Office of the County Auditor
Mary Modelski
Cook County Auditor
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June 10, 2021

The Honorable Tony Preckwinkle, President
Board of Cook County Commissioners
118 N. Clark Street, Room 537
Chicago, Illinois 60602

Dear President Preckwinkle and Board of Commissioners:

The Office of the Cook County Auditor has conducted an audit of the Elliott Data System Implementation in accordance with the Cook County Auditor Ordinance.

The objectives of our audit were to determine if the Department of Emergency Management and Regional Security has implemented adequate controls in the Elliott Data System to ensure accuracy and completeness of inventory records, accountability for inventory transactions, and safeguarding of assets. The scope of our work consisted of reviewing and testing a sample of active assets managed by the Department of Emergency Management and Regional Security. Our fieldwork was conducted from January through March 2021.

Please refer to the following audit report for the results of the audit. The Executive Summary provides an overview of the audit and recommendations. The audit report contains five recommendations.

We appreciate the cooperation of the Department of Emergency Management and Regional Security staff extended to Tsira Lashkarava during our audit. We have discussed our recommendations with management of the Department of Emergency Management and Regional Security.

Respectfully Submitted,

Mary Modelski
County Auditor

CC: Tanya Anthony, Chief Administrative Officer, Bureau of Administration
     William Barnes, Executive Director, Emergency Management and Regional Security

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COOK COUNTY GOVERNMENT

OFFICE OF THE COUNTY AUDITOR

Elliott Data System Implementation
Internal Audit Report

Report Date:
June 10, 2021

Issued By:
Mary Modelski, County Auditor

Audit Conducted By:
Tsira Lashkarava, Field Auditor V
Julie Stack, Audit Supervisor

EXECUTIVE SUMMARY

The Office of the County Auditor completed an audit of the Elliott Data System implementation for the Department of Emergency Management and Regional Security ("Department"). The objectives of our audit were designed to determine if the Department had implemented adequate controls over the Elliott Data System to ensure accuracy and completeness of inventory records, accountability for inventory transactions, and safeguarding of capital assets purchased with Federal financial assistance. This was accomplished by gathering, reviewing, and testing relevant supporting documentation to reach a conclusion on each of our audit objectives.

We conducted this audit in accordance with generally accepted accounting principles. These standards require that we plan and perform the audit to obtain sufficient and appropriate evidence to provide a reasonable basis for our findings and conclusions, based on our audit objectives. We believe the evidence obtained provides a reasonable basis. Our fieldwork was conducted from January through March 2021 and our sample of inventory assets was active in fiscal year 2021.

Management was presented and asked to respond to five recommendations. The Department of Emergency Management and Regional Security should:

- Implement policies and procedures, conduct a complete full inventory, establish connectivity between Elliott Data System and WebEOC, implement cycle counts process, and determine key attributes of assets. (Recommendation #1)
- Clearly define its inventory goals and objectives, update and communicate the *Policies and Procedures for Asset Management* document. (Recommendation #2)
- Manage 100 percent of inventory assets using the Elliott Data System, which should include accurate and complete asset information recorded in the Elliott Data System. (Recommendation #3)
- Update and enforce inventory count policies and procedures to help ensure consistent and accurate inventory records. (Recommendation #4)
- Update and enforce segregation of duties to ensure proper authorization and accountability for all transactions in the Elliott Data System. (Recommendation #5)

Please refer to the Recommendations section for more detail on the recommendations along with, management's response, corrective action plans and estimated completion dates.

BACKGROUND

The Department of Emergency Management and Regional Security (Department) implemented the Elliott Data System to manage inventory assets. Department Assets, typically equipment and supplies, are acquired with Federal grant funds, primarily Urban Area Security Initiative (UASI) Program grants. Consequently, the Department must comply with property standards for equipment and supplies found at 2 C.F.R. §§ 200.310 – 200.327, which, in part, provide:

1. Property records must be maintained that include a description of the property, a serial number or other identification number, the source of funding for the property (including the FAIN), who holds title, the acquisition date, and cost of the property, percentage of Federal participation in the project costs for the Federal award under which the property was acquired, the location, use and condition of the property, and any ultimate disposition data including the date of disposal and sale price of the property.

2. A physical inventory of the property must be taken, and the results reconciled with the property records at least once every two years.

3. A control system must be developed to ensure adequate safeguards to prevent loss, damage, or theft of the property. Any loss, damage, or theft must be investigated.

4. Adequate maintenance procedures must be developed to keep the property in good condition.

5. If the non-Federal entity is authorized or required to sell the property, proper sales procedures must be established to ensure the highest possible return.

Assets with a minimum cost of $5,000 each and a life expectancy of one year are to be recorded, identified, and accounted for by the Department of Emergency Management and Regional Security. As of January 2021, the Department manages 5,229 assets (more than $14.4 million in inventory). The Department tracks its Assets using a Master Asset List, an Excel spreadsheet out of which 811 assets are recorded in the Elliott Data System. The Master Asset List has been in use since 2005 and the plan is to transfer all assets from the Master Asset List to the Elliott Data System by the end of fiscal year 2021.

The Department purchased the Elliott Data System at the end of 2019 to support the inventory management process and functions needed to ensure efficient and effective management of inventory. The Elliott Data System was purchased by the Department at the end of 2019, according to the purchase request form the cost of the system was $17,517.11.

Below is the graph showing how much the County has been awarded and the amount projected for equipment purchases out of the Urban Area Security Initiative (UASI) program by year:
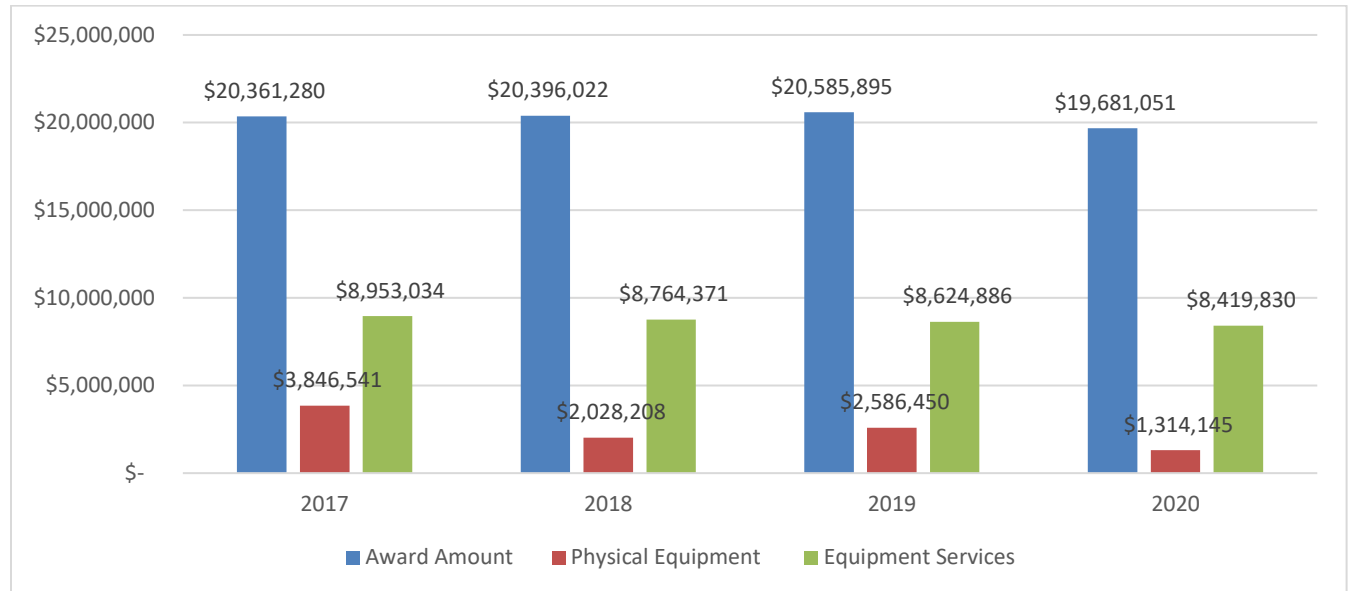
Note: Based on the Homeland Security Grant Program – Urban Area Security Initiative budget documents, the remainder of the amounts for 2017 – 2020 programs were projected for other product/service categories.

The Department has physical custody of 1,603 assets located at various locations throughout Cook County. The other 3,626 assets consist of equipment purchased by Department of Emergency Management and Regional Security sub-recipients[1], who must also comply with the above noted property standards, and County-owned assets being used by County partner organizations[2]. In accordance with requirements under Uniform Guidance 2 C.F.R. 200.331 the Department of Emergency Management and Regional Security is responsible for oversight of the operations of sub-recipients. Sub-recipients are required to submit a form to the Department of Emergency Management and Regional Security each year indicating all items that have been physically inventoried, the dates that the items were inventoried, and each item signed by the Designated Inventory Agent that verified them.

In accordance with requirements under 2 C.F.R. 200.313(d)(2),[3] "A physical inventory of the property must be taken, and the results reconciled with the property records at least once every two years." The graph on the following page shows physical inventory counts conducted by the Department of Emergency Management and Regional Security per asset by year according to the Master Asset List.

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[1] Sub-Recipient - is an entity that receives a sub-award to carry out part of a federal program that receives funding from EMRS through a sub-grant agreement.
[2] Cook County Municipalities, County Departments, Forest Preserve, or State Agencies, etc.
[3] Code of Federal Regulations, Title 2 – Grants and Agreements, Subtitle A – Office of Management and Budget Guidance for Grants and Agreements, Chapter II – Office of Management and Budget Guidance, Part 200 – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, Subpart D – Post Federal Award Requirements, Property Standards, § 200, 313. Equipment.

Number of the Physical Inventory Counts per Asset by Year
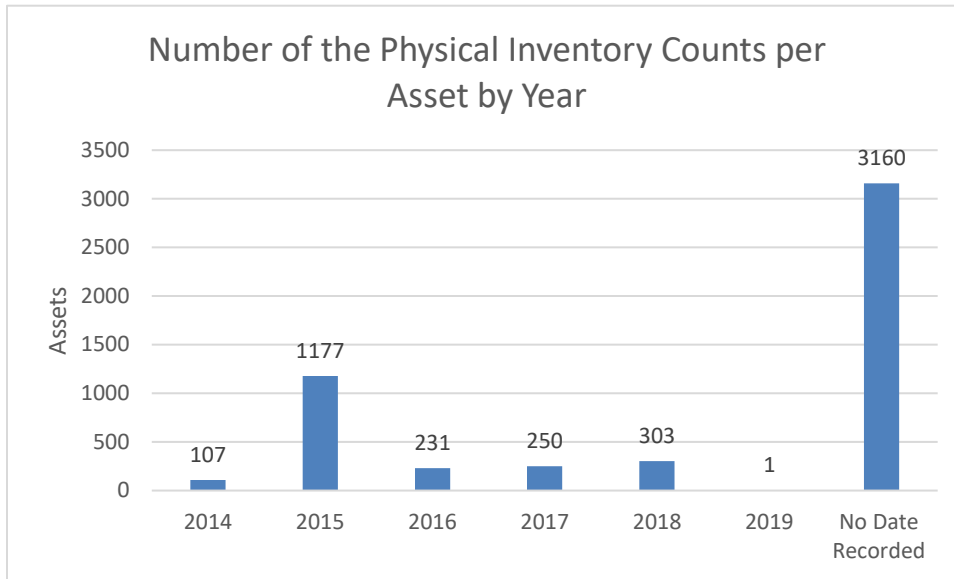
Below is a breakdown of conducted inventory count by year[4]:

- In 2014 out of 4,037 assets, 107 were counted or 2.6%.
- In 2015 out of 4,333 assets, 1,177 were counted or 27%.
- In 2016 out of 5,191 assets, 231 were counted or 4.5%.
- In 2017 out of 5,191 assets, 250 were counted or 5%.
- In 2018 out of 5,198 assets, 303 were counted or 6%.
- In 2019 out of 5,229 assets, 1 was counted or 0.01%.

When municipalities, townships, or other partner agencies request the use of an asset for a fixed period from the Department, the request is recorded and processed into the County's WebEOC system. WebEOC is a dispatch model, that is used as a processing tool with the Department partner organizations. The WebEOC and Elliott Data System are not connected so inventory information, movements and disposition of assets are not synchronized. Assets can be added in WebEOC, but such information is not transferred to the Elliott Data System automatically. Connectivity and synchronization are feasible, but this portion of the implementation had not taken place at the time of the audit.

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[4] Based on the Master Asset List, 77% of assets were purchased between 2005 and 2014, and inventory was conducted between 2014 – 2019. Our sample focused on the items listed as or presumed to be a value of $5,000 or more.

AUDIT SCOPE AND OBJECTIVES

The scope and objectives of this audit were designed to determine if the Elliott Data System implementation and related inventory management processes were being handled in accordance with the established policies, procedures, as well as assess the internal controls in place. The scope of our audit was to review controls over all active inventory owned by the Department as of January 2021.

The audit objectives were the following:

- Determine written policies and procedures are documenting the controls over the Elliott Data System process and related inventory.
- Verify inventory records are accurate, complete, and compliant with established policies and procedures.
- Verify internal controls are in place to ensure accuracy and compliance of accountability for inventory transactions.
- Verify internal controls are in place to ensure the safeguarding of inventory.

The following procedures were performed to assess the objectives:

- Interviewed Finance and Operations Section staff responsible for managing and safeguarding the Department's inventory and associated assets.
- Conduct physical inventory count on the selected sample at the Department storage facilities, as well as at their Sub-recipients' storage facilities.
- Reviewed inventory reported in the Department's financial records and analyzed inventory data in the Elliott Data System.
- Conducted physical observation of the storage facilities to verify the locations ensure safeguarding of inventory and reviewed physical security policies, procedures, and processes.

AUDIT RESULTS

Based on our analysis and evaluation of the Department's internal control over the Elliott Implementation Process, we have reached the following conclusion over our audit objectives:

- Written policies and procedures that document the controls over the Elliott Data System process and related inventory need to be updated.
- Inventory records are not accurate, complete nor in compliance with established policies and procedures.
- Internal controls to ensure accuracy and compliance of accountability for inventory transactions are not in place.
- Internal controls are in place to ensure safeguarding of inventory.

RECOMMENDATIONS

Recommendation #1:

The planning phase of the Elliott Data System implementation failed to include a project plan addressing critical components. Specific components missing included: defined user roles and permissions; identification of key user requirements, reports, and subject matter experts; user acceptance testing timeframes; methodology for validation and upload of all Emergency Management asset information; and connectivity of the WebEOC module for remote additions/modification and deployment of assets. Identifying expectations during the planning phase is critical to the success of an implementation. This is the point in the process where everyone needs to understand what the System can and cannot do; decisions are made, prioritization takes place, and contingencies are defined for lack of System functionality. A project plan is the first step in explaining the scope of the project requirements, estimations of time to complete tasks, responsible parties are assigned, and milestones are established.

Due to lack of sufficient resources with adequate knowledge and experience in an implementation of this magnitude, the Department proceeded with the implementation of the Elliott Data System solely with departmental resources. Elliott is currently being used with incomplete information, along with spreadsheets and staff knowledge of where assets reside, were purchased, and disposition of broken or lost assets. Additions are now entered into Elliott or WebEOC, without a prescribed syntax nor is synchronization between the main data source and web component occurring, to determine if information about a specific asset already exists within the Elliott Data System.

We recommend Department of Emergency Management and Regional Security:

- Define, document, and implement:
  - Policies and procedures for the use, addition, modification, removal, and deployment of asset within the Elliott Data System.
  - A syntax as to how assets are to be identified when added to the Elliott Data System.
  - User roles and permissions to access (inquire), add, modify, and delete items within the Elliott Data System.
  - Required fields to be completed for each asset, prior to its being utilized or deployed.
- Complete full inventory of assets within their responsibility and reconcile such inventory to the Elliott Data System.
- Establish connectivity between the Elliott Data System and WebEOC, along with:
  - Review user access permission for use of the module.
  - Synchronize assets between the modules and ensure modules are kept current.
- Implement a cycle count process by which assets are:
  - Accounted for on a regular basis. High value or easily lost assets should be cycle counted more frequently.
  - Verified as within the location where assigned, are in working condition and received/scheduled any required preventive maintenance.
  - Properly tagged and labeled, including any required personal protective gear required for use.
- Work with the appropriate Bureaus/Departments (Finance, Procurement, Salvage) to determine key attributes of assets such as:

- o Purchase date
- o Method of purchase (i.e., grant, operating fund, cost sharing)
- o Useful life
- o Disposal/write off requirements and notification procedures for any grantors, Departments/ Bureaus, or shared partners who uses the asset(s) or provided funding for acquisition/maintenance.

Management Response

EMRS concurs with Recommendation #1 to the extent that it requires EMRS to implement an inventory management solution capable of maintaining accurate and complete inventory records in accordance with the Federal Regulations governing the federal grant dollars it receives.

As noted in the background, EMRS has been working to better understand, track and manage its grant-funded inventory for many years. In fact, EMRS has entered numerous Corrective Action Plans with the Cook County Comptroller's Office in response to Single Audit findings related to EMRS inventory tracking. At the time of your FY 2021 audit of the Elliot Data System (EDS) implementation, EMRS was subject to the FY 2019 Corrective Action Plan (CAP) it had submitted to the Comptroller in response to related Single Audit findings. Discussing not only this CAP but also the progress EMRS has made towards implementing an inventory management solution, will help to put your recommendations (and EMRS' progress) in context.

The FY 2019 CAP consisted of the following components:
- EDS Training and Implementation by latter half of 2020.
  - o Current Status: Completed
- Transition away from legacy Master Asset List in 2021.
  - o Current Status: Out of the 5,229 assets listed on the legacy Master Asset List spreadsheet, a total of 5,201 have been entered into Elliott representing 99% of the assets on our Master Asset List. We continue to review the remaining items to determine both their location and whether they remain in EMRS possession.
- Fully implement EDS in 2021.
  - o Current Status: Continuing to enter remaining Master Asset List items, as well as update information on older items, where feasible. EMRS considers the entry of existing/available asset information to constitute EDS implementation. The additional task of tracking down missing/historical information needed to correct incomplete or inaccurate entries on the Master Asset List is not considered by EMRS to constitute a component of EDS implementation.
- Discuss with the Cook County Sheriff's Office (CCSO) ways to improve their inventory tracking of the thousands of radios purchased using federal funds in the possession and ensure that radios lent out to County partners are made available for inspection when needed in 2021.
  - o Current Status: Discussions with the CCSO have established a process to engage with the individual County and municipal partners in possession of grant-funded radios to verify and photograph every radio in their respective possession.

Despite our progress, the magnitude of the task facing EMRS – namely, implementing EDS, entering all federally required property information for all existing Master Asset List assets into EDS, while concurrently tracking down missing information for thousands of older Master Asset List assets – is

immense. EMRS remains committed to achieving a state where it maintains accurate and complete inventory records in accordance with applicable Federal Regulations. Achievement of this state has been slowed by EMRS' role in administering the county's COVID-19 emergency response efforts. Nonetheless, I proudly note that 99% of the items on the Master Asset List have been entered into the EDS database at this time.

The department's response to Recommendation # 1 is as follows:

- Define, document, and implement.
  - As noted in the Auditor's report, EMRS has already crafted an inventory procedure document to guide the process of inventorying a grant-funded asset from the time of the using section's (or partner organization's) initial request to the purchased asset's receipt and entry into EDS. EMRS is currently engaged with the Bureau of Administration's Office of Research, Operations, and Innovation (ROI) to review and revise these procedures considering both the Auditor's report and ROI suggestions.
  - EMRS concurs that common inventory syntax is important, not only for EMRS's obligations regarding federally funded assets, but the county's annual single audit requirements. Toward that end, EMRS will initiate discussions with both ROI and the Comptroller's office to consider the creation of syntax to be used by all county departments.
  - As noted in greater detail in response to Recommendation #5, EMRS concurs that well-defined user roles and permissions to access, add, modify, and delete items to the inventory system are necessary to ensure accuracy and prevent loss and theft. Accordingly, EMRS has been extremely thoughtful in its EDS implementation to ensure authorization and accountability for all transactions recorded in EDS. Given the importance of authorization in any inventory management system, EMRS will review current EDS user roles and permissions with both the vendor and ROI and implement their recommended changes. It is important to note EDS has the ultimate safeguard to identify theft and fraud; namely, it creates and maintains a record that logs every entry into the system that cannot be altered by any user, including the system administrator.

- Conduct a complete full inventory of assets within their responsibility and reconcile such inventory to the Elliott Data System. EMRS concurs with this recommendation, as it constitutes a baseline component of meeting EMRS' federal equipment requirements. As we discuss above, 99% of the Master Asset List has been integrated into EDS and we anticipate both the creation of an EDS record for the remaining assets and removal of appropriate assets (with necessary approval from the Illinois Emergency Management Agency) from the inventory by the end of Q4 2022.

- Establish connectivity between the Elliott Data System and WebEOC. Currently, EMRS respectfully disagrees with this recommendation for the following reasons:
  - The rules, regulations and grant guidance governing the federal funds EMRS receives and manages do not require connectivity with a separate system to supplement a grantee's inventory system.
  - While WebEOC provides EMRS with an additional means of identifying the location of an EMRS asset at any given time, it is primarily a virtual crisis management system and not an inventory management system.

- o EMRS has only just begun the implementation of EDS as its primary asset tracking tool and prefers to perfect the policies, procedures, and functionality of EDS (as it applies to EMRS operations) over several inventory cycles before considering interconnectivity with a separate system.
  - o EMRS has already begun to explore the potential for interconnectivity between WebEOC and EDS. While interconnectivity is possible, it is currently unclear what level of connection/communication that can occur between the two systems. As such, EMRS seeks to perfect the implementation of EDS before pursuing interconnectivity.
  - o EMRS recognizes the potential benefits in interconnecting the two systems and will continue to pursue the feasibility of this enhancement with the platform manufacturers and ROI, time and resources pending.

- Implement a cycle count process. At this point, the implementation of a cycle count is an aspirational goal. Presently, however, EMRS is in the process of implementing EDS with the goal of compliance with the Uniform Grant Guidance governing the federal funds it manages. Said guidance envisions a complete inventory at least every two years. As such, EMRS is committed to periodic count inventories.

- Work with the appropriate Bureaus/Departments (Finance, Procurement, Salvage) to determine key attributes of assets. Collaboration with County Bureaus and Departments is at the core of EMRS' efforts to track down missing information on all Master Asset List assets entered into EDS. We pledge to continue these efforts. Further, it is important to note that EMRS is taking great care to ensure that EDS equipment records for all new equipment entered into EDS since January 1, 2021, contain all required asset information specified at 2 C.F.R. 200.313 (d)(1).

Estimated Completion Date

- Define, document, and implement. End of Q2 2022. This considers the magnitude of the task EMRS has undertaken to define, document and implement changes to policies and procedures arising from discussions with ROI, the Comptroller and, potentially, others.

- Complete full inventory of assets and reconcile such inventory to the Elliott Data System. End of Q4 2022.

- Work with the appropriate Bureaus/Departments to determine key attributes of assets. As noted above, EMRS is committed to completing a full inventory of its assets and reconcile the inventory with its records in EDS by the end of Q4 in 2022. The full inventory and reconciliation will require EMRS to include as much information as is available at that time and work to fill in whatever blanks remain. Presently, the total universe of those assets purchased with federal funds with incomplete information is being refined. EMRS hopes to gather as much information as possible for all its assets but, given the age of certain assets, cannot be certain that federally required key attributes can be identified for all the assets. This task is ongoing.

Recommendation #2:

The Department has developed *Policies and Procedures for Asset Management* (original effective date September 2020), the latest version of the policy document was provided to the Office of the County Auditor on March 5, 2021 (effective date January 2021). However, the Department has not clearly defined, communicated, and enforced its inventory goals and objectives to follow federal regulations and ensure safeguarding of assets, which was caused by the lack of resources. Additionally, the *Policies and Procedures for Asset Management* do not include sufficient inventory management controls related to the Elliott Data System and the asset disposal process. This has resulted in only 40% of the assets being counted between the years 2014-2019.

We recommend the Department clearly define its inventory goals and objectives to improve the inventory process, management, and controls. Furthermore, the *Policies and Procedures for Asset Management* document should be updated and communicated to the relevant stakeholders on at least an annual basis. In addition, the updated *Policies and Procedures for Asset Management* document should include all controls related to inventory management using the Elliott Data System, asset disposal process, etc.

Management Response

EMRS concurs with Recommendation #2. As previously discussed, EMRS has already initiated a review of its asset management policies and procedures with ROI to ensure they comport with the County Auditor's Recommendations and Uniform Grant Guidance. Ultimately, it is EMRS' goal to be in full compliance with federal equipment requirements, which are clearly stated in the Uniform Guidance.

Finally, the EMRS will provide the *Policies and Procedures for Asset Management* document (as may be revised) to subgrantees for informational purposes and as a possible supplement to their own asset management policies and procedures.

Estimated Completion Date

Policy/Procedure Review - End of Q2 2022.

Recommendation #3:

Office of the County Auditor identified that 85% of the Department's Assets listed on the Master Asset List were not recorded in the Elliott Data System, which can lead to a lack of transparency, accountability, and operational efficiencies in the inventory management process. The Master Asset List is still being used because items have not been entered into the Elliot Data System yet.

Furthermore:
- Out of 97 selected and tested assets, complete financial information in the Master Asset List was provided only for 1 asset.
- Out of 75 selected assets, only 7 had complete financial information recorded in Elliot Data System.
- 52% of the selected assets' physical location did not match the locations listed in the Master Asset List.
- Initial asset cost was not provided for 552 assets listed in Master Asset List.

- All assets that are recorded in the Elliott Data System are missing dates on expiration and acquisition.

The lack of reliable and complete inventory data may impair the Department's ability to:
- Know the quantity, location, condition, and value of its inventory.
- Safeguard its inventory from physical deterioration, including possible theft, loss, and mismanagement.
- Prevent unnecessary storage and maintenance costs or purchase of inventory already on hand.
- Determine the full costs of government programs that use these assets.

We recommend the Department record 100% of asset inventory, i.e., assets purchased with corporate or grant funds, using the Elliott Data System. This should include accurate and complete asset information recorded in the Elliott Data System. Such information at a minimum must include quantity, location (base and physical), condition, the value of inventory, detailed financial information, and acquisition and expiration dates. All supporting and relevant documents such as purchase request forms, invoices, purchase orders, grant information, vendor information, memorandum of agreements, disposal reports, incident reports, investigation reports, etc. should be uploaded into the Elliott Data System.

Management Response

EMRS agrees with this recommendation to the extent that it requires EMRS to record accurate and complete federally funded asset information in EDS for assets purchased on a specific date forward. EMRS cannot, at this time, commit to recording key attributes for 100% of its assets – both corporate and federally funded – in EDS.

Our current inventory effort seeks to ensure that EMRS is in full compliance with its federal equipment requirements. To that end, all new equipment (with a purchase date of January 1, 2021, or later) has (and will have) EDS entries containing accurate and complete asset information. Historical purchases – including those near or past their useful life – often have incomplete or inaccurate information that cannot be located before said assets are salvaged. While EMRS is committed to cleaning up those historical entries, newer assets will be prioritized, as their information/documentation is more readily available. In all cases, EMRS will strive to include as much accurate information for each of its assets within EDS.

To the extent the recommendation implicates inventory synchronization, e.g., common syntax, EMRS will consult with ROI and the Comptroller as to feasibility and practicality of EMRS (and perhaps other county departments) recording 100% of asset inventory in EDS.

Recommendation #3 speaks to EMRS' inventory obligations as to corporate funded assets. As noted above, our current priority is to fully implement EDS in the context of federally funded assets.

Estimated Completion Date

Uploading Asset Information to EDS. As noted above, EMRS is committed to completing a full inventory of its assets and reconcile the inventory with its records in EDS by the end of Q4 in 2022. The full inventory and reconciliation will require EMRS to include as much information as is available at that time and work to fill in whatever blanks remain. Presently, the total universe of those assets purchased with federal funds with incomplete information is being refined. EMRS hopes to gather as much information as

possible for all its assets but, given the age of certain assets, cannot be certain that federally required key attributes can be identified for all the assets. This task is ongoing.

Recommendation #4:

Based on a physical inventory count conducted by the Office of the County Auditor, 18% of the 96 selected assets located at Department storage facilities were not recorded in the Master Asset List. The date of the last physical inventory count of all items is unknown. The inventory count policies and procedures were not updated or enforced. In addition, the sub-recipients, who receive inventory items from the Department do not report the results of their own physical inventory counts for the inventory in their custody. Lack of reconciliation of actual assets to the Master Asset List has caused concern related to the validity of the inventory records.

The Department should update and enforce inventory count policies and procedures for consistent and accurate inventory records and to ensure compliance with regulations for the timeliness of inventory counts. The update of the inventory count policies and procedures should at minimum require blind and cycle inventory counts, sufficient documentation of counts and adjustment, and appropriate segregation of duties. The updated policies and procedures should include a standardized form that the sub-recipients will utilize in their physical inventory count process. The updated policies and procedures document and reporting timeline should be communicated with all the stakeholders, including the sub-recipients.

Management Response

EMRS agrees with Recommendation #4 and as previously stated, will work with ROI to update the asset management policies and procedures. EMRS, however, cannot agree to incorporate blind and cycle counts into its inventory process at this time for reasons expressed in our response to Recommendation # 1. Thus, EMRS will limit itself to conducting periodic count inventories.

Estimated Completion Date

Update and enforce inventory count policies and procedures. End of Q2 2022.

Recommendation #5:

Appropriate access controls to the Elliott Data System had not been implemented. A segregation of duties matrix clearly defining what level of authority could add, change, delete inventory information or change the disposition of assets had not been created. Two individuals were granted full control of the Elliott Data System. Additionally, we found an individual had adjusted the inventory, as well as recorded the receipts of goods in the system. Duties should be separated to reduce the risk an individual could incorrectly add, change, delete inventory records, or misappropriate items. Due to lack of adequate planning and execution, proper segregation of duties was not designed nor implemented.

We recommend the Department update policies and procedures to include a segregation of duties matrix to ensure proper authorization and accountability for all transactions recorded in the Elliott Data System. After such policies and procedures are updated, access within the Elliott Data System should be modified to reflect the clearly defined level of authorities. A process by which periodic review should also take place to ensure access controls are functioning appropriately and as intended. In Addition, periodic review of system generated audit trails should be reviewed.

Management Response

EMRS agrees with the Auditor's recommendation that segregation of duties is important in any inventory management system. To that end, EMRS has been thoughtful in its implementation of EDS to ensure authorization and accountability for all transactions recorded in EDS. For example:

- All users of EMRS EDS are placed in permission groups each with specific read/write/edit privileges.
- Permission groups are job specific. As such, users are not allowed to access assets that are outside their job duties/responsibilities.
- Access rights for permission groups/individual users are routinely evaluated.
- The principles EMRS has implemented with respect to EDS privileges and access are taken directly from Microsoft Active Directory User Management best practices (Windows Exam 70-740, 741 and 741). Ultimately, EMRS has implemented the concept of the "Most Restrictive Environment," which provides only the minimum access necessary for a user to accomplish their job tasks.
- EMRS EDS has two System Administrators and one Admin. The two System Administrators are comprised of the EMRS Critical Systems team who repair and maintain the Elliot system. Two are necessary to create appropriate redundancy. The Admin credentials are held by the vendor, Mobile Solutions/Elliot Data Systems, as an emergency backup should the System Administrators (or their accounts) be unavailable. EMRS believes that its credentialing practices are common and best practices for security and system access, redundancy, and resilience.
- EMRS is just as concerned as the County Auditor over unauthorized access to the system or EMRS assets. To that end, all activity in EDS is recorded in a log that cannot be edited by any user, regardless of their privileges. When inventory is adjusted, the log tracks the activities of that specific user. Further, no asset can be completely deleted/eliminated/removed. As such, the log creates a permanent record of all activities within the system.

In further response to this Recommendation, EMRS will continue to refine its access controls, update its procedures accordingly, and work with ROI to implement periodic reviews of its access control and system generated audit trails.

Estimated Completion Date

End of Q2 2022.