	8	39	24	10.6
High Point	107,652	136.7	50	1,922.0	7	30	51	20.5
Salisbury	33,726	27.5	28	508.0	3	18	12	16.9
Wilson	49,097	68.5	28	400.0	4	25	26	14.5
Winston-Salem	235,527	212.4	79	3,478.7	17	47	97	23.2

EXPLANATORY FACTORS

These are some factors that the project found affected core parks and recreation services performance and cost in one or more of the municipalities:

Youth Population
Total Acreage
Miles of Trails
Number of Facilities

Apex — Core Parks and Recreation

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Town of Apex provides recreation services through the separate Parks, Recreation, and Cultural Resources Department. The city has priority use agreements with the Wake County School System in exchange for maintenance of areas used by the the town.

The town has eleven separate parks and sites. These parks cover 443 land acres; nearly all of the area is currently developed. The city has nine miles of trails; about three-fourths of them are paved.

In addition to the core parks and recreational facilities, Apex has a performing arts center. The operation of this other facility is not included in the Core Parks and Recreation comparisons reported here. This facility is not included here in dollars or staff as part of core parks and recreation facilities and activities.

Conditions Affecting Service, Performance, and Costs

Parks and Recreation is a new service area for the benchmarking project beginning with the FY 2012–13 reporting year.

Municipal Profile

Population (OSBM 2013)	40,925
Land Area (Square Miles)	16.25
Persons per Square Mile	2,518
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow

Service Profile

Parks and Recreation Staff	
Administrative Position FTEs	5.0
Maintenance Staff FTEs	15.0
Program and Facility FTEs	5.0
Other Staff FTEs	0.0
TOTAL	25.0
Number of Parks and Sites	11
Total Land Acreage in Parks	443.0
Miles of Trails in Parks	9.4
Recreational Facilities	
Indoor and Outdoor Pools	0
Recreation Centers	1
Outdoor Basketball Courts	5 full, 1 half
Outdoor Tennis Courts	15
Playgrounds	11
Diamond Fields	13
Rectangular Fields	11
Other Athletic Fields	2
Picnic Shelters	13
Parks and Recreation Revenues	
User Fees	$709,797
Grants	$0
Sponsorships	$10,200
Donations	$195

Full Cost Profile

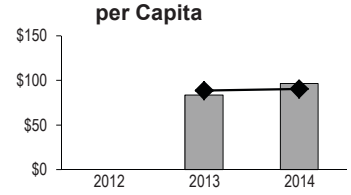
Cost Breakdown by Percentage	
Personal Services	38.0%
Operating Costs	47.5%
Capital Costs	14.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,503,117
Operating Costs	$1,880,122
Capital Costs	$574,445
TOTAL	$3,957,684

Apex — Core Parks and Recreation

Key: Apex ■ Benchmarking Average ◆ Fiscal Years 20012 through 2014

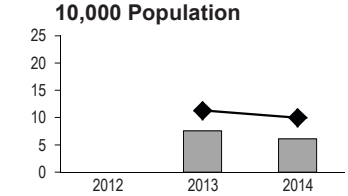
Resource Measures

Core Parks and Recreation Services per Capita



	2012	2013	2014
Apex		$83	$97
Average		$89	$90

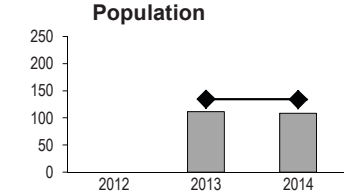
Core Parks and Recreation Staff per 10,000 Population



	2012	2013	2014
Apex		7.5	6.1
Average		11.3	10.0

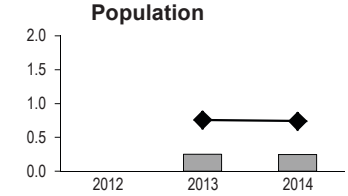
Facilities Measures

Land Acres of Parks per 10,000 Population



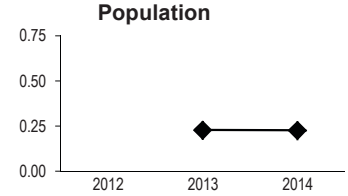
	2012	2013	2014
Apex		111.40	108.25
Average		134.60	134.32

Recreation Centers per 10,000 Population



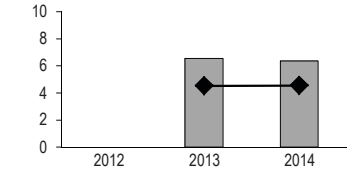
	2012	2013	2014
Apex		0.25	0.24
Average		0.76	0.74

Swimming Pools per 10,000 Population



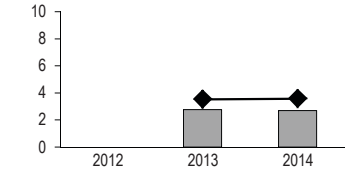
	2012	2013	2014
Apex		0.00	0.00
Average		0.23	0.23

Athletic Fields per 10,000 Population



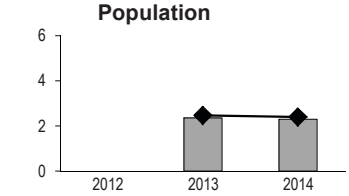
	2012	2013	2014
Apex		6.54	6.35
Average		4.52	4.55

Playgrounds per 10,000 Population



	2012	2013	2014
Apex		2.77	2.69
Average		3.53	3.57

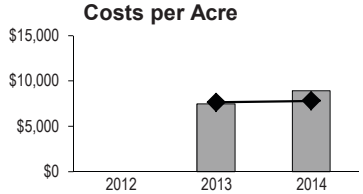
Miles of Land Trails per 10,000 Population



	2012	2013	2014
Apex		2.36	2.29
Average		2.46	2.40

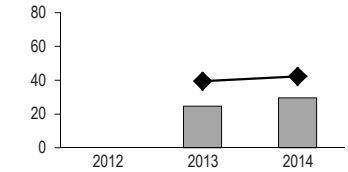
Efficiency Measures

Total Core Parks and Recreation Costs per Acre



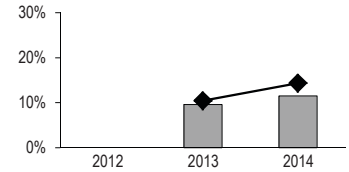
	2012	2013	2014
Apex		$7,493	$8,934
Average		$7,646	$7,808

Acres of Park Maintained per Maintenance FTE



	2012	2013	2014
Apex		24.6	29.5
Average		39.4	42.2

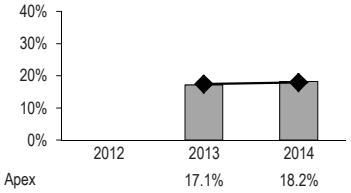
Volunteer Hours in FTEs as a Percent of Paid Staff FTEs



	2012	2013	2014
Apex		10%	11.5%
Average		10.5%	14.4%

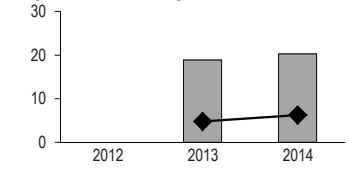
Effectiveness Measures

Revenue Gained as a Percent of Total Core Costs



	2012	2013	2014
Apex		17.1%	18.2%
Average		17.5%	17.9%

Acts of Vandalism at Parks Facilities per 10,000 Population



	2012	2013	2014
Apex		18.86	20.28
Average		4.77	6.22

Asheville — Core Parks and Recreation

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Asheville provides recreation services through the separate Parks and Recreation Department. The city has formal agreements and partnerships with athletic associations, non-profits, universities, individuals, and for-profit organizations for the provision of recreational services.

The city has forty separate parks and sites. These parks cover 869 land acres; about three-fourths of them are currently developed. The city has nearly six miles miles of trails.

In addition to the core parks and recreational facilities, Asheville has two large outdoor performance event sites and runs an eighteen-hole municipal golf course. The operation of these other facilities is not included in the Core Parks and Recreation comparisons reported here. These facilities are not included here in dollars or staff as part of core parks and recreation facilities and activities.

Conditions Affecting Service, Performance, and Costs

Parks and Recreation is a new service area for the benchmarking project beginning with the FY 2012–13 reporting year.

Municipal Profile

Population (OSBM 2013)	88,003
Land Area (Square Miles)	45.52
Persons per Square Mile	1,933
Topography	Hilly, mountains
Climate	Moderate; ice and snow

Service Profile

Parks and Recreation Staff	
Administrative Position FTEs	19.0
Maintenance Staff FTEs	31.3
Program and Facility FTEs	42.1
Other Staff FTEs	7.0
TOTAL	99.4
Number of Parks and Sites	47
Total Land Acreage in Parks	869.0
Miles of Trails in Parks	5.5
Recreational Facilities	
Indoor and Outdoor Pools	3
Recreation Centers	11
Outdoor Basketball Courts	13 full, 2 half
Outdoor Tennis Courts	26
Playgrounds	24
Diamond Fields	19
Rectangular Fields	5
Other Athletic Fields	3
Picnic Shelters	12
Parks and Recreation Revenues	
User Fees	$1,649,292
Grants	$212,160
Sponsorships	$135,782
Donations	$68,316

Full Cost Profile

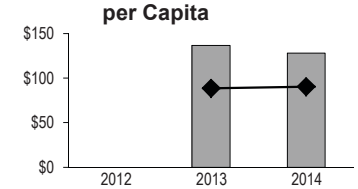
Cost Breakdown by Percentage	
Personal Services	48.1%
Operating Costs	40.4%
Capital Costs	11.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$5,421,532
Operating Costs	$4,561,169
Capital Costs	$1,293,413
TOTAL	$11,276,114

Asheville — Core Parks and Recreation

Key: Asheville ■ Benchmarking Average ◆ Fiscal Years 20012 through 2014

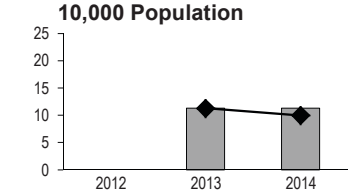
Resource Measures

Core Parks and Recreation Services per Capita



	2012	2013	2014
Asheville		$137	$128
Average		$89	$90

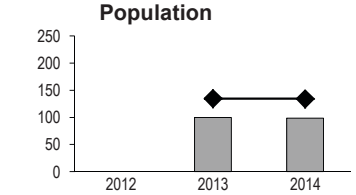
Core Parks and Recreation Staff per 10,000 Population



	2012	2013	2014
Asheville		11.3	11.3
Average		11.3	10.0

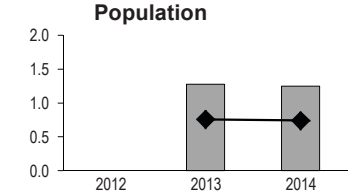
Facilities Measures

Land Acres of Parks per 10,000 Population



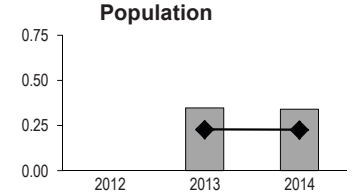
	2012	2013	2014
Asheville		99.47	98.74
Average		134.60	134.32

Recreation Centers per 10,000 Population



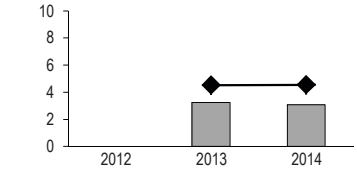
	2012	2013	2014
Asheville		1.28	1.25
Average		0.76	0.74

Swimming Pools per 10,000 Population



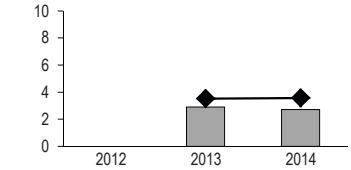
	2012	2013	2014
Asheville		0.35	0.34
Average		0.23	0.23

Athletic Fields per 10,000 Population



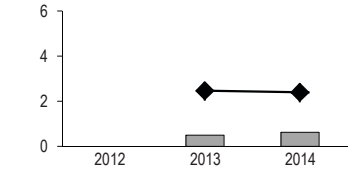
	2012	2013	2014
Asheville		3.25	3.07
Average		4.52	4.55

Playgrounds per 10,000 Population



	2012	2013	2014
Asheville		2.90	2.73
Average		3.53	3.57

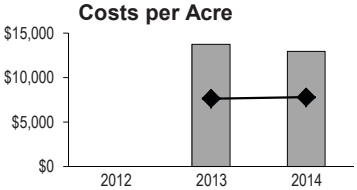
Miles of Land Trails per 10,000 Population



	2012	2013	2014
Asheville		0.50	0.62
Average		2.46	2.40

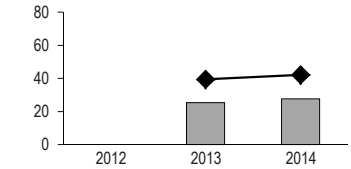
Efficiency Measures

Total Core Parks and Recreation Costs per Acre



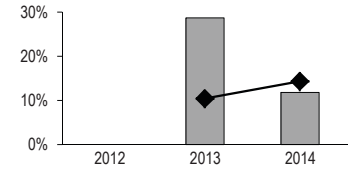
	2012	2013	2014
Asheville		$13,748	$12,977
Average		$7,646	$7,808

Acres of Park Maintained per Maintenance FTE



	2012	2013	2014
Asheville		25.4	27.8
Average		39.4	42.2

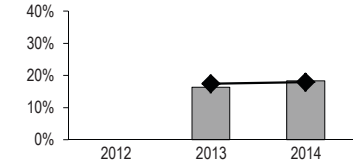
Volunteer Hours in FTEs as a Percent of Paid Staff FTEs



	2012	2013	2014
Asheville		29%	11.8%
Average		10.5%	14.4%

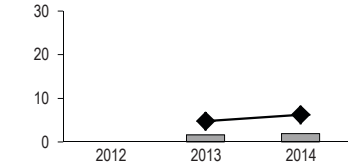
Effectiveness Measures

Revenue Gained as a Percent of Total Core Costs



	2012	2013	2014
Asheville		16.3%	18.3%
Average		17.5%	17.9%

Acts of Vandalism at Parks Facilities per 10,000 Population



	2012	2013	2014
Asheville		1.62	1.93
Average		4.77	6.22

Burlington — Core Parks and Recreation

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Burlington provides recreation services through the separate Recreation and Parks Department. The city has formal agreements with Guilford County at the Guilford MacKintosh Park and Marina.

The city has twenty-two separate parks and sites. These parks cover 632 land acres; about two-thirds of them are currently developed. Additionally, a further 2,140 water acres are part of the park system. The city has ten miles of trails.

In addition to the core parks and recreational facilities, Burlington has two large outdoor performance event sites, two historic properties, one performing arts center, one professional sports site, one farmers' market, and four boat ramps or marinas. The city also runs an eighteen-hole municipal golf course. The operation of these other facilities is not included in the Core Parks and Recreation comparisons reported here. These facilities are not included here in dollars or staff as part of core parks and recreation facilities and activities.

Conditions Affecting Service, Performance, and Costs

Parks and Recreation is a new service area for the benchmarking project beginning with the FY 2012–13 reporting year.

Municipal Profile

Population (OSBM 2013)	51,396
Land Area (Square Miles)	27.28
Persons per Square Mile	1,884
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow

Service Profile

Parks and Recreation Staff	
Administrative Position FTEs	7.5
Maintenance Staff FTEs	11.0
Program and Facility FTEs	47.0
Other Staff FTEs	0.0
TOTAL	65.5
Number of Parks and Sites	22
Total Land Acreage in Parks	631.5
Miles of Trails in Parks	10.5
Recreational Facilities	
Indoor and Outdoor Pools	3
Recreation Centers	6
Outdoor Basketball Courts	9
Outdoor Tennis Courts	17
Playgrounds	21
Diamond Fields	22
Rectangular Fields	18
Other Athletic Fields	2
Picnic Shelters	13
Parks and Recreation Revenues	
User Fees	$2,065,737
Grants	$19,779
Sponsorships	$5,000
Donations	$87,068

Full Cost Profile

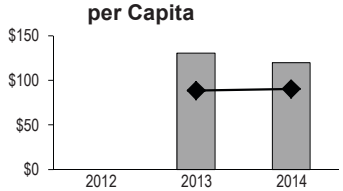
Cost Breakdown by Percentage	
Personal Services	55.5%
Operating Costs	37.1%
Capital Costs	7.3%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$3,418,044
Operating Costs	$2,285,869
Capital Costs	$451,673
TOTAL	$6,155,586

Burlington Core Parks and Recreation

Key: Burlington ■ Benchmarking Average ◆ Fiscal Years 20012 through 2014

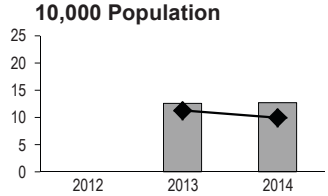
Resource Measures

Core Parks and Recreation Services per Capita



	2012	2013	2014
Burlington		$130	$120
Average		$89	$90

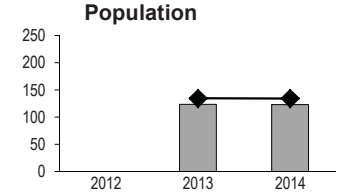
Core Parks and Recreation Staff per 10,000 Population



	2012	2013	2014
Burlington		12.6	12.7
Average		11.3	10.0

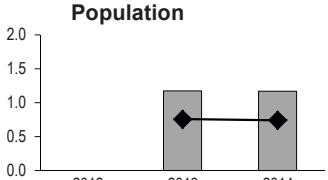
Facilities Measures

Land Acres of Parks per 10,000 Population



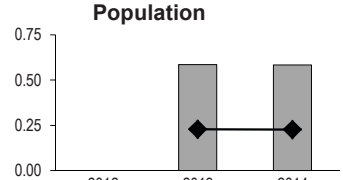
	2012	2013	2014
Burlington		123.35	122.86
Average		134.60	134.32

Recreation Centers per 10,000 Population



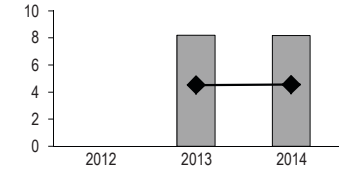
	2012	2013	2014
Burlington		1.17	1.17
Average		0.76	0.74

Swimming Pools per 10,000 Population



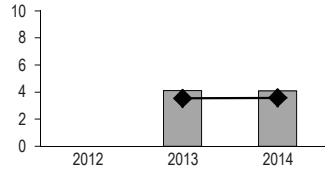
	2012	2013	2014
Burlington		0.59	0.58
Average		0.23	0.23

Athletic Fields per 10,000 Population



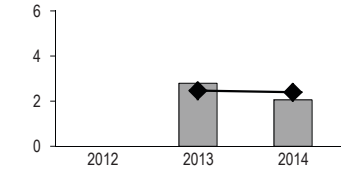
	2012	2013	2014
Burlington		8.20	8.17
Average		4.52	4.55

Playgrounds per 10,000 Population



	2012	2013	2014
Burlington		4.10	4.09
Average		3.53	3.57

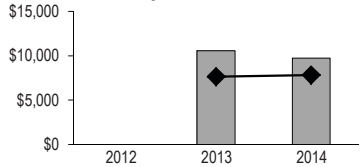
Miles of Land Trails per 10,000 Population



	2012	2013	2014
Burlington		2.79	2.05
Average		2.46	2.40

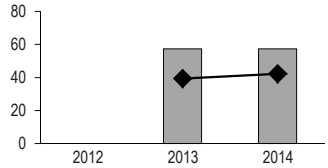
Efficiency Measures

Total Core Parks and Recreation Costs per Acre



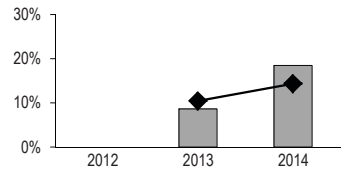
	2012	2013	2014
Burlington		$10,571	$9,748
Average		$7,646	$7,808

Acres of Park Maintained per Maintenance FTE



	2012	2013	2014
Burlington		57.4	57.4
Average		39.4	42.2

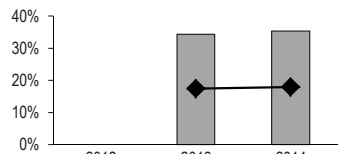
Volunteer Hours in FTEs as a Percent of Paid Staff FTEs



	2012	2013	2014
Burlington		9%	18.5%
Average		10.5%	14.4%

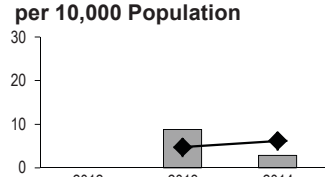
Effectiveness Measures

Revenue Gained as a Percent of Total Core Costs



	2012	2013	2014
Burlington		34.3%	35.4%
Average		17.5%	17.9%

Acts of Vandalism at Parks Facilities per 10,000 Population



	2012	2013	2014
Burlington		8.79	2.92
Average		4.77	6.22

Cary — Core Parks and Recreation

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The Town of Cary provides recreation services through the separate Parks, Recreation, and Cultural Resources Department. The town has agreements with the Wake County Public Schools for use of facilities. Additionally, as opportunities present themselves the town has some agreements with Wake County.

The city has twenty-seven separate parks and sites. These parks cover 2,542 land acres, about one-fourth of it currently developed. The city has eighty-two miles of trails.

In addition to the core parks and recreational facilities, Cary has two large outdoor performance event sites, eleven historic properties, one performing arts center, two professional sports sites, one boat ramp, and one museum.

The department also has many cultural programs not reflected fully in the benchmarking data. Cary has a public arts program which includes artists in the design of town capital projects. The operation of these other facilities is not included in the Core Parks and Recreation comparisons reported here. These facilities are not included here in dollars or staff as part of core parks and recreation facilities and activities.

Conditions Affecting Service, Performance, and Costs

Parks and Recreation is a new service area for the benchmarking project beginning with the FY 2012–13 reporting year.

Municipal Profile

Population (OSBM 2013)	144,671
Land Area (Square Miles)	55.54
Persons per Square Mile	2,605
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow

Service Profile

Parks and Recreation Staff	
Administrative Position FTEs	21.3
Maintenance Staff FTEs	0.0
Program and Facility FTEs	111.0
Other Staff FTEs	0.0
TOTAL	132.3
Number of Parks and Sites	27
Total Land Acreage in Parks	2,541.7
Miles of Trails in Parks	82.2
Recreational Facilities	
Indoor and Outdoor Pools	0
Recreation Centers	3
Outdoor Basketball Courts	23
Outdoor Tennis Courts	59
Playgrounds	18
Diamond Fields	26
Rectangular Fields	25
Other Athletic Fields	9
Picnic Shelters	14
Parks and Recreation Revenues	
User Fees	$5,967,105
Grants	$515,723
Sponsorships	$367,522
Donations	$58,076

Full Cost Profile

Cost Breakdown by Percentage	
Personal Services	35.1%
Operating Costs	50.1%
Capital Costs	14.9%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$7,364,753
Operating Costs	$10,521,491
Capital Costs	$3,121,493
TOTAL	$21,007,737

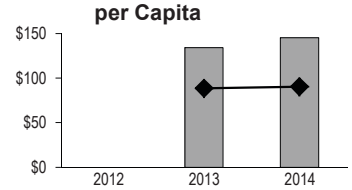
Cary

Core Parks and Recreation

Key: Cary ■ Benchmarking Average ◆ Fiscal Years 20012 through 2014

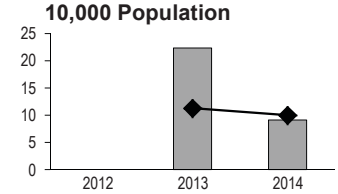
Resource Measures

Core Parks and Recreation Services per Capita



	2012	2013	2014
Cary		$134	$145
Average		$89	$90

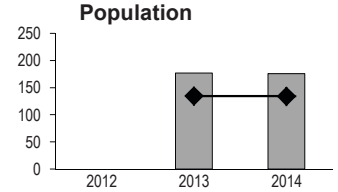
Core Parks and Recreation Staff per 10,000 Population



	2012	2013	2014
Cary		22.3	9.1
Average		11.3	10.0

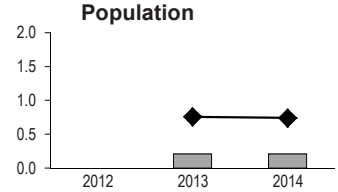
Facilities Measures

Land Acres of Parks per 10,000 Population



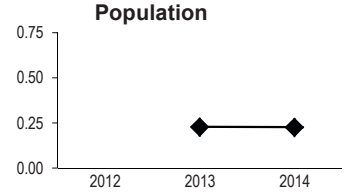
	2012	2013	2014
Cary		176.82	175.69
Average		134.60	134.32

Recreation Centers per 10,000 Population



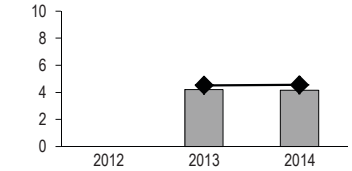
	2012	2013	2014
Cary		0.21	0.21
Average		0.76	0.74

Swimming Pools per 10,000 Population



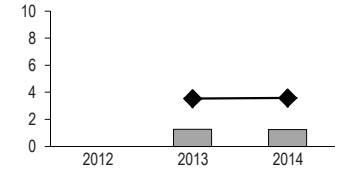
	2012	2013	2014
Cary		0.00	0.00
Average		0.23	0.23

Athletic Fields per 10,000 Population



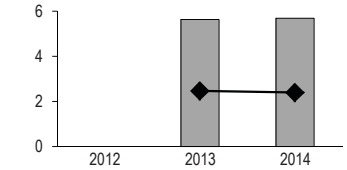
	2012	2013	2014
Cary		4.21	4.15
Average		4.52	4.55

Playgrounds per 10,000 Population



	2012	2013	2014
Cary		1.26	1.24
Average		3.53	3.57

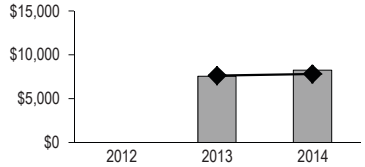
Miles of Land Trails per 10,000 Population



	2012	2013	2014
Cary		5.62	5.68
Average		2.46	2.40

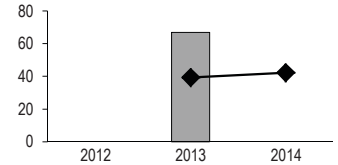
Efficiency Measures

Total Core Parks and Recreation Costs per Acre



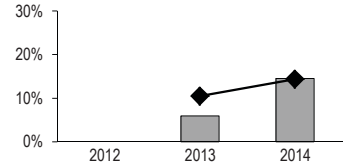
	2012	2013	2014
Cary		$7,579	$8,265
Average		$7,646	$7,808

Acres of Park Maintained per Maintenance FTE



	2012	2013	2014
Cary		67.0	
Average		39.4	42.2

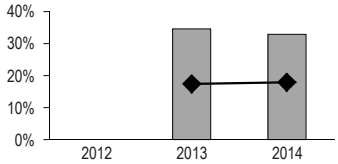
Volunteer Hours in FTEs as a Percent of Paid Staff FTEs



	2012	2013	2014
Cary		6%	14.5%
Average		10.5%	14.4%

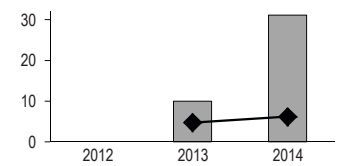
Effectiveness Measures

Revenue Gained as a Percent of Total Core Costs



	2012	2013	2014
Cary		34.6%	32.9%
Average		17.5%	17.9%

Acts of Vandalism at Parks Facilities per 10,000 Population



	2012	2013	2014
Cary		9.97	31.11
Average		4.77	6.22

Concord — Core Parks and Recreation

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Concord provides recreation services through the separate Parks and Recreation Department. The city provides an array of facilities and activities for recreation.

The city has eight separate parks and sites. These parks cover 363 land acres. The city has seven miles of recreational trails, most of them paved.

In addition to the core parks and recreational facilities, Concord has one large outdoor performance event site and one boat ramp. The operation of these other facilities is not included in the Core Parks and Recreation comparisons reported here. These facilities are not included here in dollars or staff as part of core parks and recreation facilities and activities.

Conditions Affecting Service, Performance, and Costs

Parks and Recreation is a new service area for the benchmarking project beginning with the FY 2012–13 reporting year.

Municipal Profile

Population (OSBM 2013)	83,279
Land Area (Square Miles)	60.93
Persons per Square Mile	1,367
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow

Service Profile

Parks and Recreation Staff	
Administrative Position FTEs	5.0
Maintenance Staff FTEs	0.0
Program and Facility FTEs	17.0
Other Staff FTEs	0.0
TOTAL	22.0
Number of Parks and Sites	8
Total Land Acreage in Parks	363.0
Miles of Trails in Parks	7.1
Recreational Facilities	
Indoor and Outdoor Pools	1
Recreation Centers	3
Outdoor Basketball Courts	5
Outdoor Tennis Courts	14
Playgrounds	13
Diamond Fields	13
Rectangular Fields	8
Other Athletic Fields	1
Picnic Shelters	14
Parks and Recreation Revenues	
User Fees	$294,687
Grants	$550,000
Sponsorships	$7,000
Donations	$0

Full Cost Profile

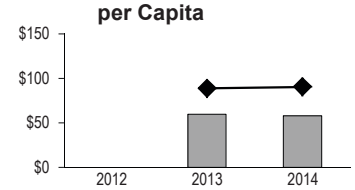
Cost Breakdown by Percentage	
Personal Services	26.1%
Operating Costs	69.7%
Capital Costs	4.2%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,263,350
Operating Costs	$3,371,406
Capital Costs	$200,765
TOTAL	$4,835,521

Concord — Core Parks and Recreation

Key: Concord ■ Benchmarking Average ◆ Fiscal Years 20012 through 2014

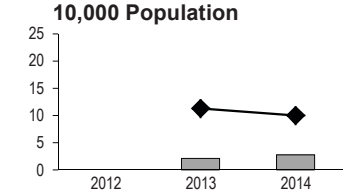
Resource Measures

Core Parks and Recreation Services per Capita



	2012	2013	2014
Concord		$60	$58
Average		$89	$90

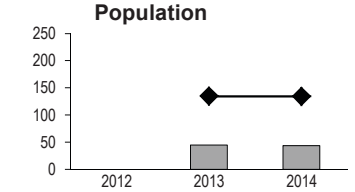
Core Parks and Recreation Staff per 10,000 Population



	2012	2013	2014
Concord		2.1	2.8
Average		11.3	10.0

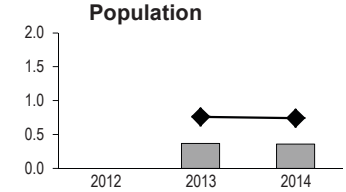
Facilities Measures

Land Acres of Parks per 10,000 Population



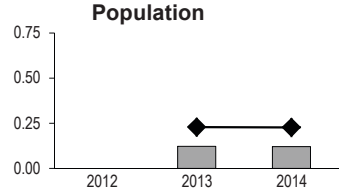
	2012	2013	2014
Concord		44.56	43.59
Average		134.60	134.32

Recreation Centers per 10,000 Population



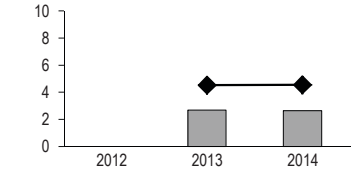
	2012	2013	2014
Concord		0.37	0.36
Average		0.76	0.74

Swimming Pools per 10,000 Population



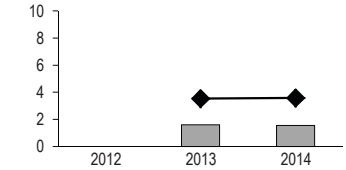
	2012	2013	2014
Concord		0.12	0.12
Average		0.23	0.23

Athletic Fields per 10,000 Population



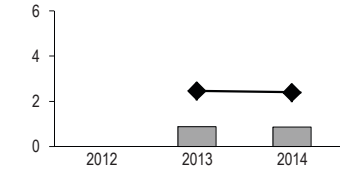
	2012	2013	2014
Concord		2.70	2.64
Average		4.52	4.55

Playgrounds per 10,000 Population



	2012	2013	2014
Concord		1.60	1.56
Average		3.53	3.57

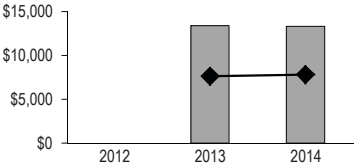
Miles of Land Trails per 10,000 Population



	2012	2013	2014
Concord		0.87	0.85
Average		2.46	2.40

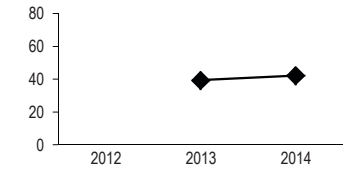
Efficiency Measures

Total Core Parks and Recreation Costs per Acre



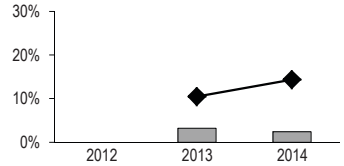
	2012	2013	2014
Concord		$13,410	$13,321
Average		$7,646	$7,808

Acres of Park Maintained per Maintenance FTE



	2012	2013	2014
Concord			
Average		39.4	42.2

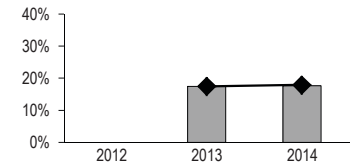
Volunteer Hours in FTEs as a Percent of Paid Staff FTEs



	2012	2013	2014
Concord		3%	2.4%
Average		10.5%	14.4%

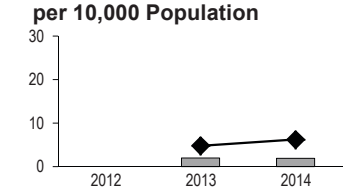
Effectiveness Measures

Revenue Gained as a Percent of Total Core Costs



	2012	2013	2014
Concord		17.4%	17.6%
Average		17.5%	17.9%

Acts of Vandalism at Parks Facilities per 10,000 Population



	2012	2013	2014
Concord		1.96	1.92
Average		4.77	6.22

Greensboro — Core Parks and Recreation

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Greensboro provides recreation services through the separate Parks and Recreation Department. The city has several cooperative agreements with the local schools and some non-profits for the provision of services or use of facilities. The city provides a full array of recreational facilities and activities.

The city has 616 separate parks and sites. These parks cover 6,380 land acres; most of them are developed. In addition, 2,584 acres in water space is part of the parks system. The city has eighty-five miles of trails; about one-third of them are paved.

In addition to the core parks and recreational facilities, Greensboro has a large outdoor performance event site, a historic property, a famers' market, a boat ramp and marina, and operates a nine-hole municipal golf course. The operation of these other facilities is not included in the Core Parks and Recreation comparisons reported here. These facilities are not included here in dollars or staff as part of core parks and recreation facilities and activities.

Conditions Affecting Service, Performance, and Costs

Parks and Recreation is a new service area for the benchmarking project beginning with the FY 2012–13 reporting year.

Municipal Profile

Population (OSBM 2013)	278,654
Land Area (Square Miles)	127.93
Persons per Square Mile	2,178
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow

Service Profile

Parks and Recreation Staff	
Administrative Position FTEs	16.5
Maintenance Staff FTEs	85.3
Program and Facility FTEs	90.0
Other Staff FTEs	0.0
TOTAL	191.8
Number of Parks and Sites	616
Total Land Acreage in Parks	6,380.0
Miles of Trails in Parks	85.0
Recreational Facilities	
Indoor and Outdoor Pools	6
Recreation Centers	11
Outdoor Basketball Courts	8 full, 32 half
Outdoor Tennis Courts	98
Playgrounds	104
Diamond Fields	55
Rectangular Fields	57
Other Athletic Fields	0
Picnic Shelters	40
Parks and Recreation Revenues	
User Fees	$1,690,684
Grants	$44,376
Sponsorships	$2,000
Donations	$80,396

Full Cost Profile

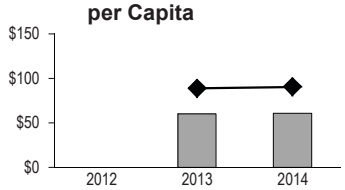
Cost Breakdown by Percentage	
Personal Services	61.0%
Operating Costs	39.0%
Capital Costs	0.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$10,299,167
Operating Costs	$6,590,969
Capital Costs	$0
TOTAL	$16,890,136

Greensboro — Core Parks and Recreation

Key: Greensboro ■ Benchmarking Average ◆ Fiscal Years 20012 through 2014

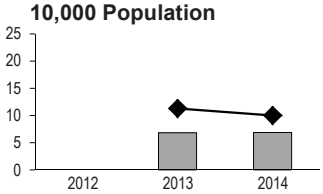
Resource Measures

Core Parks and Recreation Services per Capita



	2012	2013	2014
Greensboro		$60	$61
Average		$89	$90

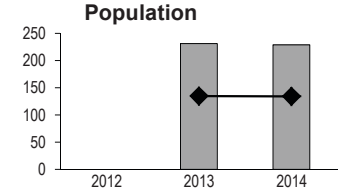
Core Parks and Recreation Staff per 10,000 Population



	2012	2013	2014
Greensboro		6.8	6.9
Average		11.3	10.0

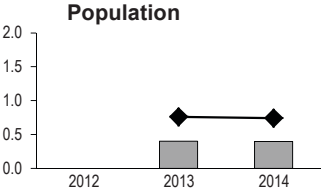
Facilities Measures

Land Acres of Parks per 10,000 Population



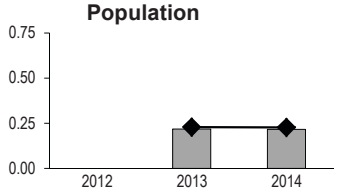
	2012	2013	2014
Greensboro		231.56	228.96
Average		134.60	134.32

Recreation Centers per 10,000 Population



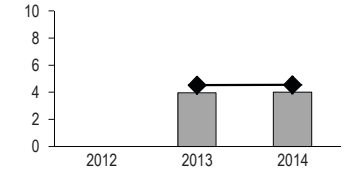
	2012	2013	2014
Greensboro		0.40	0.39
Average		0.76	0.74

Swimming Pools per 10,000 Population



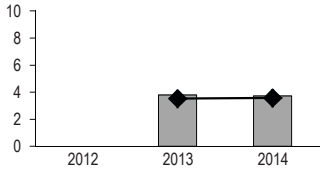
	2012	2013	2014
Greensboro		0.22	0.22
Average		0.23	0.23

Athletic Fields per 10,000 Population



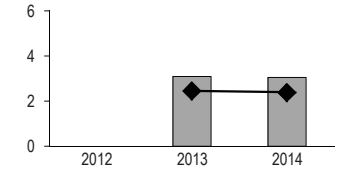
	2012	2013	2014
Greensboro		3.96	4.02
Average		4.52	4.55

Playgrounds per 10,000 Population



	2012	2013	2014
Greensboro		3.78	3.73
Average		3.53	3.57

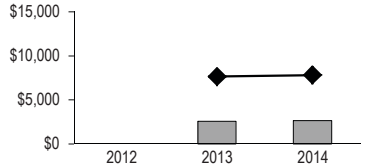
Miles of Land Trails per 10,000 Population



	2012	2013	2014
Greensboro		3.09	3.05
Average		2.46	2.40

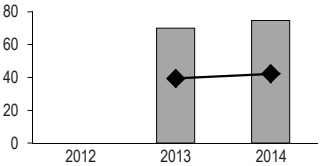
Efficiency Measures

Total Core Parks and Recreation Costs per Acre



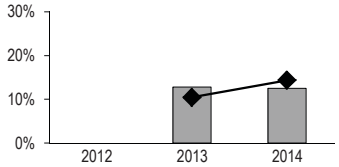
	2012	2013	2014
Greensboro		$2,591	$2,647
Average		$7,646	$7,808

Acres of Park Maintained per Maintenance FTE



	2012	2013	2014
Greensboro		70.0	74.8
Average		39.4	42.2

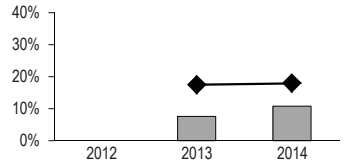
Volunteer Hours in FTEs as a Percent of Paid Staff FTEs



	2012	2013	2014
Greensboro		13%	12.5%
Average		10.5%	14.4%

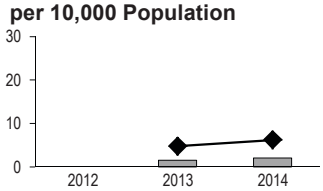
Effectiveness Measures

Revenue Gained as a Percent of Total Core Costs



	2012	2013	2014
Greensboro		7.6%	10.8%
Average		17.5%	17.9%

Acts of Vandalism at Parks Facilities per 10,000 Population



	2012	2013	2014
Greensboro		1.53	2.05
Average		4.77	6.22

Greenville — Core Parks and Recreation

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Greenville provides recreation services through the separate Recreation and Parks Department. The city has a number of ad hoc or handshake agrements with other organizations but is moving to more formal agreements. Partner groups include Pitt County, local sports organizations, and concert entertainment groups.

The city has twenty-six separate parks and sites. These parks cover 1,309 acres; about two-thirds of them are developed. The city has nearly seven miles of trails.

In addition to the core parks and recreational facilities, Greenville has a large outdoor performance event site, a historic property, a boat ramp, a museum, and an eighteen-hole golf course. The operation of these other facilities is not included in the Core Parks and Recreation comparisons reported here. These facilities are not included here in dollars or staff as part of core parks and recreation facilities and activities.

Conditions Affecting Service, Performance, and Costs

Parks and Recreation is a new service area for the benchmarking project beginning with the FY 2012–13 reporting year.

Municipal Profile

Population (OSBM 2013)	87,241
Land Area (Square Miles)	34.85
Persons per Square Mile	2,503
Topography	Flat
Climate	Temperate; little ice and snow

Service Profile

Parks and Recreation Staff	
Administrative Position FTEs	3.0
Maintenance Staff FTEs	28.3
Program and Facility FTEs	83.5
Other Staff FTEs	1.8
TOTAL	116.6
Number of Parks and Sites	26
Total Land Acreage in Parks	1,309.6
Miles of Trails in Parks	6.5
Recreational Facilities	
Indoor and Outdoor Pools	2
Recreation Centers	7
Outdoor Basketball Courts	1
Outdoor Tennis Courts	14
Playgrounds	17
Diamond Fields	15
Rectangular Fields	5
Other Athletic Fields	2
Picnic Shelters	23
Parks and Recreation Revenues	
User Fees	$1,989,384
Grants	$5,590
Sponsorships	$1,000
Donations	$50

Full Cost Profile

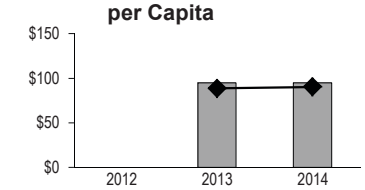
Cost Breakdown by Percentage	
Personal Services	59.3%
Operating Costs	38.5%
Capital Costs	2.2%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$4,911,581
Operating Costs	$3,186,644
Capital Costs	$178,838
TOTAL	$8,277,063

Greenville — Core Parks and Recreation

Key: Greenville ■ Benchmarking Average ◆ Fiscal Years 20012 through 2014

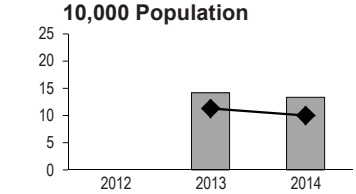
Resource Measures

Core Parks and Recreation Services per Capita



	2012	2013	2014
Greenville		$95	$95
Average		$89	$90

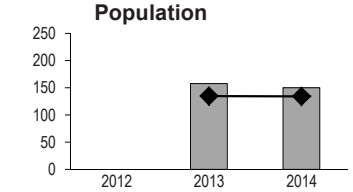
Core Parks and Recreation Staff per 10,000 Population



	2012	2013	2014
Greenville		14.1	13.4
Average		11.3	10.0

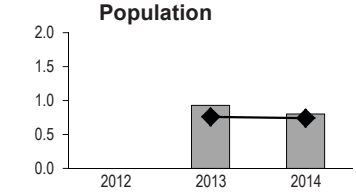
Facilities Measures

Land Acres of Parks per 10,000 Population



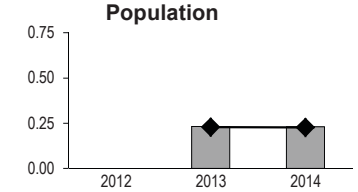
	2012	2013	2014
Greenville		157.99	150.11
Average		134.60	134.32

Recreation Centers per 10,000 Population



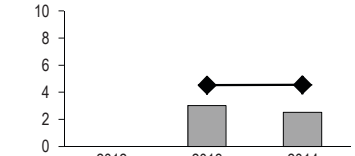
	2012	2013	2014
Greenville		0.93	0.80
Average		0.76	0.74

Swimming Pools per 10,000 Population



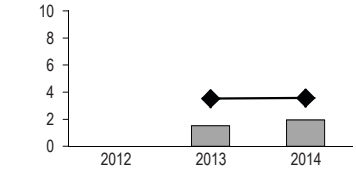
	2012	2013	2014
Greenville		0.23	0.23
Average		0.23	0.23

Athletic Fields per 10,000 Population



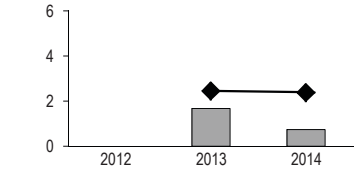
	2012	2013	2014
Greenville		3.02	2.52
Average		4.52	4.55

Playgrounds per 10,000 Population



	2012	2013	2014
Greenville		1.51	1.95
Average		3.53	3.57

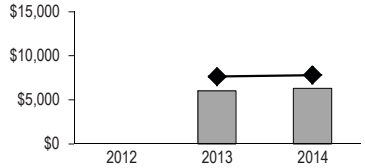
Miles of Land Trails per 10,000 Population



	2012	2013	2014
Greenville		1.68	0.75
Average		2.46	2.40

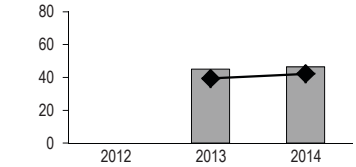
Efficiency Measures

Total Core Parks and Recreation Costs per Acre



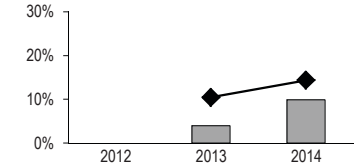
	2012	2013	2014
Greenville		$6,013	$6,320
Average		$7,646	$7,808

Acres of Park Maintained per Maintenance FTE



	2012	2013	2014
Greenville		45.0	46.4
Average		39.4	42.2

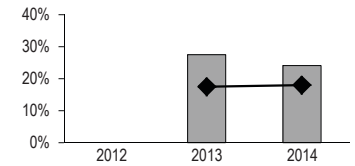
Volunteer Hours in FTEs as a Percent of Paid Staff FTEs



	2012	2013	2014
Greenville		4%	9.9%
Average		10.5%	14.4%

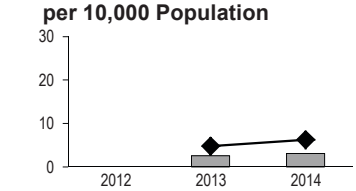
Effectiveness Measures

Revenue Gained as a Percent of Total Core Costs



	2012	2013	2014
Greenville		27.4%	24.1%
Average		17.5%	17.9%

Acts of Vandalism at Parks Facilities per 10,000 Population



	2012	2013	2014
Greenville		2.55	3.09
Average		4.77	6.22

Hickory — Core Parks and Recreation

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Hickory Parks and Recreation Department is a separate department under the city organization. The city has partnerships with other organizations to provide recreational services, including a priority use agreement with local schools for use of facilities over other non-school users and a priority use agreement with Catawba Valley Youth Soccer for use of city soccer fields.

The city has twenty-five separate parks and sites. This includes 504 acres of park acreage; 428 of these acres are developed. The city has 10.6 miles of trails; 4.6 of them are paved.

In addition to the core parks and recreational facilities, Hickory has one historic property, one professional sports facility, one boat ramp, one museum, two community gardens, and a tower ropes course. The operation of these other facilities is not included in the Core Parks and Recreation comparisons reported here. These facilities are not included here in dollars or staff as part of core parks and recreation facilities and activities.

Conditions Affecting Service, Performance, and Costs

Parks and Recreation is a new service area for the benchmarking project beginning with the FY 2012–13 reporting year.

Municipal Profile

Population (OSBM 2013)	40,222
Land Area (Square Miles)	29.83
Persons per Square Mile	1,348
Topography	Gently rolling
Climate	Temperate; some ice and snow

Service Profile

Parks and Recreation Staff	
Administrative Position FTEs	4.0
Maintenance Staff FTEs	27.5
Program and Facility FTEs	23.5
Other Staff FTEs	0.0
TOTAL	55.0
Number of Parks and Sites	25
Total Land Acreage in Parks	504.0
Miles of Trails in Parks	10.6
Recreational Facilities	
Indoor and Outdoor Pools	0
Recreation Centers	6
Outdoor Basketball Courts	13 full, 1 half
Outdoor Tennis Courts	17
Playgrounds	39
Diamond Fields	13
Rectangular Fields	11
Other Athletic Fields	0
Picnic Shelters	18
Parks and Recreation Revenues	
User Fees	$190,177
Grants	$28,000
Sponsorships	$43,827
Donations	$1,915

Full Cost Profile

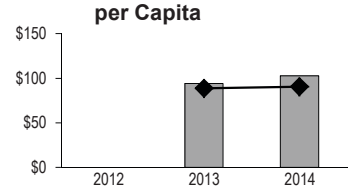
Cost Breakdown by Percentage	
Personal Services	53.8%
Operating Costs	36.7%
Capital Costs	9.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$2,221,518
Operating Costs	$1,514,847
Capital Costs	$390,404
TOTAL	$4,126,769

Hickory Core Parks and Recreation

Key: Hickory ■ Benchmarking Average ◆ Fiscal Years 20012 through 2014

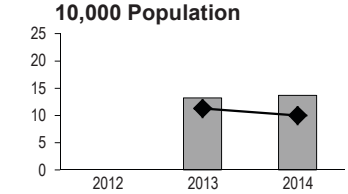
Resource Measures

Core Parks and Recreation Services per Capita



	2012	2013	2014
Hickory		$94	$103
Average		$89	$90

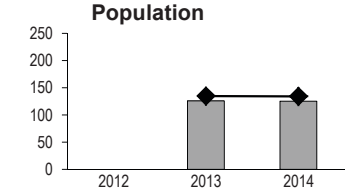
Core Parks and Recreation Staff per 10,000 Population



	2012	2013	2014
Hickory		13.2	13.7
Average		11.3	10.0

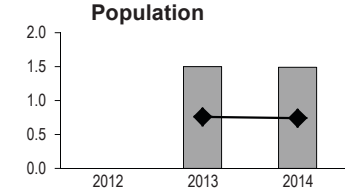
Facilities Measures

Land Acres of Parks per 10,000 Population



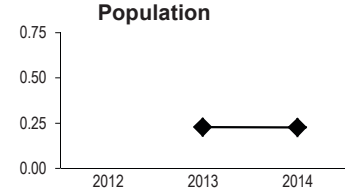
	2012	2013	2014
Hickory		125.88	125.30
Average		134.60	134.32

Recreation Centers per 10,000 Population



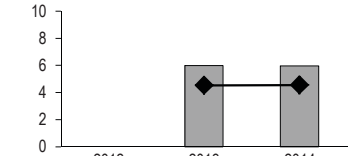
	2012	2013	2014
Hickory		1.50	1.49
Average		0.76	0.74

Swimming Pools per 10,000 Population



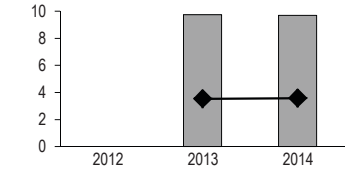
	2012	2013	2014
Hickory		0.00	0.00
Average		0.23	0.23

Athletic Fields per 10,000 Population



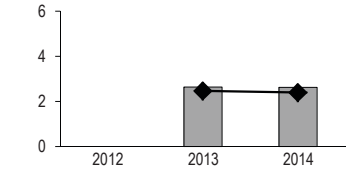
	2012	2013	2014
Hickory		5.99	5.97
Average		4.52	4.55

Playgrounds per 10,000 Population



	2012	2013	2014
Hickory		9.74	9.70
Average		3.53	3.57

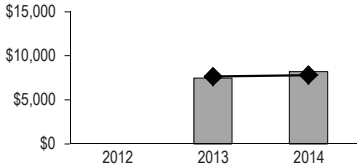
Miles of Land Trails per 10,000 Population



	2012	2013	2014
Hickory		2.64	2.63
Average		2.46	2.40

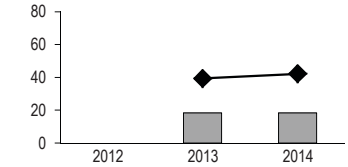
Efficiency Measures

Total Core Parks and Recreation Costs per Acre



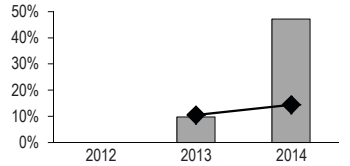
	2012	2013	2014
Hickory		$7,463	$8,188
Average		$7,646	$7,808

Acres of Park Maintained per Maintenance FTE



	2012	2013	2014
Hickory		18.3	18.3
Average		39.4	42.2

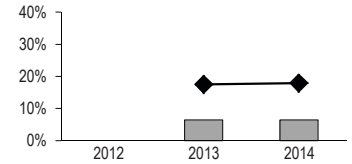
Volunteer Hours in FTEs as a Percent of Paid Staff FTEs



	2012	2013	2014
Hickory		10%	47.2%
Average		10.5%	14.4%

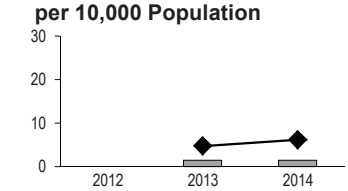
Effectiveness Measures

Revenue Gained as a Percent of Total Core Costs



	2012	2013	2014
Hickory		6.4%	6.4%
Average		17.5%	17.9%

Acts of Vandalism at Parks Facilities per 10,000 Population



	2012	2013	2014
Hickory		1.50	1.49
Average		4.77	6.22

High Point — Core Parks and Recreation

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of High Point's Parks and Recreation Department is a separate department within the city. The city has a full array of recreational facilities and programs available.

The city has fifty separate parks with 1,922 acres; most of this acreage is developed. Additionally, 1,569 acres of water space is part of the parks system. The city has 20.5 miles of trails; just less than half of them are paved. All of these are multi-purpose trails, but equestrian riding is not permitted.

In addition to traditional core recreational facilities, High Point has two public boat ramps as part of the department's operations. These facilities are not included here in dollars or staff as part of core parks and recreation facilities and activities.

Conditions Affecting Service, Performance, and Costs

Parks and Recreation is a new service area for the benchmarking project beginning with the FY 2012–13 reporting year.

Municipal Profile

Population (OSBM 2013)	107,652
Land Area (Square Miles)	54.73
Persons per Square Mile	1,967
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow

Service Profile

Parks and Recreation Staff	
Administrative Position FTEs	10.5
Maintenance Staff FTEs	65.1
Program and Facility FTEs	56.1
Other Staff FTEs	5.0
TOTAL	136.7
Number of Parks and Sites	50
Total Land Acreage in Parks	1,922
Miles of Trails in Parks	20.5
Recreational Facilities	
Indoor and Outdoor Pools	2
Recreation Centers	6
Outdoor Basketball Courts	15
Outdoor Tennis Courts	28
Playgrounds	30
Diamond Fields	22
Rectangular Fields	27
Other Athletic Fields	2
Picnic Shelters	36
Parks and Recreation Revenues	
User Fees	$1,512,600
Grants	$17,426
Sponsorships	$10,850
Donations	$26,604

Full Cost Profile

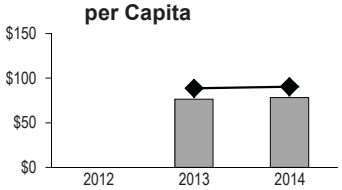
Cost Breakdown by Percentage	
Personal Services	56.9%
Operating Costs	34.6%
Capital Costs	8.5%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$4,787,251
Operating Costs	$2,905,958
Capital Costs	$715,135
TOTAL	$8,408,344

High Point — Core Parks and Recreation

Key: High Point ■ Benchmarking Average ◆ Fiscal Years 20012 through 2014

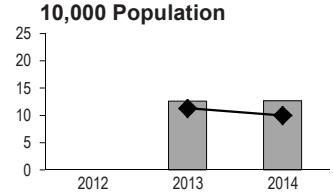
Resource Measures

Core Parks and Recreation Services per Capita



	2012	2013	2014
High Point		$76	$78
Average		$89	$90

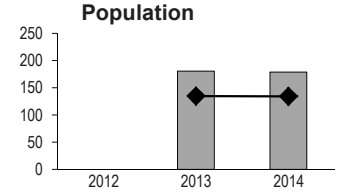
Core Parks and Recreation Staff per 10,000 Population



	2012	2013	2014
High Point		12.6	12.7
Average		11.3	10.0

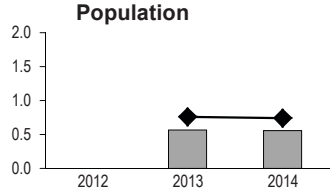
Facilities Measures

Land Acres of Parks per 10,000 Population



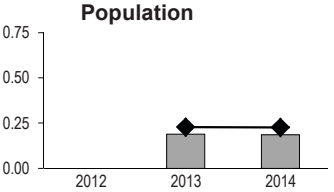
	2012	2013	2014
High Point		180.35	178.54
Average		134.60	134.32

Recreation Centers per 10,000 Population



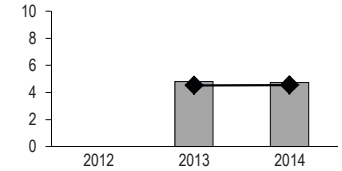
	2012	2013	2014
High Point		0.56	0.56
Average		0.76	0.74

Swimming Pools per 10,000 Population



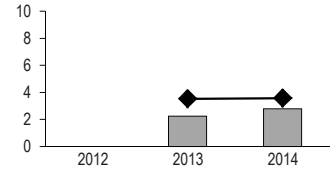
	2012	2013	2014
High Point		0.19	0.19
Average		0.23	0.23

Athletic Fields per 10,000 Population



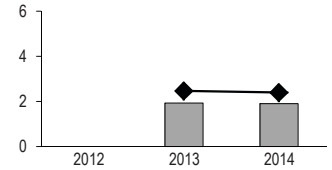
	2012	2013	2014
High Point		4.79	4.74
Average		4.52	4.55

Playgrounds per 10,000 Population



	2012	2013	2014
High Point		2.26	2.79
Average		3.53	3.57

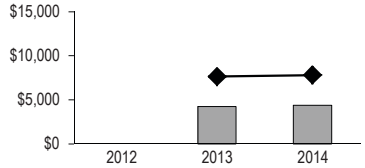
Miles of Land Trails per 10,000 Population



	2012	2013	2014
High Point		1.93	1.90
Average		2.46	2.40

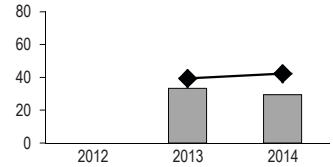
Efficiency Measures

Total Core Parks and Recreation Costs per Acre



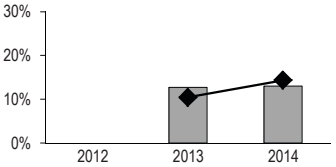
	2012	2013	2014
High Point		$4,235	$4,375
Average		$7,646	$7,808

Acres of Park Maintained per Maintenance FTE



	2012	2013	2014
High Point		33.4	29.5
Average		39.4	42.2

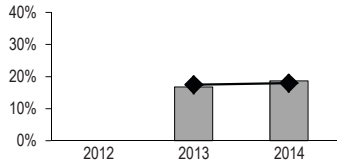
Volunteer Hours in FTEs as a Percent of Paid Staff FTEs



	2012	2013	2014
High Point		13%	13.0%
Average		10.5%	14.4%

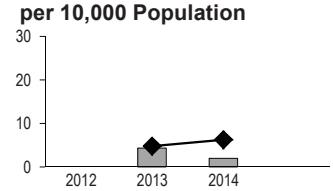
Effectiveness Measures

Revenue Gained as a Percent of Total Core Costs



	2012	2013	2014
High Point		16.8%	18.6%
Average		17.5%	17.9%

Acts of Vandalism at Parks Facilities per 10,000 Population



	2012	2013	2014
High Point		4.32	1.95
Average		4.77	6.22

Salisbury — Core Parks and Recreation

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Salisbury provides parks and recreation services through a separate department. This department includes other functions, such as services related to cemeteries, landscaping, right-of-ways, trees, medians, and mowing.

These other functions are not counted in the employees or dollars shown here. The city has an agreement with Rowan County for providing certain services for special populations. The city also provides funding for senior recreation services at the Rufty Homes Senior Center.

Salisbury has a full array of recreational facilities available. The city has 508 acres of parks; more than half are developed. The city has 16.9 miles of trails.

In addition to traditional recreational facilities, Salisbury has a large outdoor performance event site and six historic sites. These facilities are not included here in dollars or staff as part of core parks and recreation facilities and activities.

Conditions Affecting Service, Performance, and Costs

Parks and Recreation is a new service area for the benchmarking project beginning with the FY 2012–13 reporting year.

Many of Salisbury's neighborhood recreational facilities are forty years or older and somewhat dated. There is a YMCA in the city for paying members. The city programs primarily serve those who cannot afford the YMCA programs.

Municipal Profile

Population (OSBM 2013)	33,726
Land Area (Square Miles)	22.18
Persons per Square Mile	1,521
Topography	Flat; gently rolling
Climate	Temperate; little ice and snow

Service Profile

Parks and Recreation Staff	
Administrative Position FTEs	2.0
Maintenance Staff FTEs	7.5
Program and Facility FTEs	18.0
Other Staff FTEs	0.0
TOTAL	27.5
Number of Parks and Sites	28
Total Land Acreage in Parks	508.0
Miles of Trails in Parks	16.9
Recreational Facilities	
Indoor and Outdoor Pools	1
Recreation Centers	3
Outdoor Basketball Courts	6 full, 6 half
Outdoor Tennis Courts	10
Playgrounds	18
Diamond Fields	8
Rectangular Fields	4
Other Athletic Fields	0
Picnic Shelters	20
Parks and Recreation Revenues	
User Fees	$162,447
Grants	$78,625
Sponsorships	$0
Donations	$6,632

Full Cost Profile

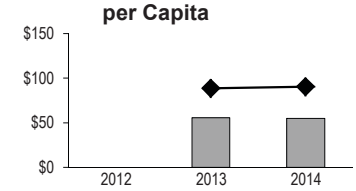
Cost Breakdown by Percentage	
Personal Services	57.9%
Operating Costs	36.8%
Capital Costs	5.2%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$1,072,923
Operating Costs	$682,150
Capital Costs	$96,896
TOTAL	$1,851,969

Salisbury — Core Parks and Recreation

Key: Salisbury ■ Benchmarking Average ◆ Fiscal Years 20012 through 2014

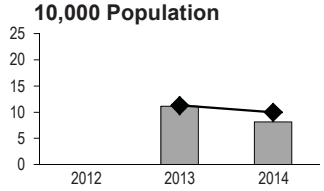
Resource Measures

Core Parks and Recreation Services per Capita



	2012	2013	2014
Salisbury		$56	$55
Average		$89	$90

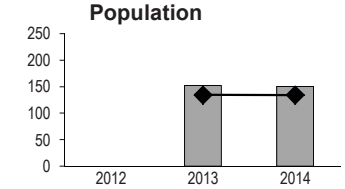
Core Parks and Recreation Staff per 10,000 Population



	2012	2013	2014
Salisbury		11.1	8.2
Average		11.3	10.0

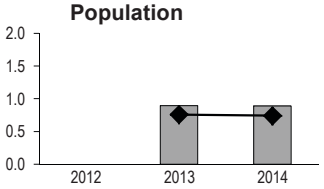
Facilities Measures

Land Acres of Parks per 10,000 Population



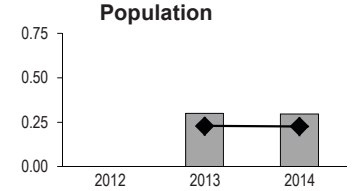
	2012	2013	2014
Salisbury		151.90	150.63
Average		134.60	134.32

Recreation Centers per 10,000 Population



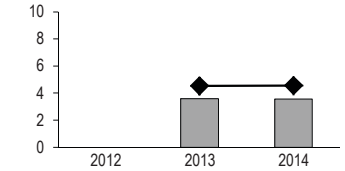
	2012	2013	2014
Salisbury		0.90	0.89
Average		0.76	0.74

Swimming Pools per 10,000 Population



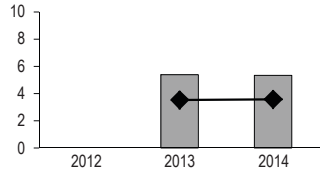
	2012	2013	2014
Salisbury		0.30	0.30
Average		0.23	0.23

Athletic Fields per 10,000 Population



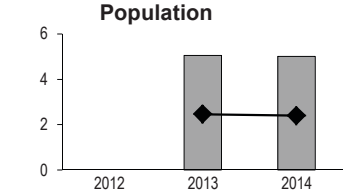
	2012	2013	2014
Salisbury		3.59	3.56
Average		4.52	4.55

Playgrounds per 10,000 Population



	2012	2013	2014
Salisbury		5.38	5.34
Average		3.53	3.57

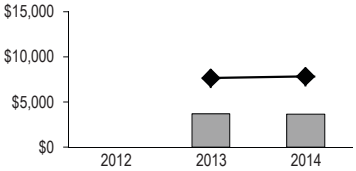
Miles of Land Trails per 10,000 Population



	2012	2013	2014
Salisbury		5.05	5.01
Average		2.46	2.40

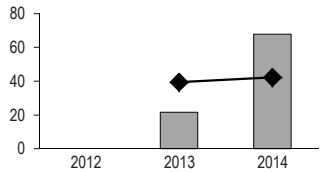
Efficiency Measures

Total Core Parks and Recreation Costs per Acre



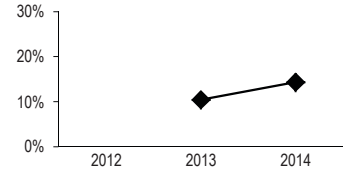
	2012	2013	2014
Salisbury		$3,662	$3,646
Average		$7,646	$7,808

Acres of Park Maintained per Maintenance FTE



	2012	2013	2014
Salisbury		21.6	67.7
Average		39.4	42.2

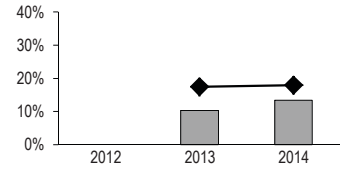
Volunteer Hours in FTEs as a Percent of Paid Staff FTEs



	2012	2013	2014
Salisbury			
Average		10.5%	14.4%

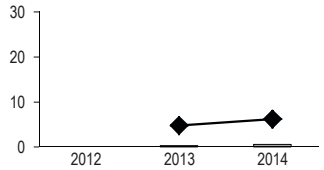
Effectiveness Measures

Revenue Gained as a Percent of Total Core Costs



	2012	2013	2014
Salisbury		10.3%	13.4%
Average		17.5%	17.9%

Acts of Vandalism at Parks Facilities per 10,000 Population



	2012	2013	2014
Salisbury		0.30	0.59
Average		4.77	6.22

Wilson — Core Parks and Recreation

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Wilson Parks and Recreation Department is a separate department under the city organization. The city has partnerships with other organizations to provide recreational services, including the Wilson County Schools, the Wilson Youth Soccer Association, Wilson City Little League, Special Olympics, Youth Soccer Association, the Senior Games of North Carolina, and the Wilson Arts Council.

The city has twenty-eight separate parks and sites. This includes 400 acres of park acreage, most currently undeveloped. The city has fourteen miles of trails.

In addition to the core parks and recreational facilities, Wilson has three boat ramps and one museum. The city also runs a municipal eighteen-hole golf course. The operation of these other facilities is not included in the Core Parks and Recreation comparisons reported here. These facilities are not included here in dollars or staff as part of core parks and recreation facilities and activities.

Conditions Affecting Service, Performance, and Costs

Parks and Recreation is a new service area for the benchmarking project beginning with the FY 2012–13 reporting year.

Municipal Profile

Population (OSBM 2013)	49,097
Land Area (Square Miles)	30.48
Persons per Square Mile	1,611
Topography	Flat
Climate	Temperate; little ice and snow

Service Profile

Parks and Recreation Staff	
Administrative Position FTEs	4.0
Maintenance Staff FTEs	14.0
Program and Facility FTEs	46.5
Other Staff FTEs	4.0
TOTAL	68.5
Number of Parks and Sites	28
Total Land Acreage in Parks	400.0
Miles of Trails in Parks	14.5
Recreational Facilities	
Indoor and Outdoor Pools	2
Recreation Centers	4
Outdoor Basketball Courts	7
Outdoor Tennis Courts	16
Playgrounds	25
Diamond Fields	11
Rectangular Fields	14
Other Athletic Fields	1
Picnic Shelters	15
Parks and Recreation Revenues	
User Fees	$436,031
Grants	$0
Sponsorships	$75,000
Donations	$0

Full Cost Profile

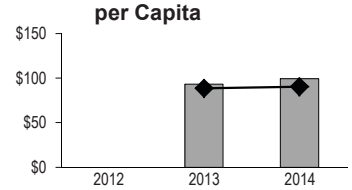
Cost Breakdown by Percentage	
Personal Services	55.6%
Operating Costs	36.4%
Capital Costs	8.0%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$2,711,045
Operating Costs	$1,773,721
Capital Costs	$388,751
TOTAL	$4,873,517

Wilson — Core Parks and Recreation

Key: Wilson ■ Benchmarking Average ◆ Fiscal Years 20012 through 2014

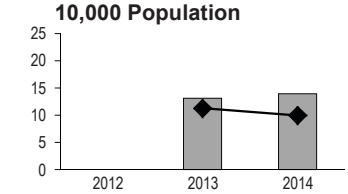
Resource Measures

Core Parks and Recreation Services per Capita



	2012	2013	2014
Wilson		$93	$99
Average		$89	$90

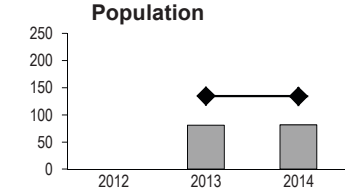
Core Parks and Recreation Staff per 10,000 Population



	2012	2013	2014
Wilson		13.1	14.0
Average		11.3	10.0

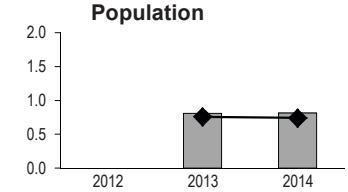
Facilities Measures

Land Acres of Parks per 10,000 Population



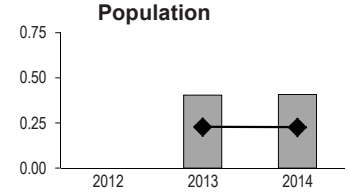
	2012	2013	2014
Wilson		80.91	81.47
Average		134.60	134.32

Recreation Centers per 10,000 Population



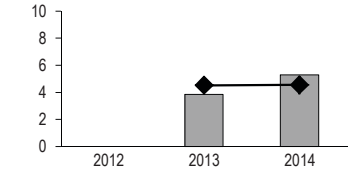
	2012	2013	2014
Wilson		0.81	0.81
Average		0.76	0.74

Swimming Pools per 10,000 Population



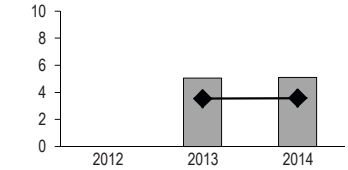
	2012	2013	2014
Wilson		0.40	0.41
Average		0.23	0.23

Athletic Fields per 10,000 Population



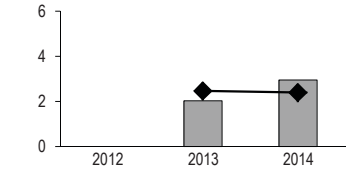
	2012	2013	2014
Wilson		3.84	5.30
Average		4.52	4.55

Playgrounds per 10,000 Population



	2012	2013	2014
Wilson		5.06	5.09
Average		3.53	3.57

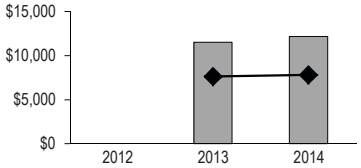
Miles of Land Trails per 10,000 Population



	2012	2013	2014
Wilson		2.02	2.95
Average		2.46	2.40

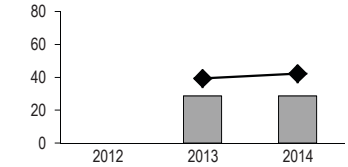
Efficiency Measures

Total Core Parks and Recreation Costs per Acre



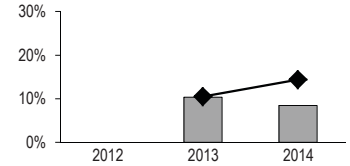
	2012	2013	2014
Wilson		$11,508	$12,184
Average		$7,646	$7,808

Acres of Park Maintained per Maintenance FTE



	2012	2013	2014
Wilson		28.6	28.6
Average		39.4	42.2

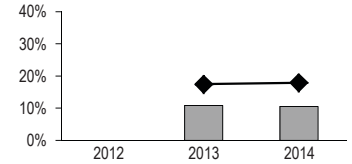
Volunteer Hours in FTEs as a Percent of Paid Staff FTEs



	2012	2013	2014
Wilson		10%	8.4%
Average		10.5%	14.4%

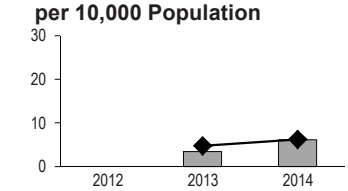
Effectiveness Measures

Revenue Gained as a Percent of Total Core Costs



	2012	2013	2014
Wilson		10.8%	10.5%
Average		17.5%	17.9%

Acts of Vandalism at Parks Facilities per 10,000 Population



	2012	2013	2014
Wilson		3.44	6.11
Average		4.77	6.22

Fiscal Year 2013–14

Explanatory Information

Service Level and Delivery

The City of Winston-Salem Recreation and Parks Department is a separate department under the city organization. The department is overseen by the advisory Parks and Recreation Commission, which has eleven members appointed by the mayor and approved by the city council. The city has formal cooperative arrangements with Foryth County and various public-private partnerships with other organizations to provide recreational services.

The city has seventy-nine separate parks and sites. This includes 3,479 acres of park land, most of which is developed The city has twenty-three miles of trails, about two-thirds of which are paved.

In addition to the core parks and recreational facilities, Winston-Salem has two large outdoor performance event sites, a historic property, one boat ramp, and one museum. The city also runs two municipal eighteen-hole golf courses. The operation of these other facilities is not included in the Core Parks and Recreation comparisons reported here. These facilities are not included here in dollars or staff as part of core parks and recreation facilities and activities.

Conditions Affecting Service, Performance, and Costs

Parks and Recreation is a new service area for the benchmarking project beginning with the FY 2012–13 reporting year.

Many Forsyth County residents make use of of the city's parks and recreational facilities. Most of the city's facilities were built in the 1960s to 1980s and are aging.

Municipal Profile

Population (OSBM 2013)	235,527
Land Area (Square Miles)	132.45
Persons per Square Mile	1,778
Topography	Gently rolling
Climate	Temperate; some ice and snow

Service Profile

Parks and Recreation Staff	
Administrative Position FTEs	27.1
Maintenance Staff FTEs	82.8
Program and Facility FTEs	100.6
Other Staff FTEs	2.0
TOTAL	212.5
Number of Parks and Sites	79
Total Land Acreage in Parks	3,478.7
Miles of Trails in Parks	23.2
Recreational Facilities	
Indoor and Outdoor Pools	8
Recreation Centers	17
Outdoor Basketball Courts	15 full, 1 half
Outdoor Tennis Courts	112
Playgrounds	47
Diamond Fields	47
Rectangular Fields	50
Other Athletic Fields	0
Picnic Shelters	51
Parks and Recreation Revenues	
User Fees	$861,552
Grants	$720
Sponsorships	$31,350
Donations	$73,745

Full Cost Profile

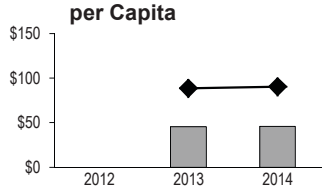
Cost Breakdown by Percentage	
Personal Services	54.3%
Operating Costs	32.9%
Capital Costs	12.7%
TOTAL	100.0%
Cost Breakdown in Dollars	
Personal Services	$5,847,076
Operating Costs	$3,546,577
Capital Costs	$1,371,704
TOTAL	$10,765,357

Winston-Salem Core Parks and Recreation

Key: Winston-Salem ■ Benchmarking Average ◆ Fiscal Years 20012 through 2014

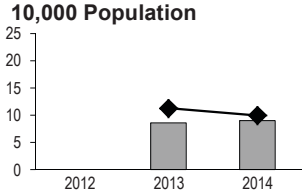
Resource Measures

Core Parks and Recreation Services per Capita



	2012	2013	2014
Winston-Salem		$46	$46
Average		$89	$90

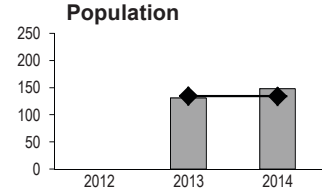
Core Parks and Recreation Staff per 10,000 Population



	2012	2013	2014
Winston-Salem		8.6	9.0
Average		11.3	10.0

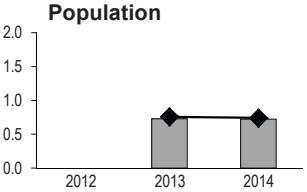
Facilities Measures

Land Acres of Parks per 10,000 Population



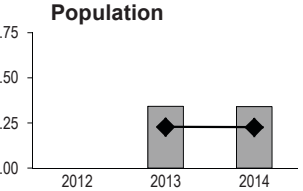
	2012	2013	2014
Winston-Salem		131.07	147.71
Average		134.60	134.32

Recreation Centers per 10,000 Population



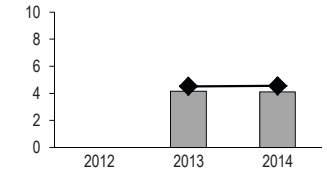
	2012	2013	2014
Winston-Salem		0.73	0.72
Average		0.76	0.74

Swimming Pools per 10,000 Population



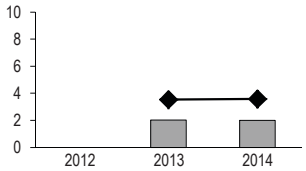
	2012	2013	2014
Winston-Salem		0.34	0.34
Average		0.23	0.23

Athletic Fields per 10,000 Population



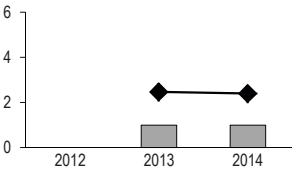
	2012	2013	2014
Winston-Salem		4.16	4.12
Average		4.52	4.55

Playgrounds per 10,000 Population



	2012	2013	2014
Winston-Salem		2.02	2.00
Average		3.53	3.57

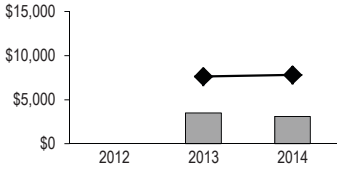
Miles of Land Trails per 10,000 Population



	2012	2013	2014
Winston-Salem		1.00	0.99
Average		2.46	2.40

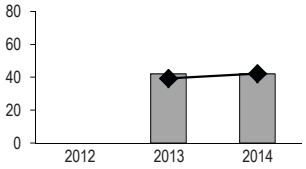
Efficiency Measures

Total Core Parks and Recreation Costs per Acre



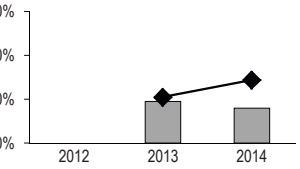
	2012	2013	2014
Winston-Salem		$3,478	$3,094
Average		$7,646	$7,808

Acres of Park Maintained per Maintenance FTE



	2012	2013	2014
Winston-Salem		42.0	42.0
Average		39.4	42.2

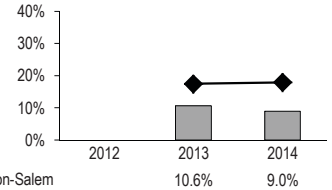
Volunteer Hours in FTEs as a Percent of Paid Staff FTEs



	2012	2013	2014
Winston-Salem		9%	7.9%
Average		10.5%	14.4%

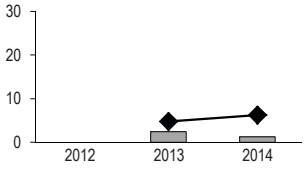
Effectiveness Measures

Revenue Gained as a Percent of Total Core Costs



	2012	2013	2014
Winston-Salem		10.6%	9.0%
Average		17.5%	17.9%

Acts of Vandalism at Parks Facilities per 10,000 Population



	2012	2013	2014
Winston-Salem		2.44	1.23
Average		4.77	6.22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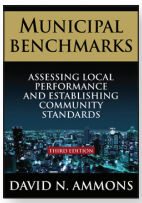
Related Publications . . .

For more information on the North Carolina Local Government Benchmarking Project, please see www.sog.unc.edu/node/173.

County and Municipal Government in North Carolina
Second Edition, 2014, published by the School of Government
Chapter 16: Performance Measurement: A Tool for Accountability and Performance Improvement
David N. Ammons



Municipal Benchmarks: Assessing Local Performance and Establishing Community Standards
Third Edition, 2012, published by M.E. Sharpe, Inc.
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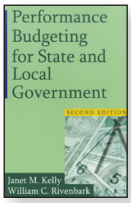
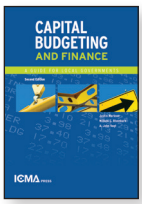


Performance Budgeting for State and Local Government
Second Edition, 2010, published by M.E. Sharpe, Inc.
Janet M. Kelly and William C. Rivenbark



Capital Budgeting and Finance: A Guide for Local Governments
Second Edition, 2009, a joint venture of the School of Government and International City/County Management Association (ICMA)
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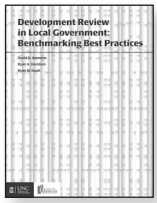
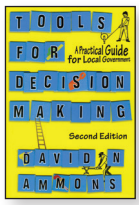
Edited by David N. Ammons



Development Review in Local Government: Benchmarking Best Practices
2008, published as a joint venture of the School of Government and the Alliance for Innovation
David N. Ammons, Ryan A. Davidson, and Ryan M. Ewalt



Tools for Decision Making: A Practical Guide for Local Government
Second Edition, 2008, published by Congressional Quarterly Press
David N. Ammons

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