



MEMORANDUM

March 21, 2002

TO: Planning, Housing and Economic Development Committee
Management and Fiscal Policy Committee

FROM: Jennifer Kimball, Legislative Analyst 
Scott Brown, Legislative Analyst 
Office of Legislative Oversight

SUBJECT: **FY 02 Intensive Budget Review Project #6:
Managing Park Maintenance Costs: A Comparative Study**

The Committees' March 25 worksession agenda includes a review of the FY 02 Intensive Budget Review (IBR) project report on managing park maintenance costs and the related discussion of M-NCPPC's Technology Innovation Fund application for a new automated system for park maintenance.

This cover memo provides background information, outlines the IBR report's findings, and presents the IBR report's recommendations for Committee discussion. **The full IBR report, Managing Park Maintenance Costs: A Comparative Study, is attached at ©1.** A memo listing all of the FY 02 IBR projects is attached at ©74.

Staff recommend the following agenda for the Committee's review of the IBR report:

15 minutes	OLO overview of the IBR report findings and recommendations
20 minutes	Committee discussion of OLO's recommendations

Background

The Council needs detailed information about maintenance activities and costs to enhance budget and policy decision-making. The Council included an Intensive Budget Review on OLO's FY 2002 Work Program to research approaches to tracking park maintenance cost data, as well as strategies that other jurisdictions use to allocate park maintenance resources.

This IBR report briefly describes M-NCPPC's maintenance of parks in Montgomery County. The remainder of the report describes how nine jurisdictions in the U.S. track and use park maintenance data, including lessons learned about implementation. It also describes resource allocation/cost saving strategies that the jurisdictions use. The report concludes with recommendations to enhance Council consideration of approaches to track maintenance costs of Montgomery County parks.

The second item on the joint Committee agenda is discussion of M-NCPPC's \$920,000 Technology Innovation Fund (TIF) request for a Work Order Management/Planned Lifecycle Asset Replacement system. The TIF request responds to the Council's need for additional data on park maintenance costs.

A memo from Council staff for the TIF application item on the Committees' agenda provides detailed background and analysis of the TIF application. The attached IBR does not assess the TIF application. However, OLO recommends that the Committees consider the TIF application within the context of the information provided in this IBR report.

Summary of Findings

In sum, OLO found that:

- The Council appropriated \$54.2 million to the M-NCPPC Park Fund in FY 2002. Of the total, approximately \$27.98 million (52%) supports Montgomery County park maintenance activities.
- Currently, M-NCPPC does not have a system in place to track and report detailed information about park maintenance activities and costs. As a result, the appropriate level of operating and personnel resources is difficult to assess.
- To begin to address park maintenance information needs, in 2001, M-NCPPC completed: The Park Costing Study; Parks Automation Study; and Technology Innovation Fund (TIF) application.
- Research indicates an industry-wide movement to track park maintenance costs to enhance fiscal, management, and policy decision making. Jurisdictions interviewed take different approaches to collecting cost data, but agree that implementing an automated system designed specifically for tracking maintenance is the most efficient and effective approach to collecting the data.
- Jurisdictions interviewed reported several lessons learned from implementing a park maintenance automation system, including it takes up to two years to fully implement a new automated system, success depends on staff buy-in and cooperation, and successful implementation requires a detailed implementation plan, and

- The jurisdictions interviewed combine information technology with other management tools, such as an updated inventory of resources, detailed park maintenance standards, and innovative resource allocation/cost saving strategies.

OLO Recommendations for Committee Discussion

Recommendation 1. OLO recommends that the Council encourage M-NCPPC efforts to track Montgomery County park maintenance costs. The Council should consider the M-NCPPC Technology Innovation Fund (TIF) application in the context of the information provided in this report, especially the lessons learned from other jurisdictions about implementation.

OLO recommends that the Council encourage M-NCPPC efforts to track labor and materials cost data and use the information collected to enhance Council decision-making. The Council can use the information to understand the impact of budget changes on the maintenance program, and to identify priorities for allocating resources. The information will also help M-NCPPC to measure maintenance activities, and to plan for the maintenance needs of new parks.

OLO also recommends that the Council consider the TIF application in the context of the information in this report, in particular the lessons learned about implementation.

Recommendation 2. If the Council approves funding for an automation system to track maintenance costs, OLO recommends that the Council request that M-NCPPC develop a detailed implementation plan and report regularly to the Council on the status of implementation.

Interviewees from other jurisdictions stressed the importance of the process of implementing a new automated systems. Therefore, OLO recommends that if the Council approves the TIF funding request, the Council should request M-NCPPC to develop a detailed implementation plan. OLO also recommends that the Council request regular reports from M-NCPPC on the status of implementation.

OLO recommends that the implementation plan include a:

- Detailed explanation of the purpose, requirements, and components of the system,
- Plan for integrating the automated system into the daily management of park maintenance program,
- Strategy for securing staff buy-in, and
- Plan for making the maintenance standards part of the resource allocation process.

Recommendation 3. OLO recommends that the Council ask M-NCPPC to investigate resource allocation and management strategies employed by other jurisdictions, and report on potential strategies for Council consideration in reviewing future budget request.

The jurisdictions interviewed do not rely solely on an automated system for effective park maintenance management. Best practice park management combines information technology with other management tools, such as an updated inventory of resources, detailed park maintenance standards, and innovative resource allocation/cost saving strategies. Examples of resource allocation/cost saving strategies that other jurisdictions use include:

1. Only track maintenance costs for the largest and most used parks as an initial step in tracking cost data,
2. Establish different maintenance standards for different categories of parks and allocate resources based on the categories,
3. Increase user fees,
4. Hire a cost effective blend of full time staff, seasonal workers, and contractors to perform maintenance tasks, and
5. Limit and park maintenance activity during the winter months.

OLO recommends that the Council ask M-NCPPC to investigate the applicability of resource allocation strategies used by other jurisdictions. OLO also recommends that the Council ask M-NCPPC to report on potential strategies for Council consideration during future M-NCPPC budget reviews.

MONTGOMERY COUNTY COUNCIL

FY02 INTENSIVE BUDGET REVIEW PROJECT # 6

MANAGING PARK MAINTENANCE COSTS: A COMPARATIVE STUDY



JENNIFER KIMBALL, LEGISLATIVE ANALYST

SCOTT BROWN, LEGISLATIVE ANALYST

OFFICE OF LEGISLATIVE OVERSIGHT

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Executive Summary

Detailed information on park maintenance costs enhances fiscal, management, and policy decision making. Research indicates an industry-wide movement to track maintenance costs. Park professionals interviewed by the Office of Legislative Oversight (OLO) agree that implementing an automated system designed specifically for tracking maintenance is the most efficient and effective approach to collecting the data. OLO found that jurisdictions with this kind of system can more easily:

- Report the cost of specific maintenance tasks,
- Report the cost of maintaining individual parks,
- Adjust resources and activities as needed throughout the year,
- Justify changes to park maintenance budgets,
- Conduct a detailed cost/benefit analysis of providing services in-house versus on contract, and
- Benchmark services against the private sector and other jurisdictions.

Jurisdictions reported several lessons learned from implementing a park maintenance automation system. First, it can take up to two years to fully implement a new automated system that produces detailed cost reports for use in decision making. Second, the success of the system depends on initial staff buy-in and ongoing cooperation. Third, successful implementation requires a detailed implementation plan.

The jurisdictions interviewed do not rely solely on an automated system for effective park maintenance management. Best practices cited by park professionals combine information technology with other management tools, such as an inventory of resources, detailed park maintenance standards, and innovative resource allocation/cost saving strategies.

Based on the research, OLO recommends that the Council encourage M-NCPPC's efforts to track park maintenance costs. OLO also recommends that the Council request M-NCPPC to:

- Develop a detailed implementation plan to accompany the proposed automated park maintenance system, and
- Explore and report back on the applicability of resource allocation and management strategies employed by other jurisdictions.

I. Introduction

A. Scope

Park maintenance costs represent a significant portion of M-NCPPC's operating budget. The Council needs more information about the cost of park maintenance activities for fiscal, management, and policy decision making.

This Intensive Budget Review (IBR) report presents background information about the County's park system and maintenance. The report describes tools that other jurisdictions use to track park maintenance activities, costs, and outcomes. It also identifies strategies that other jurisdictions use to allocate resources. The report concludes with findings and recommendations to improve how M-NCPPC's Department of Park and Planning plans, implements, and tracks park maintenance activities and costs.

The report describes jurisdictions comparable to Montgomery County's park system, as well as jurisdictions that represent a broad range of approaches to tracking costs and allocating resources. However, Legislative Staff recognize that additional research is needed to fully understand the applicability in Montgomery County of the approaches and strategies used in other jurisdictions.

B. Organization

This IBR is organized as follows:

Part II. Background describes the purpose of this study. It also provides a brief overview of the park system in Montgomery County.

Part III. M-NCPPC Park Maintenance Overview describes maintenance funding, activities, standards, and workforce planning.

Part IV. Relevant Studies and Documents describe the Park Costing Study, the Parks Automation Study, and the M-NCPPC Technology Innovation Fund (TIF) Application. M-NCPPC produced the Costing Study and the TIF application. M-NCPPC hired a consultant to complete the Parks Automation Study.

Part V. Managing Park Maintenance Costs in Other Jurisdictions summarizes how nine jurisdictions plan, track and manage park maintenance activities and costs. It also explains strategies that the nine jurisdictions use to make budget decisions. The jurisdictions studied include: Fairfax County and Prince William County, VA; Hennepin County, MN; Orange County, FL; Rockville, MD; Portland, OR; Modesto, CA; Phoenix, AZ; and the Greater Vancouver Regional District, British Columbia. Attachment 1 (©42) of the report includes a detailed description of each jurisdiction's park maintenance.

Part VI. Summary of Findings presents six findings from Legislative staff's research and analysis.

Part VII. Recommendations present three recommendations for Council consideration.

C. Methodology

Jennifer Kimball and Scott Brown in the Office of Legislative Oversight conducted this IBR, with assistance from Marlene Michaelson on Council Staff. Staff conducted background research on the Montgomery County park system and worked with M-NCPPC to identify jurisdictions for the comparative analysis. Legislative staff collected responses, surveyed additional jurisdictions, and conducted phone interviews.

D. Acknowledgements

Legislative staff appreciate the assistance of M-NCPPC staff and the individuals from other jurisdictions that provided information for the IBR. OLO thanks Charles Loehrer, Don Cochran, Trudye Johnson, Terry Brooks, Les Straw and Park Managers from M-NCPPC.

Legislative staff thanks all the individuals who participated in the survey, and the following individuals from the nine jurisdictions described in this report: Brian Daly, Fairfax County; Tom Vetsch, Hennepin County; Gudren Jensen, Greater Vancouver Regional District; Mark Kiboloski, City of Rockville; Duane Frederick, City of Modesto; Mary Husff and Bob Downing, City of Portland; John Robb and Ken Gillette, Orange County, FL; Carol Ross, City of Phoenix; and Tammy Kushner, Prince William County.

OLO would also like to thank the following people for their insights on park maintenance management: Sue Hazlett and Lisa Giehl, Virginia Beach; John Shank, Baltimore County; Curtis Black, City of Sunnyvale, CA; William Payne, College of Natural Resources, NC State University; Earl Eyler, Frederick County; Paul Nice, Fairmont Parks Commission, Philadelphia; and Mac Balkman, Arkansas State Department of Parks and Recreation.

II. Background

A. Purpose of the Study

The purpose of this study is to identify methods that other jurisdictions use to manage park maintenance costs, in particular how jurisdictions collect cost data and use it to manage and allocate resources. This comparative information will provide the Council with potential strategies for improving park maintenance policy and budget decision making in Montgomery County.

The Council needs detailed information about park maintenance costs in order to make informed policy and budget decisions. Currently, M-NCPPC does not have a system in place to track and report detailed information about maintenance activities and costs. As a result, the appropriate level of operating and personnel resources is difficult to assess. Specific information that is not currently available includes:

- Time invested in different park maintenance activities,
- Cost of specific maintenance activities,
- Cost of park maintenance at individual parks,
- Resources required to maintain parks to the standards established by M-NCPPC.
- What each dollar invested in park maintenance buys, or
- The specific impact of changes in park maintenance funding.

Detailed maintenance cost information will help M-NCPPC determine the resources needed to maintain parks up to standards, and will help plan for the maintenance needs of new parks in the system. It will also help M-NCPPC measure performance. Additional information will help the Council better understand the cost of different maintenance activities, as well as the impact of budget changes on the maintenance program. The Council can use the information to identify priorities and make budget decisions.

B. Overview of the Park System

The Montgomery County Park and Planning Department operate the 345-park system, which encompasses 30,000 acres. Approximately 8,500 or 28% of the acres are developed. Tables 1 and 2 (page 7) provide detailed information about the types of parks and amenities.

Table 1 – Types of Parks

Type	Number	Acreage
County Wide Parks		
Stream Valley	32	12,466
Regional	5	7,888
Recreational	11	2,867
Conservation Areas	41	2,642
Special	13	1,762
Community Use Parks		
Urban	22	20
Neighborhood	82	632
Local	139	2,014
Total	345	30,408

Table 2 – Park Amenities

Amenity	Number	Amenity	Number
Outdoor Tennis Courts	286	Conference Centers	3
Athletic Fields	254	Equestrian Centers/Stables	3
Playgrounds	221	Lakes/Boat Docks	3/2
Picnic Areas	128	Campgrounds	2
Open Shelters (gazebos)	115	Enclosed ice rinks	2
Basketball Courts	104	Miniature trains	2
Recreation Buildings	34	Public Gardens	2
Exercise Courses	12	Indoor Tennis Facilities	2
Golf Courses	4	Carousel	1
Group Picnic Areas	4	In-Line Skating Rink	1
Nature Centers	4	Hiker/Biker Trails	37.6 miles

III. M-NCPPC Park Maintenance Overview

A. Funding

The Council appropriated \$54.2 million to the M-NCPPC Park Fund in FY 2002. Of the total, approximately \$27.98 million (52%) supports Montgomery County park maintenance activities in the Southern Region, Northern Region, Central Maintenance and Natural Resources Divisions.

Legislative and M-NCPPC staff reviewed the FY 02 budget to identify the dollars in the Park Fund that primarily support maintenance activities. Table 3 indicates that approximately \$27.98 million fund park maintenance activities within five divisions, including the Director of Parks, Natural Resources, Central Maintenance, Northern Region, and Southern Region.

These figures include dollars for some non-maintenance activities because M-NCPPC's budget does not always separate the cost of park maintenance from other park activities. For example, the cost reported of the Trades Management Group includes the cost to maintain M-NCPPC administrative office buildings as well as facilities on parkland.

Table 3 – Approved Park Maintenance Funding by Division, FY 2002

Division	FY 2002 Approved Expenditure	FY 2002 Approved Workyears
Southern Region	\$8.28 million	195
Mowing, trimming, turf maintenance, trash collection, athletic field maintenance, landscaping, custodial service, trail maintenance, court and playground maintenance, facility maintenance, and administrative support		
Central Maintenance	\$7.69 million	124
Fleet Management Maintain and inspect all Park System fleet and equipment		
Trades Management Maintain and repair all buildings, facilities, utility systems, and exhibits (incl. Pedestrian bridges, alarm systems, exterior lighting)		
Northern Region	\$6.40 million	116
Mowing, trimming, turf maintenance, trash collection, athletic field maintenance, landscaping, custodial service, trail maintenance, court and playground maintenance, facility maintenance, and administrative support		
Natural Resources Management	\$3.85 million¹	72
Horticulture Athletic field rehabilitation; turf installation, maintenance and renovation; landscape installation		
Arboriculture Comprehensive tree management program		
Public Gardens Develop and maintain Brookside and McCrillis Gardens		
Pope Farm Nursery Supply trees, shrubs, and plants for the park system, and maintain interior plantings		
Stormwater Facility Maintenance Oversight of a contract to comply with regulations to maintain stormwater facilities		
Natural Resources Management Integrate best management practices for natural resources		
Director of Parks	\$1.76	1.5
Oversight of a contract for MCPS athletic Field maintenance		
Total	\$27.98 million	508.5

¹ Some of the dollars appropriated for the Natural Resources Division fund activities associated with park development rather than park maintenance (e.g., produce landscaping for new parks, review park acquisition proposals).

B. M-NCPPC Maintenance Activities

I. Central Maintenance

Two programs in the Central Maintenance Division contribute to park maintenance, including:

- Fleet Management, and
- Trades/Construction Management, Heavy Equipment, Asphalt, Exhibit Shop.

The Fleet Management program maintains and repairs a fleet of 547 on-road vehicles, 148 trailers, 426 off-road self propelled equipment, 991 pieces of small equipment, and 255 golf carts. The fleet includes vehicles that park maintenance staff use to travel to parks, as well as mowers, trimmers, and other equipment used to maintain parks. Some vehicles maintained by Fleet Management are not used directly for park maintenance.

The Trades Management Group maintains and repairs buildings, facilities, utility systems, and exhibits throughout the park system. The staff consists of carpenters, electricians, plumbers, HVAC mechanics, masons, painters, asphalt crewmembers, and heavy equipment operators. They maintain and repair buildings, signs, paved surfaces, bridges, and other facilities in parks. The Trades Management Group also maintains other facilities, such as administrative office buildings.

II. Natural Resources

Three programs in the Natural Resources Division contribute to park maintenance, including:

- Horticulture,
- Arboriculture, and
- Public Gardens.

Among other duties, Horticulture staff maintain and renovate turf areas and athletic fields, manage wildflower meadows, and care for trees. The Arboriculture program includes a Comprehensive Tree Management Program, which keeps trees on parkland safe and healthy. The Public Gardens program develops and maintains the Brookside and McCrillis Gardens. Maintaining public gardens is the most time/resource-consuming task for the Natural Resources Division

III. Northern and Southern Regions

The Northern and Southern Regions staff conduct the majority of the park maintenance activities, including:

- mowing,
- trimming,
- leaf removal,
- turf and athletic field maintenance,
- trash collection/removal,
- landscaping and tree planting,
- hiking and equestrian trail inspection and maintenance,
- inspection and maintenance at playgrounds/play equipment,
- maintenance of picnic areas and shelters,
- support for special activities (e.g., festivals, races),
- custodial service,
- tennis court, basketball court, and multi-use court maintenance, and
- emergency storm work.

Based on the different characteristics of the two Regions and the parks within the Regions, specific activities and the time spent on each vary. Staff report that trash and litter collection represents the highest priority and most time/resource-consuming task among Southern Region parks. Staff report that turf and athletic field maintenance represents the most time/resource-consuming task among Northern Region parks.

In addition to these standard park maintenance activities in the Northern and Southern Region parks, both Regions contribute to Enterprise Facility maintenance. For example, they maintain facilities and grounds, and remove trash and snow at golf courses, indoor ice rinks, indoor tennis facilities, carousels, and conference facilities.

The Northern Region staff also maintain athletic fields at the Germantown Recreational Park, including 2 softball fields, 2 hardball fields, two soccer fields, and a small playground. They also maintain the Black Hill and Meadowside Nature Centers, the Agricultural History Farm Park, and the following Department of Recreation facilities:

- Grounds at the Plumgar Community Center,
- Grounds of the Western County pool,
- Two athletic fields at the Germantown Community Center,
- Grounds at the Upper County Community Center and pool,
- Athletic fields at Sequoia and Flower Valley Elementary Schools.

In addition to general park maintenance tasks, the Southern Region staff maintain:

- five parkways,
- three nature centers,
- two golf courses,
- Shirley Povich Stadium,
- Lighted athletic fields and a stadium at Blair High School,
- three conference centers,
- five Recreation Department swimming pools,
- the Takoma Park and Wheaton Community Center grounds,
- the Capital Crescent Trail,
- Meadowbrook Maintenance Facility,
- Parkside Headquarters,
- Montgomery Regional Offices, and
- Saddlebrook Police Headquarters.

Parks charges the Enterprise parks/facilities, Montgomery County Public Schools, and Department of Recreation for the work completed by Parks' staff. M-NCPPC determines charge backs for these maintenance services based on work orders, labor dedicated to these services, and estimates of costs.

C. Contracted Activities

M-NCPPC contracts out a variety of park maintenance activities. For example:

- Trash collection,
- Recycling,
- Portable toilet maintenance,
- Stormwater management facility maintenance,
- Athletic fields at the south Germantown recreation park,
- Oil/grit separator maintenance, and
- MCPS athletic field maintenance.

D. Seasonal Versus Career Workyears

According to M-NCPPC's Park Costing Study, career staff perform the majority of in-house tax supported (non-Enterprise) maintenance work. Seasonal or term contract workers represent approximately 8% of the total Department of Park and Planning workyears. In contrast, seasonal/term contract workers represent approximately 74% of the Enterprise Program workyears.

Table 5 (page 13) shows the proportion of seasonal and career workyears in FY 02 by Division. It indicates that the proportion of seasonal workyears ranges from 2% in Central Maintenance to 13% in the Southern Region. The Park Costing Study also

reports that the average cost of a career workyear is \$52,883; the average cost of a Park Maintenance Worker is \$37,755; and the average of a seasonal workyear in the Park Fund is \$23,695.

Table 5 – Career versus Seasonal Workyears – FY 2002

Unit	Career	Seasonal	Total	% Seasonal
Central Maintenance	121	2.5	123.5	2%
Northern Region	107	10	117	9%
Southern Region	170	25	195	13%
Natural Resources	66	6	72	8%
Total	464	43.5	507.5	9%

E. Workforce Planning and Tracking

According to M-NCPPC’s Park Costing Study, there is no formal or written guidance on workforce planning and no comprehensive automated system for documenting and tracking park maintenance activities.

Most non-routine maintenance tasks are initiated and carried out through paper work requests generated by one division to another. Central Maintenance staff tracks work requests in a database and software applications called Maximo and Faster. Central Maintenance generates reports on outstanding work orders, including a cost estimate. Central Maintenance also uses a system called Tracker to record purchase orders and time charges.

The Northern and Southern Regions use manual systems to plan and track park maintenance activities. Paper work orders/requests drive non-routine maintenance tasks. Internal schedules, management experience, and knowledge drive the routine maintenance tasks. Northern Region staff keep paper records of the date that routine tasks were completed at each park.

F. Maintenance Frequency Targets or Standards

Over many years the Department of Park and Planning developed a series of maintenance targets as guidelines that are essential to maintaining a quality park system. The targets are reviewed annually and revised as appropriate. M-NCPPC currently uses three sets of targets. One set describes general maintenance tasks completed primarily by Northern and Southern Region staff at individual parks. The second and third sets of standards guide the maintenance work conducted by the Central Maintenance Division and the Natural Resources Division. The targets list the maintenance activities and how often M-NCPPC targets to complete the task. In some cases, the frequency changes based on the time of year.

M-NCPPC staff note that the standards represent the desired or optimal frequency of maintenance tasks. Available resources, not the standards, drive the actual maintenance completed. Therefore, the ability to meet the standards varies each year depending on priorities and available resources.

G. Evaluating/Inspecting Park Maintenance

Southern Region staff report that they inspect parks monthly. Staff notes all maintenance problems and submit work orders as necessary. In addition, Southern Region playgrounds are inspected four times per year. The Northern Region staff report that staff conduct informal inspections during each park visit.

IV. Relevant Studies and Documents

A. Park Costing Study

In April 2001, M-NCPPC released the Park Costing Study. Staff in the Department of Human Resources and Management and the Department of Park and Planning completed the study in response to Council and Executive requests for information about park maintenance costs. M-NCPPC completed detailed cost tracking and analysis of FY 2000 actual operating expenses and revenues for six parks that are representative of the others in the system, including:

- Wheaton Regional Park,
- Olney Manor Recreational Park,
- Sligo Stream Valley Park,
- Caroline Freeland Urban Park,
- Darnestown Neighborhood/Local Park, and
- Stoneybrook Neighborhood/Local Park.

The following M-NCPPC Divisions were included in the project: Central Maintenance, Northern and Southern Regions, Park Police, Natural Resources, Enterprise, and the Office of the Park Director.

Maintenance staff in these six parks tracked their time spent on maintenance tasks during July, August and September 1999; May, June, and July 2000; and December 2000, January, and February 2001. The Park Costing Study also accounts for:

- Operating expenses such as equipment, materials, and supplies,
- Managerial, supervisory and administrative overhead,
- Risk/liability insurance,
- Utilities and phones,
- Cost centers, and
- Revenues.

Costs associated with indirect management or overhead were not included (e.g., Commissioners and support functions, Central Administrative Services).

The analysis estimated that annual operating and maintenance costs, less revenues for the six parks, totaled \$5.99 million. Table 6 (page 16) summarizes data collected by park. According to the study, the cost of maintaining regional parks is significantly higher than the other types. In addition, M-NCPPC reports that maintaining an urban park requires three times as many dollars per acre as maintaining a suburban local park. The cost of policing is the most expensive aspect of the maintenance costs. Approximately 12% of the total (83 workyears) are attributable to management, supervision, and administrative support. Based on the data collected, M-NCPPC developed an estimated cost per developed acre of M-NCPPC parkland of \$5,270.

Table 6 – Park Costing Study Data

Park	Maintenance Cost	Percent of Total Cost
Wheaton Regional	\$4,498,849	75%
Sligo Steam Valley	\$979,356	16%
Olney Manor Special	\$415,992	7%
Darnestown Local	\$42,660	0.7%
Stoneybrook Local	\$41,713	0.7%
Freeland Urban	\$16,190	0.3%
Total	\$5,994,760	100%

The Park Costing Study recommends that M-NCPPC:

- Develop baseline information about the park system, in electronic and manipulable formats, to substantiate expenditures of public funds;
- Develop a formal workforce planning system across all divisions that maintain parks;
- Begin tracking labor costs by region, facility or type of work, for transition into an automated data management system when implemented,
- Integrate an automated data management system with M-NCPPC’s financial accounting systems,
- Capture data associated with the Park Maintenance Frequency Targets electronically, and review and revise the standards from time to time;
- Evaluate the relationship between career and seasonal workyears,
- Investigate maintenance and programming benchmarks from other progressive parks departments around the Country,
- Assign responsibility for continued park costing efforts to a senior manager, and
- Continue the effort to capture park maintenance costs by identifying one or more cost centers to study.

B. Parks Automation Study

M-NCPPC contracted with PlanGraphics Inc to determine Parks automation needs and priorities, and to develop an implementation plan. PlanGraphics Inc found that:

- There is no integrated source of Park inventory information (e.g., inventory of ballfields, playgrounds, buildings and structures),
- Necessary tracking information and financial information is not maintained in digital form,
- Critical planning, tracking, management and performance measurement activities cannot be conducted effectively,
- Parks managers cannot develop effective preventive maintenance programs or evaluate whether to repair or replace older facilities,
- M-NCPPC cannot effectively program new park requirements due to lack of historical cost information.

PlanGraphics completed the Parks Automation Study in February 2001. They recommend a combination of new systems to meet M-NCPPC's automation needs. Key automation areas, identified as the highest priority because they affect the most people and have the highest potential for benefits and cost savings, include:

- Park Facility Inventory,
- Work Order Management systems,
- Planned Life-Cycle Asset Replacement (PLAR) system,
- Project Management,
- Purchasing System Integration,
- Time Tracking Integration,
- Expanded Geographic Information System (GIS) use, and
- Expanded Web use.

PlanGraphics recommended that M-NCPPC focus initial implementation on the first three key automation areas, a Park Facility Inventory, a Work Order Management System, and a Planned Life-cycle Asset Replacement System. PlanGraphics expects the automation to increase efficiency in the Department through improved decision making, schedule and monitoring of park maintenance, and a reduction in emergency repairs. PlanGraphics estimates average gross savings of \$155,000 per year, as well as cost avoidance, as a result of the new system.

C. Technology Innovation Fund Application

In response to the Parks Automation Study, M-NCPPC submitted a Technology Innovation Fund (TIF) application in April 2001. The application requests \$920,000 to implement a Park Facility Inventory and a Work Order Management/Planned Life-Cycle Asset Replacement (WOM/PLAR) system. The Park Facility Inventory will consist of several integrated databases. The TIF application indicates that the Inventory will be accessible to all Park's staff and will provide update detailed park facility information in one location. M-NCPPC estimates it will take approximately 48 weeks to implement.

The WOM/PLAR system will support the work requests/work orders, customer calls, inspections, and projects related all of the Parks divisions. Commercial-off-the-shelf software will provide the tools for managing the Work Order Management and Planned Life-Cycle Asset Replacement systems. The TIF application indicates that it will take approximately 156 weeks to implement the WOM/PLAR system.

The \$920,000 TIF grant would fund hardware and software services (\$520,000), consulting and development (\$370,000), and training (\$30,000). Operating costs after the first year of implementation will total \$50,000 per year for hardware and software maintenance and services, and \$50,000 per year for consulting and technical support.

In terms of staff support, the TIF application indicates that requirements during the first year include a Project Manager and a Systems Administrator. Beginning the second year, the system will require a Programmer Analyst, GIS Developer, and Web Developer. Staffing costs will total \$150,000 in the first year and \$320,000 in later years. Office of Management and Budget's analysis of the TIF application recommends that M-NCPPC use the estimated \$155,000 annual savings to fund the staff for the project.

The County Executive recommended approval of the TIF application. If approved, M-NCPPC staff expect to submit a request for proposals this summer and begin implementation in the fall of FY 2003. Additional information is available in the TIF application and the Park Automation Study.

V. Managing Park Maintenance Costs in Other Jurisdictions

A. Introduction

This chapter describes how nine jurisdictions collect, track and report park maintenance costs. It also describes strategies that the jurisdictions use in decision making and resource allocation. Pages 23 through 34 summarize the research. Attachment 1 at © 1 provides a short description of each jurisdiction.

The Selection Process. Legislative and M-NCPPC staff mailed and e-mailed detailed surveys to 25-30 jurisdictions ranging from small cities to large counties. The survey requested information about park characteristics, maintenance costs, park maintenance management, and resource allocation strategies.

OLO identified jurisdictions to include in this report based on:

- The survey results,
- Recommendations from parks staff around the country, and
- Performance data from the International City/County Management Association (ICMA).

OLO selected jurisdictions that represent a variety of methods and strategies for collecting and reporting park maintenance cost data. OLO also selected jurisdictions known to have commendable park maintenance systems. The report also describes some park systems that are comparable in size and type to Montgomery County's, and jurisdictions in the Washington Metropolitan region.

Tables 7 & 8 beginning on pages 21 & 22 summarize the general characteristics of the park systems described in this report. OLO conducted follow up phone interviews and worked closely with these jurisdictions to collect additional information. Attachment 1 of the report includes a two to three page description of the following jurisdictions' park systems:

- Fairfax County, Virginia
- Prince William County, Virginia
- Hennepin County, Minnesota
- Orange County, Florida
- Greater Vancouver Regional District, British Columbia
- City of Rockville, Maryland
- City of Modesto, California
- City of Phoenix, Arizona
- City of Portland, Oregon

OLO also conducted phone interviews with staff in King County, Washington; Virginia Beach, Virginia; City of Sunnyvale, California; Baltimore County, MD; Frederick County, Maryland; Fairmont Park Commission, Philadelphia; and Arkansas Parks and Recreation Department. The report also includes selected information from these jurisdictions.

The comparative information collected provides a general overview of the cost tracking and resource allocation strategies employed elsewhere. Legislative staff note that each jurisdiction has its own definition of park maintenance and different ways of budgeting for park maintenance. As a result, the feasibility of comparative analysis is limited. Legislative Staff recognize that additional research is needed to fully understand the applicability in Montgomery County of the approaches and strategies used in the jurisdictions described in this report.

Definition of Park Maintenance. Each jurisdiction surveyed includes different tasks in the definition of park maintenance. For example, some larger counties include costs associated with security/police as park maintenance costs. The most common maintenance tasks among the jurisdictions described in this report include:

- Trash removal
- Trimming trees
- Landscape maintenance
- Trail inspection and maintenance
- Tennis & basketball court inspection and maintenance
- Horticultural activities
- Mowing
- Athletic field maintenance
- Public restroom cleaning
- Turf maintenance
- Playground inspection and maintenance
- Facility maintenance
- Vandalism repair/Graffiti removal

Table 7: A Summary of Park Characteristics² - Counties and Regional Districts

Jurisdiction (Detailed description attached at ©)	Number of Parks	Number of Acres/ Developed Acres	Maintenance Budget- FY 02	Number Of Workyears FY 02	Percent Seasonal Work Years	Examples of Services Contracted- Out
Montgomery County, MD	345	30,410/ 8,482	\$25.9 million	483	8%	MCPS ballfield maintenance,
Fairfax County, VA (© 1)	387	20,062/	\$24 million	183	66% ³	Mowing (200 acres), large fleet equipment maintenance, facility maintenance, capital projects
Hennepin County, MN (© 4)	25 ⁴	25,000/ 5,000	\$17 million	300	75% ³	Trash collection, facility repairs, large capital projects
Prince William County, VA (© 7)	58	519/ 3,292	\$5.6 million	92	34%	Removing large trees, Making signs
Orange County, FL (© 9)	70	338,000/ NA	\$8.8 million	232	0%	Mowing; graffiti removal; landscape, turf, trail, playground, and athletic field maintenance
Greater Vancouver Regional District, British Columbia (© 11)	24 ⁴	27,151/ 1,358	\$5.98 million	63	44%	Security, greenway park maintenance

NA = Information not available

² Legislative staff note that each jurisdiction includes slightly different activities in the definition of park maintenance and uses different ways of budgeting for park maintenance. Given the general nature of the information provided in this report, the feasibility of comparative analysis is limited.

³ By positions not work years.

⁴ Large regional parks.

Table 8: A Summary of Park Characteristics⁵ - Cities

Jurisdiction (Detailed description attached at ©)	Number of Parks	Number of Acres/ Developed Acres	Maintenance Budget FY 02	Number Of Workyears FY 02	Percent Seasonal Work Years	Example of Services Contracted Out
City of Portland, OR (© 14)	230	10,000/ 3,400	\$18 million	177	25-50%	Facility maintenance, sprinkler system maintenance
City of Rockville, MD (© 17)	55	935/ 449	\$1.7 million	45	15-20%	Mowing, athletic field maintenance
City of Phoenix, AZ- (© 19)	170	35,3447/ 3,434	\$39.7 million	NA	0%	Tree trimming
City of Modesto, CA (© 21)	60	767/ 413	\$5.3 million	68	15%	Landscapes maintenance for streetscapes (7 parks)

NA = Information not available

⁵ Legislative staff note that each jurisdiction includes slightly different activities in the definition of park maintenance and uses different ways of budgeting for park maintenance. Given the general nature of the information provided in this report, the feasibility of comparative analysis is limited.

⁶ Portland employ approximately 50% seasonal workers during peak workload (summer months) and approximately 25% during non-peak months.

B. Highlights

OLO's research indicates that jurisdictions across the U.S. use different strategies to track costs and allocate resources. All of the jurisdictions interviewed report that resource allocation decisions are based on previous budgets and park staff knowledge and experience. However, over half of the jurisdictions studied enhance resource allocation decision-making with detailed maintenance cost data.

Some of the jurisdictions studied require park staff to keep detailed records of labor and materials used. These jurisdictions use the data collected to track costs associated with specific maintenance tasks and specific parks. Some jurisdictions use detailed maintenance standards to develop maintenance cost data. The standards indicate, for example, specific tasks to be completed; frequency; staff time required; and materials and equipment required. This information becomes the basis for estimating maintenance costs per task and per park. These jurisdictions make maintenance standards an integral part of park maintenance management. Other jurisdictions reported that tracking time and materials is too time consuming and labor intensive and/or they do not have detailed maintenance standards.

OLO found different methods to automate and report park data among the jurisdictions interviewed. Some cities and counties invest in sophisticated automated system designed specifically for tracking maintenance. Other jurisdictions use basic spreadsheet or database applications to track costs.

Whether or not jurisdictions have detailed systems for tracking costs, they each reported different strategies for allocating resources and managing the parks. Strategies identified include:

- Hire a cost effective blend of full time staff, seasonal workers, and contractors to perform maintenance tasks,
- Establish different maintenance standards for different categories of parks and allocate resources based on the categories,
- Limit park maintenance activities winter months or close parks, and
- Only track maintenance costs for the largest and most used parks.

Interviewees noted that it is easier to make decisions about these strategies with detailed park maintenance cost data.

Cost Tracking Highlights

Eight of the nine jurisdictions surveyed conduct daily labor and materials tracking. They include:

- Fairfax County, VA,
- Hennepin County, MN,
- Baltimore County, MD
- Orange County, FL,
- Modesto, CA,
- Rockville, MD,
- Portland, OR, and
- Phoenix, AZ.

The maintenance staff keep track of how much time they spend on specific maintenance tasks in each park, as well as the materials used to complete the tasks. While time consuming, this tracking provides the jurisdictions with detailed information from which to calculate the actual cost of maintenance activities. The City of Phoenix takes a slightly different approach. Phoenix tracks detailed labor and materials costs for the 26 largest and most used parks in the 170 park system. Prince William County only tracks maintenance cost data for contracted activities.

Seven of the eight jurisdictions listed above enter the time and material tracking data in an automated system. Fairfax County, Hennepin County, and Modesto use a software package designed specifically for tracking maintenance tasks. Rockville currently uses a spreadsheet application, but is in the process of purchasing a more sophisticated system. Baltimore County, Portland and Modesto⁷ use database applications to track the data and produce reports. The City of Phoenix and Prince William County use a financial accounting and management system to track costs. Unlike the other four jurisdictions, Orange County, FL has not implemented an automated system for tracking the data. Staff keep data manually and report that the County would like to implement an automated system eventually.

⁷ Modesto uses a specialized system to track labor and a database to track materials.

This kind of data and automated systems give the jurisdictions the ability to produce detailed cost reports. For example, Fairfax County can report the following types of information:

- total number of athletic fields within the county;
- time spent on field maintenance by field,
- labor and materials costs for maintenance by field
- number of available (existing) staff hours;
- number of staff hours required to maintain the fields to the prescribed standard,
- the number of fields currently maintained to the standard; and
- additional staff required to maintain more fields up to the maintenance standard.

Staff use this kind of information to develop and support budget requests and to justify requests for additional resources. A memorandum from the Fairfax County Park Authority's Parks Operation Division is attached to this report at © 64. The attachment is an example of how Fairfax County uses park maintenance cost data. The memorandum requests and justifies the need for additional maintenance staff. The request was submitted as part of the Division's proposed FY 03 budget.

Maintenance Standards Highlights

Six of the nine jurisdictions surveyed use detailed park maintenance standards in the management of the park system. They include:

- Fairfax County, VA,
- Prince William County, VA
- Hennepin County, MN,
- Modesto, CA,
- Rockville, MD, and
- Phoenix, AZ.

Orange County has maintenance standards for the activities that are contracted out. Portland is currently developing more detailed maintenance standards.

M-NCPPC has park maintenance standards that list maintenance tasks and the frequency that M-NCPPC targets to complete the tasks. OLO's research indicated that the jurisdictions listed above have more developed standards and integrate them more in the management of the park system. In general, the maintenance standards developed by the Cities and Counties listed above include the following information:

- Desired quality to be maintained (e.g., Maintain a neat and presentable field, free from overgrown grass and other vegetation);
- Specific tasks to be carried out to achieve the desired standard (e.g., mowing);
- Required frequency of tasks (e.g., two times per week);
- Amount of staff time required to perform the tasks (e.g., three hours per park per week);
- Amount of consumable materials required (e.g., gallons of gas per week); and
- Types of equipment and tools required (e.g., mowers, trimmers).

These jurisdictions use the detailed maintenance standards as the basis for estimating park maintenance costs.

While the standards drive the work completed by maintenance staff, the jurisdictions do not necessarily fund park maintenance to meet these standards. Available resources, not the maintenance standards, ultimately drive maintenance levels. The standards represent the levels at which the parks would ideally be maintained. In practice, however, the jurisdictions maintain parks to the highest level they can with the resources available. For example, limited resources may require that staff mow a park once per week instead of twice. Park managers can use cost data to determine the savings associated with this kind of change to the maintenance program.

Resource Allocation Strategy Highlights

Table 9 on page 30 summarizes the resource allocation strategies identified during OLO's research.

Use Maintenance Cost Data from Automated Tracking System. All of the jurisdictions that OLO surveyed use previous year budgets and the knowledge and experience of parks staff to make resource allocation decisions. Seven of the

jurisdictions also use detailed maintenance cost data to enhance decision-making. They include:

- Fairfax County, VA,
- Baltimore County, MD
- Hennepin County, MN
- Modesto, CA,
- Rockville, MD,
- Portland, OR, and
- Phoenix, AZ.

Each of these jurisdictions uses the labor and materials data to develop budgets, track spending, support requests for additional resources, and adjust budgets as needed throughout the year. For example, Account Clerks in Baltimore County analyze park maintenance data and report on significant variances to target cost projections. Park managers in turn use the cost data to make necessary budget/operational adjustments.

Track Maintenance Costs for the Largest and Most Used Parks. Phoenix does not keep labor and materials cost data for every park in the system. To reduce the work involved in detailed tracking, the city tracks detailed cost data for 26 of its largest and most used parks. This strategy provides additional information to enhance management and decision making for the key parks in the system. Similarly, Prince William County only track maintenance cost data for activities that are contracted out.

Contract Out Selected Park Maintenance Tasks. All of the jurisdictions surveyed contract out some maintenance activities. Table 7 & 8 on pages 21 and 22 lists the contracted activities for each jurisdiction surveyed. Staff reported during interviews that contracting out can be very cost effective, but requires thorough analysis. Jurisdictions that have detailed cost data use the data to determine which activities to contract out. Common activities include mowing, facility repairs, and tree trimming.

Use Seasonal Employees. Eight of the jurisdictions studied use seasonal employees to reduce labor costs. They include:

- Fairfax County, VA,
- Prince William County, VA,
- Hennepin County, MN,
- Baltimore County, MD
- Modesto, CA,
- Rockville, MD,
- Portland, OR, and
- Vancouver, BC.

Seasonal workers represent different proportions of the workforces. Seasonal workers comprise approximately 8% of M-NCPPC workyears in FY 2002. Orange

County and Phoenix report that due to the mild climate, they need full time staff year round.

Reported advantages of using seasonal workers include:

- Labor cost savings,
- Scheduling flexibility,
- Rapid hiring in response to workload needs, and
- Employment opportunities for the community.

Disadvantages of using seasonal workers, according to the jurisdictions interviewed, include:

- The economy impacts the pool of available seasonal workers,
- High turnover,
- Fewer skills than full time employees.

Establish different standards for different categories of parks and allocate resources based on the categories. Some of the jurisdictions studied use other methods to allocate resources and reduce costs. The City of Portland is considering categorizing parks based on level of use, then allocating resources based on the categories. For example, parks that receive the highest level of use or parks that received significant past investments would be classified as Category A. Portland would allocate a larger proportion of the Park's maintenance budget to maintain Category A parks to 90-100% of the maintenance standards. The City would not allocate as many dollars to less used parks and would not maintain them to the same standard as Category A parks.

Prince William County employs a similar strategy. Prince William categorizes parks as follows:

Level 1:	Regional Park Championship Fields
Level 2:	Regional/Community Parks (high use, irrigation or lights)
Level 3	Community Parks
Level 4	Neighborhood Parks
Level 5	School Sites

The County maintains level 1 parks to a higher standard than the other categories. For example, level 1 ballfields are mowed five times a week (for 34 weeks), fertilized four times a year, and irrigated 200 hours a year. Level 2 parks are mowed three times a week (for 34 weeks), fertilized once a year and not irrigated. Level 1 sites are mowed and fertilized once a year, and are not irrigated.

The Prince William County reduces maintenance costs by not maintaining parks during winter months. Parks are not closed during the winter months, but they are not maintained. Staff in both jurisdictions report that staff still conduct inspections to be sure

that the parks are safe for use. Legislative staff were not able to collect detailed information from King County, however an article from the Seattle Times (February 26, 2002) indicates that King County closes parks during the winter months and does not conduct maintenance. Due to reduced resources for FY 2003, the article also indicated that the County Executive proposed not re-opening some parks this spring as a cost saving measure. Similarly, staff in Portland report that, due to budget cuts in FY 2003, 32 maintenance staff workyears may be cut from the budget.

Table 9: Summary of Resource Allocation Strategies

Strategy	Jurisdiction
1) Use maintenance cost data from an automated tracking system for resource allocation decision making	Portland Fairfax County Hennepin County Baltimore County Rockville Phoenix Modesto
2) Track maintenance costs for the largest and most used parks only	Phoenix
3) Contract out selected park maintenance tasks	Portland Fairfax County Rockville Hennepin County Orange County Baltimore County Prince William County Phoenix Modesto Vancouver
4) Use seasonal workers	Portland Fairfax County Rockville Modesto Baltimore County Hennepin County Prince William County Vancouver
5) Establish different maintenance standards for different categories of parks, and allocate resources based on the categories	Portland Prince William County
6) Limit park maintenance activity during the winter months or close parks	King County Prince William
7) Reduce park maintenance staff	Portland*

* Portland is investigating this strategy but has not implemented it yet.

C. Lessons Learned

OLO's research revealed several important lessons from jurisdictions already tracking park maintenance costs, including:

1. There is an industry wide movement to capture park maintenance costs.
2. There are several standard functions that an effective park maintenance automation system should perform.
3. Implementing a sophisticated automated system and tracking park maintenance costs takes time and effort.
4. A successful system depends heavily on staff cooperation.
5. Best practice park management combines information technology and other management and resource allocation tools.

There is an industry wide movement to capture park maintenance costs.

Jurisdictions invest significant amounts of resources to maintain parks. Park departments recognize the need to account for and manage these resources effectively and efficiently, particularly in times of fiscal constraint.

OLO's discussions with park professionals revealed an industry wide movement to track and automate park maintenance costs. Park managers need accurate cost data to make informed decisions on their maintenance operations. However, park officials that OLO spoke with report that park departments nation-wide have traditionally been slow to automate, and that automating park maintenance has not been a high information technology priority. OLO does not know how many jurisdictions nation-wide currently track maintenance costs, but industry officials report that nearly all jurisdictions want to track costs.

Jurisdictions interviewed by OLO agree that sophisticated automation systems designed specifically for tracking maintenance activities and costs are most efficient and effective. Jurisdictions that use sophisticated systems can produce very detailed cost data reports that assist park managers and elected officials in making informed resource allocation decisions. Some of the jurisdictions that OLO interviewed (e.g., City of Portland, Fairfax County, Baltimore County, and the City of Modesto) are quite advanced in tracking and reporting costs. Other jurisdictions are currently embarking on the process (e.g., Hennepin County, City of Rockville, City of Frederick).

Jurisdictions that use less sophisticated systems report that their systems are not as user-friendly and more labor intensive (e.g., Orange County and Prince William County). Those jurisdictions expressed a desire to purchase and implement more sophisticated systems.

There are several standard functions that an effective park maintenance automation system should perform. According to North Carolina State's College of Natural Resources, an effective automation system should perform the following functions:

- Assign work orders to maintenance staff for both routine and non-routine maintenance tasks. The work order should contain a site location, tracking code, description of job, man hour estimates, weather status code, budget tracking code, and completion due date,
- Provide reports on the status of all maintenance jobs,
- Match maintenance jobs with appropriate work crews,
- Track all materials used and alert supply managers to purchase depleted stock,
- Track the estimated and actual man-hours required to perform tasks,
- Incorporate data from an inventory of resources and maintenance standards,
- Link to existing facility and or fleet management databases, and
- Generate reports on end-of-day, week, and month maintenance activities, and fiscal reports on costs per task, per park, per facility, per equipment.

Implementing a sophisticated automated system and tracking park maintenance costs takes time and effort. OLO learned that it can take two years to fully implement a new system. Both park managers and information technology providers agreed that there is a lengthy lag time between implementation and realizing the benefits of the new system (e.g., producing detailed cost data reports). For example, Hennepin County implemented a new system last fall and anticipates that it will take at least 18 months before the system produces accurate cost data. The City of Frederick recently commenced automating park maintenance using a sophisticated system. Staff from Frederick report that the process may take up to two years to complete.

Survey participants state that the most time consuming step in the implementation process is developing an inventory of park assets. The inventory needs to include assets such as acres of ballfields and turf, linear feet of fencing, square footage of building space, etc. The jurisdictions OLO surveyed found that the most efficient way to develop the park inventory is to enter the data on a park-by-park basis. Jurisdictions typically use maintenance staff to collate the information and administrative staff to enter the data into the computer system. Depending on the size of the jurisdiction, this exercise of gathering and entering the data can take 18 months to two years. Once entered, the information needs to be continually updated.

A successful system depends heavily on staff cooperation. Discussions with park staff and industry representatives revealed that the success of a new system depends heavily on cooperation from park managers and staff. In order to produce accurate data reports, an automation system relies on staff to consistently account for and enter cost data into the system.

OLO learned that implementing an automation system often meets frustration, apathy, and initial resistance from staff. Staff often resist/resent:

- Changes to work procedures;
- Giving up existing databases and other systems to learn a new system; and
- The time intensive task of tracking time, equipment use and materials use, and entering the data in the system.

However, jurisdictions also noted that after initial adjustments, most staff come to accept the new system. One way to obtain staff buy-in is to involve staff in the planning, development and implementation stages to ensure that the system meets user needs. OLO also learned that a well-planned implementation strategy is key to gaining staff acceptance. Jurisdictions interviewed suggest that implementation include:

- Explanation of how the system can benefit staff;
- Pre-implementation training and information seminars;
- Technical assistance to key users during implementation;
- Patience and understanding on behalf of management.
- Recognition that park maintenance staff are taking on an additional task, and that it will take time to get in the habit of accurately and consistently collecting data.

Best practice park management combines information technology and other management and resource allocation tools. Representatives from North Carolina State University's College of Natural Resources report that park systems need an automated system to track maintenance costs. However, they also stress the importance of additional management tools used in conjunction with automation systems to effectively manage park systems. Other tools include an updated inventory of resources, qualitative maintenance standards and tasks for each park, and resource allocation and cost saving strategies. These tools, in addition to automated cost tracking, support effective park maintenance management and operations.

The majority of the jurisdictions interviewed use a combination of a current inventory of resources, detailed performance standards, and automated cost tracking to manage their park maintenance program. They also use the following strategies to allocated resources or reduce maintenance costs:

1. Only track maintenance costs for the largest and most used parks,
2. Establish different maintenance standards for different categories of parks and allocate resources based on the categories,
3. Increase user fees,
4. Hire a cost effective blend of full time staff, seasonal workers, and contractors to perform maintenance tasks,
5. Limit and park maintenance activity during the winter months or close parks.

VI. Summary of Findings

Finding 1. The Council appropriated \$54.2 million to the M-NCPPC Park Fund in FY 2002. Of the total, approximately \$27.98 million (52%) supports Montgomery County park maintenance activities in the Southern Region, Northern Region, Central Maintenance and Natural Resources Divisions.

The Montgomery County Park and Planning Department operates 345 parks in the County, encompassing 28,871 acres of parkland. In FY 2002, approximately \$27.98 million support park maintenance activities. Approximately 500 workyears maintain parks in FY 2002.

The Northern Region and Southern Region perform standard maintenance activities, such as mowing, trash collection, athletic field maintenance, and play equipment upkeep. The Central Maintenance division maintains fleet, equipment, buildings, utility systems, and exhibits. The Natural Resources division is responsible for turf maintenance and renovation, tree, shrub and flower production, and landscaping.

In addition to these activities, Northern and Southern Region staff maintain some County Department of Recreation property, MCPS athletic fields, and M-NCPPC Enterprise facilities. The Park and Planning Department charges those entities for that maintenance work based on work orders completed, labor dedicated to these services, and estimates of other costs.

While M-NCPPC career staff perform the majority of the park maintenance activities, approximately 8% of the workforce are seasonal workers (excludes Enterprise Program staff). The majority of the seasonal workers are assigned to the Northern and Southern Region Divisions. In addition, M-NCPPC uses contractors to perform some maintenance tasks, such as maintenance of MCPS athletic fields, trash removal, stormwater facility maintenance, recycling, and portable toilet maintenance.

Finding 2. Currently, M-NCPPC does not have a system in place to track and report detailed information about park maintenance activities and costs. As a result, the appropriate level of operating and personnel resources is difficult to assess.

M-NCPPC does not have a comprehensive system for documenting and tracking park maintenance operations. Central Maintenance currently uses database software to track and report on outstanding work requests and cost estimates. The Northern and Southern Divisions keep limited manual records. As a result, M-NCPPC cannot report detailed information about park maintenance activities or costs.

The Council and M-NCPPC need detailed information about park maintenance activities and costs to make informed fiscal, management and policy decisions. More detailed information will assist M-NCPPC to measure current maintenance activities, and

plan for the maintenance needs of new parks. The Council needs more information to understand the impact of budget changes on the maintenance program, identify priorities, and make budget decisions. Specific data needs include:

- Time invested in specific park maintenance activities,
- Cost of specific maintenance activities,
- Cost of park maintenance at individual parks,
- Resources required to maintain parks to the standards,
- What each dollar invested in park maintenance buys, and
- The specific impact of changes in park maintenance funding.

Finding 3. To begin to address park maintenance information needs, M-NCPPC completed: The Park Costing Study; Parks Automation Study; and Technology Innovation Fund (TIF) application.

The Park Costing Study, released in April 2001, provides detailed information about the maintenance costs of six parks in the County. The study recommends that Park and Planning develop baseline information about the park system, begin tracking labor costs by region, facility or type of work, implement an automated data management system, and capture data associated with the park Maintenance Frequency Targets.

M-NCPPC also contracted with PlanGraphics Inc to determine the Department of Park and Planning's automation needs and priorities, and to develop a plan for implementation. The study, completed in April 2001, recommends a combination of new systems to meet the automation needs. The three highest priority systems include:

- Park Facility Inventory,
- Work Order Management system, and
- Planned Life-Cycle Asset Replacement (PLAR) system.

In November 2001, M-NCPPC submitted a Technology Innovation Fund (TIF) application requesting \$920,000 to implement a Park Facility Inventory, Work Order Management System, and Planned Life-Cycle Asset Replacement System. The Park Facility Inventory will provide detailed park facility information in one location. The Work Order Management and Planned Lifecycle Asset Replacement systems will support work requests/work orders, customer calls, inspections, and projects related to all of the Parks Divisions.

If approved, the \$920,000 TIF grant will fund hardware and software services (\$520,000), consulting and development (\$370,000), and training (\$30,000). Operating costs after the first year of implementation will total \$50,000 per year for hardware and software maintenance and services, and \$50,000 per year for consulting and technical support.

Finding 4. Research indicates an industry-wide movement to track park maintenance costs to enhance fiscal, management, and policy decision making. Jurisdictions interviewed take different approaches to collecting cost data, but agree that implementing an automated system designed specifically for tracking maintenance is the most efficient and effective approach to collecting the data.

Local governments across the country invest significant resources in park maintenance, and recognize the need for accurate cost data for fiscal, management and policy decision-making. Jurisdictions interviewed by OLO use different strategies to collect and report park maintenance activity and costs data. For example, seven of the ten jurisdictions contacted track daily labor and materials costs for all parks. In contrast, Phoenix tracks the labor and materials costs for the 20 largest and most used parks.

While Orange County, Florida manually tracks data, the other jurisdictions automate the data. Fairfax County, Hennepin County, and Modesto use software designed specifically for tracking maintenance tasks. Rockville is in the process of replacing a spreadsheet-based system with a system designed for tracking maintenance costs. Jurisdictions that use systems designed for tracking maintenance can produce detailed cost data reports that enable park managers to:

- Report the cost associated with specific maintenance tasks and the cost associated with maintaining individual parks,
- Adjust resources and activities as needed throughout the year,
- Justify changes to park maintenance budgets,
- Conduct cost/benefit analysis of providing services in-house or on contract, and
- Benchmark services against other jurisdictions.

Jurisdictions that use less sophisticated systems report that their systems are not as user-friendly and more labor intensive (e.g., Prince William County). Those jurisdictions expressed a desire to purchase and implement more sophisticated systems.

Finding 5. Jurisdictions interviewed reported several lessons learned from implementing a park maintenance automation system. In sum:

- **It can take up to two years to fully implement a new automated system that can produce detailed cost reports for use in decision making,**
- **The success of the system depends on initial staff buy-in and ongoing cooperation, and**
- **Successful implementation requires a detailed implementation plan that includes the purpose and capabilities of the system.**

Implementing a sophisticated automated system and tracking park maintenance costs takes time and effort. Jurisdictions report that it can take two years to fully implement a new system. For example, Hennepin County implemented a new system last fall and anticipates that it will take at least 18 months before the system produces accurate cost data. The City of Frederick recently commenced automating park maintenance using a sophisticated system. Staff from Frederick also report that the process may take up to two years to complete.

A successful system depends on staff cooperation. Discussions with park staff and industry representatives suggest that the success of a new system depends heavily on cooperation from park managers and staff. In order to produce accurate data reports, an automation system relies on staff to consistently account for and enter cost data into the system.

OLO learned that implementing an automation system often meets frustration, apathy, and initial resistance from staff. Staff often resist/resent:

- Changes to work procedures;
- Giving up existing databases and other systems to learn a new system; and
- The time intensive task of tracking time, equipment use and materials use, and entering the data in the system.

However, jurisdictions also noted that after initial adjustments, most staff come to accept the new system. One way to obtain staff buy-in is to involve staff in the planning, development and implementation stages to ensure that the system meets user needs. OLO also learned that a well-planned implementation strategy is key to gaining staff acceptance.

Successful implementation requires a detailed implementation plan. The implementation plan should include a:

- Detailed explanation of the purpose, requirements, and components of the system,
- Plan for integrating the automated system into the daily management of the park maintenance program,
- Strategy for securing staff buy-in, and
- Plan for making the maintenance standards part of park operations and the resource allocation process.

Finding 6. The jurisdictions interviewed do not rely solely on an automated system for effective park maintenance management. Best practice park management combines information technology with other management tools, such as an updated inventory of resources, detailed park maintenance standards, and innovative resource allocation/cost saving strategies.

Best practice park management combines information technology and other management and resource allocation tools. Examples include an updated inventory of resources, qualitative maintenance standards and tasks for each park, and resource allocation and cost saving strategies. These tools, in addition to automated cost tracking, support effective park maintenance management and operations.

The inventory needs to include assets such as acres of ballfields and turf, linear feet of fencing, square footage of building space, etc. Depending on the size of the jurisdiction, this exercise of gathering and entering the data can take 18 months to two years. Once entered, the information needs to be continually updated.

Most of the jurisdictions that OLO interviewed used detail maintenance standards in managing the system and estimating the costs. In general, the maintenance standards developed in Fairfax County, Prince William County, Hennepin County, Modesto, Rockville, and Phoenix include the following information:

- Desired quality to be maintained;
- Specific tasks to be carried out to achieve the desired standard;
- Required frequency of tasks;
- Amount of staff time required to perform the tasks;
- Amount of consumable materials required; and
- Types of equipment and tools required.

VII. Recommendations

Recommendation 1. OLO recommends that the Council encourage M-NCPPC efforts to track Montgomery County park maintenance costs. The Council should consider the M-NCPPC Technology Innovation Fund (TIF) application in the context of the information provided in this report, especially the lessons learned from other jurisdictions about implementation.

The Council and M-NCPPC need detailed information about park maintenance costs in order to make informed fiscal, management and policy decisions. Currently, M-NCPPC does not have a system in place to track and report detailed information about maintenance activities and costs. As a result, the appropriate level of operating and personnel resources is difficult to assess.

OLO recommends that the Council encourage M-NCPPC efforts to track labor and materials cost data and use the information collected to enhance Council decision-making. The Council can use the information to understand the impact of budget changes on the maintenance program, and to identify priorities for allocating resources. The information will also help M-NCPPC to measure maintenance activities, and to plan for the maintenance needs of new parks.

OLO recommends that the Council consider the TIF application in the context of the information in this report, in particular the lessons learned about implementation. OLO's research indicated that much of the success of tracking costs ultimately depends on the implementation of the system. As M-NCPPC considers implementing an automated system, OLO recommends that the Council encourage the Commission to take advantage of other jurisdictions' experiences.

Recommendation 2. If the Council approves funding for an automation system to track maintenance costs, OLO recommends that the Council request that M-NCPPC develop a detailed implementation plan and report regularly to the Council on the status of implementation.

Interviewees from other jurisdictions stressed the importance of the process of implementing a new automated system. Therefore, OLO recommends that if the Council approves the TIF funding request, the Council should request M-NCPPC to develop a detailed implementation plan. OLO also recommends that the Council request regular reports from M-NCPPC on the status of implementation.

The implementation plan should include a:

- Detailed explanation of the purpose, requirements, and components of the system,
- Plan for integrating the automated system into the daily management of park maintenance program,
- Strategy for securing staff buy-in, and
- Plan for making the maintenance standards part of the resource allocation process.

In addition, OLO recommends that the Council encourage M-NCPPC to take advantage of the lessons learned from the Park Costing Study. The process of collecting, collating, and analyzing the park maintenance data for the Costing Study can provide valuable insights into future cost tracking efforts.

Recommendation 3. OLO recommends that the Council ask M-NCPPC to investigate resource allocation and management strategies employed by other jurisdictions, and report on potential strategies for Council consideration in reviewing future budget request.

The jurisdictions interviewed do not rely solely on an automated system for effective park maintenance management. Best practice park management combines information technology with other management tools, such as an updated inventory of resources, detailed park maintenance standards, and innovative resource allocation/cost saving strategies. Examples of resource allocation/cost saving strategies that other jurisdictions use include:

1. Only track maintenance costs for the largest and most used parks as an initial step in tracking cost data,
2. Establish different maintenance standards for different categories of parks and allocate resources based on the categories,
3. Increase user fees,
4. Hire a cost effective blend of full time staff, seasonal workers, and contractors to perform maintenance tasks,
5. Limit and park maintenance activity during the winter months.

OLO recommends that the Council ask M-NCPPC to investigate the applicability of resource allocation strategies used by other jurisdictions. OLO also recommends that the Council ask M-NCPPC to report on potential strategies for Council consideration during future M-NCPPC budget reviews.

Attachment 1. Description of Park Maintenance in Nine Jurisdictions

Fairfax County Park Authority

Park Characteristics and Maintenance Costs. Fairfax County has a population of 989,925. The Fairfax County Park Authority maintains 387 parks on 20,062 acres of parkland, including recreation centers, historic sites, nature centers, golf courses, and neighborhood, community, district, and countywide parks. The Park Authority uses approximately \$24 million and 183 workyears to maintain parks. Approximately 45% of the \$24 million represent General Tax Revenue and 55% represent Other Revenue, e.g., grants, donations, and user fees. According to Authority staff, the majority of cost funds employee salaries and benefits.

The Parks Operations Division maintains the County's park grounds, structures, equipment, and recreational facilities. Maintenance tasks include:

- Trash removal
- Trimming
- Landscape maintenance
- Trail inspection and maintenance
- Court inspection and maintenance
- Graffiti removal
- Historic structure maintenance
- Community education
- Mowing
- Athletic fields
- Amenity cleaning
- Turf maintenance
- Playground inspection and maintenance
- Vandalism repair
- Horticultural activities

Park Authority staff consider maintaining athletic fields and park facilities (especially those with HVAC systems) the most costly maintenance tasks.

Managing Park Maintenance. The Fairfax County Park Authority uses an automated Maintenance Management System (MMS) to collect and track maintenance cost data. Employees track the time spent maintaining parks on a daily work sheet. Administrative staff enter the information into MMS. The computer system tracks the costs associated with both preventive maintenance (e.g., mowing, athletic field preparation, equipment maintenance, trash collection) and non-routine maintenance (e.g., damaged tree removal, emergency repairs, removing graffiti, clearing stream blockages, etc.). The system is utilized for both data reporting and managerial purposes. For each individual park, the system tracks:

- Preventive and non-routine maintenance tasks performed,
- Time spent on preventive maintenance tasks,
- Cost of routine maintenance tasks,
- Time spent on non-routine tasks (e.g., repair damaged park equipment), and
- Cost of equipment and materials used.

In addition to tracking maintenance activities and costs, the MMS produces daily work reports for each park that list the preventive and non-routine maintenance work to be completed that day.

Maintenance Standards. Twelve years ago, the Park Authority established detailed maintenance standards for its parks that specify:

- Maintenance tasks to be completed;
- Amount of staff time required to perform the tasks;
- Amount of consumable materials required; and
- Types of equipment and tools required.

From these standards, management can determine the desired service level required at each park. This information tells park managers how many labor and material resources are required to maintain parks up to the specified standard.

Funding of park maintenance operations to the approved standard is subject to the County's overall financial situation and available funding.

Resource Allocation Strategies. The Park Authority staff allocate resources for park maintenance based on existing park facilities, maintenance standards, maintenance shop capacity and number of staff. Efforts are made to level resources across the operation. The Maintenance Standards define the level of resources required, which in turn become the basis for the budget.

Staff also use the Athletic Field Budget document, in conjunction with the adopted standards to justify increases in maintenance resources. As part of FY 03 budget deliberations, Park Management staff submitted a request for additional athletic field maintenance positions (submission attached © X). Management staff provided the decision-makers with the following information:

- total number of athletic fields within the county;
- number of staff hours required to maintain the fields to the prescribed standard;
- number of available (existing) staff hours;
- shortfall of staff hours;
- percentage of fields currently maintained to the standard;
- percentage of fields maintained to the standard if the additional positions were granted; and
- percentage increase in fields maintained to the standard with the additional positions.

According to staff, the Authority continually examines its methods of service provision to identify potential reductions in park maintenance costs. Staff believes that contracting out specific services is an effective strategy in realizing park maintenance efficiencies. The specific services currently under contract include:

- Mowing (200 acres);
- Maintenance of large fleet equipment;
- A portion of interior and exterior maintenance on facilities; and
- Capital construction projects (including design services).

To identify activities where contracting is a cost-effective solution, the Park Authority uses the data available from MMS about park maintenance costs, compares that data to existing resources, conducts a detailed cost benefit analysis, and then determines if contracting is the most efficient option.

The Park Authority also uses a high proportion of seasonal workers. By position count, the ratio of seasonal staff to full-time staff is 2:1. According to management staff, advantages of using seasonal workers include:

- increased scheduling flexibility;
- more rapid response to seasonal increases in workload; and
- employment opportunities for the community.

However, staff find that the state of the economy effects the pool of seasonal workers. In times of economic prosperity, the pool of seasonal workers decreases and in times of economic hardship, the pool increases.

Initiatives such as Adopt-A-Field, Adopt-A-Park, Clean-A-Stream, and Maintain-A-Trail programs also help stretch limited resources. These programs recruit and train citizens and sporting associations to maintain parks, baseball diamonds, waterways, and trails on a voluntary basis. Specific maintenance tasks conducted by the volunteers include, mowing the grass, picking up litter, and pre-season field preparation. These programs are popular in Fairfax County.

Hennepin Parks – Plymouth, Minnesota

Park Characteristics and Maintenance Costs. The population of Hennepin County is over 2 million. The Suburban Hennepin Regional Park District or Hennepin Parks operates parks in 5 counties around Hennepin county, Minnesota. The division of Park Operations is responsible for 27,000 acres (5,000 developed) of park reserves, regional parks, and special use areas. The regional park facilities include: nature centers; golf courses; a downhill ski area; extensive trails for hiking, biking, horseback riding, and cross country skiing; as well as areas for camping, swimming, and fishing/boating. The parks receive more than two million visitors each year.

Hennepin Parks expends approximately \$17 million and allocates approximately 300 FTEs staff for park maintenance, including facility operations, mechanic and carpenter services, building services, and fleet management. General Tax Revenue represents 65% of the Hennepin Parks revenue¹. Park user fees represent another 19% of the revenue.

Maintenance tasks include:

- Trash removal
- Trimming trees
- Landscape maintenance
- Trail inspection & maintenance
- Graffiti removal
- Tennis & basketball court inspection
- Facility maintenance
- Mowing
- Athletic field maintenance
- Public restroom cleaning
- Turf maintenance
- Playground inspection & maintenance
- Vandalism repair
- Horticultural activities

Park District staff consider servicing equipment, mowing, building maintenance, and litter control the most costly maintenance tasks.

Managing Park Maintenance. Last fall, the Hennepin Park District purchased new software, designed specifically for maintenance tracking, to track and account for park maintenance costs. Previously, park staff used databases and spreadsheets to track costs. The old system could not produce consistent, accurate, and reliable information on maintenance costs.

¹ The primary source of revenue for Hennepin Parks is General Tax, which is levied by its board of commissioners on property located within Hennepin County outside the City of Minneapolis

Under the new system, field staff track their time on daily time cards and track the amount of consumable materials (e.g., fertilizer) used at each park on a separate form. Administrative staff enter all the information into the new computer system. Field staff also fill out a separate log sheet to account for the hours of fleet and equipment used. This information is entered into a separate computer system. As a result, management reports

that the new system will account for the total costs associated with maintaining each park within the County.

Hennepin Parks staff noted the importance of successful implementation of new automated systems. Hennepin's implementation plan included:

- Pre-implementation training on how to use the new system for key users,
- Technical assistance for key users during implementation, and
- Development of a park inventory in the new system (e.g., number acres, types of equipment, amenities, facilities, etc., on a park by park basis).

Staff expect that it will take at least one year to fine tune the system. It may take another six months before the system produces detailed fiscal reports.

According to Park staff, there was some initial resistance to the new computer system. Especially from those staff that had established their own methods of tracking park maintenance costs. In addition, staff have found entering information into the systems time consuming.

Maintenance Standards

The District has maintenance standards for each of its parks. The standards specify the:

- Desired quality to be maintained;
- Specific tasks to be carried out;
- Amount of staff time required to perform the tasks;
- Amount of consumable materials required; and
- Types of equipment and tools required.

In some cases, maintenance standards for individual facilities or amenities exist that take into consideration the specific maintenance needs of the facility/amenity.

Allocation of Resources. Hennepin parks staff allocate resources based on the desired service level as set out in the standards, experience of both management and staff, and previous year's budget allocations. After full implementation of the new tracking system, management expect to enhance resource allocation decision-making with detailed maintenance cost data.

Hennepin Parks uses park staff to collect trash, repair damaged facilities, but contractors to complete large capital projects. They also use a high proportion of seasonal workers (three times the number of full time staff by position count). According to Hennepin's FY 02 budget documents, the strategies employed to reduce park maintenance costs include:

- Modifying or discontinuing programs that are not meeting goals,
- Increased emphasis on non-tax revenue through park user fees,
- Intensive marketing effort to encourage the purchase of annual permits, and
- Concentration on initiatives & programs that generate revenue or increase customer service.

**Prince William County, Virginia
Park Authority**

Park Characteristics and Maintenance Costs. Prince William County has a population of 300,000. The County's Board of Supervisors appropriates County General Funds to the Prince William County Park Authority to fund non-enterprise parks and recreation activities. The Park Authority allocates approximately \$5.6 million² for park maintenance. The majority of the dollars fund salaries and benefits. Park maintenance staff include 92 FTE staff (30 full time, 28 part time³, and 34 seasonal⁴).

The Authority owns a total of 3,292 acres, of which 519 are developed including ballfields, playgrounds, picnic areas, tennis courts, equestrian parks, campgrounds, and public gardens. The Authority also maintains 194 elementary school playgrounds and 22 County facilities⁵.

The County's maintenance tasks include:

- Trash removal
- Caretaker/Restrooms
- Landscape maintenance
- Trail inspection and maintenance
- Court inspection and maintenance
- Graffiti removal
- Herbicide/Pesticide Applications
- Mowing/Trimming/Edging
- Athletic fields maintenance
- Turf maintenance
- Playground inspection and maintenance
- Vandalism repair
- Irrigation

The Authority considers maintaining mowing, trimming, edging, and trash removal the most costly maintenance tasks.

Managing Park Maintenance. Prince William's Park Authority divides its Grounds Department into eight regions. A supervisor and a maintenance crew are assigned to each region. Maintenance crews complete general maintenance tasks such as, picking up litter, mowing, cleaning restrooms, inspecting play equipment, and preparing ballfields. The Authority contracts for non-routine tasks such as removing large trees and making signs.

The Park Authority only tracks the maintenance costs associated with contracted tasks. The Authority uses a financial management program called Quick Books to automate the data. For all other parks, the Supervisors are responsible for ensuring that maintenance tasks are performed in a reasonable amount of time.

² Provided to Grounds Maintenance, Landscape, Fleet Maintenance, Facility Maintenance, and Golf Parks.

³ Employees work 37.5 hours/week beginning March through November.

⁴ Employees work a total of 1000 hours beginning April through mid-September.

⁵ The Park Authority was awarded a contract from Prince William County to maintain the grounds at 22 County facilities.

Resource Allocation Strategies. The Authority has grounds maintenance schedules for each park. The schedule for each park contains the required frequency of tasks, type of equipment to be used, and the estimated time for completing each maintenance task. The schedule provides a guideline or basis for the allocation of resources to each park. As a result, the Authority can report the approximate cost to maintain each park in the system.

To help manage the maintenance workload and costs, the Authority categorizes its ballfields into five levels:

- Level 1: Regional Park Championship Fields
- Level 2: Regional/Community Parks (high use, irrigation or lights)
- Level 3: Community Parks
- Level 4: Neighborhood Parks
- Level 5: School Sites

The Authority maintains level 1 parks to a higher standard than the other categories. For example, level 1 ballfields are mowed five times a week (for 34 weeks), fertilized four times a year, and irrigated 200 hours a year. Level 2 parks are mowed three times a week (for 34 weeks) and fertilized once a year. Level 1 sites are mowed and fertilized once a year, and are not irrigated.

The Authority uses additional strategies to reduce park maintenance costs. Several years ago, the Park Authority Board requested staff to recommend several cost saving strategies for park maintenance. Based on the recommendations, the Board decided to mow neighborhood parks on a bi-weekly basis instead of weekly. In addition, selected parks within Prince William County are closed and do not receive routine maintenance during the winter months. However, the Authority routinely inspects its parks to detect any public safety hazards. Between the months of March to November (peak workload), seasonal workers are employed to augment the full time and part time staff complement. Seasonal workers are not employed during the winter months.

Orange County Park and Recreation Department

Park Characteristics and Maintenance Costs. Orange County, Florida has a population of approximately 800,000. The County's Park and Recreation Department maintains 70 parks on 338,000 acres of parkland, including athletic fields, basketball courts, playgrounds, picnic areas, boat ramps, community centers, equestrian parks, campgrounds, nature centers, outdoor tennis courts, historical sites, soccer fields, ballfields, lake front beaches, and swimming pools. The largest park in the County consists of 1,500 acres.

The County's Parks and Recreation Department allocates approximately \$8.8 million dollars of General Tax Revenue and 232 FTEs (25 supervisor FTEs and 207 field staff FTEs) toward park maintenance. Approximately 45% of the dollars fund employee salaries and benefits.

The Department's maintenance tasks include:

- Trash removal
- Trimming trees
- Landscape maintenance
- Trail inspection and maintenance
- Court inspection and maintenance
- Vandalism repair
- Mowing
- Athletic field maintenance
- Amenity cleaning
- Turf maintenance
- Playground inspection and maintenance
- Graffiti removal

Orange County contracts out the majority of the park maintenance tasks. Therefore, Department staff concentrate their efforts on park monitoring, planning, and development. The Department considers general park maintenance such as mowing and athletic field maintenance the most costly tasks.

Managing Park Maintenance. The Department recently began manually tracking maintenance costs for each park. The Department has established a budget for each park with object codes for salaries, equipment expenses, and material expenses. Staff are required to track their time and the hours of equipment usage by work order (paper system). The Department eventually wants to implement an automated system to track its costs.

For approximately \$1.2 million annually, the County contracts-out the following tasks for each of the County's 70 parks:

- Trash collection
- grass cutting;
- landscape maintenance;
- graffiti removal;
- turf maintenance;
- trail maintenance
- playground maintenance; and
- athletic field maintenance.

The maintenance tasks completed in-house include:

- restroom cleaning
- vandalism repair
- trail inspection
- playground inspection

Maintenance Standards. The Department has not developed specific maintenance standards for its parks. However, the Department incorporates performance standards (e.g., each park is to be mowed on a weekly basis) into the contract for park maintenance. As part of contract monitoring, park supervisors conduct quarterly inspections of each park to ensure that the contractor maintains the sites to an acceptable standard.

Resource Allocation Strategies. The Department allocates its resources such as staff, equipment, and supplies among five geographical park districts. The allocation of resources is based on previous year budgets and park management's experience and knowledge. Funding for park maintenance is currently tracked in one budget cost account. Due to Orange County's climate, the Parks and Recreation Department requires full time staff to maintain the County's parks, and does not use any seasonal workers.

Greater Vancouver Regional District (GVRD)

The Greater Vancouver Regional District is a partnership of 21 municipalities and one electoral area that make up the metropolitan area of Greater Vancouver, British Columbia. The Regional Parks function is one of eleven departments within the Greater Vancouver Regional District.

Park Characteristics and Maintenance Costs. The Greater Vancouver Region has a population of 2 million. Parks within GVRD receive over six million visits a year. The Regional Parks Department is responsible for maintaining 24 Regional Parks. There is a total of 27,151 park acres, with 1,358 developed acres and approximately 24,500 acres set aside for preservation.

The GVRD Board appropriates \$5.98 million and allocates 62.7 FTE's (6 park operation supervisors, 32 full time field staff, and 53 seasonal field staff) to maintain its park system. Approximately 90% of the maintenance program is funded by a Municipal Tax Levy (General Tax Revenue). The Department receives some user fee revenue and other external revenue, such as rental housing and water-lot licenses. According to staff, 58% of the Park's budget is allocated to employee salaries and benefits.

The tasks that fall within the Regional Parks maintenance program include⁶:

- Building maintenance
- Facility repairs
- Grass cutting
- Leaf removal
- Painting and staining
- Parking lot and road maintenance
- Sign maintenance
- Washroom cleaning
- Winter drainage
- Equipment maintenance
- Traffic control
- Landscaping
- Litter pick-up and garbage removal
- Park patrols
- Snow removal
- Winterize equipment
- Removal of deadfall and windfall vegetation

The Department considers the labor-intensive tasks of cleaning washrooms, picking up litter and garbage, and cutting grass the most costly maintenance tasks.

Managing Park Maintenance. The Department delivers its park operations via three decentralized operational areas and one centralized head office. The Department's Centralized Head Office coordinates operations consistent with departmental standards, policies, and priorities.

⁶ Park maintenance does not include: greeting booked groups, overseeing volunteer projects, wildlife control, risk management, resource conservation, bylaw and regulation compliance, visitor safety, fire suppression, and incident management.

The Department does not currently track the time staff spends on specific maintenance tasks. Ten years ago, the Department conducted an extensive time utilization study of its park maintenance operations. For a period of twelve months, maintenance staff were required to track and record the maintenance tasks carried out every thirty minutes. The intent of the exercise was to gain an understanding on the time required to complete specific maintenance tasks and assist management and budget decisions.

According to staff, the exercise was cumbersome and time consuming and maintenance staff initially resisted tracking their time. In addition, the GVRD reports that due to demanding workloads the data was never consolidated and analyzed. Since then, the GVRD limits time utilization studies to special projects or short periods to produce a snapshot of maintenance activities and costs.

Maintenance Standards. The Department defines a standards, guideline, and procedure for each maintenance task.

1. The Standard defines the quality of work required to maintain a park.
2. The Guideline describes the steps, levels, and scope of work, and frequency of activity necessary to achieve the required standard.
3. The Procedure identifies the actual activities or outputs required to achieve the standard.

For example, the standard for trash removal is to “maintain a clean and attractive environment by cleaning up refuse within the park.” The guideline followed is “inspect for litter and garbage in all usable park areas on an on-going basis depending on volume of use.” An example of a procedure staff must follow is “pick all visible litter and remove garbage from trails, parks, etc.”

According to staff, the District does not fund to meet the standards. GVRD maintains parks to the highest standard possible with the available resources. To keep within the confines of limited resources, the Department makes subtle adjustments to its maintenance standards. For example, the Department may not replace trail signage or other items that are vandalized.

Resource Allocation Strategies. GVRD allocates resources for park maintenance based on the experience of both management and staff, the previous years’ budget allocations, and the standards, guidelines, and procedures. Staff estimate the cost of new services based on experience, local comparisons, and pricing studies.

GVRD allocates more money to Regional Parks than to Conservation Reserves. The Regional Parks contain more facilities and services that consume a greater amount of the Department’s resources. However, according to the Park Staff, the level of maintenance ultimately depends on the resources available.

The Department also provides its Board with a ten-year fiscal forecast for each park within the District. The forecast aims to anticipate foreseeable impacts (e.g., capital facility development or new services) on resources and to adjust maintenance programs accordingly.

The Department is in the process of determining whether to expand the number of maintenance tasks conducted by contractors. At all parks, the Department contracts out certain services such as security (closing, opening gates or washrooms, security patrols). All maintenance operations and tasks are contracted out for greenway parks. Greenway parks contain (or are set aside to contain) transit infrastructure, e.g., roads. According to Park Staff, the Department does not have the resources to dedicate internal staff to Greenway park maintenance. In addition, the entire operation for one large park that contains a variety of facilities is contracted out.

The Parks Department employs a high proportion of seasonal workers. Approximately 25 FTE field staff (44% of total field staff) or 53 actual staff (62.4% of total field staff) are seasonal workers. According to the Operations Policy Coordinator, a high percentage of seasonal workers allows the Department to respond more efficiently to seasonal increases in workload and provides more scheduling flexibility in response to workload demands.⁷

⁷ Due to current union agreements the Department is unable to use part-time (less than 40 hr/week) staff. The Department therefore, relies on the flexibility of seasonal workers to match peak demands in workload.

Portland Bureau of Parks and Recreation

Park Characteristics and Maintenance Costs. The City of Portland, Oregon has a population of 531,600. The City's Bureau of Parks and Recreation is responsible for maintaining 230 parks, totaling 10,000 acres of parkland. Approximately 3,400 of the acres are developed. The City appropriates approximately \$18 million and allocates 177 FTEs to maintain its park system. The park maintenance program is funded by General Tax Revenue and some grant money. According to the Manager of Operations, the majority of the dollars fund employee salaries and benefits.

The tasks that fall within the City's maintenance program include:

- trail inspection and maintenance
- landscape maintenance
- graffiti removal
- athletic field maintenance
- trimming trees
- mowing
- collecting dog feces
- playground inspection and maintenance
- storm water management systems
- amenity cleaning
- turf maintenance
- vandalism repair
- trash removal
- maintenance & operation of maintenance systems

The Bureau considers maintaining storm water systems and collecting dog feces the most costly maintenance task items. Utility fees (e.g., lighting ballfields and water) are also a significant expenditure item for the City.

Managing Park Maintenance. The City of Portland divides its parks into six geographical districts. Park maintenance employees assigned to each district perform general maintenance tasks such as, picking up litter, cleaning restrooms, inspecting play equipment, minor repairs to equipment and amenities, and plant care.

The City of Portland uses a database to collect and track maintenance cost data for each park. Employees track the time spent maintaining parks on a daily work sheet. Administrative staff enter the details from the submitted work sheet into the database. The City uses the database to calculate the cost to maintain each of the City's parks. Staff produce reports about:

- Actual maintenance tasks performed at each park;
- Time spent on specific park maintenance tasks; and
- Amount of money spent maintaining each individual park.

Maintenance Standards. According to management staff, the factors that determine maintenance levels include available resources; the type of park; and maintenance standards. The standards will represent the levels that the parks would ideally be maintained at. In practice, however, the City will maintain the parks to the highest level they can with the resources available. The City is currently developing more detailed maintenance standards for its parks.

Resource Allocation Strategies. The Bureau uses the data on maintenance activities and cost, the maintenance standards, as well as the previous year budget and staff experience to make resource allocation decisions. Portland also uses its cost data to benchmark its services with both the private and public sector. For example, the Bureau benchmarks the ratio of maintenance costs to the number of acres developed.

Management Staff continually examine its operations to reduce expenditures. The City uses maintenance cost data to identify activities that can be contracted out for a lower cost. The City does contract out specific services such as, facility and sprinkler system maintenance. Management continually reviews contractual arrangements to identify cost savings in reclaiming the service from contractors. In some cases, the City has taken back services that were previously contracted out.

According to staff, the Bureau must reduce its FY 2003 budget request by \$2.8 million. The Bureau plans to cut 32 park maintenance workyears to meet this target reduction. Using the Bureau's maintenance cost database, staff can report the direct impact that these reductions will have on the City's parks (e.g., the Bureau will mow X number of parks three times per month instead of four). Other areas currently under consideration for possible cost savings include:

1. Utility (e.g., water) cost reductions,
2. New equipment and fleet turnover arrangements;
3. Increased user-fees; and
4. New materials procurement arrangements.

According to the Manager of Operations, approximately 50% of the peak season and 25% of the all-year round maintenance work force consist of seasonal workers. Staff believe that a full complement of maintenance staff is not needed year round and that there are significant cost savings in utilizing a high percentage of seasonal workers.

The Manager of Operations reports that the City is currently considering categorizing and funding parks based on the level of use and significant past investment (e.g., rehabilitation). For example, parks that receive the highest use or significant past investments would be classified as Category A. The City would allocate a large proportion of the Park's maintenance budget to maintain Category A parks to 90-100% of the maintenance standards. The less popular parks would not be maintained to the same

standard as Category A parks and would not require as many resources. Possible disadvantages to this approach include:

1. Parks that are not in Category A may deteriorate at a greater rate. Over time, it could cost a jurisdiction more to bring a park that has been neglected back to an acceptable standard; and
2. Community and political pressure to place parks in Category A.

Park Management advise that in previous years, the Department's goal was to maintain each park at the same maintenance standard. However, due to fiscal constraints, the Department is moving away from this goal in a predictable and defensible manner.

City of Rockville

Park Characteristics and Maintenance Costs. The City of Rockville has a population of 45,000. The City's Recreation and Parks Department maintains 55 parks totaling 935 acres of parkland. Approximately 449 of the acres are developed. The Department classifies its parks as "passive" or "active". Passive parks include conservation areas and reserves, and stream valley parks. Active parks include athletic parks and recreational parks.

The City appropriates approximately \$1.7 million and allocates 45 FTEs to maintain its park system. General Tax Revenue primarily funds the park maintenance program. According to staff, the majority of the dollars fund employee salaries and benefits, and facility maintenance.

The City's maintenance tasks include:

- Mowing
- Ball field maintenance
- Right-of-way maintenance
- Park equipment maintenance
- Trash collection
- Tree maintenance
- Facilities maintenance
- Horticulture

The Department considers facility maintenance, mowing, tree removal, facility maintenance, and ballfield maintenance the most costly tasks.

Managing Park Maintenance. The City currently uses work orders (paper system) and spreadsheet software to collect and track maintenance cost data for each park. Staff keep track of the amount of time and consumable materials used at each park. This information is then entered into spreadsheets, which calculate the costs associated with maintaining each park. The spreadsheets provide the raw cost data used by management for more detailed fiscal analysis. However, producing data reports under the current system is labor intensive and the tracking system is not consistently used among park staff.

The City is in the process of purchasing more sophisticated park maintenance management software. The software will further assist the Department in budgeting, tracking, reporting and benchmarking its maintenance operations. Staff anticipate that tracking maintenance costs will also be more efficient under the new system. Park supervisors and administrative staff will be required to enter the following information into the new system:

- Time it takes to complete tasks,
- Amount of consumable materials used; and
- Equipment/fleet hours used.

The new system will provide more accurate and consistent reports on the costs of performing specific maintenance tasks. Management will be able to report the costs associated with increasing or decreasing specific maintenance service at each park.

Maintenance Standards. The Department has very detailed maintenance standards for its parks. Each standard indicates the:

- Desired quality to be maintained;
- Specific tasks to be carried out to achieve the desired standard;
- Required frequency of tasks;
- Amount of staff time required to perform the tasks;
- Amount of consumable materials required (e.g., fertilizes, cleaning solutions);
- Types of equipment and tools required (e.g., mops, vacuums); and
- Estimated time each week/month to complete the tasks.

Park supervisors conduct routine inspections to ensure that the parks meet the standards. According to staff the standards are an integral part of park operations.

Resource Allocation Strategies. The City allocates resources across 5 operational areas – Parks East, Parks West, Forestry, Horticulture, and Facility Maintenance. From the park maintenance standards and cost data, management staff can estimate the amount of resources to allocate to each park. Resource allocation is also based on the experience of both management and staff and the previous year's budget allocations.

According to staff, the majority of maintenance services are either completely or partly carried out under contractual arrangements. For example, contractors maintain athletic fields, while both in-house and contract staff cut grass at parks. Seasonal workers represent approximately 15-20% of the park maintenance work force. According to management staff, advantages of using seasonal workers include increased scheduling flexibility and more rapid response to seasonal increases in workload.

Phoenix Parks and Recreation Department

Park Characteristics and Maintenance Costs. The City of Phoenix, Arizona has a population of 1.4 million. The City's Parks and Recreation Department maintains more than 170 parks, totaling 35,344 acres of parkland. Approximately, 3,434 of the acres are developed. The City's parks receive approximately 27 million visits a year.

The City appropriates approximately \$39.7 million and allocates 698 FTEs to maintain its park system. General Tax Revenue primarily funds the park maintenance program. The majority of the total funds employee salaries and benefits.

The City's maintenance tasks include:

- Mowing
- Athletic field maintenance
- Trimming trees
- Park equipment maintenance
- Trail inspection & maintenance
- Tennis & basketball court inspection & maintenance
- Playground inspection & maintenance
- Trash collection
- Tree maintenance
- Landscape maintenance
- Public restroom cleaning
- Turf maintenance
- Vandalism repair
- Community Center maintenance

The Department considers turf management the most costly maintenance task.

Managing Park Maintenance. The Department of Recreation and Parks tracks the maintenance costs of approximately 26 major parks, that is the 26 largest, most used parks. They collect and track maintenance activities and labor and materials costs for these 26 parks in separate accounts in the City's accounting and financial management system. The system can produce fiscal reports on each of the 26 parks, including the maintenance costs per acre of parkland and maintenance costs per park. The City does not separately track detailed maintenance cost data for the other 144 parks in the City.

Maintenance Standards. The Department has field operation procedures or standards that define the desired park quality, specific maintenance tasks to be completed, and the required frequency of the tasks. Park supervisors conduct routine inspections to ensure that field operations procedures are met.

The City does not necessarily fund to meet the standards or the field operations procedures. Available resources, not maintenance standards, drive maintenance levels. The standards or procedures represent the levels that the parks would ideally be maintained at. In practice, however, the City maintains the parks to the highest level they can with the resources available.

Resource Allocation Strategies. The Department allocates its park maintenance resources, including staff, equipment, and supplies, among four geographic park districts. Resource allocation is primarily based on previous year budgets and park management's experience. For 26 of the 170 parks, staff also use detailed cost data in resource allocation decision-making.

Due to Phoenix's climate, the Parks and Recreation Department requires full time staff to maintain the City's park and does not employ any seasonal workers. The City contracts out the task of trimming tall trees.

Modesto, California
Parks Operations and Maintenance

Park Characteristics and Maintenance Costs. The City of Modesto, California has a population of approximately 200,000. The City's Parks Operations and Maintenance Division maintains 69 parks, including 778 acres of undeveloped or natural parkland, 345 acres of neighborhood parks, 108 acres of community parks, and 30 acres of mini-park land.

The City of Modesto allocates approximately \$5.3 million dollars and 68 FTE (53 full time FTEs and 15 FTE temporary employees) toward park maintenance. Of the total, approximately \$4.4 million represent general fund revenue. The majority of the dollars (\$3 million) fund employee salaries and benefits.

Park maintenance staff:

1. Repair and construct park playground & athletic facilities;
2. Maintain swimming pools, park restrooms, and picnic areas;
3. Provide landscape maintenance services, including mowing;
4. Remove litter and weeds from parks and public right-of-ways; and
5. Support neighborhood park recreational programs.
6. Support for large public events

Staff consider removing trash and maintaining swimming pools the most costly maintenance tasks.

Managing Park Maintenance. The Division uses an automated Preventative Maintenance Management System (PMMS) and a separate database to collect and track maintenance cost data. The PMMS tracks labor costs by task codes. The database tracks equipment and material costs by the same task codes.

Maintenance employees track every 1/10 of an hour of their time on daily time cards. Staff also record the hourly usage of equipment and quantity of materials consumed for each task performed, on a separate log sheet. Administrative staff enter the information from the time cards into the PMMS. They enter the information from the log sheets into the database⁸.

⁸ To maintain and update the system, two maintenance positions were converted into clerical positions.

The computer systems track the labor and material costs associated with both routine tasks (e.g., grass cutting and trash collection) and non-routine maintenance (e.g., repairing vandalized equipment or removing graffiti). For each park the systems track:

- Routine and non-routine maintenance tasks performed,
- Time spent on routine maintenance tasks,
- Cost of routine maintenance tasks, including labor and materials,
- Time spent on non-routine maintenance tasks, and
- Cost of non-routine tasks, including labor and materials.

Maintenance Standards. The City developed extensive maintenance standards to indicate the frequency of tasks and quality of work. Each park has standards that define the:

- Desired quality to be maintained;
- Specific tasks to be carried out to achieve the desired standard;
- Required frequency of tasks;
- Amount of staff time required to perform the tasks;
- Amount of materials required (e.g., fertilizer, cleaning solutions);
- Types of equipment and tools required (e.g., mops, vacuums) and
- Estimated length of time each week/month to complete the tasks.

Parks staff adjust these standards from time to time to reflect any changes to procedures or number of acres to be maintained. Park management staff report that the computer systems and maintenance standards are effective tools to account for park maintenance costs and employee performance.

Resource Allocation Strategies. Staff allocate resources based on data retrieved from the PMMS database, the City's maintenance standards, experience of park staff, and the previous year's budget allocations.

The PMMS is an important tool for allocating resources. To develop the annual budget, staff use the PMMS data on the cost to complete maintenance tasks up to the desired level or standard. Staff also calculate the actual cost of maintenance against estimated (budgeted) costs and make appropriate adjustments to the maintenance programs throughout the year. They also use PMMS data to support requests for additional funds for park maintenance.

PMMS also allows the division to benchmark the ratio of maintenance costs relative to several maintenance tasks. For example, the City tracks, reports, and benchmarks the following:

- Pool maintenance cost per unit,
- Lighted ballfield maintenance cost per unit,
- Turf mowing cost per acre,
- Litter removal cost per acre,
- Weed control cost per acre, and
- Restroom maintenance cost per unit.

The City also tracks and reports the results of park inspections to assess maintenance quality.

The Division contracts out landscape maintenance for 3 miles of streetscapes and seven neighborhood parks. Approximately 14.5% of the City park maintenance employees are seasonal. Staff report that seasonal workers are more cost effective than full time employees on certain lower skilled tasks, but also report the following disadvantages of using seasonal workers:

- High turnover;
- Fewer skills than full time employees;
- Restrictions on number of work hours allowed; and
- More performance and attendance problems

Park Management staff believe that the most cost effective use of funding for labor is a blend of full time and seasonal.

**ADDENDUM REQUEST FORM
 DETAILED COSTS OF NEW/EXPANDED PROGRAM
 AND/OR POSITIONS**

FUND: 001

AGENCY: Park Authority

COST CENTER: 07 / Area Management

PROGRAM TITLE: Additional Athletic Field Maintenance Positions

PRIORITY RANKING:

FY 2002 Funding Request:

Personnel Services	\$ 145,532
Operating Costs	169,405
Capital Equipment	96,000
Less: Recovered Costs	
Subtotal	\$ 410,937
Fringe Benefits	35,655
Less: Revenues	
Net Cost to the County	\$ 446,593

New Positions:

Position Title	Number of Positions	Midpoint Range	Cost
Laborer III	2	\$ 31,489	\$ 62,978
Laborer II	3	\$ 27,518	\$ 82,554

Details of Expenditures/Revenues:

Character	Object Code	Subobject	Subobject Title	Requested Amount	Justification
30	312	3367	Uniforms	\$ 1,795	Park Uniforms for these positions
30	328	3867	R/M Ballfields	\$ 167,610	Operating expenses for athletic fields
60	651	6504	Vehicles	\$ 96,000	Two 1 Ton Crew Cab Trucks to serve these positions and crews

Agency Remarks:

The Agency is requesting 5 additional athletic field maintenance positions and operating expenses to accommodate the increasing number of athletic fields and increases in development levels at existing fields. This need is borne from the Agency's current staffing deficiency resulting from previous growth and the increases that are planned through FY2003.

In FY2001, the Agency identified a staffing shortfall of 13 positions, but due to budgetary sensibilities received only 5 positions. Since that time, there has been a tremendous amount of

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growth and development in athletic facilities, due to the 1998 Park Bond and a major increase in parkland. Athletic field growth and development from 2001 through FY2003 has increased the staffing needs by 3 additional positions, resulting in a shortfall of 11 positions. However, the Agency is requesting only 5 positions, again in deference to budgetary sensibilities.

History:

In the past twenty-five years, the Park Authority's athletic field inventory has grown 152% to a current total of 295 athletic fields; with more athletic fields to be developed in the future. The further development of existing fields has also impacted maintenance requirements. However, staffing to support this vital public service has not kept pace with the growth of fields, increasing just 16%, including the addition of 5 staff positions in Fiscal Year 2001.

The five positions approved and staffed in FY2001 represent the very first increase in staffing levels within the Park Authority's grounds maintenance operation since 1977 and addressed a glaring need. Unfortunately, due to the growth in the number of fields and the development level of fields, the total requirement for human resources remains unmet.

In Fiscal Year 2001, Park Operations staff updated the Athletic Field Budget to reflect existing labor costs, contract costs and the current inventory of athletic fields, a number that has grown since the last update in 1998 (The Athletic Field Budget was established in 1994). This Budget documents and defines the time and task requirements for each type of athletic field within the Park Authority inventory, as well as all other costs associated with field maintenance. There are currently 23 field types (a listing of field types is provided below) that require 38,566 staff hours of maintenance annually.

Justification:

Improvements to existing FCPA athletic fields through the 1998 Park Bond have increased the inventory of athletic fields and will continue to do so in the future. Through funding provided by the 1998 Park Bond Referendum and other sources, the following projects have either been completed; are currently under construction; or scheduled for completion in FY2003.

Popes Head Park – 3 new rectangular fields - Construction Complete FY2001

This project installed 3 rectangular fields of type 2-K

Resultant increase in annual staff hours: 215.82
Resultant increase in operating expenses: \$10,714

Great Falls Nike Park – 2 new fields - Construction Complete FY2001

This project installed 2 new fields, 1 diamond (2-B) and 1 rectangular field (2-K)

Resultant increase in annual staff hours: 242.45
Resultant increase in operating expenses: \$7,365

Larry Graves Park – 3 new fields - Construction FY2002

This project will reconfigure and construct 3 new fields, 2 diamonds (2-E) and 1 rectangular field (2-M)

Resultant increase in annual staff hours: 341.02
Resultant increase in operating expenses: \$7,587



Braddock Park - Lighting Installation on 1 field - Construction Complete FY2001

This project installed lighting on one rectangular field, changing from 2-M to 1-E

Resultant increase in annual staff hours: 88.60
Resultant increase in operating expenses: \$8,313

Franklin Farm Park – Irrigation Installation on 2 fields – Construction FY2002

This project will move 1 rectangular field from type 2-K to type 2-M; and
move 1 diamond field from type 2-F to type 2-E.

Resultant increase in annual staff hours: 0.00
Resultant increase in operating expenses: N/A

Ossian Hall Park – Irrigation Installation on 2 fields – Construction FY2002

This project will move 2 diamond fields from type 2-D to type 1-B.

Resultant increase in annual staff hours: 88.45
Resultant increase in operating expenses: \$15,236

George Washington RECenter – Irrigation Installation on 2 fields – Construction FY2002

This project will move 2 rectangular fields from type 2-K to type 2-M.

Resultant increase in annual staff hours: 0.00
Resultant increase in operating expenses: N/A

Cunningham Park – Irrigation Installation on 2 fields – Construction FY2002

This project will move 1 rectangular field from type 2-L to type 1-E; and
move 1 diamond field from type 2-D to type 1-B.

Resultant increase in annual staff hours: 185.42
Resultant increase in operating expenses: \$15,931

South Run District Park – Installation of lights on 1 field – Construction FY2002

This project will move 1 rectangular field from type 2-D to type 1-B.

Resultant increase in annual staff hours: 98.25
Resultant increase in operating expenses: \$7,618

Hutchison School Site - Field Reconfiguration and Irrigation Installation-7 fields – Scope FY2002

This project will convert six existing rectangular fields to 5 rectangular fields and two diamond fields

Resultant increase in annual staff hours: 248.78
Resultant increase in operating expenses: \$3,244

Lake Fairfax Park – Irrigation Installation on 2 fields – Scope FY2002

This project will move 2 diamond fields from type 2-D to type 1-B.

Resultant increase in annual staff hours: 196.50
Resultant increase in operating expenses: \$15,236

Clermont School Site - Field Development-4 fields - Construction FY2002

This project will reconfigure athletic fields at the park and create 4 new diamond fields

Resultant increase in annual staff hours: 361.33
Resultant increase in operating expenses: \$8,547

Great Falls Nike Park - Lighting Installation on 2 fields - Construction FY2002

This project will move 2 diamond fields from type 2-B to type 1-A.

Resultant increase in annual staff hours: 160.46
Resultant increase in operating expenses: \$12,695

Stringfellow Park - Construction of 3 new fields - Construction complete FY2002

This project will construct 3 new irrigated rectangular fields, opening for play in FY2002

Resultant increase in annual staff hours: 226.32
Resultant increase in operating expenses: \$10,714

Arrowhead Park - Construction of 3 new fields - Construction FY2002

This project will construct 2 new irrigated diamonds, and 4 irrigated rectangular fields, opening for play in FY2003. This project will reconfigure three existing rectangular fields.

Resultant increase in annual staff hours: 781.36
Resultant increase in operating expenses: \$44,410

Total staff hour increases due to new construction and field upgrades: 3,234.76
Total operating expense increases due to new construction and field upgrades: \$ 167,610

In addition to these existing requirements, recent increases in Park Authority landholdings will increase the inventory of athletic fields in the future. In the past year, the Park Authority has acquired over 2,000 acres of land in the western part of the County (commonly referred to as the Hunter/Hacor Assemblage). Of these new properties, upward of 400 acres of land is open in nature and available for athletic field development. There is a serious shortage of athletic fields in this area, and it is the desire of the Park Authority to develop athletic fields on these properties. Currently, the FCPA is in negotiations with youth sports leagues for interim use agreements on these properties that would allow the leagues to develop athletic fields quickly; with four rectangular fields being brought on-line in the fall of 2001.

The Park Authority is in the planning stages for acquisition of landholdings at the former Lorton Correctional Facility; where it is anticipated that numerous athletic fields will be developed, including the possibility of a tournament facility.

It is estimated that dozens of new fields may be developed in the next several years on these lands. There will be staff hours and costs associated with the development of these fields, as well as their maintenance once open to the public. This future development will further exacerbate the existing shortfall in athletic field maintenance staff.

Assessment of existing staff resources

Athletic field maintenance is performed over a 42-week period from the beginning of March through mid-December. The required staff hours must be available during this 42-week period. During the remaining 10 weeks of the year, athletic field staff perform some athletic field work, but are heavily involved with equipment breakdown, repair and conditioning. They also assist in the other areas of park maintenance. The staff hour availability for one position during that period has been determined as follows:

	<u>Staff Hours</u>
1 Staff Year Equivalent (SYE)	2,080
Annual / Sick Leave (13 days)	<u>- 104</u>
Subtotal	1,976
Holidays (11 days)	<u>- 88</u>
Available Hours	1,800
Available Days	236

The athletic field staff requirements outlined in the Athletic Field Budget are time versus task oriented and do not consider other task requirements associated with the work force such as travel time, loading/unloading of equipment and breaks. It has been determined that 3 hours daily is required for these activities:

Available Days	236
Travel Time / Equipment loading / Breaks	<u>* 3</u>
Subtotal	708
Available Hours	1,800
Travel Time/Equipment loading/Break hours	<u>- 708</u>
Total Available Hours	1,180
Weeks Annually	<u>/ 52</u>
Total Weekly Hours	23
42 week Athletic Field Maintenance period	<u>* 42</u>
Total Required Hours Annually (AF SYE)	966

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Below is a table outlining the FCPA field inventory and associated staff hour requirements. **This table represents existing baseline requirements and does not reflect additional staff hours due to new construction or development from FY2001 to FY2003.**

Field Type	Field Description	Annual Hours	# of Fields	Total Hours	% of Total Hours
1-a	Baseball/Softball - 65' or below - Grass Infield	274.46	11	3,019.06	7.83%
1-b	Baseball/Softball - 65' or below - Skinned Infield	248.46	21	5,217.66	13.53%
1-c	Baseball - 75' or above - Grass Infield	320.83	5	1,604.15	4.16%
1-d	Baseball - 75' or above - Skinned Infield	294.83	2	589.66	1.53%
1-e	Rectangular - Soccer/Football	164.04	18	2,952.72	7.66%
	Level 1 Field Subtotal	1,302.62	57	13,383.25	34.70%
2-a	Baseball/Softball - 65' or below - Grass Infield with Lights	170.51	4	682.04	1.77%
2-b	Baseball/Softball - 65' or below - Grass Infield with Irrigation	170.51	7	1,193.57	3.09%
2-c	Baseball/Softball - 65' or below - Grass Infield	170.51	15	2,557.65	6.63%
2-d	Baseball/Softball - 65' or below - Skinned Infield with Lights	150.21	5	751.05	1.95%
2-e	Baseball/Softball - 65' or below - Skinned Infield with Irrigation	150.21	6	901.26	2.34%
2-f	Baseball/Softball - 65' or below - Skinned Infield	153.01	57	8,721.57	22.61%
2-g	Baseball - 75' or above - Grass Infield with Lights	183.76	-	-	0.00%
2-h	Baseball - 75' or above - Grass Infield	183.76	-	-	0.00%
2-i	Baseball - 60'-90' or above - Skinned Infield with Lights	173.76	-	-	0.00%
2-j	Baseball - 60'-90' or above - Skinned Infield	170.51	8	1,364.08	3.54%
2-k	Rectangular - Soccer/Football	71.94	83	5,971.02	15.48%
2-L	Rectangular - Soccer/Football with Lights	76.87	3	230.61	0.60%
2-m	Rectangular - Soccer/Football with Irrigation	71.94	27	1,942.38	5.04%
2-n	Tee-Ball	86.71	5	433.55	1.12%
2-o	Baseball - 75' or above - Grass Infield with Irrigation	181.76	1	181.76	0.47%
	Level 2 Field Subtotal	2,165.97	221	24,930.54	64.64%
3-a	Baseball/Softball Grass Infield	13.40	6	80.40	0.21%
3-b	Baseball/Softball Skinned Infield	13.40	5	67.00	0.17%
3-c	Rectangular - Soccer/Football	17.40	6	104.40	0.27%
	Level 3 Field Subtotal	44.20	17	251.80	0.65%
	GRAND TOTAL	3,512.79	295	38,565.59	100.00%

In addition to the inventory and development increases, the athletic field use period has been expanded by 4 weeks since 1994, two weeks earlier in the spring season and two weeks later in fall season. This expansion of the season has been of great benefit to the athletic community, allowing for earlier season practice as well as longer game seasons in the fall.

Another major impact upon field maintenance is the agreement between the Park Authority and the Fairfax County Public Schools that provides for the use of 32 Park Authority fields by high school spring sports teams beginning the first week of February each year. This is approximately six weeks prior to the regular field opening date. This agreement has major impact on pre-season field preparation and annual field renovations. In addition to the preparation and renovation, this has extended the requirements for routine maintenance by 10 weeks on these fields.

The Fairfax County Park Authority Athletic Field Budget was developed in 1994 at the request of the Board of Supervisors to identify and justify the resources necessary to maintain the Park Authority's athletic fields. While operating expense requirements were addressed at that time, the identified staffing needs were not addressed and staff hour requirements continue to remain unmet. Since 1994, staffing requirements have continued to grow due to the addition of new



fields and increases in the field level development of existing fields. The following table demonstrates that growth.

	1994	2001	Difference	Percent
Level 1	38	57	19	50.0%
Level 2	204	221	17	8.3%
Level 3	38	17	(21)	-55.3%
Total	280	295	15	5.4%

In the area of athletic field maintenance the use of service contracts for a great deal of the work has been successful in reducing many of the staff hour needs. Contractors are used to the extent that the service is available in the private sector and can be provided in concert with in-house taskings. In addition to contracting, the Park Authority has also developed an Adopt-A-Field program that has reduced operating cost requirements by approximately \$300,000 per year and reduced staffing needs by a total of 16 positions. However, participation in this program may fluctuate throughout the year and the Park Authority must absorb into its existing resources the results of any decreases in program participation. This request is based on the staffing needs identified in the Athletic Field Budget and does not duplicate the requirements satisfied by contract or the Adopt-A-Field program.

Based upon the above tables, the FCPA has the following staffing requirements for athletic field maintenance.

Available Staff Hours (32 positions @966 hrs.)	30,912	
Existing Staff Hour Requirements	38,566	
Existing Staff Hour Shortfall	7,654	7.92 SYE
Anticipated Requirements-New Development	3,125	
Anticipated Shortfall	10,779	11.16 SYE

The type of positions requested are based on the FCPA standards, in order to maintain proper structure and supervision within the crews. Of the current 32 Laborer positions, 16 are Laborer 3. To maintain the crew structure integrity, 2 of the 5 positions are requested to be Laborer 3, with three positions at the Laborer 2 level also requested.

	Existing	Requested	Result
Laborer 3	16	2	18
Laborer 2	12	3	15
Laborer 1	4	0	4

While existing requirements indicate a shortfall of 7.92 positions; and projected requirements for new development show a shortfall of 11.16 positions; the FCPA is only requesting approval of 5 positions at this time.

Operating Expenses

Tools, hand equipment, materials, supplies and other operational needs necessary to facilitate these positions will be provided through existing operational funds. Uniforms, shoes, and additional vehicles necessary to transport the staff are being requested. Based on current contract costs, the uniform requirement for each labor position is \$269 per year. The total

uniform requirement is \$269 x 5 or \$1,345. Shoes are provided for full time employees at a current contract cost of \$90 per pair. Total shoe requirement is 5 x \$90 or \$450.

Additional operating expenses associated with new fields and improvements to existing fields will be required. These figures are defined by the athletic field budget and does not include labor, tools or capital equipment. As outlined above, total additional operating expenses associated with field development is \$167,610

Total Operating Expenses Requested = \$1,345 + \$450 + \$167,610 = \$ 169,405.

An athletic field crew consists of a Laborer 3, Laborer 2 and typically, a seasonal position traveling together. While a redistribution of staffing among the Areas would occur, 2 additional vehicles are necessary to facilitate the new crews. The type of vehicle utilized by an athletic field crews is a 1 ton, crew cab dump, which is capable of hauling the staff, trailer and used at each field. The cost of these vehicles is approximately \$48,000 each.

Total Capital Equipment Requested = \$48,0000 x 2 or \$96,000

Impact if not funded:

Should these positions and associated costs not be approved, the Park Authority will continue to operate with deficiencies in personnel and equipment for the maintenance of athletic fields. Total growth in athletic field resources since 1978 is 152%. In that time athletic field maintenance staff has grown only 16%, with 5 new positions approved in Fiscal Year 2001. Those new positions have assisted the agency in meeting its requirements. However, the addition of 5 positions is required to bring FCPA human resources in line with the park facilities it is required to maintain.

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This performance measurement data reflects the shortfall is maintenance staff resources required to maintain Park Authority athletic fields to adopted standards. This shortfall affects:

- The ability to provide minimum sustainable maintenance
- The ability to provide much needed additions to the athletic field inventory, which is not possible without proper maintenance resources to maintain newly acquired or developed fields
- The ability assure safe playing surfaces and player safety

Performance measurement data to support new program/positions:

Goal:

To maintain FCPA Athletic fields at adopted maintenance standards, to provide minimum sustainable maintenance and assure safe playing conditions.

Output:

# of athletic fields:	295
# of staff hours required per standard	41,691

Efficiency:

# of staff hours required per standard	41,691
# of available (existing) staff hours	30,912
Existing shortfall of staff hours	10,779

Service Quality:

% of fields currently maintained to standard:	74%
% of fields maintained to standard w/ 5 additional positions	86%

Outcome:

Increase in fields maintained to standard with additional positions 12%

DMB RECOMMENDATION:

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MEMORANDUM

December 1, 2001

TO: County Council

FROM: Stephen B. Farber, Council Staff Director
Karen Orlansky, Director, Office of Legislative Oversight

SUBJECT: **FY 02 Intensive Budget Review (IBR) Project Reports**

This report is one of the seven FY 02 Intensive Budget Review (IBR) projects conducted this year by Legislative Branch staff.

Background

In early 2001, the Council endorsed a proposal, first advanced by Mrs. Praisner and Mr. Silverman, for Legislative Branch staff to conduct a number of IBR projects in FY 02. The Council's explicit intent with this effort is to provide Councilmembers with more comprehensive information and options related to decision-making on the FY 03 operating budget.

In July, the Council approved a package of seven IBR projects to be conducted in FY 02. These seven projects received the largest number of priority "points" in Councilmembers' rankings of potential project topics. In addition, at least three Councilmembers identified each of the seven projects as an IBR priority.

Target Completion Dates and Committee Assignments

The table below lists the seven IBR project topics, project staff, the Committee(s) assigned for initial review, and the target completion dates.

Updated ³~~2~~-20-02

FY 02 Intensive Budget Review Project Schedule

Project Number and Topic	Project Staff	Council Committee(s) Assigned for Initial Review	Committee Worksession Date	Report to full Council
1. Advertising	Glenn Orlin	T&E Committee	December 3, 2001	January 29, 2002
2. Computer Replacement Alternatives	Sue Richards Aron Trombka	MFP Committee	February 7, 2002	February 12, 2002
3. WSSC Workforce	Steve Farber Keith Levchenko	T&E Committee	April 11, 2002	To be scheduled
4. MCPS	Jennifer Hughes	Education Committee	January 28, 2002	To be scheduled
5. Aging and Disability Services	Jenny Kimball Joan Planell	HHS Committee	January 31, 2001	March 26, 2002
6. Park Maintenance	Jenny Kimball Scott Brown Marlene Michaelson	PHED Committee	March 25, 2002	To be scheduled
7. Alcohol, Tobacco, and Other Drug Prevention Activities	Karen Orlansky Krista Baker-Hernandez Ben Stutz Scott Brown Linda McMillan	Report is scheduled first for full Council session because the project scope includes budgets across Public Safety, HHS, PHED, and Education Committees	To be determined	April 2, 2002