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**Police Response Time
Audit**

December 30, 2021



**City of Fort Worth
Department of Internal Audit**

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The Police Response Time Audit was conducted as part of the Department of Internal Audit's Fiscal Year 2021 Annual Audit Plan.

Audit Objective

The objective of this audit was to evaluate the timeliness in which the Fort Worth Police Department responded to emergency calls.

Audit Scope

Our audit included a review of police response time data for the period October 1, 2019 through December 31, 2020. Activity beyond this period was reviewed as deemed necessary.

Opportunities for Improvement

Written guidance regarding police response time reassessments and calculations

Better compliance with established response time goals

Executive Summary

As part of the Fiscal Year 2021 Annual Audit Plan, the Department of Internal Audit conducted a Police Response Time Audit. Based on our review of police response time data, the Fort Worth Police Department (FWPD) dispatched 314,424 calls from October 1, 2019 through December 31, 2020. During this time period, the FWPD did not consistently meet their police response time key performance indicator goals (which are calculated based on the amount of time elapsed between when the call is answered, to when the first officer arrives at the scene), for either priority call type.

There were no written procedures or guidelines governing the reassessment, calculation and/or reporting of police response time. Furthermore, police response time goals, referenced within the FWPD's key performance indicators, remained unchanged since at least FY2017. FWPD police response time goals were 8:54 minutes for priority 1 calls; 17:18 minutes for priority 2 calls; and 52:00 minutes for priority 3 calls.

From October 1, 2019 through December 31, 2020, the FWPD did not meet their response time goals 46.36%, 36.60% and 36.95% of the time, for priority 1, 2 and 3 calls, respectively. The FWPD met their goals 53.64%, 63.40% and 63.05% of the time, for priority 1, 2 and 3 calls, respectively. Our audit findings are discussed in further detail within the [Detailed Audit Findings](#) section of this report.

Due to a publicized incident where a 9-1-1 call reportedly went unanswered, Internal Audit reviewed Answer Time Reports received from the FWPD for two randomly sampled months (October 2019 and June 2020), and the month of the 9-1-1 call incident (June 2021, through June 23, 2021). Based on our review of Answer Time Reports provided by the FWPD, October 2019 and June 2020 abandoned call activity was consistent. However, June 2021 abandoned calls exceeded those in October 2019 and June 2020 by approximately 14%. For example, the percentage of abandoned calls in October 2019 and June 2020 were 8% and 9%, respectively. However, the percentage of abandoned calls in June 2021 totaled 23%. Internal Audit did not analyze answer time data, since answer time is outside of the FWPD's police response time calculation, and because the FWPD was corresponding with the Mayor and City Council regarding 9-1-1 issues. Internal Audit will, however, consider the CFW's 9-1-1 process in future assignments.

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Background

As noted in the City of Fort Worth’s FY2020 annual financial report, the City of Fort Worth (CFW) covers approximately 353 square miles, and serves a population of 930,971. The Fort Worth Police Department (FWPD) has six patrol divisions that are responsible for patrolling 90 police beats within the city limits. One way in which the patrol divisions help residents is by responding to residents’ calls.

The FWPD’s Communications Division has a critical role in processing incoming calls, and ensuring that an appropriate response is assigned to incidents. One sworn officer and 119 civilian employees, within the FWPD’s Communications Division, are responsible for answering 9-1-1 and other calls made to the City’s 10-digit emergency phone number (817-927-4420). Call takers answer 9-1-1 calls, collect specific details from the caller, assign call priority, and then transfer calls to dispatchers or to the Fire Department, whichever is necessary. Dispatchers then determine what emergency resources are needed, and ensure those emergency resources arrive on scene. The number of officers dispatched is based on information received from the caller and the call priority type assigned by the call taker. For example, one officer is dispatched if the call is related to a disabled vehicle. Call takers also transfer emergency calls to other agencies if the call is for assistance outside the Fort Worth service area.

Once a Call For Service (CFS) entry is created, a police unit is dispatched. CFS entries are classified in two categories: citizen-generated calls and officer-initiated calls. Citizen-generated calls are primarily reported through the FWPD’s 9-1-1, 10-digit emergency and/or 10-digit non-emergency phone lines. Officer-initiated calls are reported by police officers through mobile data terminals within the police vehicles. An officer-initiated CFS often includes traffic stops and other concerns identified by an officer.

Incoming calls are categorized as priority 1, 2 or 3. Calls are assigned lower priorities if the immediate threat has passed. Based on the City’s intranet, FWPD response time goals have remained the same since at least FY2017.

Call Type	Priority Description	Response Time Goal
Priority 1	Priority 1 calls represent the greatest threat to an individual’s safety. Examples of priority 1 calls include: robbery, sexual assault, shooting, individual with a gun, kidnapping, arson, medical emergency/not breathing etc.	8:54 minutes
Priority 2	Priority 2 calls do not present an immediate threat to an individual’s safety, but still require a rapid response.	17:18 minutes
Priority 3	Priority 3 calls do not present an immediate threat, and do not require a rapid response	52:00 minutes

The FWPD’s Communications Division uses a Computer Aided Dispatch (CAD) system to answer calls, log incidents reported, aid in identifying resources for allocation, and track incidents to conclusion. For 9-1-1 calls, information may be transferred automatically from the phone system, or manually input by the call taker. The CAD system provides call takers with the location of FWPD patrol units, allowing the closest available patrol unit to be assigned. The CAD also provides a timestamp of when calls are answered,



and when a police unit reports a status change (e.g., "en route" or "arrived" at the scene). It should be noted that the time stamp is based on when the first officer arrives on scene.

There are two ways officers indicate they have arrived on the scene. Police officers can inform dispatch over the police radio, or they can manually input their arrival within mobile data terminals that are in police vehicles. The CAD system updates the availability and location of police units through integrations with the mobile data and other police systems such as FWPD's Record Management System (RMS).

The FWPD's Police Communications Division operates 24 hours, each day of the year. Based on CAD data, call takers answer approximately 1.2 million calls from residents each calendar year, and dispatched officers to over 300,000 calls during our 15-month audit period.

The following illustration shows determinants used by the FWPD when calculating police response time.





Objective

The objective of this audit was to evaluate the timeliness in which the Fort Worth Police Department responded to emergency calls.

Scope

Our audit included a review of police response time (CAD system) data for the period October 1, 2019 through December 31, 2020. Activity beyond this period was reviewed as deemed necessary.

Methodology

To achieve the audit objective, the Department of Internal Audit performed the following:

- reviewed FWPD General Orders, standard operating procedures, key performance indicators (KPIs) within the FY2021 Adopted Annual Budget and Program Initiatives, City Council communications (e.g., informal reports) and the FWPD's website;
- interviewed FWPD management and staff within the FWPD Communications Division;
- reviewed applicable laws and best practices for the call answering process;
- reviewed CAD training materials;
- observed the police dispatch process;
- analyzed CAD system data related to call processing, dispatching and officer travel time;
- recalculated police response time, based on CAD data;
- reviewed quarterly scoreboard that compared KPIs to actual performance;
- reviewed reports supporting call volume and number of abandoned calls;
- determined the implementation status of applicable audit recommendations made in the Matrix Consulting Group's FWPD Workload and Staffing Study, dated January 22, 2019; and,
- evaluated internal controls related to police response time.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

Chapter XXVIII of the Fort Worth City Charter established the CFW's Department of Internal Audit independent of management, reporting directly to the Fort Worth City Council. We utilized the Committee of Sponsoring Organizations of the Treadway Commission (COSO) framework when evaluating internal controls.



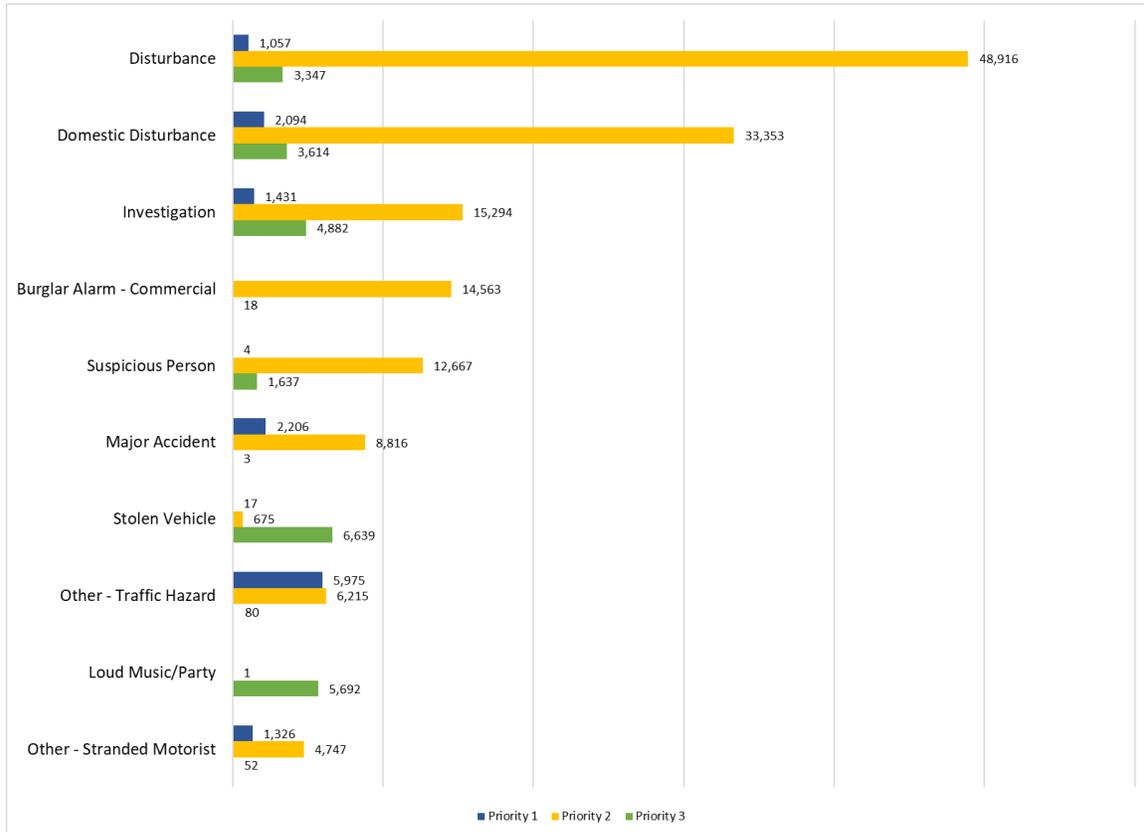
The following internal control components and corresponding principles were considered significant to the audit objective. COSO is dedicated to providing thought leadership through the development of frameworks and guidance on enterprise risk management, internal control and fraud deterrence.

Internal Control Component	Principles
Control Environment	Managerial oversight, integrity, ethics and responsibility; staff recruitment, development, retention, performance and accountability
Control Activities	Policies, procedures and systems
Risk Assessment	Clearly-defined objectives to identify risks, define risk tolerances, and implement necessary controls (e.g., written policies and procedures)
Information and Communication	Communication of necessary quality information
Monitoring	Monitoring and evaluating the effectiveness of internal controls

Audit Results

Based on our audit results, the FWPD’s Communications Division dispatched 314,424 of the 1,425,733 calls received from October 1, 2019 through December 31, 2020. The top 10 types of calls dispatched are noted in the following graph.

Top 10 Call Types, Dispatched from October 1, 2019 through December 31, 2020



Source: CAD

The FWPD had no standard operating procedures to document the reassessment, calculation, etc. of police response time. However, police response times were noted within the FWPD’s departmental KPIs. Internal Audit compared FWPD’s KPI goals to CAD data. Based on our test results, the FWPD met their police response time goals most of the time. However, the FWPD did not meet their police response time goals 46.36%, 36.60% and 36.95% of the time, for priority 1, 2 and 3 calls, respectively from October 1, 2019 through December 31, 2020. FWPD police response time goals, used during our audit period, remained unchanged since at least FY2017.

We concluded that FWPD response time calculations sometimes included negative response time data. FWPD staff indicated that negative records occurred when incidents were re-opened, after being closed by the dispatcher. For example, an officer may request a call to be re-opened in order to perform additional work related to the call (e.g., complete a report). In those instances, the original date/time stamp (from when the call was initiated) was over-written when the calls were reopened. Negative records were also the result of daylight savings time changes. For instance, negative records resulted when a call was active during the hour of the time change. In both instances, the calculated response time becomes skewed.



Based on our recalculations, the FWP inadvertently included 416 negative records when computing police response time, resulting in police response time being understated by one to five seconds. Thirty six (36) of the 416 records related to priority 1 calls, 268 related to priority 2 calls, and 112 related to priority 3 calls. The number of instances in which negative records impacted reported performance (i.e., the FWPD stating they met or did not meet their KPIs) was less than 1%. The following table provides an example of how negative numbers can impact police response time reporting.

Example: Reopened Case		
	Initial Metrics	Metrics After Reopened
Call Answered	12:00 PM	1:00 PM
Call Dispatched	12:05 PM	12:05 PM
Officer on Scene	12:10 PM	12:10 PM
Total Response Time	10 min	-50 min
Call Closed	12:25 PM	
Called Reopen	1:00 PM	
Over-Written Call	1:00 PM	

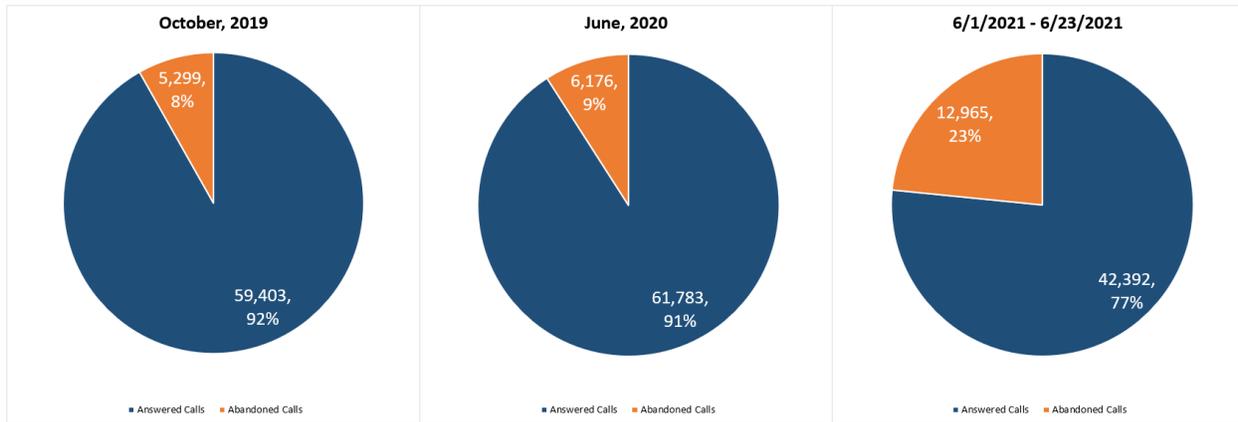
Source: Auditor-Generated

Abandoned Calls:

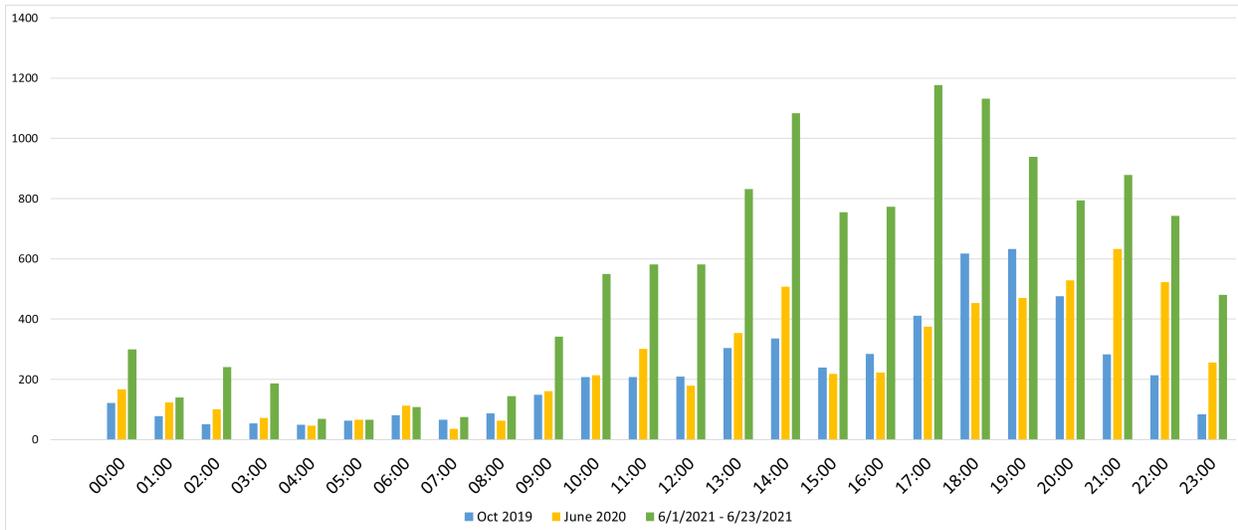
The scope of our audit was to evaluate the timeliness in which the FWPD responded to emergency calls. However, after a June 21, 2021 incident where a 9-1-1 call reportedly went unanswered, we requested feedback from the FWPD regarding their process prior to calls being answered (i.e., prior to the calculation of police response time). FWPD indicated that calls that are unanswered within 15 seconds are routed to a recorded message. If the caller hangs up before speaking with a call taker, the call is considered abandoned and is routed to an “abandoned” queue. FWPD said their call takers make two attempts to call the phone number noted for the abandoned call. If there is no answer, no further attempts are made. If there is an answer, the process begins for computing police response time.

Based on our review of Answer Time Reports, received from the FWPD, October 2019 abandoned calls were consistent with those in June 2020. However, the number of abandoned calls in June 2021 exceeded those in June 2020. The Answer Time Reports indicated that the majority of June 2021 abandoned calls occurred at 2:00 p.m., 5:00 p.m. and 6:00 p.m. Internal Audit did not analyze answer time data, since answer time is outside of the FWPD’s police response time calculation, and because the FWPD was corresponding with the Mayor and City Council regarding 9-1-1 process issues.

Answered Versus Abandoned Calls



Number of Abandoned Calls, by Hour of Day



Source: Emergency Call Tracking system (ECAT)

Internal Audit concluded that some recommendations, made by the Matrix Consulting Group (in a January 22, 2019 staffing and workload study), could impact police response time. FWPD staff indicated that the impact of the Matrix Consulting Group’s recommendations could not be realized (or the effectiveness determined) until the FWPD had adequate staffing. It should be noted that as of June 18, 2021, the FWPD reportedly had 80 sworn vacancies. Also, the Matrix Group’s recommendations were based on projected service demands and personnel needs through 2028. Internal Audit did not complete a staffing analysis as a part of this audit.

Overall Risk Evaluation

High	Medium	Low
No written guidelines for reassessing or calculating police response time		
Police response times (for priority 1, 2 and 3 calls) sometimes exceeded FWPD's police response time goals		



Detailed Audit Findings

1. Written guidelines, regarding the calculation of police response time, did not exist.

The FWPD reports police response time to executive City management on a quarterly basis. However, FWPD staff indicated that there were no guidelines for calculating police response time. Additionally, we saw no evidence that existing SOPs addressed the CFW's definition of police response time. For example, FWPD indicated that prior to FY2015, police response time was calculated based on when the call was dispatched to when an officer arrived at the scene. However, during our audit period, police response time was calculated based on when the call was answered to when the officer arrived at the scene. FWPD's police response time goals remained unchanged at least as far back as FY2017. Internal Audit was unable to determine whether the police response time goals changed when the calculation methodology was changed in FY2015.

Internal Audit observed the process by which the FWPD ran queries to calculate actual police response time. Based on our observation, FWPD's query resulted in the inclusion of negative records that should not have been included. Although the negative records accounted for less than 1% of the call data, the negative numbers skewed police response times reported to executive management. FWPD staff indicated the process of creating the police response time reports was consistent whenever it is requested.

Clearly written guidelines serve as the standard for an organization's operations. The lack of such guidelines increases the risk of obsolete performance measures, inaccurate reporting, non-uniform processes, and fails to offer proper guidance to staff. Also, without written policies and procedures, management may not have reasonable assurance that staff duties were carried out in accordance with management expectations. One of the 17 principles within the COSO framework of effective internal controls is to deploy control activities through policies and procedures.

Recommendation 1: *The Fort Worth Police Chief should require written policies and procedures that address how police response time should be calculated, how often police response times should be reassessed, etc.*

Auditee's Response: Concur. We concur and the FWPD is in the process of developing written policies and process that will address:

- the rationale as to how police response time should be calculated, including but not necessarily limited to, the mathematical calculation (i.e., taking into consideration the number of square miles per beat, number of officers, population, data trends, comparisons to other cities, etc.), response time determinant (e.g., from the time the call is answered to when the first officer arrives on the scene, etc.);
- how often the police response time determinant should be reevaluated; and,
- how often actual police response time should be measured and to whom those results should be reported.

Target Implementation Date: June 30, 2022

Responsibility: Captain Robin Krouse

Applicable Department Head: Neil Noakes, Fort Worth Police Chief

Applicable Assistant City Manager: Jay Chapa



2. The Fort Worth Police Department did not consistently meet police response time goals.

The Fort Worth Police Department CAD data indicated that the FWPD did not consistently meet their KPI police response time (i.e., from the time the call is answered, to the time an officer arrives on the scene) goals, for either call priority type -- priority 1, priority 2 or priority 3. Based on Internal Audit’s recalculation (and as noted in the following table), the FWPD only met their police response time goals 53.64%, 63.40%, and 63.05% of the time for priority 1, 2 and 3 calls, respectively. From October 1, 2019 through December 31, 2020, the FWPD did not meet their police response time goals/KPIs 46.36%, 36.60% and 36.95% of the time, for priority 1, 2 and 3 calls, respectively.

Call Priority	Police Response Goals	Number of Dispatched Calls	Number of Dispatched Calls That Met Police Response Time Goal		Number of Dispatched Calls That Did Not Meet Police Response Time Goal		Number of Dispatched Calls (with Negative Numbers) Preventing Police Response	
			Count	%	Count	%	Count	%
1	8:54	34,591	18,519	53.54%	16,036	46.36%	36	0.10%
2	17:18	222,770	140,963	63.28%	81,539	36.60%	268	0.12%
3	52:00	57,063	35,866	62.85%	21,085	36.95%	112	0.20%
Totals		314,424	195,348	62.13%	118,660	37.74%	416	0.13%

Source: CAD

Also, the FWPD indicated that their priority 2 response time (for the quarter ended December 2019) was 32 seconds less than their KPI goal. Internal Audit’s recalculation indicated that the FWPD exceeded the priority 2 goal, for that quarter, by three minutes and 23 seconds. FWPD acknowledged the inadvertent human error in the reporting and is unrelated to the negative records mentioned in the Audit Results section of this report.

The FWPD’s standard operating procedures specifically address police dispatch time (i.e., the time from when a call is transferred to a dispatcher, to when the call is dispatched to an officer), based on call priority type. When reviewing dispatched data for the period October 2019 through December 2020, we concluded that the FWPD generally met dispatch time guidelines established within their standard operating procedures.

Dispatched Calls that Exceeded the Established Dispatch Time Goal					
Period	Call Priority	Established Criteria, per SOPs	Number of Dispatched Calls	Number of Dispatched Calls That Exceeded Established Criteria	Exception Percentage
10/1/2019 – 12/31/2020	Priority 1	Dispatch Goal <=2 minutes	34,591	4,359	12.60%
	Priority 2	Dispatch Goal <=8 minutes	222,770	63,484	28.50%
	Priority 3	Dispatch Goal <= 45 minutes	57,063	18,673	32.70%

Source: CAD data provided by the Police Department

According to best practices for performance measures, the Government Finance Officers Association (GFOA) recommends all organizations identify, track, and communicate performance measures to monitor financial and budgetary status, service delivery, program outcomes, and community conditions. The GFOA addresses data integrity, referencing the source of the data, and how data is interpreted or used to draw conclusions should be clearly and fairly articulated. Not meeting established police response time goals



could potentially cause negative issues for both Police Department staff and City residents. Police Department staff indicated that a staffing shortage affected their overall response times and inability to meet police response time goals. Our audit did not include a staffing review or analysis.

Recommendation 2: *The Police Chief should routinely review police response time KPIs to determine if they are appropriate (i.e., takes into account the city's growth), identify instances where KPIs are not met, determine the reason(s) for not meeting those goals, and then take appropriate action to decrease the number of instances in which police response time goals are not met.*

Auditee's Response: Concur. We concur. The written policies, noted in our response to Recommendation 1, will include guidance related to routine reviews of police response time KPIs. The procedures will help ensure that FWPD KPIs are reasonable, and that procedures are in place to document conditions that negatively impacted police response times (e.g., staffing, roadway conditions, construction, etc.) at least during each KPI reporting period. Furthermore, we will take into consideration any applicable best practices

Target Implementation Date: June 30, 2022

Responsibility: Captain Robin Krouse

Applicable Department Head: Neil Noakes, Fort Worth Police Chief

Applicable Assistant City Manager: Jay Chapa



Acknowledgements

The Department of Internal Audit would like to thank the Fort Worth Police Department for their cooperation and assistance during this audit.



Exhibit I – Comparison to Other Cities

Municipality	Population	Population Year	Police Response Time Goal	Measurement	Sources
Houston	2,320,268	2020	4:00 to 6:00 minutes	Dispatch to officer response	2020 Annual Financial Report; General Order Houston Police Department
San Antonio	1,434,625	2020	6:45	Receipt of priority emergency call to the arrival of an officer on the scene	2022 Adopted FY2022 Budget; City of San Antonio Website
Dallas	1,330,612	2020	8:00	Dispatch to officer response	2020 Annual Financial Report; City of Dallas website
Austin	1,006,727	2020	8:10	The time the call for service is answered by a call taker to the time the first police officer arrives on scene	2020 Annual Financial Report; City of Austin website
Fort Worth	930,971	2020	8:54	Receipt of emergency call to the arrival of an officer on the scene	2020 Annual Financial Report; Police Department's Performance Scorecard (intranet)

