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Audit Report

**AUDIT OF DEPARTMENT OF DALLAS WATER
UTILITIES' WATER QUALITY AND SAFETY,
TESTING, AND MONITORING**

(Report No. A19-009)

March 22, 2019

Interim City Auditor

Carol A. Smith
CPA, CIA, CFE, CFF

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Executive Summary

The Department of Dallas Water Utilities (DWU) has policies and procedures in place for: (1) ongoing accuracy testing and monitoring of the City of Dallas’ (City) water quality and safety; and, (2) effectively communicating regular testing and monitoring results with DWU customers.

In addition, 99.4 percent of water quality results reported to the Texas Commission on Environmental Quality (TCEQ) in Calendar Year 2017 and tested during the audit were supported by documentation at DWU water treatment plants.

Background Summary

Founded in 1881, the Department of Dallas Water Utilities (DWU) is a department of the City of Dallas (City) providing water and wastewater services to approximately 2.6 million people in the City and 27 nearby communities. Its operations are funded solely by the water and wastewater rates paid by customers.

The Texas Commission on Environmental Quality is responsible for overseeing compliance with the Federal *Safe Drinking Water Act* in Texas. The source of DWU’s water supply consists entirely of surface water. The DWU’s three water treatment plants have the capacity to treat in excess of 900 million gallons of water a day. During Fiscal Year 2017, DWU provided 136 billion gallons of treated water.

Source: DWU

According to the *City of Dallas Water Quality Reports* in 2015, 2016, and 2017, DWU exceeded all TCEQ water quality standards. The TCEQ has designated DWU a “*Superior Public Water System*,” the highest rating available, which requires meeting more stringent water quality standards than other public water systems. (See Appendix I for more information).

The DWU, however, has opportunities to improve the following:

- The DWU policies and procedures for water quality complaint resolution do not: (1) state how soon DWU personnel must respond to and resolve complaints; and, (2) emphasize achieving or measuring customer satisfaction for all types of water quality complaints and customers. As a result, DWU may not be able to determine the effectiveness of its customer complaint processes in order to further improve response timeliness, resolution timeliness, and customer satisfaction.
- Water quality complaints assigned to the Water Quality Division are difficult to trace from the original complaint to final resolution. As a result, there is a risk DWU may not be able to determine when water quality complaints assigned to the Water Quality Division were finally resolved.

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- The DWU’s three water treatment plants do not have formal (written, approved, dated) policies and procedures that specify requirements to independently compare TCEQ report data to source documents before report submission. While few errors were identified during the audit, there is a risk errors may occur in the regular reporting of water quality results, particularly if there are changes in processes or personnel.
- The Bachman Water Treatment Plant’s policies and procedures are not current, and the East Side Water Treatment Plant did not have formal policies and procedures for filtration until May 2018. Without current and complete policies and procedures, there is a risk DWU personnel are not following water production practices consistently to ensure compliance with TCEQ requirements.

We recommend DWU further improve water quality and safety, testing, and monitoring by implementing the recommendations in this report.

The objectives of the audit were to determine whether DWU has: (1) adequate policies and procedures in place for ongoing accuracy testing and monitoring of City water quality and safety; and, (2) effective means of communicating with City residents (customers) regular testing and monitoring results. The audit scope covered management’s operations from Fiscal Year (FY) 2016 through FY 2017; however, certain other matters, procedures, and transactions outside the scope were reviewed to understand and verify information during the audit period.

Security-related issues and the associated recommendations omitted from this report were communicated to the appropriate DWU personnel in the *Confidential Limited Use Report: Audit of Department of Dallas Water Utilities’ Water Quality and Safety, Testing, and Monitoring*, Report No. A19-009a. The decision to exclude this information is based on Government Auditing Standards, December 2011 Revision, Sections 7.39 – 7.43, *Reporting Confidential and Sensitive Information*.

Management’s Response to this report is included as Appendix III.

Audit Results

Water Quality Complaint Policies and Procedures Do Not Fully Address Important Aspects of Customer Service

The Department of Dallas Water Utilities (DWU) policies and procedures for water quality complaint resolution do not: (1) state how soon (e.g. immediately, in one day, or in 90 days) DWU personnel must respond to and resolve complaints; and, (2) emphasize achieving or measuring customer satisfaction for all types of water quality complaints and customers (see textbox).

As a result, DWU may not be able to determine the effectiveness of its customer complaint processes in order to further improve:

- Response timeliness
- Resolution timeliness
- Customer satisfaction

Importance of Customer Service

According to the American Water Works Association's (AWWA) *Water Quality Complaint Investigator's Guide, Second Edition*, "resolving customer water quality complaints is one of the most important aspects of maintaining a successful water distribution system."

An October 2010 United States Government Accountability Office (GAO) report on customer service in the Federal government found it is critical for agencies to gauge how their customer services are meeting the needs of their customers to sustain and focus agency efforts in continuing improvements. All 13 Federal agencies surveyed reported having measured customer service, such as wait times or accuracy of services provided, and 11 reported having measures of customer satisfaction.

Sources: AWWA and GAO

The DWU has seven water quality complaint types¹ and five procedures for responding to water quality complaints. Of these five procedures, the following three procedures include some time elements for two water quality complaint types and a focus on customer satisfaction regarding wholesale customer requests:

- The DWU-PRO-010-WQ, *Complaints Relative to Illness* states how soon DWU personnel must respond to water quality complaints involving illnesses
- The DWU-PRO-007-WQ, *Complaints Relative to Discoloration* specifies how long resolving water quality complaints can take without including a definitive time frame
- DWU-PRO-006-WS, *Wholesale Customers Request for Assistance* states Wholesale Services will ensure that the resolution is satisfactory to the wholesale customer

¹ The seven complaint types include: (1) illness; (2) annual water quality test/report; (3) sample/chemical analysis; (4) milky/cloudy; (5) particles; (6) color; and, (7) taste/odor/chlorine.

According to DWU management:

- The time requirement to respond to water quality complaints is the same day and is specified in the *Service Level Agreement between Dallas Water Utilities and 311 Customer Service Center (Service Level Agreement)*. As this agreement is updated regularly, it is the best source for the response time expectations. The agreement states DWU calls should be dispatched within one hour with special priority for water quality calls.
- The time requirement to resolve water quality complaints was not specified in each policy and procedure because water quality complaints can be complex and take substantial time to adequately evaluate and resolve. While some complaints can be quickly addressed, others may require DWU to perform repeated pipeline flushing or even replace the pipeline to fully resolve the complaints.
- Water quality complaint customer satisfaction was addressed in Calendar Year (CY) 2018 by developing a Water Quality Division Customer Service Survey (Survey) along with related policies and procedures, DWU-PRO-015-WQ, *Customer Service Survey* effective February 28, 2018.²

However, some of the information cited by management is not yet complete. The Service Level Agreement does not contain response times for the seven types of water quality complaints under the *DW50 – Water Quality* call type. In addition, the Survey was developed during the audit and sent to certain DWU customers requesting services through email. Eight customers completed the Survey in CY 2018.

Recommendation I:

We recommend the Director of DWU establish expectations for: (1) response time and response resolution; and, (2) customer satisfaction in the water quality complaint resolution policies and procedures. These requirements may vary based on the type of complaint and may be addressed by referencing a completed Service Level Agreement that includes the call response time expectations for water quality complaint types.

Please see Appendix III for Management’s Response to the recommendation.

² According to DWU-PRO-015-WQ, *Customer Service Survey*, “A customer service survey is offered to customers who receive communications electronically thru email. Customers receive an invitation to participate in the survey when: water sampling results are requested to be sent via email, requested a copy of the annual water quality report, requested copies of the monthly mineral analysis, or have had other correspondence via email with the Water Quality Division.”

Water Quality Complaint Resolution Is Difficult to Trace from the Original Complaint to Final Resolution

Water quality complaints (see textbox) assigned to the Water Quality Division are difficult to trace from the original complaint to final resolution. As a result, there is a risk DWU may not be able to determine when water quality complaints assigned to the Water Quality Division were finally resolved.

The Water Quality Division tracks complaints using an Excel Spreadsheet and DWU Systems, Applications, and Products in Data Processing (SAP) System.³ Of the 130 complaints the Water Quality Division tracked in an Excel spreadsheet in CY 2017, 19 complaints, or 14.6 percent, took more than 30 days to resolve.

The results of a judgmental sample of nine of these 19 complaints showed different resolution times for the same nine complaints in both the Excel spreadsheet and SAP. Specifically,

- The different resolution times ranged from six days to 523 days
- The SAP resolution times were shorter for six complaints and longer for three complaints than the resolution times recorded in the Excel spreadsheet

In addition, two SAP work order numbers from prior years, CY 2014 and CY 2016, were used to track CY 2017 water quality complaints in the Excel spreadsheet. For example, a work order number created on May 3, 2014 and resolved on June 1,

Responsibility for Water Quality Complaint Resolutions

Two Department of Dallas Water Utilities (DWU) divisions within the Water Delivery Program are responsible for responding to water quality complaints. The Water Quality Division collects samples for testing, while the Water Distribution Division takes corrective action, such as flushing the pipelines or recommending pipelines for replacement. Some complaints involve multiple concerns and responses from both divisions.

The Water Quality Division responds to complaints related to: (1) illness; (2) annual required water treatment quality tests and reports; and, (3) requests for water quality samples or chemical analysis. The Water Quality Division responds to complaints in the Systems, Applications, and Products in Data Processing (SAP) System and separately tracks complaint responses in an Excel spreadsheet.

The Water Distribution Division responds to complaints related to: (1) milky and cloudy water; (2) particles in the water; (3) water color; and, (4) taste, odor, or chlorine. The Water Distribution Division responds to and tracks complaint responses in SAP.

Sources: DWU and Office of the City Auditor

³ The 3-1-1 call center creates work orders related to water quality complaints, which are reported in the Dallas Water Utilities' (DWU) Systems, Applications, and Products in Data Processing (SAP) System.

The DWU uses SAP to generate a unique work order number for each water quality complaint and assign that complaint to the responsible division. The SAP provides a created date and closure date for each water quality complaint. This is used for all complaints, regardless of whether they are assigned to the Water Quality Division or Water Distribution Division.

If the complaint is assigned to the Water Quality Division, an Excel spreadsheet is used to track complaint resolution using the SAP work order numbers. There is not a defined link between the two systems, such as a notation when the complaint has been closed in SAP but will continue to be resolved in the Excel spreadsheet. **Sources:** DWU and 3-1-1

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2014 in SAP was reused for a new complaint created on May 1, 2017 in the Excel spreadsheet.

According to DWU,

- The separate Excel spreadsheet is needed to comply with Texas Commission on Environmental Quality (TCEQ) requirements for all necessary customer contact information and is easier to update with new information than the SAP system
- The portion of the SAP system used for work order management has been designated for replacement. The DWU anticipates the use of a new work order management system will begin in October 2020.
- The use of a prior year work order number at the same address was an unusual mistake and is not a recommended practice

Administrative Directive 4-09, *Internal Control* (AD 4-09) requires the City of Dallas (City) to establish a system of internal control in accordance with the *Standards for Internal Control in the Federal Government by the Comptroller General of the United States* (Green Book). The AD 4-09 also requires each department to establish and document a system of internal control procedures specific to its operations, mission, goals, and objectives. The Green Book Principles 11, *Design Activities for the Information System*, and 12, *Implement Control Activities*, state that management:

- Evaluates information processing objectives to meet the defined information requirements, which may include: (1) accuracy - transactions are recorded at the correct amount in the right account; and, (2) completeness - transactions that occur are recorded and not understated [11.05]
- Implements control activities through policies, documents responsibilities through policies, and periodically reviews control activities [12.01 and 12.02]

Recommendation II:

We recommend the Director of DWU improve the tracking of water quality complaint resolution by noting in either data source (Excel or SAP) when a closed complaint is still outstanding in the other data source.

Recommendation III:

We recommend the Director of DWU eliminate the use of prior year complaint numbers to track new complaints.

Please see Appendix III for Management’s Response to the recommendations.

Water Quality Reporting Process Lacks Formal Policies and Procedures

The DWU's three water treatment plants do not have formal (written, approved, dated) policies and procedures that specify requirements to independently compare TCEQ report data to source documents before report submission. While few errors were identified during the audit, there is a risk errors may occur in the regular reporting of water quality results, particularly if there are changes in processes or personnel.

The current water quality reporting process (see textbox) is vulnerable to errors each time the data results are transferred between forms prior to preparing the monthly TCEQ report. At a minimum, the current process includes the following steps:

- Record daily water quality test results on a hand-written form
- Copy the results from the hand-written form into a spreadsheet
- Transfer these results either manually or through an automated process to a second TCEQ spreadsheet form for final reporting

Few errors identified

Audit testing of water quality results in CY 2017 showed few errors occurred. Eighteen out of 2,876 water quality sample results (0.6 percent) reported to TCEQ contained errors related to incorrectly copying results from one form to another. No errors changed whether TCEQ water quality standards were met.

In addition, two errors were identified in the *City of Dallas 2017 Water Quality Report*, due to errors in previously prepared information. Both errors overstated contaminant measurements that were still well below TCEQ standards.

According to DWU management:

Water Quality Testing and Reporting

Each DWU water treatment plant uses a monitoring plan approved by the Texas Commission on Environmental Quality (TCEQ) to establish and document water quality testing and monitoring procedures. The monitoring plans for each water treatment plant describe the tests, locations, frequency, and methods for multiple water quality parameters. Automatic and manual testing is performed multiple times daily to ensure each water treatment plant's water is safe to drink and complies with TCEQ requirements. The tests produce more than 1,000 results which must be reported to the TCEQ monthly.

The DWU collects more than 330 water quality samples each month at locations throughout Dallas according to the *City of Dallas Water Utilities Monitoring Plan*. The DWU tracks each sample collected and tested on a state-issued Microbial Monitoring Form and submits all forms monthly to TCEQ.

Source: DWU

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- In practice, DWU performs a thorough review of each report before submission to TCEQ, comparing the report to the original documentation. While DWU strives to maintain 100 percent accuracy, each monthly report contains more than 1,000 results that need to be reviewed for each water treatment plant.
- A laboratory information management system is being acquired to improve water quality reporting for both water treatment plant and distribution system testing and should be in place by October 2020. The laboratory information management system may reduce data transfer errors; however, some manual data entry may still be needed to complete the mandatory TCEQ spreadsheet.

The TCEQ regulations require that information reported by water utilities is accurate and complete. The TCEQ Title 30 Texas Administrative Code (30 TAC) §290.271-272, *Consumer Confidence Reports*, establishes the minimum requirements for the content of annual reports that community water systems must deliver to their customers. The DWU calls this document the *City of Dallas Water Quality Report*. These reports must contain information on the quality of the water delivered by the systems and characterize any risk from exposure to contaminants detected in the drinking water in an accurate and understandable manner. Any data relating to detected contaminants must be displayed in one or more tables within the report. The data must be derived from data collected to comply with the TCEQ monitoring and analytical requirements.

The 30 TAC §290.274, *Report Delivery and Recordkeeping*, states that each community water system shall certify that the information in the report is correct and consistent with the compliance monitoring data previously reported.

According to AD 4-09, each department is required to establish and document a system of internal control procedures specific to its operations, mission, goals, and objectives, in accordance with the Green Book. The Green Book Principle 12 states that management implements control activities through policies, documents responsibilities through policies, and periodically reviews control activities.

Recommendation IV:

We recommend the Director of DWU develop and implement policies and procedures that specify requirements to:

- Independently compare TCEQ report data to source documents before monthly report submission
- Reduce the potential for errors by limiting data transfer among forms

Please see Appendix III for Management’s Response to the recommendations.

Gaps Were Identified in Policies and Procedures for Water Treatment Plants

The three DWU water treatment plants have formal policies and procedures for core water treatment processes (see textbox); however, the following gaps were identified:

- The Bachman Water Treatment Plant policies and procedures were last revised in 2010, while the other water treatment plants' documents were more recently updated. Three Bachman Water Treatment Plant policies and procedures⁴ were not current to reflect changes made in 2017 and most policies and procedures referred to a document that is no longer used.

Core Water Treatment Processes

- Chloramination
- Coagulation
- Filtration
- Flocculation
- Fluoridation
- Lime Softening
- Ozonation
- Sedimentation

See Appendix I for more information about these processes.

Source: DWU

- The East Side Water Treatment Plant did not have formal policies and procedures for filtration, a core water treatment process. A formal policies and procedures document for filtration, DWU-PRO-008-ESWTP.OPS, *Biological Filtration Process*, was released in May 2018.

Although DWU has a quality system in place and water treatment plant operators are licensed by the TCEQ, without current and complete policies and procedures, there is a risk DWU personnel are not following water production practices consistently to ensure compliance with TCEQ requirements.

The DWU's annual review of policies and procedures was completed and documented; however, the annual review did not ensure policies and procedures were current and complete.

According to DWU management, the lack of the filtration policies and procedures were identified during an internal DWU audit in 2018.

According to AD 4-09, each department is required to establish and document a system of internal control procedures specific to its operations, mission, goals, and objectives, in accordance with the Green Book. The Green Book Principle 12

⁴ Three policies and procedures include: DWU-PRO-015-BWTP, *Coagulation Process*; DWU-PRO-016-BWTP, *Flocculation Process*; and DWU-PRO-020-BWTP, *Sedimentation Process*.

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states that management implements control activities through policies, documents responsibilities through policies, and periodically reviews control activities.

Recommendation V:

We recommend the Director of DWU ensure:

- Bachman Water Treatment Plant has current policies and procedures
- East Side Water Treatment Plant has policies and procedures for filtration
- The annual review process for policies and procedures is adequate to determine if policies and procedures are complete and current

Please see Appendix III for Management's Response to the recommendation.

Appendix I

Background, Objectives, Scope, and Methodology

Background

The Department of Dallas Water Utilities’ (DWU) vision is, *“To be an efficient provider of superior water and wastewater service and a leader in the water industry.”* The DWU’s mission is to:

- *“Provide services vital to the health and safety of [City of Dallas (City)] citizens and our customers*
- *Provide excellent response to the needs of our customers at a fair and reasonable cost*
- *Value and respect our employees*
- *Continuously plan for the future”*

The Texas Commission on Environmental Quality (TCEQ) has designated DWU a *“Superior Public Water System,”* the highest rating available, which requires meeting more stringent water quality standards than other public water systems. The DWU developed a comprehensive monitoring plan and separate plans for each water treatment plant including the types, locations, times, and methods, of water quality testing performed. Results of the testing and monitoring are reported to customers annually.

The DWU also developed a quality system with documented policies, procedures, and forms to help ensure water quality treatment and testing processes are performed consistently. For example, as of July 2018, all permanent operators at each DWU water treatment plant had current water licenses with TCEQ as required.

Water Quality and Safety at the Department of Dallas Water Utilities

The DWU consists of seven programs: Capital Improvements, Business Operations, Customer Operations, Water Production, Water Delivery, Wastewater Operations, and Stormwater Operations.

The responsibility for water quality and safety falls under the Water Production and the Water Delivery programs within DWU.

Water Sources

Currently, DWU obtains water from the Elm Fork of the Trinity River and the following six lakes: Lake Fork, Lake Grapevine, Lake Lewisville, Lake Ray Hubbard, Lake Ray Roberts, and Lake Tawakoni. The DWU also plans to use Lake Palestine in the future when water demands increase. All of the water supply comes from surface water (from reservoirs or rivers) and no ground water (from wells) is utilized.

Drinking Water Contaminants

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from wastewater treatment plants, septic systems, agricultural livestock operations, and wildlife
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming
- Pesticides and herbicides, which might have a variety of sources such as agriculture, urban storm water runoff, and residential uses
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems
- Radioactive contaminants, which can be naturally occurring or the result of oil and gas production and mining activities

Federal and State Regulations

To ensure that tap water is safe to drink, the United States Environmental Protection Agency (EPA) issues regulations that limit the amount of certain contaminants in water provided by public water systems. The *National Primary Drinking Water Regulations* can be found in Title 40, Code of Federal Regulations Part 141, Subpart G.

The TCEQ is responsible for regulating public water systems in the State of Texas (State). The TCEQ’s Public Drinking Water Program is a part of the State’s Public Water Supply Supervision Program, which is required to retain primary

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enforcement authority in the State for compliance with *Safe Drinking Water Act* and EPA regulations. The rules that TCEQ adopts and implements can be found in Title 30 Texas Administrative Code, Chapter 290. In addition to adopting these regulations, TCEQ regularly inspects DWU's operations.

The Department of Dallas Water Utilities' Water Treatment Plants

At DWU's three water treatment plants (Bachman, East Side, and Elm Fork), DWU uses chemical treatment, settling, filtering, and disinfection to purify drinking water. Some chemicals used throughout the process include:

- Chlorine and ammonia (which combine to form chloramine) and ozone to disinfect the water
- Lime and iron sulfate to remove suspended solids in the water and control corrosion
- Activated carbon to control offensive tastes and odors
- Fluoride to help prevent tooth decay

Water treatment processes include:

- Chloramination – Combining chlorine and ammonia to disinfect the water
- Coagulation – Using chemicals to help attach small particles from the water treatment process
- Filtration – Removing impurities from the water through the use of barriers or biological processes
- Flocculation – Mixing of the water to promote interaction of particles to form larger particles that can be removed from the water
- Fluoridation – Adding fluoride to the water
- Lime Softening – Removing hardness from the water
- Ozonation – Using ozone to disinfect the water
- Sedimentation – The process used to help particles in the water settle for removal during water treatment

Testing the Water Quality

The DWU tests and analyzes samples of the water at various intervals throughout the treatment process. The DWU evaluates the water for multiple properties, including turbidity and alkalinity.

Turbidity is a measure of the relative clarity of the water by determining the amount of light scattered by material in the water when light is shined through the water sample. Higher turbidity indicates the water is cloudy and the particles provide attachment places for contaminants.

Alkalinity is a measure of the capacity of the water to neutralize acids. A complex relationship of multiple measures determines whether water will cause corrosion or deposits. Water with low alkalinity is more likely to be corrosive, which could cause deterioration of plumbing and an increased chance for lead in water, if present in pipe, solder or plumbing fixtures.

Exhibit I

Water Treatment Plants

East Side Water Treatment Plant in Sunnyvale is one of three water treatment plants used by Dallas Water Utilities (DWU). Below, water exits a large sedimentation basin during the water treatment process.



Source: Office of the City Auditor

Exhibit II

Water Distribution System Testing

The DWU collects water quality samples for the Distribution System at 171 locations throughout Dallas, such as this sample taken March 21, 2018 at 1201 Rose Garden Avenue.



Source: Office of the City Auditor

Objectives, Scope, and Methodology

This audit was conducted under the authority of the City Charter, Chapter IX, Section 3 and in accordance with the Fiscal Year 2017 Audit Plan approved by the City Council. This performance audit was conducted 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 objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The objectives of the audit were to determine whether DWU has: (1) adequate policies and procedures in place for ongoing accuracy testing and monitoring of City water quality and safety; and, (2) effective means of communicating with City residents (customers) regular testing and monitoring results. The audit period covered management operations from Fiscal Year (FY) 2016 through FY 2017.

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We also reviewed certain related transactions and records before and after that period.

To achieve the audit objectives, we performed the following procedures:

- Conducted interviews with DWU personnel
- Observed water quality testing for the distribution system and at three water treatment plants
- Researched applicable Federal, State, and local statutes and administrative directives that impact the audit objectives
- Reviewed DWU's policies and procedures, and tested records including four separate statistical samples
- Performed various analyses

Appendix II

Major Contributors to the Report

Lee Chiang, CIA, Auditor

Yzalida Hiley, Auditor

Daniel Genz, CIA, Project Manager

Robert Rubel, CPA, CIA, CISA, Audit Manager

Thandee Kywe, CPA, CFE, CGFM, Interim Quality Control Manager

Theresa Hampden, CPA, Interim First Assistant City Auditor

Management's Response

Memorandum

RECEIVED

MAR 4 2019

City Auditor's
Office



CITY OF DALLAS

DATE: March 4, 2019
TO: Carol A. Smith, Interim City Auditor
SUBJECT: Response to Audit Report:
Audit of Department of Dallas Water Utilities' Water Quality and Safety, Testing, and Monitoring

Our responses to the audit report recommendations are as follows:

Recommendation I

We recommend the Director of DWU establish expectations for: (1) response time and response resolution; and, (2) customer satisfaction in the water quality complaint resolution policies and procedures. These requirements may vary based on the type of complaint and may be addressed by referencing a completed Service Level Agreement that includes the call response time expectations for water quality complaint types.

Management Response / Corrective Action Plan

Agree Disagree

DWU agrees to evaluate and enhance its current policies and procedures to provide clear and reasonable response and resolution timelines to customer generated water quality complaints.

Implementation Date

December 2019

Responsible Manager

Randall L. Payton, Assistant Director of Water Delivery

Recommendation II

We recommend the Director of DWU improve the tracking of water quality complaint resolution by noting in either data source (Excel or SAP) when a closed complaint is still outstanding in the other data source.

Management Response / Corrective Action Plan

Agree Disagree

"Our Product is Service"
Empathy | Ethics | Excellence | Equity

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DWU agrees to evaluate and enhance its process to properly identify the status of water quality work orders within its data sources.

Implementation Date

December 2019

Responsible Manager

Randall L. Payton, Assistant Director of Water Delivery

Recommendation III

We recommend the Director of DWU eliminate the use of prior year complaint numbers to track new complaints.

Management Response / Corrective Action Plan

Agree Disagree

DWU agrees to evaluate and enhance its current work order process to include the assignment of new work orders for new complaints through the implementation of its new work order management system.

Implementation Date

October 2020 – Implementation of EWAMS

Responsible Manager

Randall L. Payton, Assistant Director of Water Delivery

Recommendation IV

We recommend the Director of DWU develop and implement policies and procedures that specify requirements to:

- Independently compare TCEQ report data to source documents before monthly report submission
- Reduce the potential for errors by limiting data transfer among forms

Management Response / Corrective Action Plan

Agree Disagree

DWU agrees to enhance the TCEQ SWMOR submission procedure to include an independent comparison of the reported data to the source documents and evaluate current data entry practices to identify and implement opportunities to improve data transfer accuracy amongst forms.

"Our Product is Service"
Empathy | Ethics | Excellence | Equity

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Implementation Date

June 1, 2019

Responsible Manager

Sally. U. Wright, Assistant Director of Water Production

Recommendation V

We recommend the Director of DWU ensure:

- Bachman Water Treatment Plant has current policies and procedures
- East Side Water Treatment Plant has policies and procedures for filtration
- The annual review process for policies and procedures is adequate to determine if policies and procedures are complete and current

Management Response / Corrective Action Plan

Agree Disagree

DWU agrees to update its policies and procedures at Bachman Water Treatment Plant to better reflect current treatment design.

As noted in the Audit Report, DWU released a formal policies and procedures document for filtration, DWU-PRO-008-ESWTP.OPS Biological Filtration Process in May 2018.

DWU agrees to evaluate and enhance its annual review process for policies and procedures to ensure policies and procedures are complete and current.

Implementation Date

January 1, 2020 – Bachman Water Treatment Plant

Responsible Manager

Sally. U. Wright, Assistant Director of Water Production



Terry S. Lowery, Director
Department of Dallas Water Utilities



Majed Al-Ghafry, P.E.
Assistant City Manager

C: T.C. Broadnax, City Manager
Kimberly Bizer Tolbert, Chief of Staff
Sally U. Wright, DWU - Assistant Director of Water Production
Randall L. Payton, DWU - Assistant Director of Water Delivery

"Our Product is Service"
Empathy | Ethics | Excellence | Equity