

**DISTRICT OF COLUMBIA  
WATER AND SEWER AUTHORITY**

**Board of Directors**

*Audit Committee*

*Thursday, June 28, 2012*

9:30 a.m.

1. **Call to Order**..... Bradford Seamon, Chairperson
  
2. **Summary of Internal Audit Activity/Internal Audit Status**.....Joseph Freiburger  
A. Warehouse Operations Report Final
  
3. **Update on Blue Plains Maintenance**.....Walter Bailey
  
4. **Update on Establishing Fraud Hotline**..... Olu Adebo
  
5. **Executive Session**..... Bradford Seamon
  
6. **Adjournment**



water is life

District of Columbia Water and Sewer Authority  
George S. Hawkins, General Manager

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# Update on Blue Plains Maintenance

Audit Committee  
*Chairman, Bradford Seamon*

June 28, 2012



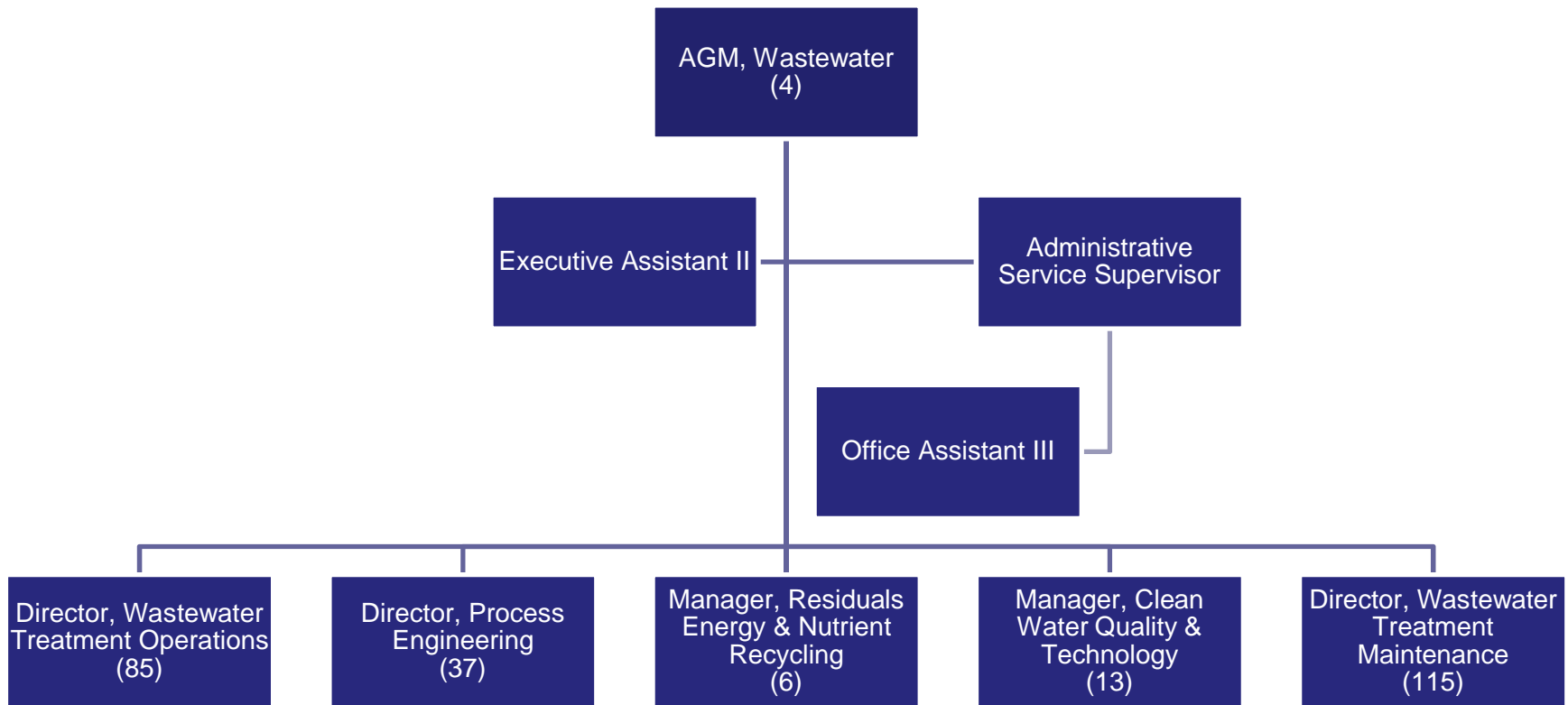
## Maintenance Improvement Focus Areas:

1. Organization, Management and Staffing Change
2. Implementation of Asset Management
3. Improvement of the Material Management System
4. Improve New Asset Integration
5. Implementation of Maximo Computerized Maintenance Management
6. Audit Recommendations



# Blue Plains Organization

FY 12 Position Approved (260)

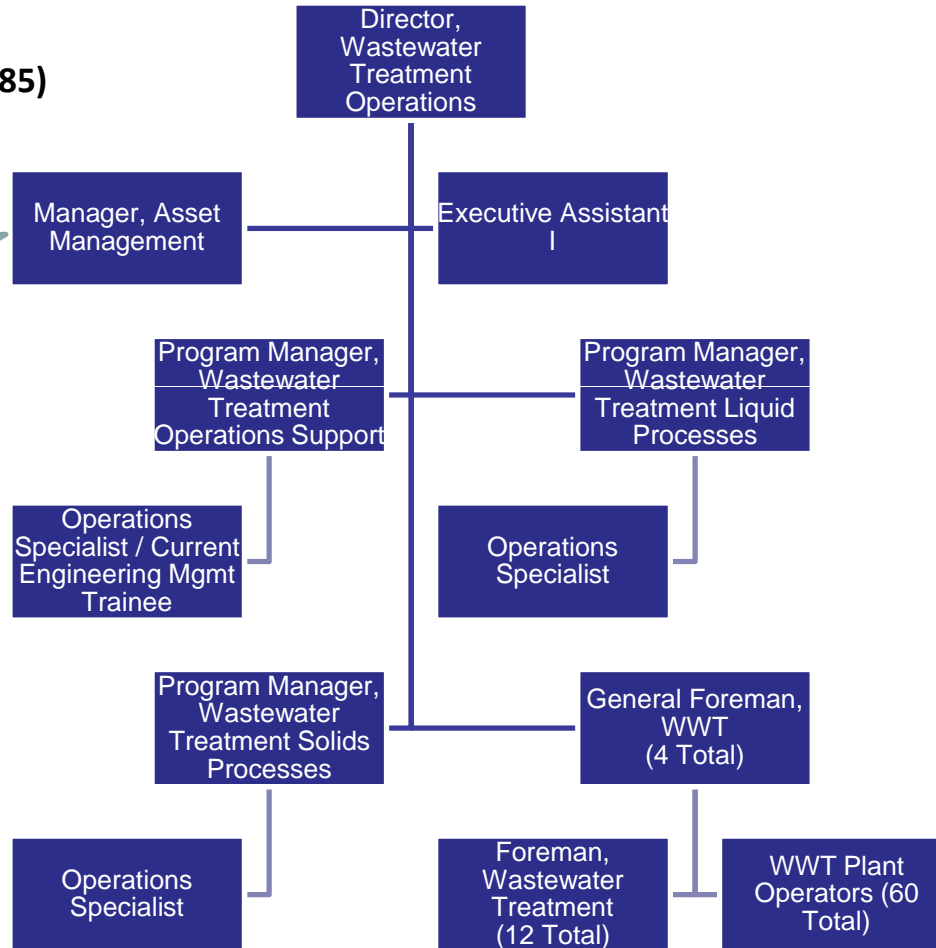




# WWT Organization

**Wastewater Treatment  
Head Count Approved (85)**

New Position  
In recruitment

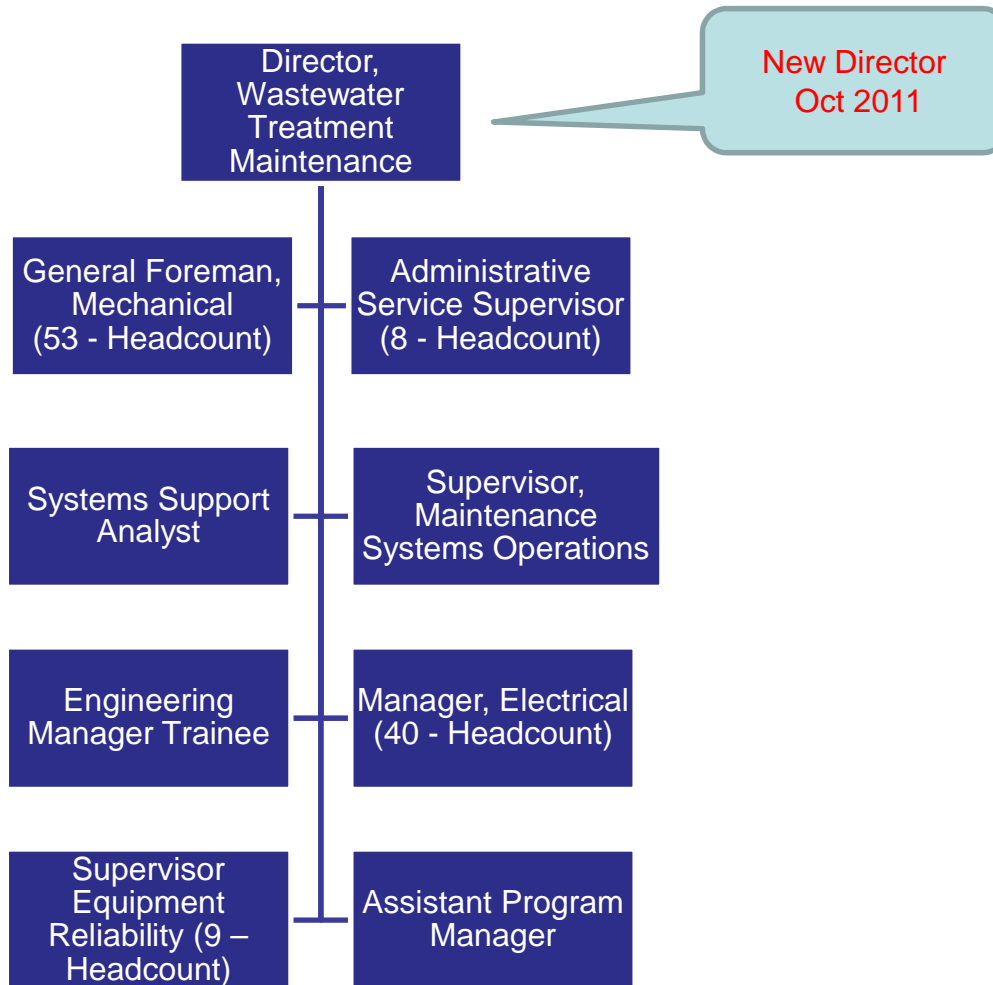




# WWT Organization

**Maintenance  
Head Count Approved (115)**

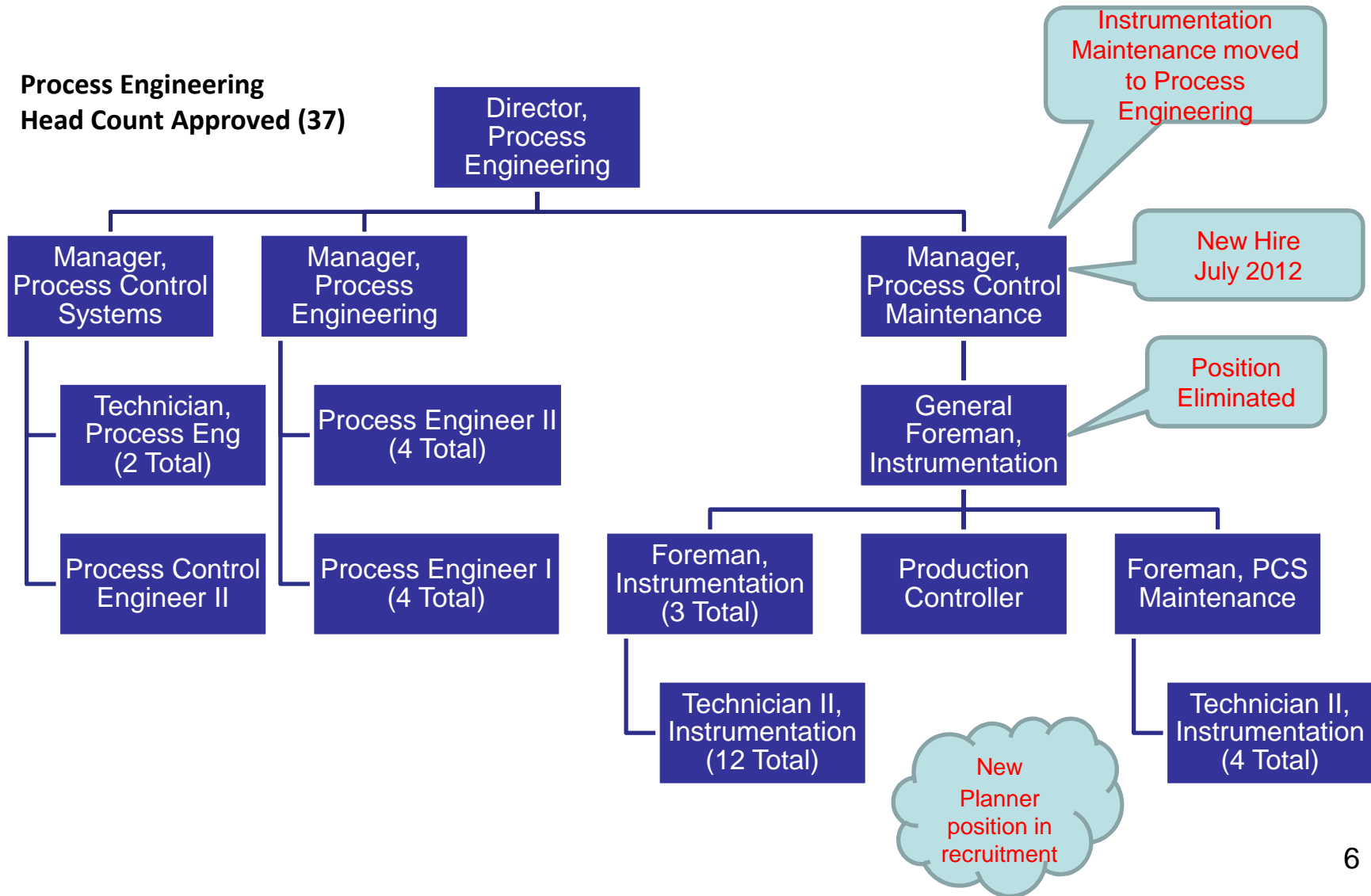
3 new  
planner/  
scheduler  
positions  
added  
(recruitment  
soon)





# WWT Organization

Process Engineering  
Head Count Approved (37)





## Asset Management

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- DC Water Team planning Asset Management
  - Technology and Data Management
  - Maintenance and Resource Management
  - Material Management and Procurement
  - Reliability and Condition Assessment
  - Asset Life Cycle Management





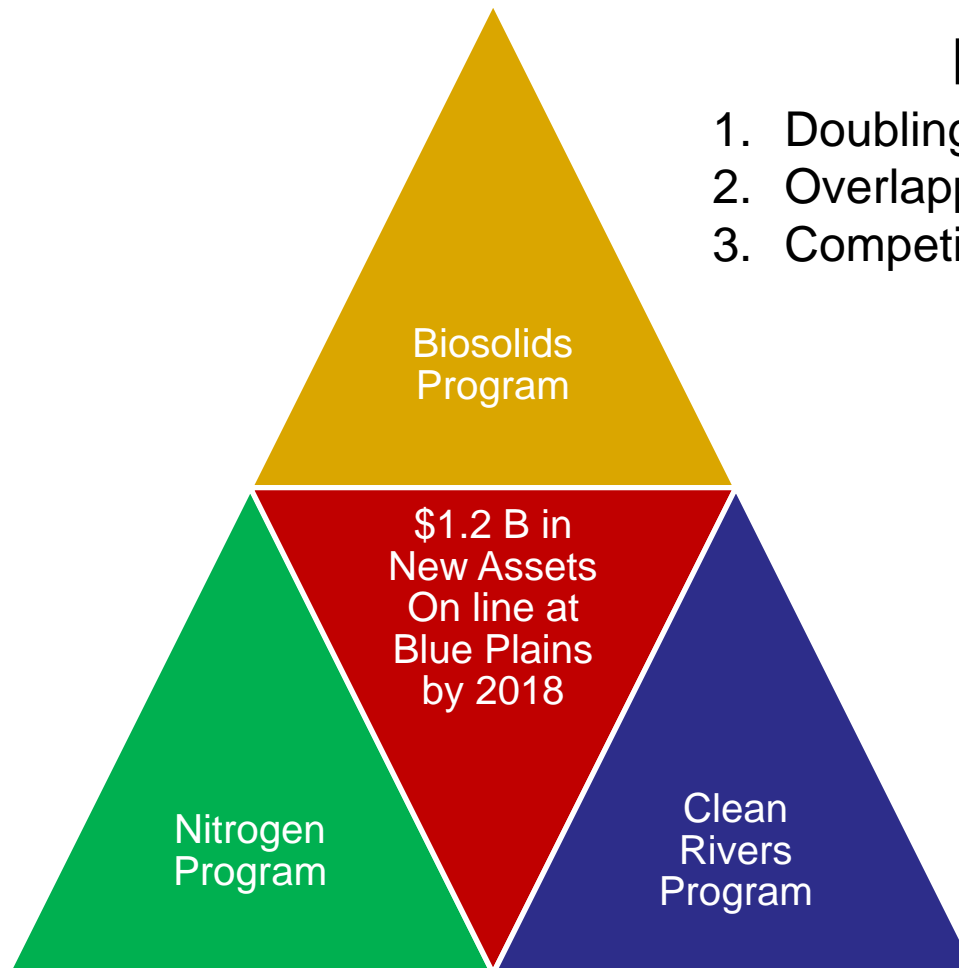
## Material Management

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- DC Water team working on MM
  - Goal: Get the right parts to maintenance crafts when they need them
- Five sub teams:
  - Item Master Rebuild
  - Sourcing
  - Process Reengineering
  - Software
  - Organization



# New Asset Integration

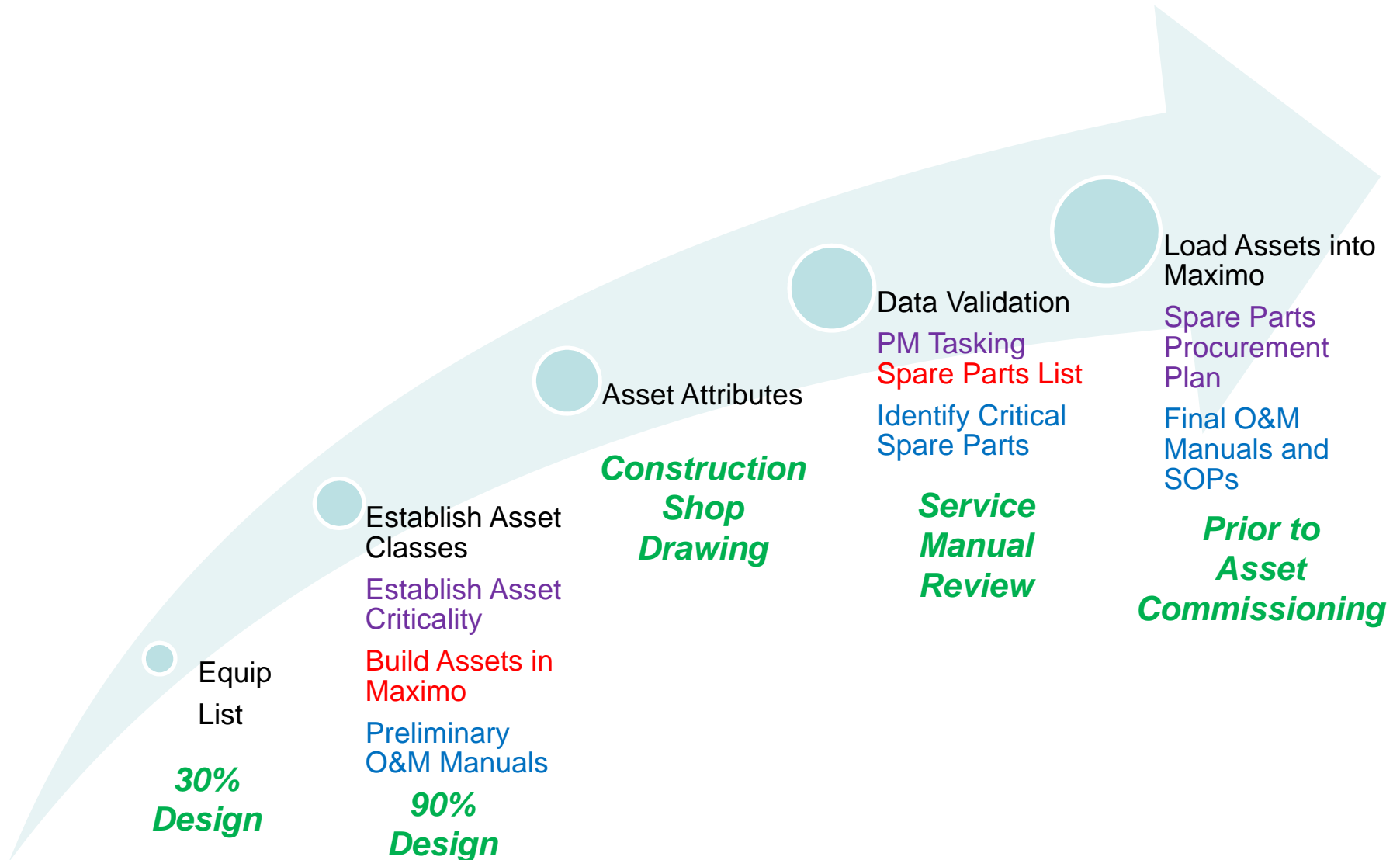


## Drivers

1. Doubling of Plant Assets
2. Overlapping Commissioning
3. Competing Priorities

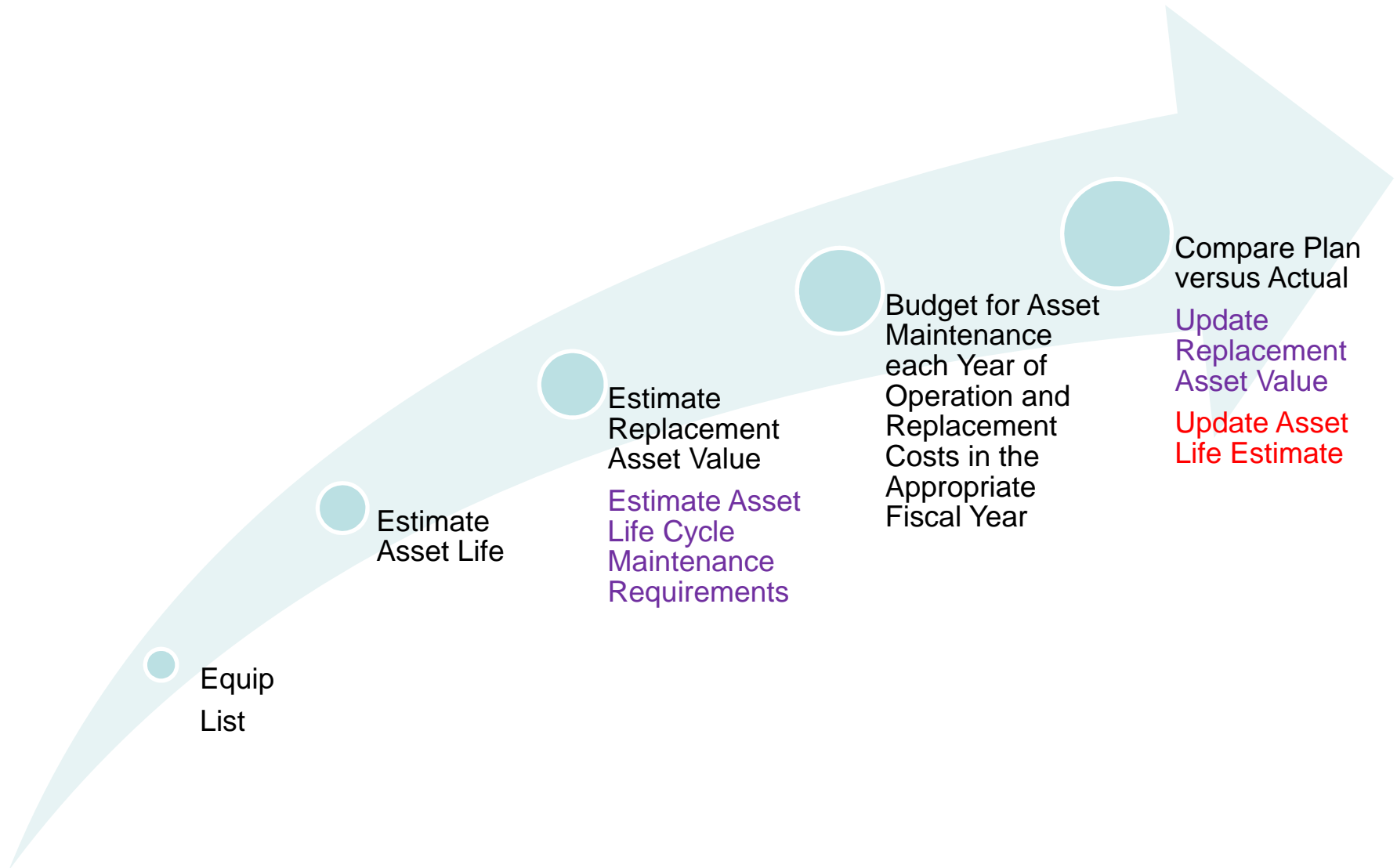


# New Asset Integration





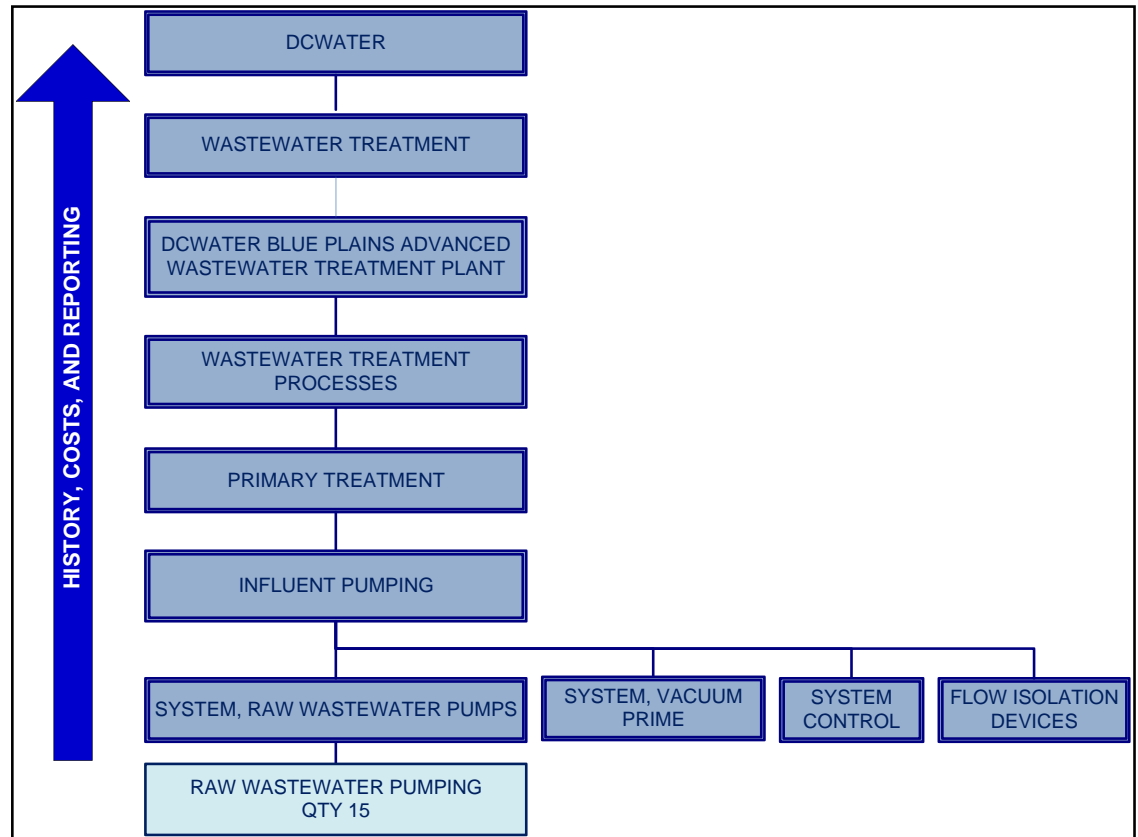
# New Asset Integration





# Maximo Goals

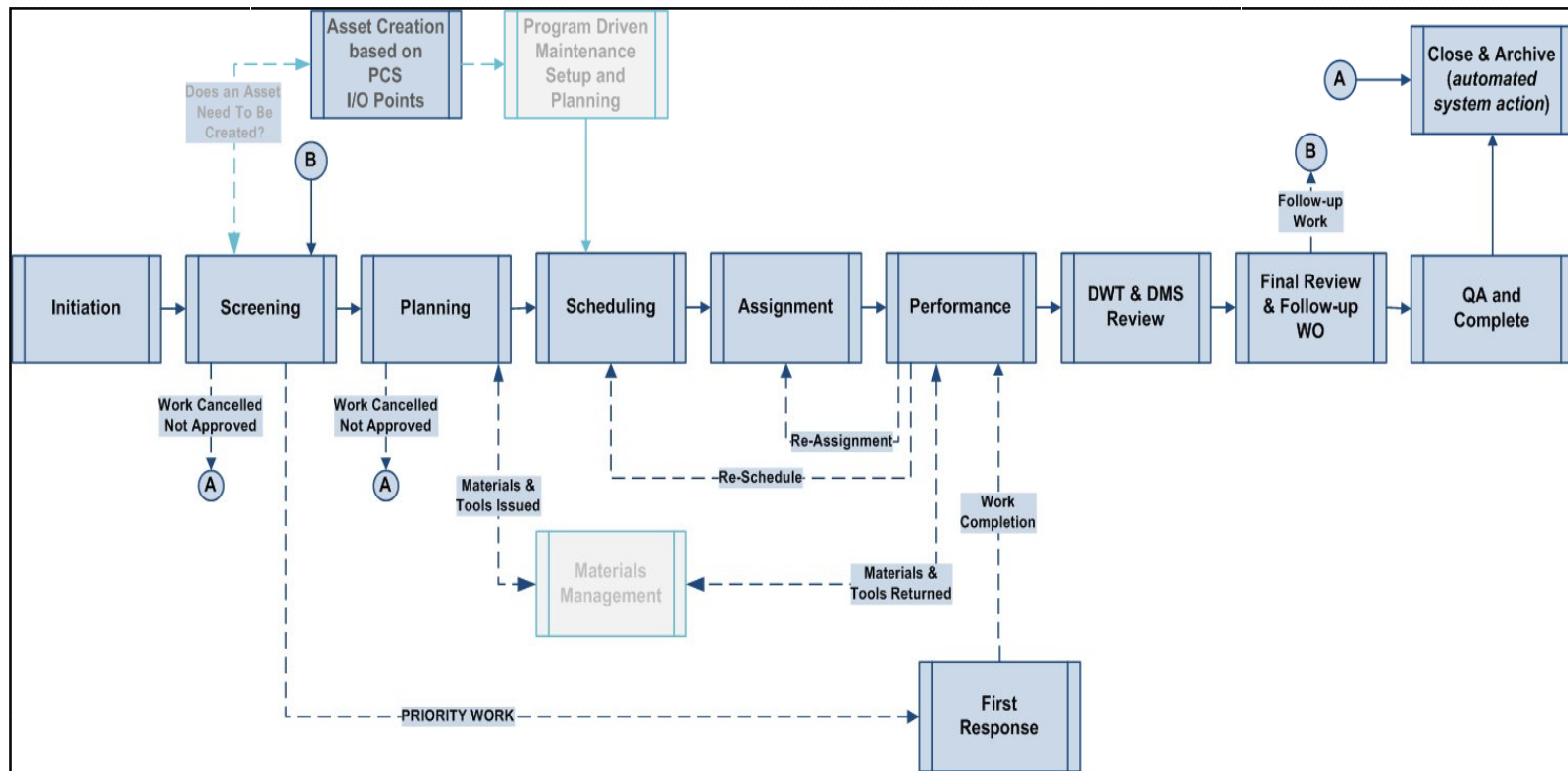
- All plant assets added to database with classes and attributes
  - Asset hierarchy follows process flow
  - Total assets ~14,000
  - Assets with key attribute data ~7,000





# Maximo Goals

- Implement work flow for all work orders





## Maximo Goals

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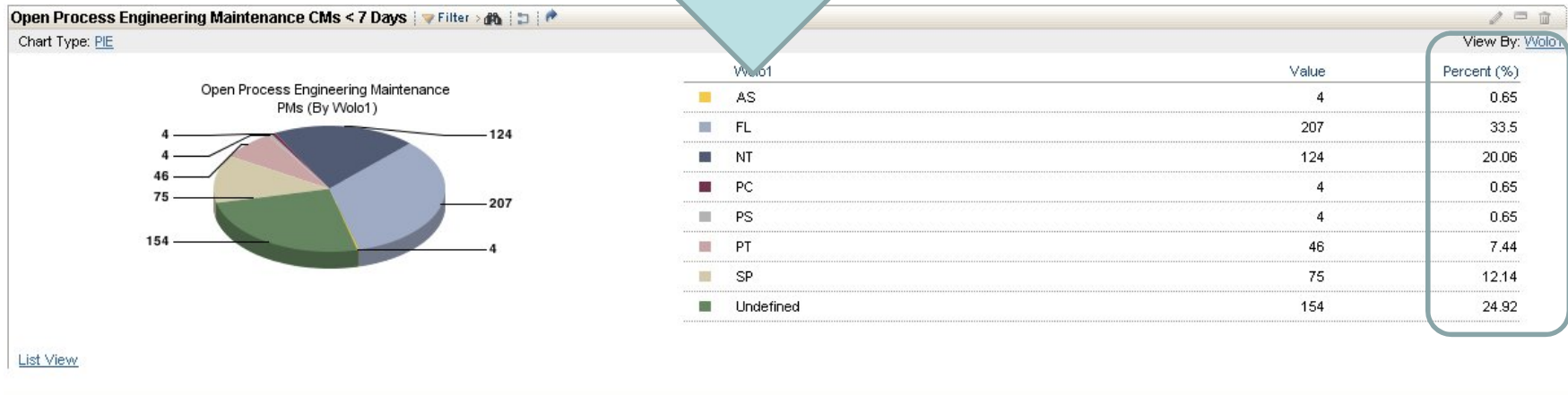
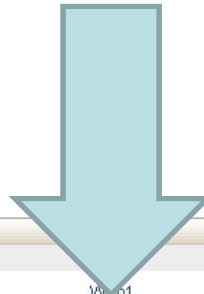
- Develop Job Plans
- Assign asset criticality and work order priority
- All work planned before execution
- Account for all hours worked on work orders
- Account for all material used on work orders
- All employees trained to use Maximo



## Maximo Goals

- Develop key performance indicators and reports such as the percentage of work orders per process area.

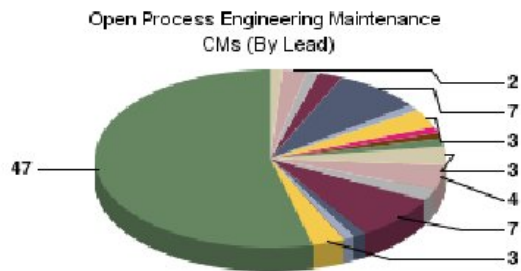
Process Area







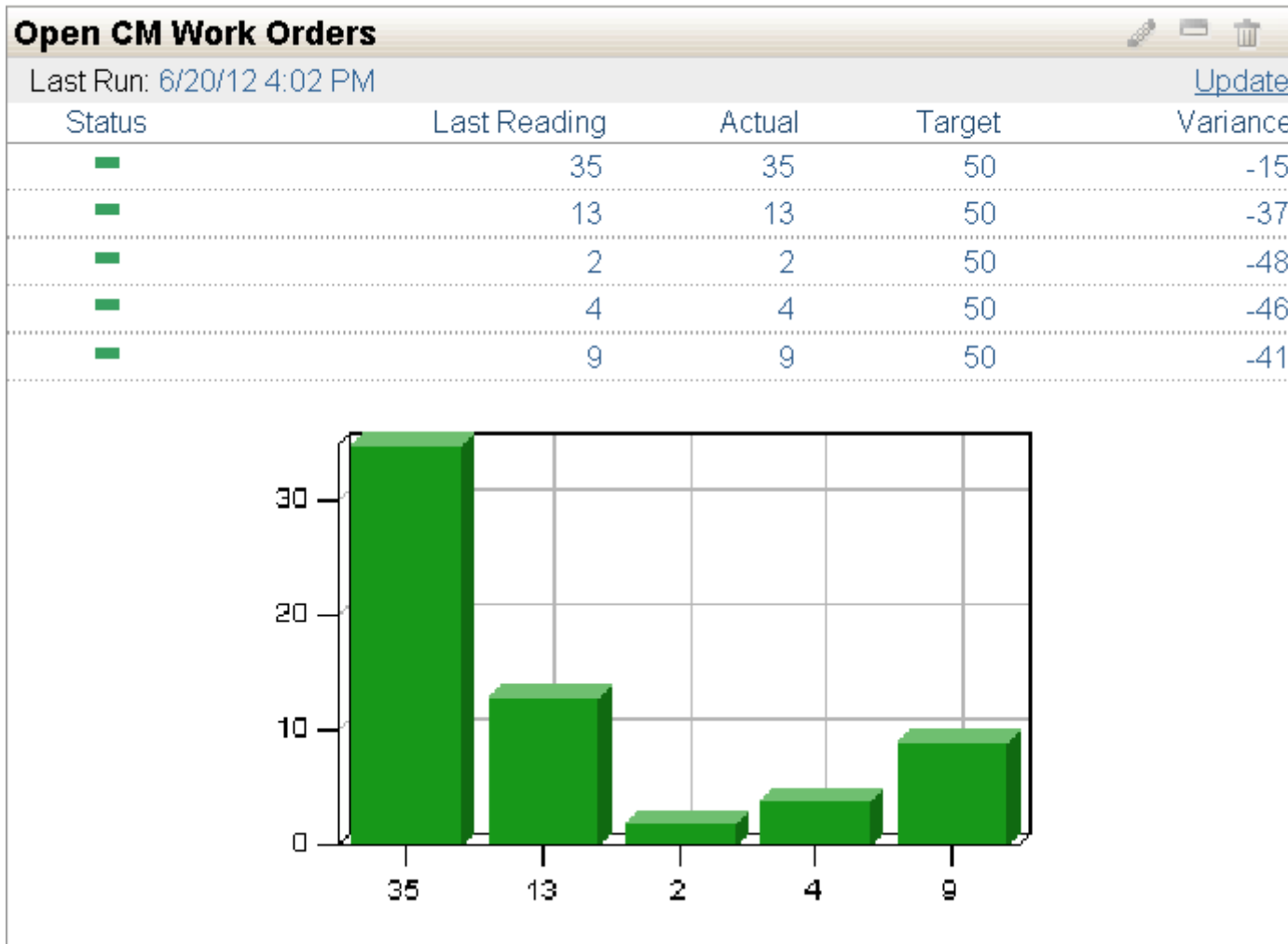
Enhanced visibility allows DC Water to track open work orders by group as well as by lead field technician.



Lead	Value	Percent (%)
00332	3	3.41
00336	1	1.14
00652	1	1.14
00665	7	7.95
00673	2	2.27
00729	4	4.55
00925	3	3.41
01291	1	1.14
02520	1	1.14
02625	1	1.14
C&E0595	3	3.41
C&E1553	1	1.14
C&E1614	7	7.95
C&E1620	2	2.27
C&E1621	1	1.14
C&E1622	2	2.27
C&E3950	1	1.14
Undefined	47	53.41



Information regarding the status of Blue Plains operations is now available on the main screen within Maximo for all levels of staff.





## Internal Audit Recommendations

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- Update Critical Spare Parts report
- Identify Asset Condition in reports
- Identify Asset Lifespan in reports
- Track equipment failure costs
- Review and monitor relevant budget activity
- Analyze P-Card activity
- Establish criteria for capturing work order information in Maximo
- Revise Daily Management reports
- Establish and report on key performance indicators
- Develop annual training requirements and guidelines
- Develop policies & procedures to coincide with operational changes



## Internal Audit Progress Update

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- Update Critical Spare Parts report
  - Critical Equipment Ranking currently under review
  - Critical Spare Parts listing to be determined
  - Lead – time to procure established
  - Minimum stocking levels based on criticality and equipment redundancy levels entered into Maximo
  - Updated Critical Spare Parts Report by end of November 2012
- Identify Asset Condition in reports
  - Asset up/down flag is currently being used and an integral part of the daily reporting and coordination meeting between operations and maintenance
  - Asset condition ratings system is part of the overall DC Water Asset Management Program (AMP).
    - 1 to 3 years after AMP is implemented



## Internal Audit Progress Update

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- Identify Asset Lifespan in reports
  - The overall DC Water Asset Management Program includes recording the installation dates, estimating the cost, and conducting an annual condition assessment based on a rating system to be established for all the 13,000+ Blue Plains WWTP assets.
    - Estimated completion 1 to 3 years after AMP is implemented.
    - The installation dates and cost for all new assets will be collected by the Department of Engineering as part of the Capital Improvement Projects.



## Internal Audit Progress Update

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- Track equipment failure costs
  - Procedure is now developed and training in progress to capture all material costs (both from P-cards and Lawson) on work orders written against assets
  - New procedure developed and out for review to record Overtime and Call-in hours in Maximo
  - Meaningful data collected to identify “bad performing assets” by April 2013
- Review and monitor relevant budget activity
  - New monthly reports being used to track both O&M and Capital Equipment budgets
- Analyze P-Card activity
  - Analysis completed by Material Management Parts Team
- Establish criteria for capturing work order information in Maximo
  - New Work Order form being developed; draft is out for review and comment



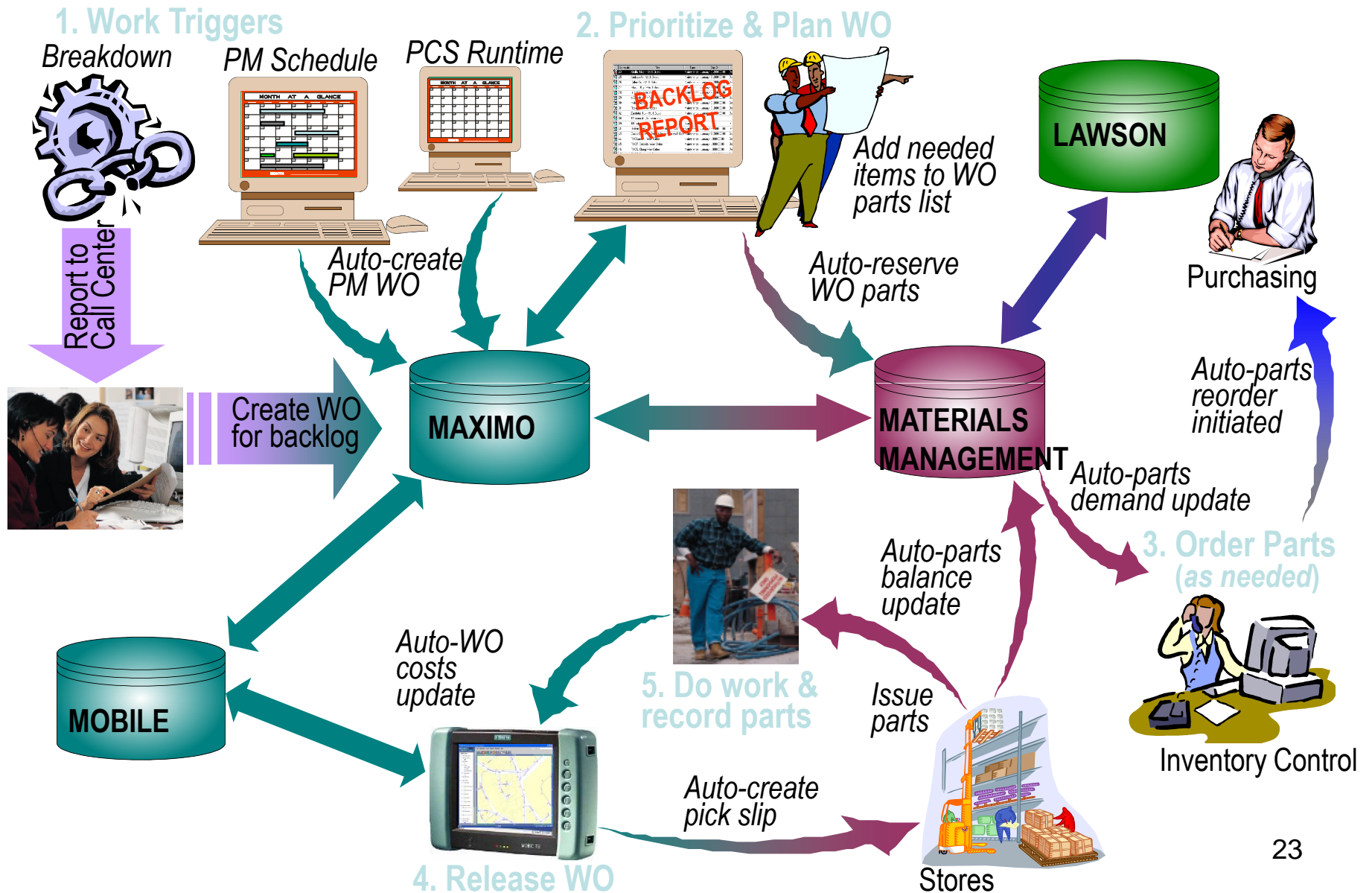
## Internal Audit Progress Update

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- Revise Daily Management reports
  - Complete and in use
  
- Establish and report on key performance indicators
  - On hold until formal planning and scheduling process is implemented
  - Planner/Scheduler position recruitment to begin July 2012
  
- Develop annual training requirements and guidelines
  - To be developed by January 2013
  
- Develop policies & procedures to coincide with operational changes
  - On-going effort



# Strategy – Fully Integrated Applications







*Internal Audit Update*  
*Audit Committee Meeting*  
*June 28, 2012*

The following represents a summary of the activities and achievements since the May 24, 2012 meeting.

**I. HIGHLIGHTS:**

Performance of scheduled internal audits – Internal Audit performed audit work in three separate audit areas. One of the projects was totally completed and the final report issued. The one project completed was the internal audit of Warehouse Operations. There are two projects in the fieldwork stage (Permit Operations, IT Help Desk). The chart below depicts the planned projects and their status for the fiscal year.

**A. Stage of Audits** - The following represents an indication of the stage of completion for each scheduled audit.

PROJECT	PLANNING / SCOPING	FIELDWORK	DRAFT REPORT	FINAL REPORT
IT Business & Operating Applications <sup>1</sup>				
Payroll				
Risk Management				
Maintenance Services (Wastewater)				
IT Governance				
IT Help Desk and Computer Operations				
Accounts Payable				
Customer Service Operations				
Warehouse Operations				
Biosolids Management				
Capital Projects				
Permit Operations				

**Note:** <sup>1</sup> indicates carry over from 2011 audit plan.

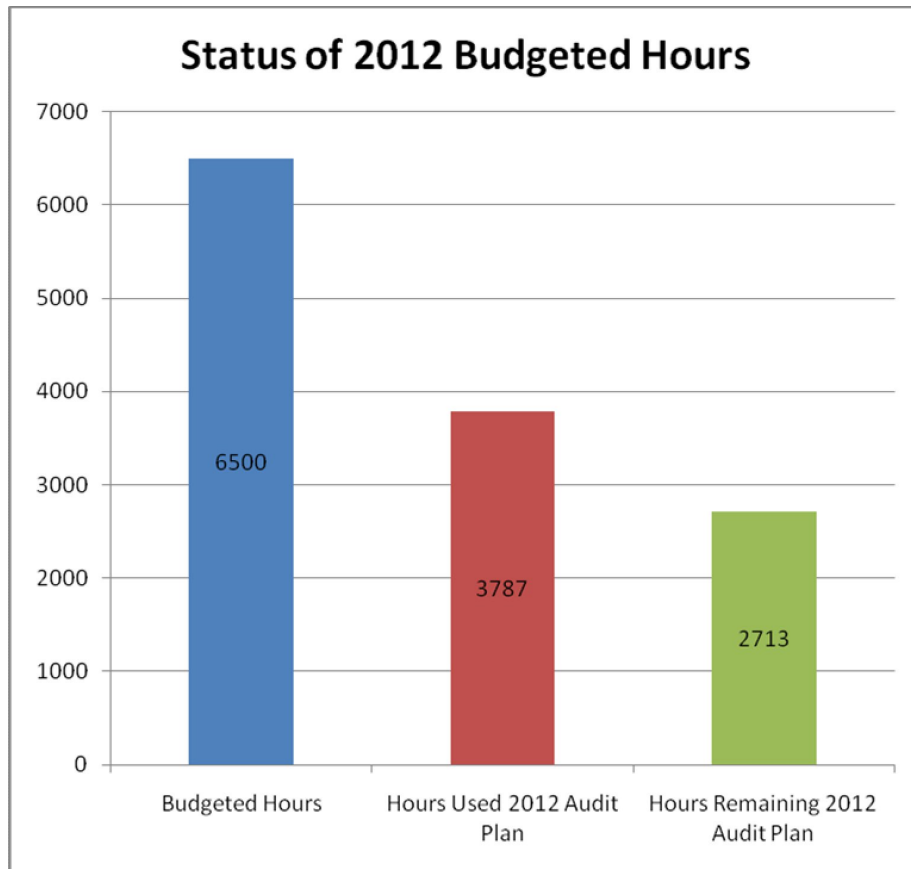
B. **Analysis of key milestone dates** - The following represents an indication of the date of completion of key project milestones.

PROJECT	START DATE	FIELDWORK END DATE	DRAFT REPORT ISSUANCE DATE	FINAL REPORT
IT Business & Operating Applications <sup>1</sup>	9/13/2011	1/26/2012	2/9/2012	2/15/2012
Payroll	10/10/2011	1/17/2012	1/24/2012	2/13/2012
Risk Management	10/5/2011	12/9/2011	1/20/2012	2/7/2012
Maintenance Services (Wastewater)	1/19/2012	3/8/2012	3/22/2012	4/18/2012
IT Governance	1/11/2012	3/2/2012	3/20/2012	5/10/2012
IT Help Desk and Computer Operations	3/9/2012			
Accounts Payable	2/28/12012	5/1/2012	5/9/2012	5/16/2012
Customer Service Operations	2/21/2012	4/5/2012	4/6/2012	4/26/2012
Warehouse Operations	3/22/2012	5/25/2012	6/6/2012	6/20/2012
Biosolids Management				
Capital Projects				
Permit Operations	5/2/2012	6/27/2012		

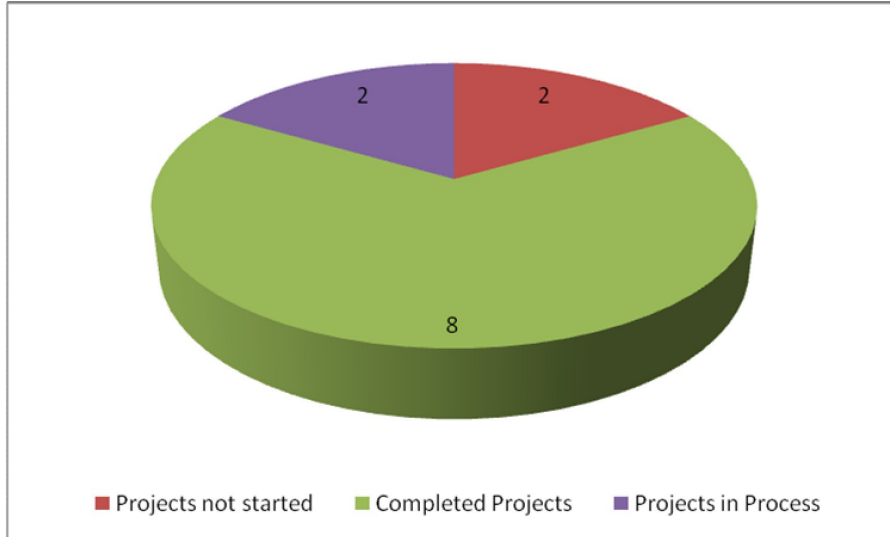
**Note:** <sup>1</sup> indicates carry over from 2011 audit plan.

C. **Analysis of Hours** – The chart below indicates the actual hours used through May 31, 2012 toward completion of the internal audit plan, along with an indication of the total hours included in the FY2012 plan.

**Note:** Some of the hours incurred pertain to the completion of FY 2011 projects in addition to the individual projects identified in the chart above.



## II. 2012 Audit Plan Status



### A. Completed Projects Since Last Audit Committee Meeting

#### Warehouse Operations -

Our overall audit objectives included an evaluation of the management of the operations to make certain the goals and objectives of the department were being met. This included the use of appropriate tools to monitor warehouse activity, efficient use of staff resources and compliance with existing policies and procedures. Specific audit procedures performed are as follows:

- To ensure that warehouse activities are in compliance with DC Water policies and procedures.
- To evaluate overall effectiveness and efficiency of the warehouse management process, including shipping, receiving, inventory selection, inventory storage, and distribution.
- To examine the financial controls to ensure that inventory is appropriately valued and reconciled.
- To ensure that the warehouse management system(s) effectively tracks and monitors warehouse/inventory activities.

After reviewing the current control environment, Internal Audit concludes that the system of internal controls and operational aspects of the warehouse operations are not effective.

There are operational issues that need to be addressed and internal control features that must be implemented in order to improve the Warehouse Operations and make certain that the warehousing activities meet DC Water's objectives. Specific issues identified included:

- Lack of segregation of duties between physically handling goods and recording transactions
- Inefficient physical inventory process
- Discrepancies between the physical inventory on-hand and the system records
- Obsolete inventory not being promptly removed for the records
- Lack of formalized supervisory review of warehouse activity
- Lack of key performance indicators
- System of record is incomplete
- Delays in creating Purchase Orders
- Not all inventoriable items are being recorded (e.g., Technicians Shop Stock)
- Inadequate security measures at the Warehouse
- Inadequate environmental controls at the Warehouse

Internal Audit recognizes that, when implemented, the material management initiatives will strengthen the overall control environment and allow the Warehouse Operations to increase its productivity and efficiency. However, once the initiatives are implemented, Management will need to evaluate the skill sets and responsibilities of the staff to ensure its staff maintains the required competencies. Further, we recommend that Management implement continuous training for its staff.

This audit resulted in 11 additions of Management Action Items to the chart in Section III. Follow Up. All 11 of these items fall under the responsibility of the AGM Support Services.

#### **B. Audits Currently in Process**

IT – Help Desk and Computer Operations – The objective of this review is to evaluate the processes and controls in place to manage the IT Help Desk and the on-going computer operations at DC Water. This audit is currently in the fieldwork stage.

Permit Operations - The objectives of this review are to evaluate the efficiency and effectiveness of internal controls over the permit operations processes; and will include verification that payments received are sufficiently controlled and monitored, transactions are being recorded accurately, proper support is on file; and activity is in compliance with policies, procedures, laws and regulations. This audit is currently in the final stage of fieldwork.

### III. Follow Up

In addition to our work performed relative to the audit projects identified in the FY2012 Internal Audit Plan, Internal Audit conducted follow-up activity relative to previously reported audit comments. The table below summarizes the issues by area of responsibility and the current status of the action plan proposed by Management.

	Chief Engineer	AGM Wastewater Treatment	AGM Consumer Services	Chief Financial Officer	General Counsel	Chief Information Officer	AGM Support Services	General Manager	Total
New Management Action Plans Since Previous Meeting	-	-	-	-	-	-	11	-	11
Management Action Plans Implementation Date Not Expired	-	9	2	4	-	6	11	-	32
Management Action Plans Implementation Date Expired	-	-	1	-	-	-	-	1	2
Total	0	9	3	4	-	6	22	1	45

**Listed below is an indication of the topics relative to the new Management Action Plans included since the previous meeting**

AGM Support Services –  
Warehouse Operations Audit

- Segregation of duties
- Physical Inventory Review
- System and Physical Inventory Discrepancies
- Obsolete Inventory
- Supervisory Reviews
- Management Reports
- Incomplete Maximo Records
- Purchase Orders
- Tracking Shop Stock Inventory
- Security
- Environmental Conditions

**Listed below is the detail of the Management Action Plans with the expired implementation dates**

**General Manager**

2011 Safety, Training & Compliance Management – There were two related issues pertaining to this area. First, there was no effective follow-up process in place once a safety violation was reported to ensure that safety problems were corrected. Second, there was no effective reporting mechanism in place to identify recurring safety problems or trends, thus facilitating a means to address problematic areas. Both of these areas will be addressed by management through acquisition and implementation of a software package to capture and report the necessary information. However, the intended actions have not been completed.

**AGM Consumer Services**

2011 Water Leakage – Internal Audit noted that DC Water does not have an active water leakage program in place. Such a program will provide a means to identify the need for a repair prior to it becoming a substantial, costly problem. Several systems have been identified and tested but a final decision relative to implementation has not yet been made.

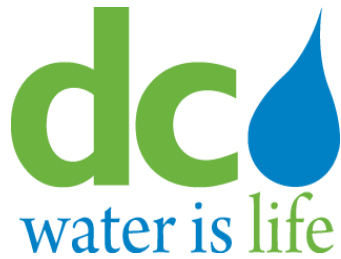
**OTHER TOPICS:**

Internal Audit is collaborating with DC Water’s Chief Financial Officer regarding his initiative to develop a Fraud Mitigation plan for the organization.

Internal Audit is also working with DC Water to ensure there is no duplication of work between the Internal Audit plan and the Office of the CFO’s Internal Control Assessment Monitoring Program.

Internal Audit is performing work on a special project directed by the Office of The General Manager.





**Warehouse Operations  
Internal Audit Report**

June 20, 2012

**INTERNAL AUDIT TEAM**

Senior: Anne Simpson

Manager: Becky Jordan

Director: Joe Freiburger

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## EXECUTIVE SUMMARY

### Background

Warehouse Operations is responsible supporting the activities of DC Water by managing the receipt, issuance, and storage of goods at the Blue Plains and Bryant Street warehouses, performing inventory reconciliations, conducting annual physical inventory reviews, and managing the disposal of excess and obsolete inventory. The Warehouse Operations staff is comprised of 16 employees: 1 warehouse manager (Blue Plains), 2 warehouse foremen (1 - Blue Plains and 1 - Bryant Street), 8 warehouse workers (1 - Blue Plains and 1 - Bryant Street), 3 supply specialists (Blue Plains), and 2 inventory specialists (Blue Plains). As of February 2012 inventory valuation reports, Warehouse Operations manages a total of 149,192 items valued at approximately \$7.2 million. In the course of a year, Blue Plains warehouse has an inventory turn of approximately 1-2%, while the Bryant Street warehouses has an inventory turn of approximately 60%. The below table illustrates the item quantity and total value by warehouse location.

<u>Warehouse Location</u>	<u>Item Quantity</u>	<u>Total Value</u>
Blue Plains (BP1)	91,880	\$ 4,095,339.71
Bryant Street Yard (BY2)	5,387	\$ 1,531,970.40
Bryant Street (BS4)	<u>51,925</u>	<u>\$ 1,564,853.43</u>
<b>Total</b>	<b>149,192</b>	<b>\$ 7,192,163.54</b>

Recently, DC Water began the implementation of a materials management initiative that will re-engineer and streamline the current processes of materials handling. As the materials management initiative continues to progress and becomes more intricate, Management from all interested departments (e.g., Engineering, Logistics, Procurement, Finance, and Maintenance) will need to maintain strong lines of communication to encourage the free and accessible flow of information regarding the project's status, trajectory, project changes; in order to ensure the initiatives success.

### Objectives

Our overall audit objectives included an evaluation of the management of the operations to make certain the goals and objectives of the department were being met. This included the use of appropriate tools to monitor warehouse activity, efficient use of staff resources and compliance with existing policies and procedures. Specific audit procedures performed are as follows:

- To ensure that warehouse activities are in compliance with DC Water policies and procedures.
- To evaluate overall effectiveness and efficiency of the warehouse management process, including shipping, receiving, inventory selection, inventory storage, and distribution.
- To examine the financial controls to ensure that inventory is appropriately valued and reconciled.
- To ensure that the warehouse management system(s) effectively tracks and monitors warehouse/inventory activities.

### Audit Scope and Procedures

This audit was conducted based on the approved FY2012 internal audit plan. The audit was initiated in March 2012, completed in May 2012 and included an evaluation of activities of the Warehouse Operations during the period of August 2011 – March 2012.

### Summary of Work

After reviewing the current control environment, Internal Audit concludes that the system of internal controls and operational aspects of the warehouse operations are not effective. There are operational issues that need to be addressed and internal control features that must be implemented in order to improve the Warehouse Operations and make certain that the warehousing activities meet DC Water's objectives. Specific issues identified included:

- Lack of segregation of duties between physically handling goods and recording transactions
- Inefficient physical inventory process
- Discrepancies between the physical inventory on-hand and the system records
- Obsolete inventory not being promptly removed for the records
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DC Water – 2012 Internal Audit  
Maintenance Services



Internal Audit recognizes that, when implemented, the material management initiatives will strengthen the overall control environment and allow the Warehouse Operations to increase its productivity and efficiency. However, once the initiatives are implemented, Management will need to evaluate the skill sets and responsibilities of the staff to ensure its staff maintains the required competencies. Further, we recommend that Management implement continuous training for its staff.

SC&H Consulting

By:

\_\_\_\_\_

Joe Freiburger, CPA, CIA

**II. DETAILED OBSERVATIONS & RECOMMENDATIONS**

Observation(s)	Internal Audit Recommendation(s)	Management Comment(s)
<b>I. Segregation of Duties</b>		
<p><b>Observation:</b></p> <p>There is no segregation of duties between physical handling of the goods and recording the activity in the system for warehouse workers at Blue Plains or Bryant Street. Currently, all workers physically receive and issue goods, as well as record the activity in Maximo.</p> <p><b>Risk:</b></p> <p>If the duties are not properly separated, a control weakness can result in inappropriate or unauthorized receipt or issuance of parts going undetected due to improper transactions being recorded in the inventory records.</p>	<p><b>Recommendation:</b></p> <p>We recommend that Management separate the duties of physically receiving and issuing items from the recording the receipt and issuances in Maximo. Further, Management should create or utilize access roles in Maximo to ensure those who physically receive goods have view only access in Maximo.</p> <p><b>Business Owner(s):</b></p> <p>Rosalind Inge, Director of Procurement</p>	<p><b>Management’s Action Plan and Implementation Date:</b></p> <p>In Q2 FY13 we plan on moving to a Radio Frequency (RF) Barcode reporting system and transactions will be recorded instantaneous. All warehouse workers will perform full transactions. We will have a “Watch Dog” program between the RF handheld device and the Controller that will permit a review of transactions prior to up loading to the mainframe. The administrator or Materials Manager will be able to review the transactions in a batch process. We plan to upload the receiving and purchase order documents into the system, which will have the transaction number associated with these documents.</p> <p>In the interim period starting 8/17/12, we will separate material handling from system reporting.</p>

		During the Physical Inventory process starting on Monday 6/18/12 there will be a separation of duties. The counters and scribes will not enter their count information.
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Observation(s)	Internal Audit Recommendation(s)	Management Comment(s)
<b>II. Physical Inventory Review</b>		
<p><b>Observation:</b></p> <p>The process used to conduct the physical inventory review is not adequate or efficient, potentially resulting in an improper inventory valuation. A full physical inventory review is conducted by two inventory specialists once each year, occurring June through September for the Blue Plains review and April through May for the Bryant Street review. Internal Audit noted that an outside firm, Logistics Consultants, Inc. (LCI) completed a full inventory review of the Blue Plains warehouse in 12 days, utilizing 4 staff. Further, there are no established receiving and issuing cut-offs during inventory reviews.</p>	<p><b>Recommendation:</b></p> <p>We recommend that Management adjust the process used to conduct inventory count by deploying sufficient resources to complete the process in a shortened timeframe. The warehouse staff should also implement cycle counts in addition to the annual physical inventory to ensure greater accuracy in the records. Further, greater use of technology tools such bar codes readers or count cards will facilitate conducting the actual counts. Additionally, Management should implement a process to limit the receiving and issuing activity during counts and quarantine those items from inventory during the count.</p>	<p><b>Management’s Action Plan and Implementation Date:</b></p> <p>New inventory procedures have been established and approved on 06/06/12 and the physical inventory is scheduled to begin 06/18/12, concluding the week of 8/17/12. A capacity plan format has been created in an excel format that allows us to enter manpower, vacation, and sick time and the timeline is calculated. This tool allows us to develop a time line by available resources.</p> <p>We plan on implementing a cycle program after the Physical Inventory the week of 08/17/12. Count areas and count locations for the physical &amp; cycle counts will be cut off during the counts.</p>

<p>Internal Audit noted that both warehouses continue to receive and issue goods during the review and but an effective method to account for the activity during the count is not in place. The Inventory Specialists conduct a blind count, using count sheets; however we noted that the count sheets are error prone.</p> <p><b>Risk:</b></p> <p>Performing a physical inventory review over an extended period of time with inadequate staffing and count sheets, while receiving and issuing items, may cause inaccuracies in the physical inventory counts, which could result in the over- or understatements of the inventory valuation on the financial statements.</p>	<p>Further, Management should implement the practice of auditing specified locations or items to ensure count accuracy.</p> <p>In anticipation of implementing cycle counts as the new method for conducting the physical inventory review, Management should conduct a pre-count training for the workers assigned to count and assigned to enter the data in the system. The training should address the inventory activity schedule, procedure details, and task assignments. Additionally, the training should clearly specify how to record quantities, reconcile errors, and handle emergency shipments.</p> <p><b>Business Owner(s):</b></p> <p>Rosalind Inge, Director of Procurement</p>	<p>Radio Frequency Barcode system has been approved and is planned to be implemented in Q2 FY13.</p> <p>We will continue to receive and issue inventory during the inventory count; however, we will store newly received inventory in a non inventory staging area. This inventory will be received into the system after the count is completed. The inventory coordinator will be responsible for tracking the receiving and issuing activity during the count.</p> <p>Cycle Counting training and documentation will begin the week of 08/13/12 and the program will be launched the week of 08/30/12.</p> <p>Radio Frequency Barcode System cycle counting will be part of the entire training program and implementation plan beginning in Q2 FY13.</p>
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Observation(s)	Internal Audit Recommendation(s)	Management Comment(s)
III. System and Physical Inventory Discrepancies		
<p><b>Observation:</b></p> <p>An outside firm Logistics Consultants, Inc. (LCI) has recently performed a 100 percent inventory review and found multiple instances in which items listed in the system could not be found in the warehouse and inventory was found in the Blue Plains warehouse that was not listed on the inventory valuation listing. There were substantial inaccuracies noted in the parts count and item valuations on the inventory records. The report indicated that the total value of the items listed in the system that could not be found in the warehouse is over \$555,000.</p> <p><b>Risk:</b></p> <p>Inaccuracies in the parts count may result in improper item valuations on the inventory records and may adversely affect the inventory valuation on the financial statements.</p>	<p><b>Recommendation:</b></p> <p>We recommend that Management immediately research and resolve all discrepancies noted and then conduct a full physical count to ensure the inventory records are accurate. The resulting valuation should provide confidence that the financial statement inventory amounts are accurate. In the future, in anticipation of the construction and move to the new warehouse, Management should conduct a 100 percent physical inventory immediately prior to and after the move to ensure that the inventory quantities and locations are accurately recorded in Maximo.</p> <p><b>Business Owner(s):</b></p> <p>Rosalind Inge, Director of Procurement</p>	<p><b>Management’s Action Plan and Implementation Date:</b></p> <p>A full Physical Inventory is planned to begin 6/18/12. The review is to include a validation of LCI’s findings and resolve any remaining issues.</p> <p>In the new warehouse (est. Q4 FY13), we will process the transfers/receipts in the RF System with a full count and inspection as if they were received from a supplier. This will guarantee receipt and inventory accuracy and reduce the cost and time loss of two physical inventories.</p> <p>In the RF “putaway” process each item will be assigned a location and the operator will scan the part b-code and the location b-code; the system will verify the relationship and the operator will count the parts and physically place them in the location and enter the quantity into the handheld scanner.</p>

Observation(s)	Internal Audit Recommendation(s)	Management Comment(s)
<b>IV. Obsolete Inventory</b>		
<p><b>Observation:</b></p> <p>Obsolete inventory is not promptly removed from the physical inventory and inventory reports. Audit learned that the AY1 warehouse stores obsolete inventory that is valued at \$3,447. Further, Audit learned that the Blue Plains and Bryant Street warehouses still store items that are deemed obsolete. Specifically, Audit noted that Bryant Street warehouse continues to store galvanized items which can no longer be used. Nevertheless, these items remain on the inventory valuation reports.</p> <p><b>Risk:</b></p> <p>By not removing obsolete items from inventory, Management is potentially overstating the inventory valuation on the financial statements.</p>	<p><b>Recommendation:</b></p> <p>We recommend that Management implement a process to ensure the proper and prompt identification and removal of obsolete materials from physical inventory and inventory reports. Further, Management should write off obsolete inventory as soon as it is identified to be in accordance with GAAP.</p> <p><b>Business Owner(s):</b></p> <p>Rosalind Inge, Director of Procurement</p>	<p><b>Management’s Action Plan and Implementation Date:</b></p> <p>Currently, we have a PDA (Parts Disposal Authorization) process in place, but the past warehouse staff was not proactive with this procedure. Besides implementing cycle counting after the physical inventory (week of 08/20/12), we plan on establishing a very proactive approach to removing obsolete items from our warehouse. Maximo records go back to 2003 and our current thinking is to identify all items in the warehouse via Maximo with a receipt date of 2003, ID and process them on a PDA. Next we will process 2005 and prior receipts and move forward in 2 year increments. Each PDA will be reviewed and approved by Finance and the appropriate Operating Department prior to disposal.</p>

Observation(s)	Internal Audit Recommendation(s)	Management Comment(s)
<b>V. Supervisory Reviews</b>		
<p><b>Observation:</b></p> <p>There are no formal supervisory reviews of warehouse activity. Management does not review the supporting documentation (e.g., purchase orders for receipts and materials requests forms for issuances) for the monthly inventory reports, although the Warehouse Foreman does spot check users’ entries in Maximo. It does not appear that Management utilizes the audit log in available in Maximo to review users’ activity (changes made in the system).</p> <p>Additionally, Internal Audit noted that there are additional system functionalities in Maximo (e.g., audit logs, email notifications, etc.) that Management and Warehouse personnel could use for monitoring purposes, but are not currently employing.</p>	<p><b>Recommendation:</b></p> <p>We recommend that Management review the audit logs provided in Maximo on a weekly basis. Further, Management should implement the email alert feature in Maximo that would alert Management to any changes made in the system. Finally, Management should review the supporting documentation (e.g., purchase orders for receipts, material requests forms for issuances, and inter- and intradepartmental transfer documentation) for all transaction reports within the monthly inventory package and supply the supporting documentation to Finance.</p> <p>Additionally, Management should implement regular training to refresh or improve upon skills and capabilities relating to system functionality for all warehouse activities, such as receiving, issuing, and reporting.</p>	<p><b>Management’s Action Plan and Implementation Date:</b></p> <p>Transaction updates are ongoing in the Maximo system and an e-mail alert system would not add any value since there is no relativity. The transaction activity logs can be reviewed and used as an investigation tool when an issue arises, as the user’s ID is attached to each transaction. The logs are used to review historical activity loads for manpower planning. The week of 08/20/12 the Warehouse Foreman will begin a review of the logs on a daily or weekly basis.</p> <p>Transaction accuracy is a function of training and operator skills. We plan on refresher training and reviewing the current operator's transaction permissions in the system the week of 08/13/12.</p> <p>The monthly closing documents will be reviewed by the Materials Manager starting the week of 06/15/12.</p>

<p><b>Risk:</b></p> <p>By not implementing formalized supervisory review process, Management is not in a position to review employees' work in a timely manner to ensure accuracy and completeness.</p>	<p>Increased training that enables personnel to fully utilize Maximo's functionalities can improve process efficiencies and system accuracies.</p> <p><b>Business Owner(s):</b></p> <p>Rosalind Inge, Director of Procurement</p>	
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Observation(s)	Internal Audit Recommendation(s)	Management Comment(s)
VI. Management Reports		
<p><b>Observation:</b></p> <p>The current management reports are not adequate to assess the performance of the warehouse activities. Management produces the inventory reports monthly and calculates the inventory turns annually; however, outside of these reports, Management does not assess the overall performance of the warehouse activities.</p> <p><b>Risk:</b></p> <p>By not assessing the performance of the warehouse activities, Management is unable to evaluate whether its staffs' efforts are meeting the department's established objectives or if inventory operations are meeting objectives established by DC Water.</p>	<p><b>Recommendation:</b></p> <p>We recommend that Management implement key performance indicators, such as inventory accuracy, inventory service level (e.g., the level of service performed by the warehouse workers in fulfilling user requirements), demand ratio, inventory lead time, and average age of inventory, that are in line with industry best practices to assess the performance of the warehouse activities and to ensure that the activities are meeting the established objectives.</p> <p><b>Business Owner(s):</b></p> <p>Rosalind Inge, Director of Procurement</p>	<p><b>Management's Action Plan and Implementation Date:</b></p> <p>The FY 13 Budget warehouse performance measures are as follows:</p> <ul style="list-style-type: none"> <li>Issue a request for restock in one business day 90%.</li> <li>System review of warehouse stock deliveries within one business day 90%</li> <li>System and physical issue of all stock requests within one business day 90%</li> <li>Internal inventory accuracy at 98%</li> <li>Internal inventory shrinkage 2%</li> </ul> <p>The lead times and demand and item level of criticality will be used in the new system to set inventory levels and order points.</p> <p>Inventory aging issue will be addressed by the before mentioned PDA process activities.</p>

Observation(s)	Internal Audit Recommendation(s)	Management Comment(s)
<b>VII. Incomplete Maximo Records</b>		
<p><b>Observation:</b></p> <p>The Maximo records are incomplete and missing information. The inventory valuation report is missing information, such as item number, stock number, and location information, and also contains items with \$0 value. Additionally, the current inventory listing report appeared to have inaccuracies in its reconciling counts. The inventory valuation report depicts important information in three columns: the amount of the physical count, the value of the system counts, and the reconciling counts. The reconciling count is the difference between the physical count and the system count. Therefore, the reconciling count should equal zero if the count is the same for the physical and system counts. Internal Audit noted several instances in which the physical and system counts were the same, but the reconciling count showed a number other than zero</p>	<p><b>Recommendation:</b></p> <p>We recommend that Management review and update the system records to ensure accurate and complete information is presented. Management should investigate the system calculations to ensure that the system is correctly calculating the valuation and to determine if there are manual overrides in the report.</p> <p>Management should prepare written procedures for entering information into Maximo to ensure standardization. Further, in the event there is a transition of the primary inventory records from Maximo to Lawson, we recommend that Management ensure that the inventory modules in Maximo and Lawson run parallel for an appropriate period of time.</p>	<p><b>Management's Action Plan and Implementation Date:</b></p> <p>A complete Physical Inventory is planned to begin 06/18/12 and the results will correct the missing records issue when the results are posted. The capital parts stocked in the warehouse have zero value, and all items with a zero value on the inventory valuation report are capital spare parts. The value was expensed under the Capital Project Funds.</p> <p>The reconciling count is a function of training and will be addressed prior to our inventory. The system uses average cost to value the inventory and the program has been reviewed.</p> <p>Maximo User's guide documents the standard data entry procedures.</p> <p>In Q2 FY13 the Maximo to Lawson upload will be data mapped by data field to insure upload accuracy, therefore eliminating the costly and time consuming need to run dual systems.</p>

<p>(e.g., the physical count of 50 less the system count of 50 = reconciling count of -50, not 0 as it should be).</p> <p><b>Risk:</b> Missing information or inaccuracies in the system’s records may contribute to over- or understatements in the inventory valuation on the financial statements.</p>	<p>This will assist in identifying any problems with conversion to the new system and to ensure that the new system is operating correctly and recording inventory transactions properly.</p> <p><b>Business Owner(s):</b> Rosalind Inge, Director of Procurement</p>	<p>The data mapping exercise will include exception reports that will notify Management of any system errors or discrepancies.</p>
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Observation(s)	Internal Audit Recommendation(s)	Management Comment(s)
<b>VIII. Purchase Orders</b>		
<p><b>Observation:</b></p> <p>The purchase order information is not automatically uploaded into Maximo. Currently, a Supply Specialist or Warehouse Manager is responsible for manually uploading the purchase order information and assigning an item number in Maximo. The current process necessitates that items cannot be received in Maximo until they an item number is assigned. We identified that goods are being received but cannot be recorded right away. The goods are left in a staging area for an unspecified period of time until they have been assigned an item number.</p> <p><b>Risk:</b></p> <p>The delay between when the goods are physically received to when the goods are recorded in the system may contribute to inaccuracies or missing information in Maximo, resulting in improper inventory valuation. Further, leaving items unaccounted for in the staging area creates an opportunity for unauthorized activity.</p>	<p><b>Recommendation:</b></p> <p>We recommend that Management establish a procedure to upload the purchase orders into the system prior to the physical delivery of the item. Further, Management should explore other ways to automate this process.</p> <p><b>Business Owner(s):</b></p> <p>Rosalind Inge, Director of Procurement</p>	<p><b>Management’s Action Plan and Implementation Date:</b></p> <p>In Q2 FY13 we are moving to the Lawson System so there will not be a need for an upload program. We do not want to use our limited programming resources working on disposable software projects.</p> <p>We are currently in testing of a new Lawson workflow program, in which the system will assign Maximo part numbers; we anticipate implementation in Q4 FY12.</p>



Observation(s)	Internal Audit Recommendation(s)	Management Comment(s)
<b>IX. Tracking Shop Stock Inventory</b>		
<p><b>Observation:</b></p> <p>There are no formal measures to track items stored in the technicians’ shop. The various technicians (e.g., mechanical, electrical, etc.) maintain a shop stock, comprised of frequently used items that are purchased with a P-card and are not maintained in the inventory as they are immediately considered an expense. The Blue Plains warehouse inventory does not track items stored in shop stock, but may be responsible for physically receiving the items. As part of the materials management initiative, it is our understanding that LCI has identified and created a list of shop stock items, over 250 parts, from the different trade shops. This list eventually will be put into Maximo and assigned to the satellite store room.</p>	<p><b>Recommendation:</b></p> <p>We recommend that Management continue with LCI’s suggested efforts to capture and record all shop stock items in the inventory records. Additionally, Management should value all shop stock items and include these items in their physical inventory reviews. Further, Warehouse Operations and Procurement should work with the operating departments to procure these items through the re-order process to facilitate the ease of acquiring the goods, recording the costs of required goods, and locating required goods instead of allowing the purchase with a P-Card.</p> <p><b>Business Owner(s):</b> Rosalind Inge, Director of Procurement</p>	<p><b>Management’s Action Plan and Implementation Date:</b></p> <p>The LCI shop stock effort is a work in process that will continue into FY13. Once all the items are captured, the Materials Manager and the appropriate Shop person will review the items and determine if it is an inventory item (asset) or an expense item (consumable). If it is an inventory item, assign a criticality level and move it to the warehouse or assigned to a satellite storeroom for future storage and management. If the item is an expense item maintain in shop.</p>

<p><b>Risk:</b></p> <p>By not recording the shop stock items as part of inventory, Management is potentially under-reporting the value of the current inventory. Further, by not procuring shop stock items through the re-order process, Management is not able to effectively track the economic quantity levels and costs of the required items.</p>		
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Observation(s)	Internal Audit Recommendation(s)	Management Comment(s)
<b>X. Security</b>		
<p><b>Observation:</b></p> <p>The warehouses do not have adequate security measures to prevent or detect improper activities including theft. Neither warehouse maintains security cameras. We noted that the goods in both warehouses (e.g., shop vacuums, shovels, fans, etc.) could be appealing to individuals for personal use. Further, it appears that the Blue Plains warehouse does not have security measures in place (e.g., security cameras) to restrict after-hours access.</p> <p><b>Risk:</b></p> <p>Failing to adequately protect warehouse inventory could result in the misappropriations or theft of DC Water assets.</p>	<p><b>Recommendation:</b></p> <p>We recommend that Management work with the security office to address its needs for increased security measures to ensure all actions have been taken to prevent and detect unauthorized access to inventory stored in both warehouses 24 hours a day.</p> <p><b>Business Owner(s):</b></p> <p>Rosalind Inge, Director of Procurement</p>	<p><b>Management’s Action Plan and Implementation Date:</b></p> <p>The majority of our inventory cannot be moved without equipment assistance which reduces the theft factor. The building is secured after operating hours.</p> <p>The 2nd and 3rd shift maintenance foremen do have keys to access the warehouse for critical parts when there is a process breakdown.</p> <p>The new facility will have a card scanning security system and will house the main offices of the security patrol.</p>

Observation(s)	Internal Audit Recommendation(s)	Management Comment(s)
<b>XI. Environmental Conditions</b>		
<p><b>Observation:</b></p> <p>There is no formal process to evaluate the effects of environmental changes on the inventory, although the warehouse workers at both locations informally review parts for effects of environmental changes. The Blue Plains and Bryant Street warehouses are not climate controlled, and the parts stored in the warehouses are subject to the changes in the environment.</p> <p><b>Risk:</b></p> <p>Exposure from environmental changes can adversely affect the parts, potentially causing the parts to become not suitable for use.</p>	<p><b>Recommendation:</b></p> <p>We recommend that Management implement formalized procedures to proactively monitor the inventory for the effects of environmental changes (e.g., rust, oxidation of rubber components, build up of dust, lubrication failure through contamination, migration and evaporation). Further, Management should work with the operating departments to assess the effects of the environmental changes on the inventory on a quarterly basis.</p> <p><b>Business Owner(s):</b></p> <p>Rosalind Inge, Director of Procurement</p>	<p><b>Management’s Action Plan and Implementation Date:</b></p> <p>A program needs to be established that informs the Materials Management group that a capital item or a new inventory item has a specific shelf life or unique storage requirements. We will work with DETS to establish one. We plan to begin this process in late August 2012.</p> <p>The before mentioned PDA programs will turn the unused/obsolete inventory. The environmental effects on parts are due to length of storage time. We cannot afford environmentally sterile storage facilities. The nature of our business is just in case inventory. No break downs and no demand for inventory increase the length of time an item sits in storage.</p>