Internal Audit Report

Follow-Up Review of

Limited Operational Audit

Port of Seattle Fleet Maintenance –
Aviation and Marine (Report No. 2011-16)

October 1, 2011 – June 30, 2013

Issue Date: October 1, 2013
Report No. 2013-18

Table of Contents

Transmittal Letter

Audit Committee
Port of Seattle
Seattle, Washington

We have completed our follow-up review of the 2011 Port of Seattle Fleet Maintenance – Aviation and Marine (Report No. 2011-16).

We reviewed information relating to the Aviation and Marine Maintenance Shops from October 1, 2011 - June 30, 2013.

We conducted this performance audit in accordance with Generally Accepted Government Auditing Standards and the International Standards for the Professional Practice of Internal Auditing. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We extend our appreciation to the Aviation and Marine Maintenance staff for their assistance and cooperation during the audit.

Joyce Kirangi, CPA, CGMA
Director, Internal Audit

Audit Team:	Responsible Management Team:
Ruth Riddle, Sr. Internal Auditor	John Christianson, General Manager, Aviation Maintenance
Jack Hutchinson, Audit Manager	Lindsay Pulsifer, General Manager, Marine Maintenance

Executive Summary

Audit Scope and Objectives The purpose of the audit was to determine the status of the prior audit's findings and recommendations:

1. Management has implemented recommendations to ensure optimal use of Maximo.
2. The requirements of Executive Policy 17 (as revised by management) are being met.

We reviewed information for the period October 1, 2011 – June 30, 2013.

Background In September 2011, Internal Audit completed a limited operational audit of the Port's fleet maintenance operations (Audit Report No. 2011-16). The auditors' conclusion was:

> *"The fleet maintenance shops have adequate controls to ensure maintenance operations are efficient, effective, and in compliance with internal policies and procedures. However, we identified two significant issues related to the monitoring and oversight of fleet management activities."*

We issued two audit findings:

1. *Maximo Software (IBM) for Fleet Maintenance Is Not Used At Optimal Capacity.*
2. *Certain Requirements of the Fleet Management Policy Are Not Being Met.*

We presented the report to the Audit Committee on September 7, 2011. The Audit Committee requested that Aviation and Marine Maintenance consider those recommendations to reduce operational and compliance risks associated with the Maximo software and Executive Policy 17.

Audit Result Summary Management has implemented the recommendations to ensure optimal use of Maximo, and continues to pursue process improvements. Management is in process of ensuring that the requirements of the recently amended EX-17 are being met.

Background

In September 2011, Internal Audit completed a limited operational audit of the Port's fleet maintenance operations (Audit Report No. 2011-16). The Port maintains its fleet through two separate shops: Aviation Maintenance (AM) and Marine Maintenance (MM). Aviation Maintenance is responsible for all fleet assets under the Port's Aviation Division. Marine Maintenance oversees the fleet assets of the other four Port divisions. The Fire Department maintains its own fleet.

The 2011 audit had four objectives, which were to determine whether AM and MM shops:

1. Were in compliance with Executive Policy 17 (EX-17) with regards to:
    a. Take-home vehicle authorizations were properly justified and authorized.
    b. Utilization requirements for take-home and pool-vehicles were met.
2. Conduct corrective maintenance in a necessary and/or reasonable fashion.
3. Utilized performance measures for evaluating its management practices over the fleet.
4. Would benefit from industry benchmarks (if applicable).

The 2011 audit report concluded as follows:

> *"The fleet maintenance shops have adequate controls to ensure maintenance operations are efficient, effective, and in compliance with internal policies and procedures. However, we identified two significant issues related to the monitoring and oversight of fleet management activities."*

We issued two audit findings:

1. *Maximo Software (IBM) for Fleet Maintenance Is Not Used At Optimal Capacity: The Port's fleet management software, Maximo, was not utilized effectively to manage fleet, particularly with identifying fleet assets*.

2. *Certain Requirements of the Fleet Management Policy Are Not Being Met: Executive Policy 17: The Port's fleet policy requirements for the use of fleet assets were not being consistently tracked and met among the various groups utilizing assigned and pool vehicles.*

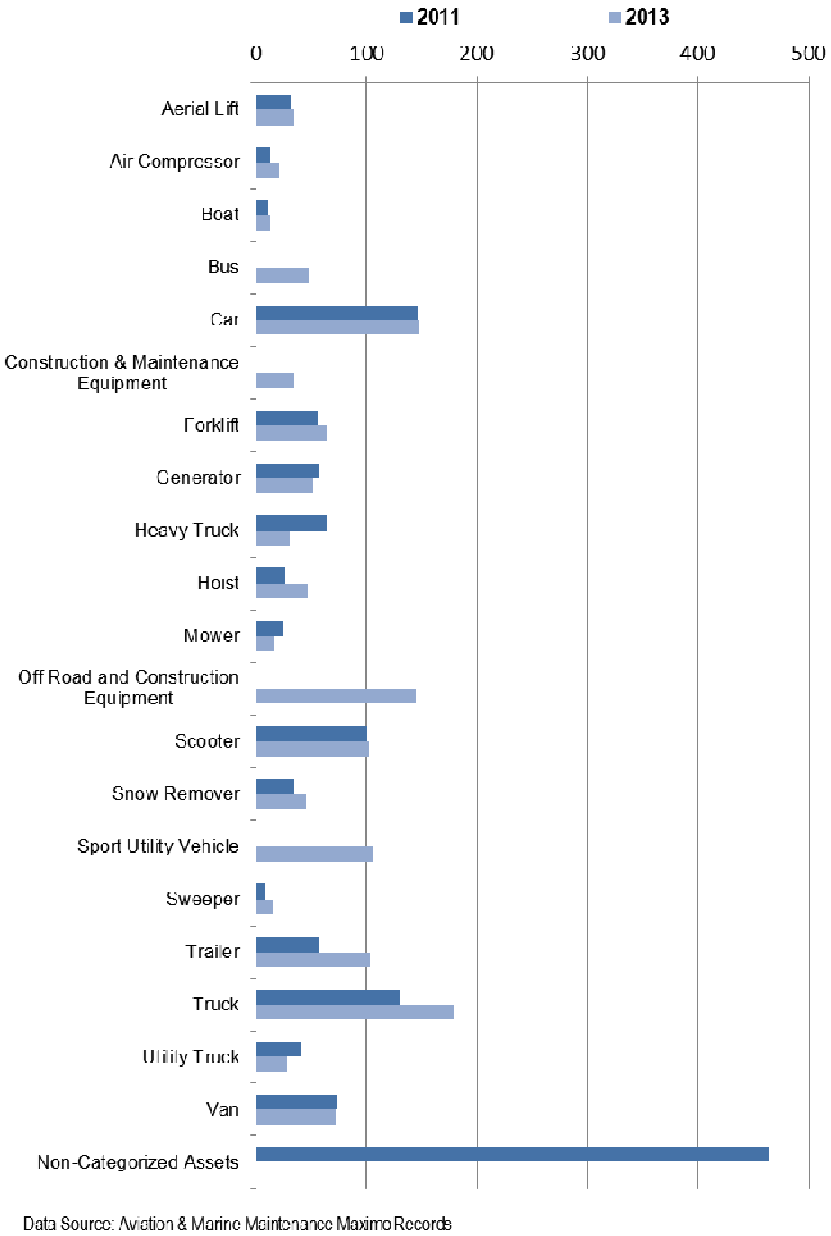
Internal Audit presented the report to the Audit Committee on September 7, 2011. The Audit Committee requested that AM and MM consider the recommendations to reduce operational and compliance risks associated with the Maximo software and Executive Policy 17.

Aviation and Marine Maintenance Shops

The Port maintains 1,298 fleet-specific assets as of August 1, 2013. The chart on the following page shows the change to the number of fleet assets in each category from the prior audit (August 1, 2011) to the current audit:

Port of Seattle Fleet Assets by Category

Number of assets by category in August 2013 vs. August 2011



Data Source: Aviation & Marine Maintenance Maximo Records

The elimination of 464 non-categorized assets resulted from the development of new common asset categories: Buses, Construction and Maintenance Equipment, Off-Road and Construction Equipment, and Sport Utility Vehicles.

Port of Seattle Fleet Assets by Category
Number of assets by category in August 2011 vs. August 2013

Category	2011	2013
Aerial Lift	31	34
Air Compressor	13	21
Boat	11	13
Bus	0	47
Car	147	148
Construction & Maintenance Equipment	0	34
Forklift	55	64
Generator	57	51
Heavy Truck	64	30
Hoist	26	46
Mower	24	17
Off Road and Construction Equipment	0	145
Scooter	100	102
Snow Remover	34	45
Sport Utility Vehicle	0	105
Sweeper	9	15
Trailer	56	103
Truck	130	178
Utility Truck	40	28
Van	74	72
Non-Categorized Assets	464	0
TOTAL	1335	1298

Data Source: Aviation & Marine Maintenance Maximo Records

Maximo – Fleet Management Software

Since 1993, the Port has used IBM Maximo software (Maximo) to manage its fleet operations. Maximo is an asset life-cycle management program. The software tracks the condition of an asset, taking into account periodic maintenance, accidents or technical failures, and major refurbishments. Maximo retains critical data points, including scheduled and emergency maintenance, parts inventory, and staff servicing a particular asset.

Executive Policy 17 – The Port's Fleet Policy

In addition to maintaining fleet assets, representatives of AM and MM participate in the Fleet Management Oversight Team (FMOT), along with Risk Management. The FMOT oversees the Port's Executive Policy 17 for the proper use of fleet assets, including:

- Acquisition of fleet assets.
- Maintenance of fleet assets.
- Assignment and use of fleet assets.
- Rules for fueling, electronic tolling, and other services related to fleet assets.
- Disposal/divesture of fleet assets.
- Environmental/sustainability issues related to fleet assets.

The FMOT updated many of the policy's requirements and published the revised EX-17, as of June 1, 2013.

Audit Scope and Methodology

We reviewed information for the period October 1, 2011 – June 30, 2013. We utilized a risk-based audit approach from planning to testing. We gathered information through research, interviews, observations, and analytical reviews, in order to obtain a complete understanding of which recommendations were implemented and whether changes were effective for mitigating the prior audit issues. We applied detailed audit procedures for each of the ten recommendations:

Objective 1: "Maximo"

1. Management has implemented recommendations to ensure optimal use of Maximo:

    1.1. Determine whether assets are assigned Maximo-generated identification numbers:
        1.1.1. Identify all assets acquired after January 1, 2013, and verify that Maximo generated their asset identification numbers.

    1.2. Determine whether fleet assets utilize one common data set to categorize fleet assets:
        1.2.1. Conduct a walk-through with the fleet managers of data entry into Maximo.
        1.2.2. Randomly select 10-15 different assets from Aviation and Marine shops and compare all category traits to validate they are the same.

    1.3. Determine whether Maximo-generated data and reports are available and appropriate:
        1.3.1. Review Aviation and Marine Maintenance SharePoint sites to identify Maximo-supported reports and metrics.

    1.4. Determine whether the fleet managers have discontinued the use of Excel inventory spreadsheets after January 1, 2012.
        1.4.1. Review SharePoint sites and confirm status with fleet managers.

    1.5. Determine whether management conducted a Business Intelligent Assessment (BIA):
        1.5.1. Analyze process improvement documentation related to BIA efforts.

Objective 2: "EX-17"

2. The requirements of Executive Policy 17 (as revised by management) are being met:

2.1. Determine whether changes to the EX-17 policy are reasonable:
- 2.1.1 Analyze changes in relation to specific recommendations.
- 2.1.2 Analyze changes not related to specific recommendations.

2.2. Determine whether Port-wide training for revised EX-17 requirements have been implemented:
- 2.2.1. Individual Users: Identify the training methods (e.g., through the Learning Management System (LMS), In-Person).
- 2.2.2. Fleet Administrators: Identify the training methods and the schedule of training.

2.3. Determine whether the common tracking system for evaluating fleet utilization has been implemented:
- 2.3.1. Evaluate fuel consumption and mileage data originating from Maximo and determine whether it is appropriate and reasonable under the revised EX-17 utilization requirements.

2.4. Determine whether the membership of the Fleet Management Oversight Team is reasonable:
- 2.4.1. Identify the current members of FMOT.

2.5. Determine whether fleet utilization and fuel efficiency have been improved through existing resources:
- 2.5.1. Compare the sustainability requirements of EX-17 with Port-wide environmental guidance.
- 2.5.2. Identify existing resources to promote sustainable fleet usage.

Conclusion

Management has implemented the recommendations to ensure optimal use of Maximo, and continues to pursue process improvements. Management is in process of ensuring that the requirements of the recently amended EX-17 are being met.