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January 9, 2006

The Honorable Antonio Villaraigosa, Mayor  
The Honorable Rockard J. Delgadillo, City Attorney  
The Honorable Members of the City Council  
200 North Spring Street  
Los Angeles, California 90012

Dear Mayor Villaraigosa, City Attorney Delgadillo and Members of the City Council::

The City of Los Angeles was the first municipality in the United States to create a totally separate Playground and Recreation Department in 1904. Now in 2006, the Department of Recreation and Parks is more than a department, it is a small empire responsible for 15,710 acres of parkland, 390 parks, 176 recreation centers, 59 swimming pools, two beaches, nine lakes, 13 golf courses, 287 tennis courts, 9 dog parks, 7 museums, 24 childcare facilities, 30 senior centers, 372 childrens' play areas, 7 skate parks and an urban forest of one million trees.

Today I release an audit of the Recreation and Parks' maintenance of its vast physical assets. This is the third and final in a series of audits of this important Department.

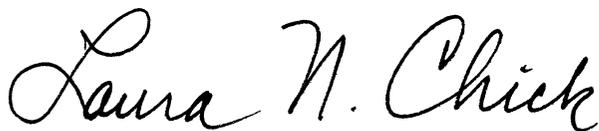
First and foremost, Recreation and Parks lacks a citywide master plan to guide the rehabilitation and renewal of the park system. In addition it does not even have a comprehensive inventory of the assets it owns. How can we provide the needed guidance for the future development and renovation of our many facilities without this information?.

Though the City is spending millions of dollars in bond monies to build new park facilities, the Department does little preventive maintenance of its current structures. There is no regular survey of the condition of our parks, golf courses and facilities. Our golf courses languish, and it is estimated that it would take \$78 million dollars to properly restore them. Of our 54 swimming pools, six are closed and another 24 are graded D or F. The Department lacks even a basic off-the-shelf computer system to schedule and track regular park maintenance across the entire City.

In addition to the regularly needed core maintenance services (air conditioning/heating, plumbing and electrical), Recreation and Parks also has full time staff performing specialized tasks such as parking lot sweeping, paving, floor refinishing, roofing, etc... The delivery of these services could be provided by either the General Services Department or outside contractors on an as needed basis. The questions are: What should be the maintenance responsibilities of Recreation and Parks? What is the most cost effective and efficient approach?

Though Los Angeles was a pioneer in creating the first Recreation and Parks Department, a century later we are no longer in the forefront. My audits have found an organization which is crying out for attention. The City elected leadership must begin a citywide conversation on the state of the Department of Recreation and Parks. We must ask the tough questions about what we want our park system to be and how are we going to get there.

Sincerely,

A handwritten signature in black ink that reads "Laura N. Chick". The signature is written in a cursive, flowing style.

LAURA N. CHICK  
City Controller



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January 9, 2006

Jon Kirk Mukri, General Manager  
Department of Recreation and Parks  
1200 West 7<sup>th</sup> Street, Suite 700  
Los Angeles, CA 90017

Dear Mr. Mukri:

Enclosed is a copy of our Performance Audit of the Maintenance Activities of the Department of Recreation and Parks conducted by Matrix Consulting Group. A draft of this report was provided to your office on December 15, 2005. Comments provided by you and your staff at the December 20, 2005, exit conference were evaluated and considered prior to finalizing this report.

Please review the final audit report and advise the Controller's Office by February 9, 2006 on planned actions you will take to implement these recommendations. If you have any questions or comments, please contact me at (213) 978-7392.

Sincerely,

FARID SAFFAR, CPA  
Director of Auditing

Enclosure

cc: Honorable Antonio R. Villaraigosa, Mayor  
Honorable Members of the City Council  
Honorable Rockard J. Delgadillo, City Attorney  
Robin Kramer, Chief of Staff, Office of the Mayor  
Jimmy Blackman, Deputy Chief of Staff, Office of the Mayor  
Christina Sanchez-Camino, President, Board of  
Recreation and Parks Commissioners  
William T Fujioka, City Administrative Officer  
Frank Martinez, City Clerk  
Gerry F. Miller, Chief Legislative Analyst  
Independent City Auditors





December 30, 2005

The Honorable Laura N. Chick, Controller  
Office of the Controller, City of Los Angeles  
200 N. Main Street, Room 300  
Los Angeles, CA 90012

Dear Ms. Chick:

We respectfully submit our report entitled, a "Performance Audit of the Maintenance Activities of the Department of Recreation and Parks". This report was prepared on behalf of the Los Angeles City Controller by the Matrix Consulting Group, in conjunction with Controller audit staff, and includes our findings and recommendations.

Our report addresses the efficiency and effectiveness of the Department's maintenance activities for parks, golf courses, facilities, and park forest, identifies opportunities for improvement, and makes recommendations accordingly.

The Matrix Consulting Group was pleased to work with the City Controller's Office on this important project, and appreciate the hard work and effort of members of your audit staff throughout the engagement.

Respectfully submitted,

  
Gary Goelitz  
Vice President

**CITY OF LOS ANGELES, CALIFORNIA  
OFFICE OF THE CITY CONTROLLER**

**Performance Audit of the Maintenance Activities  
of the Department of Recreation and Parks**

January 9, 2006

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# **1. EXECUTIVE SUMMARY**

## **1. EXECUTIVE SUMMARY**

The Matrix Consulting Group has completed an audit of the maintenance activities of the Department of Recreation and Parks (Department), under contract with the Office of the City Controller's Internal Audit Division. The audit's primary objectives included evaluating the efficiency and effectiveness of the Department's maintenance activities, to identify opportunities for improvement, and to make recommendations accordingly. The scope of the audit focused on the Department's activities beginning with fiscal year 2002 and ending at the close of audit fieldwork. Fieldwork was conducted between July and October 2005. This audit was conducted in accordance with generally accepted government auditing standards

The Department has a long history of providing recreation and park services to the residents of Los Angeles. A department of Parks was included in the City's first Freeholder Charter, adopted in 1889. Placed under its jurisdiction were parks and public land that had been set aside for the perpetual use of the community in the original Spanish land grants. Parks on this land are now called the Plaza, Pershing Square and Elysian Park. Los Angeles established the first municipal Playground and Recreation Department in the United States in 1904.

The Department is responsible for a wide variety of recreation and park assets including parks, beaches, mountain trails, campgrounds and historical sites. The Department maintains over 15,710 acres of parkland with 390 neighborhood and regional parks, nine lakes, 176 recreation centers and 372 children's play areas, 13 golf courses, 287 tennis courts, 9 dog parks, 59 swimming pools and 7 skate parks. The value of the assets operated by the Department amount to approximately \$479.3 million (as of June 30, 2004, according to the Schedule for Land and Buildings that excluded land, but included construction in progress).

### **SUMMARY OF AUDIT RESULTS**

Overall, the Department has sufficient authorized staff to effectively maintain the recreation and park assets. However, the City has not allocated sufficient ongoing funding to preserve, rehabilitate, and renew these assets. The Department has not developed and installed sufficient management controls to manage the maintenance, repair and rehabilitation of these assets. The summary of the audit results is presented in the paragraphs that follow.

#### **The Department lacks a citywide park master plan to guide the rehabilitation and renewal of the park system.**

The Department has developed and continues to develop master plans for individual parks, but has not developed a citywide park master plan to guide the rehabilitation and renewal of recreation and park assets. The National Recreation and Park Association, in their Guide to Standards for National Accreditation, states that "there shall be a

comprehensive park and recreation system plan, which is basically an inventory of existing conditions and recommendations for future programs and services, acquisition and development of areas and facilities, and administration. The plan shall be officially adopted by the appropriate governing body, updated regularly, and be linked with a capital improvement budget with a phased development.” In fact, the development of a citywide park master plan was recommended in the Mayor’s Blue Ribbon Task Force on Infrastructure in 2003. The lack of a citywide park master plan by the Department significantly impacts the ability of the Department to effectively redress the clear and significant asset investment requirements for renewal and rehabilitation of the park system and park facilities. There are a number of indicators that a master plan for the renewal and rehabilitation of recreation and park assets needs to be developed.

- According to a review conducted by the University of Southern California, there are significant areas of the City that are underserved by the Department. Analysis showed a significant difference in available park acres per 1,000 where the dominant race/ethnic group was Caucasian (31.8 acres/1,000) versus other groups, i.e., Latino (.6 acres/1,000); African-American (1.7 acres/1,000); and Asian-Pacific Islanders (.3 acres/1,000).
- The Mayor’s Blue Ribbon Task Force on Infrastructure identified that only 70% of existing parks and facilities received a rating of A, B or C (considered acceptable levels) and that the remaining 30% were graded at a D or F condition level.
- The 2003 Infrastructure Report cited fifteen pools that were graded F and need to be replaced. Over 60% of the pools in the City exceed 40 years of age.
- The City still has parks that require manual irrigation.
- The Department is on a 125-year schedule for renewal and rehabilitation of recreation and park assets at current levels of annual capital expenditures. This far exceeds the lifecycle of these assets.

**The Department is developing a strategic plan, but the strategic plan does not include a number of key elements.**

While the Department is developing a strategic plan, it does not include a number of key elements such as a community needs assessment, an analysis of strengths, weaknesses, opportunities, and threats (SWOT), and goals and objectives that are based upon the SWOT. The National Recreation and Park Association, in their Guide to Standards for National Accreditation, states that “an agency should have a strategic plan, approved by the board, stating how the agency will achieve its goals and objectives.” The lack of a comprehensive strategic plan limits the Department’s ability to effectively and efficiently achieve its mission. There are a number of other recreation

and park departments in other cities, such as Dallas and San Jose, which have developed comprehensive strategic plans.

**The Department has not developed goals, objectives, and performance measures for park maintenance, park forestry, facility maintenance and repair, and golf course maintenance.**

The Department has developed department-wide goals such as “Protect and preserve parks and recreation facilities for use by subsequent generations through systematic, comprehensive, and responsive facility repair programs.” It has not developed goals and objectives at the division-level such as park maintenance, park forestry, facility maintenance and repair, and golf course maintenance. Top and middle management of the Department do not receive meaningful, ongoing performance measurement data that indicates the accomplishment of these goals and objectives. The National Recreation and Park Association, in their Guide to Standards for National Accreditation, states “there shall be written goals and objectives for the agency and for each organizational component within the agency. Such goals and objectives shall be directed toward accomplishing the agency mission, be updated annually, and distributed to all appropriate personnel.” The lack of these goals and objectives for each organizational component impedes the ability of the management of the Department to hold managers and supervisors accountable for effectively and efficiently achieving its mission.

**The Department has not developed and updated long-term financial strategies to assure adequate funding for the maintenance, renewal and rehabilitation of recreation and park assets.**

The Department has not developed and updated long-term financial strategies that identify the gaps between operating and capital revenues and expenditures for maintenance, renewal and rehabilitation of recreation and park assets, or developed recommendations on how these gaps might be closed. The National Advisory Council on State and Local Government Budgeting recommends that a government have a financial planning process that assesses the long-term financial implications of current and proposed projects, policies, programs, and assumptions and that develops appropriate financial strategies to achieve those goals. In today’s environment of economic uncertainty, the lack of these financial strategies places the Department in a more vulnerable position in effectively addressing its significant asset renewal and rehabilitation investment requirements and avoiding fiscal emergencies.

**The Department does not have a comprehensive inventory of the assets that it maintains.**

The Department has developed limited inventories of its assets such as the gross acreage of parks, but has not developed a comprehensive inventory of the assets that it maintains. The lack of a comprehensive inventory of the Department’s assets limits the Department’s ability to effectively and efficiently manage the maintenance, renewal, and rehabilitation of park and facility assets. There are a number of reasons why this asset information is important in the cost effective management of these assets.

- The Department, over the past several years, has been asked to do more with fewer resources (in terms of filled positions).
- A comprehensive asset inventory will provide better information for the Mayor and City Council to make informed resource allocation decisions.
- A computerized maintenance management system relies on comprehensive asset inventory data.

**The Department lacks formal maintenance management systems for the maintenance of parks, facility maintenance and repair, golf courses, and facility maintenance and repair.**

The Department has not installed a commercial off-the-shelf (COTS) maintenance management system that systematically plans and schedules the maintenance and repair of its assets. The Department has developed park maintenance weekly assignment sheets for some, but not all of its park maintenance staff, but has not developed such weekly assignment sheets or other formal planning and scheduling systems for facility maintenance and repair, golf course maintenance, or park forestry maintenance. The National Recreation and Park Association, in their Guide to Standards for National Accreditation, states “there shall be a written maintenance and operations plan for management of the agency’s park and recreation areas, facilities, and equipment.” The lack of formal maintenance management system limits the ability of Departmental management to effectively manage assets.

**The Department is not preventively maintaining its buildings and building equipment or replacing major building components on an established schedule.**

The Department, with rare exception, is not preventively maintaining its buildings and building components such as such as heating-ventilation-air-conditioning (HVAC) systems, roofs, plumbing, and electrical systems. The Department is not replacing these components on an established replacement schedule; rather it is using a “run-to-failure” approach to these components. The American Public Works Association, in their Public Works Management Practices Manual, recommends the establishment of a preventive maintenance program for all building maintenance functions, and a component replacement schedule for all major components to enable the projection of budgets and reduce the need for deferred maintenance. Effective preventive maintenance and major component replacement is a planned approach designed to avoid equipment breakdowns and prevent minor problems from escalating into major ones. By contrast, emergency and corrective maintenance occur when equipment fails, typically requiring more time and resources to correct problems. From a cost of service perspective, corrective repairs, due to their inherent inefficiencies, typically cost 2 to 4 times more than planned or preventive maintenance.

**The Department's overall level of staffing for building maintenance and repair is sufficient, but not in the core trades - electrical, and heating-ventilation-air-conditioning (HVAC), and plumbing - hindering the Department's ability to preventively maintain its buildings.**

The Department has significant diversification of its building maintenance staff among a broad array of trades. This array includes roofing, upholstery, flooring, fence repair, masonry/cement, welding, and painting. Overall, the Department has sufficient facility maintenance and repair staff based upon benchmarks utilized by the Matrix Consulting Group. However, the Department allocates a lower proportion of the building trade positions to the core trades: electrical, HVAC, and plumbing. These three core trades comprise only 29% of the facility maintenance and repair authorized positions for the Department. In comparison, the General Services Department (GSD) Building Construction and Maintenance Division allocates 45% of its positions to these three core trades. Other local governments also concentrate their staff in these core trades so that their facilities can be preventively maintained, relying on contractors for specialized functions. The significant diversification of trades and limited staffing in the core trades hinders the Department's ability to preventively maintain its buildings.

**The productivity of the staff of the Park Forestry Division does not meet reasonable guidelines as a result of reliance on rope-and-saddle equipment to trim trees in parks.**

Crews that utilize aerial towers to trim trees can complete the trim of a broadleaf tree that is 41 to 60 feet tall in 42% of the crew hours than a crew using rope-and-saddle. The Department's reliance on rope-and-saddle for trimming of park trees hinders the ability of the Division to provide a reasonable level of service. The Division is currently trimming parks trees on a 195 to 220 year cycle. The City has and is incurring litigation risks and exposures as a result.

**The Department has underinvested in the renovation and rehabilitation of its golf courses.**

The Golf Division has estimated that it requires \$78.8 million for future repair and replacement of its existing golf course facilities. There are significant other rehabilitation and renewal needs such as replacing the Hansen Dam golf course irrigation system (\$7 million). In fact, the Golf Division faces a number of challenges including:

- Declining play levels and stagnating revenues;
- Aging infrastructure reflecting deferred maintenance;
- Capital needs in excess of available funding;
- The golf surcharge has been used for non-golf purposes; and

- 2004 customer satisfaction ratings were only fair to good. Factors rated as poor by the respondents included the condition of fairways, sand bunkers, driving range, target greens, and restrooms.

General fund monies could be utilized to renovate and rehabilitate these golf courses, but use of these general fund monies would limit the Department's ability to meet other essential needs such as enhanced preventive maintenance of facilities or scheduled facility component replacement.

**The Department does not conduct periodic, ongoing facility condition assessments of its parks, golf courses, and facilities.**

The Department has conducted a limited number of facility condition assessments of parks. The Department has established, through a Joint Labor Management Committee, a facility condition evaluation program that proposes to evaluate the quality of maintenance services and condition of recreation centers. The Department has not fully implemented this program, however. Prior to this effort by the Joint Labor Management Committee, the Department did not conduct condition assessments of any of its assets – parks, golf courses, or facilities. The American Public Works Association, in their Public Works Management Practices Manual, a guide to accreditation of public works departments, recommends the condition assessment of assets on an ongoing basis. The lack of ongoing condition assessments limits the Department's ability to identify major deficiencies early when timely repairs will be much less costly and risks to the public are less. The Matrix Consulting Group conducted condition assessments of ten parks, where fourteen criteria were evaluated and rated on a four point scale, with "1" being a fail and "4" being excellent. Overall, five parks received a "Good" rating, while five were rated "Fair". However, poor conditions were noted for the lawns and trees at Chase Park in West Hills, and for restrooms at Ramona Gardens Park in East Los Angeles.

**There are significant inequities in the allocation of park maintenance staff among the four regions.**

The Department is authorized a ratio of 9.63 acres per park maintenance worker. This falls in the range for staffing levels necessary to provide an above average level of maintenance service quality based upon benchmarks utilized by the Matrix Consulting Group. The selected park facility condition assessments conducted by the Matrix Consulting Group indicates that, considering the level of use of the City's parks, parks are being maintained at average to above average levels of service.

However, the inconsistent balance of workload and staffing among the regions limits the ability of the Department to provide consistent levels of service in each of its regions. Clearly the Pacific Region is able to provide a higher level of park maintenance service given its staffing and the number of developed park acres maintained in this region in comparison to the Valley Region.

**The amount of authorized staff for the maintenance of golf courses is higher than necessary for high-volume municipal courses, but insufficient to maintain Rancho Park as a championship-level golf course.**

While all of the Department's golf courses experienced declines in the number of rounds played, the number of rounds played at all of the Department's 18-hole golf courses is high compared to their peers based upon data reported by the National Golf Foundation (NGF) in the *Operating and Financial Performance Profiles of 18-hole Golf Facilities* in the U.S. Similarly, the number of staff authorized for its high-volume municipal golf courses such as Balboa or Encino exceeds that of its peers. On the other hand, Rancho Park, which has a history of being a championship-level golf course, the level of staffing is less than that of other championship level golf courses. This inconsistency in staffing levels results in higher costs than appropriate for high-volume municipal golf courses, and an inability to adequately maintain levels of service at a championship-level golf course such as Rancho Park.

**The current plan of organization for park maintenance results in too narrow a span of control for managers and too broad a span of control for first-line supervisors.**

The Department dedicates 60 managers and supervisors to park maintenance. There is an imbalance in the number of managers versus supervisors.

- The spans of control for the four Principal Grounds Maintenance Supervisors in the regions are narrower than appropriate, ranging from two to three.
- The spans of control of the ten Senior Park Maintenance Supervisors in the regions are narrower than appropriate, ranging from three to four.
- The spans of control of the twenty-eight Park Maintenance Supervisors in the regions are too broad, ranging from forty to fifty-eight.

The National Recreation and Park Association, in their Guide to Standards for National Accreditation, states "to achieve effective direction, coordination, and control, the number of employees under the immediate control of a supervisor should not be excessive." The number of employees under the immediate control of top and middle managers is less than warranted. The span of control for Park Maintenance Supervisors is excessive. The ability of Park Maintenance Supervisors to effectively manage park maintenance is limited given the span of control.

**The authority and responsibility of Park Maintenance Supervisors has not been clearly defined.**

These first line supervisors do not exercise the full-range of responsibilities necessary to hold them accountable for the delivery of quality services. For example, Principal Grounds Maintenance Supervisors must approve all expenditures out of account 316 – maintenance, materials, and supplies – that are budgeted at the region-level. This

impedes the ability of the Department to hold first line supervisors accountable. The National Recreation and Park Association, in their Guide to Standards for National Accreditation, states “at every level within the agency, personnel should be given the authority to make decisions necessary for the effective execution of their responsibilities. A priority should be assurance that each employee is made fully accountable for the use of delegated authority as well as for the failure to use it.” This limitation in the authority of Park Maintenance Supervisors limits the ability of the Department to hold these supervisors accountable for the effectiveness and efficiency of the maintenance of parks.

**The Department delivers a number of services unrelated to its core mission.**

The Department has recently transferred the responsibility for security and maintenance of small equipment, such as chainsaws and push mowers, to GSD. However, the Department continues to deliver non-core services, such as parking lot sweeping, parking lot paving, floor refinishing, and roofing. The delivery of these services by the Department duplicates the capacity in other departments and detracts from its ability to focus on achieving its core mission.

**SUMMARY OF RECOMMENDATIONS**

RECOMMENDATIONS	PAGE REFERENCE
<p><b>Chapter 3 – Management Controls</b></p>	
<p>We recommend that management of the Department:</p>	
<p>3.1 Develop a citywide park master plan, and present the plan to the Mayor and City Council for review and adoption. Steps to developing the master plan should include:</p> <ul style="list-style-type: none"> <li>• Conducting a facility condition assessment;</li> <li>• Conducting an assessment of the adequacy of existing parks and facilities to meet the needs of present and forecasted populations in comparison to standards, such as those published by the National Recreation and Park Association in the document <i>Recreation, Parks and Open Space Standards and Guidelines</i>;</li> <li>• Developing a comprehensive set of strategies to address an ongoing program of maintenance, renewal, and replacement requirements of parks and facilities; and</li> <li>• Preparing a five-year capital improvement program that integrates this set of strategies;</li> <li>• Developing financing strategies to fund the replacement, renewal and upgrading of parks and facilities</li> </ul>	18
<p>3.2 Expand the scope of the strategic plan that is currently being developed by:</p> <ul style="list-style-type: none"> <li>• Undertaking an assessment of the recreational and park needs of Los Angeles residents;</li> <li>• Documenting the internal and external trends related to the services provided by the Department and the long-term implications for the Department;</li> <li>• Conducting an analysis to document the strengths, weaknesses, opportunities, threats and constraints that the Department faces when delivering its programs and services; and</li> <li>• Upon completion of the SWOT analysis, community needs assessment, and trends analysis, modifying and expanding the goals and objectives.</li> </ul>	20
<p>3.3 Monitor the accomplishment of the strategic plan and report annually on the status of implementation.</p>	20
<p>3.4 Develop goals, objectives, and performance measures at the division and the program-level.</p>	22
<p>3.5 Develop reliable and accurate data to measure performance, and use performance measurement data for decision-making and accountability reporting.</p>	22
<p>3.6 Prepare long-term financial strategies for the ongoing renewal and rehabilitation of recreation and park assets and update these strategies on an annual basis.</p>	23

We recommend that management of the Department:	
4.1 Conduct a comprehensive asset inventory of parks, golf courses, facilities, and park forest.	26
4.2 Develop a formal maintenance management system for parks, park forestry, golf courses, and facility management.	28
4.3 Develop and implement a preventative maintenance program for its facilities and equipment including HVAC systems, roofs, plumbing and electrical systems.	29
4.4 Work with the Joint Labor Management Committee to reallocate staff from non-core building trades (roofing, upholstery, flooring, fence repair, masonry/cement, welding and painting) to the core building trades (electrical, HVAC, plumbing) to enable the development and installation of a preventative maintenance program.	30
4.5 Enhance the level of automation and equipment for park forestry to increase productivity of staff.	31
4.6 Develop a proposal for consideration by the Board of Recreation and Park Commissioners to transition the Golf Division to an enterprise fund as a means to assure funding for needed renovations of golf courses, while also paying overhead costs for Departmental and citywide support in accordance with the City's Cost Allocation Plan.	33
4.7 Complete condition assessments of all Departmental assets on a routine, ongoing basis.	35
<b>Chapter 5 –Organizational Structure and Staffing</b>	
We recommend that management of the Department:	
5.1 Reallocate staff to balance the park maintenance workload among the regions and districts to provide a more consistent level of service.	40
5.2 Adjust the allocation of maintenance staffing at golf courses based upon the rounds played and the type of golf course – high-volume municipal versus championship.	43
5.3 Modify the existing organizational structure for park maintenance by considering appropriate spans of control.	46
5.4 Clarify the roles and responsibilities of the Park Maintenance Supervisors and provide them with ongoing supervisory training	48
5.5 Consider the feasibility of transferring additional non-core maintenance services to other City departments.	50
5.6 Over the long-term, consider the feasibility of transferring all facility repair and maintenance functions to the General Services Department.	50

## **2. INTRODUCTION AND BACKGROUND**

## **2. INTRODUCTION AND BACKGROUND**

This chapter of the performance audit presents a background to the analysis of the maintenance activities of the Department. This includes a summary of the assets maintained by the Department, the staff resources allocated to the maintenance of these assets, the objectives of the analysis of maintenance activities of the Department and positive features identified in the analysis.

### **1. ASSETS MAINTAINED BY THE DEPARTMENT**

The Department is responsible for one of the largest park systems in the United States. Other cities such as New York, Chicago, Dallas, San Diego, and Houston have comparably sized or larger systems than that maintained by the Department, but the amount of developed and undeveloped acreage maintained by the Department is significant. A summary of the assets maintained by the Department is presented below.

- The Department is responsible for the maintenance of 15,710 acres of parks.
- The Park Forestry Division is responsible for the maintenance of an estimated 1,000,000 trees in the City's parks.
- The Golf Division maintains and operates thirteen golf courses. These include seven 18-hole golf courses, three 9-hole golf courses, and three special courses (pitch and putt and 3-hole).
- The Department is responsible for the maintenance and repair of 3.8 million square feet of buildings.
- The Department maintains 59 swimming pools. 15 operate year round. However, eight of the City pools are closed.

The Department operates a diverse park system. The value of the assets operated by the Department amount to approximately \$479.3 million (as of June 30, 2004, according to the Schedule for Land and Building that excluded land, but included construction in progress).

These assets, in many instances, are old and difficult to maintain and repair given their age. The Mayor's Blue Ribbon Task Force on Infrastructure in 2003 identified that only 70% of existing parks and facilities received a rating of A, B or C (considered acceptable levels) and that the remaining 30% were graded at a D or F condition level. It was also noted that many of the facilities given a C grade could be downgraded to a D or F within 2 to 5 years unless there was a significant implementation of improvements, maintenance, renovation and/or replacement. The estimated cost to maintain all park

facilities at a C grade or better was \$80 million annually in capital investments with an existing revenue stream of only \$25 million available annually for investment.

## **2. AUTHORIZED MAINTENANCE STAFF**

The Department has a large workforce to maintain its diverse park system. The number of authorized full-time staffing for the maintenance of this system includes the following:

- 59 staff are authorized for the maintenance of the park forest. This includes staff that provide Department-wide support for such services as pesticide application.
- 250 staff are authorized for the maintenance of the buildings within the City's park system.
- 739 staff are authorized for the maintenance of the City's parks.
- 131 staff are authorized for the maintenance of the City's golf courses.

Altogether, the Department is authorized 1,179 full-time staff for its maintenance activities, which represents 60% of total full-time departmental staffing.

## **3. OBJECTIVES OF THE PERFORMANCE AUDIT**

The primary objective of the audit was to evaluate the efficiency and effectiveness of the Department's maintenance activities in the context of the following:

- Determine if the maintenance activities are performed in accordance with established internal and external benchmark standards and that the same standards are consistently used for parks and facilities citywide;
- Determine whether maintenance activities are performed in an efficient manner, e.g., resource utilization, managing contracts, and cost per output/outcome;
- Determine whether goals and objectives are met to help the Department achieve its mission by reviewing and analyzing maintenance performance measures; and
- Determine whether maintenance policies and procedures are in place, consistently followed, and achieving the desired goals.

The scope of the audit included park maintenance, facility maintenance and repair, park forestry, and golf course maintenance.

#### **4. METHODOLOGY EMPLOYED IN CONDUCTING THE PERFORMANCE AUDIT**

The audit was performed in accordance with Generally Accepted Government Auditing Standards. Fieldwork was conducted between July and October 2005.

The methodology used in reviewing the maintenance activity practices and performance of the Department included the following:

- A review of documentary material on maintenance activities policy and processes (i.e., goals and objectives, organization chart, classification descriptions, policy and procedures, etc).
- Interviews with the top and middle managers of the Department including the General Manager, Assistant General Managers, Executive Officer, Superintendents of Recreation and Park Operations, Principal Grounds Maintenance Supervisors, Senior Park Maintenance Supervisors, Park Maintenance Supervisors, Construction and Maintenance Supervisors, etc.
- Collection and analysis of descriptive and quantitative information regarding the maintenance activities provided by the Department and the assets it maintains (i.e., park inventory, performance measurement data, operating and maintenance cost data, etc).
- Site visits to selected parks to evaluate the condition of these parks against standards developed by the Matrix Consulting Group.

This information was used to evaluate the performance of maintenance activities and operations by:

- Developing quantitative measures of maintenance activities (e.g., developed acres per full and permanent part-time staff) and performance (e.g., the condition assessment of parks) and comparing the resulting performance against benchmarks.
- Assessing the effectiveness of maintenance management through analyses of current asset conditions and costs.

#### **5. POSITIVE FEATURES**

By its nature, a study like this focuses on identifying and evaluating improvement opportunities. Before addressing those opportunities, it is important to note that the study identified a number of significant positive features about maintenance activities of the Department such as:

- The Department has developed goals for its budget and has recently begun to expand those goals.
- The Department has begun to develop a strategic plan.
- The Department uses an automated work order system for facility maintenance and repair and for park forest maintenance.
- The Park Forestry Division has initiated an inventory of trees within parks.
- The Department has developed and installed a Park Restroom Enhancement Program (PREP) to maintain the cleanliness of restrooms in parks.
- An evaluation of the condition of many parks indicated that they were maintained in a fair to good condition.
- The Department has worked with a Joint Labor Management Committee to establish park and facility condition standards and a process to evaluate the condition of these parks and facilities.
- Route sheets have been established for CLASS parks. (A CLASS park is a park selected to provide youth development for teens including facility refurbishment and enhanced park safety.)
- The Department has recently outsourced some non-core services, including park security services and small equipment maintenance to the City's General Services Department.
- The Park Forestry Division has developed a tree preservation policy, and a Tree Care manual that established specific technical regulations, standards and specifications necessary to implement the Tree Preservation Policy and defines the City's tree preservation goals.
- The Forestry Division has an effective and extensive recycling program for green waste.
- The evaluation of ten parks by the Matrix Consulting Group indicates that all of these parks were maintained in at least a fair condition, and many were maintained in a good condition.

### **3. MANAGEMENT CONTROLS**

### **3. MANAGEMENT CONTROLS**

This chapter presents an analysis of the management control systems within the Department of Recreation and Parks (hereinafter referred to as the “Department”). In completing this task, the project team evaluated the positive and negative features of management controls that the Department utilized to manage its resources.

The maintenance-related management controls that were analyzed included the following:

- Goals, objectives, and measurement of efficiency and effectiveness;
- Long-term strategic and system planning;
- Long-term financial and capital planning; and
- Financial accounting and reporting.

In performing this study, the project team compared current conditions in the Department to best practices for a modern and progressive municipal Recreation and Parks Department providing similar services as defined by professional associations such as the National Recreation and Parks Association, the Government Finance Officer’s Association, etc.

#### **ISSUE #1 – THE DEPARTMENT LACKS A CITYWIDE PARK MASTER PLAN TO GUIDE THE REHABILITATION AND RENEWAL OF THE PARK SYSTEM.**

The Department does not have a citywide park master plan to guide its efforts. The Department has developed master plans for individual parks, but not a citywide plan that addresses the needs of the park system on a comprehensive basis.

A park master plan provides guidance for the future development and renovation for the assets of a park system. The plan clearly articulates future capital needs based upon a comprehensive evaluation of the existing conditions of these assets, documents the historical context of these assets, evaluates the ability of the Department to deliver services to support the ongoing maintenance and rehabilitation of these assets and the needs of the City for additional assets, and defines strategies for meeting the needs of the City. The result of the citywide park master plan is a set of strategies that address park planning, recreation program development, along with operations and maintenance strategies and funding and revenue requirements.

There are a number of reasons to suggest the development of a citywide park master plan is important to the sustainability of the park system within the City.

First, the report *The Excellent City Park System* developed by The Trust for Public Land noted that one of the seven measures of an excellent city park system was a master plan. The ideal master plan should have, at the least, the following elements:

- An inventory of natural, recreational, historical and cultural resources;
- A needs analysis;
- An analysis of the agency's ability to carry out its mandate as identified within the charter;
- An implementation strategy (with dates), including a description of other park and recreation providers' roles;
- A budget for both capital and operating expenses; and
- A mechanism for annual evaluation of the plan.

Second, the development of a citywide park master plan was recommended in the Mayor's Blue Ribbon Task Force on Infrastructure in 2003. The recommendations are presented below.

- *"The Department immediately needs funding allocated to develop the Citywide Strategic Parks Master Plan. These Plans will help to provide guidance for development, maintenance, upgrades, etc., of parks and recreation facilities and to determine highest priority funding needs to make best use of scarce resources. Park and recreation areas provide opportunities for increasing physical and social health, as well as bringing communities together."*
- *"Prepare a 10-year strategic plan by 6/05, which is more detailed in the early years. Update it every five years."*
- *"Prepare detailed annual operating plans tied to the Citywide Strategic Parks Master Plan."*

Third, data suggests that the City has under invested in the park system for a lengthy period of time.

- **There are significant areas of the City that are underserved by the Department.** A review conducted by the University of Southern California identified that this inequity occurs in areas where residents are primarily of minority backgrounds. The data analysis showed a significant difference in available park acres per 1,000 population for neighborhoods where the dominant race/ethnic group (greater than 75% of the residents) was

Caucasian – 31.8 acres/1,000 - versus neighborhoods where the dominant race was other than Caucasian - .6 acres/1,000 for Latino, 1.7 acres/1,000 for African-American, and .3 acres/1,000 for Asian-Pacific Islanders. While the differences may have developed over time due to shifts in populations, this information accentuates the need to clearly develop a park master plan that will outline how the Department plans to address these issues in the future by adding park and facility resources in certain neighborhoods.

- The Mayor's Blue Ribbon Task Force on Infrastructure (2003 Infrastructure Report) identified that only 70% of existing parks and facilities received a rating of A, B or C (considered acceptable levels) and that the remaining 30% were graded at a D or F condition level. It was also noted that many of the facilities given a C grade could be downgraded to a D or F within 2 to 5 years unless there was a significant implementation of improvements, maintenance, renovation and/or replacement. The estimated cost to maintain all park facilities at a C grade or better was \$80 million annually in capital investments with an existing revenue stream of only \$25 million available annually for investment. While recommendations were included for revenue enhancement opportunities, a park master plan would guide the Department in prioritizing the capital investments and structuring them to be in concert with the adopted goals and objectives for the Department.
- The pools operated by the Department are failing. Over 63% of the pools are over 40 years old, and in many cases the only option is replacement. At many of these pools, maintenance or refurbishment efforts might only hold off deterioration for a few years, before the need to replace them is inevitable. Today, the Department maintains 59 swimming pools: 15 of which operate year round. Eight of the Department's pools are closed due to failure. The 2003 Infrastructure Report cited fifteen pools that were graded F that have failed and need to be replaced.
- The City still has parks that require manual irrigation.
- The Department is on a 125-year schedule for renewal and rehabilitation of recreation and park assets at current levels of annual capital expenditures. This far exceeds the lifecycle of these assets.

These are some of the factors that suggest that the Department should develop a citywide park master plan. A possible approach that could be utilized in the development of this citywide park master plan is presented in Appendix 1.

**Recommendation:**

- 3.1 Department management should develop a citywide park master plan, and present the plan to the Mayor and City Council for review and adoption. Steps to developing the master plan should include:
- Conducting a facility condition assessment;
  - Conducting an assessment of the adequacy of existing parks and facilities to meet the needs of present and forecasted populations in comparison to standards, such as those published by the National Recreation and Park Association in the document *Recreation, Parks and Open Space Standards and Guidelines*;
  - Developing a comprehensive set of strategies to address an ongoing program of maintenance, renewal, and replacement requirements of parks and facilities; and
  - Preparing a five-year capital improvement program that integrates this set of strategies;
  - Developing financing strategies to fund the replacement, renewal and upgrading of parks and facilities

**ISSUE #2 – THE DEPARTMENT IS DEVELOPING A STRATEGIC PLAN, BUT THE STRATEGIC PLAN DOES NOT INCLUDE A NUMBER OF KEY ELEMENTS.**

The Department is currently developing a strategic plan; however, the current plan does not include a number of key elements such as a community needs assessment, an analysis of strengths, weaknesses, opportunities, and threats (SWOT), goals and objectives that are based upon the SWOT, and trends in the community that will impact how the Department maintains and develops its assets in the future.

The development of a strategic plan is important to the Department given the number of challenges that it faces such as failing infrastructure, insufficient park acreage in comparison to the standards in the City's general plan and in comparison to its peers, and insufficient levels of funding to adequately address these needs. The development of this strategic plan is essential to enable the Department to concentrate its scarce resources on the renovation and reconstruction and obtain the best return on its investments.

The National Advisory Council on State and Local Budgeting, sponsored by the *Governmental Finance Officers Association*, identified a number of principles and best practices that are designed to enhance the ability of a local government to address

these types of challenges by developing long-term strategies. These principles include the following:

- Establishing broad goals to guide government decision making and the general direction of the Department by long-term goals that are based upon an assessment of community needs, priorities, challenges and opportunities for government services, capital assets, and management;
- Establishing specific policies, plans, programs, and management strategies necessary to achieve these long-term goals including:
  - Adopting financial policies;
  - Developing programmatic, operating, and capital policies and plans regarding levels of service and the types of capital assets to be provided;
  - Developing programs and services that are consistent with these policies and plans including evaluating current delivery mechanisms to determine whether cost-effective alternatives exist; and
  - Developing management strategies to enhance the ability of the Department to successfully execute the budget and achieve its long-term goals.

A number of other cities faced the same set of challenges and developed strategic plans to identify the steps necessary to address these challenges. In fact, the Mayor's Blue Ribbon Task Force on Infrastructure in 2003 recommended that the Department make long-range strategic planning an integral part of Department operations.

The strategic plan should:

- Guide the decision-making and priority setting process in allocating financial resources among competing demands such as replacing roofs pools, manual irrigation systems;
- Coordinate key initiatives to assure consistency among the Regions in such areas as facility condition inspections;
- Address core issues such as the lack of preventive maintenance for buildings and the lack of ongoing rehabilitation funding for these buildings;
- Define key issues that the Department should deal with in the future such as those issues raised in the study completed in 2002 – *Parks and Park*

*Funding in Los Angeles: An Equity Mapping Study* - that indicated that there was significant inequity in the distribution of park resources based upon race and ethnic group; and

- Provide a comprehensive definition of the challenges that the Department faces based upon the community needs assessment.

A possible approach that could be utilized in the development of this strategic plan is presented in Appendix 2.

### **Recommendations:**

Department management should:

- 3.2 Expand the scope of the strategic plan that is currently being developed by:
  - Undertaking an assessment of the recreational and park needs of Los Angeles residents;
  - Documenting the internal and external trends related to the services provided by the Department and the long-term implications for the Department;
  - Conducting an analysis to document the strengths, weaknesses, opportunities, threats and constraints that the Department faces when delivering its programs and services; and
  - Upon completion of the SWOT analysis, community needs assessment, and trends analysis, modifying and expanding the goals and objectives.
- 3.3 Monitor the accomplishment of the strategic plan and report annually on the status of implementation.

### **ISSUE #3 – THE DEPARTMENT LACKS COMPREHENSIVE GOALS, OBJECTIVES, PERFORMANCE MEASURES, AND REPORTING SYSTEMS.**

The Department has developed department-wide goals such as “Protect and preserve parks and recreation facilities for use by subsequent generations through systematic, comprehensive, and responsive facility repair programs.” It has not developed goals and objectives at the division and program level such as park maintenance, park forestry, facility maintenance and repair, and golf course maintenance. Top and middle management of the Department do not receive meaningful, ongoing performance measurement data that indicates the accomplishment of these goals and objectives.

The lack of these goals and objectives for each division and program impedes the ability of the management of the Department to hold managers and supervisors accountable for effectively and efficiently achieving its mission.

The National Advisory Council on State and Local Budgeting (NACSLB) was formed on behalf of the Governmental Finance Officer's Association with a mission to improve state and local government budgeting through identification and dissemination of good budget principles and practices. This Council developed a framework describing critical issues that must be addressed to improve the budgeting practices of state and local governments. It provides a definition and a mission of a good budget process. It also defines principles and elements of the budget process that serve as a means to categorize budget practices.

One of the best practices identified by the Council was that a local government should include a description of key programmatic goals in its budget documents. Goals and objectives for individual programs and/or organizational units included in the budget documents should also be provided. They usually appear as a part of the narrative for each individual unit or program. Key interrelationships of programs and units in terms of goals to be achieved should be identified.

Another of the best practices identified by the Council was that a local government should monitor and analyze the performance of its service programs, its capital programs, and its financial performance. Performance should be based on stated goals and objectives.

In order to improve goals, objectives, and performance measurement practices within the Department, the Department needs:

- Clear goals and objectives for divisions and programs within divisions that flow directly from the Department's mission and goals and that provide a sound basis for performance measures;
- A complete but simplified set of performance measures that are clearly linked to the major objectives and goals of the Department and measure the efficiency and effectiveness of services;
- Performance measures that are developed by managers, supervisors, and line employees to promote the buy-in and use of the resulting data; and
- Timely and reliable reporting of data on the activities and results of major programs, and use of performance information by management and staff for decision-making.

A possible approach that could be utilized in the development of these goals and objectives is presented in Appendix 3.

## **Recommendations:**

Department management should:

- 3.4 Develop goals, objectives, and performance measures at the division and the program-level.
- 3.5 Develop reliable and accurate data to measure performance, and use performance measurement data for decision-making and accountability reporting.

### **ISSUE #4 – THE DEPARTMENT HAS NOT DEVELOPED AND UPDATED LONG-TERM FINANCIAL STRATEGIES TO ASSURE ADEQUATE FUNDING FOR THE MAINTENANCE, RENEWAL AND REHABILITATION OF RECREATION AND PARK ASSETS.**

The Department has not developed long-term financial strategies that identify the gaps between operating revenues and asset-related expenditures for the next five-year period, or developed recommendations on how these gaps might be closed. In today's environment of economic uncertainty, the lack of these long-term financial strategies places the Department in a more vulnerable position to effectively address its significant asset investment requirements and avoid fiscal emergencies.

One of the best practices identified by the National Advisory Council on State and Local Government Budgeting was that a local government should develop long-range financial strategies. The purpose of the long-term financial strategies is to identify gaps between Departmental operating and capital revenues and expenditures over a five-year period, and to develop recommendations on how these gaps might be closed. An effective plan contains four major elements:

- A multi-year presentation of historic financial trends, including trends in economic condition, expenditures, revenues, fund balances, and debt levels;
- A long-term financial forecast of expenditures and revenues including:
  - Five-year projection of revenues and other resources to understand the level of funding available for services and capital acquisition to help determine the likelihood that services can be sustained, and highlight future financial issues to be addressed;
  - Five-year projections of salary, service and supply and capital outlay expenditures for existing and new programs, the

identification of service level assumptions and key issues that may affect actual expenditures, and clarification of key issues related to expenditures.

- A set of financial policies based on recommended practices to facilitate prudent management (such as child care fees and child care scholarships shall cover the direct and indirect costs of operating child care programs); and
- A presentation of gap-closing strategies (recommendations).

The Department's long-range financial strategies will serve as a support mechanism for the annual budget and other planning processes. The lack of these strategies places the Department in a more vulnerable position to effectively address its significant asset investment requirements and avoid fiscal emergencies.

**Recommendation:**

- 3.6 Department management should prepare long-term financial strategies to assure adequate funding for the maintenance, renewal and rehabilitation of recreation and park assets and update these strategies on an annual basis.

## **4. MAINTENANCE MANAGEMENT**

## **4. MAINTENANCE MANAGEMENT**

This chapter presents an analysis of maintenance management practices for the Department. This analysis includes the following:

- The availability of asset inventory data for those assets maintained by the Department;
- The adequacy of maintenance management systems employed for park maintenance, facility maintenance and repair, and golf course maintenance;
- The availability and application of a commercial off-the-shelf (COTS) computerized maintenance management system to manage the maintenance of the Department's assets;
- Opportunities to improve the productivity of the staff assigned to the maintenance of these assets;
- The extent to which periodic assessments are conducted of the adequacy of the maintenance; and
- The adequacy of preventive maintenance of assets.

In performing this study, the project team compared current conditions in the Department to best practices for a modern and progressive municipal Recreation and Parks Department providing similar services as defined by professional associations such as the National Recreation and Parks Association, the Government Finance Officer's Association, etc.

### **ISSUE #1 – THE DEPARTMENT LACKS A COMPREHENSIVE INVENTORY OF ITS ASSETS.**

The Department has developed limited inventories of its assets such as the gross acreage of parks, but has not developed a comprehensive inventory of the assets that it maintains. Governmental Accounting Standards Board Statement 34 requires state and local governments to begin reporting the value of their infrastructure assets including parks and park facilities. The accurate reporting of the value of these assets necessitates a comprehensive inventory of the Department's assets. In addition, the American Public Works Association, in their Public Works Management Practices Manual, a guide to accreditation of public works departments, recommends the development of a comprehensive inventory for parks, grounds, and forestry. For example, the Public Works Management Practices Manual recommends the development of a tree inventory including all trees within the right-of-way and on public

grounds that is updated periodically. The lack of a comprehensive inventory of the Department's assets limits the Department's ability to effectively and efficiently manage the maintenance, renewal, and rehabilitation of park and facility assets.

There are a number of reasons why this asset information is important in the cost-effective life cycle management of these assets.

- **The Department, over the past several years, has been asked to do more with fewer staff (in terms of filled positions).** The hiring freeze significantly impacted the Department's ability to maintain and repair the assets assigned to its care. In addition, new assets are being constructed without additional or with insufficient staff or maintenance budget. This places more importance on the need to have comprehensive asset data to prioritize and manage maintenance and repair activities and resources.
- **A comprehensive asset inventory will provide better information for the Mayor and City Council to make informed resource allocation decisions.** The Mayor and City Council, with a comprehensive asset inventory can make sounder decisions regarding how tax dollars should be used, particularly as it concerns funding for renewal and rehabilitation of existing park and facility assets versus the construction of new assets.
- **The assets of the Department have significantly deteriorated.** The report issued by the Mayor's Blue Ribbon Task Force on Infrastructure (2003 Infrastructure Report) amply demonstrates that the Department faces challenges in the renewal and rehabilitation of its assets. It is not possible for the Department to plan for the cost effective lifecycle of these assets without a comprehensive inventory. Proactive preventative maintenance helps extend the life of an asset in a cost-effective manner, reducing the need for large expenditures typical of a reactive maintenance approach. Proactive maintenance is not possible without this inventory.
- **Governmental accounting standards are requiring enhanced and more consistent inventory information.** GASB 34 is a relatively new action that requires enhanced and more consistent information on infrastructure assets than has been required in the past. Local governments require better asset inventory data to meet these standards. The Department is in compliance with GASB 34, but more comprehensive asset information would enable the Department to more accurately depict the value of these assets.
- **Computerized maintenance management systems rely on comprehensive asset inventory data.** With the technological advances in recent years, tools are now available to create an effective asset management system. These systems no longer require large investments

of resources or a lengthy education process. These tools can be made accessible to nearly all employees and the public. Automating the once manual system of managing assets does more than increase speed and efficiency of the process; it also ensures that the maintenance and repair of these assets are more effectively managed.

A possible approach that could be utilized in the development of this comprehensive inventory of its assets is presented in Appendix 4.

**Recommendation:**

- 4.1 Department management should conduct a comprehensive asset inventory of parks, golf courses, facilities, and park forest.

**ISSUE #2 – THE DEPARTMENT LACKS FORMAL MAINTENANCE MANAGEMENT SYSTEMS FOR THE MAINTENANCE OF PARKS, FACILITY MAINTENANCE AND REPAIR, GOLF COURSES, PARK FOREST, AND FACILITY MAINTENANCE AND REPAIR.**

The Department has not installed a formal maintenance management system that systematically plans and schedules the maintenance and repair of its assets. The Department has developed weekly work plans and schedules (park maintenance weekly assignment sheets) for some, but not all of its park maintenance staff, but has not developed such weekly work plans and schedules or other formal planning and scheduling systems for facility maintenance and repair, golf course maintenance, or park forestry maintenance.

The National Recreation and Park Association, in their Guide to Standards for National Accreditation, states “there shall be a written maintenance and operations plan for management of the agency’s park and recreation areas, facilities, and equipment.” The absence of a formal maintenance management system limits Departmental management in their ability to effectively and efficiently manage the maintenance and repair of parks, golf courses, park forest, and facilities.

The need for a formal maintenance management system was aptly stated by the Department itself in the master plan for Griffith Park that noted that “the maintenance operations should move out of a crisis management or emergency response system, and focus on the needs of each zone, including facility demand, programming and special events scheduling.” The lack of formal maintenance management system limits the ability of Departmental management to effectively manage assets. Managers lack the ability to answer such questions as:

- Are assets being preventively maintained according to established service levels?

- Are facility condition inspection frequencies adequate?
- Where are the problems in equipment reliability and where should staff focus their limited resources?
- What is the backlog of work?
- How efficient is the maintenance workforce?
- How much money is the Department spending on maintenance and repair for the various types of work activities?

In the 1960's and 1970's, the Department was a leader in managing the maintenance of parks. The Department had dedicated methods and standards technicians that developed and managed the Department's maintenance management program. This program was unique among other large cities. The Department contracted with H.B. Maynard and Company in 1962 to install this maintenance management system.

All maintenance work within the Department was classified as either "routine." or "demand". Routine work was classified as work that can be predicted and reoccurs on a regular basis. Demand work is classified as predictable only and generally must be performed as work orders occur. The Department developed a system to manage routine work (the routine maintenance system), and another system to manage demand work (the work order system).

The work order system was utilized for facility maintenance and repair staff, forestry staff, and those golf and park maintenance staff allocated to demand work such as planting crews, and ball diamond maintenance crews. These crews were issued work orders that were utilized to capture labor hours and materials. Included within these work orders were estimates regarding how long it should take the crew to complete the work. Upon completion, work was reported in a monthly report to management.

Routine maintenance in parks and golf courses was managed using the routine maintenance system. The methods and standards technicians completed a physical inventory of each park, including plot plans. The methods and standards technicians developed a physical listing of the components of each park with their physical dimensions, and developed a task list of the work to be performed at each park. The methods and standards technicians then documented the amount of time required to perform each of these tasks for each of these parks.

This maintenance management system needs to be revived by the Department, using technology to streamline the administration of the system, and not the manual system that was in place in the 1960's and 1970's. The maintenance management system is critical to the effective management of the resources authorized for the Department to manage the parks, facilities, golf courses, and the park forest. A possible approach that

could be utilized in the development of this maintenance management system is presented in Appendix 5.

**Recommendation:**

- 4.2 Department management should develop a formal maintenance management system for parks, park forestry, golf courses, and facility management.

**ISSUE #3 – THE DEPARTMENT IS NOT PREVENTIVELY MAINTAINING ITS BUILDINGS AND BUILDING EQUIPMENT OR REPLACING MAJOR BUILDING COMPONENTS ON AN ESTABLISHED SCHEDULE.**

The Department, with rare exception, is not preventively maintaining its buildings and building components such as heating-ventilation-air-conditioning (HVAC) systems, roofs, plumbing, and electrical systems. The Department is not replacing these components on an established replacement schedule; rather it is using a “run-to-failure” approach to these components. The American Public Works Association, in their Public Works Management Practices Manual, recommends the establishment of a preventive maintenance program for all building maintenance functions, and a component replacement schedule for all major components to enable the projection of budgets and reduce the need for deferred maintenance. Effective preventive maintenance and major component replacement is a planned approach designed to avoid equipment breakdowns and prevent minor problems from escalating into major ones. By contrast, emergency and corrective maintenance occur when equipment fails, typically requiring more time and resources to correct problems. From a cost of service perspective, corrective repairs, due to their inherent inefficiencies, typically cost 2 to 4 times more than planned or preventive maintenance.

This condition has been identified previously by the City Controller’s Office. In a report issued in December 2002, the City Controller’s Office found that the Department’s preventive maintenance policies varied between divisions, but that the Department did not have a consistent and formal preventive maintenance approach. According to the Department at that time, preventive maintenance was a priority but they did not have the resources necessary to perform the level of preventive maintenance required. Consequently, the Department was forced to focus on breakdown maintenance, and defer preventive maintenance. The report recommended that Department management develop and implement a preventive maintenance program that is based on an acceptable industry standard and include scheduled routine maintenance, inspections, corrective measures, and record keeping. The Department has not made any progress in implementing this recommendation.

The Department should establish and implement a preventive maintenance program. A possible approach that could be utilized in the development of this preventive maintenance program is presented in Appendix 6.

**Recommendation:**

- 4.3 Department management should develop and implement a preventative maintenance program for its facilities and equipment including HVAC systems, roofs, plumbing and electrical systems.

**ISSUE #4 – THE DEPARTMENT’S OVERALL LEVEL OF STAFFING FOR BUILDING MAINTENANCE AND REPAIR IS SUFFICIENT, BUT THE DEPARTMENT LACKS SUFFICIENT STAFFING IN THE CORE TRADES, HINDERING THE ABILITY OF THE DEPARTMENT TO PREVENTIVELY MAINTENAIN ITS BUILDINGS.**

As an essential part of the analysis of the Department, the Matrix Consulting Group benchmarked the facilities maintenance and repair staff against other public and private agencies that maintain approximately 590 million square feet of building space. The level of staffing for facility maintenance and repair for those buildings maintained and repaired by the Department is sufficient based upon a comparison to these benchmarks.

Yet, while the Department’s level of staffing is sufficient, the Department does not preventively maintain its buildings. This results from the diversification of facility maintenance staff among a broader array of trades than other local governments. The broader array of trades includes roofing, upholstery, flooring, fence repair, masonry/cement, welding, and painting.

Specifically, the Department allocates a lower proportion of these positions to the core trades. The Department has 11 staff allocated to heating, ventilating, and air conditioning (HVAC) maintenance and repair, 25 staff allocated to electrical maintenance and repair, and 21 staff allocated to plumbing maintenance and repair. These three core trades comprise only 29% of the facility maintenance and repair authorized positions for the Department. In comparison, the General Services Department Building Construction and Maintenance Division allocates 45% of its positions to these three core trades. Other local governments rely to a greater extent on contractors for construction and repair services, and focused their staff on the core trades including plumbing, electrical, heating, ventilation, and air conditioning so that their facilities can be preventively maintained by these core trades.

The Department should work with the Joint Labor Management Committee to shift staff resources to these core trades. Over time, the Department should reduce its level of staffing in the non-core trades. Overall, the Department requires approximately 75 to 80 core trades staff compared to the current 57 authorized positions. The Department requires approximately 18 to 23 additional staff in these core trades to initiate an effective preventive maintenance program for its buildings. These additional staff should not be an increase in the total authorized positions for facility maintenance for the Department. These additional positions should be based upon the reallocation of staff

internally from other trades (roofing, upholstery, flooring, fence repair, masonry/cement, welding, and painting) when these positions become vacant. Most of these staff will be required in two trades: HVAC and in electrical.

**Recommendation:**

- 4.4 Department management should work with the Joint Labor Management Committee to reallocate staff from non-core building trades (roofing, upholstery, flooring, fence repair, masonry/cement, welding and painting) to the core building trades (electrical, HVAC, plumbing) to enable the development and installation of a preventative maintenance program.

**ISSUE #5 – THE PRODUCTIVITY OF THE STAFF OF THE PARK FORESTRY DIVISION DOES NOT MEET REASONABLE GUIDELINES AS A RESULT OF RELIANCE ON ROPE-AND-SADDLE EQUIPMENT TO TRIM TREES IN PARKS.**

The productivity of the staff allocated to tree trimming can be increased. The analytical steps that the Matrix Consulting Group utilized to develop this conclusion are presented below.

- **The crews are only allocated four 75 foot aerial towers and four 56 foot aerial towers.** These towers are not always available for tree trimming. The Park Forestry Division indicated that typically only five of the eight aerial towers are available for use on a daily basis; the other three towers are either in the shop for repairs or assigned to other uses (such as replacement of sports field lighting). This means that only five of the seventeen (or 30%) Tree Surgeons and Tree Surgeon Supervisors (those positions that were filled in August 2005) are able to use aerial towers; the remainder of this staff uses rope and saddle.
- **Crews that use aerial ladders to trim trees versus rope and saddle are capable of much higher levels of productivity.** This is based upon tree trimming benchmarks employed by the Matrix Consulting Group. For example, a crew equipped with an aerial tower can complete the trim of a broadleaf tree, forty-one feet to sixty feet tall requiring heavy trimming in 42% of the crew hours as a crew that uses a rope and saddle.

The productivity of the staff assigned to maintenance of the park forest needs to be enhanced. This will require increased levels of automation for these crews. The recommended additional equipment is presented below.

- **Two additional 75 foot aerial towers and eight additional 56 foot aerial towers.** This would provide approximately seven to eight additional aerial towers on a day-to-day basis (given downtime). It is inevitable that some of the trees within the park forest can only be trimmed with rope-

and-saddle since some of these trees will not be easily accessible. The cost of acquisition of each of the eight 56-foot aerial towers approximates \$125,000 to \$150,000. The cost of acquisition of each of the 75-foot aerial towers approximates \$220,000 to \$250,000. The total cost of these ten additional aerial towers would approximate \$1,600,000. The annual operating and maintenance costs would approximate \$400,000. The benefit of this additional equipment is a direct impact on productivity. As noted previously, for a broad tree that is forty-one feet to sixty feet tall that requires heavy trimming, a crew equipped with an aerial tower can complete the trim in 42% of the crew hours as a crew that uses rope and saddle.

- **Three additional Bobcat tractors.** The Park Forest Division prefers to use an automated brush pick up using Bobcat skid steer tractors to pick up and load brush. The Bobcats also pick up logs, and crews don't have to be sent at a later date with the grapple truck or crane truck to pick up the logs. The division only has three Bobcat tractors at present. The cost of acquisition of each of these 3 Bobcat tractors would approximate \$35,000, or \$105,000 for the 3 Bobcat tractors. The annual operating and maintenance costs would approximate \$30,000. This equipment complements the aerial towers, and work as part of the aerial tower crew.
- **Three additional roll-off trucks.** These roll-off trucks service the brush collected by the Bobcat tractors. The Park Forestry Division currently has three roll-off trucks that service two crews and green waste recycling bins throughout the golf courses and parks. The cost of acquisition of each of these trucks would approximate \$60,000 or \$180,000 for the three roll-off trucks. The annual cost of operating and maintenance costs would approximate \$50,000. This equipment complements the aerial towers, and work as part of the aerial tower crew.

The capital outlay cost for these vehicles would approximate \$1,900,000. The annual operating and maintenance costs would approximate \$480,000. The acquisition of this equipment should enable the increase of the productivity of these crews. These crews should be capable, with the acquisition of this equipment, to trim a minimum of 7,100 trees annually. If, after the level of automation has been increased and the park Forestry Division is still unable to deliver reasonable trimming service levels, the extent of resources available to the Division should be reevaluated.

**Recommendation:**

- 4.5 Department management should enhance the level of automation and equipment for park forestry to increase the productivity of staff.

**ISSUE #6 – THE DEPARTMENT HAS UNDERINVESTED IN THE RENOVATION AND REHABILITATION OF ITS GOLF COURSES.**

The Golf Division has estimated that it requires \$78.8 million for future repair and replacement of its existing golf course facilities. There are significant other rehabilitation and renewal needs such as replacing the Hansen Dam golf course irrigation system (\$16 million). In fact, the Golf Division faces a number of challenges including:

- Declining play levels and stagnating revenues;
- Aging infrastructure reflecting deferred maintenance;
- Capital needs in excess of available funding;
- The golf surcharge has been used for non-golf purposes; and
- 2004 customer satisfaction ratings were only fair to good. Factors rated as poor by the respondents included the condition of fairways, sand bunkers, driving range, target greens, and restrooms. The conditions of the parking lots at the 9-hole golf courses received poor ratings.

While general fund monies could be utilized to renovate and rehabilitate these golf courses, this would limit the availability of these general fund monies to meet other essential needs of the Department such as enhanced preventive maintenance of facilities or scheduled facility component replacement.

The golfers that use these facilities should pay the costs associated with these necessary capital improvements, and the golf courses should not be subsidized by the general fund. This would require that the golf courses be established as an enterprise fund. It is not unusual for cities operating large park systems – such as San Diego, Phoenix, and San Jose – to operate their golf courses as an enterprise fund. These cities operate their golf courses as enterprise funds to avoid a general fund subsidy of the renovation of these assets.

The use of an enterprise fund for the Golf Division is in accordance with generally accepted accounting principles that suggest enterprise funds should be utilized to account for any activity for which a fee is charged to external users for goods or services.

**Recommendation:**

- 4.6 Department management should develop a proposal for consideration by the Board of Recreation and Park Commissioners to transition the Golf Division to an enterprise fund as a means to assure funding for needed renovations of golf courses, while also paying overhead costs for Departmental and citywide support in accordance with the City’s Cost Allocation Plan.

**ISSUE #7 – THE DEPARTMENT DOES NOT CONDUCT PERIODIC, ONGOING CONDITION ASSESSMENTS OF ITS PARKS, GOLF COURSES, AND FACILITIES.**

The Department has conducted a limited number of facility condition assessments of parks. The Department has established, through a Joint Labor Management Committee, a facility condition evaluation program that proposes to evaluate the quality of maintenance services and condition of recreation centers. The Department has not fully implemented this program, however. Prior to this effort by the Joint Labor Management Committee, the Department did not conduct condition assessments of any of its assets – parks, golf courses, or facilities. The American Public Works Association, in their Public Works Management Practices Manual, a guide to accreditation of public works departments, recommends the condition assessment of assets on an ongoing basis. The lack of ongoing condition assessments limits the Department’s ability to identify major deficiencies early when timely repairs will be much less costly and risks to the public are less.

The need for ongoing condition assessments was clearly evident in the assessments conducted by the Matrix Consulting Group of ten parks. The condition assessment is summarized in the table below. Each park was evaluated based upon fourteen criteria, including lawns, shrubs and groundcover, trees, open space, athletic fields and courts, play areas, restrooms, waste receptacles, and other amenities and structures. Ratings were assigned based upon a scale representing poor to excellent condition and cleanliness with “1” being a fail and “4” being excellent.

Asset Category	Park									
	Chatsworth	Jessep Roger	Dearborn	Chase	Lanark Rec Center	Warner	Barns-dale	Ramona Gardens	Hazard	Hollenbeck
Lawns	2.1	2.4	2.6	1.9	3.3	2.5	2.9	3.0	2.3	2.4
Shrubs & Grndcover	2.2	2.8	3.0	2.0	3.0	3.0	3.0	3.0	2.4	3.0
Trees	2.3	3.0	3.3	1.7	3.0	3.0	3.0	3.0	3.0	3.0
Hardscape and Trails	3.0	2.7	3.2	2.3	3.0	3.0	3.0	3.0	2.5	2.0
Open Space	3.0	2.0	3.0	3.0	3.0	3.0	4.0	N.A.	3.0	2.0
Turf Athletic Field	N.A.	N.A.	N.A.	N.A.	3.3	N.A.	N.A.	3.0	3.0	N.A.

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Asset Category	Park									
	Chatsworth	Jessep Roger	Dearborn	Chase	Lanark Rec Center	Warner	Barns-dale	Ramona Gardens	Hazard	Hollenbeck
Outdoor Athletic Courts	2.0	N.A.	3.1	N.A.	2.7	N.A.	N.A.	N.A.	2.7	N.A.
Children's Play Areas	2.6	2.3	2.8	3.0	3.3	2.8	N.A.	N.A.	2.4	2.4
Restrooms	2.8	2.5	2.6	N.A.	2.6	2.8	4.0	1.8	2.8	3.0
Parking Lots and Roads	2.9	2.9	3.0	N.A.	3.0	N.A.	3.0	2.7	N.A.	2.2
Waste and Recycling Receptacles	3.0	2.6	3.2	2.6	3.0	3.0	3.0	2.6	2.6	2.8
Benches, Tables, and Grills	3.0	2.4	2.8	2.0	2.8	3.0	3.0	3.0	2.0	2.2
Amenities and Structures	3.0	3.0	2.3	N.A.	2.8	3.0	2.8	3.0	2.8	2.3
<b>Overall Park Rating:</b>	<b>2.7</b>	<b>2.6</b>	<b>3.0</b>	<b>2.3</b>	<b>3.0</b>	<b>2.9</b>	<b>2.9</b>	<b>2.8</b>	<b>2.7</b>	<b>2.5</b>

This assessment revealed that:

- Five of the ten parks were maintained in good condition including Dearborn, Lanark Recreation Center, Warner, Barnsdale, and Ramona Gardens.
- Overall, parks were assessed in a range between fair and good. These condition assessments also indicated a consistent level of maintenance across selected parks assets.
- The park assets found to be in greatest need of improvement were lawns, outdoor athletic courts, and benches, tables, and grills.
- The park assets found to be in the best condition were turf athletic fields.
- In general the overall condition of parks was fairly consistent across all rating criteria indicating that all components of these different sites were maintained at relatively the same level. The most notable exception of the sites was Chase Park where the ratings varied more widely. Chase Park received ratings of poor for condition of the lawns and trees while at the same time receiving good ratings for the condition of the open space and children's play areas.

- In some instances, the assets in these parks were rated as a “fail.” In Chase Park, for example, tree limbs in some instances were hanging onto lawn areas and touching the grass. The walkways were cracked, and some tripping hazards were present. There were some broken benches. At Ramona Gardens, there was graffiti on the toilets and toilet walls, no soap was available in the restrooms, and trash bags were left by two garbage cans (three full bags not picked up).

The Department should implement a routine, ongoing condition assessment of its parks, golf courses, and facilities. Periodic condition assessments are intended to close an information loop. The maintenance management system should be developed to effectively manage the maintenance, repair and renewal of the Department’s parks, golf courses, and facilities assets. The condition assessment is intended to assess the effectiveness of the Department’s maintenance, repair and renewal efforts and adjust the levels of service to enhance its effectiveness. The objectives of these assessments should include the following:

- Protect the health and safety of parks patrons and staff;
- Restore the functional integrity of facilities to the Department’s maintenance standards;
- Optimize the life cycle of the facilities;
- Provide a basis for forecasting funding requirements for the various categories of facilities capital plans;
- Provide a basis for setting priorities for the maintenance, repair, replacement, and enhancement of facilities; and
- Provide an assessment of the effectiveness of maintenance programs including parks, golf, and facilities.

All of the Department’s assets should be evaluated on a periodic cycle that provides current data suitable for planning and evaluation purposes. Parks and golf courses should be evaluated on an annual basis. Buildings and associated structures should be evaluated on a two to three year cycle.

**Recommendation:**

- 4.7 Department management should complete condition assessments of all Departmental assets on a routine, ongoing basis.

## **5. ORGANIZATIONAL STRUCTURE AND STAFFING**

## 5. ORGANIZATIONAL STRUCTURE AND STAFFING

This section of the report analyzes the organizational structure for the maintenance activities of the Department and the levels of staffing required for maintenance of these assets.

### ISSUE #1 – THERE ARE SIGNIFICANT INEQUITIES IN THE ALLOCATION OF PARK MAINTENANCE STAFF AMONG THE FOUR REGIONS.

The Department is responsible for the maintenance of 15,508.04 acres of parks. The four regions maintain only 8,173 acres excluding golf courses and developed park acreage outside of the regions such as the camps. The allocation of this acreage among the different regions is presented below.

- **The West Region is responsible for the maintenance of 925.45 developed acres.** The region is responsible for 64 developed park sites. Of the 925.45 developed park acres, 530 acres are beaches (or 57.3%).
- **The Pacific Region is responsible for the maintenance of 666.57 developed park acres.** The region is responsible for 73 developed park sites. Of the 666.57 developed park acres, 35% is located at two facilities: Malloy Harbor Regional park (181.47 developed park acres) and Cabrillo Beach (54 developed acres).
- **The Valley Region is responsible for the maintenance of 3,317.55 developed park acres.** The region is responsible for 92 developed park sites. Of the 3,317.55 developed park acres, 2,162.32 developed park acres (or 65%) are located at two sites: the Sepulveda Basin Recreation Area and the Hansen Dam Recreation Area.
- **The Griffith/Metro Region is responsible for the maintenance of 3,263.84 developed park acres.** The region is responsible for a total of 99 developed park sites. Of the 3,263.84 developed park acres, 2,109.37 developed park acres (or 65%) is located at one site: Griffith park.

The optimal manner to document staffing requirements for park maintenance is a “bottom-up” approach based upon the inventory of assets at each park. This was, in fact, the approach used in developing the Department’s maintenance management system established by H.B. Maynard and Company in 1962. This “bottom-up” approach would document the inventory at each park site, the tasks required to maintain that park site, and the staff hours required to perform those tasks on an annual basis. This data, however, is not available. The Department has not utilized this approach since the maintenance management system established by H.B. Maynard and Company was

abandoned. The level of park maintenance staffing in each region is based upon historical trends, not based upon workload.

Since this data was not available, the Matrix Consulting Group utilized an approach of the number of developed acres per staff. The ratio of developed acres per staff will vary depending on the length of the growing season and park system characteristics (such as the number and size of the parks, extent to which the parks contain large, unobstructed turf areas, utilization levels by the public, etc.). However, the Matrix Consulting Group has utilized the following benchmarks as general guidelines.

- An excellent service level is usually associated with a ratio of one maintenance worker for every 5 to 6 developed park acres.
- An above average level of maintenance is usually associated with a ratio of one worker for every 6 to 10 developed park acres.
- An average level of maintenance is usually associated with a ratio of one maintenance worker for every 10 to 15 developed park acres.

The application of these guidelines to each of the regions is presented in the table below.<sup>1</sup> Important points to note regarding the table are presented on the following page.

<b>Region</b>	<b>Developed Acreage</b>	<b>Full-Time Staff (FTE)</b>	<b>Permanent Part-Time Staff (FTE)</b>	<b>Total FTE Staff</b>	<b>Developed Acres/Staff</b>
Griffith/Metro	3,263.84	258.00	57.91	315.91	<b>10.33</b>
Pacific	666.57	114.00	30.00	144.00	<b>4.63</b>
Valley	3,317.55	216.00	58.79	274.79	<b>12.07</b>
West	925.45	86.00	28.25	114.25	<b>8.10</b>
<b>TOTAL</b>	<b>8,173.41</b>	<b>674</b>	<b>174.95</b>	<b>848.95</b>	<b>9.63</b>

The ratio of 9.63 acres per park maintenance worker falls in the range for staffing levels necessary to provide an above average level of maintenance service quality. The

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<sup>1</sup> This staffing reflects authorized levels of staffing. It should be recognized that there have been significant differences in the past several years between authorized and actual levels of staffing due to the City's hiring freeze. For example, the Department had 94 vacant Gardener Caretaker positions at the end of May 2005. The permanent part-time staff reflects these staff as full-time equivalents that are allocated to landscape or grounds maintenance. This staff was converted to full-time equivalents based upon 2,080 hours per full-time staff per year. This staff excludes those staff allocated to custodial maintenance. The full-time staff excludes the Principal Grounds Maintenance Supervisor II's, Senior Park Maintenance Supervisors, Park Maintenance Supervisors, Lead Senior Gardeners, Motor Sweeper Operator's, and Custodial Service Attendants. The full-time staff only includes Gardener/Caretakers, Senior Gardeners, Light Equipment Operators, Senior Gardener/water Utility Workers, Truck Operators, and Vocational Worker II's. The permanent part-time staff reflects these staff as full-time equivalents that are allocated to landscape or grounds maintenance. This staff was converted to full-time equivalents based upon 2,080 hours per full-time staff per year. This staff excludes those staff allocated to custodial maintenance.

selected park facility condition assessments conducted by the Matrix Consulting Group indicates that, considering the level of use of the City's parks, parks are being maintained at average to above average levels of service. This further confirms that current staffing is consistent with both workload demands and above average service levels. However, with the number of vacant positions that the Department experienced in May 2005, the level of staffing afforded the Department the ability to actually provide an average level of maintenance.

However, the inconsistent balance of workload and staffing among the regions limits the ability of the Departmental management to provide consistent levels of service in each of the four regions. Clearly the Pacific Region is able to provide a higher level of park maintenance service given its balance of developed acreage and staffing than the Valley Region that has a 62% lower level of staffing per developed acre than the Pacific Region.

**Recommendation:**

- 5.1 Department management should reallocate staff to balance the park maintenance workload among the regions and districts to provide a more consistent level of service.

**ISSUE #2 – THE AMOUNT OF AUTHORIZED STAFF FOR THE MAINTENANCE OF GOLF COURSES IS HIGHER THAN NECESSARY FOR HIGH-VOLUME MUNICIPAL COURSES, BUT INSUFFICIENT TO MAINTAIN RANCHO PARK AS A CHAMPIONSHIP-LEVEL GOLF COURSE.**

While all of the Department's golf courses experienced declines in the number of rounds played, the number of rounds played at all of the Department's 18-hole golf courses is high compared to their peers based upon data reported by the National Golf Foundation (NGF) in the *Operating and Financial Performance Profiles of 18-hole Golf Facilities* in the U.S. Similarly, the number of staff authorized for its high-volume municipal golf courses such as Balboa or Encino exceeds that of its peers. On the other hand, Rancho Park, which has a history of being a championship level golf course, the level of staffing is less than that of other championship level golf courses. This inconsistency in the levels of staffing results in a higher cost structure than appropriate for high-volume municipal golf courses such as Balboa or Encino, but an inability to adequately maintain levels of service at a championship-level golf course such as Rancho Park.

Golf courses represent a significant business for the Department. With the network of thirteen golf courses, golf generated \$20.8 million in gross revenue in 2003-04 (less concession costs) and a significant financial commitment for the City regarding capital improvements. The table below presents the thirteen golf courses that are operated and maintained by the Golf Division. These include seven 18-hole golf courses, three 9-hole golf courses, and three special courses (pitch and putt and 3-hole).

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<b>Golf Course</b>	<b>Type of Golf Course</b>	<b>CY 2003 Total Rounds</b>	<b>CY 2004 Total Rounds</b>
Balboa	18-hole	91,895	85,192
Encino	18-hole	108,236	96,488
Hansen Dam	18-hole	105,394	94,688
Harding	18-hole	110,581	92,466
Rancho Park	18-hole	126,437	116,780
Wilson	18-hole	118,627	101,972
Woodley Lakes	18-hole	107,014	94,484
Harbor Park	9-hole	130,817	117,214
Holmby	9-hole Pitch and Putt		
Los Feliz	9-hole, 3-par		
Penmar	9-hole	97,703	80,120
Rancho Park	9-hole		
Roosevelt	9-hole	98,528	93,803
<b>TOTAL</b>		<b>1,222,158</b>	<b>1,078,138</b>

All of the courses experienced declines in the number of rounds played. The total rounds played in calendar year 2003 amounted to 1,222,158. The total rounds played in calendar year 2004 amounted to 1,078,138. The rounds played in 2004 represent a decline of 144,020 rounds or 11.8% in comparison to 2003.

Despite the decline, the number of rounds played at all of the seven 18-hole golf courses is high compared to their peers. The National Golf Foundation (NGF) publishes *Operating and Financial Performance Profiles of 18-hole Golf Facilities* in the U.S. The most recent publication was in 2004, reporting 2003 data.

<b>NGF Data</b>	<b>U.S.</b>	<b>Sunbelt</b>	<b>Total Revenue</b>	
			<b>Below \$1.0 mm</b>	<b>Above \$1 mm</b>
Bottom 25%	27,500	26,860	24,020	34,510
Median	35,390	39,830	29,220	40,930
Top 25%	44,730	58,170	36,400	53,240

This data is based upon 99 municipal golf courses in the United States. The Sunbelt represents such states as California, Nevada, Texas, Georgia, South Carolina, Florida, etc.

The number of rounds played in 2003 at each of the 18-golf courses operated by the Department exceeded that reported by other 18-hole golf courses for the United States by a significant margin. The median number of rounds played at the seven 18-hole golf courses operated by the Department amounted to 108,236 in 2003 and was:

- 212% higher than the rounds played at the top 25% of the 18-hole municipal golf courses in the United States;
- 163% higher than the rounds played at the top 25% of the 18-hole municipal golf courses in the Sunbelt.

- 260% higher than the rounds played of the 18-hole municipal golf courses with less than \$1.0 million in total annual revenue.
- 178% higher than the rounds played of the 18-hole municipal golf courses with more than \$1.0 million in total annual revenue.

The NGF surveyed thirty-nine 9-hole golf courses in 2004. On average, the rounds played at these 9-hole golf courses amounted to 17,429; only five of the thirty-nine golf courses reported rounds in excess of 25,000 in 2003. In comparison, the median number of rounds played at the three 9-hole golf courses managed by the Department amounted to 98,528 in 2003.

Similarly, the number of staff authorized for its high-volume municipal golf courses such as Balboa or Encino exceeds that of its peers. Important points to note regarding the level of staffing for the golf courses are presented below.

- The Department's 18-hole golf courses are authorized the full-time equivalent of 0.9 full and permanent part-time positions per hole; this is what would be expected at a championship golf course like Rancho Park, but not high-volume municipal courses such as Balboa.
- The average number of FTE staff reported by the NGF at 18-hole high-volume municipal courses in the Sunbelt amounted to 10 or 0.56 full and permanent part-time positions per hole.
- In previous analyses of high-volume municipal 18-hole golf courses by the Matrix Consulting Group, the level of staffing for high-volume municipal golf courses was closer to that reported by NGF than the current levels of authorized staffing in the Department.
- There is little, if any, relationship between the rounds played at an 18-hole course and the level of authorized staffing. The Rancho golf course, a 27-hole golf course, had far more rounds played than any of the other 18-hole golf courses: 175,470 in 2004. This is almost twice the number of rounds as Balboa, yet Balboa is allocated a higher level of authorized staffing. In fact, while all of the other 18-hole golf courses had higher levels of play than Balboa, these other courses had lower levels of authorized staffing.
- If the Department approached the level of staffing reported by NGF, staffing levels would approximate 100 full and permanent part-time staff, not the 145.2 authorized full and permanent part-time positions.

While some allowances should be made given the number of rounds played at the Department's courses, the current level of staffing approaches that found at championship level golf courses, but these courses are largely high-volume courses, and not championship courses with one exception: Rancho Park. The number of authorized full and permanent part-time staff allocated to that golf course should be increased. Other 18-hole golf courses, such as Balboa and Encino, should be maintained as high volume municipal courses and their levels of staffing should be reduced.

In considering the levels of staffing at each of these golf courses, there are three other important factors to consider.

- **The green fee revenue declined in fiscal year 2004-2005 in comparison to the previous two fiscal years.** The green fee revenue in 2004-05 amounted to \$13,884,780. This compares to \$15,019,831 in 2003-04 and \$14,988,620 in 2002-03. The revenue in 2004-05 was \$1,135,051 less than 2003-04.
- **The Golf Division has estimated that it requires \$78.8 million for repair and replacement of its existing facilities.** There are significant rehabilitation and renewal needs such as replacing the Hansen Dam golf course irrigation system (\$16,000,000).
- **The golf courses operated by Los Angeles County generate higher levels of "profit" for the County.** While the County operates its golf courses as an enterprise fund, these golf courses still generate a significant profit for the County's general fund. The "profit" enables the County to provide services to its residents that it would not otherwise be able to provide. The golf courses operated by the Department charge green fees that are similar to those charged by the County.

These factors, in addition to the comparisons to the staffing levels for other high volume municipal golf courses suggest that the levels of staffing for these high-volume golf courses should be reduced.

**Recommendation:**

- 5.2 Department management should adjust the allocation of maintenance staffing at golf courses based upon the rounds played and the type of golf course – high-volume municipal versus championship.

**ISSUE #3 – THE CURRENT PLAN OF ORGANIZATION FOR PARK MAINTENANCE RESULTS IN A NARROW SPAN OF CONTROL FOR TOP AND MIDDLE MANAGERS, BUT TOO BROAD A SPAN OF CONTROL FOR SUPERVISORS.**

The Department uses a pyramidal form of organization for park maintenance activities with narrow spans of control for managers and very broad spans of control for supervisors. The plan of organization for park maintenance is described in the paragraphs below.

- **The spans of control for the four Principal Grounds Maintenance Supervisors in the regions is narrow.** In the West Region and the Pacific Region, the span of control is two: two Senior Park Maintenance Supervisors report to each Principal Grounds Maintenance Supervisor. In the Valley Region and the Metro/Griffith Region, the span of control is three: three Senior Park Maintenance Supervisors report to each Principal Grounds Maintenance Supervisor.
- **The spans of control of the ten Senior Park Maintenance Supervisors in the regions is too narrow.** In the West Region and in the Pacific Region, the two Senior Park Maintenance Supervisors each supervise four Park Maintenance Supervisors. In the Valley Region, the three Senior Park Maintenance Supervisors supervise a total of eight Park Maintenance Supervisors. In the Metro/Griffith Region, the three Senior Park Maintenance Supervisors supervise a total of twelve Park Maintenance Supervisors.
- **The spans of control of the twenty-eight Park Maintenance Supervisors in the regions is too broad.** As indicated in the table below, the span of control for the Park Maintenance Supervisors in these four regions ranges from 40 to 58.

Region	Number of Full-Time and Permanent Part-Time Positions	Number of park Maintenance Supervisors	Span of Control for Park Maintenance Supervisor
West	178	4	45:1
Pacific	232	4	58:1
Valley	414	8	51:1
Matro/Griffith	481	12	40:1

The permanent part-time staff are not expressed as full-time equivalents, in this instance, but as the number of positions.

- **Eighteen Lead Senior Gardeners are utilized as first line supervisors to address the span of control of the Park Maintenance Supervisors assigned to each region.** The West Region has three Lead Senior Gardener positions. The Pacific Region has four Lead Senior Gardener positions. The Valley Region has one Lead Senior Gardener position. The

Metro/Griffith Region has ten Lead Senior Gardener positions. These eighteen Lead Senior Gardener positions allocate the majority of their time to supervision of Gardener/Caretakers, Light Equipment Operators, Senior Gardeners, etc., in the districts in each region.

In evaluating the plan of organization for park maintenance activities for the Department, there are a number of issues to consider.

- **There is no ideal ratio of staff to managers or supervisors. No ideal structure exists which fits all organizations or all functions within an organization.** Numerous factors come into play in determining the best ratio of staff to managers, including the nature of the work tasks to be performed and special circumstances. While noting the variations between functions, contemporary management experts advocate high ratios of staff to managers.
- **Spans that are too wide and spans that are too narrow both have drawbacks.** Too few staff per manager or supervisor diminishes an organization's effectiveness because it does not fully utilize the talents of its higher paid managers and supervisors, who could manage or supervise more staff. It also does not fully utilize the service level staff who could assume more responsibility. However, too many staff per manager or supervisor also diminishes an organization's effectiveness because managers and supervisors are overburdened, and subordinates are left without sufficient coaching, training, or direction.
- **The ratio of staff to managers or supervisors depends on work tasks and circumstances.** Leading management theorists agree that only by carefully evaluating the particular purposes and characteristics of an organizational unit can the most appropriate ratio of staff or supervisors to staff be determined. The figure below summarizes some common task and situation characteristics that can be utilized to determine the ratio of staff to manager or supervisor.

**Factors Influencing Spans of Control**

**← Lower Spans**

Complex  
 Different  
 Not Clear

Fuzzy  
 High

High  
 Many  
 Fast  
 Weak

Heavy

High  
 None  
 Work  
 Dispersed

Nature of Work
Similarity of Activities Performed
Clarity of Organizational Objectives
Degree of Task Certainty
Degree of Risk in the Work for the Organization
Degree of Public Scrutiny
Number of Intermittent Staff
Employee Turnover
Supervisor's Experience and Skill Managing Staff
Supervisor's Burden of Non-Supervisory Duties
Degree of Coordination Required
Availability of Staff Assistance
Qualifications of Staff Assistance
Geographic Location of Subordinates

**Higher Spans →**

Not Complex  
 Similar  
 Clear

Definite Rules  
 Low

Low  
 Few  
 Slow  
 Strong

Light

Low  
 Abundant  
 Abundant  
 Strong

**← More Supervisors**

**Fewer Supervisors →**

- **Other local governments that have evaluated spans of control reported higher spans of control than currently exists in maintenance activities in the Department.** These local governments include Kansas City, Missouri; Portland, Oregon; Seattle, Washington; and King County, Washington. These local governments reported spans of control that ranged from 5 to 7. Portland, Oregon, in their analysis of spans of control, recommended operations and maintenance supervisors with spans in the range of 10 to 20

The National Recreation and Park Association, in their Guide to Standards for National Accreditation, states “to achieve effective direction, coordination, and control, the number of employees under the immediate control of a supervisor should not be excessive.” The number of employees in park maintenance activities of the Department under the immediate control of top and middle managers is less than warranted. The span of control for Park Maintenance Supervisors is excessive. The ability of Park Maintenance Supervisors to effectively manage park maintenance is limited given the span of control.

**Recommendation:**

- 5.3 Department management should modify the existing organizational structure for park maintenance by considering appropriate spans of control.

#### **ISSUE #4 – AUTHORITY AND RESPONSIBILITY FOR PARK MAINTENANCE HAS NOT BEEN CLEARLY DELEGATED TO PARK MAINTENANCE SUPERVISORS.**

These first line supervisors do not exercise the full-range of responsibilities necessary to hold them accountable for the delivery of quality services. For example, Principal Grounds Maintenance Supervisors must approve all expenditures out of account 316 – maintenance, materials, and supplies – that are budgeted at the region-level. This impedes the ability of the Department to hold first line supervisors accountable. The National Recreation and Park Association, in their Guide to Standards for National Accreditation, states “at every level within the agency, personnel should be given the authority to make decisions necessary for the effective execution of their responsibilities. A priority should be assurance that each employee is made fully accountable for the use of delegated authority as well as for the failure to use it.” This limitation in the authority of Park Maintenance Supervisors limits the ability of the Department to hold these supervisors accountable for the effectiveness and efficiency of the maintenance of parks.

Supervisors are an important part of the management team since they are the representatives of management in closest contact with the people who actually produce the work. Supervisors should:

- Be regarded by managers as important members of the management team and seen as such by employees;
- Have a clear understanding of their role and authority; and
- Receive ongoing training in management and supervisory techniques.

Although some local governments have reduced the number of first line supervisors and expanded their span of control, in most local governments the first-line supervisor will retain a key role in assuring the effective and efficient delivery of services to residents.

The Department should clarify the roles and accountabilities of Park Maintenance Supervisors, and prepare these supervisors for these responsibilities. This clarification should include the following:

- **The development of park maintenance budgets at the district level.** This would include budgets for full-time staff, permanent part-time staff, services and supplies, and capital outlay.
- **The clarification of the roles and responsibilities of the Park Maintenance Supervisors in a formal, written policy and procedure.** This clarification should include the authority of Park Maintenance Supervisors. It should also clarify the responsibilities of these staff for

meeting the quality standards for parks, the development of route sheets for the staff and parks assigned to these first-line supervisors, the ongoing condition assessment of these parks, etc.

- **The provision of supervisory training to all Park Maintenance Supervisors.** This supervisory training should be mandatory, if the supervisors have not recently participated in supervisory training. The City's Personnel Department provides a range of training for supervisors including civil service rules for supervisors, discipline and the supervisor, front-line supervision, advanced supervision, etc. The Department should define the required coursework for Park Maintenance Supervisors, and require this training of all of these supervisors.

**Recommendation:**

- 5.4 Department management should clarify the roles and responsibilities of the Park Maintenance Supervisors and provide them with ongoing supervisory training

**ISSUE #5 – THE DEPARTMENT DELIVERS A NUMBER OF SERVICES UNRELATED TO ITS CORE MISSION.**

A central question facing the management of the Department is what maintenance services the Department should and should not provide: what are the priorities in the Department for services given funding limitation and challenges. Cost effective service delivery requires that management concentrate limited financial resources on core services.

The Department has recently addressed issues of non-core services in some areas. The Department has centralized the responsibility for security and maintenance of small equipment such as chainsaws and push mowers within the General Services Department Office of Public Safety. In order to adequately focus on its core mission, the Department should consider transferring a limited number of additional non-core services to other City Departments whose primary focus includes those core services.

Facility maintenance and repair services should be organized to meet the needs of its customers. Traditionally, it was believed that the effectiveness of facility maintenance and repair was correlated to its proximity to its customers. The most obvious result was the decentralization of facility maintenance and repair, each serving the seemingly unique needs of its own Department.

Increasingly, however, it has been recognized by professional facility maintenance organizations such as International Facility Management Association that facility maintenance and repair can be more effectively met through a consolidated approach. The move towards consolidation can be traced, in large measure, to the increasing

complexity and cost of facility maintenance and repair over the past twenty years. During this period, developments in such areas as automation, personnel management, professional development, regulation of environmental protection and occupational safety and health, and energy management have made it prohibitively expensive for individual departmental facility maintenance and repair organizations to keep up. The City of Los Angeles has recognized this - the General Services Department maintains and repairs the facilities with one exception: the Department of Recreation and Parks.

A significant advantage of centralizing facility maintenance and repair was that investment in automation, employee training, facilities, and the like are more likely to be adequately funded for one large organization than for several smaller ones. Another significant advantage is the ability it affords to standardize policies and procedures so as to promote consistent – and consistently sound – operating and service delivery practices and avoid inequities in the distribution of resources that create uneven service levels and impair employee morale. An advantage of consolidation is that it can improve the utilization of facility maintenance and repair resources and capabilities – such as maintenance personnel or predictive maintenance expertise – by permitting the application across organizational lines that might otherwise create barriers to such shared use. The price of consolidation is the distancing – organizationally if not physically – of facility maintenance and repair services from customers. Sacrifices in this area should be acceptable, however, if they are offset by gains in others, and can be compensated by the use of crews that are based at Departmental facilities.

Thus, the key question to be addressed in examining the organization of the facility maintenance and repair functions in Los Angeles is whether different organizational structures will yield improvements in service effectiveness and/or cost control, always keeping in mind that service considerations should take precedence over cost considerations.

Over the long term, the Department should consider transferring all facility maintenance and repair activities to the General Services Department. Briefly, the vision for the fundamental shift in management of facility maintenance and repair in the City would include:

- Centralizing within the General Services Department the responsibility and accountability for the delivery of facility maintenance and repair services, and
- Separating support service delivery roles from the governance roles filled by the Department of Recreation and Parks.

The reallocation of responsibility for facility maintenance and repair from the Department to GSD would eliminate fragmentation of responsibility for facility maintenance and repair processes and technologies. Other municipal recreation and park departments in other cities (e.g., San Diego) have made this shift to centralized facility maintenance and repair services with clear and positive results.

**Recommendations:**

Department management should:

- 5.5 Consider the feasibility of transferring additional non-core maintenance services to other City departments.
- 5.6 Over the long-term, consider the feasibility of transferring all facility repair and maintenance functions to the General Services Department.

## **APPENDIX 1**

## **APPENDIX 1 – POSSIBLE APPROACH TO THE DEVELOPMENT OF A CITYWIDE PARK MASTER PLAN**

There are a number of steps that the Department could consider in developing this citywide park master plan. These steps are portrayed in the paragraphs below.

### **(1) Conduct a Facility Condition and Needs Assessment.**

A comprehensive facility condition assessment could be conducted for every facility and park location maintained by the Department. This facility condition assessment could categorize each facility by category type (community center, picnic area, athletic field, regional park, neighborhood park, pocket park, open space, etc.) and assign condition ratings to a common set of assessment criteria for each facility. Each factor evaluated could be correlated with a specific work function.

The factors for buildings that could be included in the facility condition evaluation, for example, should include the following elements:

- Exterior Structure (including play areas, picnic areas);
- Interior structure;
- Landscape;
- Life/Fire Safety;
- Heating, ventilation and air conditioning;
- Plumbing;
- Electrical; and
- Handicapped accessibility/ADA compliance.

The assessment of each of these criteria could provide not only an aggregate rating, but document specific information relative to (1) the current condition, (2) the work needing to be completed, and (3) an estimation of the costs for completion including labor and material costs. While the completion of this assessment rating is not a small task, it will provide the level of data and detail necessary to accurately determine the true status of existing facilities and the costs associated with upgrading facilities to approved service

level standards. This information could be developed into a ten-year plan that outlines specific facility improvements so that a clear picture of the total costs associated with the needs are developed.

The second element of this step could include a parks and facility needs assessment – an assessment of the adequacy of existing parks and facilities to meet the needs of present and forecasted populations in comparison to standards. The National Recreation and Park Association published standards in documents such as *Recreation, Parks and Open Space Standards and Guidelines*. Using these standards as a reference and benchmarking to comparable cities, the Department could conduct an analysis to develop facility standards to guide the planning of park and recreation facilities in Los Angeles.

These standards could be viewed as a guide.

As a third element, service areas of the Departments facilities by type of facility (such as pools, recreation centers, gymnasiums, etc.) could be mapped using GIS to graphically depict gaps and overlaps in service areas for each facility type. These depictions could be based upon population projections by census tract, and mapping of the park facilities based on the approved facility standards. These facilities could include neighborhood parks, community parks, recreation centers, etc. These maps allow for informed decision-making on park facility and program planning -an assessment of those areas within the City that are underserved.

## **(2) Develop Strategies To Address the Facility Condition and Needs Assessment**

Following the completion of the facility condition and needs assessment, the Department could develop strategies that address the needs both on a citywide basis as well as on a Council District basis. Sample strategies that could be included to prioritize the needs and develop a plan of action could include:

- **Facility renovation.** These would include deteriorated systems (electrical, plumbing, mechanical), structural issues, and security issues.
- **Facility Improvements could be phased in to meet critical needs first.** The level of identified needs will certainly exceed available resources. The phasing of work could be conducted in accordance with criteria such as:
  - Potential life/safety hazards and accessibility issues;
  - Critical infrastructure needs; and
  - Critical program space needs.

- **Facility improvements could be prioritized by an analysis of the greatest need.** Consideration could be given to the improvements that will have the greatest impact upon the largest number of users.
- **New and renovated park areas could be developed to accommodate flexible usage.** Where possible, park areas could be accessible for a variety of sporting and usage activities including multi-use sports fields, and could consider joint use by other governmental agencies such as school districts.
- **Concentrate renovation efforts on activities and uses identified as lacking within the immediate service area.** Information developed from the environmental scan and community outreach efforts will identify differing service needs and desires in various sectors of the community. Efforts could be taken to implement the services desired by the community rather than simply renovating existing facilities and parks according to their current design.

Park facilities deteriorate rapidly in outdoor conditions and require an ongoing program of maintenance, renewal, and City's park system in need of significant investment.

**(3) Develop a Five-Year Capital Improvement Program To Address The Needs of the Department For New Parks and Park Facilities and the Rehabilitation and Renewal of Existing Parks and Park Facilities.**

The value of the assets operated by the Department amount of approximately \$479.3 million on June 30, 2004 based upon the Schedule for Land and Building. This excluded land, but included construction in progress.

Over the three-year period from fiscal year 2004-05 through 2006-07, the City's capital improvement program identifies that the City will expend \$35.1 million in Proposition K funds and Proposition 12 funds for recreation and parks facilities. However, only \$12.1 million of these expenditures, or a little more than one-third of the total, are dedicated to the refurbishment of existing facilities.

The City is clearly under investing in the rehabilitation and refurbishment of its parks and park facilities. Indications that the City is under investing in its parks are presented below.

- The Mayor's Blue Ribbon Task Force on Infrastructure graded 30% of the City's parks and park facilities at a D or F condition level in 2003.
- The City still has parks that require manual irrigation such as Saint James park, Lincoln park, Hazard park, Alvarado Terrace park, etc. Other parks have galvanized irrigation systems.

- Over 63% of the pools in the City are over 40 years old, and in many cases the only option is replacement. The 2003 Infrastructure Report cited fifteen pools that were graded F that have failed and need to be replaced.
- The City will be spending an average of \$4.0 million or 2.5% of the replacement value of park facilities over the three fiscal years from 2004-05 to 2006-07 on the rehabilitation and refurbishment of these facilities or 0.8% annually. This places the Department on a 125-year rehabilitation and refurbishment schedule. This far exceeds the lifecycle of parks and park facilities. The table below presents recommended lifecycles for selected park facilities.

<b>Type of Park Facility</b>	<b>Suggested Lifecycle (Years)</b>
Gymnasiums	40
Indoor aquatics	30
Recreation centers	40
Playgrounds	12
Picnic areas	25
Outdoor aquatics	60
Trails	10
Multi-use courts	10
Athletic fields	16
Irrigation system	20

- The level of funding in other progressive city or county park systems exceeds that of Los Angeles. For example, Fairfax County, which has 22,900 acres of park land, will be spending \$21.3 million a year over a 5-year capital improvement program for new parks and park facilities and rehabilitation of existing facilities; this approximates \$930 per acre over this 3-year period. The City of Los Angeles will be spending \$11.7 million a year over a 3-year capital improvement program for new parks and park facilities and rehabilitation of existing facilities; this approximates \$754 per acre over this 5-year period or 19% less than Fairfax County. If the City of Los Angeles expended the same amount as Fairfax County, it would be expending \$2.7 million more annually. It should be noted that Fairfax County relies extensively on bond referenda to finance its capital improvement program for its parks and park facilities.

These are indications of a deferred rehabilitation and refurbishment that will have significant ramifications in the long-term on the ability of the Department to provide responsive service to the residents of Los Angeles.

This plan could result in the five-year capital improvement program by the Department. In the development of this five-year capital improvement program, the following model could be utilized:

- The Budget Section within the Department could be assigned responsibility for coordinating the capital improvement program process;
- The Budget Section could identify the necessary steps in the process, prepare a timetable, and prepare recommended lifecycles for the various parks and park facilities maintained by the Department;
- The Budget Section could design the capital budgeting request forms and instructions – possibly modeled after those already utilized by the City;
- The top and middle managers of the Department could prepare capital budget requests for a five-year time frame;
- The top and middle managers of the Department could evaluate and prioritize capital budget requests;
- The Budget Section could assess the financial condition of the Department and forecast its capital financing capacity using sources such as Proposition K, but also the financing strategies developed in the citywide park master plan;
- Top and middle managers of the Department and the Budget Section could identify financing options and select appropriate financing;
- The Budget Section could develop a capital financing strategy; and
- The Budget Section could prepare and recommend a five-year capital budget.

**(4) Develop Financing Strategies To Fund the Replacement, Renewal, and Upgrading of Parks and Facilities**

Following the identification and prioritization of facility and park replacement, renewal, and upgrading strategies, comprehensive financing strategies must be developed to fund the replacement, renewal, and upgrading of facilities. Principles of the financing strategy could include:

- **The improvement program could be financially feasible.** This principle will ensure that the plan developed is appropriately phased for realistic accomplishment.
- **New facilities could not be considered without adequate ongoing sources of funding.** Funding must be available to support an adequate level of maintenance and programming for any new or expanded facility. This principle would override even an identified need for a facility

improvement or expansion since it is not a wise use of funds to improve or expand a facility and have insufficient funds available following the improvement to either maintain or program the facility.

- **Maintenance, operating and depreciation costs must be fully considered and projected.** All facilities must be maintained, renovated, and replaced over a certain period of time. Budgets could accurately take into account the impact on the operating budget for all capital dollars expended on improvements, expansion, renovation, or addition of facilities and parkland.
- **Renovation of existing facilities could receive higher funding priority over the acquisition of new facilities.** Given the large number of facilities that are currently maintained below an acceptable level, funding priority could go to the necessary upgrades on these facilities prior to additional facilities (and the associated additional annual maintenance costs).
- **New residential and commercial developments could be required to cover a share of park and recreation improvement costs.** Changes in development patterns have a direct impact upon the service demand and services desired from the Department. These costs could be shared with the developer's of the housing/buildings that are contributing to the increased demand. The City, while it does charge a Quimby fee, does not avail itself of park development impact fees. Quimby Fees can be collected from residential subdivisions for park or recreational purposes. However, Quimby fees **cannot** be collected from commercial developments, apartment projects, or subdivisions of fewer than five (5) parcels. To ensure that such development mitigates its parks impacts, an equivalent AB 1600 fee could be collected. Also, there is authority for the proposition that Quimby fees can only be based on the value of unimproved land, and not include park improvements. Cities will often adopt an AB 1600 impact fee to "fill in the gap" left by Quimby. Also, Quimby fees cannot be used to maintain parks or recreation facilities, only for the initial development. Therefore, under this approach, cities could have three separate fees that relate to park and recreation facilities: (1) a Quimby fee applicable to residential subdivisions for the purchase of park or recreation acreage, (2) an AB 1600 fee applicable to commercial, condominium and residential developments of fewer than five parcels for the same purpose, and (3) an AB 1600 fee applicable to all new development for the construction of park improvements. The City of Sacramento, for example charges the following park development impact fees for non-infill development.

<b>Land Use</b>	<b>Fee</b>
Single family/unit	\$4,277
Duplex/unit	\$3,221
Multi-family, Mobile Home, Other/unit	\$2,520
Retail, Commercial Services, Other/sq. ft.	\$0.30
Commercial Office/sq. ft.	\$0.41
Industrial/sq. ft.	\$0.13

- **Shared facilities with other public entities and with private or non-profit entities could be pursued to leverage the ability to finance improvements and maintenance costs of buildings.** Increased shared use of buildings with entities such as schools, non-profits, and others will generate additional resources to be used for the maintenance needs of these facilities.
- **In addition to making decisions based upon the established financing principles, the current charges for services, such as childcare, could be reviewed to determine if the costs of services provided are recovered by the fees charged.** While in some cases, it may not be practical or desirable to have service fees cover all costs associated with the provisions of a service including replacement, renewal, and upgrading, this could be a conscious decision and not one that occurs due to inaction.

The strategic plan – to be achievable - must establish feasible and effective financing strategies for parks and community facilities, as well as ongoing funding for operations and maintenance. The financing issue must be recognized as a challenge from the start of the strategic planning effort. In addressing this challenge, the Department could put forward a number of funding strategies including dedicated local funding sources, Quimby fees and AB 1600 fees, operating and program recreation program fees and charges including MRP, concession and lease revenues, parking fees, redevelopment agency tax increment funding, grant funding, and private grants and endowments including partnerships with businesses in Los Angeles.

**(5) Monitor, Evaluate and Report on the Departmental Performance in Accomplishing the Strategic Plan.**

To evaluate the progress of implementation of the citywide master plan, performance measures could be developed that are tied to the goals and objectives of the citywide master plan. As these measures are implemented, the Department could build a database of information.

## **APPENDIX 2**

## **APPENDIX 2 – POSSIBLE APPROACH TO THE DEVELOPMENT OF A STRATEGIC PLAN**

While the Department is developing a strategic plan, it does not include a number of key elements such as a community needs assessment, or an analysis of strengths, weaknesses, opportunities, and threats (SWOT), and goals and objectives that are based upon the SWOT, community needs assessment, and trends. A possible approach to the expansion of the strategic plan to ensure that it results in a product that provides long-term directions necessary for the Department is presented below.

### **(1) The Department Could Conduct An Assessment of the Recreation and Park Needs of City Residents As A First Step in Expanding the Scope of the Strategic Plan.**

As the first step in expanding the strategic planning effort, the Department could undertake an assessment of the recreational and park needs of City residents. This effort could involve a survey of residents within the service area and the utilization of focus groups to elicit critical information regarding the public's needs, interests, and attitudes towards services currently performed and those desired. Additionally, this will provide critical benchmark data against which future performance of the Department can be measured. While a community recreation needs survey was previously conducted in 1999, this information could be updated.

The survey could be a random sampling of residents from all areas of the City, stratified by community, so that the responses reflect the demographics of the City as a whole. The survey could not only focus on citizen's views regarding the current services provided (appropriateness and satisfaction level) but also with future services that the community would like to see. It could also question individuals specifically regarding why (or why not) services are utilized. The survey could contain questions that address the following areas:

- Demographic data of the respondent;
- Leisure interests and how frequently the respondent engages in leisure activities such as aquatics, arts and crafts, indoor fitness, performing arts, sports and athletics, etc. – such as once a month or more, less than once a month, or never;
- Reasons for participation, such as availability of parking, cleanliness of facilities, hours of operation, how close the programs were to their culture, where the program or park is located, etc., and how important these factors are to the decision to participate or visit parks or facilities;

- Opinions regarding current Recreation and Parks services and facilities in the City such as whether the respondent was aware of the programs and activities offered by the Department, was satisfied by the recreation opportunities, felt safe in parks, was willing to pay reasonable user fees for recreation opportunities, whether it was more important to maintain and upgrade existing facilities than build new facilities, etc.;
- Opinions regarding current Department facilities and recreation programming asking the respondent to indicate whether they utilize these facilities and programs or would if these facilities and recreation programs were located in closer proximity; and
- Opinions regarding the relative importance of facilities and recreation programming in allocating additional funding such as senior programs, teen programs, development of new parks and facilities, rehabilitation of existing parks and facilities, etc.

The results of this survey will provide an indication of the respondent's needs and where they believe resources could be concentrated to meet these needs.

## **(2) The Department Could Identify Major Trends Impacting Their Operations**

In developing the strategic plan, the Department could identify and analyze the mid-term and long-term trends that may impact the way it conducts its business. This analysis could first identify major trends and then answer questions about the implication that these trends would have upon the Department and the parks and facilities that it maintains and operates. The trends that could be considered include:

- Demographic and socio-economic trends;
- Life style and behavioral trends;
- Societal trends;
- Environmental and ecological trends;
- Political trends/public accountability;
- City planning and economic development trends;
- Park and facility design trends;
- Park and facility maintenance trends;
- Cultural and historic preservation trends;

- Financial management trends; and
- Organizational management trends.

The development of an effective strategic plan for the Department could be well grounded through the identification of trends relating its services and the long-term implication on the services provided by the Department. There are a number of sources for these trends such as the report issued by the State of California State Department of Parks and Recreation in 2005 entitled “Parks and Recreation Trends in California.” Understanding these trends will better position the Department to successfully respond to these changes and secure greater support.

**(3) The Department Could Conduct An Environmental Scan To Assess Its Strengths, Weaknesses, Opportunities and Threats.**

The Department could conduct an in-depth environmental scan to identify and assess its current strengths, weaknesses, opportunities, and threats (SWOT). This SWOT analysis would evaluate the current situation of the Department and serve as an informational tool for the development of a strategic plan. This is accomplished by assessing the Department’s current strengths and weaknesses in addition to opportunities and threats. The SWOT analysis could be developed utilizing the community input and trend analysis previously developed. The SWOT analysis could document staff’s understanding of the strengths, weaknesses, opportunities, threats and constraints that the Department faces when delivering its programs and services.

**(4) Develop Goals and Objectives Based Upon the SWOT Analysis, Community Needs Assessment, and Trends.**

As previously noted, the Department is currently developing a series of goals and objectives for the Department. However, the detailed analysis outlined above does not appear to have been conducted in advance of their development. This limits the ability to tie these goals and objectives directly to the desired vision and mission developed by the Department.

The Department could develop goals that give action to their needs assessment, trend analysis, and SWOT analysis. Possible goals for maintenance activities are presented below.

- **Maintain all parks and facilities as valuable community assets.** All parks and facilities owned or operated by the Department will be maintained to preserve these valuable community assets. Regardless of whether Departmental staff, partner Departments, or volunteers perform the maintenance tasks, the Department is responsible for quality control.

- **Maintain each park or facility according to its function.** Maintenance level of service will be based on the function of each park and facility. For example, turf could be provided and maintained where it supports recreational use. Turf is needed for organized sports activities, and it is also needed for open play within certain classifications of parks.
- **Provide a tiered system of maintenance.** Because recreation programs guide maintenance decisions, the Department shall have a tiered maintenance system to ensure that maintenance dollars are invested in tasks that support recreation programs.
- **Maintain parks and recreation facilities equitably.** The tiered maintenance system and the detailed maintenance management plan will ensure that maintenance is conducted equitably throughout the community. This means that parks of one classification, such as neighborhood parks, will be maintained at the same standard throughout the city.
- **Make preventative maintenance a higher priority.** Preventative maintenance includes tasks that extend the life of Departmental facilities, minimize deterioration, and ensure efficient operation. In the long term, preventative maintenance can result in less crisis response and greater maintenance efficiency.

Objectives could be developed that not only build upon the identified strengths and opportunities but overcome identified weaknesses and threats.

**(5) The Department Could Continuously Monitor and Periodically Report the Accomplishment of the Strategic Plan**

The Department could review the strategies within their strategic plan annually and the goals and objectives designed to accomplish these strategies. This review could assess whether the implementation of these strategies is progressing according to schedule, within budget (if applicable) and if helping the Department achieve their mission. If any of these questions cannot be answered in the affirmative, then the Department could take this opportunity to reintroduce the issue and see how the Department and their management team may correct the problems. If strategies seem to be in line with their goals and objectives, but desired outcomes are not achieved, then the Department may want to revise its goals and objectives.

## **APPENDIX 3**

## APPENDIX 3 – POSSIBLE APPROACH TO THE DEVELOPMENT OF GOALS, OBJECTIVES, AND PERFORMANCE MEASURES

The Department, as noted earlier in this report, has developed and expanded its goals. The Department, however, has not developed goals, objectives, and performance measures at the program level such as Park Forestry, Facility Maintenance and Repair, Park Maintenance, Golf Maintenance, etc. The development of goals, objectives and performance measures at the program level by the Department could consider the guidelines presented below.

- **Goals could be developed for each division and each program within a division.** These goals could give specific direction on how the divisions, and the programs within these divisions, will contribute to the mission and goals of the Department. These goals could not be quantifiable. These goals could span multiple years. Examples of the programs that could develop goals include Forestry, Facility Maintenance, Park Maintenance, Golf, Maintenance and Operations etc.
- **Objectives could be developed for each program.** Objectives are outcome-based statements of specifically what will be achieved within the fiscal year. Each program could have 3 to 5 objectives. The objectives could clearly demonstrate progress toward the goal of the program. These objectives could be written to allow measurement of progress, and be quantifiable.
- **Performance measures could be developed for each objective.** Performance measures could convey the extent to which an objective has been met. These measures could include a range of indicators including input, output, efficiency, service quality and outcome. For example, an input measure would be the value of the resources used to produce output such as the dollars spent on contract tree trimming in parks or the staff hours used to trim trees in parks. An output measure is the quantity or number of units produced such as the number of park trees that were thinned. An efficiency measure is the inputs used per unit of output such as the cost per park tree thinned. A service quality measure is the degree to which customers are satisfied with a program or how accurately or timely a service is provided such as the average cycle to trim all of the trees within the City's parks. An outcome measure is the qualitative consequences associated with a program or service – the ultimate benefit to a customer. An example would be the amount of claims paid by the City for park tree branches that fall and hit cars or residents attending parks.

- **The Department could develop reliable and accurate data to measure performance.** Each performance measure needs a consistent reliable data source. The Department could acquire and install the information systems necessary to develop good data sources. This would include a range of data sources such as citizen satisfaction indicators, parks and facility condition ratings, etc. Departmental management and staff could work closely together to define the method, frequency, and reliability of data collection.
- **The Department could communicate and use performance measurement data for decision-making and accountability reporting.** Top management of the Department could communicate their commitment to the value and use of goals, objectives, and performance measures to all Departmental managers and supervisors. Management could involve line managers and staff in the development and reporting of goals, objectives, and performance measures. The Departmental managers could communicate the results of these goals, objectives, and performance measures internally to its staff.

## **APPENDIX 4**

## APPENDIX 4 – POSSIBLE APPROACH TO THE DEVELOPMENT OF A COMPREHENSIVE ASSET INVENTORY

While it will not be easy, the Department could develop a comprehensive inventory of its assets. To develop this comprehensive inventory, the Department could consider taking the following steps:

- **Identify the objectives of the COTS maintenance management system including how the asset inventory data will be utilized to maintain and repair these assets.** Understanding how the asset inventory data will be utilized is necessary to identify the data to collect. Data could initially be utilized to establish a preventive and corrective maintenance program. In the longer term, data could be utilized to document the facility maintenance, repair, rehabilitation, and renewal expenditures as a percentage of current replacement value. Not all data needs to be collected initially. Some may be essential to the initial phase of the COTS maintenance management system, while others, such as current replacement value, can be collected during later phases. It is unrealistic to expect that all objectives of the COTS maintenance management system will be achieved at once. The Department could start with the most important and expand the data within the system over time.
- **Identify sources of pertinent data.** Once the required data for the COTS maintenance management system is defined, the Department must determine how to obtain the data and how it will be entered into the new system. Necessary data is currently in paper records or must be documented and collected.
- **Determine who will collect and enter the initial asset inventory.** The collection of data is time intensive and costly. Data collection is typically collected in house or through outsourcing. Evaluating the merits of these two options lies primarily with the costs associated with each. Using current personnel who are not devoted specifically to data collection will take them away from present duties. On the other hand, outsourcing requires that the cost be incorporated into the asset management budget.
- **Assign responsibility for updating the asset inventory data.** The time and expense of collecting this asset inventory data will be wasted unless the inventory is kept current. The responsibility for updating this asset inventory needs to be clearly assigned.

- **Consider how the information will be collected and transferred to the COTS maintenance management system.** Consider if new forms could be created or the information could be collected using handheld electronic devices.
- **Document specific asset inventory data to be collected as well as the quality control procedures.** In addition to identifying the data entry and collection staff, determine how this data will be quality controlled. Data validation must ensure accuracy, and identify inconsistencies and potential problems, particularly during the early stages of the data collection.
- **Establish a timeline for data collection and a project manager responsible for managing data collection on a citywide basis.** The Department could develop a schedule for data collection and clearly assign responsibility to a mid-level manager for managing this process.
- **Before beginning the initial asset inventory, install and familiarize the data collection team with software and hardware tools, the required data and data collection and entry procedures.** Training could be provided to all team members. Since the initial inventory will involve manual data collection, the Department could develop electronic forms using PDA's to gather the information in the field.
- **Conduct a pilot program.** Completing a pilot program is an important part of making sure the asset inventory data collection meets needs and expectations. The assets selected for the pilot program could represent the assets as a whole and be limited in size. Once pilot program data is in the system, both the data and the process could be reviewed and quality controlled. Based upon the findings of the pilot project, the Department could revisit the timeframe for collecting the asset inventory data.

The General Services Department has already begun the collection of asset inventory data for the City facilities assigned to its care. The General Services Department estimated that it requires approximately seven months using a five-person team to collect this data. Given the amount of building square footage maintained by the Department of Recreation and Parks, it requires approximately two months to collect the same data for those facilities. To assure consistency in the data collection throughout the City, the same five-person team that is collecting the data for the General Services Department could also collect the same data for the Department of Recreation and Parks.

## **APPENDIX 5**

## APPENDIX 5 – POSSIBLE APPROACH TO THE DEVELOPMENT OF A MAINTENANCE MANAGEMENT SYSTEM

The development and installation of a maintenance management system could consider the elements and steps presented in this Appendix.

The components of a successful system include:

- **Asset inventory.** An asset inventory needs to exist in some basic format in every organization that effectively manages the maintenance of these assets. Keeping asset inventory information - construction dates and current replacement value, features, square footage of turf, square footage of groundcover, square footage of shrub beds, location, - up-to-date, accessible and understandable is the challenge of inventory management.
- **Work Management.** Work management includes all the activities involved in maintaining assets at a predefined condition level. The Department has not maintained records to track the maintenance and repair of parks, buildings, golf courses, or the park forest or to justify the activities associated with maintenance, rehabilitation or reconstruction. While a work management system can't replace the judgments of individuals responsible for these tasks, the system can recommend maintenance actions. Effective work management predicts and tracks the costs of labor, equipment and materials needed for maintenance and budget planning, and monitors the performance of actions taken.
- **Service Request Management.** As a starting point for many of the work orders, service requests provide access to information such as citizen requests, work order generation, and caller history. The ability to track requests provides the Department with the ability to keep better track of their data and in turn improve service.
- **GIS Integration** Linking a database and geographic information systems (GIS) provides more options to analyze asset information.
  - A GIS can display asset symbols on a map with links to their corresponding database records. The GIS provides the ability to analyze data based on geographic information, allowing patterns to emerge on a map that may not be as obvious in rows and columns of data.

- Asset information can be shared in a visual format that is often better understood by others including city councils and the public.
- Finding asset location is faster and easier with the help of a map.

A commercial off-the-shelf (COTS) maintenance management system will be acquired by the General Services Department in fiscal year 2005-06. The Department plans to utilize this same system. However, there are a number of steps that need to be accomplished before the COTS maintenance management system can be effectively utilized. These steps are presented below.

**(1) An Inventory of the Primary Work Activities Performed by Parks, Golf Courses, Facility Maintenance, and Forestry Needs to Be Developed.**

The Department needs to assure that all of the primary work activities (i.e., mowing, edging, fertilizing, aerating, planting, weed control, cleaning restrooms, pest control, pruning shrubs, etc.) that consume the majority of staff work hours are defined. All 2,080 staff hours for each employee could be included within the system, including all forms of leave. The work activities need to be carefully defined to assure that the same terminology is used for the work performed by staff. Each of these work activities could define the unit of measure. Examples of work activities and units of measure are provided below.

Work Activity	Unit of Measure
Change cups on golf green, regular course	Golf green
Clean restroom – one men’s and one women’s	Restroom
Pickup litter	Acre
Sweep sidewalks and courts, power	1,000 square feet
Check sprinkler stations	Station

**(2) Define the Levels of Service To Be Provided.**

Levels of service could vary depending on the type of facility, intensity of use, and local standards. For example, community parks that are widely used for a variety of sports activities generally will require a higher level of maintenance than smaller neighborhood parks. This means that different levels of service will be present throughout the City's park system. Service levels are not fixed, but rather variable levels to be applied to individual facilities based upon their usage and unique demands. An example for tennis courts and how this level of service could vary is presented below. The levels of service for tennis courts that vary are the frequency of the sweeping of the courts, the frequency

for repainting the lines, and the frequency for replacing the nets. These levels of service vary depending upon the type of usage of these tennis courts – courts used for tournaments, courts at community parks, and courts at neighborhood parks.

Maintenance Item	Maintenance Standards		
	Tournament – high quality courts for use by better players for tournaments and normally serve the entire City	Recreation – courts provided in good condition suitable for average players normally serve a region	Neighborhood – courts suitable for beginning players and serve a neighborhood
<b>Number of courts</b>	3 or more provided in a grouping	3 or more provided in a grouping	1 or 2, preferable 2 in a grouping
<b>Nets</b>	Nylon or fabric replaced each year	Nylon or fabric, replaced as needed	Nylon
<b>Surface</b>	Colored asphalt, swept weekly, no cracks larger than ½”	Asphalt or concrete, preferably colored, surface swept monthly, no cracks larger than 1”	Asphalt or concrete, surface swept once per season, no cracks larger than 1 and ½ “
<b>Lines</b>	Repainted annually	Repainted every 2 years	Repainted every 3 years
<b>Benches</b>	Player benches provided	Player benches provided	None
<b>Lighting</b>	Provided, intensity minimum outdoor 30 foot candle	Provided when possible, intensity outdoor 10 to 20 foot candle	None
<b>Spectator seating</b>	Provided for special events	None	None
<b>Wind screening</b>	Provided	None	None
<b>Bounce wall</b>	None	At least one court size provided	None

**(3) Performance Standards Need to Be Developed.**

Performance standards are formally established criteria for determining the need for work, required quality of work, the resources necessary to achieve quality, the expected rate of productivity, etc. Performance standards are developed for each maintenance activity (i.e., mowing, edging, fertilizing, aerating, planting, weed control, cleaning restrooms, pest control, pruning shrubs, etc.), and could include, at a minimum, six components:

- A brief description of the specific work involved;
- The frequency with which the work activity could be performed (or the level of service);
- The crew size required for the job;
- The equipment, material, and tools needed;

- The performance expectations for each job or average daily productivity; and
- The recommended procedures for completing the job.

**(4) An Annual Work Plan Needs to Be Developed Using the COTS Maintenance Management System.**

An annual work plan needs to be developed within the COTS maintenance management system that will not only guide prioritization and performance of specific tasks, but will provide the managers within park maintenance, facilities maintenance and repair, golf course maintenance, and park forestry with standards to which staff can be held accountable for results. Annual work plans will need to be developed for each district, area, and region, each golf course, each trade for facility maintenance and repair, and for forestry. The annual work plan estimates the kind and amount of work to be done in the next fiscal year. The managers in these programs could prepare an annual work plan as part of the budgetary preparation process. The development of an annual work plan takes into consideration two major questions: (1) What work is needed to provide the desired levels of service to the public, and (2) What levels of staff, equipment, and materials will be needed to provide that level of service and at what cost?

The first line supervisors and middle managers could develop this annual work plan. Several basic steps are required to develop an annual work plan including the following:

- An updated and comprehensive inventory of parks and facilities could be constructed to determine the volume of work that will need to be accomplished.
- The quantity of service must be determined. This requires the number of units (such as the acreage of turf to be mowed using a rotary riding mower with three decks) be multiplied times the frequency that the work activity is to be performed on an annual basis (the turf is mowed weekly 52 weeks per year).
- The resource requirements of the annual work plan must be estimated. For example, if 100 acres are to be mowed weekly and a one-person crew can mow 18 acres of turf per work day, then mowing would require 5.6 staff days per week or 291 staff days annually.

**(5) A Monthly Performance Report Could Be Generated Using the COTS Maintenance Management System Comparing Planned Versus Actual Performance and Costs.**

The COTS maintenance management system could be utilized to produce a monthly work activity status report that provide comparisons of accomplishments compared to the annual work program as well as unit costs. The report could be designed to enable:

- A comparison of planned versus actual staff hours per work activity for the previous month and year-to-date for each work activity;
- A comparison of actual versus planned work output (miles of curbs swept by street sweepers) per month and year-to-date for each work activity;
- A unit cost analysis that compares the planned versus actual unit costs for each work activity per month and year-to-date; and
- A comparison of actual productivity (work output per staff hour) versus the expected productivity as stated in the performance standards.

The intent of the monthly performance report is to report actual accomplishments against the annual work plan.

**(6) Route-Based Work Orders or Schedules Could Be Developed Using the COTS Maintenance Management System.**

The first line supervisors could prepare a bi-weekly schedule; this is the most critical component of the COTS maintenance management system. It implements the annual work program. These bi-weekly schedules establish a timetable for what is to be accomplished by specific staff on a specific day at a specific location.

The maintenance management system developed and utilized by the Department in the 1960's and 1970's relied on a mix of route sheets and work orders. The bi-weekly schedule developed by the COTS maintenance management system could similarly rely on route sheets and work orders. Route sheets, or route-based work orders, could be utilized for the routine work that is performed each week in multiple locations in the maintenance of parks, facilities, and golf courses using a single work order issued by the COTS maintenance management system.

The COTS maintenance management system could utilize work orders for that work that is not routinely performed each week such as aerifying turf, fertilizing turf, trimming trees in parks, etc.

**(7) Handheld Devices Could Be Utilized To Report the Work Accomplished Within the COTS Maintenance Management System.**

Tracking the work accomplished is another important part of an effective maintenance management system. This is unfortunately, a time intensive task given the number of staff involved. Handheld devices can, however, diminish the time and resources required.

With handheld devices, the maintenance staff of the Department can become mobile, and paperless. This will ensure the ability to manage work orders and other data electronically and synchronize on demand or automatically on a periodic basis via a wireless network. If the handheld device has scanning capability, the bar coding function could increase accuracy and productivity even further by scanning bar codes on building equipment or to scan labor, material and equipment codes to eliminate manual data entry. Other features and functionality of these handheld devices include the following:

- Download/upload assigned work orders with priority;
- Track the time worked on an assignment using an automatic start and stop feature;
- Transfer completed work order information (comments, labor, material, other charges) to the COTS database directly from the handheld device;
- Update lookup data on the handheld device;
- Create new inventory records for areas and equipment on the handheld device, and transfer this data directly to the COTS database;
- Create new work orders from the handheld device while performing facility inspections;
- Conduct inventories and update the parts records from the handheld device directly to the COTS database;
- Issue parts and upload all data from the handheld device at the end of the day;
- Increase efficiency and accuracy utilizing bar coding technology that quickly scans bar codes representing parks, golf courses, or physical assets;

- Display preventive maintenance task sheets on the handheld device; and
- Use a detailed preventive maintenance checklist and record the results directly on the handheld device.

When considering hardware options that can increase system efficiency, wireless technology is an area to consider.

## **APPENDIX 6**

## APPENDIX 6 – POSSIBLE APPROACH TO THE DEVELOPMENT OF A PREVENTIVE MAINTENANCE PROGRAM

The Department could establish and implement a preventive maintenance program. Possible elements of this preventive maintenance program are presented below.

- **Establish levels of service necessary to preventively maintain the facilities.** In establishing levels of service, the Department could document what maintenance activities are needed to ensure that this particular system/component meets or exceeds its life expectancy? Manufacturer's literature and the experience of the Departments' staff are some ways to determine both acceptable life-cycles and what preventive maintenance work would result in achieving those life expectancies in the most efficient manner.
- **Prepare an annual work program for preventive maintenance of facilities.** Once the levels of service have been established, setting the tasks into a work plan is the next step. The list of tasks to be performed could be described in detail. The frequency and nature of the work could be clearly stated. The materials to be used are specified in considerable depth and the manner in which the work is to be accomplished must be expressed in simple language.
- **Develop a formal work planning and scheduling system for preventive maintenance of these facilities.** The heart of any preventive maintenance program is scheduling and assigning specific preventive maintenance tasks. This is almost always done using a work order system. This element of the preventive maintenance program takes the work items developed for each facility component, such as the quarterly inspection of a rooftop HVAC unit, and assigns them to the appropriate trade or team according to the established structure and schedule.
- **Report actual versus planned results of preventive maintenance.** Effective preventive maintenance programs depend on feedback from trades staff using the work orders and a reporting/tracking system of costs associated with the work order. This information is used to maintain the proper balance between preventive maintenance and renewal and replacement efforts. Through a combination of informal evaluations and formal audits, a reporting system could be established to analyze the Department's maintenance system to achieve cost-effective maintenance.

Much of these elements were identified earlier in the description of the maintenance management system and the COTS computerized maintenance management system. However, the Department could consider initiating the preventive maintenance of its facilities in the short-term. The acquisition and installation of a COTS computerized maintenance management system will likely take a number of years. The elements necessary for effective preventive maintenance of the Department's facilities could not wait until that system is installed. The Department could modify its existing facility management work order system to bridge the gap until the COTS computerized maintenance management system is installed and implemented.