SFPUC Audit Bureau Inventory Management Performance Assessment April 23, 2024



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Introduction

Effective inventory management is of vital importance to the SFPUC in serving several critical purposes.

<u>Uninterrupted Service</u>

As a public utility, the SFPUC must have necessary equipment and spare parts readily available to quickly address maintenance and repair needs in order to minimize service disruptions and ensure that essential services continue without interruption. Adequate inventory management ensures that the necessary resources are readily available to respond swiftly and effectively during emergencies as well, safeguarding public safety.

Cost Control

By managing inventory effectively, the SFPUC can reduce excess stock, prevent over-purchasing, and minimize storage expenses. This cost control is essential for maintaining stable and affordable utility rates for customers.

Asset Longevity

Proper inventory management ensures that infrastructure and equipment are well-maintained, prolonging their lifespan and preventing costly breakdowns.

Regulatory Compliance

Maintaining accurate records, tracking the condition of assets, and promptly addressing maintenance requirements is necessary for adherence to regulations.

Financial Efficiency

Managing inventory efficiently can lead to increased financial efficiency as well by reducing carrying costs such as storage, insurance, and depreciation expenses. This frees up financial resources that can be redirected to other important needs.

Workflow Optimization

Inventory management systems streamline processes, ensuring that materials are used efficiently and reducing waste and spoilage. These systems also enhance procurement processes, making them more efficient.

Overview and Objective

Acknowledging the critical importance of internal governance and to ensure the effectiveness of SFPUC inventory management practices, the Audit Bureau presents the following overview assessment focused on the current performance and policies and procedures of the various SFPUC enterprise inventory divisions, highlighting their respective strengths and areas for improvement. The last inventory management audit was performed in 2012 by the City and County of San Francisco Controller's Office City Services Auditor.

The information used to create this document was collected through multiple interviews and site visits with staff at the facilities, along with current and historical data from the annual inventory counts performed by outside auditors (Crowe LLP) on behalf of SFPUC Financial Services. The City and County of San Francisco Controller's Office's Accounting Policies & Procedures section 6 (Inventory) served as a guide for standards.

Executive Summary

Overall, policies and procedures as documented are robust, and the trend has been positive regarding inventory count accuracy as recorded in the Maximo inventory management system over recent years. Overall dollar-value accuracy was about 98.2%. Two areas stand out as opportunities for improvement: 1) fuel inventory tracking and 2) tracking of Power warehouse facility non-fuel inventory. These two together account for over 90% of the approximate \$347,000 in inaccuracies observed in the most recent annual inventory count audit, and we recommend more in-depth review of each of these individually.

Total inventory by facility:

Warehouse	Total Inv \$	% of Total \$ Inv		
CDD	\$ 7,271,844.00	55.45%		
Wastewater	\$ 3,356,658.00	25.59%		
Power	\$ 1,372,997.00	10.47%		
WST	\$ 642,514.00	4.90%		
Moccasin	\$ 470,945.00	3.59%		
Total	\$ 13,114,958.00			

As of the 2023 audit count, SFPUC facilities were responsible for slightly more than \$13.1 million of inventory items and fuel, with City Distribution Division (CDD) and its six satellite facilities responsible for more than half of that total.

Inventory Variances based on 2023 count:

Warehouse	Non-	Fuel \$ Var	Fue	el \$ Var	Tota	al All \$ Var	% of All Non- Fuel \$ Var	% of Total Fuel \$ Var
CDD	\$	24,703.24	\$	137,196.44	\$	161,899.68	12.13%	95.65%
Wastewater	\$	2,410.19		N/A	\$	2,410.19	1.18%	N/A
Power	\$	174,701.30		N/A	\$	174,701.30	85.76%	N/A
WST	\$	1,582.00	\$	5,515.00	\$	7,097.00	0.78%	3.84%
Moccasin	\$	320.00	\$	724.00	\$	1,044.00	0.16%	0.50%
Total	\$	203,716.73	\$	143,435.44	\$	347,152.17		

As shown in the table above, the two main contributors to inventory variance (i.e., discrepancy between Maximo records and reality) are fuel inventory at CDD (39.52% of total variance) and non-fuel inventory at Power facilities (50.32%). Note: To avoid negative and positive variances for individual items cancelling each other out these totals are based on the sums of the absolute values of each discrepancy identified by auditors rather than a simple total dollar variance. This is intended to better illustrate the sources and magnitude of errors.

Overall, according to the auditors' figures for FY 22-23, SFPUC saw a total dollar-value variance of about 1.8%. This figure is slightly higher than that of nearby East Bay Municipal Utility District, which reported an estimated overall dollar-value variance of about 1.4%, based on sample counts of their facilities conducted in June of 2023.

The following are brief summaries of the Audit Bureau's assessment observations for each division.

City Distribution Division (CDD)

Summary: Progressing, with Challenges

Explanation: Responsible for the greatest amount of inventory of all facilities, CDD has made progress in reducing discrepancies in Crowe inventory counts but still exhibits noticeable item and dollar value variances. Limitations of the automated fuel tracking system and lack of manual fuel checks contribute substantially to these variances. The inventory management practices show improvement, but there are issues that need further review to achieve optimal oversight. The plan to complete and finalize policy and procedure documents is a positive step.

Power

Summary: Improving, but Refinement Needed

Explanation: Power has made progress in reducing Crowe inventory count discrepancies, but these variances remain relatively high. Their inventory management practices are promising, but further refinement and enhancement are needed, particularly regarding segregation of duties, cycle counts, and oversight of contractors in the facility.

Wastewater

Summary: Strong

Explanation: Wastewater exhibits exceptional accuracy in Crowe inventory counts with very minor discrepancies. Their inventory management practices appear strong and effective, supported by fairly comprehensive procedures, regular cycle counts, and effective technology use.

Moccasin

Summary: Strong, with Fuel Tracking System Challenge

Explanation: Moccasin demonstrates exceptional accuracy in Crowe inventory counts with very minor discrepancies. Their inventory management practices are strong and well-organized, featuring well-documented procedures and a clear separation of duties. The glaring opportunity for improvement is the E.J. Ward fuel tracking system which, while it is the source of issues at all facilities where it is in use, is a particular problem at Moccasin given distances between pumps and the remote location's lack of reliable internet connectivity.

Water Supply and Treatment (WST)

Summary: Strong

Explanation: WST achieves exceptional accuracy in Crowe inventory counts with minimal discrepancies. Their inventory management practices are strong and proactive, characterized by clear roles, regular cycle counts, and proactive inventory management.

Spotlight: E.J. Ward Challenges and Issues

The E.J. Ward fuel tracking system is a comprehensive system designed to monitor and manage fuel usage in various industries and applications, including fleet management, construction, and utilities. The system is intended to track and control fuel consumption, reduce fuel-related costs, improve efficiency, and enhance accountability.

Key components and features of the E.J. Ward fuel tracking system are:

- Fuel Dispensing Equipment: E.J. Ward typically provides fuel dispensers, pumps, and related hardware that are installed at fueling stations. These dispensers are equipped with sensors and meters to accurately measure the amount of fuel dispensed.
- Fuel Management Software: The system includes specialized software that collects data from the fuel dispensers and stores it in a central database. This software allows for real-time monitoring of fuel transactions.
- Fuel Cards or Key Fobs: To access and dispense fuel, authorized users are often issued fuel
 cards or key fobs. These cards are linked to individual accounts, vehicles, or equipment, allowing
 organizations to track who is accessing fuel and how much they are dispensing.
- Data Transmission: The system is designed to transmit fuel transaction data from the dispensers to the central database. This data may be transmitted through various means, such as wired connections or wireless communication, depending on the setup.
- Reporting and Analysis: Users can access detailed reports and analysis tools through the software interface. These reports provide insights into fuel consumption, usage patterns, and discrepancies. Reports can help identify inefficiencies, unauthorized usage, and areas for cost savings.
- Alerts and Notifications: The system can be configured to send alerts and notifications for specific events, such as unusual fuel transactions, low fuel levels in tanks, or maintenance requirements for dispensing equipment.
- Integration: E.J. Ward systems are often designed to integrate with other fleet management, asset management, or enterprise resource planning (ERP) systems. This integration allows for seamless data sharing across different departments and systems.
- Security and Access Control: The system typically includes security features to control access and prevent unauthorized fuel dispensing. This may include PIN codes, driver authentication, and user access controls.
- Maintenance and Support: E.J. Ward or its authorized service providers offer maintenance, support, and training services to ensure the continued operation and reliability of the fuel tracking system.

However, all SFPUC inventory facilities using E.J. Ward report multiple issues with the system, including:

- Reliability Issues: The E.J. Ward fuel system is not consistently reliable in monitoring and
 transmitting fuel levels in Maximo. While staff at Moccasin attribute this problem mainly to a lack of
 connectivity in the area, similar issues have been observed at other sites with presumably better
 network access. This inconsistency can lead to inaccuracies in tracking fuel levels and
 transactions.
- Loss of Fuel Transactions: Fuel transactions are not being reliably captured. Factors such as
 adverse weather conditions (snow), fire incidents, and power outages can disrupt data
 transmission, resulting in the loss of valuable transaction data. This lack of data can hinder
 accurate fuel inventory management.
- Calibration Challenges: There are calibration issues with the E.J. Ward monitoring system.
 Calibration is essential to ensure accurate measurements of fuel levels and dispensed quantities.
 Inaccurate calibration can lead to discrepancies in fuel inventory records and potentially result in over-ordering or under-ordering of fuel if manual checks are not also consistently performed.
- Hardware Maintenance Needs: There is a desire expressed for an improved contract with E.J. Ward, including yearly maintenance. Regular maintenance is crucial to keep the monitoring

system functioning optimally and to address calibration and reliability issues promptly. Outdated terminal hardware has been an issue, with all divisions other than CDD using hardware past its end-of-life date of 6/1/2022. Updating these facilities to the current "IOT W4" terminal hardware is advised.

- Pulser Measurements: The fuel dispensers are equipped with pulsers to measure the fuel dispensed. Accurate pulsers are essential for precise tracking of fuel consumption. Any issues with these pulsers can lead to inaccuracies in fuel usage records.
- Pump Upgrades and Meter Accuracy: There is a need for pump upgrades and accurate meters.
 Upgraded pumps and meters are necessary to ensure the precise measurement and dispensing of fuel. Inaccurate meters can lead to discrepancies in fuel inventory and financial losses.
- Delay or Lack of Data Transmission: There have been reported delays in transmitting fuel
 transaction data to PeopleSoft, and in some cases many transactions are reportedly lost. Timely
 and complete data transmission is crucial for maintaining accurate inventory records and financial
 tracking. Delays and missing transactions can lead to operational inefficiencies and inaccurate
 records.
- Data Transmission Frequency: E.J. Ward is designed to store information and send data once a
 day to Maximo. This data transmission frequency may not be sufficient for real-time monitoring
 and tracking of fuel levels and transactions, especially in situations where timely data is crucial.
 Additionally, Moccasin has reported even lower frequencies, with one transaction per month being
 transmitted.
- Power Outage Vulnerability: The fuel pumps are hardwired and subject to power outages. Power
 interruptions can disrupt the functioning of the fuel monitoring system and affect data transmission,
 leading to potential inaccuracies in tracking fuel levels and transactions.
- Connectivity Issues: Hardwire connectivity is recommended where problematic locations are
 currently connected wirelessly. Where the hardwire option is not viable, satellite integration may be
 advisable for data transmission. This could potentially improve fuel order and delivery efficiency by
 providing real-time data. Satellite technology may also enhance the ability to monitor individual
 transactions more effectively.
- Sensor Issues: There are issues with sensors around the fuel nozzle intake. These sensors are critical for accurately detecting fuel dispensing and inventory management. Problems with these sensors can result in inaccurate data.

As described, staff have reported a variety of problems with the E.J. Ward fuel tracking system related to hardware reliability, data transmission, calibration, hardware maintenance, and sensor accuracy. Addressing these issues is essential for accurate fuel inventory management, cost control, and efficient operations.

In the case of Moccasin, fuel inventory variance is kept at a minimum through the work of a laborer spending two to three days per week manually measuring fuel and propane levels at the remote locations with a dip stick. This work, along with time spent by warehouse staff on records maintenance and other miscellaneous activities to track fuel levels comes at an estimated cost of over \$40,000 per year.

As fuel accounted for about 42% of the total dollar-value discrepancies between reality and records for fiscal year 2022-23, it is apparent that the system as it stands is not performing at an acceptable level.

The Audit Bureau recommends a further dedicated assessment of the E.J. Ward system to determine whether and how it can be rendered viable or if other options must be explored to improve inventory accuracy and prevent potential waste, fraud, and abuse of resources. In the meantime, it is recommended that all facilities with fuel inventory undertake regular manual measurements of fuel levels as often as feasible.

History and Analysis of Annual Counts, FY 19-20 through FY 22-23

SFPUC Finance employs auditors annually to perform full physical inventory count audits as part of the Controller's Office fiscal year end close. These audits assess the extent to which records match the actual stock in the various facilities and provide insight into the effectiveness of the current policies, procedures, and practices regarding tracking and recording stock levels.

The charts provided in this section present an analysis of inventory count item variances and inventory count dollar value variances between Maximo (the inventory management software system) and actual physical stock for the five warehouse divisions over a four-year period (FY 19-20 through FY 22-23). Lower variances indicate better synchronization between Maximo records and actual physical inventory counts.

Locations:

Moccasin:

10390 Moccasin Switchback Road, Moccasin, CA

Responsible for \$470,945 worth of inventory as of 2023 count, or 3.59% of the total for all facilities.

Wastewater:

2725 Oakdale Avenue, San Francisco, CA

Responsible for \$3,356,658 worth of inventory as of 2023 count, or 25.59% of the total for all facilities.

City Distribution Division (CDD):

1990 Newcomb Ave San Francisco, CA and 6 satellite facilities

Responsible for \$7,271,844 worth of inventory as of 2023 count, or 55.45% of the total for all facilities.

Water Supply and Treatment (WST):

1000 El Camino Real, Millbrae, CA and

505 Paloma Way, Sunol, CA

Responsible for \$642,514 worth of inventory as of 2023 count, or 4.90% of the total for all facilities.

Power:

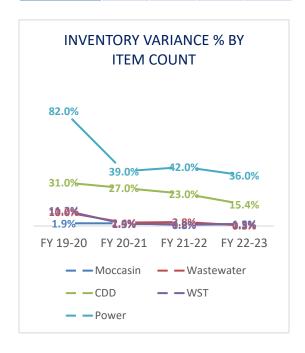
Pier 23, San Francisco, CA and

Treasure Island, Lot 69 (End of Avenue M), San Francisco, CA

Responsible for \$1,372,997 worth of inventory as of 2023 count, or 10.47% of the total for all facilities.

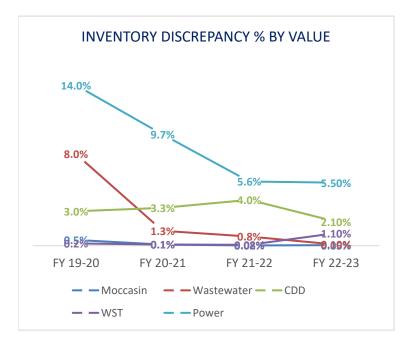
Item Count Variances

Warehouse	19-20	20-21	21-22	22-23
Moccasin	1.9%	1.9%	0.8%	1.5%
Wastewater	10.0%	2.4%	2.8%	0.3%
CDD	31.0%	27.0%	23.0%	15.4%
WST	11.2%	1.5%	1.2%	1.3%
Power	82.0%	39.0%	42.0%	36.0%



Dollar Value Variances

Warehouse	19-20	20-21	21-22	22-23	\$ Value (22-23)
Moccasin	0.5%	0.1%	0.02%	0.05%	\$ 470,945
Wastewater	8.0%	1.3%	0.8%	0.10%	\$ 3,356,658
CDD	3.0%	3.3%	4.0%	2.10%	\$ 7,271,844
WST	0.2%	0.1%	0.08%	1.10%	\$ 642,514
Power	14.0%	9.7%	5.6%	5.50%	\$ 1,372,997



Moccasin: Moccasin has consistently maintained low item variances over the four-year period, with variances ranging from 0.8% to 1.9%. This indicates a high level of accuracy in tracking individual inventory items.

Moccasin also demonstrates a consistent and commendable performance in managing inventory count dollar value variances. Over the four-year period, variances range from 0.02% to 0.5%, reflecting highly accurate tracking of inventory values.

Wastewater: Wastewater has shown substantial improvement in controlling inventory count dollar value variances. Starting at 8.0% in FY 19-20, it has steadily reduced variances to an impressive 0.10% in FY 22-23, indicating a significant enhancement in the accuracy of inventory valuation. Wastewater has also shown significant improvement in reducing item variances. It started with a high

Wastewater has also shown significant improvement in reducing item variances. It started with a high variance of 10.0% in FY 19-20 but improved consistently over the years, reaching an impressive 0.3% in FY 22-23.

CDD (City Distribution Division): CDD has maintained relatively low dollar value variances, with a peak of 4.0% in FY 21-22. However, the variances have generally been manageable, and they improved to

2.10% in FY 22-23.

CDD also demonstrates improvement in item variances, decreasing from 31.0% in FY 19-20 to 15.4% in FY 22-23. While variances remain relatively high, the facility appears to be actively working to enhance accuracy.

WST (Water Supply and Treatment): WST exhibits a strong performance in controlling inventory count dollar value variances. With variances ranging from 0.08% to 1.10%, it consistently maintains a high level of accuracy in inventory valuation.

WST has maintained low item variances over the past three years, consistently below 2%. This reflects a high level of accuracy in managing individual inventory items.

Power: Power, while starting with higher item count variances at 14.0% in FY 19-20, has made substantial progress in reducing these variances over the years. By FY 22-23 the variances have decreased to 5.50%, though this remains relatively high. Power started with exceptionally high item variances (82.0% in FY 19-20) but has made improvements over the years. The variances decreased to a still high 36.0% in FY 22-23, indicating an active effort to address inventory management challenges.

In summary, the facilities have made effective efforts to control inventory count and dollar-value variances, with all facilities achieving lower variances over the years in question. These improvements indicate enhanced accuracy in inventory records and more effective overall inventory management practices. As highlighted earlier, however, significant room for improvement remains.

Performance Assessment of Inventory Policies and Procedures

The following performance assessments of inventory policies and procedures are based on information gathered from staff comments, site visits to the various facilities, and the annual inventory count audits. These evaluations aim to provide an overview of the strengths and areas for improvement in each divisions inventory management practices.

City Distribution Division Main Warehouse and 6 Satellite Facilities



Larger items are stored outside in the locked and guarded yard.



Records and gate books dating back many decades are stored on site in a vault. Digitizing these valuable records is a current project.

Strengths

Improvement in Crowe Inventory Count: CDD have shown improvement in its annual Crowe inventory count compared to the previous year. Although there are discrepancies, efforts have been made to reduce them, demonstrating a commitment to accuracy. CDD attributes these improvements to the performance of more frequent cycle counts and the prioritization of counting items with high turnover rates and high value.

Standard Operating Procedure Improvement Work: The decision to work with a consultant to formalize Standard Operating Procedures (SOPs) indicates a proactive approach to enhance inventory management practices. Clear and standardized procedures are essential for efficient inventory control. CDD plans to finalize their SOPs subsequent to the implementation of Informer Inventory Management (iIM) cycle counting.

Awareness of Technology: The division's adoption or planned adoption of technology such as barcode scanning, Informer software, and expanded use of Cognos reporting reflects a willingness to leverage tools for better inventory control and asset management.

Security Measures: Locking valuable metals in the main location and keeping pipes "under lock and key" in warehouses demonstrate a commitment to safeguarding valuable inventory items. The number of people who have keys to locked areas is limited, and the expressed plan is to lock up all outdoor inventory in the future.

Digitization Efforts: The ongoing digitization of physical records and gate books is a positive step toward modernizing data management and improving accessibility. In the future CDD plan to eliminate hard copies of cycle count sheets and conduct physical inventory counts electronically.

Future Goals: The division's planned implementation of electronic cycle counting with iIM barcode scanning to improve accuracy, along with a move to a larger space in 2028, indicate a forward-thinking approach to improving inventory management processes.

Areas for Improvement

Inventory Accuracy: While there has been improvement in the annual count, significant variances in item quantity (15.4%) and dollar value (2.1%) still exist. These discrepancies are attributed to manual errors, miscounted items, and inconsistent counting methods. Efforts should be made to further enhance accuracy. CDD states they are undertaking a reorganization of their warehouse to improve inventory accuracy, and plan to improve inventory naming and labeling practices by creating barcoded labels and uploading pictures of materials into Maximo Item Master and Inventory applications.

Incomplete SOPs: The procedure documents supplied by CDD were incomplete. They are currently automating their processes with iIM and are rewriting their SOPs to reflect their updated inventory management practices. Completing and formalizing these SOPs is critical to ensure consistent and clear guidelines for inventory management.

Fuel Tracking System Issues: The reported issues with the E.J. Ward fuel tracking system require resolution to prevent discrepancies and ensure accurate fuel inventory management. They are currently working with E.J. Ward to reconfigure their software and make hardware improvements so that mileage can be automatically recorded from vehicle odometers instead of requiring employees to enter the reading and vehicle ID manually as part of the fueling process, with the goal of reducing instances of data entry errors and fuel transactions associated with incorrect vehicles. To ensure more accurate fuel counts, it is recommended that manual tank measurements be performed regularly as in other divisions.

Interface Challenges: The noted challenges with the interface between Maximo and the Customer Care + Billing system should be addressed to ensure seamless data integration and accuracy. [Correction: see note in CDD's response – the issue lies in the interface between Peoplesoft and Maximo.]

Consistency Across Locations: Managing inventory across multiple locations adds complexity. Ensuring consistency in practices across all locations, including satellite sites, is crucial to accurate inventory control. To date CDD have trained some shops to enter their own issue tags, and plan to require all satellite shops to enter their own issue tags and cycle count at least once per fiscal quarter.

In conclusion, while CDD has made progress in improving inventory practices, there are notable challenges and areas for improvement. These include enhancing accuracy, completing SOPs, resolving technology-related issues, and ensuring consistency across locations. CDD's commitment to technology adoption, digitization, and future goals are positive indicators of its dedication to continuously enhance inventory management.

CDD Acknowledgement Letter:



CITY DISTRIBUTION DIVISION 1990 Newcomb Avems San Francisco, CA 94124 T 415.550.4900

MEMORANDUM

November 29, 2023

TO: Christopher Crane, Senior Audit and Compliance Analyst

FROM: William Toman, Materials Coordinator William Toman

THROUGH: Sue Tensfeldt, Business Services Manager

Bill Teahan, Division Manager William, P. Tookon

SUBJECT: 2023 SFPUC Audit Bureau Assessment

The SFPUC Audit Bureau conducted interviews with CDD Materials Management personnel during a site visit to CDD in March of 2023 to review CDD's Materials Management program. During these interviews SFPUC Audit Bureau notated various observations of CDD's Materials Management system. This memorandum is CDD's Material Management response to SFPUC Audit Bureau's site visit and observations.

CDD Materials Management team reported minor inventory variances of \$153,390 (2.1%) in their 2023 annual inventory conducted on June 12, 2023 through June 14, 2023. CDD Materials Management staff continues to maintain a historically high level of accuracy year over year. This is due to the team's efforts made to reduce discrepancies and a commitment to accuracy, proactive approach to enhance inventory management practices, use of technology, a commitment to safeguarding valuable inventory items and digitization efforts, and clear and standardized procedures.

There are five main areas in your final assessment that CDD's Materials Management team would like to respond to:

Inventory Accuracy:

Significant variances in item quantity (15.4%) and dollar value (2.1%) exist. These discrepancies are attributed to manual errors, miscounted items, and inconsistent counting methods. The CDD Materials Management team is standardizing the cycle counts while mitigating opportunities for error. Moreover, CDD is organizing the warehouse to improve inventory accuracy. CDD is implementing improved inventory naming and labeling practices by creating barcoded labels and uploading pictures of materials into the Maximo Item Master and Inventory applications.

2) Incomplete SOPs:

Currently, CDD's SOPs are incomplete. Completing and formalizing these SOPs is critical to ensure consistent and clear guidelines for inventory management. CDD is currently automating processes with iIM and later MAS, rewriting SOPs to reflect the most updated inventory management practices. CDD is close to completing them and should be able to wrap them up shortly.

3) Fuel Tracking System Issues:

Across the agency at various locations, the system remains challenged with connectivity / telemetry issues that negatively impact inventory accuracy, reordering, preventative maintenance scheduling, and has led to manually tracking fuel inventory to mitigate system shortfalls. CDD is working with the EJ Ward vendor, SFPUC's Maximo IT group, and other SFPUC locations to collaborate on efforts to improve the fuel system's inventory accuracy. CDD started by inputting invoices into Maximo more frequently to align the fuel levels with EJ Ward's fuel outputs.

4) Interface Challenges:

CC&B data interfaces with CDD's work orders, however, it does not need to interface with our procurement and inventory modules in Maximo. Interface challenges between the financial reporting system (Peoplesoft) and Maximo IBM continue to be an issue for managing purchase orders on inventory stock items. Manual data entry between the two systems creates inefficiencies and inability to manage keeping the systems in sync. CDD continues to work with the Finance and Maximo IT groups to build better reporting tools and improve the interface between the two systems for more reliable procurement tracking.

5) Consistency Across Locations:

CDD continues to work with the maintenance supervisors to implement regular cycle counting and issue tag processing. Managing inventory across multiple locations adds complexity. Ensuring consistency in practices across all locations, including satellite sites, is crucial to accurate inventory control.

In addition to the ongoing improvements described above, CDD plans to hire a 1938 Stores and Equipment Assistant Supervisor and an additional 1934 Storekeeper to work toward more improved overall inventory management. Point of contact for this response and CDD Materials Management concerns is William Toman wtoman@sfwater.org.

OUR MISSION: To provide our customers with high-quality, efficient and reliable water, power and sewer services in a manner that values environmental and community interests and sustains the resources entrusted to our care.

Power Warehouse: Pier 23 and Treasure Island



Located within a warehouse on the Embarcadero in San Francisco, Power is able to keep all items under lock and key.



The two main categories of item in the Power warehouse are street lighting and high voltage.

Strengths

Physical Security: The ability to keep all items locked in an indoor facility is effective in preventing theft. Physical security is provided by a garage door swing gate entrance and security cameras, with storeroom staff on site during work hours.

Technological Measures: The planned use of QR codes on bins and implementation of barcode scanning in the future indicates a commitment to enhancing inventory accuracy and reducing human error. They currently have the mobile software, label software, and bin storage system in place to implement a QR code-based inventory system, and plan to implement new part number nomenclature to identify parts easily.

Improvement in Crowe Inventory Count: Power has shown improvement in its annual Crowe inventory count compared to FY 2019-20, with dollar amount variance in the past two counts down from previous years.

Equipment Tracking: Power's practice of associating trucks' numbers with work orders and assigning employees to trucks ensures accountability and efficient material handling, as long as efforts are made to adhere to the policy.

Areas for Improvement

High Discrepancy in Inventory Count: The most recent annual Crowe inventory count revealed a significant 36% item and 5.5% value discrepancy between physical counts and Maximo records. This high discrepancy rate needs urgent attention, and a comprehensive plan should be implemented to rectify the root causes. Power have indicated they plan to focus efforts on the top 10% of variances that accounted for 70% of the total dollar variance.

Inadequate Cycle Counts: The infrequent nature of cycle counts and reliance on Crowe auditors to identify and correct discrepancies highlight a gap in inventory control practices. Implementing regular cycle counts can help identify and address issues proactively. Additional regular cycle counts and focus on high dollar

value and high-volume usage items is recommended. Power have indicated they are planning to implement this, along with more random cycle counts out in the warehouse and increased backflushing of parts when items are depleted.

Contractor Oversight: The practice of allowing contractors to list items they take without direct oversight can lead to discrepancies and potential misuse of inventory. Implementing a more controlled and accountable process for contractor material requests is advised, ensuring contractors and staff follow appropriate procedures in pulling and issuing them parts.

Segregation of Duties: At the time of the Audit Bureau's site visit Power only employed three inventory-handling employees, making appropriate segregation of duties impossible. Power indicates this staff now numbers four which should allow for proper segregation, though buy-in from the staff is identified as an obstacle by warehouse management. Power management further express being limited in improving inventory management by the lack of tools for enforcement of policies and accountability among staff.

In conclusion, Power has established a foundation for inventory management with detailed procedures, effective use of Maximo, and plans for technology upgrades. However, the high discrepancy rate in the annual inventory count, infrequent cycle counts, and challenges in segregation of duties are areas of concern. Addressing these issues and improving accountability and contractor oversight can lead to more efficient and accurate inventory management practices in Power.

Power Acknowledgement Letter:



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MEMORANDUM

November 28,2023

TO: Christopher Crane, Senior Audit and Compliance Analyst

FROM: David Carter, Materials Coordinator, SFPUC Power UFS,

CC: Richard Stephens, Manager, SFPUC Power UFS Barbara Hale, AGM, SFPUC Power

SUBJECT: Response to Final Inventory Assessment

The SFPUC Audit Bureau conducted a site visit in March 2023 and then conducted an inventory assessment meeting in Sept. 2023 to review HHP Materials Management program. During these meetings SFPUC Audit Bureau notated various observations and areas of concern regarding the HHP Materials Management system, contained in their Final Inventory Assessment Report. This memorandum is HHP Material Management response to SFPUC Audit Bureau's Final Inventory Assessment Report.

HHP Materials Management team reported Inventory variances of 36% (with a Value variance of 5.5%) in their 2023 annual inventory conducted in June 2023. HHP Materials Management staff continues to show improvement from year to year. However, the results are too high and HHP Materials Management will continue to work at bringing the variance down.

These are the main areas HHP Materials Management team will focus on improving:

- Reassess and improve Cycle Count process. Three areas of focus: Using the Re Order Report on a weekly or bi-weekly basis; using Random Location counts on a weekly basis, with backflush procedures to identify and correct any discrepancies; using the Audit results create a cycle count of problematic items on a bi-monthly basis and adjust accordingly.
- 2) QR code development. Further integration of Work orders with material pulls that can be on the field crew work phones. Especially when they need materials after hours they can sean the part QR code and enter in quantity, to be uploaded into Maximo later. Need to coordinate with Crew Supervisor to ensure the process can be followed.
- 3) Improve accuracy of material ID, to prevent duplication and inaccurate identification or incomplete counts. For example, Streetlight Poles amounted to 55% of the total value variances. Accurate ID of the poles will improve our counts.

London N. Breed Mayor

> Tim Paulson President

Anthony Rivera

Newsha K. Ajami Commissioner

Sophie Maxwell

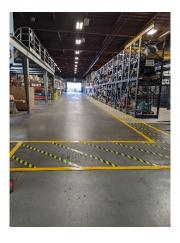
Kate H. Stacy Commissioner

Dennis J. Herrera General Manager

OUR MISSION: To provide our distances with high-quality, efficient and reliable water, power and sewer services in a manner that values environmental and community interests and sustains the resources entrusted to our care.



Wastewater Warehouse



Wastewater operates a closed warehouse



Many smaller items are stored in locked drawers.

Strengths

Improved Inventory Accuracy: Wastewater reported a significant improvement in inventory accuracy, with only 0.3% item and 0.1% value differences between physical counts and Maximo records in the 2023 Crowe inventory count. This indicates a commendable effort in maintaining inventory data integrity.

Inventory Procedures Documentation: Wastewater has supplied comprehensive procedures for inventory management, including Warehouse Cycle Counts, Warehouse Procedures, and Warehouse and Toolroom Procedures and Responsibilities. These documents provide clear guidelines for various aspects of inventory control.

ABC/XYZ Analysis: The use of ABC and XYZ analysis to categorize and prioritize inventory items based on their financial value and usage frequency is a noteworthy practice. It ensures that high-value and frequently used items receive appropriate attention and monitoring.

Cycle Count Frequency: Wastewater conducts cycle counts daily, with the entire warehouse completed roughly quarterly, which provides regular opportunities to identify and rectify inventory discrepancies. This proactive approach to inventory control can help maintain data accuracy.

Barcoding System: The use of barcode scanners along with plans to implement a QR code system in the future demonstrates a commitment to leveraging technology for accurate and efficient inventory management.

Staffing Awareness: Wastewater recognizes the importance of adequate staffing for effective inventory management. Efforts to recruit additional staff members are a positive step towards minimizing risks associated with staff shortages.

Areas for Improvement

Staffing Challenges: Despite recruitment efforts, Wastewater has faced staffing shortages in certain positions. Filling these positions is essential to ensure the segregation of duties and maintain effective inventory controls.

Maximo Integration: Exploring options for improving integration with Maximo and addressing any concerns related to system functionality or reporting capabilities can enhance inventory management practices. Wastewater have indicated that they work closely with the Maximo support team when data transfer glitches occur, and express hope that the upcoming integration of Maximo Application Suite will help to minimize these issues.

Tool Loans Management: While Wastewater has documented tool loans in Maximo, improving the tracking and accountability of tool sets, especially those with missing pieces, can further enhance control over inventory assets. They have expressed that they are actively working on more efficient ways to make sure that any incomplete sets are replenished. They are also considering a mobile solutions application designed to enhance productivity, reduce costs, improve quality and safety, increase accountability, and enable scalability.

In conclusion, Wastewater has demonstrated significant improvements in inventory accuracy and maintains comprehensive inventory procedures documentation. The use of ABC/XYZ analysis, regular cycle counts, and plans for implementing barcode scanning are commendable practices. Addressing staffing challenges and exploring opportunities for system integration and technological solutions can further enhance Wastewater's inventory management practices.

Wastewater Acknowledgement Letter:



MEMORANDUM

November 29, 22023

TO: Christopher Crane, Senior Audit and Compliance Analyst

FROM: Christian Losno, Materials Coordinator

THROUGH: Joel Prather Assistant General Manager

SUBJECT:2023 Wastewater Final Inventory Assessment for Response

We were pleased to receive your recent letter accepting the position of Wastewater Final Inventory Assessment for Response. We appreciate the recommendations of areas of improvement and will follow up on them. We also are pleased to read that our inventory management practices appear strong and effective, supported by fairly comprehensive procedures, regular cycle counts, and effective technology

A detailed summary document is attached to this memorandum. Point of contact for this response and WWE Materials Management concerns is Christian Losno, closno@sfwater.org

London N. Breed Mayor

Tim Paulson

Anthony Rivern

Newsha K. Ajami Commissioner

Sophie Maxwell

Commissioner

Kate H. Stady Commissioner

Dennis J. Henera

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Wastewater Inventory Observations

Strengths:

- Improved Inventory Accuracy: Wastewater reported a significant improvement in inventory
 accuracy, with only 0.3% item and 0.1% value differences between physical counts and Maximo
 records in the 2023 Crowe inventory count. This indicates a commendable effort in maintaining
 inventory data integrity.
- Inventory Procedures Documentation: Wastewater has supplied comprehensive procedures for inventory management, including Warehouse Cycle Counts, Warehouse Procedures, and Warehouse and Toolroom Procedures and Responsibilities. These documents provide clear guidelines for various aspects of inventory control.
- ABC/XYZ Analysis: The use of ABC and XYZ analysis to categorize and prioritize inventory items based on their financial value and usage frequency is a noteworthy practice. It ensures that high-value and frequently used items receive appropriate attention and monitoring.
- Cycle Count Frequency: Wastewater conducts cycle counts roughly quarterly, providing regular
 opportunities to identify and rectify inventory discrepancies. This proactive approach to
 inventory control can help maintain data accuracy.
 - Cycle counts are performed daily, with the entire warehouse completed every quarter.
- Barcoding System: The use of barcode scanners for cycle counts and plans to implement barcode scanning for bin locations demonstrates a commitment to leveraging technology for accurate and efficient inventory management.
 - Every item in the warehouse inventory carries a barcode. This is for better identification and cycle count efficiency. We are in the talks to upgrade to a QR code in the future.
- Staffing Awareness: Wastewater recognizes the importance of adequate staffing for effective inventory management. Efforts to recruit additional staff members are a positive step towards minimizing risks associated with staff shortages.

Moccasin Warehouse





Moccasin staff encounter many issues EJ Ward fuel monitoring system. Due to the innaccuracy of the system, manual measurements are taken instead at all pump locations on a regular basis (worksheet pictured at right).

Strengths

Inventory Accuracy: Moccasin reported very minor discrepancies in their 2023 Crowe inventory count, which indicates a high level of accuracy in their inventory management. This is consistent with prior years' results and suggests that their inventory records are well-maintained.

Robust Standard Operating Procedures (SOPs) and Flowcharts: Moccasin have well-established inventory Standard Operating Procedures and flowcharts dating back to 2009. These comprehensive procedures cover the various aspects of inventory management, including procurement, shipping and receiving, inventory controls, and compliance, providing clear guidelines for staff. Moccasin further indicates that they plan to conduct an "end to end" review with the objective of updating these documents.

Separation of Duties: Moccasin maintains a clear separation of duties with identified individuals responsible for inventory management, which is reviewed and updated annually, as well as submitted to SFPUC Finance for review and approval. This practice helps minimize the risk of errors and fraudulent activities.

Stratified Inventory System: Moccasin employs a stratified inventory system, which includes A, B, and C level items with corresponding cycle count frequencies. This approach ensures that high-value items receive more frequent attention, improving overall accuracy, and ensures that an appropriate amount of inventory is held in the warehouse. They further describe the importance of using other key performance indicators such as "orders vs issues" and inventory adjustment reports.

Areas for Improvement

E.J. Ward Fuel Tracking System: Moccasin faces challenges with the E.J. Ward fuel tracking system, including issues with data transmission and calibration. Options need to be explored to improve the reliability of this system, such as better hardware maintenance contracts with E.J. Ward and the upgrading of monitoring equipment. Despite these challenges, Moccasin has maintained accurate fuel records through weekly manual checks.

Connectivity Issues: Connectivity issues with barcode scanning and data transmission should be addressed. Exploring solutions like satellite telemetry or improved internet connectivity could help optimize these processes.

Documentation of Manual Fuel Tracking Costs: Moccasin should consider documenting the estimated staff hours required for fuel tracking for comparison to the cost of implementing satellite telemetry or pursuing alternative fuel tracking hardware/systems. This analysis can help make informed decisions about potential remedies. [Note: This estimate has been provided and incorporated into this assessment.]

Obsolete Building: The deteriorating condition of the original powerhouse storing critical spares is a concern. Plans for addressing this issue should be developed to prevent any disruptions in inventory management. Moccasin have identified hazardous materials and structural concerns with the building and new facilities are currently in the design phase, with staff continuing to store items in more temporary structures in the interim.

In conclusion, Moccasin's inventory management practices are strong, with very minor discrepancies in the Crowe inventory count (mainly due to E.J. Ward fuel tracking) and well-established SOPs. However, addressing fuel tracking issues and improving connectivity for potential barcode scanning could be steps toward enhancing inventory management further. Proactive communication and appropriate maintenance contracts with E.J. Ward may help improve the reliability of fuel tracking

Moccasin Acknowledgement Letter:

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PO Box 160 Moccasin, CA 95347 T: 209-989-2000 F: 209-989-2104 Junction of Hwy 49 and Hwy 120

MEMORANDUM

October 17, 2023

TO: Christopher Crane, Senior Audit and Compliance Analyst

FROM: Ray Emerald, Materials Coordinator Ray Emerald.

THROUGH: Alan Thoburn, Asset Management Services Manager

Margaret Hannaford, Division Manager, ---

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SUBJECT: 2023 SFPUC Audit Bureau Site Visit

The SFPUC Audit Bureau conducted interviews with HHWP Materials Management personnel during a site visit to HHWP in April of 2023 to review HHWP Materials Management program. During these interviews SFPUC Audit Bureau notated various observations of HHWP Materials Management system. This memorandum is HHWP Material Management response to SFPUC Audit Bureau's site visit and observations.

HHWP Materials Management team reported minor inventory variances of \$220 (.05%) in their 2023 annual inventory conducted on June 22, 2023. HHWP Materials Management staff continues to maintain a historically high level of accuracy year over year. This is due to the team's well-established inventory management business processes, clear employee roles and responsibilities, as well as leveraging multiple inventory management reporting tools.

There are two main areas HHWP Materials Management team will focus on improving: 1) Improvement in HHWP's fuel inventory management. Specifically, the EJ Ward fuel system. This system remains challenged with connectivity / telemetry issues that negatively impact inventory accuracy, reordering, preventative maintenance scheduling, and has led to manually tracking fuel inventory to mitigate system shortfalls. Correcting this problem should be addressed in the next budget cycle through a combination of fuel system hardware and software upgrades. 2) Improvement in HHWP inventory storage spaces. There is currently not enough space to store warehouse materials and supplies, tool room items, and critical spares at Moccasin. This shortfall has been identified in HHWP's 10 Year Capital Plan and new facilities are currently in the design phase. Until permanent upgrades are made, Materials Management staff will continue to store items in temporary structures/solutions.

A detailed summary document is attached to this memorandum. Point of contact for this response and HHWP Materials Management concerns is Ray Emerald remerald@sfwater.org.

London N. Breed

Tim Paulson President

Anthony Rivern

Newsha K. Ajami Commissioner

Sophie Maxwell Commissioner

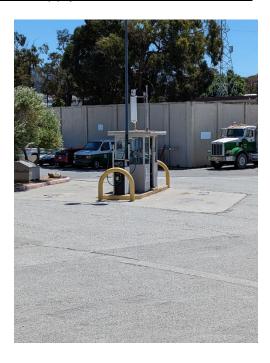
> Kate H. Stary Commissioner

Dennis J. Herrera

General Manager



Water Supply and Treatment Facilities



E.J. Ward is a common source of issues across divisions. WST found a discrepancy of several hundred gallons of fuel between E.J. Ward reports and manual checks over a testing period of several months.



Many obsolete items are stored outdoors in "the boneyard".

Strengths

Effective use of Maximo: WST staff effectively use the Maximo system for recording inventory transactions. Maximo's ability to track expenses, issues, and purchases, along with providing a record of who performs various tasks is seen as a strength.

Accurate Inventory Counts: WST exhibits a strong performance in controlling inventory count item and dollar value variances, and consistently maintains a high level of accuracy in inventory valuation.

Comprehensive Procedures: WST has a set of comprehensive inventory procedures covering various aspects of inventory management, including procurement, inventory controls, cycle inventory, and management reporting. These procedures provide clear guidelines for staff, enhancing consistency and accuracy.

Daily Reorder Reports: The use of daily reorder reports generated by Maximo helps in proactive inventory management by identifying items that need replenishment promptly.

Areas for Improvement

Data Entry Errors: The minor discrepancies in the Crowe inventory count attributed mostly to data entry errors highlight the need for improved accuracy in recording inventory transactions. Staff should receive additional training or adopt more stringent data entry procedures to reduce errors. WST have indicated

they plan to use the valuation report after completing their inventory count to recheck any differences before completing the annual inventory records.

Barcode Implementation: WST does not use barcodes on bins or barcode scanners, which might enhance the efficiency and accuracy of inventory processes. Implementing barcodes and scanners should be considered, and WST has indicated they are open to the technology depending on how well it proves to perform at other divisions who have adopted it.

Fuel Tracking and E.J. Ward: The necessity of manual fuel level checks every two weeks stemming from issues with E.J. Ward's fuel tracking system indicate room for improvement. Further investigation and potential solutions, such as improved calibration or system upgrades, should be explored to ensure accurate fuel data.

Limited Staff and Segregation of Duties: The limited number of staff members may pose a challenge to segregation of duties. Care should be taken to ensure that procurement, custody, recording, and approval of transactions are each handled by different staff members. WST recognize the issue of limited staff and has trained all members in the various aspects of warehousing, stating that in the event the purchaser is forced to receive due to lack of staff on site, a note to that effect is added to the packing slip for that order.

In conclusion, WST's inventory management practices benefit from effective use of Maximo and comprehensive procedures. However, there is room for improvement in reducing data entry errors, addressing fuel tracking issues, and maintaining appropriate staffing levels. Overall, with attention to these areas, WST can further enhance its inventory management processes.



Water Supply and Treatment Division 1000 El Camino Real Milibrae, CA 94030 T (650) 872-5900 F (650) 872-5984

INTER-OFFICE MEMORANDUM

Date: November 30, 2023

To: Christopher Crane, Senior Audit and Compliance Analyst

From: Annette Devincenzi, Acting Assistant Materials Coordinator

Subject: WSTD Response to 2023 SFPUC Audit Bureau Assessment

The SFPUC Audit Bureau conducted an assessment of WSTD's Warehouse operations with WSTD's materials management personnel on August 16, 2023. As part of the site visit to Millbrae and after reviewing WSTD's Warehouse Policies and Procedures, the SFPUC Audit Bureau made some observations of WSTD's Materials Management operations. This memorandum is the WSTD Materials Management response to the SFPUC Audit Bureau observations.

WSTD's Materials Management team reported minor variances of 1.1% of the total value of the inventory in their 2023 annual inventory conducted on June 27, 2023, mostly due to fuel variances. WSTD's Materials Management staff continues to maintain a high level of accuracy year over year. This is due to the team's well-established inventory management business practices, clear policies and procedures, as well as leveraging Maximo for tracking and recording purchases.

There are two main areas WSTD plans to focus on improving. One – make improvements to WSTD's fuel inventory management system – EJ Ward. This fuel management system is over 15 years old and requires hardware and software upgrades. We are making strides in upgrading some hardware and making both wireless and wired data transmissions possible. Two – improve staffing and inventory storage space. WSTD has fewer Materials Management and purchasing staff compared to other operating divisions of similar size and responsibility. With the limited staff it has been difficult to segregate duties along the purchasing chain, which Accounting has been advocating. WSTD will continue to pursue staff addition in purchasing and warehousing so trades staff can be alleviated of these duties. The Millbrae Warehouse does not have sufficient space to store materials and supplies needed by the trades staff that maintain the Regional Water System. This shortfall has been identified in the

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London N. Breed Mayor

Tim Paulson

Anthony Rivera Vice President

Newsha K. Ajami

Suphie Maxwell Commissioner

> Kate H. Stacy Commissioner

Dennis J. Herrera General Manager



Appendix: Inventory Management Guidelines

The City of San Francisco Controller's Office has established various inventory policies and procedures for effective inventory management. This assessment uses those guidelines in the analysis of the inventory management systems. The following is a summary of those policies and procedures:

Segregation of Duties:

Ensure that [the following] responsibilities related to inventory management are segregated among different individuals or departments to prevent fraud and errors.

Procurement
Physical Custody of Inventory (Receipt & Issuance)
Recording Inventory Transactions in Maximo
Approval of Inventory Transactions in Maximo

Purchase of Inventory:

- Establish and implement periodic replenishment values or minimum/maximum inventory levels.
- Monitor inventory regularly to identify and address obsolescence.
- Ensure prompt review, signing, and dating of packing slips.
- · Record receipt of items in Maximo promptly.
- Record any returns in Maximo promptly.
- Ensure correct labeling and location of items in the warehouse.
- Pay and record invoices in the accounting system within 30 days of receipt.

Safeguard of Inventory:

- Restrict access to the Maximo system and storage facilities to authorized employees.
- Implement controls for key distribution or electronic key tracking for entry to storage facilities.
- Periodically inspect storage facilities for fire and other hazards.
- Use the FIFO (First-In-First-Out) method for items with expiration dates.

Consumption of Inventory:

- Authorize inventory issuance by operations staff and process it through storage staff.
- Separate obsolete items from operating inventory.
- Dispose of obsolete inventory at least annually with approvals from storage and operations management.
- Communicate the disposal of obsolete inventory to the accounting department.
- Dispose of obsolete inventory in a manner that serves the City's best interests.

Physical Inventory Counts:

- Conduct physical inventory counts at least annually.
- Establish a schedule for physical inventory and cycle counts.
- Develop specific inventory count procedures and instructions, including templates.
- Prepare and organize storage for inventory counts, ensuring that only items with current City ownership are included.

- Ensure that inventory count staff have adequate knowledge and are independent from storage staff. Staff should work in pairs and be monitored by supervisors.
- Perform full counts at least annually, with additional random sample or cycle counts.
- Any different method of inventory counting must be approved by the Controller's Office.
- Adjust Maximo records promptly for any discrepancies identified in counts.
- Periodically review records for reasonableness and appropriateness of changes to unit cost, inventory valuation, and unit of measure.
- Periodically review inventory for obsolescence and reasonableness of inventory classification.
- Analyze inventory usage to determine the appropriate frequency of counts.
- Investigate significant discrepancies discovered during counts, document them, and take corrective actions to reduce future discrepancies. Adjustments to Maximo and PeopleSoft must be approved by management.
- Retain all documentation in the accounting office and at the location(s) of all physical inventories for audit purposes.
- Conduct office supply counts only if the dollar value is significant.
- Establish performance measurement systems to hold personnel accountable for consistent, accurate physical counts.

Accounting & Financial Reporting of Inventories:

- Record supply inventories as expenditures when they are acquired.
- Proprietary funds value inventory at cost or average cost and expense inventory as it is consumed.
- Allow all GAAP costing methods (e.g., FIFO, LIFO, Avg/Weighted Avg) as long as they are used consistently.
- Inventory valuation should include the purchase price and sales and use tax.
- Record the actual cost of physical inventory count discrepancies, disposal of obsolete inventories, and annual inventory adjustments in the General Ledger, with approval from management.
- For physical counts conducted at the fiscal year-end, reconcile receipts and issuances around year-end to include items in transit.

Written Department Inventory Policies and Procedures:

Each department should have written policies and procedures covering various aspects
of inventory management, including segregation of duties, inventory planning, obsolete
inventory monitoring, physical custody, physical count, inventory valuation, inventory
recording, financial reporting, and records retention. These policies help ensure
consistency and accountability in inventory management across departments.