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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 ended June 30, 2009, for the seventeen North Carolina municipalities participating in the benchmarking project—Asheville, Burlington, Carrboro, Cary, Charlotte, Concord, Durham, Gastonia, Greensboro, Greenville, Hickory, High Point, Raleigh, Salisbury, Wilmington, Wilson, and Winston-Salem. Thirteen previous reports have been published regarding municipal services and are available through the Publications Sales Office of the School of Government.

The benchmarking project is a collaborative effort. Officials from the participating local governments have made vital contributions to the success of the benchmarking 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: Ann G. Jones (chair), budget and evaluation director of Winston-Salem; Tony McDowell, budget manager of Asheville; Aaron Noble, Human Resources Director of Burlington; Sandy Svoboda, purchasing officer/budget analyst of Carrboro; Scott Fogleman, budget director, Kathy Lieras, budget analyst, and Josh Edwards, budget analyst, of Cary; Bill Parks, budget and evaluation analyst, and Toni Gortney, budget and evaluation analyst, of Charlotte; Robin Barham, budget and performance manager, and Lesley Reder, management analyst, of Concord; John Allore and Jay Reinstein of Durham; Crystal Falls, senior budget analyst of Gastonia; Mary Vigue, budget analyst of Greensboro; Katie Lumb, financial analyst of Greenville; Karen Hurley, budget analyst of Hickory; Louanne C. Hedrick, budget manager of High Point; David Scarborough, staff analyst of Raleigh; Evans C. Ballard, budget and benchmarking analyst of Salisbury; Kathy Mann, senior budget analyst of Wilmington; Bernard McLean, senior financial analyst of Wilson; and Ben Rowe, deputy budget and evaluation director 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 Nancy Dooly and Dan Soileau in the Publications Division and Ann Roper who worked on this report as a research assistant.

Dale J. Roenigk  
February 2010

## 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 of 1997, consisting of fourteen municipalities and counties from medium to smaller 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 seventeen municipalities that are included in this report:

- Asheville
- Burlington
- Carrboro
- Cary
- Charlotte
- Concord
- Durham
- Gastonia
- Greensboro
- Greenville
- Hickory
- High Point
- Raleigh
- Salisbury
- Wilmington
- 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

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
- Human resources
- Water services

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 fourteenth publication representing municipal services. The previous twelve 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).

## 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. **Resource Measures.** These measures gauge the amount of resources or inputs municipalities allocate for the provision of a given service.
2. **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.
3. **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 in only selected profiles.
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. **Service Profile.** This area provides input and output data and identifies important dimensions of service delivery.
6. **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.

## 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 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 quality services at reasonable cost.

**READING THE REPORT**

This report presents the performance and cost data for the seventeen North Carolina municipalities participating in the benchmarking project for the fiscal year ended June 30, 2008. 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 and the corresponding municipalities by fiscal year of participation.

<b>Final Report</b>	<b>Jurisdictions</b>
<i>Final Report on City Services for Fiscal Year 2004–2005</i>	Asheville, Carrboro, Cary, Charlotte, Concord, Durham, Gastonia, Greensboro, Hickory, High Point, Matthews, Raleigh, Salisbury, Wilmington, Wilson, and Winston-Salem
<i>Final Report on City Services for Fiscal Year 2005–2006</i>	Asheville, Carrboro, Cary, Charlotte, Concord, Durham, Gastonia, Greensboro, Hickory, High Point, Matthews, Raleigh, Salisbury, Wilmington, Wilson, and Winston-Salem
<i>Final Report on City Services for Fiscal Year 2006–2007</i>	Asheville, Burlington, Carrboro, Cary, Charlotte, Concord, Durham, Gastonia, Greensboro, Hickory, High Point, Matthews, Raleigh, Salisbury, Wilmington, Wilson, and Winston-Salem
<i>Final Report on City Services for Fiscal Year 2007–2008</i>	Asheville, Burlington, Carrboro, Cary, Charlotte, Concord, Durham, Gastonia, Greensboro, Hickory, High Point, Matthews, Raleigh, Salisbury, Wilmington, Wilson, and Winston-Salem
<i>Final Report on City Services for Fiscal Year 2008–2009</i>	Asheville, Burlington, Carrboro, Cary, Charlotte, Concord, Durham, Gastonia, Greensboro, Greenville, Hickory, High Point, Raleigh, Salisbury, Wilmington, 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 ended June 30, 2009. 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 ended June 30, 2005, through June 30, 2008, 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 ended June 30, 2000. This service was previously reported as Street Pavement Maintenance. Police Services represented a new service area for the fiscal year ended June 30, 200. This service was presented as Police Patrol and Police Investigations in prior reports. Fleet Maintenance represented a new service area for the fiscal year ended June 30, 2002. Human Resources represented a new service area for the fiscal year ended June 30, 2004. Finally, Water Services represented a new service area added in the fiscal year ended June 30, 2007.

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	Asheville, Burlington, Carrboro, Cary, Charlotte, Concord, Durham, Gastonia, Greensboro, Greenville, Hickory, High Point, Raleigh, Salisbury, Wilmington, Wilson, and Winston-Salem
Household Recycling	Asheville, Burlington, Cary, Charlotte, Concord, Durham, Gastonia, Greensboro, Greenville, Hickory, High Point, Raleigh, Salisbury, Wilmington, Wilson, and Winston-Salem
Yard Waste/Leaf Collection	Asheville, Burlington, Carrboro, Cary, Charlotte, Concord, Durham, Gastonia, Greensboro, Greenville, Hickory, High Point, Raleigh, Salisbury, Wilmington, Wilson, and Winston-Salem
Police Services	Asheville, Burlington, Carrboro, Cary, Concord, Durham, Gastonia, Greensboro, Greenville, Hickory, High Point, Raleigh, Salisbury, Wilmington, Wilson, and Winston-Salem
Emergency Communications	Asheville, Burlington, Cary, Concord, Durham, Greensboro, Greenville, Hickory, High Point, Raleigh, Salisbury, and Winston-Salem
Asphalt Maintenance and Repair	Asheville, Burlington, Carrboro, Cary, Charlotte, Concord, Durham, Gastonia, Greensboro, Greenville, Hickory, High Point, Salisbury, Wilmington, Wilson, and Winston-Salem

Service Area	Jurisdictions
Fire Services	Asheville, Burlington, Carrboro, Cary, Charlotte, Concord, Durham, Gastonia, Greensboro, Greenville, Hickory, High Point, Raleigh, Salisbury, Wilmington, Wilson, and Winston-Salem
Building Inspections	Asheville, Burlington, Carrboro, Cary, Durham, Gastonia, Greensboro, Greenville, High Point, Raleigh, Wilson, and Winston-Salem
Fleet Maintenance	Asheville, Burlington, Carrboro, Cary, Charlotte, Concord, Durham, Gastonia, Greensboro, Greenville, Hickory, High Point, Raleigh, Salisbury, Wilmington, Wilson, and Winston-Salem
Human Resources	Asheville, Burlington, Carrboro, Cary, Charlotte, Concord, Durham, Gastonia, Greensboro, Greenville, Hickory, High Point, Raleigh, Salisbury, Wilmington, Wilson, and Winston-Salem
Water Services	Asheville, Burlington, Charlotte, Concord, Durham, Gastonia, Greensboro, Hickory, High Point, Raleigh, 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 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 per Residential Collection Point**

These are the project's principal measures of efficiency for this service. Because of differences in numbers 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 for fiscal year 2008-09. 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 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	Collection Location	Collection Points	Tons Collected	Weekly Routes	Percentage Contracted Service	Crew Size (most commonly used)	FTE Collection Positions	Main Equipment		Landfill/Transfer	
								Packers	Automated	Trips per Day	Distance
Asheville	Curbside	28,841	24,271	38	0%	1 & 3 person	15.5	2	7	2	6 Miles
Burlington	Curbside	16,164	13,193	27	0%	1 & 2 person	8.5	1	5	2	17 Miles
Carrboro	Curbside	2,901	2,662	5	0%	1 person	1.64	0	1	2	5 Miles
Gary	Curbside	39,583	31,801	48	0%	1 & 4 person	26	3	10	1.5	12 Miles
Charlotte	Curbside	206,453	189,783	300	22%	1 & 2 person	61	8	41	1.4	14 Miles
Concord	Curbside	27,000	24,529	45	100%	2 person	1.6	8	3	2	8 Miles
Durham	Curbside	67,400	49,309	88	0%	1 & 3 person	57	10	14	2	11 Miles
Gastonia	Curbside	26,061	15,543	28	0%	1 person	8.05	1	5	2	13 Miles
Greensboro	Curbside	74,783	56,917	86	0%	1 & 2 person	26.17	3	18	1.75	8 Miles
Greenville	Curbside and Backyard	37,013	28,458	40	0%	3 person	67.5	8	0	2	6 Miles
Hickory	Curbside	11,600	9,661	15	0%	1 person	4.25	1	4	2	5 Miles
High Point	Curbside	35,332	32,038	40	0%	3 person	35	2	8	2	8 Miles
Raleigh	Curbside	111,402	87,054	136	0%	1 & 3 person	69	10	25	2	8 Miles
Salisbury	Curbside	11,262	9,380	31	0%	1 & 2 person	9.5	6	0	1	19 Miles
Wilmington	Curbside	28,366	25,855	44	0%	2 & 3 person	38	15	0	2	10 Miles
Wilson	Curbside	17,900	19,500	17	0%	1 & 3 person	11	2	5	2	10 Miles
Winston-Salem	Curbside and Backyard	73,500	50,934	128	0%	3 person	96	29	13	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 to affect 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)

# High Point

# Residential Refuse Collection

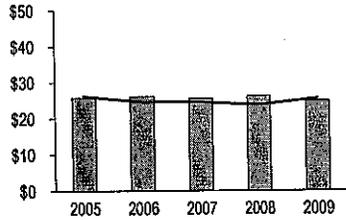
Key: High Point ■

Benchmarking Average —

Fiscal Years 2005 through 2009

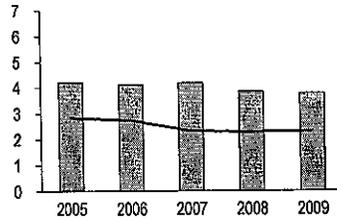
## RESOURCE Measures

**Residential Refuse Collection Costs per Capita**



High Point \$25.78 \$26.12 \$25.57 \$26.24 \$24.87  
Average \$26.26 \$24.68 \$24.65 \$23.83 \$25.55

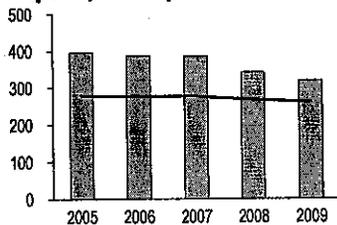
**Residential Refuse Collection FTEs per 10,000 Population**



High Point 4.21 4.11 4.18 3.85 3.78  
Average 2.85 2.74 2.34 2.30 2.31

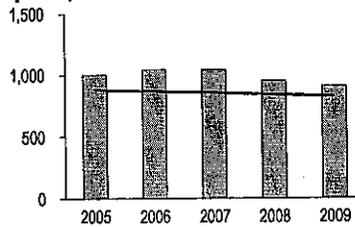
## WORKLOAD Measures

**Residential Refuse Tons per 1,000 Population**



High Point 397 386 385 341 318  
Average 280 278 276 268 261

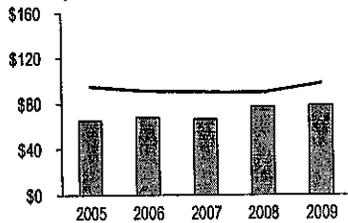
**Residential Refuse Tons per 1,000 Collection Points**



High Point 1000 1044 1042 952 907  
Average 885 872 860 843 830

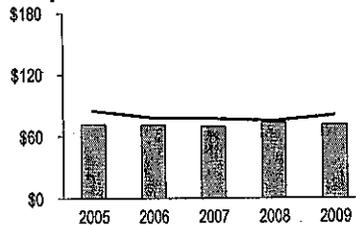
## EFFICIENCY Measures

**Residential Refuse Collection Cost per Ton Collected**



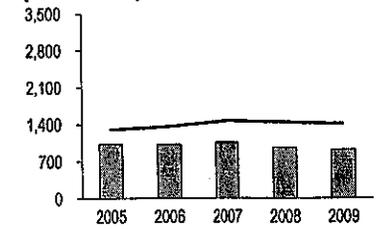
High Point \$65 \$68 \$66 \$77 \$78  
Average \$95 \$91 \$90 \$90 \$98

**Residential Refuse Collection Cost per Collection Point**



High Point \$72 \$71 \$69 \$73 \$71  
Average \$85 \$78 \$77 \$75 \$80

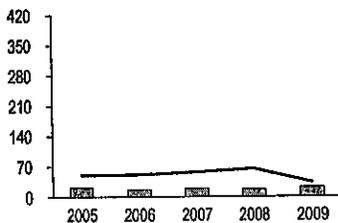
**Refuse Tons Collected per Municipal Collection FTE**



High Point 1,024 1,019 1,052 961 915  
Average 1,304 1,365 1,467 1,439 1,412

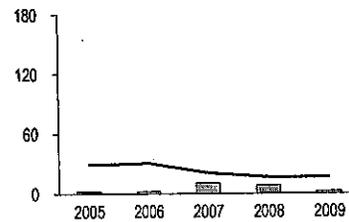
## EFFECTIVENESS Measures

**Complaints per 1,000 Collection Points**



High Point 21.4 16.6 19.4 17.5 22.3  
Average 51.2 52.4 58.6 65.9 33.9

**Valid Complaints per 1,000 Collection Points**



High Point 2.2 2.3 10.8 8.3 2.1  
Average 29.5 30.8 21.2 16.8 16.6

# Residential Refuse Collection

# High Point

Fiscal Year 2008–09

<b>MUNICIPAL PROFILE</b>	
Population (OSBM 2008)	100,648
Land Area (Square Miles)	54.00
Persons per Square Mile	1,864
Topography	Flat; gently rolling
County	Guilford
Climate	Temperate; some snow and ice
Median Family Income (US Census 2000)	\$48,057

<b>FULL COST PROFILE</b>	
Cost Breakdown by Percentage	
Personal Services	62.7%
Operating Costs	27.7%
Capital Costs	9.6%
<b>TOTAL</b>	<b>100.0%</b>
Cost Breakdown in Dollars	
Personal Services	\$ 1,569,109
Operating Costs	\$ 693,684
Capital Costs	\$ 239,899
<b>TOTAL</b>	<b>\$ 2,502,692</b>

<b>SERVICE PROFILE</b>	
FTE Positions—Collection	35.0
FTE Positions—Other	3.0
Tons Collected	32,038
Residential Customers (number represents collection points)	35,332
Collection Location (backyard for disabled)	Curbside
Collection Frequency	1 x week
Size of Crews (most commonly used)	3 person
Percentage of Service Contracted	0%
Service Fee	No
Type of Equipment	2 automated packers 8 packers

## 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.

The city uses eight crews with one driver and two collectors and two crews with just a driver. 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 32,038 tons of residential refuse during FY 2008–09 at a cost of \$78 per ton. The cost per ton does not include the disposal cost of \$22, representing the landfill tipping fee. The city does not use a transfer station.

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.

High Point defines rear loaders as trucks with large hoppers and bulky item capacity, with refuse loaded from the rear. Automated packers are trucks that contain a device that sweeps the refuse into the trucks and are essentially independent of external influence or control. Packers are manual trucks.

### Conditions Affecting Service, Performance, and Costs

"Tons collected per collection FTE" includes only the tons collected by city crews.

## 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 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	FTE Collection Positions
	City Owned	Other								
Asheville	1	2	1 x 2 weeks	Yes	27,140	23%	7,337	23%	98%	0
Burlington	0	3	1 x 2 weeks	Yes	16,164	18%	2,836	18%	99%	0
Cary	1	0	1 x week	Yes	40,604	23%	9,322	23%	0%	17
Charlotte	0	11	1 x week	Yes	202,838	14%	30,417	14%	14%	38
Concord	0	1	1 x week	No	27,000	11%	3,045	11%	100%	0.5
Durham	1	6	1 x week	Yes	67,400	20%	12,297	20%	100%	0
Gastonia	0	1	1 x week	Yes	4,117	6%	912	6%	98%	0
Greensboro	17	0	1 x 2 weeks	No	74,783	24%	17,832	24%	0%	15
Greenville	1	85	1 x week	No	17,074	7%	2,175	7%	0%	15
Hickory	2	0	1 x week	Yes	11,600	17%	1,997	17%	75%	0.6
High Point	13	0	1 x week	Yes	35,332	15%	5,541	15%	0%	10.25
Raleigh	3	4	1 x week	Yes	111,402	20%	21,684	20%	0%	76
Salisbury	0	0	1 x week	Yes	11,967	13%	1,356	13%	100%	0
Wilmington	0	0	1 x week	No	14,548	16%	4,785	16%	0%	10.25
Wilson	0	0	1 x week	No	19,800	6%	1,311	6%	0%	6
Winston-Salem	9	2	1 x week	Yes	73,500	18%	11,370	18%	100%	0

### 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 to affect 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

# High Point

# Household Recycling

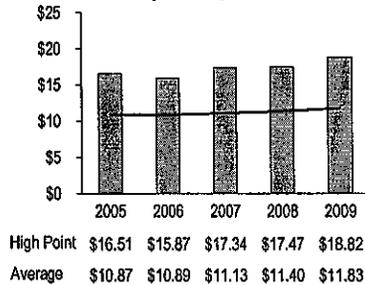
Key: High Point 

Benchmarking Average 

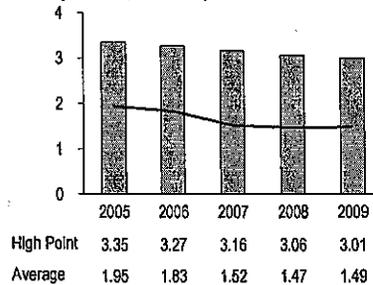
Fiscal Years 2005 through 2009

## RESOURCE Measures

**Recycling Services Cost per Capita**

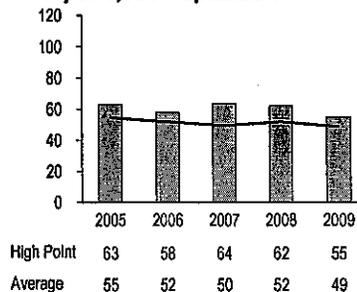


**Recycling Services FTEs per 10,000 Population**

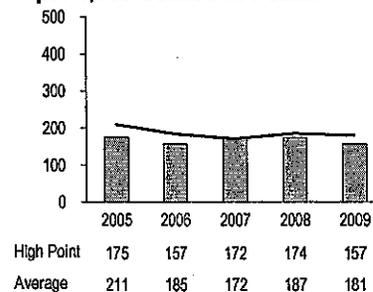


## WORKLOAD Measures

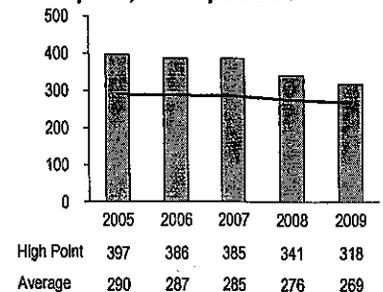
**Tons Recyclables Collected per 1,000 Population**



**Tons Recyclables Collected per 1,000 Collection Points**

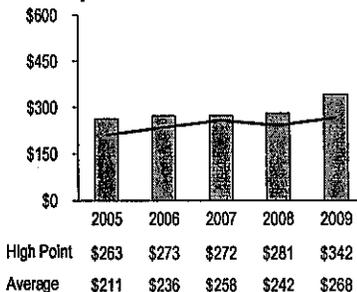


**Tons Solid Waste Landfilled per 1,000 Population**

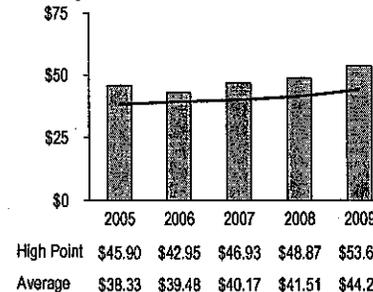


## EFFICIENCY Measures

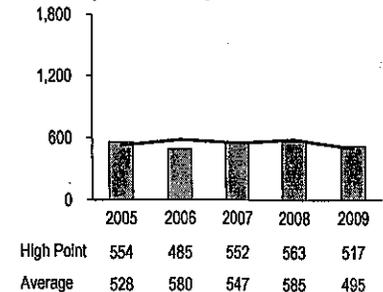
**Recycling Services Cost per Ton Collected**



**Recycling Services Cost per Collection Point**

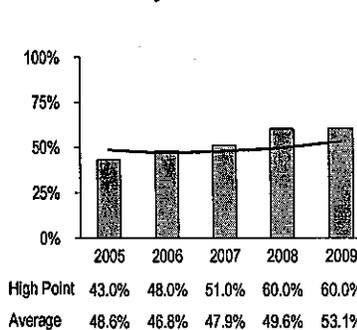


**Tons Collected Curbside per Municipal FTE**

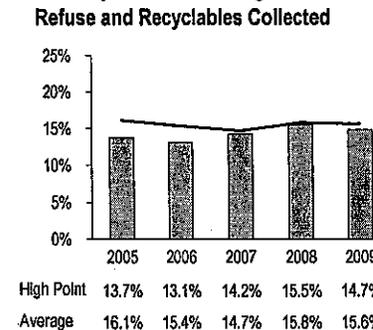


## EFFECTIVENESS Measures

**Community Set-Out Rate**



**Tons Recycled as Percentage of Tons Refuse and Recyclables Collected**



# High Point

## Household Recycling

Fiscal Year 2008–09

### MUNICIPAL PROFILE

Population (OSBM 2008)	100,648
Land Area (Square Miles)	54.00
Persons per Square Mile	1,864
Topography	Flat; gently rolling
County	Guilford
Climate	Temperate; some snow and ice
Median Family Income (US Census 2000)	\$48,057

### FULL COST PROFILE

Cost Breakdown by Percentage	
Personal Services	24.0%
Operating Costs	72.6%
Capital Costs	3.4%
<b>TOTAL</b>	<b>100.0%</b>

Cost Breakdown in Dollars	
Personal Services	\$ 454,603
Operating Costs	\$ 1,375,717
Capital Costs	\$ 64,242
<b>TOTAL</b>	<b>\$ 1,894,562</b>

### SERVICE PROFILE

FTE Positions—Collection	10.25
FTE Positions—Other	20.00
Tons Collected	5,541
Collection Points	35,332
Collection Location	Curbside
Collection Frequency	1 x week
Number of City Drop-off Centers	13
Percentage of Service Contracted	0%
Revenue from Recycling	\$523,603
Revenue as Percentage of Cost	27.6%

### EXPLANATORY INFORMATION

#### Service Level and Delivery

The city offers curbside collection once per week. Eighteen-gallon containers are provided, and optional thirty-six-gallon containers may be purchased by customers. The recycling program is a city function.

Recyclables are collected using four recycling crews that work in the Environmental Services Division. Each crew consists of one driver and one laborer. There also are thirteen drop-off sites throughout the city for newspaper collection. The following materials are collected:

- 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. This report includes the cost and FTE positions for the MRF. Drop-off sites include the MRF and twelve recycling dumpsters.

#### Conditions Affecting Service, Performance, and Costs

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

## 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 do separate the two 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 for FY 2008–09. 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 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 Collection Positions
	Location	Frequency			Yard Waste	Loose Leaves	
Asheville	Curbside	2 x month	2 sweeps	28,841	5,924	2,925	19.3
Burlington	Curbside	1 x week	4 sweeps	16,164	3,335	2,909	12.7
Carrboro	Curbside	2 x month	2 x month	2,920	778	449	3
Cary	Curbside	1 x week	3 sweeps	39,583	12,821	4,762	25.4
Charlotte	Curbside	1 x week	NA	202,838	47,320	na	56
Concord	Curbside	1 x week	3 sweeps	27,000	7,553	1,908	18.34
Durham	Curbside	1 x week	NA	17,028	10,177	na	16
Gastonia	Curbside	1 x week	1 x week	26,061	5,644	1,748	11.6
Greensboro	Curbside	1 x week	2 sweeps	74,783	14,715	11,071	37.62
Greenville	Curbside	1 x week	1 x week	20,000	NA	NA	3.75
Hickory	Curbside	1 x week	2 sweeps	11,600	3,864	2,411	8.375
High Point	Curbside	1 x week	2 sweeps	35,332	7,137	2,348	16.5
Raleigh	Curbside	1 x week	2 sweeps	111,402	19,691	11,007	55.5
Salisbury	Curbside	1 x week	1 x 3 weeks	12,000	17,241	2,192	11
Wilmington	Curbside	1 x week	NA	27,566	10,008	na	19
Wilson	Curbside	1 x week	1 x 3 weeks	19,800	4,820	1,979	15
Winston-Salem	Curbside	yard waste cart 1 x week brush every 10 days	2 to 3 sweeps	14,923 for yard waste 73,500 for brush and leaves	6,494	15,983	71.65

### 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 to affect 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

# High Point

# Yard Waste/Leaf Collection

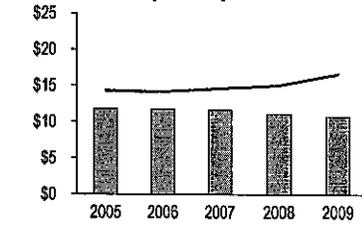
Key: High Point ■

Benchmarking Average —

Fiscal Years 2005 through 2009

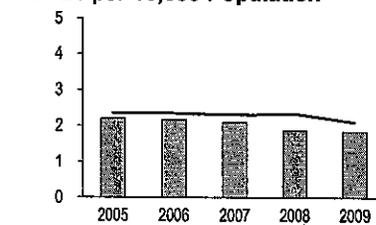
## RESOURCE Measures

**Yard Waste and Leaf Collection Costs per Capita**



Year	High Point	Average
2005	\$11.79	\$14.34
2006	\$11.74	\$14.23
2007	\$11.69	\$14.65
2008	\$11.07	\$15.10
2009	\$10.76	\$16.66

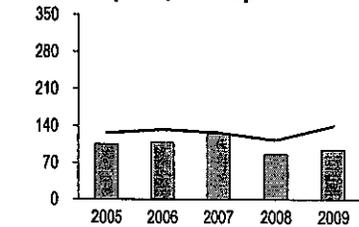
**Yard Waste and Leaf Collection FTEs per 10,000 Population**



Year	High Point	Average
2005	2.2	2.4
2006	2.2	2.4
2007	2.1	2.3
2008	1.9	2.4
2009	1.8	2.1

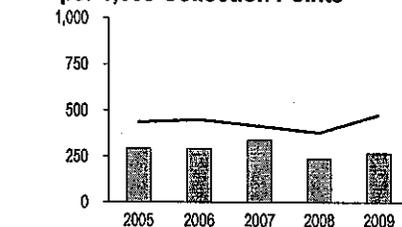
## WORKLOAD Measures

**Yard Waste and Leaf Tons Collected per 1,000 Population**



Year	High Point	Average
2005	105	127
2006	108	134
2007	125	127
2008	85	114
2009	94	141

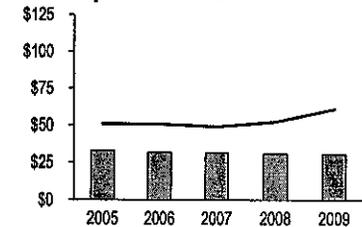
**Yard Waste and Leaf Tons Collected per 1,000 Collection Points**



Year	High Point	Average
2005	292	438
2006	293	453
2007	339	417
2008	239	381
2009	268	478

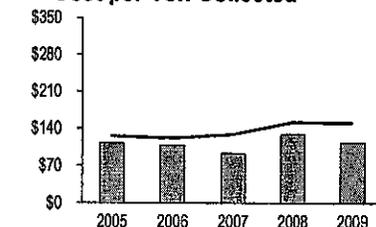
## EFFICIENCY Measures

**Yard Waste and Leaf Collection Cost per Collection Point**



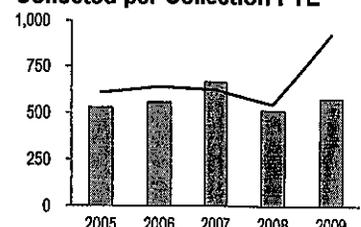
Year	High Point	Average
2005	\$33	\$51
2006	\$32	\$51
2007	\$32	\$49
2008	\$31	\$53
2009	\$31	\$61

**Yard Waste and Leaf Collection Cost per Ton Collected**



Year	High Point	Average
2005	\$112	\$126
2006	\$108	\$123
2007	\$93	\$130
2008	\$130	\$153
2009	\$114	\$151

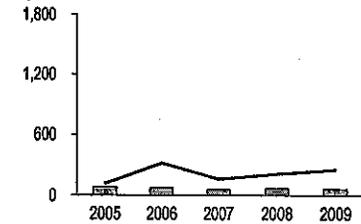
**Yard Waste and Leaf Tons Collected per Collection FTE**



Year	High Point	Average
2005	528	610
2006	556	642
2007	665	625
2008	512	547
2009	575	928

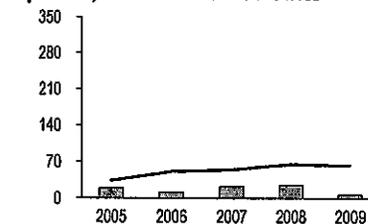
## EFFECTIVENESS Measures

**Collection Complaints per 10,000 Collection Points**



Year	High Point	Average
2005	81	119
2006	72	320
2007	60	163
2008	70	214
2009	63	258

**Valid Complaints per 10,000 Collection Points**



Year	High Point	Average
2005	20	34
2006	12	62
2007	22	55
2008	26	66
2009	7	64

# Yard Waste/Leaf Collection

# High Point

Fiscal Year 2008-09

MUNICIPAL PROFILE	
Population (OSBM 2008)	100,648
Land Area (Square Miles)	54.00
Persons per Square Mile	1,864
Topography	Flat; gently rolling
County	Guilford
Climate	Temperate; some snow and ice
Median Family Income (US Census 2000)	\$48,057

FULL COST PROFILE	
Cost Breakdown by Percentage	
Personal Services	69.4%
Operating Costs	23.3%
Capital Costs	7.4%
<b>TOTAL</b>	<b>100.0%</b>
Cost Breakdown in Dollars	
Personal Services	\$ 751,244
Operating Costs	\$ 251,970
Capital Costs	\$ 79,634
<b>TOTAL</b>	<b>\$ 1,082,848</b>

SERVICE PROFILE	
FTE Positions—Collection	16.5
FTE Positions—Other	2.0
Collection Points	
Yard Waste	35,332
Leaves	35,332
Tons Collected	
Yard Waste	7,137
Leaves	2,348
<b>Total</b>	<b>9,485</b>
Collection Frequency	
Yard Waste	1 x week
Bagged Leaves	1 x week
Loose Leaves (seasonal collection)	2 sweeps
Service Fee	No

**EXPLANATORY INFORMATION**

**Service Level and Delivery**  
 Yard waste collection 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. Loose tree limbs will be picked up within two weeks.

Yard waste is collected once each week from the curbside using three three-person crews. Each crew is composed of one driver and two collectors. The city also uses a boom truck with a single driver/operator. 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 six leaf collection crews with each crew consisting of five permanent employees. Bagged leaves are collected once per week with the regular yard waste.

**Conditions Affecting Service, Performance, and Costs**

## PERFORMANCE MEASURES FOR POLICE SERVICES

### SERVICE DEFINITION

Police Services consists 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 includes 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 fiscal year 2008-09.

#### 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 1 Crimes			Part 2 Crimes	Dispatched Calls	Number of Traffic Accidents
						Against Persons	Against Property	Total			
Asheville	Yes	205	9.2	221	UCR/IBR	465	3,882	4,347	4,027	113,104	2,740
Burlington	Yes	118	12.4	141	IBR	401	3,914	4,315	4,283	61,091	1,543
Carrboro	No	41	8.8	45	IBR	69	745	814	1,574	17,674	195
Cary	Yes	165	8.8	115	IBR	128	2,266	2,394	2,116	123,014	3,807
Concord	No	157	8.1	184	IBR	191	3,172	3,363	2,015	92,808	3,019
Durham	Yes	512	9.0	385	IBR	1,713	11,771	13,484	9,196	271,502	7,604
Gastonia	No	170	11.7	200	UCR	640	5,107	5,747	4,905	91,564	1,761
Greensboro	Yes	639	10.4	214	IBR	1,802	15,660	17,462	17,527	221,857	8,816
Greenville	Yes	183	9.3	180	UCR	598	5,318	5,916	4,898	63,438	5,407
Hickory	No	118	8.3	162	IBR	290	2,997	3,287	3,840	72,048	2,023
High Point	No	225	9.4	226	IBR	667	5,818	6,485	2,484	133,252	2,399
Raleigh	Yes	776	9.9	483	UCR	1,338	13,971	15,309	29,114	456,074	23,251
Salisbury	Yes	88	9.8	89	IBR	315	2,321	2,636	2,703	41,261	2,190
Wilmington	No	265	9.7	271	IBR	753	5,823	6,576	4,334	180,194	6,719
Wilson	Yes	116	8.1	135	UCR	245	2,161	2,406	5,143	90,774	2,027
Winston-Salem	Yes	514	11.2	NA	IBR	1,970	14,298	16,268	238,562	238,562	8,378

### NOTES

#### EXPLANATORY FACTORS

These are factors that the project found to affect 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

# High Point

# Police Services

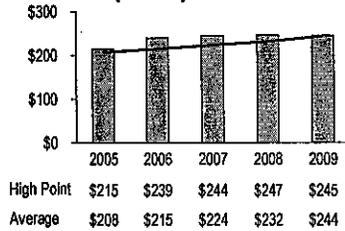
Key: High Point ■

Benchmarking Average —

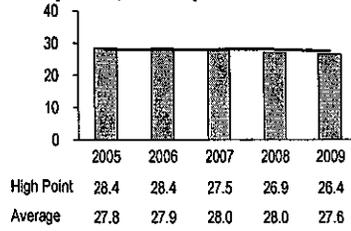
Fiscal Years 2005 through 2009

## RESOURCE Measures

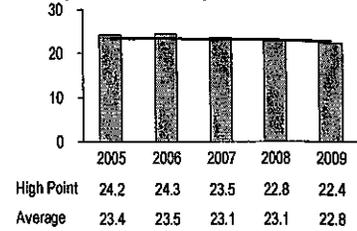
**Police Services Costs per Capita**



**Total Police Services Personnel per 10,000 Population**

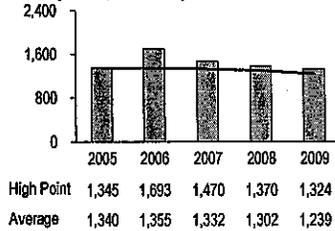


**Sworn Police Officers per 10,000 Population**

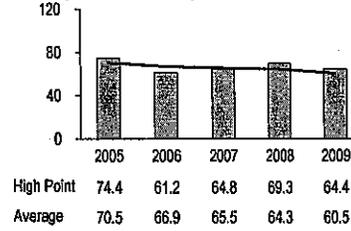


## WORKLOAD Measures

**Calls Dispatched per 1,000 Population**

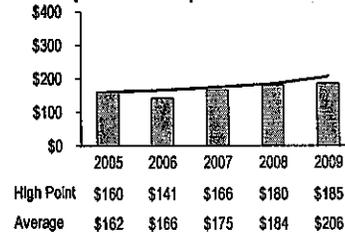


**Part I Crimes per 1,000 Population**

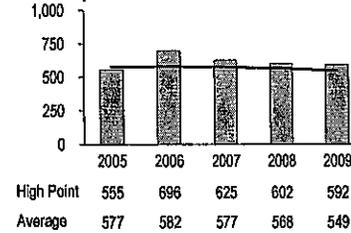


## EFFICIENCY Measures

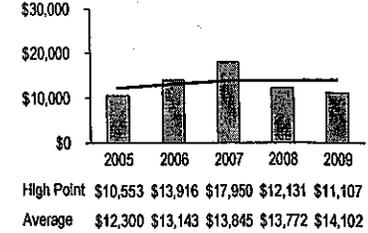
**Police Services Cost per Call Dispatched**



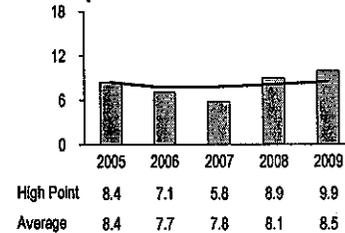
**Calls Dispatched per Sworn Officer**



**Police Services Cost per Part I Case Cleared**

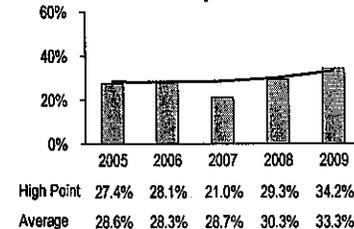


**Part I Cases Cleared per Sworn Officer**

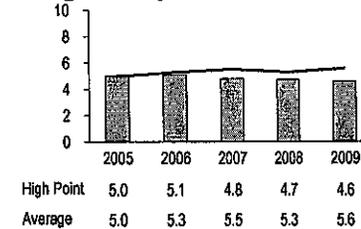


## EFFECTIVENESS Measures

**Percentage of Part I Cases Cleared of Those Reported**



**Response Time to High Priority Calls in Minutes**



# High Point

Fiscal Year 2008–09

MUNICIPAL PROFILE	
Population (OSBM 2008)	100,648
Land Area (Square Miles)	54.00
Persons per Square Mile	1,864
County	Guilford
Median Family Income (US Census 2000)	\$48,057
Unemployment Rate (ESC-08)	8.2%
Part I Crimes Reported	
Homicide	6
Rape	39
Robbery	298
Assault	324
Burglary	1,717
Larceny	3,733
Auto Theft	338
Arson	30
<b>TOTAL</b>	<b>6,485</b>

FULL COST PROFILE	
Cost Breakdown by Percentage	
Personal Services	72.7%
Operating Costs	21.8%
Capital Costs	5.5%
<b>TOTAL</b>	<b>100.0%</b>
Cost Breakdown in Dollars	
Personal Services	\$ 17,913,473
Operating Costs	\$ 5,377,151
Capital Costs	\$ 1,365,934
<b>TOTAL</b>	<b>\$ 24,656,558</b>

SERVICE PROFILE	
FTE Positions—Sworn	225.0
FTE Positions—Other	41.0
Part I Crimes Cleared	
Persons	362
Property	1,858
<b>Total</b>	<b>2,220</b>
Reporting Format	IBR
Part II Crimes Reported	2,484
Number of Calls Dispatched	133,252
Traffic Accidents	2,399
Property Damage	\$10,512,847

**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 225 sworn officer positions authorized for FY 2008–09, with an average length of service of 9.4 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, half the team reports early and the other half reports late. This applies to both daytime and night coverage.

Detectives work twenty-eight-day cycles 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 response.

The police department was successful in clearing a total of 2,220 Part I cases in FY 2008–09.

**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.

# 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 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 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 Three Rings

These are effectiveness measures that assess how quickly telecommunicators answer calls. The time between the beginning of a ring and the beginning of the next ring is six seconds. Thus three rings equal eighteen seconds.

### 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 CAD entry begins. This measure is often referred to as "talk time."

### 5. For Calls Dispatched, Average Number of Seconds from CAD (Computer-Aided Dispatch) 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	Equipment Shared with County?	Fee Charged?	Number of FTEs	Total Incoming Calls Handled	Total E-911 Calls Handled	Total Dispatches
Asheville	79,393	No	Yes	25	210,492	35,816	113,104
Burlington	50,929	Yes	Yes	14	137,437	22,056	82,242
Cary	141,269	No	Yes	22	193,009	50,285	142,008
Concord	79,673	Yes	Yes	23	136,219	28,467	105,912
Durham	260,420	No	Yes	81	382,094	283,027	406,344
Greensboro	468,344	Yes	Yes	91	610,589	329,053	408,678
Greenville	81,092	No	Yes	17	178,937	28,278	116,029
Hickory	40,765	No	Yes	13	139,049	13,972	72,078
High Point	100,648	No	Yes	27	286,525	56,210	168,769
Raleigh	864,429	Yes	Yes	103	825,840	520,431	422,811
Salisbury	31,315	No	Yes	10	75,021	13,968	36,930
Winston-Salem	228,459	Yes	Yes	45	524,255	216,522	262,081

### NOTES

Although fees are charged for E-911 service in every jurisdiction, the revenue generated often goes to county governments.

The population served by the municipal emergency communications center may go beyond municipal boundaries up to the entire county in some cases where the service is a consolidated center.

### EXPLANATORY FACTORS

These are factors that the project found to affect 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

# High Point

# Emergency Communications

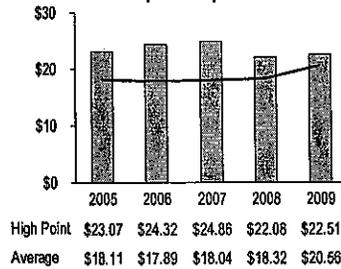
Key: High Point ■

Benchmarking Average —

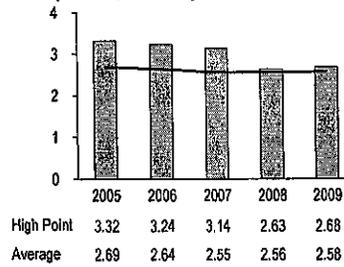
Fiscal Years 2005 through 2009

## RESOURCE Measures

**Emergency Communications Services Costs per Capita**

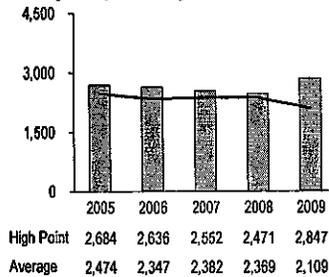


**Emergency Communications FTEs per 10,000 Population**

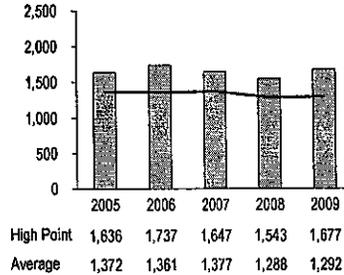


## WORKLOAD Measures

**Total Calls Answered per 1,000 Population**

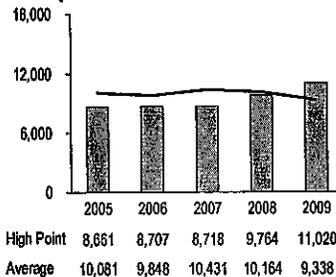


**Calls Dispatched per 1,000 Population**

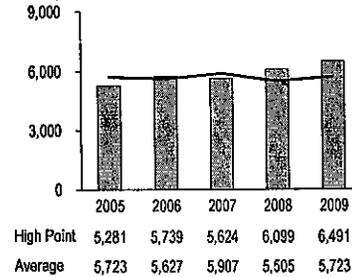


## EFFICIENCY Measures

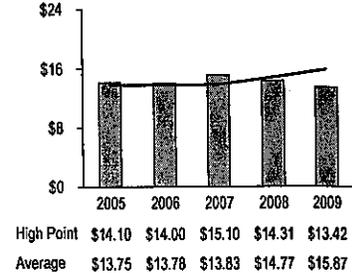
**Calls Answered per Telecommunicator**



**Calls Dispatched per Telecommunicator**

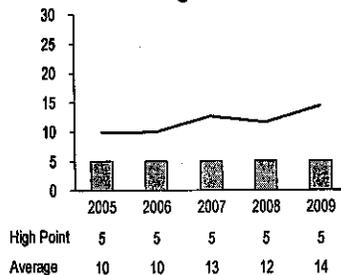


**Emergency Services Cost per Call Dispatched**

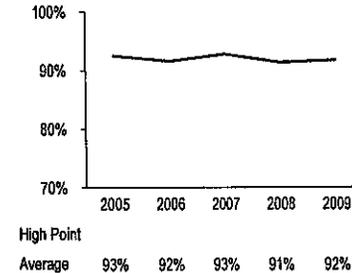


## EFFECTIVENESS Measures

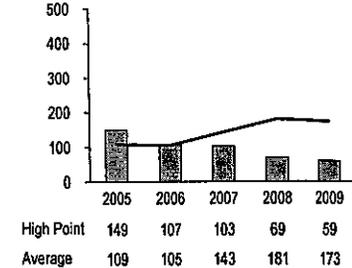
**Number of Seconds from Initial Ring to Answer**



**Percent of Calls Answered within Three Rings**



**Average Time in Seconds from CAD Entry to Dispatch**



# High Point

## MUNICIPAL PROFILE

Population (OSBM 2008)	100,648
Land Area (Square Miles)	54.00
Persons per Square Mile	1,864
County	Guilford
Median Family Income (US Census 2000)	\$48,057
Unemployment Rate (ESC-08)	8.2%
Population Growth (OMB 2000–2008)	17.3%

## FULL COST PROFILE

Cost Breakdown by Percentage	
Personal Services	85.4%
Operating Costs	13.6%
Capital Costs	1.0%
<b>TOTAL</b>	<b>100.0%</b>

Cost Breakdown in Dollars	
Personal Services	\$ 1,934,508
Operating Costs	\$ 308,769
Capital Costs	\$ 22,204
<b>TOTAL</b>	<b>\$ 2,265,481</b>

## SERVICE PROFILE

FTE Positions	
Telecommunicators/Call-takers	26.0
Other	1.0
Total Incoming Calls	286,525
Total 911 Calls	56,210
Total Calls Dispatched	168,769
E-911 Fee	\$0.70
Monthly Wireless Fee	\$1.00
Revenue from Fee	\$521,491

## 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 (PSAP), 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. The city charges a \$0.30 E-911 fee to offset costs. The city also charges a \$1 monthly fee for wireless phones.

High Point's center handled a total of 286,525 calls in FY 2008–09, dispatching 168,769 of them. The city defines highest priority emergency calls as situations likely to result in loss of life, injury, or property damage and crimes in progress.

### Conditions Affecting Service, Performance, and Costs

High Point was unable to provide data on certain measures given a change in technology.

High Point made a concentrated effort to reduce the time from the start of CAD entry to dispatch in FY 2008 including daily review of their performance at the end of each day. Additionally, there were several new employees in the prior year so that as they have become more experienced they have become more proficient.

## 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, row 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. Tons of Asphalt Applied

This is the number of tons of asphalt used by contractors and by municipal crews for the purpose of resurfacing streets. Jurisdictions will not report tons of asphalt applied by municipal crews if all street resurfacing is under contract.

#### 3. Full-Time Equivalent (FTE) Positions

Full-time equivalent (FTE) positions for asphalt maintenance and repair are calculated in the same way as those for the solid waste services studied in the project.

#### 4. Percentage of Street Segments Rated 85 Percent or Better

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. The measure provides the proportion of street segments that are rated 85 percent or better on the most recent street pavement assessment.

#### 5. 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 repaving—contract" represents the annual cost of the contract plus any indirect costs associated with contract administration. "Cost of repaving—city crews" represents direct, indirect, and capital costs associated with an in-house repaving function. "Cost of maintenance" represents total cost from the accounting form minus cost of repaving by contract and municipal crews.

# Asphalt Maintenance and Repair

## Summary of Key Dimensions of Service

City or Town	Lane Miles Maintained	Number of Registered Motor Vehicles	Total Lane Miles Resurfaced	Total Asphalt Tonnage for Resurfacing	Depth of Resurfacing (in inches)	Resurfacing Cycle	FTE Positions for City Staff
Asheville	753.1	68,225	9.9	7,656	2.5	51	19.7
Burlington	534.0	NA	7.3	10,043	1.5	15	16.0
Carrboro	78.7	12,873	5.3	3,134	1.50	15	0.7
Cary	922.4	103,264	14.2	6,500	1.25	15	13.0
Charlotte	5091.0	529,000	324.0	169,483	2.0 (city) 1.0 (contractor)	17	133.0
Concord	660.4	64,063	25.9	15,641	1.5	29	10.6
Durham	1735.6	167,364	48.2	27,500	1.5	54	67.0
Gastonia	1172.0	58,819	5.5	4,311	1.5	96	11.5
Greensboro	3624.0	199,133	0.0	0	1.25	35	51.0
Greenville	524.9	56,051	17.5	7,452	1.00	40	6.0
Hickory	719.2	30,179	11.6	6,721	1.5	64	7.0
High Point	1471.0	58,589	9.6	4,377	1.25	117	17.2
Salisbury	342.1	24,209	4.0	2,250	1.5	15	10.0
Wilmington	778.0	117,621	4.0	2,335	1.5 to 2.0	20	21.0
Wilson	678.4	40,624	5.1	7,985	1.5	35	5.5
Winston-Salem	2190.0	176,582	30.1	19,337	1.5	84	40.8

### NOTES

### EXPLANATORY FACTORS

These are factors that the project found to affect 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

# High Point

# Asphalt Maintenance and Repair

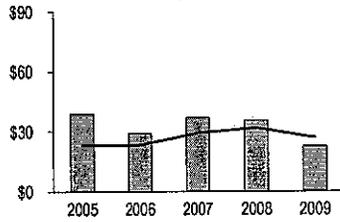
Key: High Point ■

Benchmarking Average —

Fiscal Years 2005 through 2009

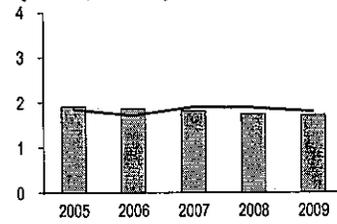
## RESOURCE Measures

**Asphalt Maintenance and Repair Services Costs per Capita**



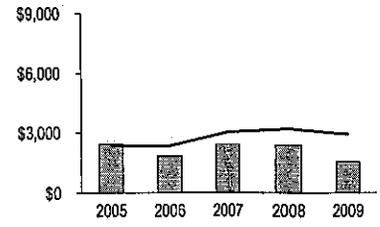
High Point \$38.75 \$28.91 \$36.86 \$35.32 \$22.47  
Average \$23.23 \$23.29 \$29.31 \$31.78 \$26.95

**Asphalt Maintenance and Repair FTEs per 10,000 Population**



High Point 1.90 1.86 1.80 1.74 1.71  
Average 1.85 1.72 1.91 1.89 1.80

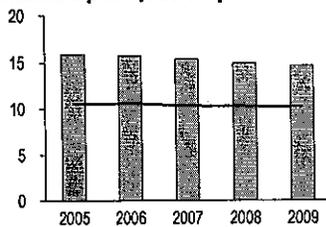
**Service Costs per Lane Mile of Road Maintained**



High Point \$2,442 \$1,845 \$2,403 \$2,372 \$1,537  
Average \$2,347 \$2,355 \$3,031 \$3,227 \$2,941

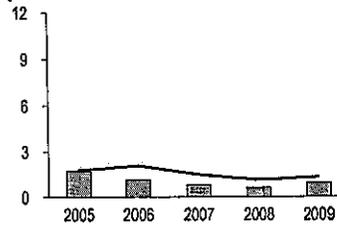
## WORKLOAD Measures

**Number of Lane Miles Maintained per 1,000 Population**



High Point 15.9 15.7 15.3 14.9 14.6  
Average 10.5 10.6 10.3 10.3 10.2

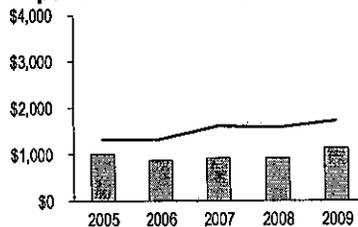
**Reported Pot Holes per Lane Mile Maintained**



High Point 1.72 1.13 0.81 0.62 0.95  
Average 1.80 2.10 1.51 1.16 1.35

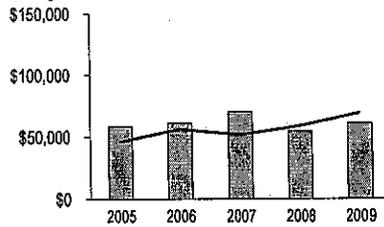
## EFFICIENCY Measures

**Cost of Maintenance per Lane Mile Maintained**



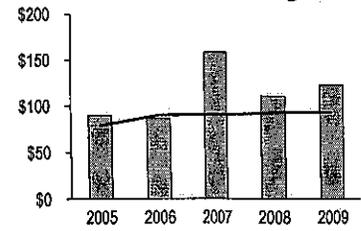
High Point \$1,001 \$867 \$910 \$911 \$1,140  
Average \$1,324 \$1,330 \$1,614 \$1,576 \$1,724

**Resurfacing Cost per Lane Mile Resurfaced**



High Point \$58,392 \$61,127 \$70,174 \$53,872 \$60,711  
Average \$46,384 \$56,197 \$51,503 \$58,824 \$69,032

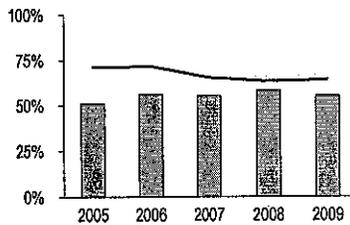
**Cost per Ton for Contract Resurfacing**



High Point \$90 \$87 \$158 \$110 \$122  
Average \$79 \$90 \$90 \$93 \$93

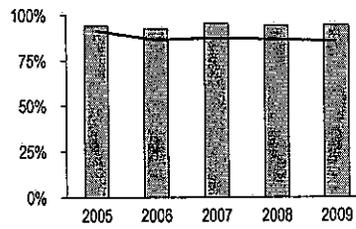
## EFFECTIVENESS Measures

**Street Segments Rated 85 Percent or Better**



High Point 51% 56% 55% 58% 55%  
Average 71% 72% 65% 63% 64%

**Percentage of Pot Holes Repaired within 24 hours**



High Point 94% 92% 95% 94% 94%  
Average 91% 86% 87% 87% 85%

# Asphalt Maintenance and Repair

# High Point

Fiscal Year 2008–09

MUNICIPAL PROFILE	EXPLANATORY INFORMATION
Population (OSBM 2008) 100,648	<p><b>Service Level and Delivery</b>                      The City of High Point was responsible for maintaining 1,471 lane miles during FY 2008–09. This includes 340 lane miles of state roads.</p> <p>Contract resurfacing during FY 2008-09 had been budgeted for \$2 million. However, due to the economic downturn and a decline in city revenues, the resurfacing contract was suspended. Only \$289,689 was spend on contract resurfacing during the year.</p> <p>The city resurfaced 9.64 lane miles altogether, roughly 0.7 percent of total lane miles. The contractor resurfaced 5.32 miles while city crews resurfaced 4.32 miles. A total of 4,377 tons of asphalt was used during the fiscal year for resurfacing projects including 2,011 tons used by the city and 2,366 tons used by a contractor. An average resurfacing depth of 1.25 inches was used by the contractor and 1.50 inches by city crews.</p> <p>The city reported that 55 percent of its street segments rated 85 percent or above on its most recent rating conducted in the year 2007. The city used the ITRE rating system.</p> <p>The number of potholes reported for FY 2008–09 was 1,400, including self-reported and citizen-reported potholes. The percentage of potholes repaired within twenty-four hours was 94 percent.</p>
Land Area (Square Miles) 54.00	
Persons per Square Mile 1,864	
Topography Flat; gently rolling	
County Guilford	
Climate Temperate; some ice and snow	
Median Family Income (US Census 2000) \$48,057	
<b>FULL COST PROFILE</b>	
Cost Breakdown by Percentage	
Personal Services 29.6%	
Operating Costs 62.4%	
Capital Costs 8.1%	
<b>TOTAL 100.0%</b>	
Cost Breakdown in Dollars	
Personal Services \$ 668,547	
Operating Costs \$ 1,410,314	
Capital Costs \$ 182,795	
<b>TOTAL 2,261,656</b>	
<b>SERVICE PROFILE</b>	
FTE Positions—Crews 16.0	
FTE Positions—Other 1.2	
Lane Miles Maintained 1,471.0	
Lane Miles Resurfaced—Contract 5.32	
Lane Miles Resurfaced—City 4.32	
<b>Total 9.64</b>	
Tons of Asphalt Used—Resurfacing	
Contractor 2,366	
City Crews 2,011	
Cost of Repaving—Contract \$289,689	
Cost of Repaving—City Crews \$295,564	
Cost of Maintenance \$1,676,403	
Registered Vehicles 58,589	
Registered Vehicles/Square Mile 1,085	
<b>Conditions Affecting Service, Performance, and Costs</b>	

## PERFORMANCE MEASURES FOR FIRE SERVICES

### SERVICE DEFINITION

Fire Services refers to the 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 for the first unit arriving and also for 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 but 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
Asheville	84,312	58.4	\$11.0	13,394	4,702	11	236	3
Burlington	50,929	25.0	\$3.9	6,741	2,797	5	92	3
Carrboro	25,300	24.3	\$2.2	1,576	2,426	1	37	3 - town 5 - county
Cary	142,641	54.8	\$19.9	6,807	2,466	7	210	3
Charlotte	700,464	287.9	\$74.2	91,309	26,974	39	1,102	3
Concord	80,141	60.2	\$10.5	7,324	1,470	9	185	3
Durham	228,482	105.5	\$22.0	18,345	2,849	15	300	3
Gastonia	74,518	50.4	\$5.1	8,968	991	8	140	3
Greensboro	275,055	142.7	\$25.1	28,475	34,945	23	501	1
Greenville	81,092	34.8	\$5.6	4,091	1,057	6	141	3
Hickory	45,816	42.1	\$5.1	5,833	5,619	6	126	3
High Point	110,023	67.0	\$10.0	10,897	2,773	14	224	2
Raleigh	378,508	140.5	\$48.8	41,503	na	27	568	3
Salisbury	31,315	21.6	\$2.9	4,263	2,105	4	92	2
Wilmington	101,977	49.3	\$13.9	9,221	4,292	11	221	2
Wilson	50,652	28.9	\$3.8	4,869	4,988	5	93	2
Winston-Salem	228,459	132.8	\$20.1	23,537	11,459	18	343	3

### NOTES

#### EXPLANATORY FACTORS

*These are factors that the project found to affect 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

# High Point

# Fire Services

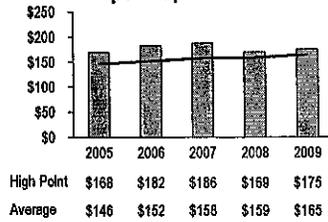
Key: High Point ■

Benchmarking Average —

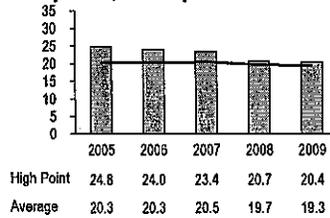
Fiscal Years 2005 through 2009

## RESOURCE Measures

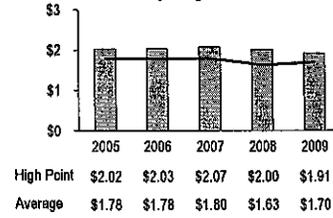
**Fire Services Costs per Capita**



**Fire Services Total FTEs per 10,000 Population**

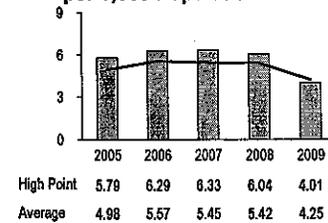


**Fire Services Cost per Thousand Dollars of Property Protected**

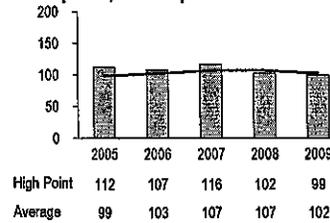


## WORKLOAD Measures

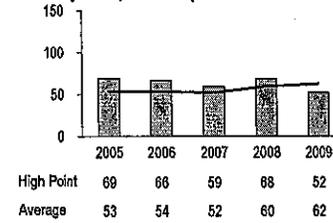
**Actual Fires per 1,000 Population**



**Fire Department Responses per 1,000 Population**

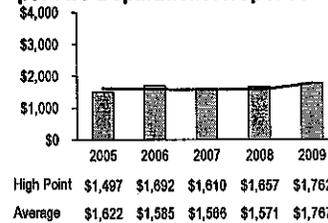


**Fire Inspections Completed per 1,000 Population**

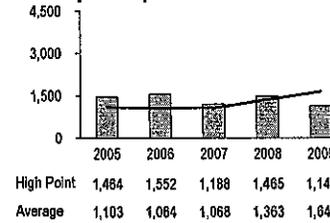


## EFFICIENCY Measures

**Fire Services Cost per Fire Department Response**

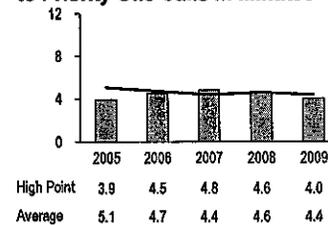


**Inspections Completed per Inspector FTE**

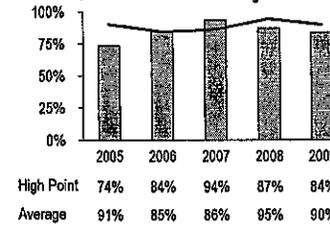


## EFFECTIVENESS Measures

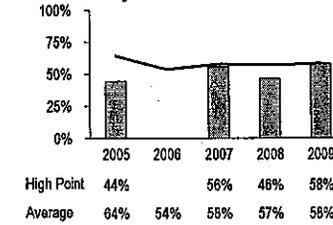
**Average Response Time to Priority One Calls in Minutes**



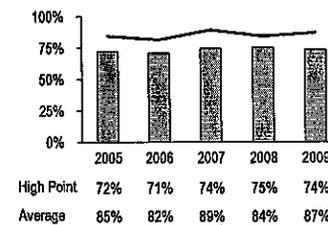
**Percentage of Fire Code Violations Cleared within 90 Days**



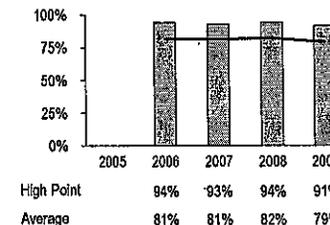
**Percentage of Fires Confined to Rooms or Objects Involved on Arrival**



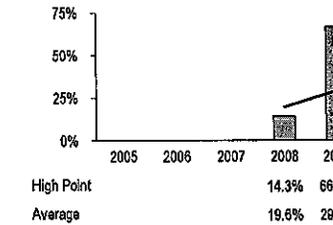
**Percentage of Fires for Which Cause Was Determined**



**Percentage of Full Response Within 8 Minutes Travel Time**



**Percentage of Lost Pulse Cases Recovered Pulse at Transfer of Care**



# High Point

MUNICIPAL PROFILE	
Population Served	110,023
Land Area Served (Square Miles)	67.0
Persons Served per Square Mile	1,642
Topography	Flat; gently rolling
County	Guilford
Climate	Temperate; some ice and snow

FULL COST PROFILE	
Cost Breakdown by Percentage	
Personal Services	74.7%
Operating Costs	16.5%
Capital Costs	8.7%
<b>TOTAL</b>	<b>100.0%</b>
Cost Breakdown in Dollars	
Personal Services	\$ 14,343,854
Operating Costs	\$ 3,176,437
Capital Costs	\$ 1,679,988
<b>TOTAL</b>	<b>\$ 19,200,279</b>

SERVICE PROFILE	
FTE Positions—Firefighters	201.0
FTE Positions—Other	23.0
Fire Stations	14
First-line Fire Apparatus	
Pumpers	13
Aerial Trucks	3
Quints	0
Squads	3
Rescue	0
Other	9
Fire Department Responses	10,897
All Fire Responses	441
Structural Fires Reported	123
Estimated Fire Loss	\$2,003,985
Amount of Property Protected	\$10,042,522,951
Number of Fire Education Programs or Events	406

**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 contained the following divisions: administration, operations, and technical services.

Firefighters work twenty-four-hour shifts followed by forty-eight hours off. This cycle is repeated three times and is then followed by a four-day break, resulting in an average work week of fifty-six hours over a twenty-seven-day period.

The city has an ISO rating of 2.

The fire department in High Point conducted 5,701 fire maintenance, construction, and reinspections during FY 2008-09. 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**  
 The performance measure "percentage of full response within 8 minutes" was new as of FY 2005-06. The performance measure "percentage of lost pulse cases recovered pulse at transfer of care" is a new measure as of FY 2007-08

# PERFORMANCE MEASURES FOR BUILDING INSPECTIONS

## SERVICE DEFINITION

Building inspections 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 FY 2008–09 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 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 in FY 2008–09, and the number of plan reviewers.

**7. Percentage of Inspection Responses within One Working Day of Request**

A request for inspection may be 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 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 2007	Building Inspections by Trade					Number of Plan Reviews	Building Inspector FTEs	Plan Reviewer FTEs
			Building	Electrical	Mechanical	Plumbing	Total			
Asheville	63.1	15.2%	15,382	8,367	7,239	7,720	38,708	2,941	17.0	6.0
Burlington	41.0	13.4%	1,712	3,230	2,873	2,289	10,104	80	6.50	0.50
Carrboro	12.1	16.1%	1,359	920	817	894	3,990	747	1.5	1.0
Cary	65.9	49.4%	26,236	13,870	13,638	12,617	66,361	4,769	24.0	4.0
Durham	298.2	22.2%	27,731	21,029	12,725	12,975	74,460	3,194	27.0	4.0
Gastonia	59.0	12.3%	3,927	2,056	2,557	2,249	10,789	742	5.0	1.0
Greensboro	131.8	17.9%	29,737	18,518	15,224	14,014	77,493	1,018	19.0	4.5
Greenville	66.6	32.5%	5,094	3,942	4,067	3,067	16,170	738	6.0	1.0
High Point	59.3	17.3%	8,548	6,007	6,575	4,755	25,885	820	11.5	1.5
Raleigh	181.6	37.1%	26,383	26,133	18,754	19,363	90,633	2,364	53.0	13.0
Wilson	55.8	14.1%	2,231	1,736	1,984	1,760	7,711	196	3.2	0.8
Winston-Salem	413.0	23.0%	17,602	15,843	13,842	9,839	57,126	976	23.0	3.0

### NOTES

#### EXPLANATORY FACTORS

*These are factors that the project found to affect 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

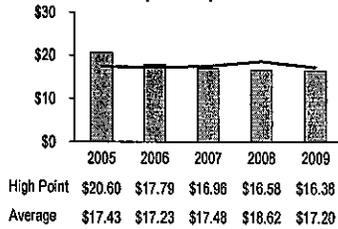
Key: High Point ■

Benchmarking Average —

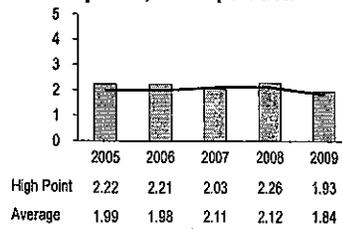
Fiscal Years 2005 through 2009

## RESOURCE Measures

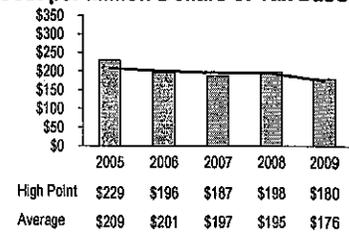
**Building Inspections Services  
Costs per Capita**



**Building Inspections Services  
FTEs per 10,000 Population**

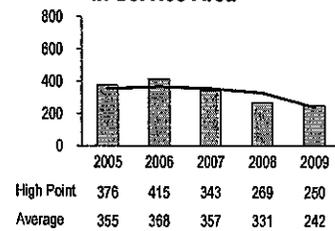


**Building Inspections Services  
Cost per Million Dollars of Tax Base**

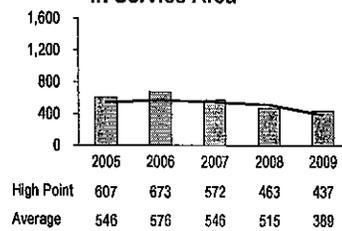


## WORKLOAD Measures

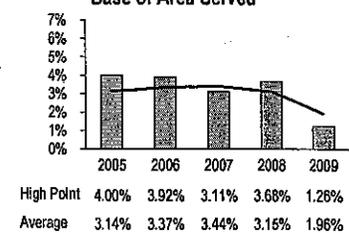
**Inspections per 1,000 Population  
in Service Area**



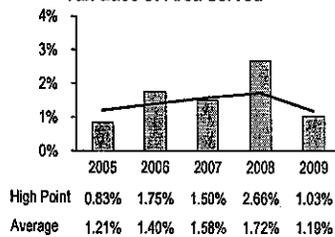
**Inspections per Square Mile  
in Service Area**



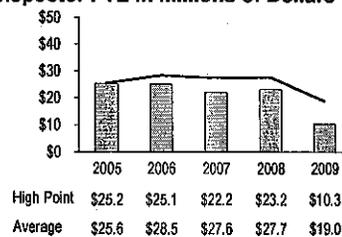
**Value of Building Permits as Percentage of Tax  
Base of Area Served**



**Value of Commercial Permits as Percentage of  
Tax Base of Area Served**

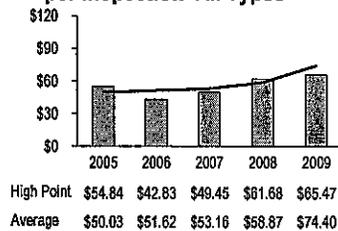


**Value of Building Permits Per  
Inspector FTE In Millions of Dollars**

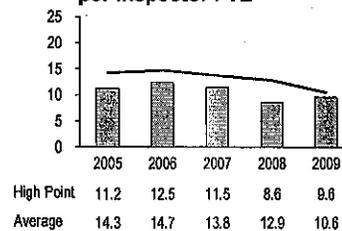


## EFFICIENCY Measures

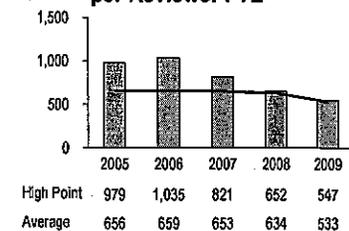
**Building Services Cost  
per Inspection—All Types**



**Inspections per Day  
per Inspector FTE**

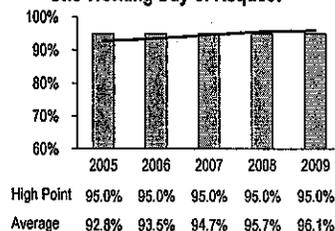


**Plan Reviews per Year  
per Reviewer FTE**

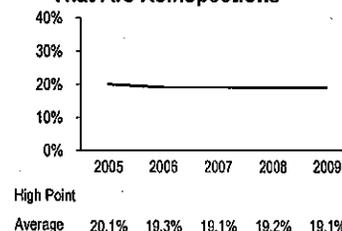


## EFFECTIVENESS Measures

**Percentage of Inspection Responses within  
One Working Day of Request**



**Percentage of Inspections  
That Are Reinspections**



# High Point

<b>MUNICIPAL PROFILE</b>	
Population Served	103,461
Land Area Served (Square Miles)	59.27
Persons Served per Square Mile	1,746
Topography	Flat; gently rolling
Tax Base Served (Assessed Value)	\$9,419,578,153
County	Guilford
<b>FULL COST PROFILE</b>	
Cost Breakdown by Percentage	
Personal Services	73.5%
Operating Costs	21.7%
Capital Costs	4.8%
<b>TOTAL</b>	<b>100.0%</b>
Cost Breakdown in Dollars	
Personal Services	\$ 1,245,763
Operating Costs	\$ 367,203
Capital Costs	\$ 81,669
<b>TOTAL</b>	<b>\$ 1,694,635</b>
<b>SERVICE PROFILE</b>	
Number of Inspections by Type	
Building	8,548
Electrical	6,007
Mechanical	6,575
Plumbing	4,755
<b>Total</b>	<b>25,885</b>
Building Permit Values	
Residential	\$21,729,845
Multi-Family	NA
Commercial	\$96,647,437
<b>Total</b>	<b>\$118,377,282</b>
FTE Inspectors	
Building	4.0
Electrical	2.5
Mechanical	2.5
Plumbing	2.5
All Trades	0.0
<b>Total Inspectors</b>	<b>11.5</b>
FTE Plan Reviewers	
FTE Plan Reviewers	1.5
Other FTE Positions	7.0
Inspection Fee Revenue	\$733,130

## 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 rural/suburban extraterritorial 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 \$773,130 for FY 2008–09. 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.

## PERFORMANCE MEASURES FOR FLEET MAINTENANCE

### SERVICE DEFINITION

Fleet maintenance represents the scheduled and unscheduled maintenance of rolling stock performed by the central garage and by 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 1 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 Fiscal Year 2008-09.

#### 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 ended June 30, 2009, which are done by the municipality's staff. The number of full-time equivalent (FTE) positions for technicians is the same as defined above.

#### 3. Cost per Work Order

The cost 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 ended June 30, 2009.

#### 4. Cost per Vehicle Equivalent Unit (VEU)

The cost represents the total cost of fleet maintenance and is calculated using the full cost accounting model that captures direct, indirect, and capital costs. Vehicle Equivalent Units (VEUs) are calculated as defined above for the fiscal year ended June 30, 2009.

**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 full-time equivalent (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 preventive maintenance jobs (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 work 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
Asheville	783	8.1	5,972	1,675	16	9.0	\$60 (Cars and Small Trucks) \$70 (Large Truck and Off-Road)	1.9	General Fund
Burlington	463	9.8	4,139	2,524	19	10.0	\$55-Heavy Equipment \$45 Auto/Light Truck \$35-Small Engine/Mowers	0.9	General Fund
Carrboro	121	6.8	1,097	781	3	2.0	NA	NA	General Fund
Cary	801	5.6	5,204	1,704	7	8.0	\$60.00	NA	Internal Service
Charlotte	4,642	5.7	43,412	16,380	111	79.0	\$50.55	5.6	General Fund
Concord	798	6.5	4,414	1,614	8	8.0	\$22.00	5.6	Internal Service
Durham	1,559	5.9	14,426	6,786	33	24.0	\$59-Heavy Equip \$47-Others	2.9	General Fund
Gastonia	819	8.2	4,906	1,403	24	13.0	\$35.00	NA	General Fund
Greensboro	1,962	5.3	10,782	5,118	33	31.0	\$52.00	4.1	Internal Service
Greenville	466	NA	4,330	2,294	12	12.0	\$42.83	7.0	General Fund
Hickory	557	9.4	6,424	1,297	14	7.0	\$44.50	4.0	Internal Service
High Point	926	8.4	5,061	1,905	18	14.0	\$60.00	4.0	Internal Service
Raleigh	2,367	5.7	11,905	6,575	37	41.0	\$65-Heavy Equipment \$55 Motor Equipment \$40-Senior Technician	2.6	Internal Service
Salisbury	533	9.0	4,265	1,193	14	9.0	NA	1.8	General Fund
Wilmington	747	5.9	4,786	1,612	20	10.0	\$53.00	5.4	Internal Service
Wilson	735	7.1	5,318	1,076	15	11.0	\$44.00	2.3	General Fund
Winston-Salem	1,755	7.1	11,211	5,215	31	18.0	\$50.00	3.7	General Fund

### NOTES

#### EXPLANATORY FACTORS

These are factors that the project found to affect 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

# High Point

# Fleet Maintenance

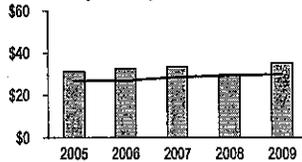
Key: High Point ■

Benchmarking Average —

Fiscal Years 2005 through 2009

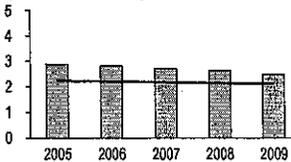
## RESOURCE Measures

**Fleet Maintenance Services Cost per Capita**



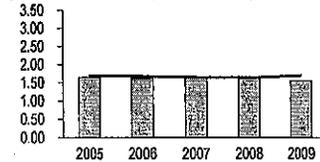
Year	High Point	Average
2005	\$31.48	\$26.82
2006	\$32.59	\$27.18
2007	\$33.42	\$28.81
2008	\$29.79	\$29.50
2009	\$35.31	\$30.05

**Fleet Maintenance FTEs per 10,000 Population**



Year	High Point	Average
2005	2.88	2.25
2006	2.81	2.22
2007	2.72	2.18
2008	2.63	2.15
2009	2.48	2.12

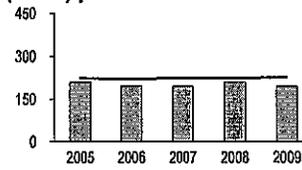
**Fleet Maintenance FTEs per 100 Municipal Employees**



Year	High Point	Average
2005	1.64	1.70
2006	1.63	1.69
2007	1.63	1.65
2008	1.62	1.64
2009	1.55	1.69

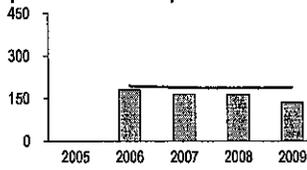
## WORKLOAD Measures

**Number of Vehicle Equivalent Units (VEUs) per Technician FTE**



Year	High Point	Average
2005	210	225
2006	195	221
2007	195	226
2008	210	225
2009	194	228

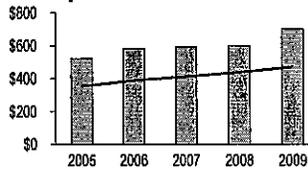
**Preventive Maintenances (PMs) Completed In-House per Tech FTE**



Year	High Point	Average
2005	180	196
2006	166	190
2007	164	188
2008	136	191

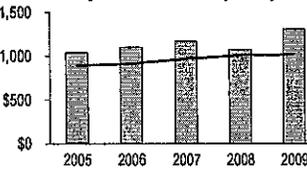
## EFFICIENCY Measures

**Fleet Maintenance Cost per Work Order**



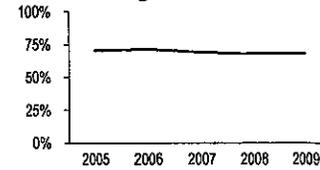
Year	High Point	Average
2005	\$522	\$355
2006	\$582	\$389
2007	\$593	\$413
2008	\$599	\$438
2009	\$702	\$471

**Fleet Maintenance Cost per Vehicle Equivalent Unit (VEU)**



Year	High Point	Average
2005	\$1,040	\$895
2006	\$1,102	\$917
2007	\$1,169	\$975
2008	\$1,077	\$1,013
2009	\$1,306	\$1,021

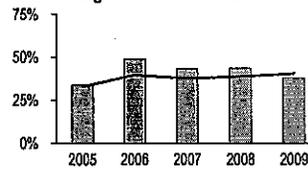
**Hours Billed as a Percentage of Total Hours**



Year	High Point	Average
2005	71%	71%
2006	72%	72%
2007	69%	69%
2008	68%	68%
2009	68%	68%

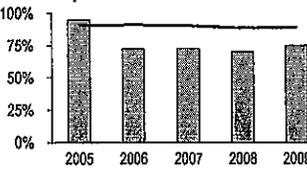
## EFFECTIVENESS Measures

**Preventive Maintenances (PMs) as a Percentage of All Work Orders**



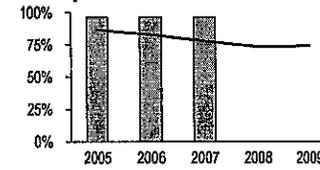
Year	High Point	Average
2005	34%	33%
2006	49%	40%
2007	43%	38%
2008	43%	39%
2009	36%	40%

**Percentage of Preventive Maintenances (PMs) Completed as Scheduled**



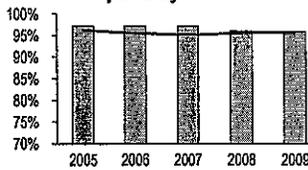
Year	High Point	Average
2005	95%	91%
2006	72%	92%
2007	73%	91%
2008	70%	89%
2009	75%	89%

**Percentage of Work Orders Completed within 24 Hours**



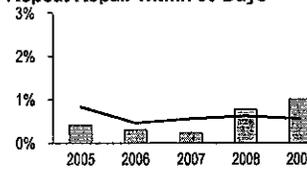
Year	High Point	Average
2005	96%	87%
2006	97%	83%
2007	96%	78%
2008	74%	74%
2009	74%	74%

**Percentage of Rolling Stock Available per Day**



Year	High Point	Average
2005	97%	96%
2006	97%	96%
2007	97%	95%
2008	98%	96%
2009	86%	96%

**Percentage of Work Orders Requiring Repeat Repair within 30 Days**



Year	High Point	Average
2005	0.42%	0.84%
2006	0.31%	0.47%
2007	0.24%	0.57%
2008	0.77%	0.63%
2009	1.01%	0.57%

# High Point

## Fleet Maintenance Fiscal Year 2008-09

### MUNICIPAL PROFILE

Population (OSBM 2008)	100,648
Land Area (Square Miles)	54.00
Persons per Square Mile	1,864

County	Guilford
Topography	Flat; gently rolling

Climate	Temperate
---------	-----------

Rolling Stock Maintained	No.	Average age
Cars—Normal Usage	80	8.0 Years
Cars—Severe Usage	196	6.0 Years
Light Vehicles	238	8.0 Years
Medium Vehicles	40	10.0 Years
Heavy—Sanitation	24	8.0 Years
Heavy—Sewer	5	7.0 Years
Heavy—Fire Apparatus	0	NA
Heavy—Other	55	10.0 Years
Trailed Equipment	118	10.0 Years
Off-road/Construction/Tractors	170	10.0 Years
Buses	0	NA
<b>Total</b>	<b>926</b>	

Vehicle Equivalent Units (VEUs)	2,722
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### FULL COST PROFILE

Cost Breakdown by Percentage	
Personal Services	40.9%
Operating Costs	55.5%
Capital Costs	3.6%
<b>TOTAL</b>	<b>100.0%</b>

Cost Breakdown in Dollars	
Personal Services	\$ 1,453,421
Operating Costs	\$ 1,973,555
Capital Costs	\$ 127,372
<b>TOTAL</b>	<b>\$ 3,554,348</b>

### SERVICE PROFILE

FTE Positions—Technician	14.0
FTE Positions—Other	11.0
 Work Bays	 18
 Average Rolling Stock Units Available Per Day	 886
 Hours Billed	 18,616
 Work Orders	 5,061
Repeat Repairs within 30 Days	51
Work Orders Completed within 24 hours	NA
 Preventive Maintenance (PMs)	 1,905
PMs Completed as Scheduled	1,428

### EXPLANATORY INFORMATION

#### Service Level and Delivery

High Point's Fleet Maintenance Department is a separate entity, consisting of a director, administrative staff, support, 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.

There is no markup charge on parts sold or sublet work. Parts inventory turned four times during the fiscal year.

The following services were contracted out during FY 2008-09:

- 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 completion standard for "percentage of PMs completed as scheduled" is within certain mileage parameters or every three months, whichever comes first.

## 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 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

The cost represents the total cost of human resources for the fiscal year ended June 30, 2008, 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 FY 2007-08.

**7. Employee Total Turnover Rate**

The employee turnover rate is calculated by dividing the total number of separated staff during FY 2008–09 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 FY 2008–09 by the total number of authorized positions. Voluntary separations include retirements and resignations.

**8. 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 FY 2008–09.

**9. 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 FY 2008–09. This measure excludes recruitment of temporary workers.

# Central Human Resources

## Summary of Key Dimensions of Service

City or Town	Total Number of Authorized Municipal Employees	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
Asheville	1,167.0	9.7	149	4,499	322	6 months	11.3%	12.0
Burlington	1,009.0	8.9	25	358	na	6 & 12 months	6.9%	3.0
Carrboro	162.0	9.2	9	521	19	6 & 12 months	7.4%	2.0
Cary	1,169.0	8.8	186	5,200	113	6 & 12 months	4.5%	12.1
Charlotte	6,286.0	10.7	275	47,752	1,908	6 & 12 months	7.5%	32.8
Concord	952.0	7.8	70	5,847	72	6 & 12 months	9.0%	7.5
Durham	2,531.0	9.5	120	13,131	700	6 months	7.3%	19.0
Gastonia	1,061.0	10.0	62	8,364	435	6 & 12 months	6.1%	8.0
Greensboro	3,145.0	1.0	220	5,880	1,052	6 & 12 months	5.3%	33.0
Greenville	732.0	10.0	48	7,909	114	6 & 12 months	6.6%	9.0
Hickory	716.0	10.1	45	2,154	43	12 months	9.6%	6.6
High Point	1,617.0	10.4	258	2,475	102	12 months	4.7%	12.5
Raleigh	3,586.0	9.5	355	14,550	na	6 & 12 months	6.0%	25.0
Salisbury	480.0	9.9	51	2,317	33	6 months	6.0%	6.0
Wilmington	1,036.0	8.2	143	2,179	105	12 & 18 months	20.9%	8.0
Wilson	757.0	10.9	53	2,024	302	12 months	7.4%	6.0
Winston-Salem	2,592.0	11.5	114	23,086	150	none	10.3%	16.8

### NOTES

*For municipalities with varying probationary periods, typically fire and or police personnel have longer probationary periods.*

### EXPLANATORY FACTORS

*These are factors that the project found to affect 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

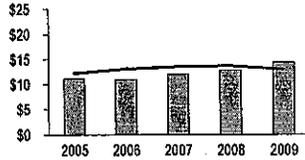
Key: High Point ■

Benchmarking Average —

Fiscal Years 2005 through 2009

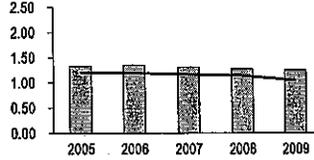
## RESOURCE Measures

**Human Resources Services Cost per Capita**



High Point \$11.09 \$10.82 \$12.02 \$12.74 \$14.32  
Average \$12.25 \$13.17 \$13.57 \$13.73 \$13.01

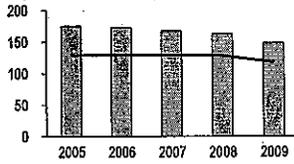
**Human Resources FTEs per 10,000 Population**



High Point 1.33 1.35 1.31 1.27 1.24  
Average 1.21 1.20 1.17 1.14 1.05

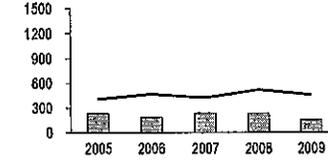
## WORKLOAD Measures

**Total Municipal FTEs per 10,000 Population**



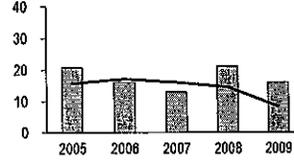
High Point 175 173 167 163 149  
Average 129 129 130 128 119

**Applications Processed per 100 Municipal Employees**



High Point 231 190 234 231 153  
Average 412 473 428 523 462

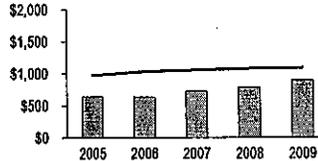
**Position Requisitions per 100 Municipal Employees**



High Point 20.8 16.0 12.9 21.2 16.0  
Average 15.8 17.2 16.1 14.6 8.3

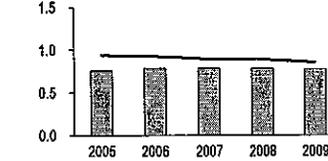
## EFFICIENCY Measures

**Human Resources Cost per Municipal Employee**



High Point \$633 \$631 \$719 \$784 \$891  
Average \$973 \$1,036 \$1,061 \$1,079 \$1,080

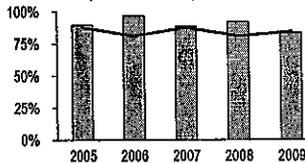
**Ratio of Human Resources Staff to 100 Municipal Employees**



High Point 0.76 0.78 0.78 0.78 0.77  
Average 0.94 0.93 0.90 0.89 0.86

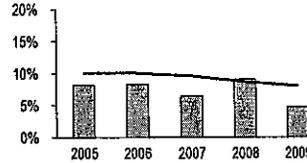
## EFFECTIVENESS Measures

**Probationary Period Completion Rate (New Hires)**



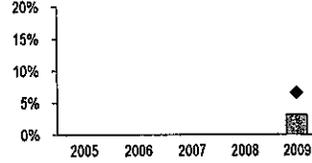
High Point 89% 97% 88% 92% 84%  
Average 88% 81% 88% 81% 84%

**Employee Turnover Rate (All Separations)**



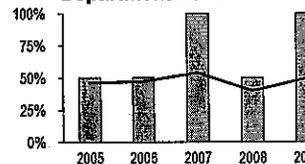
High Point 8.1% 8.3% 6.4% 9.0% 4.7%  
Average 10.1% 10.1% 9.7% 8.7% 8.1%

**Employee Turnover Rate (Voluntary Separations)**



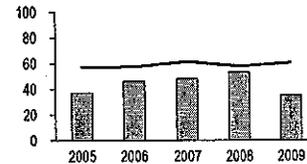
High Point 3.0%  
Average 6.5%

**Percentage of Grievances Resolved at Department Level**



High Point 50% 50% 100% 50% 100%  
Average 46% 47% 54% 40% 50%

**Average Days from Post Date to Hire Date (First Day of Employment)**



High Point 37 46 48 53 35  
Average 57 58 62 58 61

# High Point

MUNICIPAL PROFILE	
Population (OSBM 2008)	100,648
Land Area (Square Miles)	54.00
Persons per Square Mile	1,864
Unemployment Rate (ESC-08)	8.2%
County	Guilford
Topography	Flat; gently rolling
Climate	Temperate

FULL COST PROFILE	
Cost Breakdown by Percentage	
Personal Services	72.8%
Operating Costs	26.2%
Capital Costs	0.9%
<b>TOTAL</b>	<b>100.0%</b>
Cost Breakdown in Dollars	
Personal Services	\$ 1,050,073
Operating Costs	\$ 378,142
Capital Costs	\$ 13,225
<b>TOTAL</b>	<b>\$ 1,441,440</b>

SERVICE PROFILE	
FTE Positions	
Administration	5.00
Generalist/Specialist	6.50
Staff Support (Clerical)	1.00
Total Authorized Workforce	1,617
Authorized FTEs	1,497
Number of Position Requisitions	258
Employment Applications Processed	2,475
Employee Turnover	
Voluntary Separations	49
Involuntary Separations	27
Total Separations	76
Average Length of Service (Months)	125.0
Formal Grievances Filed by Employees	4
EEOC Complaints Filed	0
Length of Probationary Employment Period	12 months
Compensation Studies Completed	1
Positions Studied	454

## 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, 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, DOT, and North Carolina workers' compensation regulations.

One compensation study was conducted in FY 2008–09 that included the review of multiple job classifications and 454 positions.

The city's probationary period was 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

## PERFORMANCE MEASURES FOR WATER SERVICES

### SERVICE DEFINITION

This includes the collection, treatment, distribution, and billing related to drinking water services. This service area 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 Thousand Gallons of Billed Water

This efficiency measure shows the total system costs per thousand 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 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 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	Treatment Plants	Total Treatment Capacity for Finished Water in MGD	Miles of Water Main Lines	Number of Water Meters	Water System FTE Positions
Asheville	123,750	183.0	20.5	3	43.5	1,653.0	55,171	153.0
Burlington	52,000	40.9	10.9	2	34.0	425.4	20,831	35.0
Charlotte	902,803	544.8	98.9	3	242.0	4,025.0	259,179	403.0
Concord	83,805	173.4	9.5	2	24.0	662.0	33,522	83.0
Durham	227,736	143.0	26.1	2	52.0	1,235.8	84,211	140.0
Gastonia	84,232	56.1	11.4	1	25.1	548.2	27,974	76.0
Greensboro	255,000	137.2	31.0	2	54.0	1,465.1	100,955	165.5
Hickory	92,000	326.0	13.0	1	32.0	890.0	27,568	60.5
High Point	105,000	64.0	11.7	1	24.0	677.6	39,963	60.0
Raleigh	435,000	285.0	47.0	2	86.0	2,229.0	173,785	296.0
Salisbury	51,275	44.5	7.7	1	25.0	382.9	17,100	47.0
Wilson	50,947	99.0	8.6	2	22.0	405.0	21,945	46.0
Winston-Salem	286,028	325.0	36.8	3	97.0	2,087.8	120,191	226.0

### NOTES

MGD stands for millions of gallons per day.

### EXPLANATORY FACTORS

These are factors that the project found to affect 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

# High Point

# Water Services

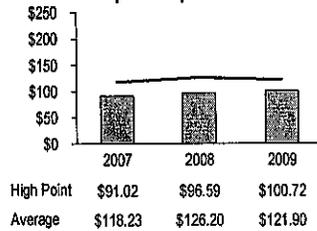
Key: High Point ■

Benchmarking Average —

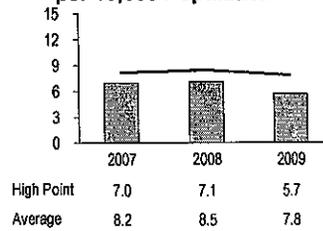
Fiscal Years 2007 through 2009

## RESOURCE Measures

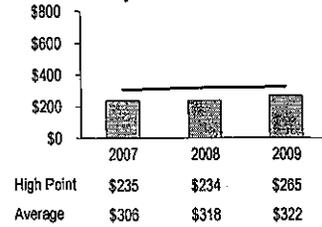
**Water Services Cost per Capita**



**Water Services FTEs per 10,000 Population**

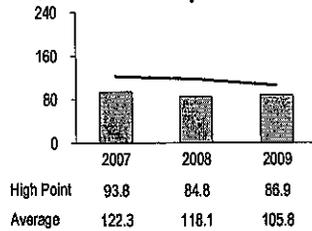


**Water Services Cost per Meter**

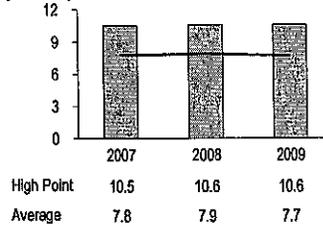


## WORKLOAD Measures

**Thousands of Gallons of Billed Water per Meter**

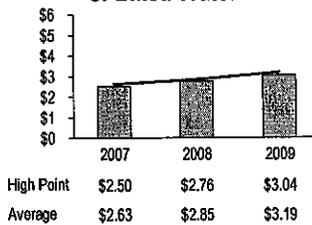


**Miles of Main Line Pipe per Square Mile of Service Area**

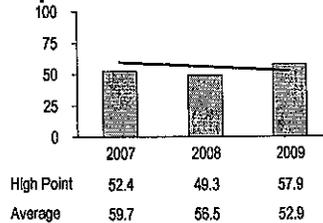


## EFFICIENCY Measures

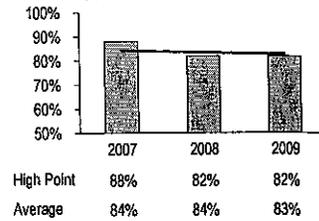
**Total Cost per Thousand Gallons of Billed Water**



**Million Gallons of Billed Water per Water Services FTEs**

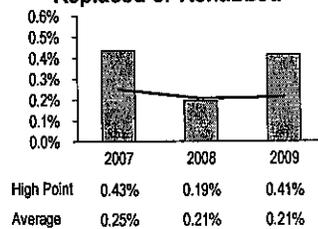


**Billed Water as a Percentage of Finished Water**

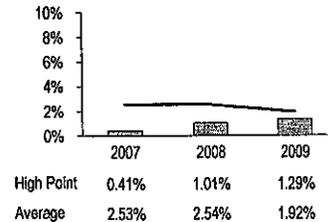


## EFFECTIVENESS Measures

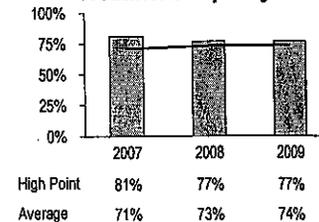
**Percentage of Existing Pipeline Replaced or Rehabbed**



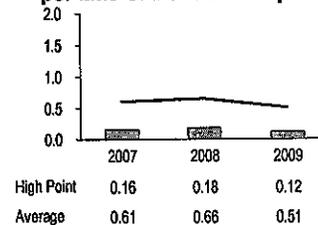
**Percentage of Water Bills Not Collected**



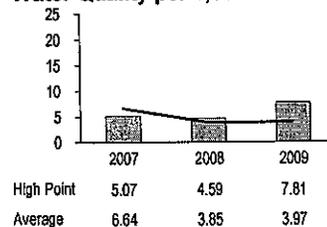
**Peak Daily Demand as a Percentage of Treatment Capacity**



**Breaks and Leaks per Mile of Main Line Pipe**



**Customer Complaints about Water Quality per 1,000 Meters**



# High Point

Fiscal Year 2008-09

MUNICIPAL PROFILE	
Estimated Service Population	105,000
Service Land Area (Square Miles)	64.0
Persons per Square Mile	1,641
County	Guilford
Topography	Flat, gently rolling
Climate	Temperate; some ice and snow
Median Family Income (US Census 2000)	\$48,057

FULL COST PROFILE	
Cost Breakdown by Percentage	
Personal Services	30.7%
Operating Costs	36.2%
Capital Costs	33.2%
<b>TOTAL</b>	<b>100.0%</b>
Cost Breakdown in Dollars	
Personal Services	\$ 3,241,793
Operating Costs	\$ 3,823,124
Capital Costs	\$ 3,510,649
<b>TOTAL</b>	<b>\$ 10,575,566</b>

SERVICE PROFILE	
FTE Staff Positions	
Treatment Plant	13.0
Line Crews	21.0
Meter Readers	5.0
Billing/Collection	6.0
Other	15.0
Number of Treatment Plants	1
Total Treatment Capacity	24.0 MG
Average Daily Demand	11.7 MG
Miles of Mainline Pipe	678
Average Age of Mainline Pipe	50 years
Number of Breaks/Leaks	82
Number of Water Meters	39,963
Percent of Meters Read Automatically	3.5%
Total Revenues Collected	\$14,831,786

**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 105,000 people.

Water source for the system is two city-owned reservoirs located in the Deep River basin. The estimated safe yield of the system is twenty-five million gallons per day. The system has one treatment plant and uses a upflow clarification process and a super "U" pulsator with a treatment capacity of twenty-four million gallons per day.

Water meters are read monthly. Nearly four 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**  
 Water Services is a new service area for the benchmarking project beginning with Fiscal Year 2006-07.

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 they do not pay their bill. In addition, High Point performs a credit check based on the customer's payment history with Equifax.

The costs of water service as captured here do not include debt service but do capture depreciation.