



The Research Bureau

Benchmarking Public Safety in Worcester: 2010

Report 10-04
July 26, 2010

Dear Citizen,

This is the seventh annual report on the status of public safety in Worcester prepared by The Research Bureau. The indicators in this report describe the performance of Worcester's police, fire, and ambulance/emergency medical services. We continue to monitor the same five indicators discussed in previous reports: crime rates, perceptions of crime and neighborhood safety, allegations of police misconduct, fire suppression and first responder services, and advanced life support/ambulance services. We measure performance by asking "What has changed since last year, what have we accomplished, and what challenges remain?"

*It is important to bear in mind that no single indicator presented here should be considered in isolation. In other words, context is important, and the indicators included in this report are interrelated. For example, increased interaction and information sharing between residents and police officers (see **Indicator 2**) may lead to reductions in certain types of crime measured in **Indicator 1**.*

Thank you for taking the time to read this report. We hope that it will encourage widespread discussion of public safety issues, serve as a basis for sound priority-setting and decision-making, and further the adoption of performance measurement practices at the municipal level.

Sincerely,



Sandra Dunn, Chairman of the Board



Roberta R. Schaefer, Ph.D., President & CEO



Laura M. Swanson, Project Manager

WORCESTER POLICE DEPARTMENT: DEPARTMENT OVERVIEW AND INPUT INDICATORS

The mission of the Worcester Police Department is to promote the highest level of public safety and quality of life in the City of Worcester, through exceptional police services to the City's residents, businesses, and visitors.¹

The Worcester Police Department's FY10 budget of \$38.9 million (excluding fringe benefits and excluding capital expenditures) comprised 7.9% of the City's annual operating budget. As shown in the table below, the WPD's expenditures have increased by about 8% over the past five years, from \$36.1 million in FY06 to \$38.9 million (budgeted) in FY10. However, between FY09 and FY10, WPD's expenditures decreased by almost 6% due to citywide budget cuts. These cuts resulted in the elimination of 31 recruit positions, 9 vacant officer positions, 24 police officer positions, and 4 civilian positions.

In FY10, the department budget authorized funding for 51 civilian personnel positions, the same amount that had been budgeted in

FY06, but a 13% increase from FY09. However, the number of budgeted uniformed officer positions has steadily decreased from 475 in FY06 to 416 in FY10 (a 12.4% decrease), with a 9% decrease from FY09 to FY10. Twenty-four of the eliminated officer positions described above add to the 416 which are funded with stimulus money through November 2010. However, after that date, the City Manager plans to fund these positions through the regular General Fund budget.

In 2008, the average number of police department employees (uniformed and civilian) in Northeast cities with populations of 100,000 to 249,999 was 3.5 per 1,000 residents, compared to 2.7 per 1,000 in Worcester. Uniformed officers averaged 2.9 per 1,000 residents in these same Northeast cities, while the City of Worcester averaged 2.4 per 1,000.²

Benchmarking Public Safety in Worcester: 2010

Worcester Police Department						
	FY06	FY07	FY08	FY09	FY10	% Change FY06-FY10
Expenditures*	\$36,133,284	\$41,143,952	\$40,110,711	\$41,382,085	\$38,947,555	7.8%
Expenditures per capita	\$205.42	\$234.41	\$228.52	\$235.77	\$221.90	8.0%
Salaries**	\$31,280,700	\$34,632,740	\$34,659,425	\$36,585,880	\$34,470,680	10.2%
Salaries Expenditures per capita	\$177.83	\$197.31	\$197.47	\$208.44	\$196.39	10.4%
Ordinary Maintenance	\$1,650,000	\$1,836,340	\$2,193,193	\$1,815,000	\$1,839,845	11.5%
OM Expenditures per capita	\$9.38	\$10.46	\$12.50	\$10.34	\$10.48	11.7%
Uniformed Positions	475	473	471	458	416	-12.4%
Officers per 1,000 Population	2.7	2.7	2.7	2.6	2.4	
Civilian Positions	51	52	48	45	51	0.0%
Civilians per 1,000 population	0.3	0.3	0.3	0.3	0.3	
Total Positions	526	525	519	503	467	-11.2%
Total Law Enforcement positions per 1,000 population	3.0	3.0	3.0	2.9	2.7	

*Excluding capital expenditures and fringe benefits

** Does not include benefits

Data Sources: *Comprehensive Annual Financial Reports*, Office of the City Auditor (Actual expenditures for fiscal years 2006 and

2007) and *City of Worcester Annual Budget* (Actual Budget for FY08, Approved Budget for FY09, and Recommended Appropriation FY10). Uniformed and civilian positions reflect budgeted positions in the *City of Worcester Annual Budgets* for the years FY06 - FY10.

INDICATOR 1: CRIME RATES AND ARRESTS

Why are they important?

Crime rates are basic indicators of public safety. Crime not only affects the quality of life of those who directly experience or witness it, but may also impact the lives of others in the community who feel threatened by it, undermining their sense of personal security. Low crime rates promote neighborhood stability and increase a community's attractiveness as a place to live, work, and conduct business. Accurate and timely crime data are a tool that enable the police to identify trends in the types of crimes and the geographic areas in which they occur. These data enable the police to deploy resources most effectively.

How does Worcester perform?

In 2009, there were a total of 119,009 incidents that occurred in the city.³ As shown in **Table 1.1**, about eight out of ten of these incidents (79.7%) were reported by citizens (primarily 9-1-1 emergency calls), while 18% were officer-initiated (the remaining incidents were of "unknown origin"). The total number of incidents police respond to annually has been increasing since 2007,

from 103,019 in 2007 to 119,009 in 2009 (a 15.5% increase). Over a five-year period, the number of total incidents has increased by 22.5%.

The number of arrests made by the WPD in 2009 was at a five-year low, with 7,189 arrests (a 10.5% decrease from 2005, when there were 8,028 arrests). In 2007, there were 9,223 arrests made, a five-year high. More detailed arrest data is not available at this time, and will be updated at a later date.

During calendar year 2008, 1,720 violent crimes and 6,362 property crimes were reported in Worcester.⁴ (Preliminary data from 2009 show 1,790 violent crimes and 6,691 property crimes.) Aggravated assaults comprised three-fourths of the reported violent crimes (75%), followed by robbery (22%), rape (2.5%), and murder (0.4%). The number of reported violent crimes has been increasing since 2004, from 1,383 in 2004 to 1,790 in 2009 (an almost 30% increase). The increase has been concentrated in aggravated assaults, while the other categories of violent

Incidents:	2005	2006	2007	2008	2009	% Change 2005-2009
Total Incidents	97,163	95,313	103,019	108,121	119,009	22.5%
Citizen-Reported	74,697	75,184	82,211	87,146	94,871	27.0%
WPD-Initiated	22,466	20,229	20,808	20,975	20,945	-6.8%
Arrests:						
Total arrests made by WPD	8,028	8,698	9,223	8,393	7,189	-10.5%

Source: Worcester Police Department, Crime Analysis Unit, Police Incident Statistics

crime have remained more or less stable.

Larceny constituted the greatest proportion of property crimes reported in Worcester in 2008 (63%), followed by burglary (27%) and motor vehicle theft (11%). From 2006 to 2009, the number of property crimes in the city rose from 5,660 in 06 to 6,691 (an 18% increase). Larceny appears to be the category of property crime that is mostly responsible for this increase; it has risen 31% since 2006. On the other hand, motor vehicle theft has decreased about 31% since 2006.

Table 1.2 shows trends in reported property and violent crime rates for Worcester and several other Northeastern cities since 2002. Worcester has typically experienced lower crime rates than Bridgeport, Hartford, and Springfield. Among the six cities examined, Worcester's property crime rate has consistently been the second-lowest. In 2008 and 2009, its violent crime rate was higher only than that of Providence out of the six cities.

While Worcester experienced an increase (12%) in the number of reported violent crimes in 2008 compared to 2007 (1,531 in 2007 compared to 1,720 in 2008), the New England region also saw an increase in reported violent crimes from 2007 to 2008 (7.7%), and Massachusetts experienced a 4.8% increase (nationwide there was a 2% decrease between these two years). Reported property crimes in Worcester also rose from 2007 to 2008 (from 6,362 to 6,691, respectively), a 5.2% increase. New England experienced a 2.5% increase in property crime during this period, while nationwide, property crimes were down by .8%.

What does this mean for Worcester?

Annual data for the five-year period from 2005 to 2009 show that the number of incidents (criminal and non-criminal) entailing police response increased by more than 21,000 (22.5%). According to Worcester's Police Chief Gemme, personnel reductions in the department may have resulted in the increase in calls for service (citizen-initiated calls) while patrol-initiated incidents have

Table 1.2: Reported Crimes per 10,000 Population

	Bridgeport, CT		Hartford, CT		Lowell, MA		Springfield, MA		Worcester, MA		Providence, RI	
	Violent	Property	Violent	Property	Violent	Property	Violent	Property	Violent	Property	Violent	Property
2002	121.4	491.0	124.3	749.4	81.3	326.3	204.1	736.2	NA	NA	74.0	713.7
2003	97.5	457.3	145.4	791.0	83.2	295.9	191.4	763.6	87.5	434.9	78.9	627.2
2004	101.4	445.9	121.3	878.6	95.4	309.8	183.7	655.7	78.6	371.4	60.7	583.9
2005	108.5	512.1	115.9	764.7	97.9	319.6	177.4	573.6	79.0	345.5	68.2	515.9
2006	108.7	503.4	128.0	710.4	88.7	323.1	148.2	572.5	84.7	319.9	55.4	489.3
2007	116.5	477.8	113.3	578.5	85.0	323.2	136.9	525.7	87.1	342.7	56.0	475.6
2008	120.1	452.6	121.1	513.8	112.6	361.9	126.0	488.0	98.3	363.5	67.8	528.7
2009*	111.9	411.6	129.2	498.9	N/A	N/A	128.1	499.1	102.3	382.3	69.0	463.5

*preliminary

Source: Rates calculated by The Research Bureau using FBI Uniform Crime Reports data.

decreased and the number of arrests have decreased.⁵ Although a decrease in the number of arrests might sound like a positive development, the decline could simply be due to fewer officers patrolling the streets.⁶

While the number of reported violent crimes in the city has been increasing, the rate is still lower than several similar urban areas. Following national trends, aggravated assault has been the most frequently reported violent offense in Worcester since 2003 (recently, about three-fourths of violent offenses reported to the WPD). According to Chief Gemme, there has been a slight increase in the number of robberies in the City (armed and unarmed), with many of these occurring after midnight.⁷ Possibly due to the downturn in the economy, some property crimes have been on the rise, such as larceny (theft).

Since his appointment in late 2004, Police Chief Gemme has implemented a department restructuring designed to meet one of the primary goals of the WPD: to work more closely with City residents to address both crime and quality-of-life issues. The expansion of the Department's Crime Analysis Unit ensures that officers have timely and accurate data to aid in solving crime and quality-of-life issues. WPD is sharing its data with the community, and with the reorganization of its community policing efforts is working systematically with neighborhood groups, according to Chief Gemme, to combat identified problems and to develop tactics that anticipate problems rather than simply reacting to them.

INDICATOR 2: PERCEPTIONS OF CRIME AND SAFETY (QUALITY OF POLICE SERVICES)

Why is it important?

Citizen perceptions of public safety are important to a community's vibrance and can affect the quality of life in a community or in a neighborhood. Perception that a neighborhood is unsafe can lead to decreased neighborhood investment, mistrust of the local police force, and decreases in participation in community activities. Measuring citizens' perceptions of public safety in their neighborhood and in the larger community is important partly in order to locate gaps between perception and reality. Local police departments can then work with the community to correct misperceptions as well as tackling substantive problems identified by the community.

How does Worcester perform?

The Research Bureau administers an annual survey of participants in the more than 50 neighborhood associations/ Neighborhood Watch groups throughout the City. The majority of these groups meet on a monthly basis to discuss a variety of neighborhood issues, including public safety and quality-of-life concerns. Most of these groups have a police officer assigned to them through the WPD's Community Impact Division. During the spring of 2010, 148 participants from 20 of the neighborhood associations responded to a survey which measures

participants' perceptions of neighborhood safety, their assessment of WPD performance, and quality-of-life issues. Among respondents, two-thirds have participated in their neighborhood groups for two or more years, and 60% have lived in their neighborhoods for more than twenty years.

When asked how they rated the safety of their neighborhood in general, 57% of respondents said "good" or "very good," while 37% responded with "average" and 6% with "poor." (Respondents provided a similar response to this question in 2009.) The survey also asked respondents whether they thought crime in their neighborhoods had increased, decreased, or stayed the same during the past year. About 64% of respondents thought that the level of crime had stayed the same, while 24% thought it had decreased, and 13% thought it had increased. (In 2009, 52% of respondents said "stayed the same," 27% thought it had decreased, and 21% thought it had increased.)

While 88% of respondents said they felt safe walking alone in their neighborhoods during the daytime, only 57% said they felt safe walking alone at nighttime (about a 30 percentage point decrease). When asked to identify

specific times of day when greater police presence in general is needed, 41% of the responses indicated that the greatest need was “nighttime/after dark” followed by “after school/early evening” (27%).

Participants were also asked to identify the most serious problem facing their neighborhood. Twenty-eight percent of responses identified drugs and alcohol as the most serious issue, followed by traffic-related issues (speeding, poor traffic flow, etc.) with 15% of total responses.⁸ About 9.5% of responses cited break-ins, burglaries, or theft as the most serious problem. Respondents were also asked to cite the major cause or source of crime in their neighborhood. While the most cited

cause/source was drugs and/or alcohol, a small percentage of respondents replied that the current economic situation or loss of jobs was the source, a response not widely cited in previous surveys.

Table 2.1 shows respondents’ assessment of WPD performance regarding overall quality of services provided, officers’ interactions with citizens, officers’ responsiveness to quality-of-life concerns, and WPD’s responsiveness to the community’s overall policing needs over the past three years. In 2010, about 84% of respondents judged that the quality of services provided in their neighborhoods was “good” or “very good,” while 76% felt that WPD’s

Table 2.1: Neighborhood Watch Respondent Ratings of WPD Performance

	Year	n	Very Poor	Poor	Average	Good	Very Good
Quality of services provided by WPD in your neighborhood	2005	129	1.6%	10.1%	33.3%	41.1%	14.0%
	2006	183	1.6%	9.3%	28.4%	40.4%	20.2%
	2007	127	0.8%	3.9%	20.5%	47.2%	27.6%
	2009	266	0.4%	3.0%	23.3%	46.6%	26.7%
	2010	132	1.1%	1.1%	14.1%	40.2%	43.5%
WPD officers' attitude and behavior toward citizens	2005	125	0.8%	7.2%	20.8%	42.4%	28.8%
	2006	182	1.1%	6.6%	20.3%	38.5%	33.5%
	2007	127	0.8%	2.4%	16.5%	35.4%	44.9%
	2009	271	0.7%	1.9%	17.0%	40.6%	39.9%
	2010	114	1.4%	0.0%	8.1%	35.1%	55.4%
WPD's responsiveness to quality-of-life issues in the community (neighborhood disputes, loud noise concerns, graffiti, etc.)	2005	121	5.8%	10.7%	28.1%	38.0%	17.4%
	2006	179	3.4%	13.4%	30.2%	32.4%	20.7%
	2007	121	0.8%	6.6%	22.3%	41.3%	28.9%
	2009	264	0.8%	4.6%	20.1%	40.5%	34.1%
	2010	131	1.1%	4.4%	14.3%	39.6%	40.7%
WPD's responsiveness to the community's overall policing needs	2005	126	0.8%	11.1%	27.8%	45.2%	15.1%
	2006	175	3.4%	6.3%	30.9%	39.4%	20.0%
	2007	117	0.0%	6.8%	21.4%	44.4%	27.4%
	2009	253	0.0%	2.8%	21.0%	44.7%	31.6%
	2010	103	1.6%	4.8%	17.5%	49.2%	27.0%

responsiveness to the community's overall policing needs was "good" or "very good." Officers' attitudes and behavior towards citizens received the highest rating, with 91% of respondents giving a rating of good/very good, 8% an average rating, and 1% a poor rating (only one individual offered a response of "very poor").

Ninety percent of respondents reported that a police officer always attends the neighborhood meeting while the remaining 10% indicated that an officer attends "most of the time." In addition, 92% reported that the same police officer attends each meeting. Only 6% of respondents felt that they were uninformed about WPD projects, programs, activities, and services. An overwhelming majority of respondents - about 97% - thought that Neighborhood Watch groups made their neighborhood safer.

What does this mean for Worcester?

Having this information about citizens' perceptions of crime and neighborhood issues provides the WPD with an

opportunity to compare perception to reality, as tracked by the Department's expanded use of neighborhood-level crime data, and respond to citizen concerns appropriately through the community policing program.

Citizen perception of neighborhood safety and police performance are especially important to consider now that public safety departments have suffered budget cuts and decreases in personnel. When asked about the overall safety of their neighborhood, respondents provided answers similar to those given last year. Also, whereas in 2009 21% of respondents reported that they thought crime in their neighborhood had increased over the past year, in 2010 this figure dropped to 13%. Ratings of WPD performance were steady or even showed an improvement from the previous year. Although there may be fewer police on patrol, it appears that the public does not, at this time, perceive the city to be less safe as a result.

INDICATOR 3: ALLEGATIONS OF POLICE MISCONDUCT

Why is it important?

Police departments are obligated to ensure that their personnel are performing their duties in accordance with the law, professional standards, and established internal procedures. The Worcester Police Department's complaint investigation procedure provides a venue for citizens to express concerns about police conduct. The review process holds officers accountable for improper behavior, but also protects police officers against unwarranted criticism while fulfilling their duties. Citizen trust in the fairness of police conduct is essential to effective policing. When trust in a police department erodes, citizens can become hesitant to report crimes or assist in police investigations. Therefore, the quality of each of the thousands of police-citizen interactions can shape both perceptions and outcomes. (Continued improvement in, and strengthening of, police-community relations is the goal of the Worcester Police Department's community policing initiative.)

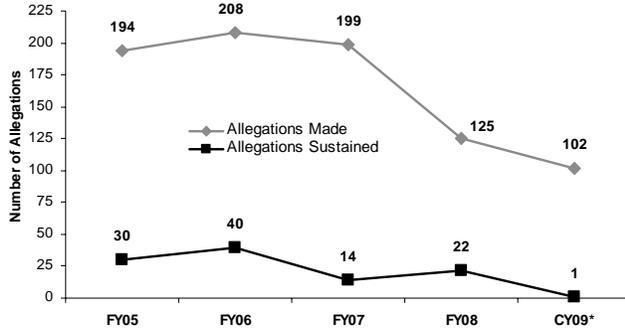
WPD's Bureau of Professional Standards reviews and investigates all citizen complaints alleging police officer misconduct. The complaint investigation process begins when the complainant or his representative (such as an attorney or family member) files a

complaint with the department. The type of review is determined by the nature of the complaint. More serious complaints are investigated by the Bureau of Professional Standards (BPS), while other complaints may be reviewed by the commander or supervisor of the officer involved, with the BPS remaining involved in the process. During the investigation, the department will speak with the complainant and any other witnesses. Once a decision about the complaint is made, the citizen complainant and the officer are notified by mail of the results. No matter the outcome of the complaint, the letter informs the complainant that the results of the investigation do not prevent the complainant from further pursuing the complaint with another party (which may involve an outside agency, such as the District Attorney or Attorney General). Complaints may take between a month and six months to resolve, depending on the complaint.

How does Worcester perform?

In 2009, there were 41 complaints against the WPD, containing 102 allegations.^{9,10} As shown in **Chart 3.1**, the number of allegations of misconduct has been steadily decreasing since FY06, and reached a five-year low in CY09. From FY07 to CY09 alone, the number of allegations made dropped by almost

Chart 3.1: Allegations of Police Misconduct



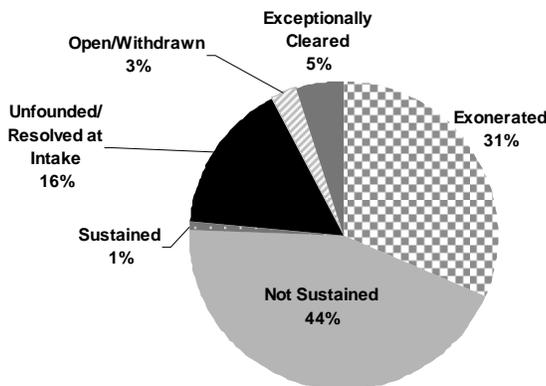
*The WPD's Bureau of Professional Standards now uses the calendar year for tabulating complaints.
Source: Worcester Police Department, Bureau of Professional Standards

50%. In 2009, only one allegation was sustained, also a five-year low.

As shown in **Chart 3.2**, 44% of allegations made in 2009 were not sustained, or there was insufficient evidence to prove or disprove these allegations. Sixteen percent of allegations in 2009 were determined to be unfounded or resolved at intake, and almost one-third (31%) resulted in the officer being exonerated of any unlawful or improper conduct. Only one allegation was sustained (1%), or those in which evidence supports the alleged improper conduct.

Allegations are deemed *unfounded/resolved at intake* if the investigation indicates that the act or acts complained of did not occur, or they did not involve police department personnel. Allegations are *not sustained* if there is insufficient evidence to prove or disprove the charge, while *exonerated* indicates that the actions taken by the officer were found to be justified, lawful, and proper. *Sustained* allegations are those in which the investigation discloses sufficient evidence to prove the allegations made in the complaint. *Exceptionally cleared* occurs when a factor that is external to the investigation interrupts or halts the process, such as when the individual who filed the complaint refuses to cooperate in the investigation. *Open* includes complaints or allegations that are in their concluding stages, awaiting court or other judicial dispositions, or are open due to circumstances beyond the control of the WPD.

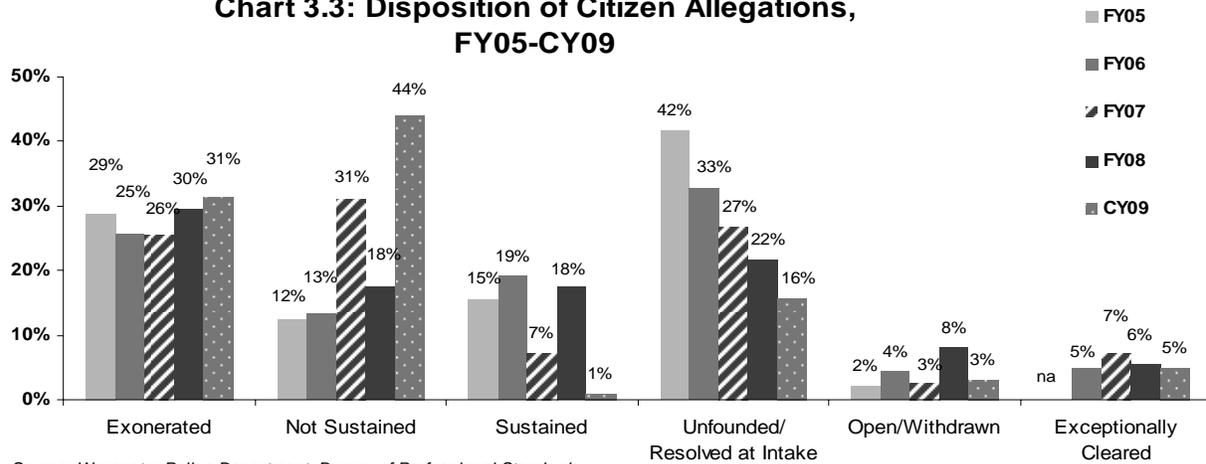
Chart 3.2: Disposition of Citizen Allegations, CY09 (N=102)



Source: Worcester Police Department, Bureau of Professional Standards

Chart 3.3 shows the disposition of allegations from each of the past five years. From FY05 to 2009, the percentage of allegations resulting in exoneration remained similar (29% in FY05 and 31% in 2009). As mentioned previously, the number of allegations sustained was at a five-year low in 2009, with only one allegation sustained in 2009. (In FY08, this figure was 18% of total allegations). The proportion of allegations that were

Chart 3.3: Disposition of Citizen Allegations, FY05-CY09



Source: Worcester Police Department, Bureau of Professional Standards

determined to be unfounded or were resolved at intake has been steadily declining over the past five years, from 42% of allegations in FY05 to 16% in 2009, while the percent that were “not sustained” rose from 12% to 44%. In FY06, “exceptionally cleared” (when a factor external to the investigation interrupts or halts the process) was added as a new category of complaints and constituted about 5% of all allegations in 2009.

What does this mean for Worcester?

During the five-year period from FY05 to CY09 the number of allegations of police misconduct contained in citizen complaints decreased by 47%, from 194 to 102 allegations. WPD’s Bureau of Professional Standards and its Training Division play an important role in ensuring that the department is able to hold complaints to a minimum, and that when complaints do occur, they are dealt with promptly. Ongoing training of officers and a continuous review of the Department’s standards of practice

have been recognized as elements critical to the success of the Chief’s reorganization initiative. For example, citizen support of community policing will likely be strongest if citizens perceive a fair and timely review of complaints that are made, and think that the process is transparent. Questions regarding citizen awareness of the Bureau of Professional Standards process and outcomes may be added to future citizen satisfaction surveys (see **Indicator 2: Police-Community Relations**). Additionally, further monitoring of the average length of time it takes to complete an investigation ought to be considered. We do not know whether the open allegations represent complaints received at year end (which may then be resolved in a timely manner early the next year), or whether they represent investigations which have not been completed in a timely manner. Again, the cuts in the WPD made as a result of reductions in local aid will have to be monitored for any impact on the professionalism of the Department.

WORCESTER FIRE DEPARTMENT: DEPARTMENT OVERVIEW AND INPUT INDICATORS

The mission of the Worcester Fire Department is to protect the lives and property of the visitors and citizens of Worcester from the adverse effects of fire, medical emergencies, and other hazardous conditions both man-made and natural.¹¹

The Worcester Fire Department's (WFD) FY10 budget of \$32.2 million (excluding fringe benefits and capital expenditures) comprised 6.6% of the City's total operating budget. The budget authorized funding for 384 firefighters and 8 civilian personnel, who are assigned to 21 fire companies located in 10 fire stations throughout Worcester. The City's land area encompasses 39 square miles, supporting densely-populated residential areas containing single- and multi-family dwellings; an urban core containing high-rise and office buildings; industrial and manufacturing complexes; and several hospitals and colleges, all of which are served by the WFD. The Fire Chief has management oversight of the department and its daily operations.

Firefighters respond to all fire and hazardous-materials situations occurring within the City, and they may also be dispatched as first responders in medical emergencies. All fire companies are equipped with semi-automatic external defibrillators which enable

firefighters to provide early critical care to cardiac-arrest patients. The WFD provides basic life-support training (first aid and CPR) to the community and is one of the largest first aid and CPR certifying agencies in central Massachusetts. The Department sponsors numerous fire-prevention and fire-safety programs, and firefighters perform inspections to ensure that commercial and retail establishments comply with fire safety standards, as well as regular inspections of warehouses and vacant buildings within the City.

As shown in the table below, the WFD's budget increased by 2.2% from FY06 to FY10, from \$31.54 million in FY06 to \$32.23 million in FY10. However, from FY09 to FY10, the department's budget decreased by almost 8% due to City budget cuts. A total of 25 positions were eliminated for FY10, including 17 recruit positions, 5 vacant uniformed positions, and 3 civilian positions. During the five-year period between FY06 and FY10, staffing levels declined by 8.6% (from 429 to 392 positions). During FY06, there were 2.4 budgeted firefighter positions per 1,000 Worcester residents; by FY10, this ratio was 2.2 per 1,000.

Worcester Fire Department Overview						
	FY06	FY07	FY08	FY09	FY10	% Change FY06-FY10
Expenditures*	\$31,542,394	\$31,843,471	\$34,170,335	\$34,856,181	\$32,230,467	2.2%
Expenditures per capita	\$179.32	\$181.42	\$194.68	\$198.59	\$183.63	2.4%
Salaries**	\$29,255,939	\$29,372,207	\$30,556,089	\$32,252,561	\$30,754,354	5.1%
Salary Expenditures per capita	\$166.32	\$167.34	\$174.09	\$183.75	\$175.22	5.3%
Ordinary Maintenance	\$1,161,512	\$1,213,292	\$1,362,235	\$913,840	\$918,735	-20.9%
OM Expenditures per capita	\$6.60	\$6.91	\$7.76	\$5.21	\$5.23	-20.7%
Total Positions (Budgeted)	429	421	417	417	392	-8.6%
<i>Total per 1,000 population</i>	2.4	2.4	2.4	2.4	2.2	
Firefighter Positions (Budgeted)	418	410	406	406	384	-8.1%
<i>Firefighters per 1,000 population</i>	2.4	2.3	2.3	2.3	2.2	
Civilian Positions (Budgeted)	11	11	11	11	8	-27.3%
<i>Civilian positions per 1,000 population</i>	0.1	0.1	0.1	0.1	0.05	
<p>*Excluding capital expenditures and fringe benefits **Does not include benefits Data Sources: <i>Comprehensive Annual Financial Reports</i>, Office of the City Auditor (Actual expenditures for FY06-FY07) and <i>City of Worcester Annual Budget</i> (Actual Budget for FY08, Approved Budget for FY09 and Recommended Appropriation for FY10). Firefighter and civilian positions reflect budgeted positions in the <i>City of Worcester Annual Budgets for the years FY06 - FY10</i>.</p>						

INDICATOR 4: FIRE SUPPRESSION AND FIRST-RESPONDER SERVICES

Why is it important?

The number of fire-suppression responses, first-responder calls, inspections, and fire safety and prevention activities is an indicator of the fire department's workload. The ability of emergency personnel to respond quickly to a fire or other emergency situations may be the difference between minimal and total property loss, or even life and death. Therefore, fire response time is a critical measure when assessing the overall safety of a community, and it is important that fire departments be able to assess and identify factors that delay responses, including resource allocation. Additionally, tracking both the frequency and location of fires and emergency situations to which fire personnel respond enables the Chief and City officials to examine coverage to ensure that appropriate protection is provided to all areas. Finally, continued efforts to promote awareness of fire prevention and fire safety are important functions of any fire department.

How does Worcester perform?

In 2009, the Worcester Fire Department (WFD) responded to 28,307 calls for service, an increase of 28% compared to 2005. This is primarily due to an increase in first responder/rescue calls, which continue to represent the largest proportion of calls to which WFD

responds. They comprised close to three-quarters (73%) of all incidents in 2009.¹² As shown in **Table 4.1**, in 2009, WFD responded to 706 structure fires, a 6% decrease from 2005. From 2005 to 2009, the number of false alarms to which WFD responded increased by about 14%, from 3,102 to 3,521. The number of hazardous conditions (no fire) that WFD responded to in 2009 was a 30% decrease from 2005, and a 55% decrease from 2008.

Worcester Fire Department's average response time, or the time from dispatch to arrival on scene, has been slowly increasing since 2006, from 3 minutes 59 seconds to 4 minutes 37 seconds in 2009. (However, the number of incidents the department has responded to has also increased during this time.) The average response time for fire incidents was 3 minutes 27 seconds, and 4 minutes 40 seconds for EMS incidents. For fire responses, the industry standard is a 1 minute turnout time and 4 minutes response, while EMS incidents have a standard of 8 minutes for turnout and response.¹³ Worcester's average response times are considerably better than these standards.

Table 4.1: Worcester Fire Department Incidents and Response Times						
	2005	2006	2007	2008	2009	% Change 2005-2009
Total Incidents/Dispatched Calls	22,070	23,427	24,735	28,953	28,307	28.3%
First Responder/Rescue Calls	14,558	15,663	16,873	19,939	20,664	41.9%
Structure Fires	749	678	725	831	706	-5.7%
Incendiary (Arson)	29	28	32	37	39	34.5%
Vehicle Fires	184	139	132	123	120	-34.8%
Hazardous Conditions without a Fire (e.g., chemical spills, natural gas leaks, electrical equipment)	726	825	690	1,152	514	-29.2%
Good Intent	1,322	1,109	1,452	1,580	1,315	-0.5%
False Alarms	3,102	2,971	3,134	3,765	3,521	13.5%
Average Response Time (All Incidents)	3:59	3:59	4:11	4:26	4:37	+ 38 seconds

Source: Worcester Fire Department

In addition to responding to the emergency calls for fire and emergency medical services described above, the WFD personnel perform a range of education, enforcement, and engineering functions. In FY09, firefighters in the fire-prevention division conducted 8,914 fire safety inspections, reviewed 821 building plans, issued 6,349 permits, and conducted fire safety education programs at 246 locations (excluding schools). Additionally, 3,103 students (almost double the amount from FY07) attended the Department’s S.A.F.E. (Student Awareness of Fire Education) program which is presented in schools.

What does this mean for Worcester?

As noted earlier, almost three-quarters of all WFD responses in 2009 were first responder/rescue incidents, a figure that has been increasing. Over the last two years, the Department’s average response time has increased slightly, possible as a result of the increase in

dispatched calls and incidents as well as modest decreases in the number of firefighters.

The number of false alarms has increased by 13.5% over the last five years. According to the Fire Department, possible reasons for this increase include new alarm systems being put in place, which sometimes results in “bugs” to work out; along with deferred maintenance on older systems that may malfunction (possibly due to the economy and decreases in building maintenance budgets). However, the Fire Department is currently developing a false alarm billing program whereby a building owner is assessed a fine for exceeding a prescribed number of false alarms in a rolling six month period. A program such as this should encourage building owners to maintain their systems.

In February 2007, the Worcester Fire Chief issued a Redeployment Plan for the Fire Department entailing the

closing of two engine companies to “provide an equal or improved service at a reduced cost [to the City].”¹⁴ The 24 firefighters of these closed companies have now been transferred to other fire stations. The Brown Square station has been closed, and both fire trucks at the Providence Street station have been replaced with an ambulance.¹⁵ This redeployment coupled with an 11% reduction in staff over eight years has resulted in approximately \$3.8 million in savings each year to the City.

The fire prevention division conducts fire safety inspections, reviews buildings plans, and conducts fire safety programming in the city. However, the WFD is in the process of relocating this division to the Department of Inspectional Services, where inspectors can be cross-trained for the different types of inspections that occur.¹⁶ In a time of budget cuts and declining personnel, this will ensure that uniformed personnel remain on fire apparatus.

INDICATOR 5: ADVANCED LIFE SUPPORT/ AMBULANCE SERVICES

Why is it important?

An ambulance is dispatched to respond to each 911 call for medical assistance. In Worcester, ambulance services are provided by UMass Memorial EMS. The all-paramedic, hospital-based service operates a fleet of six ambulances staffed by 50 full-time and 25 part-time paramedics. Since 1991, UMass Memorial has operated the ambulance service at no cost to the City.¹⁷

Speed of response in treating those who are seriously ill or critically injured can improve the patient's odds of survival. Therefore, the average response time from the receipt of a call to an emergency medical provider arriving on the scene is a key industry standard by which EMS performance is measured.

How does Worcester perform?

As shown in **Table 5.1**, the number of 911 emergency calls to which UMass Memorial EMS responded increased from 26,498 in 2005 to 28,417 in 2009 (a 7.2 % increase). From 2005 to 2008, the

number of calls resulting in the transport of a patient to a hospital increased by 13%, from 19,687 (about 74% of all calls) to 22,223 (about 75% of all calls). However, in 2009, the number of calls resulting in transport fell to 19,572 (about 69% of all calls), or the lowest during this five-year period. During 2009, UMass Memorial EMS's response time for all calls decreased by thirty seconds from 2008. Average response times for life-threatening injuries or illnesses (Priority 1 responses) have consistently been shorter than the average response time for all calls, and from 2005 to 2009, Priority 1 response time decreased by thirty-three seconds.

Improved response times in 2009 may be the result of a new process by which the dispatcher is able to view the exact location of each EMS vehicle using global positioning system (GPS) technology, and thus can more accurately dispatch resources. This new system, implemented in April 2009, also

Table 5.1: UMass Memorial EMS Responses*

	2005	2006	2007	2008	2009	% Change 2005-2009
Responses	26,498	27,769	28,181	29,477	28,417	7.2%
Transports	19,687	20,154	20,982	22,223	19,572	-0.6%
Average Overall Response Time	5:56	5:57	6:04	6:02	5:32	-0:24
Average Priority One Response Time	5:51	6:15	5:26	5:39	5:18	-0:33
* Worcester calls only (service also provided to Shrewsbury)						
Source: UMass Memorial EMS						

calculates “drive times” and recognizes street routes. Also in 2009, UMass Memorial EMS added six field supervisors to the system for purposes of better quality oversight and better integration with Fire and Police services.

While Worcester has consistently demonstrated response times that are better (lower) than the industry standard of 90% of paramedic responses arriving on scene within 8 minutes, there is some debate in the EMS community over the importance of response times. Several studies have challenged the link between a quick EMS response and survival chances of the patient.¹⁸ Patients who were treated more quickly than others did not fare significantly better. The one case where a quick response time does matter, however, is with patients suffering from cardiac arrest, which account for 1% of emergency calls (although, less than 5% of these cases even survive).¹⁹ In these cases, patients should be treated within 4 minutes of the event. The debate on EMS response time becomes important when a community invests a large sum into its emergency response system in order to keep response times lower. However, as clearly noted, UMass Memorial operates the EMS system at no cost to the City.

What does this mean for Worcester?

Worcester’s system for providing emergency medical services is not widely used elsewhere. Among 200 cities surveyed by the *Journal of Emergency Medical Services* in 2009, approximately 8.3% utilized hospital-based EMS services. As a hospital-based EMS service, UMass Memorial EMS provides those it serves with the benefits of clinical oversight provided by UMass Memorial Medical Center’s Department of Emergency Medicine and ongoing training and professional development programs available to its staff. Additionally, a full-time medical director oversees UMass Memorial EMS operations, providing quality assurance and clinical oversight expertise. Highly-trained paramedics are qualified to perform advanced medical procedures in the field that could otherwise be performed only in a hospital setting.

UMass Memorial EMS provides this service at no charge to the City. Under this arrangement, Worcester does not have to purchase or maintain ambulances, or provide advanced life-support training to other City personnel. Thus, not only does the current structure perform better than industry standards, it saves Worcester’s taxpayers the expense of operating a municipally-run ambulance service.

¹ *City of Worcester Fiscal 2010 Annual Budget*.

² Comparison data are reported in the FBI's annual *Crime in the United States* statistical summary; Worcester data reflect budgeted positions per 1,000 population. The reader is cautioned that the most recent police employee data compiled by the FBI are from 2008, and municipal budgets and employee levels may have changed since then due to the current economic situation.

³ Total incidents represent both criminal and non-criminal events to which the police respond. These figures do not represent actual crime rates, since they include calls which were not substantiated (complaints which turned out not to be criminal), calls for general assistance, and calls to which the police respond but find no one there upon arrival. A single incident may also involve more than one crime.

⁴ Reported crime data are from the FBI's Uniform Crime Reporting Program; see <http://www.fbi.gov/ucr/ucr.htm> for additional information about reported crime, including the FBI's annual publication *Crime in the United States*. The violent-crime category includes murder, forcible rape, robbery, and aggravated assault. Property crimes include burglary, larceny-theft, and motor vehicle theft.

⁵ Scott J. Croteau, Nick Kotsopoulos. "Stabbings and Shootings Increase in City; Chief: Cuts Hamper Police Planning." *Worcester Telegram & Gazette*, April 16, 2010.

⁶ *Ibid.*

⁷ *Ibid.*

⁸ Respondents were able to identify more than one answer to this question, so percentages are based on the total number of answers provided.

⁹ A single complaint may contain multiple allegations of misconduct.

¹⁰ Starting in 2009, the BPS now calculates this information for the calendar year. Data from past years are based on the fiscal year (as shown).

¹¹ *City of Worcester Fiscal 2010 Annual Budget*.

¹² Worcester firefighters are dispatched to medical emergencies as first responders to provide basic life support services (CPR, first aid, and early defibrillation). For a further discussion of Worcester's First Responder System, see Research Bureau Report #06-03 *Dial 911: Whose Call is it, Anyway?* available at www.wrrb.org.

¹³ NFPA 1710 (National Fire Protection Association).

¹⁴ Fire Department Redeployment Plan, <http://www.ci.worcester.ma.us/reports/RedeploymentPlan.pdf>.

¹⁵ Engine 12 went to the new Franklin Street Station and Ladder 5 went to the McKeon Road station.

¹⁶ The Research Bureau Report # 10-02, *Worcester's FY11 Budget and Fiscal Crisis: No End in Sight*, June 1, 2010.

¹⁷ In July 1977, ambulance service was transferred from the Worcester Police Department to Worcester City Hospital. With Worcester City Hospital's closing in 1991, ambulance services were taken over by UMass Medical Center, which became UMass Memorial Health Care in 1997.

¹⁸ As described in: Margot Sanger-Katz, "Research challenges link between quick EMS response and survival chances." *The Concord Monitor*, November 9, 2009.

¹⁹ *Ibid.*

Mission Statement:

The Research Bureau serves the public interest of the Greater Worcester region by conducting independent, non-partisan research and analysis of public policy issues to promote informed public debate and decision-making.



The Research Bureau

Worcester Regional Research Bureau
319 Main Street, Worcester, Massachusetts
Telephone: 508 799 7169 Facsimile: 508 799 4720
www.wrrb.org

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