



**A Report to the  
Audit Committee**

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# Audit of Metro Parks and Recreation Maintenance Division

November 5, 2015

Metropolitan  
Nashville  
Office of  
Internal Audit

## EXECUTIVE SUMMARY

November 5, 2015



### Why We Did This Audit

The audit was initiated because well maintained parks and safe playgrounds improve the quality of life for Metropolitan Nashville citizens and visitors.

### What We Recommend

- Formalize maintenance standards.
- The Work Order System should be replaced.
- Safety training documentation should be maintained.
- Assets should be safeguarded when on location at Metro Nashville parks.

# AUDIT OF METRO PARKS AND RECREATION MAINTENANCE DIVISION

## BACKGROUND

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The mowing and maintenance of open spaces, athletic fields, greenways, playgrounds, and recreational areas is a top priority of Metro Parks and Recreation. The Consolidated Maintenance Division within Metro Parks and Recreation maintain over 15,000 acres of open space within parks and greenways and 740,000 square feet within Metro Parks and Recreation facilities. Consolidated Maintenance consists of approximately 134 employees among four divisions: grounds, facilities, horticulture, and custodial and safety.

The budget for Consolidated Maintenance totaled \$11,608,900 for fiscal year 2015 which represents 29 percent of Metro Parks and Recreation total budget.

## OBJECTIVES AND SCOPE

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The objectives of the audit were to:

- Determine if a maintenance plan is in place to help management maintain Metro Nashville parks.
- Determine if supervisory controls are in place to ensure the successful management of Metro Nashville parks.
- Determine if controls are in place to ensure employee safety.
- Determine if equipment and assets are safeguarded.

The audit scope included all maintenance activities between June 1, 2013, and May 31, 2015.

## WHAT WE FOUND

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We found that Metro Parks and Recreation was successfully maintaining park areas, playgrounds, and facilities with limited resources. However, the Consolidated Maintenance Division should develop written standards for parks and facilities. The work order system should be replaced as it is outdated and does not provide valuable information for management decision making. Documentation should be maintained for safety training for equipment used on the job as well job hazard analysis. The Consolidated Maintenance Division had controls in place to safeguard assets, but more care is needed in safeguarding assets while on location at Metro Nashville parks.

## GOVERNANCE

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A seven-member board ultimately governs Metro Parks and Recreation. An assistant director of the Consolidated Maintenance Division reports to the Director of Metro Parks and Recreation. A grounds superintendent, horticulture superintendent, and facilities superintendent report to the assistant director of the Consolidated Maintenance Division. Each superintendent has a staff of supervisors and maintenance workers.

## OBJECTIVES AND CONCLUSIONS

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1. *Are controls in place to ensure the effective and efficient maintenance of Metro Nashville parks?*

**Generally yes.** The Consolidated Maintenance Division is successfully maintaining park areas, playgrounds, and facilities with limited resources. However, improvements could be made by documenting maintenance standards, replacing the work order system, and safeguarding assets while on location at Metro Nashville parks and facilities. (See Observations A, B, C, and D.) Sub-objectives tested were:

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### Supporting Objectives and Conclusions

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a. *Is a maintenance plan in place to help management maintain Metro Nashville parks and facilities?*

**Generally yes.** The Consolidated Maintenance Division follows a schedule of maintenance activities for parks, greenways, and playgrounds. The conditions at a random selection of these locations were gauged against a set of standards compiled from a literature search and the standards used by the College Station, Texas, Parks and Recreation Department. Playgrounds were additionally gauged against The American Society for Testing and Materials (ASTM) and the U.S. Consumer Product Safety Commission (CPSC) playground standards. Metro Nashville parks met 93 percent of standards, greenways met 86 percent of standards, community and nature centers met 82 percent of standards, and playgrounds met 86 percent of standards. Metro Parks and Recreation does not have a set of formal written standards to which park areas and facilities should be maintained. (See Observation A.)

b. *Are supervisory controls in place to ensure the successful management of Metro Nashville parks and facilities?*

**Generally yes.** An analysis of 6,437 work orders submitted between June 1, 2013, and May 31, 2015, was conducted. A total of 5,341 (83 percent) of the work orders submitted had been completed. Of the work orders completed, 24 percent were completed within 1 day, and 52 percent between 1 and 30 days.

Work order requests are called or e-mailed to an administrative employee who enters the request and work order completion information into a database. This system does not capture information relating to labor cost, material cost, time spent on the job, and material used.

The work order system in place is meeting the basic needs of the maintenance division by scheduling and organizing maintenance activities. However, a new system could provide better information for management decisions. (See Observation B.)

Utility costs are charged to a consolidated maintenance division business unit. An analysis of utility costs showed that energy costs have steadily increased over the last two years. Water costs showed the largest increase with costs rising 27 percent between 2013 and 2014 and 26 percent between 2014 and 2015. Energy costs are reviewed by the assistant director of consolidated maintenance and compared to the same period for the previous year. Any significant fluctuations are investigated.

c. *Are controls in place to ensure employee safety?*

**Generally yes.** A review of safety training documentation for a random sample of the Consolidated Maintenance Division employees found all employees had some form of documented safety training. However, there is no requirement to document safety training for equipment used by maintenance employees. Only 2 out of 11 (18 percent) employees had some form of documented safety training for a piece of equipment. Metro Parks and Recreation should complete a job hazard analysis for each maintenance position to determine which equipment could pose a safety risk and what training may help minimize the risk of potential harm to employees. (See Observation C.)

d. *Is the Parks and Recreation maintenance function cost effective?*

**Generally yes.** The average hourly pay of a Metro Parks and Recreation grounds maintenance worker is \$15.23 which is 27 percent higher than the average Tennessee wage of \$12.02 for a grounds keeping or landscaping employee. However, the use of more sophisticated mechanical equipment has brought about the change of moving from primarily unskilled laborers to more skilled technicians for maintenance work<sup>1</sup>. Also, the grounds division of Consolidated Maintenance has had difficulty retaining a stable workforce; turnover during the two-year audit period was 38 percent.

Exhibits 1 and 2 shows, compared to other parks and recreation agencies, Metro Nashville Parks and Recreation is in the lower quartile of funding per acre and the upper quartile of acres maintained per full-time employee. By these standards, the maintenance function is understaffed or doing more with fewer resources than their peers.

**Exhibit 1 – Operating Expenditures per Acre of Land Managed or Maintained**

Number of Acres	Lower Quartile	Median	Upper Quartile
250 or fewer	\$6,054	\$12,403	\$27,242
251 to 1,000	\$4,163	\$8,884	\$17,597
1,001 to 3,500	\$2,827	\$5,928	\$11,234
More than 3,500	\$2,064	\$3,564	\$5,662

Source: National Recreation and Park Association 2015 Field Report and Office of Internal Audit Calculation

Metro Nashville Parks and Recreation has \$2,635 of operating expenditures per acre of land managed or maintained which falls between the lower quartile and median of comparable parks and recreation agencies.

<sup>1</sup> Warren R., Rea P., Payne S. (2007). *Park and Recreation: Maintenance Management*. Champaign, IL: Sigamore Publishing.

**Exhibit 2 –Acres Park Maintained per Full Time Equivalent Employee**

Number of Acres	Lower Quartile	Median	Upper Quartile
250 or fewer	3.7	5.7	16.6
251 to 1,000	5.4	12.8	24.1
1,001 to 3,500	12.2	18.3	39.4
More than 3,500	16.4	46.1	139.3

Source: National Recreation and Park Association  
2015 Field Report and Office of Internal Audit Calculation

Metro Nashville Parks and Recreation has 112.5 park acres per full time maintenance employee which falls between the median and upper quartile of comparable parks and recreation agencies.

2. *Are effective internal controls in place to safeguard assets?*

**Yes.** The Consolidated Maintenance Division is performing and documenting annual physical inventories at each of the regional maintenance shops. The regional maintenance shops are being secured outside of normal business hours. However, more care should be taken to safeguard maintenance equipment when on location around Metro Nashville parks and facilities. (See Observation D.)

## AUDIT OBSERVATIONS

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Internal control helps entities achieve important objectives and sustain and improve performance. The Committee of Sponsoring Organizations of the Treadway Commission, *Internal Control – Integrated Framework (COSO)*, enables organizations to effectively and efficiently develop systems of internal control that adapt to changing business and operating environment, mitigate risks to acceptable levels, and support sound decision making and governance of the organization. The audit observations listed are offered to assist management in fulfilling their internal control responsibilities.

### **Observation A – Maintenance Standards**

Metro Parks and Recreation does not have a set of formal standards to which parks, facilities, and greenways should be maintained. Parks, greenways, and facilities were compared to standards compiled from a literature search and standards used by the College Station, Texas, Parks and Recreation Department. While standards will be different between various parks and recreation maintenance departments, the general objectives of parks and recreation departments are standard<sup>2</sup>. The general objectives of a parks and recreation department can be described as:

- Parks and recreation areas and facilities should have a clean, orderly appearance at all times.
- Areas and facilities that are aesthetically pleasing should be developed and maintained or identified and protected.
- Areas and facilities should be maintained to create a healthful environment.
- Areas and facilities should be maintained to create a safe environment.
- Maintenance should promote good public relations by providing areas and facilities where people have an opportunity for an enjoyable leisure experience.

Maintenance standards are used as tools to achieve the objectives of the maintenance department. The standards describe the conditions that exist once maintenance tasks have been completed.

#### *Criteria:*

- COSO, Control Activities–Principle 12–The organization deploys control activities through policies that establish what is expected and procedures that put policies into action.
- Warren R., Rea P., & Payne S. (2007). *Park and Recreation: Maintenance Management*. Champaign, IL: Sigamore Publishing.

#### *Recommendations for management of Metro Parks and Recreation:*

Establish a set of formal standards to which areas and facilities within Metro Parks and Recreation are maintained.

### **Observation B – Work Order System**

The work order system utilized by the Consolidated Maintenance Division is outdated and does not provide management with important information needed for decision making. The system does not

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<sup>2</sup> Warren R., Rea P., Payne S. (2007). *Park and Recreation: Maintenance Management*. Champaign, IL: Sigamore Publishing.

capture information relating to labor cost, material cost, time spent on the job, and material used. The only reports generated by the system are variations of open work order reports. The work order system is a Microsoft Access database that was created over twenty years ago. The employee that created the database has since retired making program changes and upgrades to the work order system difficult.

*Criteria:*

*COSO, Information and Communication—Principle 13—The organization obtains or generates and uses relevant, quality information to support the functioning of internal control.*

*Recommendations for management of Metro Parks and Recreation:*

Implement a work order system that is capable of capturing necessary information and provides reports that are beneficial for decision making. Possibilities include purchasing an “out of the box” work order application or exploring a way to use the Asset Management module within CityWorks.

***Observation C – Documentation of Safety Training***

Metro Parks and Recreation has not completed a safety hazard assessment to determine training required for each maintenance position. While every employee in the audit sample had some form of safety training, it could not be determined if any training gaps existed.

Supervisors are tasked with teaching new employees how to operate equipment safely used in their positions. However, there is no requirement to document that training. Only 2 out of 11 (18 percent) of employees sampled had documented equipment training. One employee had received training on ladder and table saw safety and another employee received training on chainsaw safety.

*Criteria:*

*COSO, Control Activities—Principle 10—The organization selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to acceptable levels.*

*Recommendations for management of Metro Nashville Parks and Recreation:*

Perform a job hazard analysis for each maintenance position to determine what equipment could pose a safety risk and what training may help minimize the risk of potential harm to employees. Maintain a record of completed training for each employee to ensure all recommended training is completed timely.

***Observation D – Safeguarding Assets while on Location***

Exhibit 3 shows an unattended maintenance vehicle was on location at a park in downtown Nashville that contained unsecured equipment in the back of the truck. The vehicle was in a high traffic area and contained smaller equipment that could have easily been removed. The maintenance worker was mowing several yards away out of sight of the vehicle.

### Exhibit 3 – Unsecured Equipment



Source: Office of Internal Audit physical observation

#### *Criteria:*

*COSO*, Control Activities—Principle 10—The organization selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to acceptable levels.

#### *Recommendations for management of Metro Nashville Parks and Recreation:*

Secure maintenance equipment when maintenance vehicles are left unsupervised on location.



## **GOVERNMENT AUDITING STANDARDS COMPLIANCE**

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We conducted this performance audit in accordance with generally accepted government auditing standards. 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 observations and conclusions based on our audit objectives.

## **METHODOLOGY**

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To accomplish our audit objectives, we performed the following steps:

- Interviewed key personnel within various functions.
- Reviewed and analyzed documentation for compliance with the Tennessee Code Annotated, Metropolitan Nashville Code of Laws, and other applicable laws, regulations, and policies.
- Evaluated internal controls currently in place.
- Reviewed sample selections to determine the effectiveness of internal controls.
- Considered risk of fraud, waste, and abuse.
- Considered information technology risks.

## **AUDIT TEAM**

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Seth Hatfield, CPA, CIA, Auditor-in-Charge

Laura Henry, CFE, Staff Auditor

Mark Swann, CPA, CISA, CIA, ACDA, Quality Assurance

## APPENDIX A – MANAGEMENT RESPONSE AND CORRECTIVE ACTION PLAN

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MEGAN BARRY, MAYOR

### METROPOLITAN BOARD OF PARKS AND RECREATION

Centennial Park Office  
Park Plaza at Oman Street  
Nashville, TN 37201



(615) 862-8400  
Fax (615) 862-8414  
[www.nashville.gov/parks](http://www.nashville.gov/parks)

Thomas M. Lynch, Director

November 4, 2015

Mr. Mark Swann, Metropolitan Auditor  
Office of Internal Audit  
222 3<sup>RD</sup> Avenue North, Suite 401

RE: Audit of Metro Parks and Recreation Maintenance Division

Dear Mr. Swann,

This letter acknowledges that the Metro Parks and Recreation Department received the Maintenance Division's audit report and has reviewed the audit comments and recommendations. The department has implemented some of the recommendations since the completion of the fieldwork by your staff and will strive to continue to implement the recommended improvements as appropriate.

The Parks Department welcomes the recommendations. We will continue to provide residents and visitors safe and well-maintained Parks and Facilities.

It was a pleasure working with you and your staff on this project. We will continue the process of improving the Maintenance Division.

Sincerely,

Monique N. Odom  
Assistant Director Finance and Administration  
Acting Director

cc: Tommy Lynch, Parks Director

*"It is the mission of the Metropolitan Board of Parks and Recreation to provide every citizen of Nashville and Davidson County with an equal opportunity for safe recreational and cultural activities within a network of parks and greenways that preserves and protects the regional natural resources"*



FOR ADA ACCOMMODATIONS, PLEASE CONTACT 862-8400

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## APPENDIX A – MANAGEMENT RESPONSE AND CORRECTIVE ACTION PLAN

We believe that operational management is in a unique position to best understand their operations and may be able to identify more innovative and effective approaches and we encourage them to do so when providing their response to our recommendations.

Recommendations	Concurrence and Corrective Action Plan	Proposed Completion Date
<b>Management of Metro Nashville Parks and Recreation should:</b>		
<b>A.</b> Establish a set of formal standards to which areas and facilities within Metro Nashville Parks and Recreation are maintained.	<b>Partially Accept.</b> We currently follow task guidelines for every park. This will be reviewed by the division. Additional standards will be established and implemented based on audit recommendations and best practices	<b>June 2016</b>
<b>B.</b> Implement a work order system that is capable of capturing necessary information and provides reports that are beneficial for decision making. Possibilities include purchasing an “out of the box” work order application or exploring a way to use the Asset Management Module within CityWorks.	<b>Accept.</b> We are currently in the research phase of the property/ asset management system that includes an integrated work order system. This software will also feature deferred maintenance budget forecasting tools to assist in decision making. City Works and CarteGraph are two companies that we are evaluating.	<b>Jan 2017</b>
<b>C.</b> Perform a job hazard analysis for each maintenance position to determine what equipment could pose a safety risk and what training may help minimize risk of potential harm to employees. Maintain a record of completed training for each employee to ensure all recommended training is completed timely.	<b>Partially Accept.</b> We have done some safety training but agree additional training is needed. Training is scheduled for November 2016. It will be comprehensive on how to operate all heavy equipment, vehicles, and power tools. In addition video training classes will be added as part of a required in-service training. Job hazard analysis for each position will be performed	<b>Mar 2016</b>
<b>D.</b> Secure maintenance equipment when maintenance vehicles are left unsupervised on location.	<b>Partially Accept.</b> Maintenance equipment on vehicles/trailers is a current requirement to be secured on unattended vehicles.	<b>Immediate</b>