Montgomery County, Maryland
Office of the County Executive
Office of Internal Audit

Montgomery County Department of Liquor Control
Inventory Management

Prepared by Watkins Meegan LLC

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MCIA-15-1

Highlights

Why MCIA Did this Audit?

The Montgomery County Department of Liquor Control (DLC) controls the wholesale distribution of all beverage alcohol in Montgomery County and operates 25 retail outlet stores located throughout Montgomery County. DLC operates from a newly relocated centralized warehouse in Gaithersburg and provides wholesale distribution to licensed retailers including DLC operated retail outlets.

DLC inventory management was listed as a high risk area in our 2010 Countywide Risk Assessment. The overall objective of this audit was to assess the internal controls related to inventory management for DLC and provide recommendations to facilitate process improvement and enhance internal controls, where necessary.

What MCIA Recommends

The recommendations in this report cover a range of areas. Overarching recommendations include additions or changes to DLC's organization structure and reporting lines to provide increased segregation of duties and independent oversight, implementation of succession planning activities to ensure the ongoing sustainability of the organization.

Additional recommendations include enhancements to physical inventory count procedures, and improvement opportunities for warehouse operations, and retail store operations.

Common themes underlying these recommendations include inadequate segregation of duties, lack of formal policies and procedures, dependence upon manual processes, and the need for improved monitoring and reporting capabilities.

Full details can be found in the Results: Findings and Recommendations section of this report. DLC and the County Finance Department concurred with the recommendations.

DLC Inventory Management

What MCIA Found?

During our audit we identified many areas and activities that DLC did well, such as maintaining an experienced management team and overall DLC employee roster with minimal turn-over and over 330 years of combined work experience; continuous department expansion with marginal interruption in meeting customer needs; providing approximately $25 million in funding to the County's General Fund while growing the department and incurring significant costs in system implementation and retail site openings; and demonstrating a firm commitment to customer service and sensitivity to avoiding real or perceived abuses of the monopoly position DLC holds for distribution of beverage alcohol within the County.

However, reliance upon the experience and expertise of key individuals has led to some internal control gaps related to segregation of duties and independent oversight. This generated a number of audit recommendations related to the organization structure, reporting lines and effective monitoring of operational activities as noted below.

Additionally, gaps in current, formally documented policies and procedures are another common root cause for the need to improve controls. With the recent change in warehouse location and pending 2014 implementation of a new warehouse management system, it is important that DLC management act to document and formalize policies and procedures in the near term so the knowledge and experience of the leadership and management team can be leveraged prospectively to ensure the ongoing sustainability and success of the organization.

We also found, and DLC recognizes, that there are opportunities to better leverage technology to drive efficiencies, reduce the risk of data entry errors, enhance reporting and analytical capabilities, and increase integration with centralized accounting and reporting functions with the County. In this regard, DLC has projects underway to implement GPS tracking on the vehicle fleet and a comprehensive upgrade to the warehouse management system, offering significant enhancements to tracking, monitoring, reporting, and segregation of duties controls.

It is important to note that our audit did not disclose any instances of fraud or material errors resulting from the weaknesses we found during our audit. However, if not corrected the weaknesses may increase DLC's vulnerability to waste, fraud, or abuse.

Inventory Process Audit

Introduction

This report summarizes the work performed by Watkins Meegan on behalf of the Montgomery County Office of Internal Audit (MCIA) in reviewing the Montgomery County Department of Liquor Control's inventory management and processes. The overall objective of the audit was to assess the design and operating effectiveness of the inventory process controls in place at the centralized warehouse location and at a selected number of Department of Liquor Control (DLC) retail outlets. This document provides background information on DLC, outlines the objectives, scope, approach and methodology used in the audit, describes an overview of DLC operations and documents the results of our audit, including recommendations for improvements.

Background

Every state in the United States controls the distribution of and access to beverage alcohol to varying degrees. The states can be broadly divided between "license states", where regulation is managed through the issuance of licenses to independent private sellers, and "control states", where more direct control is maintained through the state managing its own wholesale and / or retail distribution of beverage alcohol.

While Maryland at large is considered a license state, Montgomery County operates as a control jurisdiction within the state. All Montgomery County alcohol laws are state governed and are not determined directly by the County or DLC. DLC was created under state law in 1951 and has responsibility for the distribution of all beverage alcohol within the County. As a result, all beverage alcohol sold in Montgomery County passes through the DLC warehouse prior to distribution. DLC also owns and operates 25 retail stores. These retail stores have the exclusive right to sell spirits for carryout and share the rights of selling wine and beer with independent retailers that are appropriately licensed, through DLC, to conduct off-premise sales.

The DLC Director is appointed by the County Executive, subject to the approval of the County Council. This is an "at will" position reporting directly to the County's Chief Administration Officer. The incumbent DLC Director has served in the role since 2001.

Three division chiefs currently report to the DLC Director. Their titles and areas of responsibility are:

- Chief of Administration
    - Administration – budget, Human Resources, facilities
    - Finance – financial reporting, accounts payable, accounts receivable, pricing
    - Information Technology – systems and applications for all divisions of DLC
- Chief of Operations
    - Purchasing and Customer Service
    - Wholesale Operations – sales, warehousing and delivery
    - Retail Operations – sales, promotions and marketing
- Chief of Licensure, Regulation and Education (LRE)
    - Licensure and staffing for the Board of License Commissioners
    - Regulation through alcohol and tobacco inspections
    - Education, training and development of community alliances

As described in its latest annual report, DLC's mission is "…to provide licensing, wholesale and retail sales of beverage alcohol products, enforcement and effective education and training programs, while promoting moderation and responsible behavior in all phases of distribution and consumption. The department diligently promotes, enforces and obeys all laws and regulations governing beverage alcohol while generating revenue for the benefit of Montgomery County's General Fund."[1]

DLC is self-funded and does not draw on any property, state or local taxes to fund its operations. Revenues from wholesale and retail sales of beverage alcohol, as well as income generated through the licensing and regulatory enforcement activities, provide funds to cover all costs for DLC and typically generate excess income. DLC pays the excess income into the Montgomery County General Fund each year. For fiscal year ended June 30, 2013 (FY2013), DLC reported revenues of over $256 million, resulting in a contribution to the General Fund of over $25 million for FY2013. Over the ten year period from FY2004 to FY2013, DLC has reported a cumulative contribution of over $245 million to the General Fund. [2]

Due to continuing growth and expansion DLC relocated to a 210,000 square foot warehouse located in Gaithersburg, Maryland, during June and July, 2013. It was in its old facility for almost 40 years. The new facility is completely climate-controlled, allowing for proper storage conditions for all types of products, including fine wines. DLC personnel planned and performed the relocation of their entire inventory, as well as all warehouse and office staff, using in-house DLC crews and staff for all aspects of the move, while maintaining regular daily operations throughout.

Currently, DLC is completing the configuration and implementation of a new warehouse management system which will allow for increased automation of warehouse processes and controls and greater reporting capabilities. The warehouse management system is a module of the Montgomery County Oracle Enterprise Resource Planning (ERP) system, which allows for increased integration between DLC and the Department of Finance.

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1 Montgomery County Department of Liquor Control Annual Report, Fiscal Year 2013, page 3

2 Montgomery County Department of Liquor Control Annual Report, Fiscal Year 2013, page 9

Objectives, Scope and Methodology

The overall objective of this audit was to assess the design and effectiveness of internal controls related to inventory management for DLC and provide detailed recommendations to facilitate process improvement and enhance internal controls, where necessary. Our review of procedures encompassed components such as internal process documentation, policies, communication, training and similar elements as appropriate. The audit included such areas as:

- DLC Management oversight of warehouse operations.
- Procedures for the end-to-end inventory lifecycle including ordering, receiving, safeguarding, picking and distribution.
- Physical count procedures for the DLC warehouse and select DLC retail outlets
- System configuration and capabilities pursuant to the planned 2014 Oracle implementation.
- Performance measurement and reporting metrics for DLC warehouse operations.

We executed a detailed audit plan for the areas mentioned above and sought to assess whether key inventory process controls had been appropriately developed and implemented to mitigate risk and assist in identifying, detecting, and preventing inventory errors and/or fraud.

The scope of the review of procedures included the centralized warehouse facility and five DLC retail outlets selected during the planning phase with input from the Office of Internal Audit, Finance Department and DLC management. Policies and procedures relating to compliance areas such as Health & Safety were outside the scope of this review.

During the course of the audit the audit team interviewed key DLC team members. We developed an understanding of the end-to-end process by walking through the process with responsible process owners ("walkthroughs") to validate key functional and technical controls where applicable. We met with personnel from DLC management, DLC warehouse operations, DLC finance, DLC retail operations management, DLC retail store employees, and the County Department of Finance. The audit team reviewed relevant inventory reports, observed inventory operations and processes including the physical count at the DLC warehouse conducted in September 2013, and inspected and reviewed a limited number of DLC and County policies and procedures, where available. Additionally, the audit team performed site visits and observed retail outlet processes and procedures for the selected retail store locations.

Summary of DLC Operations

The following information provides a high-level summary of DLC operations and activities and is included to provide context for the observations and recommendations included in the Results section of this report. A more detailed overview is provided in Appendix III and a high-level process flow of the DLC inventory lifecycle is provided in Appendix IV for reference.

The DLC warehouse facility is approximately 210,000 square feet and the inventory within is broadly segregated between liquor/wine items, bottled beer and kegs. Inventory items are further categorized as either stock or special order items. Stock items are carried at all times and ordered by DLC on a recurring basis to ensure an appropriate volume is available on hand to fulfill projected retail demand. Special order items are sourced by DLC in response to specific requests by retail customers or licensees and are not typically available in inventory.

Roles and responsibilities for the Warehouse staff are generally split in line with the products such that there are dedicated liquor/wine teams and beer teams with supervisors over each respective section.

DLC directly controls purchasing of inventory items. The DLC procurement team consists of six buyers and their purchasing responsibilities are divided across the categories of inventory noted above. The buyers purchase items based on specific orders (for special order items) or projected demands (for stock items).

Deliveries of orders into the DLC warehouse are scheduled through DLC receiving clerks. The receiving clerks assign the timeslots in the order requested and will work with suppliers to accommodate specific times and dates wherever possible. When received, deliveries are verified, counted, inspected, marked with a location identifier and stored in the warehouse. Special order items are not assigned specific location identifiers but are stored in designated areas grouped by licensee.

The Router handles all coordination of deliveries from the warehouse to licensees. Each day, the Router pulls orders that are scheduled for delivery to licensees the next day and prepares the routes for the delivery drivers. The Router then generates order pick lists, detailing the items and quantities for each order that need to be pulled from their respective locations and made ready for delivery to the licensees.

Delivery vehicles are loaded during the night for dispatch the following morning. As the vehicles are loaded and orders are cross-checked, warehouse supervisors generate invoices for each completed order loaded. The process of invoicing automatically reduces the on-hand inventory quantities and creates a receivable balance due for the corresponding licensee.

Drivers collect payment from the licensees at the time of delivery. When a driver returns to the warehouse after a route is completed, a checker inspects the vehicle to determine if any items have been returned by the licensees. When returns are taken into the warehouse, appropriate paperwork is completed and the returns are staged for storage or return to suppliers.

Drivers submit invoice copies and the corresponding payments to the cashier's office in the warehouse. The DLC cashiers process payments made by customers and licensees for purchased products. This includes payments received for any orders collected by customers and licensees at the warehouse.

In addition to the warehouse and wholesale operations, DLC owns and operates 25 retail outlets for the retail sale of beverage alcohol. DLC has the exclusive rights in Montgomery County to sell distilled spirits for off-site consumption and shares the rights to sell beer and wine with other licensed retailers in the County.

Item pricing for the retail stores is set centrally and each product is set up in the Point of Sale (POS) system with a standard retail price and a wholesale price that can be applied to licensee sales in the retail locations. DLC retail outlets monitor available inventory in their POS system on a daily basis and submit orders to the DLC warehouse as needed to address projected demand.

Physical inventory counts were completed annually at fiscal year-end at the legacy warehouse location. With the move to the new warehouse facility and pending implementation of the new warehouse management system the physical inventory counts will be completed on a quarterly basis for the warehouse. Physical inventory counts are completed at least every two months in each of the retail stores to ensure that accurate inventory records are maintained.

Results: Findings and Recommendations

During the course of the audit we identified areas and activities that DLC performed very well, particularly considering the size and complexity of the department. Some of the key positive accomplishments were:

- Maintaining an experienced management team and overall DLC employee roster with low turn-over and over 330 years of combined work experience.
- Continuous expansion with marginal interruption in meeting customer needs, including relocation of the warehouse facility and adding two additional retail locations to the portfolio of outlets during the course of our audit.
- Providing approximately $25 million in funding to the Montgomery County General Fund while growing the department and making significant investments in system implementation and retail site openings.
- Demonstrating a firm commitment to customer service and sensitivity to avoiding real or perceived abuses of the monopoly position DLC holds for distribution of beverage alcohol within Montgomery County

Given the size, scale and product volume of DLC, any audit of this nature will identify areas and activities that can be enhanced, and some areas that require deeper analysis and an improved approach.

With the length of tenure enjoyed by executive and management levels in the organization, there is reliance upon the experience and expertise of key individuals. The long-term working relationships have fostered a high degree and familiarity and mutual trust within and across the leadership in the organization. While this enables the organization to work cooperatively and remain flexible and responsive to customer demands and operational challenges, it has also led to some internal control gaps related to segregation of duties and independent oversight. This generated a number of audit recommendations related to the organization structure, reporting lines and effective monitoring of operational activities as noted below.

Gaps in current, formally documented policies and procedures are another common root cause for recommendations noted below. While this issue extends back for a prolonged period, over the last year DLC management has deferred any efforts to create, update, or revise policies in part because of the comprehensive updates that would be necessitated with the 2013 change in warehouse location and pending 2014 implementation of the new warehouse management system. It is important that DLC management act to document, revise and formalize applicable policies and procedures in the near term so the knowledge and experience of the leadership and management team can be leveraged prospectively to ensure ongoing sustainability and success of the organization.

Another common theme in the recommendations below is the opportunity to leverage technology to drive efficiencies, reduce data entry errors, enhance reporting and analytical capabilities, and increase integration with centralized accounting and reporting functions with the County. These opportunities have already been recognized by DLC and we noted processes in place to implement GPS tracking on the vehicle fleet and implement a comprehensive upgrade to the warehouse management system offering significant enhancements to tracking, monitoring, reporting, and segregation of duties controls.

Our audit disclosed additional areas that need strengthening, enhancing, and/or the need for new processes or controls to mitigate risks. We have listed below our findings that apply across all of the processes assessed. Findings are separated by area and include the criteria, condition, cause, effect, and associated recommendation to the Director, DLC.

It is important to note that our audit did not disclose any instances of fraud or material errors resulting from the weaknesses we found during our audit. However, if not corrected these observations may increase DLC's vulnerability to waste, fraud, or abuse.

1. General Operations

#	Criteria	Condition	Cause	Effect	Recommendation
1.1	Monitoring Independent Checks on Performance	The warehouse manager has day-to-day responsibility for physical security of the warehouse while retail management is responsible for store location physical security. While a number of preventative and detective measures are in place at each physical location, the responsibility for physical security is one of many for the assigned individuals and may not be a core competency for them.	Resource constraints	The lack of dedicated and experienced personnel for warehouse and retail physical security, monitoring and loss prevention could result in loss of inventory or missed opportunities to prevent such losses. The Association of Certified Fraud Examiners estimates that, across all industries, approximately 7% of annual revenue is lost to fraud through asset misappropriation.	With more than $256 million in annual revenue flowing through the warehouse and retail locations, management should consider appointing a dedicated and independent Loss Prevention Specialist who would report directly to the DLC Director. This would provide the appropriate level of oversight and expertise in both the warehouse and retail store locations to deter potential fraudulent activities and minimize the associated revenue loss.

1. General Operations					
#	**Criteria**	**Condition**	**Cause**	**Effect**	**Recommendation**
1.2	Data Integrity	Current warehouse operations and day-to-day procedures rely heavily on manual data entry for items such as purchase orders, entering receipts, and inventory count results.	System Constraints	Lack of automation in the warehouse could negatively impact the efficiency of operations and increase the risk of inventory data integrity issues due to manual data entry errors. By automating procedures, management can increase efficiency by reducing the processing time and also reduce errors associated with the manual input of data, further ensuring data integrity and the accuracy of subsequent reporting from the system.	In order to mitigate the risk associated with manual data entry, DLC management should implement greater automation, where feasible, related to warehouse operations. Automation enhancements available include the use of barcode scanning technology of products for direct entry into the inventory management system and/or automatically populated data fields related to purchase orders.

1. *General Operations*					
#	**Criteria**	**Condition**	**Cause**	**Effect**	**Recommendation**

1.3	Policies & Procedures	During the course of the audit fieldwork we requested copies of any DLC policies and procedures that were available. When provided, we noted that the documented policies and procedures were significantly outdated and had not been routinely updated or maintained. Further, certain procedural guides are not applicable as the referenced systems are no longer being utilized.	No formal requirements to maintain current policies and procedures.	Increased risk of failure to adhere to established DLC procedures and improper job performance.	In order to ensure employees are educated and understand current processes and procedures related to DLC operations, policy documents should be reviewed periodically (at least annually) and updated according to current processes and procedures. Currently, all policies and procedures related to DLC operations require review and update.
					
					Based on industry inventory management guidance, the following set of policies and procedures provides an example of what DLC management should consider when developing/updating current documentation. This list is not exhaustive, but rather a starting point in evaluating current policies and procedures.
					• Department level policy identifying County wide procedures applicable to DLC
					• Department organizational structure and governance plan
					• Operational procedures related to:
					    ○ Purchasing authority and procedures
					    ○ Scheduling and receiving shipments
					    ○ Breakage room organization
					    ○ Inventory system user guides
					    ○ Warehouse floor plan / storage guides
					    ○ Order picking and loading procedures
					    ○ Routing and delivery guidance
					    ○ Physical inventory count procedures
					• Key performance metrics and reporting
					• Employee performance standards

1. General Operations

#	Criteria	Condition	Cause	Effect	Recommendation
1.4	Segregation of Duties Conflict of Interest	DLC does not have any direct sales employees responsible for generating or increasing sales with licensees. This role is filled by sales representatives and brokers from the various producers, who work to promote their product lines with licensees and work as liaisons between licensees and DLC to facilitate the placement of orders. Through discussion with DLC management, we noted that the third party sale representatives / brokers are authorized to place orders on behalf of licensees without requiring any formal approval or confirmation from the licensee.	Management's focus is on customer service and without an internal sales team, DLC relies on brokers to act as intermediaries between DLC and licensees.	Allowing third party sales representatives to place orders on behalf of licensees may create a conflict of interest, particularly where such orders may impact the compensation of the sales representatives through commissions or equivalent incentive bonuses. The lack of licensee approval for orders placed by third party sales representatives can also lead to disputes at the time of delivery with licensees rejecting or returning product claiming that they had not ordered them. Under current policies, DLC accepts these returned items and incurs additional costs in the processing and handling of the returned items.	In order to ensure appropriate segregation of duties and purchasing authority, the role of sales representatives in the ordering process should be reviewed. Sales representative should not be allowed to place orders with the procurement team without appropriate approval documentation from the licensee. This will help ensure accountability of the licensee and may reduce the volume of returns / rejected product at the time of delivery.

1. General Operations

#	Criteria	Condition	Cause	Effect	Recommendation
1.5	Business Continuity	We noted that many employees within DLC Operations have served in their roles for an extended number of years and are nearing retirement. DLC does not have formal succession plans in place to ensure a smooth transition of responsibilities when key DLC individuals retire / leave.	Resource constraints and County human resource practices have limited the ability to prioritize development of formal succession plans.	Inability to fill critical management roles and the potential for several concurrently open management positions could negatively impact service levels.	In order to adequately ensure DLC continuity of service with minimal disruptions to operations, management should begin to discuss succession planning across the department, to the extent management is able based on County regulations. DLC should identify and develop a strategy for identifying, hiring or promoting individuals with the potential to fill key business leadership positions in the organization. Activities should include the following: • Identify key roles for succession or replacement planning • Define the competencies and motivational profile required to undertake those roles • Assess existing DLC employees against these criteria • Identify pools of talent that could potentially fill and perform in key roles • Create development plans to prepare employees for advancement into key roles in the future

1. General Operations

#	Criteria	Condition	Cause	Effect	Recommendation
1.6	Segregation of Duties	Through discussion with the DLC Director, Chief of Operations and Chief of Administration we noted that the range of responsibilities under Operations includes oversight of purchasing, pricing, receiving, safeguarding, distribution, and retail sale of inventory. This effectively puts the entire inventory lifecycle under a single chain of command and does not allow for effective checks and balances in the end-to-end process.	Current organizational structure	Improper segregation of duties could exist increasing the risk or waste, fraud or abuse.	In order to ensure appropriate checks and balances are in place, Management should consider dividing these areas of responsibility between the available reporting lines. Examples may include moving purchasing responsibilities under Finance and having a Retail division Chief report directly to the DLC Director. We are aware that DLC management has begun the process of ensuring appropriate checks and balances are in place by realigning the purchasing function. The DLC purchasing department now reports to DLC Finance, as recommended above.

2. Physical Inventory Count Procedures

#	Criteria	Condition	Cause	Effect	Recommendation
2.1	Safeguarding of Assets	DLC is required to pay a deposit to suppliers for kegs and a subset of pallets (depending on supplier). Each keg is worth approximately $30 and each pallet is worth anywhere from $10 - $30. While kegs and pallets are stored within the warehouse, they are not included in physical inventory counts. Further, controls to safeguard the empty kegs could be improved: - Empty kegs are stored outside the warehouse next to the main entrance to the warehouse facility and could be susceptible to theft - Empty kegs are not included with the physical inventory count even though the kegs have deposit value. The Chief of Operations indicated that keg inventories are performed by certain beer suppliers to reconcile records and verify keg counts at the warehouse.	Space constraints in the warehouse limit the ability to store empty kegs in a more secure location. Lack of management oversight due to resource constraints and no current monitoring procedures over kegs and pallets.	Lack of proper tracking for kegs and pallets could lead to physical loss / theft resulting in the forfeit of deposit funds paid by DLC to suppliers. On average per year 70,000 kegs flow through DLC that require deposit funds thus exposing DLC to approximately $2.1 million in forfeited funds risk. On average per year over 70,000 pallets flow through DLC that require deposit funds thus exposing DLC to approximately $700,000 to $2.1 million in forfeited funds risk.	In order to ensure complete and accurate inventory counts and to validate and monitor associated DLC liabilities, management should implement tracking of kegs and pallets and/or include kegs and pallets for counting in the warehouse inventory counts. Tracking of kegs and pallets could include a log of all outgoing/incoming items in order to better account for their whereabouts. This would help to ensure all deposit funds due to the County for keg and pallet returns are being realized through a reconciliation of funds received / sent for processing to the item's log.

2. *Physical Inventory Count Procedures*					
#	**Criteria**	**Condition**	**Cause**	**Effect**	**Recommendation**
2.2	Monitoring Independent Checks on Performance	It was noted through observation of the September 2013 warehouse inventory count, there was no independent participation in the count process from any function outside of the warehouse / operations group. Further, noted DLC warehouse staff responsibilities were split on a day-to-day basis between Liquor / Wine or Beer teams. Thus, the same teams are used to count the products for which they have daily responsibility. We noted that Department of Finance personnel were involved only from an observation perspective and were not involved in oversight or execution of the initial physical inventory count or subsequent recounts. DLC Finance personnel were not present in the warehouse during the count and rather their role was the preparation of Inventory Count Books (ICBs) and the recording of results / variances.	Current policy does not require any independent participation in the inventory count process.	Lack of independent monitoring and segregation of duties could lead to inaccurate inventory counts and loss/theft of assets.	In order to ensure appropriate levels of oversight and independence from daily activities during the inventory counts, members from other DLC units or other departments (e.g., DLC Finance and / or Montgomery County Finance), should take an active role in the counts and teaming with the warehouse personnel. This would allow for a secondary, independent check of the activities being performed by the DLC warehouse and operations teams. Further, DLC Finance, while participating in the counts, should also monitor for compliance with the established DLC Inventory Count Procedures. DLC Finance would serve as an independent party in review of policy adherence and ensure teams are completing the count completely, accurately, and per policy.

2. *Physical Inventory Count Procedures*

#	Criteria	Condition	Cause	Effect	Recommendation
2.3	Policies & Procedures	We attended the September 2013 quarter-end physical inventory count to observe procedures and gain an understanding of the operations. We were provided with written instructions detailing the roles and responsibilities for the various parties involved and noted that certain elements of the procedures were not followed during the count: ○ Instructions were not distributed to participating warehouse staff ○ The instructions indicated that teams of two would conduct each count independently and cross-check results – this practice was not routinely followed during the count and WM observed that multiple areas of the Warehouse were counted by one person. ○ The instructions indicated that Warehouse staff should mark pallets to indicate that they had been counted – this practice was not routinely followed during the count.	Lack of communication of the required procedures and lack of enforcement of the documented process.	Failure to follow the agreed upon procedures for the warehouse physical inventory may negatively impact the quality of the initial count and lead to inefficiencies and additional costs through increased recounts and research of variances.	In order to ensure all inventory count procedures are adhered to, an advanced meeting between DLC Operations, DLC Finance and any other participating entities (e.g., County Finance) should be held to review and, if necessary, update the written instructions in preparation for the physical count. The instructions and any other available guidance should then be provided to the individuals tasked with performing the count. This should occur prior to the actual day of the count to ensure available time to address any questions and finalize the process. Following these steps will better ensure all employees participating in the count have the requisite understanding of the policies, procedures, and overall operations of the inventory count.

2. Physical Inventory Count Procedures

#	Criteria	Condition	Cause	Effect	Recommendation
2.4	Safeguarding of Assets	It was noted through observation of the warehouse facility that unique location IDs for inventory storage locations were not consistently utilized throughout the warehouse. Specifically, we observed: ○ Location IDs listed on reports generated from the inventory management system had not been updated since the relocation of the warehouse in July 2013. Some inventory items were assigned to location IDs that were no longer in use. ○ Sections of racking in the liquor/wine section of the warehouse were not designated with specific location IDs and were considered "overflow" areas for additional items not able to fit on the labelled racks. *...continued over*	System limitations with Apex and the planned migration to an Oracle inventory management system lowered the priority for making updates to the Apex system. Existing system limitations require the assignment of a dedicated location ID to each product, rather than offering flexibility to assign a quantity of any product to any available storage location.	Lack of unique and identifiable storage location IDs could lead to inaccurate and incomplete inventory counts and transparency over available on-hand inventory levels. Further, there could be potential inaccuracies in inventory management as the reported quantity on hand within the system cannot be easily located within the warehouse. This places heavy reliance on the knowledge and experience of the existing warehouse staff to locate and identify products within the warehouse when storing or picking products for delivery.	To ensure appropriate controls over the storage and handling of inventory, all physical storage locations in the warehouse facility should be clearly labelled and assigned a unique location code within the inventory management system. Location IDs should be used to differentiate where product is stored (aisle, rack, location number, etc.) or where it has been temporarily placed (receiving, quality assurance, quarantine, breakage room, dispatch, etc.) pending storage or distribution. While default storage locations may be assigned to product items, especially high volume items, the system should allow the flexibility to store any product in any available storage location, rather than force a one-to-one relationship between products and storage locations.

2. Physical Inventory Count Procedures					
#	Criteria	Condition	Cause	Effect	Recommendation
		○ Similar to the liquor/wine area, the beer side of the warehouse maintained an “overflow” area without any clear location methodology. These areas do not have racking in the floor space and there are no specific location IDs assigned to these sections. ○ Special Order Liquor/Wine items in the warehouse are not grouped by location ID but rather grouped by customer. As a result the system records for these inventory items do not reflect the physical location of the items in the warehouse. ○ The chilled “keg room” of the warehouse holds the entire DLC keg inventory but there is no racking or location IDs within the large room to help demarcate areas for product storage and identify the specific location of products within the room.			

2. Physical Inventory Count Procedures

#	Criteria	Condition	Cause	Effect	Recommendation
2.5	Segregation of Duties	When physical inventory counts are completed for the DLC warehouse the initial count results are provided to DLC Finance by the warehouse manager to compare the count results to the inventory records in the warehouse management system. Any items with variances greater than a pre-defined tolerance (see Overview of Operations section of report) are subject to recounts until the variances are reduced below the tolerance levels or the warehouse manager makes a decision to accept the residual differences. At this point the final counts are provided to DLC finance to update the perpetual inventory records in Apex to reflect the counted quantities. Under this arrangement, the warehouse manager, who has day-to-day responsibility for ensuring custody of the inventory, is also given the authority on when to determine that recounts are no longer necessary.	Current warehouse inventory count processes are designed to maximize efficiency in identifying items rather than ensuring independent oversight.	Improper segregation of duties could exist causing inaccurate inventory counts.	Management should establish metrics/thresholds related to acceptable variance levels as a basis for decision to complete the inventory count. By establishing thresholds of acceptable variances, management can reduce the subjective nature of the completion decision. Further, in order to ensure appropriate checks and balances are in place, Management should consider giving the responsibility for accepting residual differences between the physical count records and the perpetual inventory to an individual other than the warehouse manager. For example, a member of the DLC finance team could be given this role to allow for an independent assessment of when inventory count numbers should be considered final. With the assistance of a Loss Prevention Specialist, management should research any identified differences noted during the inventory counts in an effort to investigate and identify the root cause of the variance.

3. Procurement

#	Criteria	Condition	Cause	Effect	Recommendation
3.1	Monitoring Independent Checks on Performance	DLC follows Montgomery County purchasing guidelines and approval requirements for all non-inventory expenditures. For inventory items, a team of six buyers share responsibility for ordering inventory from suppliers. Through discussion with the buyers we noted that there are no formal limits in place above which buyers must obtain secondary approval of purchase orders prior to submitting to suppliers. In addition, it was noted that the buyers all report directly to Chief of Operations with no management layer between the staff and executive level. As a result, it is at the discretion of the individual buyers to obtain review and approval of purchase orders from the Chief of Operations when deemed necessary as no direct oversight is in place.	Lack of formal purchase authorization limit policies and enforcement.	Failure to adequately monitor purchasing activity increases the risk of collusion / fraud between buyers and suppliers.	In order to ensure appropriate management oversight, thresholds should be established and enforced for review and approval of purchase orders prior to submitting to suppliers. This would allow for a more strict approval process and tighter controls around purchase authorizations and approvals. Review of purchase orders meeting the established threshold should occur at a manager level. Peer review can be utilized for purchase orders not meeting the minimum threshold but requiring a second set of eyes for a spot check. In addition, management should consider adding an additional layer of oversight to the procurement team so that they do not report directly to the Chief of Operations. This additional level of management would provide greater oversight on the day-to-day activities of the buyers and also perform the purchase order review for the pre-defined thresholds.

4. Retail Store Operations					
#	**Criteria**	**Condition**	**Cause**	**Effect**	**Recommendation**
4.1	Data Integrity	Point-of-sale system transmissions occur each evening from the retail locations in order to update the inventory counts and sales volumes across all systems. These transmissions allow for the retail site system and the warehouse system to be in-sync with product volumes. Through discussion with retail management, we found that a confirmation notification of successful transmission is not provided to the retail locations. Rather, the transmissions automatically occur in the evening and the retail staff is not aware of any technical discrepancies should they arise. Thus the stores are unable to determine if the upload occurred without error.	System limitation	Lack of transmission acknowledgements from the point-of-sale system to the warehouse system (APEX) could lead to upload failure and subsequent inaccurate inventory levels in the system.	In order to ensure all data transmissions are occurring timely and completely, a successful and/or failure notification should be sent to the retail locations to validate the transmission. Validation checks of the data transmissions would aid in ensuring the inventory counts remain as up-to-date as possible. If notifications cannot be sent automatically via the system, manual email notifications could be sent by IT staff currently monitoring the success / failure of these transmissions to allow retail stores to validate the transmission.

4. *Retail Store Operations*					
#	**Criteria**	**Condition**	**Cause**	**Effect**	**Recommendation**
4.2	Authorization Limiting access rights	It was noted through discussion with retail management and observation of the retail locations that price modifications can be made by employees in the point of sale system for various reasons (e.g., sales tag not correct, manager special pricing, etc.). Reports are run daily by store managers or designees to list price modifications for the day. Where deemed necessary, the reviewer will request additional information from the employee responsible for discounted transactions to capture the justification for the change. These reports are submitted to DLC headquarters as part of the daily reporting batches, and are reviewed by supervisors for reasonableness. Although there is a monitoring process in place, currently any employee with a user account for the point of sale system can process these pricing modifications without requiring secondary approval or review at the time of the transaction.	Management decision to facilitate quicker customer processing.	Employees may process inappropriate or unauthorized discounts at the point of sale. Although monitoring controls are in place to review discounted transactions these only occur after the fact and would not mitigate the negative revenue impact of unauthorized discount transactions being processed at the point of sale.	Management should explore preventative measures in order to ensure that all discount transactions are appropriately authorized prior to processing. This may include limiting the access rights so that only supervisors or managers can process discounts, requiring a second approval on discounts, or imposing tolerance thresholds (by value and / or percentage of list price) above which secondary approvals are required.

4. Retail Store Operations

#	Criteria	Condition	Cause	Effect	Recommendation
4.3	Monitoring Independent Checks on Performance Data Integrity	A number of licensee customers have escrow accounts wherein they maintain a pre-paid balance with DLC. The licensee draws down on those funds through the month with each purchase transaction until they are billed at month end and replenish the required balance on their account. Licensees have the option of receiving deliveries directly from the DLC warehouse or purchasing product in person through a DLC retail store location, where the licensee discount is applied by retail store staff at the point of sale. The retail store POS system does not interface directly with the Licensee accounts payable records in the Apex system and as a result the retail store staff cannot determine whether sufficient escrow funds are available on the licensee's account. This runs the risk of performing a transaction where escrow funds may have been exhausted with the effect of extending credit to the customer.	System limitation	Lack of visibility into escrow account balances at the point of sale could lead to items being purchased without appropriate funding and increase the risk of bad debt if a licensee fails to pay	As of January 4, 2014, management has stated that it has eliminated escrow as a form of payment within the retail locations which effectively remediates this issue. Therefore, we offer no recommendation.

4. Retail Store Operations

#	Criteria	Condition	Cause	Effect	Recommendation
4.4	Monitoring Independent Checks on Performance	Retail store physical inventories are completed using cycle counts with a requirement to count all items at least every two months (one month at fiscal year-end). In practice, the managers within each store develop a schedule and complete limited physical counts each week, by category (e.g., wine, whisky, vodka, etc.) and record any discrepancies between the physical count and the perpetual inventory in the point of sale system. There is no process in place to observe or spot-check the retail store inventory counts by any independent party.	Resource constraints	Failure to adequately monitor physical inventory procedures in retail stores limits the reliability of the results as store management could mask shortages / shrinkage by making unsupported adjustments to the perpetual inventory records	In order to ensure appropriate levels of oversight are maintained during the inventory counts, retail store operations managers should take an active role in the counts. This would allow for a secondary check of the activities being performed by the retail teams. Further, the participation of an independent resource, such as a DLC Finance representative or a Loss Prevention Specialist (see 1.1) could further strengthen this control measure.

4. Retail Store Operations

#	Criteria	Condition	Cause	Effect	Recommendation
4.5	Safeguarding of Assets	Each retail store location has a combination safe to store cash register trays, cash and other valuables. The combinations are generally shared with all employees with cash register responsibilities. Through discussion with managers at individual retail locations during our fieldwork, we noted that there is no protocol or requirement in place to change or update the combination on a periodic basis and / or whenever there is employee turnover of someone with knowledge of the combination.	No formal process in place to require changes to safe combinations	Lack of security mechanisms regarding asset safeguarding increases the risk of theft and/or fraudulent activities	In order to ensure appropriate security mechanisms for the safeguarding and storage of valuables in the retail location, safe combinations should be changed periodically and whenever there is employee turnover of someone with knowledge of the combination.

5. *Warehouse Operations*					
#	**Criteria**	**Condition**	**Cause**	**Effect**	**Recommendation**
5.1	Monitoring Independent Checks on Performance Performance Metrics	Deliveries from the DLC warehouse to licensees and retail stores are loaded overnight ready for dispatch early in the morning. Drivers are dispatched to their respective routes and historically there was no mechanism to track or monitor progress through their assigned routes. Similarly there was no tracking of data by route to determine estimated times for each route and to monitor performance against a standard. Drivers may check in with the dispatch supervisor if any issues are encountered during the route but there is no pro-active monitoring in place. We are aware that DLC management has recently implemented GPS tracking technology for the fleet of DLC delivery trucks to ensure that the location and activity can be appropriately tracked and support can be given to drivers whenever needed. This also enables management to monitor driver efficiency running scheduled routes as well as monitors driver activity to ensure routes are being adhered to.	Processes need to be developed to fully leverage newly installed GPS tracking functionality.	Inability to monitor driver activity and location restricts the ability to ensure employee safety and provide appropriate support to drivers when needed. Without establishing appropriate baselines management cannot monitor performance of drivers in order to determine efficiency against department expectations. Further, lack of monitoring over driver activity increases the risk of collusion and/or theft.	Management should leverage the GPS technology to establish baseline expected times for recurring delivery routes and define accepted tolerable variance thresholds from that baseline, requiring explanations for any delays beyond the acceptable tolerance. Management can also use such metrics to identify potential issues and proactively contact drivers who appear to be experiencing delays or other issues on their route. Management should also monitor driver activity for any deviations from the planned or expected route and establish protocols to contact drivers when such deviations occur.

5. Warehouse Operations

#	Criteria	Condition	Cause	Effect	Recommendation
5.2	Segregation of Duties	Delivery drivers are currently responsible for collecting payments for deliveries, including cash payments. Drivers receive the cash or checks, place in an envelope and the funds are not secured during transit. Funds are not deposited until the end of a route when the cash and check receipts are processed through the cashier office at the DLC warehouse. Drivers have the option to deposits funds received at a DLC retail location; however, through inquiry at the DLC stores visited it appears that this option is rarely used.	Lack of procedures and management enforcement	Inadequate segregation of duties increases the risk of fraudulent activity wherein drivers have responsibility for reporting errors / corrections on delivery quantities and also have responsibility for gathering payment. In addition, the inability to secure cash in transit during completion of a delivery route increases the risk of third party theft, loss, or fraudulent activity.	Management should explore opportunities to facilitate licensee payment for deliveries through alternate methods to eliminate the need for drivers to handle payment collections, particularly cash. In the interim, payments collected by the drivers should be secured in a lockbox/secure envelope while in the trucks and periodically deposited at DLC retail locations when a pre-determined threshold is met.
5.3	Monitoring Independent Checks on Performance	The DLC warehouse dispatches deliveries to retail locations and licensees Monday through Friday each week. Each delivery truck is assigned a driver and a driver helper. These teams run the same delivery routes to the same retail stores and licensees each week. Assignments are only changed to adjust for absences or, in rare cases, truck size changes as drivers are normally assigned to the same physical truck for each route.	Current policy is to keep the same teams on each route to maximize efficiency of deliveries due to the driver's familiarity with the routes / licensees	Lack of driver rotation increases the risk of collusion and / or fraud	Periodically rotate the delivery route assignments and driver / helper pairings.

5. Warehouse Operations

#	Criteria	Condition	Cause	Effect	Recommendation
5.4	Data Integrity	When cases of product are partially damaged any product that can be salvaged from the case is held in a breakage room until such time that a full case can be re-packaged for distribution and sale. The product in the breakage room is not currently part of the DLC inventory count. While items are manually recorded on a paper log-sheet when received in the room, the items are not adjusted out of inventory or included in the periodic physical inventory counts when performed. We are aware management is in the process of including the breakage room in the warehouse inventory counts until the Oracle implementation which will then track items within the inventory system.	Lack of monitoring procedures over breakage room	Perpetual inventory balances may not accurately reflect the available quantities on hand if the items in the breakage room are not included in the physical inventory count process. Further, lack of monitoring over breakage room inventory could increase the potential for theft of items.	In order to ensure complete and accurate inventory counts, management should create separate location identifiers for the breakage room, establish procedures to record transactions when inventory is moved to the breakage room and include that area in the periodic warehouse counts.

5. Warehouse Operations

#	Criteria	Condition	Cause	Effect	Recommendation
5.5	Data Integrity Policies and Procedures	Inventory items may be earmarked for sale only to licensees and not generally made available by DLC for sale to the general public. In order to differentiate these items in the inventory system, point-of-sale systems, and on the online Montgomery County DLC search site, the code "LS" is utilized which effectively removes these items from view for general purchase. In certain situations, an item marked as a licensee specific product may be approved for a one-time general customer sale. In such situations, the product code must be changed from "LS" to "S" (stock) within the inventory system to allow for the sale to take place. After the sale, the product code should be changed back to "LS" in order to return the item to its earmarked status. Through discussion with management we noted that the monitoring of these code changes is not formal and there are no automatic reminders or alerts to inform the warehouse staff or retail staff to change the codes in a timely manner once the transaction is complete.	Partial system limitations	Lack of code change monitoring could lead to goods being requested by the retail location for stock sale that are specifically reserved for licensee use only, and customer ability to view inventory on-hand through the Montgomery County DLC search portal and subsequently request for purchase causing service / procurement issues	In order to ensure appropriate mechanisms are in place to monitor code changes, alerts should be set-up from a system perspective (e.g., successful transmission confirmation message) or tracking and approvals should be documented for all inventory code changes (e.g., via spreadsheet or procurement form) to ensure the required actions are completed in a timely manner.

5. Warehouse Operations					
#	**Criteria**	**Condition**	**Cause**	**Effect**	**Recommendation**
5.6	Performance Metrics	Existing DLC policies permit customer returns and / or refusal of deliveries without any consequence or incentive to encourage the customer to validate orders in advance. While daily reporting of customer returns is gathered and reviewed by Operations management there is no mechanism in place to monitor trends over time or identify persistent or recurring issues.	Lack of formal performance metrics reporting due to timing and resource constraints	Lack of trending data for returns limits the extent to which management can identify issues and implement corrective measures to reduce the volume of returns	In order to better illustrate and quantify return metrics, management should track return volume by customer and reason code over time in order to determine trending and if action must be taken for patterns with certain customers such as imposing return or re-stocking fees. Management could track such metrics via spreadsheet and include the customer information as well as the reason code, volume and date of return.

5. *Warehouse Operations*					
#	**Criteria**	**Condition**	**Cause**	**Effect**	**Recommendation**
5.7	Performance Metrics	There is currently no automated system-generated reporting that identifies slow moving items in the on-hand inventory in the warehouse. The existing Apex inventory management system can report on quantities on hand and the depletion quantities, by month, for the previous 12 months. Buyers within the DLC Purchasing group use these reports from Apex to independently create days-on-hand reports for the items under their purview (available inventory, divided by unit sales for the preceding 12 months, multiplied by 360 = number of days). Each buyer has a targeted acceptable range of days-on-hand inventory for their stock inventory items and use this reporting in conjunction with forecasting models to drive the timing and quantities of order placement for stock inventory items.	Lack of automated reporting and metrics to facilitate management oversight	Management is dependent upon individually prepared tracking reports from buyers to identify slow-moving inventory items that may be taking up needed space within the warehouse facility. Automated exception reports (e.g., days on hand in excess of the accepted tolerance) would provide a more independent and reliable source of reporting from the system and allow management to monitor performance of the buyers and, where necessary, make pricing decisions to try and influence the rate of sale of slow-moving items.	In order to better illustrate warehouse movement and quantify items on hand, slow moving item reporting should be implemented in a standard, system-generated format. The ability to consistently track slow moving items would allow for more efficient procurement activities and oversight by management on goods being purchased versus sold. Additionally DLC should use the resulting data as a key performance indicator to assist management in inventory review.

Comments and MCIA Evaluation

We provided the Department of Finance and the Department of Liquor Control with a draft of this report for review and comment on May 9, 2014 and they responded in a joint memo on July 3, 2014. Both departments agreed with all of the recommendations above and indicated that they have begun or will take actions to implement the recommendations. In several cases the implementation of the recommendations may be subject to collective bargaining requirements, computer system refinements and capabilities or other factors as noted in the response memo.

The full response memo appears in Appendix II of this report.

Appendix I – Audit Objectives and Related Risks

In reviewing the DLC inventory process, we designed audit steps which sought to address the following objectives and associated risks:

<table>
<tr><th colspan="2">AUDIT OBJECTIVES and RELATED RISKS</th></tr>
<tr><td>A</td><td>Assess DLC Management oversight of warehouse operations</td></tr>
<tr><td colspan="2">Risks:
• Theft or loss of assets*
• Inappropriate tone at the top
• Lack of accountability
• Lack of formalized policies and procedures
• Inadequate staff training
• Inefficient operations</td></tr>
<tr><td>B</td><td>Assess procedures for the end-to-end inventory lifecycle including ordering, receiving, safeguarding, picking and distribution</td></tr>
<tr><td colspan="2">Risks:
• Theft or loss of assets*
• Inefficient operations
• Lack of accountability
• Lack of formalized policies and procedures
• Ineffective customer service</td></tr>
<tr><td>C</td><td>Assess physical count procedures for the DLC warehouse and select DLC retail outlets</td></tr>
<tr><td colspan="2">Risks:
• Theft or loss of assets*
• Inadequate segregation of duties
• Inaccurate inventory valuation</td></tr>
<tr><td>D</td><td>Assess system configuration and capabilities pursuant to the planned 2014 warehouse management system implementation</td></tr>
<tr><td colspan="2">Risks:
• Inaccurate reporting of inventory balances
• Inaccurate or incomplete reporting and analysis</td></tr>
<tr><td>E</td><td>Assess performance measurement and reporting metrics for DLC warehouse operations</td></tr>
<tr><td colspan="2">Risks:
• Inaccurate reporting of inventory balances
• Inaccurate or incomplete budgeting and analysis
• Lack of accountability
• Inefficient operations</td></tr>
</table>

Appendix II – Responses to Review DLC Management and County Finance

ROCKVILLE, MARYLAND

MEMORANDUM

July 3, 2014

TO: Larry Dyckman, Chief
Office of Internal Audit

FROM: George Griffin, Director
Department of Liquor Control

Joseph F. Beach, Director
Department of Finance

SUBJECT: Formal Comments on Draft Report Audit of DLC Inventory Management

Attached please find the joint response to the subject audit. I want to recognize the excellent efforts of the staff from Watkins Meegan who conducted this audit and worked professionally and collaboratively with us and our staff throughout this process.

If you have any additional questions or need additional information on this matter please contact Karen Hawkins at 240-777-8828.

Attachments

copies:
Karen Q. Hawkins, Chief Operating Officer, Department of Finance
Lenny Moore, Controller, Department of Finance
Sunil Pandya, Chief of Finance and Administration, Department of Liquor Control
Gus Montes De Oca, Chief of Operations, Department of Liquor Control

montgomerycountymd.gov/311 MC311 ANSWERING TO YOU 240-773-3556 TTY

Formal Comments on Draft Report
Audit of DLC Inventory Management
By the Office of Internal Audit (IA)/Watkins Meegan LLC (WM)

Provided below are formal comments on the Findings and Recommendations section of the draft audit report:

Finding #	DLC Responses & Comments	Finance Responses & Comments
1.1	DLC agrees with the creating the position of a "Loss Prevention Specialist" within DLC reporting directly to the Department Director. This individual should also be the agency point-of-contact and have direct operational authority over security plans, processes and systems at DLC, and will coordinate security efforts with MCPD and DGS.	Agree with recommendation.
1.2	Agree. DLC management will assess the operational impact of the Oracle ERP Warehouse Management System (WMS) and will then suggest any additional beneficial enhancements necessary to meet this recommendation.	Agree with recommendation.
1.3	DLC agrees with the need for enhancements and updates of written procedures and regulations.	Agree with recommendation.
1.4 1.6	Recommendations 1.4 and 1.6 ("Segregation of Duties") are related. Regarding the role of supplier sales representatives: the new Oracle ERP "I-Store" and "I-Supplier" functions will regulate and formalize the interaction of industry representatives with both DLC and our County licensees. Regarding the DLC Segregation of Duties, we have already moved both "Licensee Ordering" and "Purchasing" from the Division of Operations to the Division of Administration/Finance to address this recommendation. (These two functions capture the buying and selling of product inventory into and out of DLC.) Will consider recommended reorganization, but would need to coordinate and obtain approval from OMB, OHR, and the County Executive.	1.4 - Agree with recommendation re documented approval from licensee. 1.6 – Agree that there should be further consideration of further reorganization and segregation of duties.
1.5	Agree. DLC has some of the same challenges as other County agencies in the area of Succession Planning. We will continue to actively participate in county-wide succession planning efforts with CountyStat, the Office of the Chief Administrative Officer, and others.	Agree with recommendation, subject to requirements of collective bargaining agreements and personnel regulations.

2.1	Agree. DLC has already implemented enhanced tracking of the keg inventory. DLC will also contact DGS for assistance in planning and constructing a secure area for storage of empty (returned) kegs. DLC also conducts regular, periodic inventory counts of the keg inventory in collaboration (jointly) with our keg product suppliers.	Agree with recommendations. Our understanding is that this recommendation has already been implemented by DLC.
2.2 2.3 2.5	Agree. DLC already has, or is preparing to implement these suggested recommendations	2.2 Agree with recommendation re DLC Finance and County Finance. 2.3 Agree with recommendation 2.5 Agree with all three recommendations.
2.4	Agree	Agree with recommendation, subject to capabilities in Oracle.
3.1	Agree. The Purchasing Section is now in the Administration/Finance division. The DLC "Listing Committee" (comprised of representatives from several operational areas of DLC – retail, wholesale, finance, purchasing, etc.) makes recommendations to the DLC Director for approval.	Agree with recommendations relating to both thresholds, and procurement team oversight.
4.1	Agree. DLC will monitor the Oracle ERP system impact on this area, and will make needed recommendations after WMS is operational.	Agree with recommendation regarding communication of transmission issues, and anticipate that requirements will be considered in context of existing procedures over interfaces into Oracle.
4.2 4.4	These two recommendations are related. DLC will develop strategies to address these two recommendations, considering appropriate staffing levels and customer service demands in our retail stores.	4.2 Agree with recommendation to explore preventative measures. 4.4 Agree with recommendations.
4.3	N/A	N/A
4.5	Agree.	Agree with recommendation.
5.1	Agree. DLC has already recently installed GPS in its delivery truck fleet. DLC will also monitor information provided by GPS for management	Agree with recommendations.

	planning and oversight purposes as recommended.	
5.2	DLC has already developed a new process for deliveries and licensee payments that will be implemented when WMS is fully operational. Oracle ERP WMS requires "ACH" direct debit/deposit for licensees into the DLC account. In the near future, no drivers will be responsible for any cash transactions or reconciliations.	Agree with recommendation for alternate payment methods, and DLC's ACH policy change with the implementation of Oracle. Agree with recommendation regarding securing cash and periodically depositing at retail locations based on thresholds, until Oracle is implemented.
5.3	DLC management will explore the feasibility and desirability of these recommendations within the context of existing MCGEO contracts. Overtime usage, physical limitations and demands, workload requirements associated with certain routes, and variances in types of product deliveries all impact the efficiency of scheduling delivery teams.	Agree with recommendation, subject to requirements of collective bargaining agreements and personnel regulations.
5.4	Agree. DLC will consider the breakage room inventory in future accurate inventory counts.	Agree with all recommendations, including location identifiers, procedures, and counts.
5.5 5.6 5.7	These recommendations are related. DLC management will assess the operational impact of Oracle WMS and make additional recommendations regarding needed or desirable functional enhancements that could address these performance metrics. Regarding the potential use of "re-stocking fees," (5.6), it is expected (or hoped) that the volume of returned or refused delivered inventory will significantly decline with the use of WMS components (particularly I-Store and I-Supplier.) Once the new system is operational, DLC will certainly measure the volume of all returns and track the performance of individual licensees in this area. The results of this analysis will form the basis of potential corrective actions.	5.5 Agree with recommendations. 5.6 Agree with recommendation. 5.7 Agree with recommendations.

Appendix III – Overview of DLC Operations

The following information is included in this appendix to provide an overview of the regular operations of DLC in order to provide additional context for the observations and recommendations included in the Results section of this report. As such, it is intended to be a summarized account of the common processes and not exhaustive in nature.

Warehouse Facility

The DLC warehouse facility is approximately 210,000 square feet with additional office space of approximately 37,000 square feet. Throughout the entire DLC facility security cameras are in place for monitoring. Cameras are present at all entry points on the interior and exterior of the building. The perimeter of the warehouse is fenced and the access gate is locked overnight, requiring a key-card badge to open off-hours. The gate remains open during regular hours of operation and is monitored by security cameras on an on-going basis.

Within the DLC warehouse facility inventory items are stored in designated areas according to the category of the inventory. The warehouse is aligned such that the loading bays are at the mid-section of the building. On one side of the loading bays Liquor/Wine items are stored, on the opposite side, Beer items are stored. On the Beer side of the warehouse there is also a separate refrigerated room for the storage of kegs.

DLC inventory items are categorized as either stock or special order items. Stock items are carried at all times and ordered by DLC on a recurring basis to ensure an appropriate volume is available on hand to fulfill projected retail demand. Special order items are sourced by DLC in response to specific requests by retail customers or licensees and are not typically available in inventory.

Roles and responsibilities for the Warehouse staff are generally split in line with the products such that there are dedicated Liquor/Wine teams and Beer teams with supervisors over each respective section.

Purchasing

DLC directly controls purchasing of inventory items (beer, liquor and wine products) however all other non-inventory purchases must go through the standard Montgomery County procurement process. DLC has a Listing Committee, composed of DLC personnel, to determine which items should be carried in inventory rather than special order. The listing committee meets monthly to discuss potential new product listings and related matters. DLC does not have to carry the entire product line from a producer or supplier; rather, the Listing Committee may pick and choose only those items it wants to carry in inventory. If a stock inventory item is slow moving, it can be de-listed based on Committee approval and returned to special order status. The only items not requiring Committee approval are holiday items and one-time deals and promotions. These items can be approved by the Chief of Operations and bypass the Committee process.

The DLC procurement team consists of six buyers – one buyer for stock Beer, one buyer for special order Beer, two buyers for stock Liquor/Wine, and two buyers for special order Liquor/Wine. The buyers are cross trained and can fill-in when required. Buyers do not participate in the receiving, scheduling of inbound deliveries, or unloading of the product. The only job function of the buyers is to purchase inventory based on specific orders (for special order items) or projected demands (for stock items). The procurement team reports to the Chief of Operations.

Buyers for stock items use forecasting models and historical sales volumes reports, combined with their knowledge and experience, to predict demand and order sufficient quantities to ensure that there are no product shortages for stock items. This requires maintaining a minimum on-hand inventory quantity of the stock products. These inventory quantities are expressed as a number of days of sales available, which is calculated as follows:

$$\frac{\text{Quantity on hand}}{\text{12 months' sales volume}} \times 365 = \text{Number of Days of Sales in Inventory}$$

Generally, the DLC guideline for stock items is to carry at least 45 days' sales of inventory on hand for domestic products and 75 days' sales of inventory for imported items. Buyers must account for delivery lead times, shipping and freight costs, minimum required order quantities, supplier promotions and discounts, and past sales history, amongst other factors, when monitoring on-hand inventory balances and determining the appropriate quantities to order each week.

Special order products are sourced by DLC buyers as customer or licensee orders are received. Listing Committee approvals are not required for special order items; rather a new item can be added to the system as needed with the appropriate product details. Under certain circumstances, special order items can become stock items. During the monthly Listing Committee meetings, the Committee determines if a special order item has a high enough volume to justify stock ordering. If so, the item status will change within the system and become available for routine, stock purchases.

Receiving

Once buyers place orders with suppliers the suppliers must work with the DLC receiving clerks to schedule delivery dates and times at the DLC warehouse. In general, the DLC warehouse and staff have the capacity to unload approximately two trucks per hour and timeslots are allocated to suppliers based on this assumption. The receiving clerks assign the timeslots in the order requested and will work with suppliers to accommodate specific times and dates wherever possible.

There are currently four individuals stationed at the warehouse loading bays for receiving and two clerks who are responsible for entering product receipt details into the inventory system (APEX) once the products being unloaded are verified, counted and inspected. When a truck is in a bay for unloading, the truck manifest and product orders are reviewed by the supervisors to ensure the delivery contains the product(s) and quantities ordered. As items are moved off the truck to the staging area, the supervisor checks off the items and marks the product with a location identifier indicating where in the warehouse the items should be stored.

Special order Liquor/Wine items tend to be ordered in smaller quantities and/or sourced locally through distributors. These smaller deliveries are not formally scheduled and are handled on a first-come first-served basis by the special order Liquor/Wine team in the warehouse through a dedicated delivery door separate from the main loading bays.

Storage

Storage locations for stock items in the DLC warehouse are centered around conveyors systems that run along the middle of each side of the warehouse and terminate at the loading bays. High-volume stock items are each assigned a default location along either side of the conveyors. Pallets of product are stored in the appropriate locations to facilitate order picking when loading trucks for deliveries to licensees. With the current warehouse management system, there is a one-to-one relationship between each inventory item and a location identifier such that the same product is always stored in the same location. Each location on the conveyors has capacity for up to three pallets of an item. If more than three pallets are held in inventory then "overflow" space is used to store the excess quantities that cannot fit along the conveyors. As the pallets along the conveyor systems are depleted the product is replenished from the overflow areas. Low-volume stock items are similarly assigned a location identifier in the APEX system and physically in the warehouse.

Special order items are not assigned specific location identifiers but are rather placed into storage in designated areas grouped by licensee. Special order items are ordered by DLC on demand and shipped to the respective licensee as soon as possible after receipt from the supplier, typically within a few days.

Deliveries

Licensees are each assigned set delivery days when first set up in the warehouse management system. The Router, a member of the Warehouse Operations team, works with licensees to determine mutually convenient recurring schedules for deliveries. For a variety of logistical reasons deliveries are split between Liquor/Wine, Beer and Keg deliveries, such that a given licensee may receive three or more separate deliveries each week depending on the type of items ordered. Licensees also have the option of collecting their orders directly from the warehouse or purchasing their items from one of the DLC retail locations. When purchasing at a DLC retail location licensees still receive the wholesale pricing they would otherwise get with deliveries.

The Router handles all coordination related to licensee deliveries. Each day, the Router pulls orders that are scheduled for delivery to licensees the next day and prepares the routes for the delivery drivers. A licensee must provide at least two days' notice to make adjustments to its standard delivery day and orders. The Router reviews the population of orders and determines the appropriate combination of truck size and sequencing of deliveries to plan the routes.

Once the routes are determined, the Router generates order pick lists, detailing the items and quantities for each order that need to be pulled from their respective locations and made ready for delivery to the licensees. The Router arranges the pick lists in reverse order of the delivery sequence so that the orders can be loaded onto the assigned delivery vehicle in the correct order for subsequent unloading at the time of delivery to the licensee.

The delivery vehicles are loaded during the night for dispatch the following morning. The pick lists are provided to warehouse staff the day prior to dispatch so they can prepare, or "stage", the items for loading onto delivery vehicles. While items located along the conveyors are readily available to be added to an order, the warehouse staff must prepare special order and slower-moving stock items and position them near the conveyors. Overnight loading crews then consolidate all the required items for each order onto the conveyors in the correct sequence and load them onto the delivery vehicles.

Loading is only performed Sunday night through Thursday night for deliveries Monday through Friday. Deliveries are not scheduled on weekends. The night loading crew is responsible for ensuring delivery vehicles are loaded in accordance with the instructions provided by the Router and are ready for dispatch when drivers arrive each morning. Each order is prepared in turn, with items placed on the conveyors in the required sequence, verified and consolidated, then loaded onto the assigned vehicle. As the vehicles are loaded and orders are cross-checked, warehouse supervisors generate invoices for each completed order loaded. The process of invoicing automatically reduces the on-hand inventory quantities and creates a receivable balance due for the corresponding licensee.

The only exception to the loading process as described above is the Keg deliveries. Keg orders are provided to the designated keg truck drivers who determine the most efficient sequence and arrangement for the vehicles to be loaded. Once loaded, the Keg trucks and corresponding orders are cross-checked by a supervisor prior to dispatch for delivery.

DLC owns and operates a fleet of 40 delivery vehicles used for deliveries Monday to Friday. Each vehicle is operated by a driver and helper pairing, with a team of three supervisors providing oversight. The driver supervisors are cross-trained and interchangeable to provide supervision over Beer, Keg, and Liquor/Wine delivery operations and the corresponding drivers and helpers. In general, the supervisors work as a team over the collective pool of drivers and helpers rather than individual supervisors only managing one set.

Delivery routes can take anywhere from seven to twelve hours to complete depending on the number of stops and the quantities ordered. Drivers collect payment from the licensees at the time of delivery, typically by check or money order, although licensees can pay in cash. Drivers can deposit cash receipts at a DLC retail location on their route and obtain a receipt to submit upon return to the warehouse or can deposit the receipts in a lockbox at the DLC warehouse.

Certain licensees have escrow accounts with DLC where the licensee pays a deposit balance and the cost of individual deliveries/purchases are drawn against that balance. On a monthly basis, the escrow accounts are invoiced by DLC Finance to replenish the deposit balance. Drivers are not required to collect any payments from escrow accounts.

When a driver returns to the warehouse after a route is completed, a checker is assigned to the driver and will inspect the vehicle to determine if any items have been returned by the licensees. Items may be returned as a result of failure to pay, order picking errors, disputed/unrequested items, breakage or other reasons. Based on current industry practice, returns are accepted by DLC from customers/licensees without any penalty or fee. In turn, suppliers accept the returns without imposing fees upon DLC. When returns are taken into the warehouse, appropriate paperwork is completed and the returns are staged for storage (stock items) or return to the suppliers (special order items). Both warehouse operations and DLC Finance are involved in the returns process in order to ensure that all items are returned to suppliers and that appropriate licensee account credits are issued for returned items.

Payment Processing

Once drivers return to the warehouse and vehicles are checked in, the drivers update their invoice paperwork to account for any returns. They then submit the invoice copies and corresponding payments to the cashier's office in the warehouse. Invoice credits due to returns or breakages are processed by the credit staff located within the cashier's office. While the cashiers report up through the DLC Finance organization, the credit staff report directly to the Chief of Operations and are considered separate from DLC Finance staff.

The DLC cashiers process payments made by customers and licensees for purchased products. This includes payments received for any orders collected by customers and licensees at the warehouse. Cash, checks and money orders are the only forms of payment accepted through the cashier's office. A lockbox located in the cashier's office is checked daily for paperwork submitted by drivers who have collected payments during their delivery runs. This paperwork is generally processed the next business morning by the cashiers. A safe is located onsite to ensure the appropriate safeguarding of funds.

Breakage

Given the fragile nature of the inventory items and the number of times it is physically moved through unloading, storage, order picking, loading and delivery, inventory packaging can be damaged and breakages occur. A designated room has been created by DLC for breakage items. When breakages occur, the case of product is transferred to the breakage room. If any individual bottles within the case are salvageable, those items are set aside and stored in the breakage room until such time as a full case can be compiled from the remnants of other cases of the same product. A part-time member of DLC staff is responsible for the breakage room product listings, repacking, and general room management. A listing is maintained of all items passing through the breakage room.

For breakage of Liquor/Wine items, the necks of the broken bottles are retained to facilitate state excise tax credits. Bottle necks are maintained in the breakage room and on a monthly basis are counted and disposed of by a state inspector.

All breakages are processed through the warehouse. When breakage occurs in one of the DLC retail locations, the items are transferred back to the warehouse through the warehouse management system and any associated bottle necks are physically returned to the warehouse to be included in the next state excise tax inspection cycle.

Retail Operations

DLC owns and operates 25 retail outlets for the retail sale of beverage alcohol. DLC has the exclusive right in Montgomery County to sell distilled spirits for off-site consumption and shares the rights to sell beer and wine with a large number of licensed retailers in the County.

In general, each retail location employs approximately eight staff. For each store, security cameras are positioned throughout the location for optimal monitoring of the front door(s), registers, stock rooms, delivery doors, and various "blind spots" on the store floor. The number of cameras varies per store. On average there are at least seven cameras to monitor activities. All delivery doors are locked when not in use and front doors are open only during business hours.

The vast majority of the sales through DLC retail outlets is derived from Liquor/Wine sales. The beer section of the retail stores is limited so as to not compete directly with the private sector. Only non-refrigerated “specialty” beers (e.g., imports, seasonal beers, etc.) and cases of domestic beer are typically stocked for sale through the DLC retail outlets.

Item pricing is set centrally for all retail stores by Operations and DLC Finance. Each item is set up in the Point of Sale (POS) system with a standard retail price and a wholesale price that can be applied to licensee sales in the retail locations. Price modifications can be made by store individuals; however justification for the modification must be included on the appropriate paperwork. Store management reviews price adjustments each morning and the site manager sends all paperwork to the retail store operations supervisor for further review.

Licensees in Montgomery County can opt to purchase products directly through DLC retail store locations at a discounted, wholesale price, rather than arrange for scheduled deliveries. When purchased in the retail locations, licensees have the flexibility to purchase limited quantities of items instead of purchasing by the case through the warehouse. In order for a buyer to obtain the wholesale pricing at a retail location, valid proof of licensure must be presented in store and the sale transaction is flagged with the appropriate licensee number.

The DLC retail stores have the ability to take special orders from retail customers. No money is collected from the customer upfront for special orders as the POS retail system is not configured to process advanced payments or deposits on sales. These orders are placed through the buyers at the DLC warehouse location, received through the warehouse and distributed to the appropriate retail store as part of the recurring scheduled deliveries. Once received in the store, the customer is contacted and advised that their order is ready for collection.

DLC retail outlets monitor available inventory in their POS system on a daily basis and submit orders to the DLC warehouse as needed to address projected demand. Similar to the buyers, retail store managers and assistant managers access system reports to review historical sales activities and apply their own knowledge and experience to determine order quantities for the warehouse deliveries. The retail outlets also have access to view the available inventory on hand across all 25 DLC retail locations and, in the event of product shortages, can arrange transfers between locations or direct customers to the location where items are available.

Physical Inventory Counts

A complete physical inventory count for the DLC warehouse was historically conducted annually, prior to the relocation to the new warehouse facility in 2013. The intention is now to move to a quarterly physical inventory cycle. This will be fully implemented following the roll-out of a new inventory management system in 2014.

Due to the intensive and disruptive nature of the physical inventory process, counts are scheduled to begin on a Friday, with recounts, if necessary, on Saturday. To complete the physical inventory count, DLC warehouse staff ensure that appropriate cutoffs are enforced to avoid discrepancies caused by items in transit from suppliers and to licensees. Cutoff procedures include the following:

1. All delivery orders shipped from the Warehouse for delivery Friday are invoiced prior to the physical count commencing.
2. No customer collections at the warehouse are scheduled or permitted on the day of the count and any picked orders that have not been collected are cancelled and the items returned to inventory prior to the physical count commencing.
3. All inbound deliveries are received and recorded in the inventory management system on Thursday evening with no subsequent inbound deliveries scheduled or permitted until the following Monday.
4. Return of merchandise to suppliers is not permitted from Thursday evening through Sunday.
5. All customer returns are received and recorded in the warehouse management system prior to the physical count commencing.
6. All breakage is recorded in the warehouse management system prior to the physical count commencing.

Inventory Count Books (ICBs) are generated from the warehouse management system by DLC Finance and are distributed to the warehouse staff to facilitate the count process. The ICBs are split by type of inventory (e.g., Beer special order, Beer stock, Liquor/Wine special order, etc.) and list location identifiers and the product codes at each location but no quantities. Warehouse staff then count the items in their assigned areas and record the quantities on the ICBs. Completed ICBs are returned to DLC Finance to compare the physical count records with the inventory balances in the warehouse management system.

The following variance thresholds have been established and any discrepancies between the physical count and the amounts listed in warehouse management system. Variances outside of these tolerances require a recount of the items in question:

1. +/- 4 cases for liquor/wine stock
2. +/- 0 cases for liquor/wine special order
3. +/- 10 cases for beer stock
4. +/- 0 cases for beer special order
5. +/- 0 kegs

Recounts are completed until the variances are identified or until such point as the Warehouse Manager determines that the physical counts are accurate and that the warehouse management system should be updated to agree to the physical count. Only DLC Finance personnel have the system access to enter these adjustments in the warehouse management system, whether the adjustment arises during the quarterly physical counts or through errors in data entry of receipts or invoices during the normal course of operations.

For the DLC retail outlets, physical inventory counts are completed on an on-going basis using cycle counts, where individual subsets of the inventory are counted on a rotational basis rather than completing a full physical inventory at one time. For example, vodka products may be counted one week and whisky products the following week until all product has been covered. The timing of the cycle counts is left to the discretion of the retail store managers provided that all product items in the store are covered at least every two months. At fiscal year-end this window is shortened to one month.

Retail store staff use barcode scanners to scan product codes then manually enter the quantity counted into the scanner device. Once the cycle count has been completed, the scanner is connected to the main POS system and a variance report is generated. The variance report is reviewed by the retail store manager and any recounts considered necessary are completed before accepting the results and updating the POS system with the results. Adjustment reports are available to the DLC Retail Operations management team regional managers for review and follow up as necessary.

Appendix IV – DLC Operations Process Flow