



Memorandum

TO: TRANSPORTATION & ENVIRONMENT
COMMITTEE

FROM: Ed Shikada

SUBJECT: SEE BELOW

DATE: 09/18/07

Approved

Date

9/24/07

**SUBJECT: REPORT ON STRATEGIES TO REDUCE DEFERRED MAINTENANCE
AND INFRASTRUCTURE BACKLOG**

RECOMMENDATION

Accept this report on strategies to reduce deferred maintenance and infrastructure backlog for City facilities as background information that will be presented to the full Council at the October Study Session.

OUTCOME

Acceptance of this report will allow staff to continue with the development of various funding options to address the City's infrastructure backlog, as well as provide direction to staff on the approach to future City Council and community discussions.

BACKGROUND

The City's assets consist of numerous buildings, parks, trails, pools, streets (including trees and sidewalks), water, sewer and storm systems as well as an international airport, a large water pollution control plant, major equipment such as fleet vehicles and complex computing systems. Some of these assets are approaching the end of their useful life cycle and the need to replace, rehabilitate and upgrade them is becoming critical. Even in the case of facilities that have been recently upgraded or constructed, regular maintenance is essential to ensure the facilities and their major components meet life cycle expectancies.

On February 20, 2007, the City Council, Council appointees and senior management staff met to develop the City's three-year high priority goals. The Mayor's March Budget Message for fiscal year 2007-08 took these goals and other community outreach efforts, and identified reduction of the City's deferred maintenance and infrastructure backlog as one of the City's top five priorities. Staff was directed to create a Two-Year Infrastructure Work Plan to identify prioritized needs and potential funding mechanisms. A preliminary work plan was presented to the Transportation and Environment (T&E) Committee in May 2007 with the commitment to

report back to the T&E Committee in August 2007 with condition assessments and potential funding options.

In June 2007, the Parks Maintenance Subcommittee, which is comprised of community members and Commissioners from the Parks and Recreation and Planning Commissions, sent a letter to the Rules and Open Government Committee expressing its concerns about the lack of adequate funding for parks operations and maintenance and requested that staff be directed to explore alternate funding sources such as a parcel tax or increase/reallocation of the Construction and Conveyance Taxes. In light of the ongoing citywide effort related to deferred maintenance and infrastructure backlog currently underway, the Rules and Open Government Committee asked staff to present the issue to the full Council. On August 14, 2007, the City Council directed that the Subcommittee recommendations be considered in conjunction with infrastructure strategies in Fall 2007. Staff presented a preliminary progress report to the T&E Committee on August 27, 2007 which included information on the City's assets and anticipated unfunded needs.

ANALYSIS

Since March 2007, staff has been working on an interdepartmental effort to identify and analyze the City's deferred maintenance and infrastructure backlog. A senior staff committee and core team working group have been meeting on a regular basis to assemble specific program needs, condition standards, asset management systems and existing and proposed funding strategies.

Condition Assessment:

To address the complexity and magnitude of the City's assets, staff has grouped them into the thirteen discrete programs previously reported to the Transportation & Environment Committee:

- | | |
|--|-----------------------------------|
| 1. Airport | 8. Transportation Infrastructure |
| 2. Building Facilities | 9. Sanitary Sewer System |
| 3. Convention Center and other Cultural Facilities | 10. Service Yards |
| 4. City Facilities operated by Others | 11. Storm Sewer System |
| 5. Fleet | 12. Water Pollution Control Plant |
| 6. Parks, Open Space and Pools | 13. Water Utility System |
| 7. Technology | |

Condition assessments, anticipated unmet funding needs, information on existing or proposed asset management systems as well as some of the proposed highlights in the next two years are included in this report. Of the programs and funding needs that are identified to date, the estimated one time needs are approximately \$915 million and the anticipated ongoing unmet annual needs are approximately \$45 million.

As presented to the Committee previously, it is important to note that in order to focus this effort, the work and costs included to date include preventive maintenance and capital replacement needs only. Preventive maintenance is defined as activities performed to meet the asset's life

cycle expectancy and does not include ongoing daily or weekly maintenance and repairs tasks such as mowing of lawns and cleaning of restrooms or corrective maintenance activities and unanticipated repairs due to vandalism or equipment failure.

At the August T&E Committee meeting, staff also outlined the extent of the work effort that is planned to be completed over the next several months. Key elements of this ongoing work effort along with current status are listed below:

- **Coordinate with structural deficit work effort**
Staff is continuing to coordinate the unmet needs with the City Manager General Fund Structural Deficit Task Force.
- **Validate effective use of existing funding**
Staff is also looking at ways to communicate the effective use of existing funding as this is clearly a critical element for presentation and review before putting forward any recommendations for new funding sources. The existing performance measures in place are not specifically designed to demonstrate the effectiveness of how deferred maintenance and infrastructure improvement needs are being addressed. Instead, staff is looking at information about the extent of the City's investment as well as the types of projects completed in the last several years to evaluate how effectively we have been using existing funding.

Since the start of the Decade of Investment in 2000, the City has completed more than 1,000 projects. Though some of these projects resulted in the addition of new assets, the majority of these projects upgraded, rehabilitated or replaced existing assets. For example, in the Building Facilities program, the deferred maintenance and infrastructure improvement backlog which was at \$40 million prior to the year 2000 has now been reduced to \$12.8 million. This is a result of the collaboration between the City's facility maintenance staff and project design teams to address the deferred maintenance needs with more cost effective, maintenance friendly, operationally efficient and sustainable improvements.

In the Transportation Infrastructure program projects have been programmed and implemented with a goal of increasing operational efficiencies. Some examples of this are as follows: the LED modification of the traffic signals over a 4 year period realized an efficiency gain of almost \$1.6 million or about 20% of the total budget through saved electricity and labor costs. New and improved materials being used for the traffic control signs are anticipated to increase their life expectancy by 40% and result in an approximate savings of \$1 million in material and labor costs over the 10 year life expectancy of the signs.

- **Determine eligibility of funding sources and budgeting strategies for capital and operating uses**
Appendix A has been updated to discuss the eligibility of each of the potential funding sources and budgeting strategies for capital and maintenance purposes.

- **Prioritize needs – critical vs. important**

Given the magnitude of the one time and ongoing needs, staff believes that it is important to develop a strategy that first addresses the critical needs over the next two fiscal years. Each program is taking the following factors into consideration in order to determine its critical needs:

- a. health and safety code requirements,
- b. risk analysis,
- c. return on investment and,
- d. alignment with the City's goals of environmental sustainability.

- **Obtain input from Council, Commissions and community stakeholders**

A Council Study Session is being scheduled on October 25, 2007 to obtain input from the Council and community stakeholders. Staff will continue to work with the Commissions and advocacy groups on an ongoing basis.

- **Develop funding strategy options**

See discussion below

Funding Strategy:

On July 16, 2007 senior and executive level staff from the Departments of Airport, Environmental Services, Finance, Fire, Library, Parks, Recreation and Neighborhood Services, Police, Public Works, General Services, Transportation, and the Office of the City Manager participated in a half day workshop to discuss the unfunded needs and potential funding strategies. Eight distinct categories of existing and new funding mechanisms were reviewed. A brief summary of funding mechanisms and their sub-categories, along with their eligibility for capital and operating uses, has been included in Attachment A. This is not intended to be a complete description of each of these strategies, but rather a guide.

Given the General Fund deficit reported in the 2008-2012 Five-Year Forecast and Revenue Projections, staff determined that limited General Fund budgeting strategies such as creation of program reserves and sinking funds may make sense for specific programs. However, these strategies can only be a part of a citywide strategy for meeting deferred maintenance and infrastructure needs, as any General Fund strategy would require diverting funds away from other City needs.

Thus, staff's discussion focused on the feasibility and timing of new funding sources including formation of special assessment/community facilities districts, seeking voter approval of a new parcel tax, and increases to existing taxes such as the Construction & Conveyance Taxes, service rate and impact fee increases, issuance of bonds, partnership and grant opportunities.

A follow up strategy meeting held on September 14, 2007, further focused the discussion on possible strategies for addressing the critical unmet needs in the next two years. Service rate

increases, sales tax increases, developer fee increases, Construction and Conveyance tax increases, new parcel taxes and establishment of citywide special assessment districts were discussed as potential ways to obtain new funding. These discussions are still at a preliminary stage. Staff will continue to evaluate the impact of these strategies on the community as well as their effectiveness in addressing specific needs.

A Council Study Session is being scheduled on October 25, 2007 to discuss the findings of the report and the possible preliminary funding strategies that staff plans to bring forward. Staff will be looking to Council for input as to the viability of pursuing specific funding strategies. The Study Session is also intended to serve as a forum to gain input from community stakeholders. This will allow staff to then carefully evaluate and weigh options based on program needs and the likelihood of success of funding initiatives. Factors such as allowing adequate time for preparatory work like detailed condition assessments, master plans and community surveys shall also be considered before formulating recommendations which shall be brought forward to Council in December 2007. As part of the December report, staff will also develop preliminary information that would more specifically describe services or service levels that can be provided with existing funding, and those that cannot be provided absent additional funding.

Potential Upcoming Steps:

<u>Timeframe</u>	<u>Setting</u>	<u>Objective</u>
October 25, 2007	Council Study Session	Review analytical report, receive input from community stakeholders, and discuss options
December 2007	Council	Staff to present recommended strategy, prioritize near term actions and any survey proposals as appropriate
January / February 2008	Staff	Preliminary survey on any prospective ballot initiatives
March – June 2008	Council	Finalize any recommended actions involving voter approval

Based on input and discussions at the October T&E Committee meeting and the October 25, 2007 Council Study Session, staff will refine recommended strategies and present them to Council in December 2007. If Council direction is to explore prospective ballot initiatives, preliminary survey/polling is anticipated to occur in January-February 2008. Council approval of any actions involving voter approval in November, 2008 will be required in the March – June 2008 timeframe.

COORDINATION

Preparation of this report and memorandum was coordinated with the assistance of the following Departments: General Services, Transportation, Airport, Parks, Recreation and Neighborhood

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Services, Library, Public Works, Environmental Services, Police, Fire and the City Attorney's Office.

FISCAL/POLICY ALIGNMENT

The staff report and proposed work plan is consistent with the Council approved Budget Strategy to reduce deferred maintenance and infrastructure backlog and to develop a strategy to improve the infrastructure.

COST AND BUDGET IMPLICATIONS

Funding strategy recommendations will be brought forward to Council in Fall 2007.

CEQA

Not a project.



EDWARD K. SHIKADA
Deputy City Manager

For questions, contact Ashwini Kantak, CIP Action Team Leader (Interim) at 535-8147.

Attachment

Deferred Maintenance and Infrastructure Backlog Report

Transportation and Environment Committee
October 1, 2007

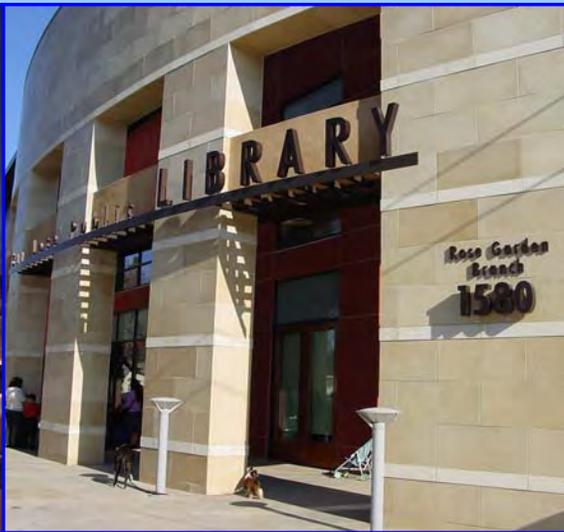


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Executive Summary

Background

The City of San José's assets consist of numerous buildings, parks, trails, pools, streets, water, sewer and storm systems as well as an International Airport and a large Water Pollution Control Plant. In addition to fixed or stationary assets, the City also owns and operates major equipment such as fleet (vehicles and equipment), computers and servers. Some of these assets are approaching the end of their life cycle and the need to replace, rehabilitate and upgrade them is becoming critical. Even in the case of assets that have been recently upgraded or constructed, on-going regular maintenance is essential to ensure the assets and their major components meet life cycle expectancies.

This report provides information on the City's key assets along with preliminary information on possible funding strategies. Not all of the one time or annual needs are known at this time as some programs require additional studies or assessment to determine total needs. However, based on the current information, the total anticipated unfunded needs are: One time – Approximately \$915 million; Annual – Approximately \$45 million. It is important to note that these numbers only include partial anticipated preventive maintenance and capital improvement needs. Preventive maintenance is defined as maintenance required to ensure anticipated life expectancy and does not include ongoing daily or weekly maintenance needs such as mowing of lawns and cleaning of restrooms or corrective measures due to vandalism or unanticipated failures.

Some of the highlights for the programs are given below:

1. Airport

A major expansion is currently underway and there are no significant upfront or ongoing unmet needs.

2. Building Facilities

There is a substantial deferred maintenance backlog with the unfunded need estimated at about \$12.8 million and a capital need of \$6.2 million over the next five years for a total of \$19 million in one-time costs. There are no unmet ongoing needs.

3. City Facilities operated by community organizations

There is currently an anticipated need of about \$4.3 million for capital improvements. The ongoing maintenance needs are typically the responsibility of the individual facility operators, with some exceptions. The ongoing needs are currently unknown.

4. Convention Center and Other Cultural Facilities

There is a significant need to repair and upgrade facilities. A recent assessment study done by a consultant identified a need of about \$24.6 million over the next five years with a total of \$30 million needed over the span of the next ten years. This number includes the ongoing preventive maintenance needs.

5. Fleet

There is an unfunded backlog in the amount of \$800,000, \$400,000 of which is the backlog associated with replacement vehicles and equipment. This backlog is expected to increase by about \$400,000 annually if adequate funding is not provided. The remaining \$400,000 backlog is related to retrofitting diesel vehicles and equipment as required by the Bay Area Air Quality Management Board. Additionally, a one-time capital investment is required to replace the current fuel distribution system, estimated at about \$320,000.

6. Parks, Open Space and Pools

There is a substantial need to address deferred maintenance and capital improvements estimated at about \$33.3 million (\$29.7 million for parks and pools and \$3.6 million for landfills). Though there is an ongoing unfunded need, the exact amount is currently unknown.

7. Sanitary Sewer System

There is a substantial sanitary system capital improvement need. The recently completed master plan for the three out of five City's sanitary drainage areas projects a cost of \$104 million for the capital improvements in these three areas. Estimated at about \$250 million total. The ongoing rehabilitation and annual maintenance and operation need has been partially identified as \$3-\$5 million, the total needs are currently unknown and will be determined by the "Sanitary Sewers Condition Assessment Study". Staff is pursuing funding for this study and is hoping to complete the study in two years, once funding has been identified. Cost of the study is estimated at about \$2-\$3 million.

8. Service Yards

Currently all of the needs in this program have been adequately budgeted for in the 5-year CIP.

9. Storm Sewer System

A Storm Sewer Master Plan, at an estimated cost of \$2-\$3 million, is needed to accurately identify the storm system capital improvement needs. The one time storm system capital improvement need is envisioned to be in the low hundreds of millions of dollars. The ongoing rehabilitation and annual maintenance needs are currently unknown and will be determined by the “Storm Sewers Condition Assessment Study” at an estimated cost of \$2-\$3 million. Staff is pursuing funding and hopes complete the study in approximately two years once funding is made available.

10. Technology Infrastructure

An unfunded need of \$15.5 million (\$12.5 million in one-time costs and an ongoing \$3 million cost component) has been identified for in-building infrastructure, connectivity among key facilities, asset replacement, and electrical and back-up capacity for the NOC to accommodate system consolidation. An unfunded need exists of about \$35 million in one-time costs, with an ongoing maintenance component of approximately \$5 million, for major software applications that are in need of upgrade or replacement. An unfunded need of about \$19 million has been identified for Radio Communications. The majority of this amount is required to replace existing radio communication infrastructure with 700 MHz digital trunking technology that will allow for improved radio communications within the City for Public Safety as well as for addressing interoperability issues with surrounding cities.

11. Transportation Infrastructure

Development of a Transportation Management Master Plan is currently underway. The preliminary estimates indicate a one time unfunded need of about \$455 million and an anticipated ongoing annual need of about \$29 million.

12. Water Pollution Control Plant

An effort to develop a Plant master plan is currently underway. Based on a preliminary consultant study, the anticipated unfunded 5-year needs are about \$55 million. An ongoing annual need is estimated to be about \$1.3-\$2 million.

13. Water Utility System

Currently all of the needs in this program have been adequately budgeted for in the 5-year CIP.

Staff is continuing to further evaluate various funding options for all programs. Since new funding sources are limited, several factors will be taken into consideration before recommending any specific funding strategy. These factors include program needs, applicability of the funding source, condition assessments, effective use of existing resources, likelihood of community support, and timeline to allow for adequate preparatory work.

Given the magnitude of the one time and ongoing needs, staff is developing a strategy that would first address the critical needs over the next two fiscal years. Each program is taking the following factors into consideration in order to determine its critical needs:

- a. health and safety code requirements;
- b. risk analysis;

Executive Summary

- c. return on investment and;
- d. alignment with the City's goals of environmental sustainability.

Funding options that address the critical needs over the next two years shall be brought forward for Council consideration during a Council Study Session in October 2007.

Methodology

To address the complexity and magnitude of the City's assets, staff has grouped them into thirteen discrete programs, which are listed below:

1. Airport
2. Building Facilities
3. City Facilities Operated by Others
4. Convention Center and other Cultural Facilities
5. Fleet
6. Parks, Open Space and Pools
7. Sanitary Sewer System
8. Service Yards
9. Storm Sewer System
10. Technology
11. Transportation Infrastructure
12. Water Pollution Control Plant
13. Water Utility System.

This report provides information specific to each of the programs in the six categories listed below:

a. Overview

A brief description of the types of assets included in the program.

b. Condition standards and assessment

Information on current condition standards and assessment methodology.

c. Asset Management System

Information on the asset management system that is currently being used or is proposed for future use to effectively track and monitor all of the assets in the program.

d. Anticipated capital improvement and maintenance needs

Information on the anticipated deferred maintenance and capital improvement needs for the next five years along with the required five-year funding needs.

e. Funding Strategy

A description of current funding strategy along with an evaluation of some possible new funding strategies.

f. Anticipated Highlights

Deferred maintenance and infrastructure related highlights for 2007-2008 and 2008-2009.

Funding Options

Eight distinct categories of existing and new funding mechanisms were reviewed and discussed. See Appendix A for further information on each of the funding options.

A. City Budgeting Strategies

1. General Fund Ending Fund Balance
2. Internal Service Fund
3. Program Reserves
4. Reserves as percentage of fees
5. Reserves as percentage of capital projects
6. Sale of Surplus Real property
7. Savings through leasing of technology
8. Sinking fund

B. Service Rate Increases

1. Airport Customer Facility Charge Fee
2. Airport Passenger Facility Charge Fee
3. General Purpose Parking Revenue
4. Municipal Water Rate
5. Sewer Service and Use Fee
6. Storm Sewer Use Fee

C. Impact Fee Increases

1. Municipal Water Fees (including Major Water Facilities Fee)
2. North San Jose Impact Fee
3. Parkland Dedication Ordinance and Park Impact Ordinance Fees
4. Sanitary Sewer Connection Fee
5. Treatment Plant Connection Fee

D. Special Districts

1. Assessment District
2. Business Improvement District
3. Community Facilities District
4. Landscaping and Lighting Assessment District
5. Property Based Improvement District

E. Tax Revenues

1. Building and Structure Tax
2. Construction and Conveyance Taxes
3. Construction Excise Tax (Commercial-Residential - Mobilehome Park Building Tax)
4. Parcel Tax
5. Residential Construction Tax
6. Transaction and Use Taxes
7. Transient Occupancy Tax
8. Utility Tax

F. Bond Funding

1. Certificates of Participation
2. Commercial Paper
3. Enterprise Revenue Bond
4. General Obligation Bond
5. Lease Revenue Bond
6. Redevelopment Agency Tax Allocation Bond

G. Public/Private Partnerships

1. Parks Maintenance
2. Partnerships and Donations

H. External Funding Sources

1. Developer Assisted Projects Contributions
2. Grants
3. Joint Participation (with other public agencies)
4. Loans

Given the General Fund deficit reported in the 2008-2012 Five-Year Forecast and Revenue Projections released in February 2007, staff determined that limited General Fund budgeting strategies such as creation of program reserves and sinking funds may make sense for specific programs. However, these strategies can only be a part of a citywide strategy for meeting deferred maintenance and infrastructure needs, as any General Fund strategy would require diverting funds away from other City needs.

Thus, staff's focus was on the feasibility and timing of new funding sources such as formation of special assessment/community facilities districts, parcel taxes, increases to the Construction & Conveyance taxes, service rate and impact fee increases, bonds, partnership opportunities and grants.

Through the course of the workshop it became apparent that various programs are looking at similar types of funding mechanisms in the same timeframe. Thus, it became important for staff to be able to recommend to Council a course of action that is appropriate for the City as a whole. This entails planning and coordinating preparatory work such as community surveys, development of master plans, environmental studies,

Funding Options

Council approval and communication plans that could lead up to ballot measures or fee and rate increases. Staff will also be taking other factors into consideration before formulating recommendations about a specific strategy. These factors include criticality of the program needs, applicability of the funding source, condition assessments, and effective use of existing resources.

Funding options that address the critical needs over the next two years shall be brought forward for Council consideration during a Council Study Session in October 2007. Based on input and discussions at the October T&E Committee meeting and the October 25, 2007 Council Study Session, staff will refine recommended strategies and present them to Council in December 2007.

Airport

Overview

Mineta San José International Airport’s mission is to provide air transportation services for the local community, Silicon Valley and the surrounding geographic region. Assets include aircraft runways, taxiways and apron zones, terminal facilities with passenger ticketing, security processing, circulation, waiting and service areas, aircraft boarding bridges, parking garages and surface parking lots, circulation roadways, various air freight buildings, aircraft hangars, ground service, maintenance and general aviation facilities, above and underground utility infrastructures, a fuel storage farm, plus other air services related facilities.

Condition standards and assessment

Current airport assets are 20 to 50 years old, except the FIS Building which has been in service about 4 years. Terminal C, the oldest, will be demolished over the next 2-3 years, while Terminal A, site Roadways and other infrastructure will receive a multi-million dollar upgrade over the same period. In total, approximately \$1 billion of new facilities are under construction. Such significant capital investment includes in depth evaluation and programming activities that would make formal condition assessment redundant at this time.

Asset Management System

Business planning has begun for effective service delivery in the coming shared use environment that affords Airport controlled flexible aircraft gate assignment on a per flight basis, as opposed to current airline proprietary gate assignment. An evolving industry trend, this arrangement enables managing assets to maximize gate traffic and revenue, while reducing cost to carriers. However, systems currently managed by airlines under the proprietary use structure, such as baggage handling, boarding bridges and information technology, will become the Airport responsibility. Respective resource needs, skill sets, training, qualitative standards, best practices, valuation procedures, service levels, performance metrics, etc. must be established before completion of Phase I in 2010. Generally, these follow recognized airport, national, professional, and site/facility management practices. Quantitative factors such as asset life expectancy, performance benchmarks and respective metrics will be established based on asset type and/or service.

Asset management includes comprehensive inventory and identification, bar-codes, a web based, structured Computerized Maintenance Management System (CMMS) to capture, store and manage information, make it available to staff on demand in a mobile environment, and communicate with other technology tools where deemed effective.

CMMS will contain all quantitative asset information necessary for lifecycle sustenance, including service date, initial value, life expectancy, recommended preventive

maintenance, Operations and Maintenance literature links, condition monitoring procedures, replacement value and other financial parameters, and Service Level Agreements. The focus shall be customer satisfaction, asset performance tracking, and more informed staff decision making.

The Airport's plan is to purchase Datastream 7i, the product adopted for citywide application, and award an implementation contract in the next two months. The Airport anticipates having the system operational by mid-2008.

Anticipated capital improvements and maintenance needs

As stated above, major Airport capital improvements are currently underway. The overriding strategy for assuring quality and lifecycle performance expectations is to stress the ownership perspective throughout programming and design phases. The main objective is a built environment that delivers consistent customer satisfaction in a shared use environment, is economical to operate, and is able to adapt to future expansion phases.

The Airport expects to implement the asset management system discussed above containing all available data for existing and newly built assets within six to nine months. The plan is to create major asset classifications such as runways, taxiways, roadways, terminal buildings, parking facilities, infrastructure systems, etc., install respective quantitative data, preventative maintenance procedures and frequency, service levels, benchmarks and key performance indices, relevant cost data and labor rates, etc., develop budgets and staffing needs, present alternatives to management.

Incremental annual Operations and Maintenance expenses for new facilities is estimated in the \$6 million range, including costs associated with day-to-day operation as well as preventative and corrective maintenance. These costs will be budgeted for through the Operating Budget for the Airport. Each year a sum of money is also placed in a separate reserve fund to replace, improve and/or renew capital assets at the end of their useful life. Projections for surface roadway, parking lot and surface improvements are yet to be developed.

Funding Strategy

The Airport is operated as an enterprise fund. As such, all expenses not reimbursed through the Federal Aviation Administration (FAA) or other grant funds, are supported by fees, charges and rent paid by the airlines, concessions, on-site fixed base operators, and other tenants.

Anticipated 2007-2008 Highlights

- Closing Terminal C north end in preparation for its subsequent demolition, followed by construction of new Terminal B.
- Continuing construction of the North Concourse Building.
- Complete implementation of the asset management system.

Anticipated 2008-2009 Highlights

Airport capital improvements are expected to reduce the asset deferred maintenance backlog significantly, as a result of major utility, Information Technology infrastructure, roadway and surface feature upgrades, including aesthetic and functional upgrades to Terminal A and its existing Parking Garage, to assure service level parity with new facilities.

Building Facilities

Overview

The Department of General Services is responsible for maintaining the City's building infrastructure through preventive and corrective maintenance and the implementation of facility improvements to enhance service delivery and the user's experience. This core service contributes to the Strategic Support CSA outcome: *Safe and Functional Public Infrastructure, Facilities, Materials and Equipment*. General Services supports the CSA outcome by striving to ensure that all of the City's facilities meet the following criteria:

- Safe to occupy, operate and use
- Functional to the operations supported and to the needs of the customers served
- Efficient building components and systems
- Attractive to the public and the surrounding neighborhoods
- Comfortable for the occupants and users

The economic environment once again presents significant challenges in sustaining the existing maintenance service levels and maintaining the overall condition of City facilities. General Services continues to focus on looking for opportunities to 1) find ways to achieve operational savings; 2) address health, safety, and mission-critical maintenance services; 3) enable the development of maintenance programs based on available resources; and 4) develop mid-and-long term capital strategies for operators to manage their City facility assets.

General Services supports operations at 219 locations in 439 buildings that are located across the City. This inventory includes 2,683,561 square feet of Fire Stations, Police Facilities, Branch Libraries, Community/Senior/Youth Centers, City Hall, and Park Facilities. In June of 2005, the new City Hall became operational. This 530,000 square foot, eighteen-story facility is unlike any other City facility, and providing proper operational maintenance and support has presented significant challenges to General Services.

Assets managed by General Services include the Animal Care Center, branch libraries, City Hall, community, senior and youth centers, fire stations/Fire Training Center, Happy Hollow and Kelley Park buildings, neighborhood park buildings and security lighting, off-street parking lots and garages, old City Hall, old Martin Luther King library, police administration building and substations, regional park building facilities, storm and sanitary lift stations.

Each Facility is comprised of a variety of site related assets from hardscape, landscaping, interior and exterior lighting, parking lots, and pavement, to buildings that are supported by air conditioning and heating systems, electrical systems, elevators, fire suppression systems, flooring, generators, painted surfaces, plumbing systems, roofs, and security systems.

Condition Standards and Assessment

General Services conducts an annual Facilities Condition Assessment that is comprised of two surveys. The external survey includes the site related assets as well as the building exterior ratings. The internal survey includes inspecting and rating cabinetry, doors, flooring, kitchen and bathroom fixtures, lighting, and painted surfaces.

Each asset is rated individually on a 1 – 5 scale, with 1 being poor, and 5 being excellent. The scores are averaged for each similar asset type in a building creating an overall rating for that building. For example, in a building that has multiple floors flooring condition is scored individually, some areas may have higher traffic and wear out sooner than others, and receive a lower rating if appropriate. The scores are collected for each room and floor, and then averaged to represent an overall rating for the flooring in a given building.

As the City's asset performance manager for buildings, General Services collaborates with client Departments to develop forecasted major asset/system replacement schedules. These models are based on predicted lifecycles, current asset condition and the needs of the operating department. Currently, however, not all asset replacements are identified, quantified, or forecasted. The forecast models that are generated are used to justify budget needs and prioritize the limited capital funds allocated for these activities.

General Services is currently working with its Enterprise Asset Management vendor, Datastream, to collect condition assessment data utilizing their Inspection Module, which would tie the rating directly to an asset record, and allow for life cycle forecasting, performance measurements, and depreciation, to improve forecasting and budgeting of asset replacements.

Asset Management System

Currently, General Services Building Facility Assets are managed using Datastream's Enterprise Asset Management D7i version 7.9.

General Services utilizes the Asset Management, Materials Management, Work Management, and Project Management Modules, and has a work plan item to implement the Inspection Management Module in 2007-2008.

Field staff are equipped with mobile devices which are synchronized at the end of each shift to update work order status. These devices help track labor hours and material costs for each work order and are able to provide data on the timeline and resources associated with each work order.

Thus, at any given time during the life of a work order General Services can determine the progress of the work and the amount of staff resources used, as well as identify both material costs to date as well as total costs associated with the work order.

Anticipated capital improvements and maintenance needs

General Service's \$12.8 million infrastructure backlog of deferred maintenance (DM) represents work needed to perform asbestos abatement, electrical upgrades, mechanical system renovations, facility painting, roofing, and structural repairs and/or replacements.

This figure continues to grow annually as work is deferred and additional maintenance is identified. An additional \$9.8 million in capital maintenance is projected from 2008-2009 through 2011-2012. Of this \$9.8 million in capital maintenance projected, \$3.6 million is funded. This leaves an unfunded need of \$6.2 million from 2008-2009 through 2011-2012.

The total capital and preventive maintenance funding needs anticipated for the next 5 years is estimated at \$19 million in one-time funds. No unfunded ongoing needs have been identified at this time.

Funding Strategy

There are several strategies that may have merit in addressing the timely and ongoing maintenance obligation of the current building facility inventory. In most cases, the strategies that might offer the greatest degree of success for this program will require voter approval.

This program does have one-time, unique capital maintenance needs. These needs, however, grow annually. To that end, it is prudent to look for a funding strategy that offers an on-going funding mechanism that can support the annual capital maintenance needs along with the on-going general maintenance needs. With this in mind, the funding strategies that are under evaluation include:

- Internal Service Fund – established as a budgeting strategy, this approach would pass all general building maintenance and programmed capital renewal through to the line departments operating programs in the buildings.
- Revenues from Construction and Conveyance Taxes – Set aside a portion of the Construction and Conveyance Taxes and direct them to a fund for certain Building Asset Renewal (capital maintenance) and ongoing maintenance. This would provide the city a greater ability to maintain facilities at a level where the infrastructure meets its expected life cycle and performance level.
- Parcel Tax – voter approval of a parcel tax to provide maintenance funding for certain municipal buildings.

Anticipated 2007-2008 Highlights

- **City Hall Network Operations Center Secondary Cooling System (\$1.3 million)**
A Secondary Cooling System is required to ensure that equipment in City Hall's NOC can have a fully redundant cooling system. Should the primary cooling system fail, this secondary cooling system would ensure that the temperature

remains cool enough to prevent damage to the City's computer equipment inventory in the NOC.

- **Unanticipated/Emergency Maintenance (\$200,000)**
These funds are used to implement projects that correct safety problems or address other emergency maintenance needs as well as deferred maintenance.
- **Arena Repairs (\$100,000 annually)**
There is an annual allocation for maintenance and repair needs of the HP Pavilion at San José that fall outside of the scope of the current operator's contract.
- **Fuel Tank Monitoring (\$50,000 annually)**
The fuel tank monitoring/replacement project provides annual funding for the Environmental Services Department to monitor in-ground fuel tanks and perform soil cleanup once fuel tanks have been removed from City facilities. This work is done in coordination with ESD
- **Closed Landfill Compliance (\$250,000)**
This allocation provides funding for the Environmental Services Department to provide construction and maintenance of a methane monitoring control system, groundwater monitoring, and erosion control as well as miscellaneous pipe repairs and grading, work plans, geotechnical evaluations, and closure plans at the City's five landfill sites. The annual allocation for this item will be increased to \$290,000 beginning 2008-2009 due to anticipated infrastructure needs and additional environmental compliance requirements. It is also anticipated that additional maintenance of the aging landfill gas collection system will be necessary at the Singleton Road Landfill. Furthermore, additional groundwater monitoring and/or landfill gas monitoring is expected to be required for the Story Road, Roberts Avenue, and Martin Park landfills due to changes in site regulatory requirements, land use activities, and site conditions, respectively.
- **Deferred Maintenance Implementation Strategy (\$337,000)**
In FY 06-07 General Services received one-time funds from the City Manager's office in the amount on \$1 million. The DMIS Team utilized existing forecasting data as well as several recently developed asset replacement/renewal lists to prioritize, verify, and create 48 projects that include roofing replacements, mechanical system replacements, exterior and interior painting.
- **Cypress Senior Center Renovation (\$939,000)**
Replacement of the HVAC and flooring in the three buildings at the Center.
- **Kirk Center Renovation (tbd, pending confirmation of scope)**
Landscaping enhancements and upgrade of the electrical and wiring and expansion of the center.

Anticipated 2008-2009 Highlights

- **Unanticipated/Emergency Maintenance (\$200,000 annually):** This is the annual allocation to the General Services Department for emergency repairs.
- **Fuel Tank Monitoring (\$50,000 annually):** This is the annual allocation for the Environmental Services Department for fuel tank monitoring at City facilities.
- **Closed Landfill Compliance (\$290,000):** This is the annual allocation to the Environmental Services Department for closed landfill monitoring and compliance.

City Facilities Operated by Others

Overview

The City has contracted with various independent non-City organizations to manage, operate and maintain certain City-owned building and facilities. Included in this inventory is the HP Pavilion, the Logitech Ice Centre, the Children's Discovery Museum, the San José Repertory Theater, the Tech Museum of Innovation, History Park, Fallon House, the Museum of Art, the Municipal Stadium, and the Mexican Heritage Plaza facilities. To protect the public investment, General Services developed a maintenance oversight program that audits the maintenance at these facilities on a routine interval. This program began with only the San José Arena (HP Pavilion) in 1995. In 1999, the Logitech Ice Centre, Children's Discovery Museum, and the San José Repertory Theater were added to the list of facilities. Then in 2000, the Tech Museum of Innovation and the Mexican Heritage Plaza facilities were added. The Fallon House and the Museum of Art were added to the list in 2003. As part of the transference of governance of the former San José Historical Museum to a non-profit organization, History San José, in 1997 the City retained a consultant firm to perform an assessment of the buildings contained on the grounds. Funding was granted to History San José to address priorities identified in the report and through negotiations with History San José.

The maintenance standards required for each facility have been developed for all six facilities with the assistance of a consultant. The City provides “Maintenance Oversight” through a third party vendor to ensure that all preventive maintenance and capital improvements work is completed in compliance with the agreements and that all the building assets for these facilities are operating in an optimum fashion while maximizing their lifecycle and preventing premature equipment failure.

During the 12 years that General Services has managed these consultant services, the City and the non-City organizations have benefited by maximizing building asset lifecycles, as well as increasing the safety for staff and the public who visit these sites.

Each facility is comprised of a variety of site related assets from hardscape, landscaping, lighting, parking lots, and pavement, to buildings that are supported by air conditioning and heating systems, electrical systems, elevators, fire suppression systems, flooring, generators, painted surfaces, plumbing systems, roofs, and security systems.

General Services worked closely with the non-profit operators to identify their “Top 5” infrastructure needs. The results of that work identified nearly \$4.3 million in needed work to either complete owner required capital maintenance or to initiate studies to further develop project scope for capital maintenance activities.

Condition standards and assessment

General Services conducts an annual Facilities Condition Assessment that is comprised of two surveys. The external survey includes the site related assets as well as the building exterior ratings. The internal survey includes inspecting and rating cabinetry, doors, flooring, kitchen and bathroom fixtures, lighting, and painted surfaces. This system is described in the Building Facilities section of this report.

Asset Management System

Assets in this category are managed consistent with Building Facilities.

Anticipated capital improvements and maintenance needs

The types of capital maintenance / renewal projects identified by the non-profit operators range from replacing HVAC systems to the updating of Emergency Lighting systems. In all cases, the building systems are nearing their anticipated lifecycle and are ready for replacement.

The 2007-2008 needs have been identified at \$4.3 million. This funding level will deliver several projects but will also help to study and develop scope for many others that will require funding in the out years.

Funding Strategy

There are several strategies that may have merit in addressing the timely and on-going maintenance obligation for the current building facility inventory. In most cases, the strategies that might offer the greatest degree of success for this program will require voter approval.

This program does have one-time unique capital maintenance needs. These needs, however, grow annually. To that end, it is prudent to look for a funding strategy that offers an on-going funding mechanism that can support the annual capital maintenance needs along with the on-going general maintenance needs.

Anticipated 2007-2008 Highlights

- **Arena Repairs (\$100,000)**
This allocation resides in the Municipal Improvement Program (MIP) and provides funding for necessary repairs to the HP Pavilion, such as roof repairs and HVAC repairs. There has also been funding set aside (approx \$16 million) to perform additional work at the Arena.

- **Mexican Heritage Plaza (\$488,000)**
One of the major capital improvement projects for the Mexican Heritage Plaza is the HVAC unit upgrade for the Theater. An additional HVAC unit will be installed in the theater of the Mexican Heritage Plaza. The additional HVAC unit will assist in providing separate zones (one for the lobby of the theater and the other for the main theater area), making it more comfortable for the public, when visiting. The cost of the project was bid at \$488,300 and began in June 2007. The project is currently being managed by the Redevelopment Agency and is anticipated to be completed in late August 2007.
- **Fallon House (\$700,000)**
Structural upgrades are included in the Redevelopment Agency's budget and work plan.
- **Children's Discovery Museum (\$400,000)**
Project includes HVAC upgrades. This project is included in the Agency's budget and work plan. Additionally, another \$2.2 million has been included in the Agency's five year budget for building modifications.
- **Tech Museum (\$300,000)**
Signage and upgrades to the facility. This project is included in the Agency's budget and work plan for this fiscal year as well as the next one.
- **Repertory Theater (\$70,000)**
Signage for the Hammer Theater. This project is included in the Agency's budget and work plan.
- **Museum of Art Expansion (\$1.5 million)**
Expansion of the existing facility. This project is included in the Agency's budget and work plan.

Anticipated 2008-2009 Highlights

See above for ongoing projects such as building modifications at the Children's Discovery Museum and signage and upgrades at the Tech Museum.

Convention Center & Other Cultural Facilities

Overview

Team San José is responsible for operating and maintaining several of the City’s cultural facilities such as the California Theater, the Civic Auditorium, the McEnery Convention Center, the Center for Performing Arts, the Montgomery Theater, and Parkside Hall.

Condition standards and assessment

Team San José commissioned a consultant to do an evaluation of the facilities under its management and to identify the scope of needs. The study, performed by Property Condition Assessment, Inc (PCA) identified the immediate maintenance and capital improvement needs as well as anticipated needs over the span of the next 10 years.

Items such as the installation of new fire alarm systems that are ADA compliant are required at the CPA, Civic Auditorium, Montgomery Theater and Convention Center facilities and the replacement of the gas boilers in the Civic and CPA are critical Fire/Life-Safety measures. These projects have been funded and will begin once scoping has been completed.

Other modernization projects that would help lower utility/operations costs and other operational efficiencies were recommended. Examples include replacement of the Convention Center roof with materials utilizing California Energy Conservation Title 24 2005 Building Efficiency Standards and installing Variable Frequency Drive (VFDs) for the exhaust and supply fans in many of the buildings to prolong the serviceable lives of the fans as well as reduce day-to-day operational costs.

Asset Management System

Currently there is no asset management system in place for this program.

Anticipated capital improvements and maintenance needs

The study done by PCA found an immediate deferred maintenance and capital improvement need of \$8.5 million for all facilities and a \$24.6 million need over the next five years. The evaluation, spanning a ten-year period estimated a \$30 million investment to bring the facilities up to code and running efficiently. Some of the needs over the next two years are listed below:

- **Civic Auditorium** – Replace roofing, windows, paint railings and fencing, repair stage, HVAC control system, add variable frequency drive (VFD) for the fans to reduce operational costs, renovate stage level team rooms and mezzanine level chorus and dressing rooms, upgrade lighting and controls, repair cracks in exterior

- walls, install water softening system and perform thermoscan surveys of the electrical switchgear equipment and panels. Total cost - \$2,710,450
- **Parkside Hall** – Replace operable acoustic wall systems, upgrade lighting and controls, install new fire alarm system, add VFD's for fans, replace HVAC control system, upgrade interior lighting and controls, replace chiller, replace boiler, and install water softening system. Total cost - \$2,377,000
 - **Montgomery Theater** – Upgrade HVAC in Lobby and Basement dressing areas, upgrade lighting and controls, replace roofing per Title 24 standards, renovate basement dressing rooms, restrooms' lighting, television monitoring system and upper level sound system, repair cracks in exterior walls, replace packaged HVAC units, replace HVAC control system., install water softening system, perform thermoscan surveys of electrical switchgear equipment and panels. Total cost - \$857,350.
 - **Convention Center** – Replace sump pumps and motors, upgrade hydraulic elevators, upgrade escalators, rehabilitate exterior paving, replace existing terrace paving system, upgrade boiler, replace water heaters, repair and rehabilitate roofing system, repair operable acoustical wall systems, replace signage, install fire alarm panel and end devices to meet ADA standards, power wash and repair cracks in exterior walls, replace HVAC system, install VFDs for the fans, upgrade lighting, replace cooling tower and chiller, install a load governor on gas generator to monitor efficient generation of electricity, replace operable walls in ballroom, replace some packaged rooftop HVAC units.. Total cost - \$16,018,150.
 - **California Theater** – Install water softening system and side stage lifts, power wash and repair cracks in exterior walls. Total cost - \$119,625.
 - **Center for the Performing Arts** – Replace boilers, upgrade elevator, install water softening system, power wash and repair cracks in exterior walls, install new marquee sign, install new fire alarms system and end devices to meet ADA standards, replace HVAC system, install VFDs, refurbish cooling tower, replace chiller, replace boilers. Total cost - \$3,230,500

These estimates are based on current year costs and do not include prevailing wages, cost escalation and project contingencies. The estimates do include preventative maintenance needs.

Funding Strategy

Team San José is in the process of setting up a sinking fund for the Convention Center.

Anticipated 2007-2008 Highlights

- **Civic Auditorium** – Upgrades to the HVAC system and the fire alarm system are proposed in the Agency's 2007-2008 budget for \$2.1 million and space modifications are proposed for in the Agency's 2007-2008 and 2008-2009 budget for another \$2.6 million.

- **Parkside Hall** – A roofing replacement project was completed early this fiscal year.
- **Montgomery Theater**- Upgrades to the sound system are proposed in the Agency's 2007-2008 budget for \$500,000 and space modifications are proposed for in the Agency's 2007-2008 and 2008-2009 budget for another \$1.4 million.
- **Convention Center** – Addition of new restrooms at the Convention Center South Hall are proposed in the Agency's 2007-2008 budget for \$500,000.
- **California Theater** – Addition of a lift is proposed in the Agency's 2007-2008 budget for \$150,000.
- **Center for the Performing Arts** – \$1.55 million has been budgeted for a new marquee sign and loading dock in the Agency's 2006-2007 budget.

Anticipated 2008-2009 Highlights

See above for ongoing projects such as space modifications at the Montgomery Theater.

Fleet

Overview

The Department of General Services - Fleet Management Division provides preventive maintenance and repair services for over 2,700 City owned vehicles and equipment. Fleet availability continues to be a primary focus as the organization adjusts to recent changes in fleet size and replacement standards. The 2007-2008 budget year affords fleet services the opportunity to apply \$1.6 million towards replacing older unreliable general fleet assets thereby improving fleet availability, however, this allocation falls short of addressing fleet’s unfunded needs required to mitigate the deferred replacement backlog of approximately \$400,000.

Condition standards and assessment

The replacement policy incorporates a set of standard evaluation criteria for all fleet assets, which includes years in service and miles driven/hours operated. Both criteria must be met before replacement is considered. In addition to the minimum service life, a mechanical assessment is performed to determine future repair costs. These replacement criteria are described below:

Replacement & Utilization Guidelines

Class Type	Years and Miles/Hours	Average Annual Utilization
Marked Patrol Sedans	5 Years and 100,000 Miles	20,000 Miles
Unmarked Sedans	10 Years and 100,000 Miles	10,000 Miles
Patrol Motorcycles	4.5 Years and 60,000 Miles	13,333 Miles
General Fleet Sedans (compact, mid-size, full size)	10 Years and 100,000 Miles	10,000 Miles
Light Trucks (below 12,000 GVW)	10 Years and 100,000 Miles	10,000 Miles
Vans (Mini, passenger, and cargo below 12,000 GVW)	10 Years and 100,000 Miles	10,000 Miles
Heavy Trucks (above 12,000 GVW)	15 Years and 100,000 Miles	6667 Miles
Light Metered Equipment (Lawn mowers, scooters, light tractors, etc.)	6 Years and 2,500 Hours	417 Hours
Heavy Metered Equipment (loaders, backhoes etc.)	15 Years and 6,000 Hours	400 Hours

Asset Management System

The Fleet Management Division database uses a Windows-based program called Maximus Fleet Focus to manage all preventive maintenance, repair activities, outsourced vendor services, vehicle utilization, and shop productivity.

Anticipated capital improvements and maintenance needs

The amount currently budgeted for general fleet replacements for fiscal year 2007-2008 is \$1.6 million. This funding allocation does not address the unfunded backlog amount for General Fund replacements of approximately \$400,000. This unfunded backlog is expected to increase over the fiscal year as additional vehicles meet the criteria for replacement. This backlog projection does not include special fund vehicle and equipment replacements. General Services will be performing an analysis of the replacement needs of special fund departments over the next several months.

The amount budgeted for Police Department fleet replacements for 2007-2008 is \$4.5 million. This amount is anticipated to be a sufficient amount of funding to be able to address the replacement and growth needs of the Police Department.

In addition to the fleet replacement needs, diesel retrofits will also be required. While this need is currently unfunded, it is anticipated that approximately \$400,000 will be required annually for this purpose for at least the next five years to comply with Bay Area Air Quality Management Board requirements for diesel emissions.

The fuel management system is also aging and in need of replacement. The replacement of this system is becoming necessary because the existing fuel system is over ten years old and the hardware associated with that system is becoming unreliable and expensive to maintain. The existing system is proprietary and is not fully compatible with the Fleet Focus system; it cannot be reconfigured without significant reprogramming costs. Fleet Management has researched the cost of a replacement system that would allow for real-time tracking of fuel usage; the costs of a replacement system are estimated at \$320,000.

It should also be considered that while many of the maintenance programs detailed here operate an existing fleet of vehicles that allow these programs to meet their current service levels, the condition of the fleet can have an impact on service delivery. Many vehicles and pieces of equipment have sufficient age and usage to be replaced, but often are not for budgetary reasons. Large pieces of equipment, with heavy usage, can be prone to failure. This not only results in higher-than-average maintenance costs, but also negatively impacts the service level of the associated program.

Funding Strategy

The current replacement funding strategy relies on the General Fund as the primary funding source for general fleet and the majority of public safety replacements; however, special fund departments, such as Environmental Services Department (ESD) and the Airport, provide funding for the replacement of vehicles assigned to their respective departments. Additionally, Fleet Management, often in partnership with ESD, pursue grant funding opportunities for alternative fuel vehicles and diesel retrofits. When obtained, these grants provide for additional opportunities to replace retrofit vehicles. Typically, the grant opportunities are for the incremental costs associated with purchasing alternative fuel vehicles and may not always allow for the full purchase price of new or replacement vehicles.

Anticipated 2007-2008 Highlights

In addition to the General Fund funded replacements and Special Fund funded departments, it is possible in limited circumstances for a General Fund department to allocate a portion of its capital budget for replacement vehicles/equipment. During fiscal years 2006-07 and 2007-08, PRNS is allocating capital funding (from the Construction and Conveyance Taxes) to replace targeted equipment (turf mowers and associated vehicles) that would have otherwise been placed on the unfunded backlog. Additionally, Fleet Management has implemented the use of B-5 bio-diesel fuel and will move toward B-20 during this fiscal year. The use of this fuel will result in a reduction in emissions produced by City vehicles.

Anticipated 2008-2009 Highlights

The Department of General Services will continue to work cooperatively with operating departments to identify alternative funding methods, including grants, to retrofit or replace vehicles that would otherwise be unfunded. Much of this effort will be focused on acquiring replacement vehicles that will have lower emissions than the ones they are replacing.

Parks, Open Space and Pools

Overview

The Parks, Recreation and Neighborhood Services (PRNS) Department oversees the operation and maintenance of pools, trails, parks, parks service yards and open space. In addition, PRNS also oversees a number of special facilities within parks such as Happy Hollow Park and Zoo, skate parks, community gardens, water features (decorative and interactive), restrooms, a roller hockey rink and a BMX park. PRNS also oversees the operations of community centers but the deferred maintenance of these facilities are discussed in the Building Facilities section of this report.

The Environmental Services Department oversees the operations and maintenance of five City-owned closed landfills: Story Road, Singleton Road, Roberts Avenue, Martin Park, and Nine Par. Operations and Maintenance responsibilities vary for each site but generally include regular and ongoing groundwater monitoring, groundwater extraction, perimeter landfill gas monitoring, landfill gas extraction and treatment, cover/cap maintenance, and basic housekeeping and security.

Condition standards and assessment

Parks and Pools:

Condition assessments of facilities are currently performed annually and are based on a rating scale of 1-5. Condition assessments are currently being done for the following elements within each park: Irrigation, Turf, Trees, Shrubs, Ground cover, Picnic areas, Playgrounds, Restrooms, Drinking fountains, Athletic fields, Hard courts, Tennis courts, Parking lots, and Walkways. The individual ratings for each element are then averaged to obtain an overall rating value for a park.

In addition, annual condition assessments are performed for trails using the following categories (where applicable): Irrigation, Surface condition, Planted area, Landscaped area, Natural growth, presence of Poison oak, Picnic areas, Drinking fountain, Parking lot, Litter, Graffiti, Weeds, and Vandalism. These items are averaged to receive an overall condition assessment for a trail.

Condition assessments are not currently performed on a regular basis for pools. However, the Aquatics Master Plan, which was approved in August 2007, will provide a plan for future development of aquatics facilities as well as an ongoing program of preventative maintenance and repairs to the City's existing pools. In addition, 4 of the City's 6 pools will be rebuilt (Mayfair) or repaired (Alviso, Biebrach and Ryland) by 2008, which will provide the City with an upgraded aquatics infrastructure.

Detailed assessment of the parks system's irrigation systems has never been performed. Over the next fiscal year, PRNS will begin a more detailed assessment of the components

that make up the irrigation system and will move towards implementing assessments of the pools and fountains that they are responsible for maintaining.

PRNS does not perform condition assessments of Open (undeveloped) Space. The level of service is minimal for open (undeveloped) space. The Department of Transportation (DOT) has a contract with a vendor for weed abatement. PRNS utilizes this same contract through DOT and uses it as needed for illegal dumping/clean up or weed abatement services. Where illegal dumping is repetitive, staff provide routine inspections, schedule clean ups, work through San José Code Enforcement and San José Police Department to deter the illegal activity, and install fencing or other devices to deter access.

Open Space (Landfills):

Due to the age of the closed landfill sites, they are “grandfathered” in. However, reconstruction of the infrastructure will likely require a higher standard due to new professional and regulatory requirements (Title 27). Ongoing O&M of abatement and monitoring infrastructure occurs to continue safe and efficient operations however general age deterioration continues:

1. Landfill gas flare at Singleton Road landfill failed in 2006 and replacement is underway
2. Landfill gas collection system at Singleton Road Landfill is 7 to 18 years old
3. Pumps, lateral extensions and monitoring well networks related to groundwater at Story Road Landfill are over 10 years old.

Asset Management System

Parks and Pools:

PRNS uses the same asset management system as General Services (DataStream). The system is currently used for generating and tracking work orders but is not being used for asset evaluation. Asset evaluations are currently tracked using an excel workbook/spreadsheet which feeds into the budget development process.

PRNS is in the process of finalizing a contract to purchase handheld devices. These handheld devices will allow the transition of asset evaluations into DataStream beginning in FY 07-08. Phase I will start with the irrigation system assets and will eventually be used for all assets including park benches, playgrounds, turf, tree care and maintenance, etc. The current work plan is to have the handhelds fully operable this fiscal year and to implement the DataStream program for asset management and evaluations over the next two years.

Staff recently completed the integration of the GIS system into the standard Oracle based system. This will allow an interface with other City layers and the asset management system. PRNS will also be able to accurately track data such as park acreage, trail length, mitigation sites, and infrastructure such as bridges, etc. Initial data synchronization is anticipated to occur in 2008. PRNS plans to implement the program in phases to ensure easy transitions. The first priority for asset management is to centralize the tracking of

park acreage. This system will be the single source for this data collection and will provide consistency and accuracy.

Open Space (Landfills):

There is currently no asset management system for Landfills.

Anticipated capital improvements and maintenance needs

Parks and Pools:

As reported to Council in Fall 2006, there is currently an estimated \$29.7 million infrastructure maintenance backlog for parks facilities. PRNS is fortunate to have had an investment of \$228 million of Measure P funds to upgrade over half of the playgrounds in the City over the past seven years as well as to construct new multi-service community centers. Over the next five years the focus will be to identify and prioritize potential large scale irrigation, turf and pavement projects to ensure that these critical pieces of the City’s infrastructure do not deteriorate and to begin to put in place a long term funding plan for the next major overhaul of the City’s playgrounds and community centers.

Open Space (Landfills):

- Current CIP budget is \$250,000 annually.
- Study underway to estimate cost to repair and/or fully reconstruct landfill gas collection system at Singleton Road Landfill. Preliminary estimate could be over \$2 million to fully reconstruct well network, this need is unfunded.
- Approximately \$1.5 million to construct a required interceptor trench at Martin Park Landfill
- Study planned to estimate if the replacement of old and/or installation of new groundwater extraction pumps at Story Road Landfill will be necessary. If required, preliminary estimate is approximately \$50,000.
- Regulatory review occurring which will determine if the installation of additional groundwater monitoring wells will be required at Roberts Avenue Landfill; could cost approximately \$30,000
- Regulatory review occurring which will determine if new perimeter landfill gas wells will be required at Roberts Avenue Landfill; could cost approximately \$30,000 for new network

Funding Strategy

Parks and Pools:

The 5-year Parks CIP program budget has a number of line items specific to the upkeep of the existing infrastructure. These line items are intended to help extend the useful life of the infrastructure and include the following:

- Minor Building Renovations (\$1.5 million) and Minor Park Renovations (\$2.5 million) over 5 years
- Pool Repairs (\$1.0 million)
- Enhanced Park Maintenance (\$330,000)
- Strategic Capital Replacement and Maintenance Needs (\$11.0 million)

Staff generates recommendations and work plans for park, pool and building maintenance activities on an annual basis to ensure that the top priority repairs are being performed in order to maximize the useful life of our existing facilities. In addition to physical improvements, the most critical component to extending the useful life of the infrastructure is to provide sufficient maintenance staffing.

PRNS is in the process of updating the Greenprint which is the strategic plan for parks and community facilities. This Greenprint update will discuss the need to program the capital budget to address needs and priorities as identified by the asset management system. Over time, the emphasis for the parks capital program will transition to maintenance of existing facilities, including infrastructure systems, and less on new facilities, buildings and improvements.

Open Space (Landfills):

California Integrated Waste Management Board Matching Grants. One example of this is a \$750,000 grant which has been received by the City for the Watson Park project. Staff will be applying for a similar grant for the Martin Park project.

Anticipated 2007-2008 Highlights

Parks and Pools:

- Almaden Winery Irrigation Automation (\$395,000)
- Bramhall Park Play Lot Renovation (\$696,000)
- Calabazas Park Play Lot Renovation (\$730,000)
- Lo Bue Park Irrigation (\$321,000)
- Starbird Park Irrigation Renovation (budget tbd)
- Ryland, Alviso and Biebrach Pool Repair and Rehabilitation
- Mayfair Community Center, Park and Pool Reconstruction
- Roosevelt Community Center Reconstruction
- Solari Community Center Reconstruction
- Happy Hollow Park and Zoo Reconstruction

Open Space (Landfills):

- Currently conducting an evaluation of the landfill gas collection system at Singleton Road Landfill
- Planning to conduct an evaluation of the groundwater extraction system at Story Road Landfill
- Awaiting final groundwater monitoring requirements by the Regional Water Quality Control Board (RWQCB) for the Roberts Avenue landfill and the Martin Park Landfill
- Awaiting final landfill gas monitoring requirements by the LEA/CIWMB for the Roberts Avenue Landfill
- Finalizing installation, including Bay Area Air Quality Management District (BAAQMD) approval, of the new landfill gas flare at the Singleton Road Landfill

Anticipated 2008-2009 Highlights

Over \$7 million in reserves exist in the Parks CIP allocated to existing project sites in order to provide funding for renovation in future years. Staff meets on an annual basis to propose which infrastructure replacement projects are proposed to move forward based upon the asset evaluation. A number of the projects listed above such as Happy Hollow Park and Zoo and Solari Community Center will still be under construction during the 2008-2009 fiscal year.

Projects for Landfills in 2008-2009 are yet to be determined.

Sanitary Sewer System

Overview

The Department of Transportation (DOT) is responsible for operating and maintaining the City's sanitary sewer system, which is comprised of the following infrastructure:

1. 2,200 miles of sanitary sewers
2. 14 pump stations
3. 2 bio-filters
4. 1 ferrous chloride injection station

DOT manages a number of programs to monitor and maintain the sanitary system:

- Response to all sanitary related incidents such as blockage removal, overflows and the spill cleanups
- Reactive cleaning of sanitary mains and laterals
- Video inspection of the lines
- Continuous inspection, monitoring and maintenance of electrical, mechanical and hydraulic components of sanitary pump stations
- Continuous inspection, monitoring and maintenance of bio-filters
- Continuous operation, inspection, monitoring and maintenance of instrumentation, electrical, and mechanical components of ferrous chloride injection station in order to control odor
- Caustic soda addition to sewer at several locations in order to control odor

Condition standards and assessment

Sanitary sewer assets are generally assessed in three distinct areas:

1. Physical Condition
2. Operational Condition
3. Capacity

1. Physical Condition

A. Condition of Sewer Lines

This addresses the structural integrity of pipes, manholes, and junction structures. Evaluating the physical condition of a sanitary sewer requires expensive closed circuit television work followed by office analysis and documentation. Because it is physically and financially impractical to perform a comprehensive video review of the entire system, the City's assessments are limited to those that are generated from deficiencies in the operational characteristics and the capacity problems. Over the next two years, DOT is planning to conduct a study to assess the condition of the entire system through sampling and projections. The estimated cost of this study is \$2 - \$3 million.

The standard design life of sanitary sewers is commonly believed to be approximately 50 years. 81% of the system, approximately 1,750 miles, was constructed between 1950 and 1979 (between 27 and 57 years old). Thus, a significant portion of the system has reached or will reach the 50-year age milestone within the next two decades. At this point it is unclear as to whether the sewers will trigger a significant increase in replacement costs in the near future, or continue to operate well beyond the 50 year design life. For this reason, staff is proposing a comprehensive study to analyze and predict the condition of the storm system.

B. Condition of Pump Stations

The sanitary sewer system includes 14 pump stations. The average age of the City's 14 sanitary sewer pump stations is over 35 years. The standard for the design life of the mechanical and electrical components of a pump station is 10 to 25 years. Thus, it is reasonable to expect that a pump station be rehabilitated with new pumps, motors and control systems every 25 years. The City currently has 8 stations that are beyond this limit without significant rehabilitation or funding for rehabilitation. The total cost to perform this pump station work is estimated at \$5 million. DOT is preparing a prioritized list of sanitary pump stations should funding for rehabilitation become available.

C. Condition of bio-filters

The City currently has two bio-filters. One of the two bio-filters, located on Zanker Road, was rehabilitated about three years ago. The bio-filter on Curtner Ave (known as Downer –Canoas bio-filter) is in need of rehabilitation in order to increase the effectiveness of their function.

D. Condition of ferrous chloride injection station

A chemical injection station is located on Blossom Hill Road. Ferrous chloride is injected into the sanitary line to eliminate odor in that neighborhood. The station will be rehabilitated, at an estimated cost of \$500,000, during this fiscal year to comply with the new Fire Code and environmental requirements.

2. Operational Condition

At present, the City does not have a comprehensive condition assessment document. Maintenance on the system is either reactive or based on current environmental requirements that dictate activities that must be performed. The majority of operational condition improvement work entails line and lateral cleaning by high pressure water or by vacuuming the debris using "Vactor Trucks" (trucks equipped with high power vacuums machines) and other job-specific methods. DOT is able to monitor the effectiveness of the sewer system through data such as sanitary sewer overflows, backups and blockages.

DOT presently cleans “all” sanitary sewer mains on a 12 to 15 year cycle, with some mains on DOT’s “hit list” being cleaned as much as twice a month. It is anticipated that DOT can obtain guidance on a more equitable cleaning cycle from other jurisdiction Sewer System Management Plans which are required to be submitted to the Regional Water Quality Control Boars by August 2008. More information about these plans is included later in this report.

Sanitary Sewer Overflows (SSO)

An SSO is an event when sanitary sewage exits the sanitary sewer system onto city streets, sidewalks, curb & gutters, yards and/or private homes/properties. All SSOs (regardless of amount spilled) are reported to a California State Water Board operated electronic system, <http://ciwqs.waterboards.ca.gov/>. A summary report is due to the Board each March, summarizing the previous calendar years SSOs. The number of SSOs reported in calendar years 2004, 2005 and 2006 were 154, 131 and 145 respectively.

DOT hopes to be able to benchmark with other similar jurisdictions when Sanitary Sewer Management Systems (SSMP) are made available at the end of 2008. This will allow DOT to set a goal and a schedule for the reduction of SSOs.

Back-Ups

DOT maintains an inventory of the number of sewer back-ups into private homes and businesses. Backup’s standard operating procedures have been implemented on how DOT handles the cleanup of homes after a back-up. As mentioned above, DOT will be able to utilize SSMP to benchmark and set a goal and a schedule for the reduction of back-ups. There were 21 back-ups reported in 2006.

Blockages

Blockages of the sanitary sewers occur daily throughout the City. Blockages may be caused by grease, excessive debris, tree roots, offsets in the pipe and anything else that may cause an obstruction to the flow. The number of blockages in the sewer mains has decreased by 32% from years 2002 to 2006 with 679 blockages reported in 2006. DOT will be able to utilize SSMP to benchmark and set a goal and a schedule for the reduction of blockages.

3. Capacity

Sanitary sewer collection systems are designed to handle up to peak daily flows, based on current and predicted/planned future demands. As a design standard, the system should have sufficient capacity to handle peak daily flows at 2.5 times the average daily flows. However, collection systems often end up being under-designed and thus deficient in capacity due in part to the in-exact science of forecasting population and economic growth and, hence, unforeseen demand on the system. System capacity is also decreased over time due to operational problems such as sedimentation build up, oil and grease buildup.

In order to prepare a comprehensive capacity improvement program, a sanitary sewer master plan is needed. PW has recently completed master plans for the North, Central, and South portions of the City. The master plan preparations for the remaining East and West portions are currently in progress, with estimated completion in September 2008

Capacity improvement projects are funded by the Sanitary Capital Improvements Program. These projects are currently selected based on existing chronic/re-occurring sewer capacity problems as they become apparent due to public complaints, City staff observations and historical knowledge. The funding and the master plan are discussed in detail later in this report.

Compounding these problems is the issue of system expansion. As the City expands the collection system through development, on average about 50 miles per year, the workload grows while the resources to address the expanding maintenance demand have not increased.

Asset Management System

As stated earlier, the City has no system to assess the physical condition of the sanitary sewer infrastructure. Any projects are the result of observed deficiencies in the operation or the capacity of the sanitary system. Over the next two years, DOT will conduct a study to approximate the condition of the entire system through sampling and projections, but actual system condition can only be approximated because of the impracticality of televising the entire system. The estimated cost of such an analysis is up to \$2-\$3 million and should result in the following outcomes:

- Estimated condition of all storm sewers based on projections from sampling.
- Identification of specific pipelines or areas that merit further investigation for probable rehabilitation
- Budgeting tool to allow the City to plan for sufficient funding to meet anticipated structural repair demand

Currently, the primary asset management tools used by the City are the Geographical Information System (GIS), the DOT dispatch data, and a computerized Sewer Management System (SMS).

GIS is a computer mapping system that links databases of geographically based information to maps that display the information. Over the past decade, the City of San José has converted all its sanitary sewer collection mapping and infrastructure inventory data into a GIS format. The City's sanitary sewer collection system is available in published map book format or can be assessed through the DPW's intranet site. DPW will continue to upgrade and maintain its GIS investment as technology and budget allow.

The DOT dispatch is a log of all calls and subsequent service for infrastructure maintenance complaints. Data from the inlet cleaning program includes only inlets for which some problem or unusual condition was observed.

A computerized SMS is an essential tool for planning and scheduling sewer maintenance work and for tracking the maintenance history of individual sewer line segments. The City implemented a first generation SMS in 1988 and is currently utilizing Hansen Software for its existing SMS. The primary functions of the City's SMS are:

- Maintain service request and maintenance history information for each individual collection system asset.
- Produce and regularly update the maintenance schedule based on feedback information from the cleaning operations.
- Generate reports that support data analysis and decision making.
- Provide documentation for use in regulatory compliance reporting.
- Indicate line segments or structures that may be candidates for replacement or rehabilitation under the capital improvement program.

Using the SMS, the City developed a location list to better serve its customers. The list assists the field crews in determining real maintenance cycles for sewer segments in need of more intensive cleaning.

The SMS is limited in that it does not give a definitive condition assessment of the sanitary sewer mains. Because the sanitary sewer mains are underground and can be assessed only through video, DOT can only get an understanding of how the system is functioning through blockage, backup and sanitary sewer overflow reports. A system similar to a pavement condition index is not possible without a comprehensive visual/video inspection program.

Sewer System Management Plan

Sanitary sewer collection systems are the last major component of the wastewater management system yet to be regulated. Treatment plants, including pretreatment programs, have been regulated for some time. The California Regional Water Quality Control Board is now requiring all the public agencies that operate sanitary sewer collection infrastructure to develop and implement a Sewer System Management Plan

(SSMP). This comprehensive document describes the activities that agencies use to manage their wastewater collection system effectively.

Effective management of a wastewater collection system includes:

1. Maintaining or improving the condition of the collection system infrastructure in order to provide reliable service into the future.
2. Cost-effectively minimizing infiltration/inflow (I & I) and providing adequate sewer capacity to accommodate design storm flows; and
3. Minimizing the number and impact of sanitary sewer overflows (SSOs).

The submittal date of the SSMP to the Regional Board is August 31, 2008.

Anticipated capital improvements and maintenance needs

1. Physical Conditions

As mentioned earlier, DOT does not have a comprehensive condition assessment of the sanitary sewer system infrastructure. However, in preparation for the city-wide condition assessment program, Public Works initiated a pilot project that evaluates the Hester-Naglee sewer-shed area which encompasses 50 miles of sanitary pipeline (6-inch to 36-inch in diameter). The area is bounded by W. San Carlos Street, N. Bascom Avenue, the Guadalupe River, Coleman Avenue, and Newhall Street. The pilot project will utilize Sewer Scanner and Evaluation Technology (SSET) and conventional Closed Circuit Television (CCTV) methods. The project will allow the City to develop an initial set of strategies, methodologies, and procedures for facilitating the condition assessment program.

Another element of the condition assessment program is the identification of groundwater and rainfall inflow and infiltration (I & I) into the sanitary system. In December 2006, Public Works executed a Master Agreement with several flow-monitoring companies, which provide on-demand services for flow monitoring, I & I investigation, and gravity & pressurized sewer pipeline/manhole condition assessments. In addition, the upcoming 2008-12 CIP program will provide \$6 million in funding for I & I related projects.

In partnership with the Department of Transportation, Public Works recently conducted a condition assessment of the 84-inch interceptors located in Zanker Road and the 48-inch trunk line in the Branham/Blossom Hill area. The resulting deficiencies discovered from the assessment produced three CIP projects. The first project (which was completed in May 2006) cleaned and removed 1,030 tons of debris from the sewers and restored the design capacity to the system. The second project (scheduled FY07-08) will rehabilitate the 48-inch trunk line at a cost of \$1.5 million. The final project (scheduled in FY08-09) will rehabilitate a portion of the Zanker Road interceptor at a cost of \$2.0 million.

2. Operational Conditions

The above mentioned condition assessment document will also provide tools for a maintenance schedule in order to establish a proactive sewer cleaning methodology and schedule that will facilitate an optimal operation of the system.

While the storm and sanitary programs operate a seemingly adequate fleet of vehicles, much of it is outdated and inefficient in performing sewer maintenance activities. Some equipment is physically demanding on maintenance personnel, and more prone to causing injuries. Even the more up to date vehicles have an average age of over ten years, and many of them are utilized for multiple shifts several times per week. Consequently, much of this critical equipment is unreliable, in generally poor to very poor condition, and in need of replacement. This issue is further discussed in the “Fleet Program” portion of this document.

Resolving these issues related to the state of the City’s equipment is a high priority for DOT. An investment in newer, more effective and efficient equipment, along with an adequately funded equipment replacement program, is essential in ensuring the proper function of the City’s sewer collection system and achieving compliance with the pending SSMP mandates. It is estimated that approximately \$3 million is needed over the next five years for new equipment with an ongoing investment of \$500,000 for regular equipment replacements. This need will be coordinated with the Fleet program.

3. Common to Physical Conditions and Operational Conditions

DOT’s sanitary maintenance budget for 2007-2008 is \$11.1 million. This allocated fund is strictly for maintenance programs and resolution of known problems. At present, there is no program to identify the condition of infrastructure other than those generated from deficiencies of capacity or operations. Funding needs for the operation and maintenance of the sanitary sewer infrastructure are currently unknown, but they are estimated to be in the range of \$3 million to \$5 million per year for the next five years. Furthermore, the condition assessment and master plan would almost assuredly generate additional projects/workload above and beyond these costs.

4. Capacity

Historically, the majority of funds (between 50% to 60%) in the Sanitary Sewer Capital Improvement Program are used to rehabilitate aging sewer mains. Construction projects in the CIP fall into two categories: (a) to enhance sewer capacity; (b) to rehabilitate existing sewers with extensive and/or severe deterioration.

The Sanitary Sewer Capital Improvement Program is used to increase the capacity or rehabilitate the lines as determined based on recurring problems (such spills, blockages, and odor) or staff’s historical knowledge.

Current funding

Funding for this program has steadily decreased during the last several fiscal years. The 2008-2012 Sanitary Sewer Capital Program provides for \$100.8 million in funding, of which \$32.3 million is allocated for the 2007-08 fiscal year.

In the current 5-year CIP, approximately \$37.8 million is allocated for capacity projects, including the Edenvale Supplement projects which will provide increased sewer capacity for south San José, Edenvale Redevelopment Area, existing south San José neighborhoods and North Coyote Valley. For rehabilitation projects, \$68.5 million is programmed for a variety of projects that will improve large diameter interceptors, trunk line and neighborhood collection systems.

Projects in the current five-year CIP includes:

- \$50.7 million for capacity improvement projects
- \$28.5 million for structure enhancement (rehabilitation) projects
- \$14.0 million for program management projects (flow monitor, master planning, development reviews, etc.)

Future needs

To determine the future needs of capacity improvements, a sanitary sewer master plan is required. This document is currently being prepared by the City. The Phase I Master Plan was completed in Fall 2004 and Phase II will be done in 2011 at an approximate total cost of \$6 million. The actual cost of the most needed infrastructure improvements would be in the hundreds of millions of dollars. Listed below are some of sanitary sewer projects that have been evaluated and prioritized, but await funding.

- Capacity improvement projects identified by the Phase I Capacity Assessment (for the city's north, south and central areas): \$104 million
- Rehabilitate existing RCP trunk lines: \$18 million
- Development Areas:
 - Downtown Core: \$28 million;
 - North San José Intensification: \$25 million;
 - Midtown: \$5 million,
 - BART: \$5 million
- The Phase I Master Plan completed in 2004 identified and prioritized over \$114 million in capacity improvement projects that will be warranted in the City's northern, southern and central areas. The Phase II project is underway to identify the capacity constraints in the eastern and western areas of the City.
- An analysis of the current North San José Intensification plans indicates a need for \$25-\$30 million in additional capacity projects.
- An analysis of the trunk and collector mains indicates an additional \$9 million is warranted to rehabilitate these older reinforced concrete pipe mains to protect them from the corrosive effects of the sewer environment

- Pump Station Rehabilitation Projects. The cost is currently unknown.
- Replacement of existing fleet of storm and sanitary equipment. The cost is currently unknown

5. Other significant needs

As mentioned earlier, the City of San Jose is working with the California Regional Water Quality Control Board to develop and implement a Sanitary Sewer Management Plan (SSMP). The primary outcomes of the SSMP are to significantly reduce the occurrence of sanitary sewer overflows (SSOs) and protect our local and regional waterways.

One of the greater challenges and demands on sanitary infrastructure maintenance in the very near future is the new environmental mandates that will be imposed by the upcoming SSMP. San José is one of the approximately 90 public agencies negotiating with the Regional Water Quality Board.

The proposed regulations will affect DOT in dictating levels of maintenance, record keeping, equipment choices, and staffing flexibility. The financial impact is currently unknown, but it is believed to be significant.

Funding Strategy

An increase in the Sanitary Sewer Fee of 9% was approved for the current fiscal year, and consecutive annual increases of up to 15% could be requested over the next two years. A significant portion of these increases will be used to address the requirements of the SSMP.

Other proposed funding sources for maintenance are listed as follows:

- Using program reserves or ending fund balances for one-time costs
- Storm Sewer Service Fee increase.
- Formation of Community Facilities Districts and Maintenance Assessment Districts for major rehabilitations and payment of operations and maintenance costs. Requiring more system components to be built on private property to shift responsibility for operations and maintenance to property owners (e.g. Home Owners Associations)
- Enterprise Revenue Funds –Issue bonds backed by the sewer revenues for large improvements.
- Increase the “Connection Fees” collected from new developments and adopt new “Major Facilities fees to fund capacity related improvements.

Anticipated 2007-2008 Highlights

Operation and maintenance:

- Purchase and acquisition of four new vacuum equipped trucks with video cameras- estimated at \$1 million.
- Continue with SSMP development
- Identify funding for Condition Assessment program
- Additional maintenance responsibilities from the County annexations

Capacity:

- 60” Brick Interceptor Phase VIA - \$1.7 million
- Edenvale Supplement Phase VA - \$1.9 million
- Julian-Sunnol Supplement Rehab - \$1.2 million
- Union/Almaden Oak SS Rehab - \$1.6 million
- Willow Glen SS Rehab - \$1.1 million
- Infiltration and inflow study – \$2.0 million

Anticipated 2008-2009 Highlights

Operation and Maintenance:

- Continue implementation of the subsequent phases of SSMP
- Probable increase in sewer cleaning activities
- Additional maintenance responsibilities from the County annexations

Capacity:

- 60” Brick Interceptor Phase VIA - \$10.9 million
- Edenvale Supplement Phase VA - \$310,000
- Julian-Sunnol Supplement Rehab - \$314,000
- Central Interceptor - \$1.6 million
- Infiltration and inflow study – \$2.0 million

Service Yards

Overview

City Service Yards house support shops that maintain City vehicles, buildings, sewer systems, pavement, and related public infrastructure facilities. The current Service Yards Network consists of five Sites that occupy 47.19 acres with 31 buildings and more than 432,600 square feet of workshops and office space.

The current Service Yards network includes the Main Yard (Offline effective July 2007), located at Sixth and Taylor Streets, a 5.5 acre site with 6 buildings providing 75,764 square feet of vacated workshops and office space; the Mabury Yard located on Mabury Road near Highway 101 is a 9.2 acre site with 4 buildings providing 31,691 square feet of workshops and office space; the South Yard located at Monterey Road at Skyway Drive is a 6.83 acre site with four buildings providing 18,124 square feet of workshops and office space; the West Yard located on Williams Road near Lawrence Expressway is a 4.36 acre site with two buildings providing 6,546 square feet of workshops and office space and the Central Service Yard located at corner of Senter Road and Phelan Avenue is a 21.3 acre site with 10 buildings providing 300,517 square feet of workshops and office space. The 2008-2012 Proposed Capital Improvement Program (CIP) provides funding of \$46.0 million, of which \$7.7 million is allocated in 2007-2008. This program is part of the Strategic Support City Service Area (CSA) and supports the following outcome: *Safe and Functional Public Infrastructure, Facilities and Equipment*. The operations housed in the Service Yards not only support the Strategic Support CSA, but also the Transportation and Aviation Services CSA, Environmental and Utility Services CSA, and Neighborhood Services CSA.

Service Yards are comprised of a variety of site related assets from hardscape, landscaping, lighting, parking lots, and pavement, to buildings that are supported by air conditioning and heating systems, electrical systems, elevators, fire suppression systems, flooring, generators, painted surfaces, plumbing systems, roofs, and security systems. Service Yards also have unique assets that are operationally necessary to provide services to Fleet/Facilities/Parks/Streets/Trees/Storm and Sanitary Systems. Among those unique assets includes vehicle lifts, air compressors, exhaust systems, sandblasters, table saws, paint booths, testing equipment.

Currently, all of the maintenance needs can be addressed with the current Service Yards program.

Condition Standards and Assessment

General Services conducts an annual Facilities Condition Assessment that is comprised of two surveys. The external survey includes the site related assets as well as the building exterior ratings. The internal survey includes inspecting and rating cabinetry, doors, flooring, kitchen and bathroom fixtures, lighting, and painted surfaces. This system is described in the Building Facilities section of this report.

Asset Management System

Assets in this category are managed consistent with Building Facilities.

Anticipated capital improvements and maintenance needs

All forecasted maintenance and improvement needs for the near future will be addressed with the current programs within the Service Yards Capital Program.

The 2007-2008 funding needs of \$6.4 million have been programmed into the programs budget. The identified needs of \$44.8 million for 2008 through 2012 have been programmed into the 5-year capital budget and provide the required funding to cover all debt service while allowing ample funds to address other programmed capital maintenance needs within the Service Yard Network.

Funding Strategy

Retain current allocation of funding from the Construction and Conveyance Taxes.

Anticipated 2007-2008 Highlights

- **Main Yard Demolition (\$2.6 million)**
With the Central Service Yard Phase II recently completed, the demolition and clean-up of the Main Yard will require funding in the amount of \$2.1 million. Additional funding in the amount of \$500,000 is also proposed to address archaeological and environmental issues at the Main Yard. An environmental study will be conducted in 2007, as the main yard site housed an underground fuel tank. It is unknown at this time if the tank caused any environmental issues. Since the Main Yard site was previously the site of a Chinese temple, an archaeological assessment of the site will be needed to ensure that any demolition or development preserves artifacts. It is anticipated that this funding will be used for the environmental study/archaeological assessment as well as for any necessary remediation.
- **Roof Replacement, Painting and Supplemental Needs (\$500,000 annually)**
This allocation funds emergency repairs and miscellaneous projects such as parking site improvements and repaving, roof repair and replacement, painting and mechanical upgrades. This allocation will be reduced to \$400K beginning 2008-2009.
- **Service Yards Equipment (\$250,000 annually)**
This allocation funds the purchase of shop equipment, including: lifts, stands, overhead reels, air systems, and computer hardware as required to support the operations housed within the Service Yards Network. This allocation will be reduced to \$150,000 beginning 2008-2009.
- **Underground Fuel Tank Renovation/Replacement (\$59,000 annually)**

The fuel tank renovation/replacement project provides annual funding to monitor in-ground fuel tanks, repair and perform soil cleanup once fuel tanks have been removed from Service Yard facilities.

Anticipated 2008-2009 Highlights

- Roof Replacement, Painting and Supplemental Needs (\$400,000 annually)
- Service Yards Equipment (\$250,000 annually)
- Underground Fuel Tank Renovation/Replacement (\$59,000 annually)

Storm Sewer System

Overview

The Department of Transportation (DOT) is responsible for operating and maintaining the City's storm drain system, which is comprised of the following infrastructure:

1. 1,250 miles of storm sewer
2. 29,000 street drainage inlets and laterals
3. 26 storm water pump stations
4. 1,200 outfalls
5. 4,100 linear miles of Storm curb and gutter. This is covered in Transportation Program
6. Other facilities such as channels, culverts, ditches and debris basins
7. Various storm water quality treatment devices and flow control facilities

DOT manages a number of programs to monitor and maintain the storm system:

- Response to all storm related incidents
- Annual cleaning and inspection of all 29,000 storm inlets
- Reactive cleaning of storm mains and laterals
- Continuous monitoring and maintenance of all storm pump stations
- Inspection of outfall structures
- Preventative cleaning of ditches, culverts and channels and debris basins
- Paving conforms to reconstructed curb and gutter
- Maintenance of storm water quality control measures

Condition standards and assessment

Storm sewer assets are generally assessed in three distinct areas:

1. Physical Condition
2. Operational Condition
3. Capacity

1. Physical Condition

A. Condition of Sewer Lines

This addresses the structural integrity of pipes, manholes, inlets, curb and gutters. Evaluating the physical condition of a sewer requires expensive closed circuit television work followed by office analysis and documentation. Because it is physically and financially impractical to perform a comprehensive video review of the entire system, the City's assessments are limited to those that are generated from deficiencies in the operational characteristics and the capacity problems. Over the next two years, DOT is planning to conduct a study to assess the condition of the

entire system through sampling and projections. The estimated cost of this study is \$2.0 million. Staff is evaluating possible funding resources for this study.

The standard design life of both sanitary and storm sewers is commonly believed to be approximately 50 years. The actual service life will vary based on a variety of factors. Currently 81% of the system was constructed between 1950 and 1979. Thus, a significant portion of the City's system has reached or will reach the 50 year milestone within the next two decades. At this point it is unclear whether the sewers will trigger a significant increase in replacement costs in the near future, or continue to operate well beyond the 50 year design life. For this reason, staff is proposing a comprehensive study to analyze and predict the condition of the storm system.

B. Condition of Curb and Gutters

Curbs and gutters are an important component of the storm system as they channel street runoff toward inlets. There is a recognized problem of ponding throughout the City caused by displaced gutters. While the City has performed some corrective maintenance, the primary responsibility for their maintenance remains with the adjacent landowner according to the Municipal Code. The impact of future projects to correct minor drainage issues is unknown but undertaking such projects will be at the City's discretion. The reconstruction of curbs and gutters is included/addressed in the Transportation Infrastructure program.

C. Condition of Pump Stations

The storm drainage system includes 26 pump stations. The average age of the City's 26 storm sewer pump stations is over 36 years. The standard for the design life of the mechanical and electrical components of a pump station is 10 to 25 years. It is reasonable to expect that a pump station be rehabilitated with new pumps, motors and control systems every thirty years. The City currently has seven stations that are beyond this limit without significant rehabilitation, or funding for rehabilitation. Two more stations will join this list in the next five years. The total cost to perform this pump station work is estimated at \$6 million.

DOT has prepared a priority list for the rehabilitation of the storm pump stations. The list includes nine stations that need rehabilitation in the next few years. Starting in 2005-2006, DOT has transferred \$500,000 annually to Public Works to rehabilitate the pump stations according to the priority list. Eight stations have been updated since 2000. Willow, Bird and Alma were completed via the \$500,000 transfer the remaining stations were completed by DOT using the existing maintenance funds. The City is still contemplating further improvements at the Gold Street Station and Liberty

in conjunction with its Alviso improvement plan. It is anticipated that funding will continue to be needed for the foreseeable future.

D. Condition of Outfalls

Storm outfalls are the transition structure between the storm sewer system and the creeks and rivers. The majority of the outfalls are located in the Santa Clara Valley Water District's (SCVWD) right of way. Others are located within property owned by the City. Regardless of the location, the SCVWD has authority over the creeks, and has granted the City a city-wide encroachment permit to perform routine minor repairs and maintenance. In terms of repairing outfalls, this permit allows the City to replace and repair broken flapgates, and minor repairs to the outfall structure. Any work that disturbs the creek bank, requires additional permits from the State Fish and Wildlife, the San Francisco Regional Water Quality Board, and other regulatory agencies. The permit application and compliance process is an extremely time consuming process. The resulting environmental study and mitigation can easily increase the project cost by a factor of ten or more. Thus, the City has tentative plans to pursue the installation of two outfalls with its allotted \$600,000 of funding. At present, the City is considering pursuing a cooperative agreement with the SCVWD to facilitate the repair of outfalls when the District is performing bank stabilization projects in any given reach of a creek.

2. Operational Condition

At present, the City does not have a comprehensive condition assessment document. Thus maintenance on the system is either reactive or based on current environmental requirements that dictate activities that must be performed.

Each storm pump station has its own regimen of maintenance activities to ensure that they will be able to perform the critical function of draining water from low lying areas of the City. In addition to the planned regimen, pump crews also perform a variety of ad hoc jobs, such as replacing or repairing pumps, installing or operating temporary pumps. During heavy rain events, individual pump crews visit each of the storm stations to ensure that they are operating as expected.

As mentioned earlier, maintenance work on the storm outfalls are performed under a city-wide encroachment permit issued by the Santa Clara Valley Water District, and any maintenance work that disturbs the creek bank, requires additional permits from the state and federal regulatory agencies. The maintenance work is performed only on an as needed basis and, at the present, there is no comprehensive outfall maintenance program.

The street sweeping program benefits the operational condition of curb and gutters by keeping the flow of water in them unimpeded by debris and

accumulated sediment. It also helps to intercept debris that would otherwise wash into the storm inlets. When this happens, the debris can block up the storm system or be transported all the way to the creeks and rivers.

3. Capacity

Stormwater collection systems are designed to handle up to a certain storm event frequency (such as 3- year, 5-year, 10-year, or 100-year events).

The current standard for most of the bay area cities is a 10-year design (this means that in any given year there is a 10% chance that a storm with this magnitude can occur). A significant majority of the City of San Jose's storm system (about 97% or about 1,210 miles) is designed for approximately a 3-year storm (in any given year there is a 33% chance that a storm with this magnitude can occur). Only the pipes that were constructed during approximately the last 15 years (about 40 miles) are constructed to handle a 10-year storm frequency.

As the City expands the storm sewer system through development, (averaging less than five miles of new storm sewer per year), the workload grows while the resources to address the expanding maintenance demand have not increased. Of even greater concern is the type of infrastructure that will need to be maintained. Newer developments are required to install storm water quality and storm water quantity control devices to reduce pollutant runoff. While the use of Community Facilities Districts, Maintenance Assessment Districts and Home Owners Associations will be optimized, devices that are located within the City right of way will become the responsibility of DOT. These devices require significantly more maintenance than current devices.

Capacity improvement projects are funded by the Storm Sewer Capital Improvements Program. These projects are currently selected based on existing chronic/re-occurring drainage problems as they become apparent due to public complaints, City staff observations and historical knowledge. The funding for this program has steadily decreased during approximately last 10 years. The 2008-2012 funding is \$14.8 million. This is sufficient only to fund about two to three small to medium or minor neighborhood drainage improvement projects per year.

The community of Alviso in North San Jose has a flat topography that is at or below sea level. The drainage of this community relies entirely on one pump station. The station was recently partially rehabilitated by the replacing the pumps in kind. The capacity of the station, however, remains the same. In addition, the majority of the storm drainage pipes, similar to almost all other City-wide neighborhoods, have a capacity of 2 to 3-year storms. The current and the next year's CIP budget includes an extra annual funding of \$2 million to construct new and improve/rehabilitate storm infrastructure in Alviso in order to increase the capacity and reliability of the system.

Asset Management System

As stated earlier, the City has no system to assess the physical condition of the storm sewer infrastructure. Over the next two years, DOT will conduct a study to approximate the condition of the entire system through sampling and projections, but actual system condition can only be approximated because of the impracticality of televising the entire system. The estimated cost of such an analysis is up to \$2-\$3 million and should result in the following outcomes:

- Estimated condition of all storm sewers based on projections from sampling.
- Identification of specific pipelines or areas that merit further investigation for probable rehabilitation
- Budgeting tool to allow the City to plan for sufficient funding to meet anticipated structural repair demand

The primary asset management tools used by the City are the Geographical Information System (GIS) and the DOT dispatch data, and the data recorded from the annual inlet cleaning program. The GIS is a computer mapping system that links databases of geographically based information to maps that display the information. At present the system is roughly 90-95% correct and is updated when funding is available. The DOT dispatch is a log of all calls and subsequent service for infrastructure maintenance complaints. Data from the inlet cleaning program includes only inlet for which some problem or unusual condition was observed.

Anticipated capital improvements and maintenance needs

1. Physical Conditions

As mentioned earlier, DOT does not have a comprehensive condition assessment of the storm drainage infrastructure. In order to determine the future maintenance needs and prepare a proactive, preventive maintenance management program, a comprehensive condition assessment study needs to be performed. The cost of preparation of such a study is currently unknown, but it is believed to be around \$2-\$3 million.

DOT's storm maintenance budget for 2007-08 is \$6.9 million. This allocated fund is strictly for maintenance programs and resolution of known problems. At present, there is no program to identify the condition of infrastructure other than those generated from deficiencies in capacity or operations. Funding for future needs (Condition Assessment Study, pump station rehabilitation, Municipal Regional Permit impacts) is currently unknown but estimated to be in the range of \$2 million to \$3 million per year for the next five years. Furthermore, the condition assessment and master plan would almost assuredly generate additional projects above and beyond these costs.

2. Operational Conditions

The above mentioned condition assessment document will also provide tools for a maintenance schedule in order to establish a proactive sewer cleaning methodology and schedule that will facilitate an optimal operation of the system. Over the past few years, the Storm and Sanitary section has evaluated the City's program and benchmarked its efforts against other cities throughout the state. While the City has been generally satisfied with the performance of both maintenance programs, comparisons with other cities and industry published standards have shown that San Jose is poorly equipped and well below average in terms of cleaning cycle times and stoppage performance. Simultaneously, environmental mandates imposed by the SSMP (Sanitary Sewer Master Plan) and the storm water MRP (Municipal Regional Permit) will place further demands on the equipment and staffing.

While the program operates a seemingly adequate fleet of vehicles, much of it is outdated and inefficient in performing sewer maintenance activities. Much of this equipment is unreliable, generally in poor to very poor condition, and in need of replacement. This issue is further discussed in the "Fleet Program" portion of this document.

An investment in newer, more effective and efficient equipment, along with an adequately funded equipment replacement program, is essential in ensuring the proper function of the City's sewer collection systems and achieving compliance with both the MRP and the pending SSMP mandates. It is estimated that approximately \$4 million is needed over the next five years for new equipment with an ongoing investment of \$500,000 for regular equipment replacements.

3. Capacity

Current funding

As mentioned earlier, the existing Storm Sewer Capital Improvement Program is used to address capacity deficient lines or drainage areas which are determined based on, complaints, recurring drainage problems or staff's historical knowledge. The 2008-2012 storm sewer capital programs provides for \$14.8 million in funding, of which \$4.6 million is allocated for the 2007-2008 fiscal year.

Funding for this program has steadily decreased during the last 10 years. The current proposed funding is sufficient only to fund about one or two neighborhood capacity improvement projects per year.

Future needs

To determine the future needs of capacity improvements, a storm drain master plan is required. This document is currently not available. The cost of preparing the document is currently unknown, but it is estimated to be around \$2 - \$3 million. The actual cost of the most needed infrastructure improvements would be in the tens of millions of dollars. Listed below are some storm drain projects that have been evaluated and prioritized, but await funding:

- Upgrade of flood protection in Alviso up to \$8.5 million according to a recently completed consultant study.
- Minor Neighborhood Storm Drain Improvements – Based on staff observations and citizen complaints, five neighborhoods have been identified for improvement. The cost of improvement to the priority locations in these neighborhoods is estimated to be around \$5 million.
- Analysis of pipeline condition Citywide – This would be derived from the condition assessment document which will likely generate a further list of pipe rehabilitation needs.
- Pump Station Rehabilitation Projects. The cost is currently unknown.
- Outfall Rehabilitation Program. This would be on as needed basis, with an average estimated total cost of \$1.5 million.
- Replacement of existing fleet of storm and sanitary equipment. The cost is currently unknown.

Other significant needs

One of the greater challenges and demands on storm infrastructure maintenance in the very near future are the new environmental mandates that will be imposed by the upcoming storm water Municipal Regional Permit (MRP). For approximately 15 years, the City has been a co-permittee of SCVURPPP (Santa Clara Valley Urban Runoff Pollution Prevention Program) to allow all of the member cities to discharge storm runoff into the creeks and eventually the bay. This permit was one of several across the bay area. For the purpose of equity in standards and restriction, all of the bay area permits will be unified into the single MRP some time in 2008. San Jose is one of approximately 90 public agencies negotiating with the Regional Water Quality Board to allow runoff into the bay. The latest proposed language would impose significant impacts on the department by dictating levels of maintenance, requiring new programs, eliminating past efficiencies, and mandating excessive record keeping standards. At present, the City's estimate is approximately \$1.2 million one-time and an additional \$600,000-\$800,000 ongoing from DOT alone. Additionally, reporting requirements will force the City to update much of its storm sewer systems databases in order to properly record maintenance efforts. This data effort alone would result in a cost increase of approximately \$500,000. ESD is the lead department on this issue and has compiled estimates from various departments on the impact of the proposed regulations. DOT has submitted its cost estimates and will be creating contingency plans to implement the expected changes in 2007-2008. Negotiations continue with the

SFRWQB, and it is hoped that the future permit language will be less severe. However, preparations for the worst case scenario will continue.

The proposed regulations will affect DOT in dictating levels of maintenance, record keeping, equipment choices, and staffing flexibility. The financial impact is currently unknown, but it is believed to be significant.

Funding Strategy

An increase in the Storm Sewer Rates of 9% was approved for current fiscal year, and consecutive increases of up to 30% could be requested over the next two years. A significant portion of these increases will be used to address the requirements of the MRP.

Other proposed funding sources for maintenance are listed as follows:

- Using program reserves or ending fund balances for one-time costs
- Storm Sewer Service Fee increase.
- Formation of Community Facilities Districts and Maintenance Assessment Districts for major rehabilitations and payment of operations and maintenance costs. Requiring more system components to be built on private property to shift responsibility for operations and maintenance to property owners (e.g. Home Owners Associations).
- Enterprise Revenue Funds – Issue bonds backed by sewer revenues for large improvements.
- Increase the “Connection Fees” collected from new developments and adopt “Major Facilities Fees.

Anticipated 2007-2008 Highlights

Operation and Maintenance:

- Purchase and acquisition of four new vacuum equipped trucks with video cameras – estimated at \$1 million
- Annual cleaning of all inlets between October ‘07 and January ’08
- Storm response to service requests
- Release of Municipal Regional Permit Tentative Order for next storm discharge permit
- Purchase of four new Vacators to supplement sanitary and storm maintenance
- Identify funding for Storm Sewer Condition Assessment Study
- Construction complete on rehabilitation of Bird Pump Station
- Construction complete on rehabilitation of Alma Pump Station
- Design work complete on Oakmead Pump Station
- Replacement of pump at Liberty Pump Station
- Trial of redesigned trash rack at Rincon I Pump Station
- Additional maintenance responsibilities from the County annexations

Program Information – Storm Sewer System

Capacity:

- Albany-Kiely Storm Drainage Improvement - \$1.3 million
- Alviso Storm Drain Improvement Phase I - \$1.0 million
- Storm Pump Station rehabilitation - \$500,000

Anticipated 2008-2009 Highlights

Operation and maintenance:

- Annual cleaning of all inlets between October '08 and January '09
- Storm response to service requests
- Adoption of Municipal Regional Permit for storm discharge
- Design work complete on River Oaks Pump Station Rehabilitation
- Phase I construction for Oakmead Pump Station rehabilitation
- Additional maintenance responsibilities from the County annexations

Capacity:

- Alviso Storm Drain Improvement Phase II - \$1.0 million
- Chateau Drive Storm Drain improvement - \$583,000

Technology

Overview

Technology Infrastructure and Facility Services:

Cabling, equipment, computers (servers and desktops), network equipment, software, and ongoing technical support and maintenance are components of this program. Historically, these have not been programmed adequately into capital projects, causing a serious downstream issue of information technology lifecycle management, inconsistent system maintenance, and unbudgeted costs associated with required ongoing support and maintenance. These factors affect the ability to fully fund other previously planned and funded information technology projects.

Radio Communications:

The Communications Capital Improvement Program was established to address the replacement and upgrade needs of both the public safety and non-public safety radio equipment. The inventory of equipment that is supported by this program consists of approximately 12,000 pieces of equipment around the City including fixed-equipment sites, mobile radios, mobile computers, portable radios and pagers. As the city continues to focus on public health and safety as a first priority, the radio program maintains 99% uptime to the communications infrastructure and 95% uptime for subscribers. Funding is available in 2007-2008, in the amount of \$985,000, to provide for the replacement of older unreliable communications equipment, to provide an upgrade to radio sites to support simulcasting thereby improving the City-wide communications systems, and to perform a feasibility study to migrate to a digital trunked communication system.

Condition standards and assessment

Technology Infrastructure and Facility Services:

Currently no comprehensive condition assessment exists, however, partial inventories are available. One partial condition assessment is scheduled to be completed this fiscal year with the development of a Desktop Replacement Policy. If the initial capital project development process includes the necessary Information Technology elements, more accurate replacement schedules could be developed and maintained.

Radio Communications:

The replacement policy incorporates standard evaluation criteria for all communications assets, which includes years in service and continued manufacturer support. Both criteria must be met before replacement is considered. In addition to the minimum service life, a technical assessment is performed to determine future repair costs.

Asset Management System

Technology Infrastructure and Facility Services:

Currently there is not an asset management systems in place, however current year funds have been approved and allocated for an integrated asset management system that integrates with the current information technology help desk tracking software. This integration will smooth the ability to accurately track these assets and the associated maintenance and/or replacements.

Radio Communications:

Communications program database uses a Windows-based program produced called Maximus Equipment Focus to manage all preventive maintenance, repair activities, outsourced vendor services, replacement tracking, and shop productivity. This system uses the same database as the Fleet Focus program used by Fleet Management.

Anticipated capital improvements and maintenance needs

Technology Infrastructure and Facility Services:

Key City facilities are in need of cabling and power infrastructure improvements. These improvements include fiber optic network connections among key City facilities; (\$5 million); update of the cabling infrastructure at several critical City Facilities (\$5 million); increasing the electrical and backup power capacity for the NOC to accommodate several systems that are being consolidated into that environment (\$2.5 million, with a \$500,000 annual cost component) and an asset replacement strategy for desktops, servers, and network equipment (\$3 million annually).

Major software applications that are in need of upgrade or replacement include citywide ERP (Enterprise Resource Planning); a Records Management System for the Police Department; a Citywide Content Management System, and several latent department applications that have been identified through the Information Technology Master Plan process in conjunction with City Departments. It is estimated that this unfunded need represents a one-time cost of approximately \$35 million, with ongoing annual maintenance costs of \$5 million.

A comprehensive maintenance schedule which includes cabling, computers, network devices and ancillary equipment will be developed as part of the overall Information Technology Operational Strategy. The City operates and depends on a sophisticated local and wide area network along with a VOIP telephone system that connects staff at key City facilities for voice and computer communications. The vast majority of this network is currently leased from AT&T at an increasing cost as we continue to implement advanced information systems. Development of an enlarged City owned fiber network has been identified as a key strategy to provide the bandwidth necessary to support enhanced service delivery and to give the City control over operating costs.

The proposed network should be developed in conjunction with current and future capital improvement projects. A comprehensive cabling site survey of City facilities in need of

upgrades or enhancements is planned within the next 24 months, and DOT's extensive fiber network will be utilized to add additional fiber optic capacity.

Several critical computing facilities are in need of an upgrade of the electrical power, air conditioning, and back-up power (UPS) at those locations. Several locations including the NOC have exceeded their capacity to accommodate the current equipment located within these facilities and must be expanded to accommodate the newer equipment that is planned. The estimated one-time cost for this upgrade is \$2.5 million, with ongoing annual maintenance costs of \$500,000.

The optimal time frame for replacement of desktop computers and servers is between 3-6 years and usually 4-5 years, according to industry best practices. As a starting point a four-year replacement policy is recommended, at an annual ongoing cost of \$3 million.

Radio Communications:

Current replacement needs have been identified in the amount of \$985,000 and funding has been identified in the 2007-2008 Capital Budget; this work is in progress and is progressing on schedule.

Beginning in fiscal year 2009-10 and lasting through 2012-13, the capital budget includes funding to begin the implementation of a City-wide 700 MHZ digital trunking system – to replace the current 150 MHZ system. A COPS grant in the amount of \$6 million is anticipated to augment the approximate total cost of \$25 million required to complete this project. There is an unfunded need of \$19 million to complete this project. Communications is partnering with both the Fire and Police Departments to pursue additional grant funding for this purpose.

Funding Strategy

Technology Infrastructure and Facility Services:

If Information Technology is brought into the capital planning process at inception, then the anticipated capital and ongoing costs associated with technology requirements can be identified early and considered as part of the overall cost of that particular capital project. If more realistic programming costs can be factored into the capital project planning process, ongoing costs for technology requirements can be identified and programmed into the budgeting process. A standard model used in the industry is calculation of a "standard" percentage of the original cost of the information technology item to be used to project ongoing support and maintenance costs, with this percentage being added to all capital projects and budgeted accordingly. The existing infrastructure and ongoing support and maintenance costs are budgeted along with standard personnel costs in the Information Technology Department budget.

Radio Communications:

Currently, the City funds the Communications Capital Program through the Construction and Conveyance Tax. The revenue for this program is estimated at approximately \$800,000 annually and is often augmented with grants – as described above. Fire and Police will often dedicate portions of their respective operating and capital budgets to assist in the process of replacing and upgrading radio communications equipment as well.

Anticipated 2007-2008 Highlights

Technology Infrastructure and Facility Services:

An integrated asset management system is planned for integration during this fiscal year. Master Plans have been completed for each of the CSAs. Plans for this fiscal year are currently being reviewed and shall be adopted shortly.

Radio Communications:

For fiscal year 2007-2008, the City is beginning to replace and upgrade radio communications equipment that will provide for a wireless mobile data connectivity network for public safety vehicles. Over 400 radio modems and base stations will be replaced as part of this effort.

Anticipated 2008-2009 Highlights

Technology Infrastructure and Facility Services:

To be determined

Radio Communications:

The effort toward replacing and upgrading radio communication equipment will continue, however, at a reduced rate. For 2008-2009, the Radio Communications Capital budget includes only funding from Construction and Conveyance Taxes. As of yet, no additional grant funding has been secured.

Transportation Infrastructure

Overview

The City of San José’s Transportation Infrastructure includes City roadways and median islands, street trees, traffic signal systems, traffic signs, roadway markings and striping, street lights, sidewalks and curb ramps, curbs and gutters, and public parking facilities. These fixed assets that make up the transportation system are essential to the basic function, safety and livability of San José. Current funding sources are not sufficient to adequately maintain, operate, and improve the system, and the condition of the infrastructure is deteriorating.

Transportation Assets:

1. 2,310 miles of paved streets
2. 152 bridges
3. 888 traffic signals
4. 5.2 million square feet of roadway markings
5. 92,500 traffic signs (64,000 traffic control signs, 25,000 blue street name signs and 3500 traffic signal intersection green street name signs)
6. 59,000 street lights
7. 4,500 miles of curb, gutter and sidewalks
8. 306,000 street trees
9. 504 acres of landscaping (228 acres of general benefit landscaping; 276 acres of landscaping maintained with funding provided by an assessment district or community facilities district)

Public Parking Facilities:

The Department of Transportation manages 7,800 parking spaces and over 95% percent of the parking inventory is located in Downtown San Jose. The parking inventory includes seven parking garages and nine surface parking lots.

Condition standards and assessment

The assessment of existing condition, along with the maintenance and planned rehabilitation/replacement cycles are based on the function and operating characteristics of each asset type.

Pavement Maintenance:

The City has been using the Bay Area Metropolitan Transportation Commission’s (MTC) Pavement Management System (PMS) since 1998. The PMS applies a Pavement Condition Index (PCI), which rates streets from 0 to 100. A street rated 100 would be in excellent condition and one rated at 0 would be in need of reconstruction. A street in acceptable or better condition is defined by the City of San José as having a PCI rating of 50 or above. The City’s core service goal is to obtain 97% of streets rated in acceptable or better condition. Currently, 78% of the City’s network is rated at acceptable or better condition.

Based on industry standards and the City’s own experience, the City has established an eight year re-seal cycle for arterial streets and a 10 year cycle for residential streets.

Traffic Signal System Maintenance:

The City of San José bases its preventive maintenance program model on recommended Caltrans and ITE guidelines. The recommended preventive maintenance program would ensure that the traffic signal intersections are operating at optimum efficiency and visibility. The goal is to provide a traffic signal maintenance program that maintains traffic signal intersections as they were designed, provide proactive maintenance that reduces requests for service, and respond in a timely manner to complaints. The goal is respond to corrective maintenance or service requests 90% of the time within 30 minutes during normal working hours, and 60 minutes during non-working hours.

Current condition:

1. Traffic signals meeting visibility and operational guidelines is 37% so far this year. Maintenance activities have been reduced by 70%
2. Response time within 30 minutes is currently running at 62%
3. About 50% of the traffic signal heads are installed as 8x8x8 or 12x8x8 VH. The other 50% of our traffic signal heads are the new standard of 12x12x12

Desired condition rating or condition rating if new funding is approved:

1. Traffic signals meeting visibility and operational guidelines = 80%
2. Response time within 30 minutes = 90%
3. All 8x8x8 and 12x8x8 traffic signal heads replaced with 12x12x12

Roadway Markings:

The City’s core service goal is to have 100% of roadway markings and striping meet visibility and operational guidelines. There are about 3.2 million square feet (62%) in good condition, which leaves 2.0 million square feet that needs to be painted to achieve 100% good condition. Currently, 35% (58,443 of 166,981) of Residential Raised Pavement Markers (RPMs) are in good condition, and 25% (29,013 of 116,053) of Arterial RPMs are in good condition. There are also about 195,000 Raised Pavement Markers (RPMs) that need to be installed.

Traffic and Street Name Signs:

The City’s core service goal is to have 100% of traffic and street name signs meet visibility and operational guidelines. Currently, 79% of the traffic control signs and an estimated 70% of the blue street name signs meet the guidelines.

There are 64,000 traffic control signs, 25,000 residential street name signs (cobalt blue signs), and 3,500 traffic signal intersection street name signs (large green signs) in the City of San José. Currently, the Traffic Sign section replaces 3,000 traffic control signs annually, which equates to a 21-year replacement cycle. To meet 100% visibility and operational guidelines, signs need to be replaced on a 7-year cycle, which equates to 9,143 signs replaced per year. The life span of a traffic sign is approximately seven years

after which the reflectivity falls below the recommended standard. The average life span of both types of street name signs is approximately 15 years.

Streetlights:

The City of San José owns and maintains approximately 59,000 streetlights and streetlight poles. The City’s core service goal is to have streetlights operational 98% of the time. The desirable service level for repairs of streetlight outages is 85% within seven days and 95% within 14 days.

At current staffing levels and with the addition of a one-time resource of \$50,000 that was used for overtime in FY 2006-07, streetlight outages were repaired 85% of the time within seven days through all quarters and 92% of the time within 14 days.

There are 59,000 streetlights poles within the City of San José of which 33,000 are painted octaflutes. The other 26,000 streetlight poles are mostly galvanized octaflutes and decorative lights with higher quality paint.

Sidewalks, Curbs and Gutters:

The City of San José Municipal Code requires property owners to maintain the sidewalks (including the curb and gutter) adjacent to the property.

A 2% sample survey was performed in year 2001 which estimated the following:

- 1 48,000 feet of severely damaged curb and gutter.
- 2 225,000 feet of moderately damaged curb and gutter.
- 3 300,000 feet of minor damaged curb and gutter.

Almost all curb and gutter damage whether it is minor, moderate or severe creates ponding water in the curb area. As a result, it is assumed that all curb and gutter damage will be repaired.

ADA Compliant Curb Ramps: There are approximately 28,600 curb locations in the public right of way. Of the approximate 28,600 curb locations, approximately 12,300 locations do not have curb ramps. The remaining approximately 16,300 curb locations have curb ramps which were installed according to the required standards at the time they were installed. However, the required building and ADA standards have evolved and changed over time (over 30 years) and only about 5% of the 16,300 curb locations with ramps are in compliance with the current ADA standards. The remaining 15,500 existing ramps are in compliance with the required standards at the time of installation. For the existing 15,500 ramps to meet the current ADA standards, the following actions need to occur:

- 1 50% of the existing 15,500 curb ramps have a slope that can be modified to meet current ADA standards; and
- 2 The remaining 50% of the existing 15,500 curb ramps will need to be completely removed and replaced to meet current ADA standards. Many of these curb ramps do not meet Detectable Warning requirements.

Sidewalk Repair:

Sidewalk repair is the responsibility of the adjoining property owner and the City does not maintain a database or inventory of the sidewalks. The condition rating is based on the rate of repairs accomplished. Typically 1,500 sidewalks are repaired annually. Of all the sidewalks that are repaired approximately 45% of them are repaired within the 120 day condition rating standard.

Street Trees:

Currently, 37% of the Urban Forest is in Good condition. The City’s Municipal Code requires property owners to maintain the street trees in the park strip adjoining their property. However, the City has traditionally provided some tree work such as emergency trimming and dead tree removal services. In order to meet the desired 95% of the urban forest in good condition the trees would need to be pruned on the U.S. Department of Forestry recommended 5-year pruning cycle and an effective spraying and tree replacement program would need to occur.

Street/Median Island Landscaping:

The industry standard for high level landscape (trees, shrubs and ground cover) maintenance is 2.5 acres per worker. The number of acres of landscape that each landscape maintenance person in DOT is responsible for has increased from 3.5 acres in 2000-01 to 8.1 acres in 2006-07. The percentage of landscape in good or better condition has declined approximately 30% with the increased workload.

In 2000-2001, Citywide Street Landscaping reached a high of 86% in good or better condition. Since the budget shortfalls, it has declined to 65% in good or better condition and will continue to decline as a result of budget reductions.

DOT is proposing 3.5 acres per worker as the desired baseline staffing that will maintain landscape in optimum condition due to the loss of plant material. This is based on the standard set in 2000-01. The desired target is 90% of street/median island landscaping is in good or better condition.

Public Parking Facilities:

The Parking Capital Program has prepared several assessments for facilities which require major capital maintenance projects. In the last several years, the following assessments have been prepared:

Third Street Garage Stairwells: Structural Inspection Report San Jose Plaza Parking Facility (The Crosby Group, February 2007) Estimated Cost: \$640,000

Convention Center Garage: Convention Center Garage Repair Project (Ahearn, Knox and Hyde, Inc., September 2005) Contract awarded.

Convention Center Garage Deck Leaks: Crack Study of San Jose Convention Center Parking Garage (Tourney Consulting, July 20, 2007) Estimated Cost: \$0.5 million to \$1.3 million.

Given the complexity of these capital maintenance projects, the Department of Transportation relies on outside experts to prepare these assessments.

Asset Management System

Pavement Maintenance:

The City of San José has been using the Bay Area Metropolitan Transportation Commission's (MTC) Pavement Management System (PMS) since 1998. This PMS was created by MTC to standardize the methodology of rating and managing pavement networks across the 9 bay area counties. Currently, there are over 103 cities and counties utilizing this PMS.

Pavement deficiencies are collected out in the field for each pavement segment and fed into the City's Pavement Management System (PMS). The PMS takes the raw data, applies standardized algorithms and deterioration curves, and calculates a Pavement Condition Index (PCI) for each segment.

Traffic Signal System Maintenance:

A file is maintained for each intersection. Flashing beacons, crosswalk uplights, radar signs, CMS signs, surveillance cameras and all intersections are on an access list and GPS map. Each of the assets have a predetermined life cycle.

Roadway Markings:

Roadway Markings utilizes a Microsoft Access Database that was developed within DOT.

There are 5.2 million square feet of roadway markings throughout the City. The roadway markings inventory, which includes all striping, crosswalks, stop bars and messages painted on street surfaces and Raised Pavement Markers (i.e., buttons), increases substantially every year. On average, the inventory increases 200,000 square feet each year. The roadway markings preventive maintenance program is currently on a six-year cycle for residential areas but should be on a three-year cycle to achieve 100% of the markings in good or better condition.

Traffic and Street Name Signs:

Inventory and tracking of the Traffic Signs is accomplished with a Microsoft Access Database that was developed within DOT.

Street Name signs have not been inventoried and are therefore not part of an asset database management system. However we do correlate the number and location of Street Name signs from the City's street Segment/Intersection data tables and from the Signalized Intersection data table.

Streetlights:

Each individual street light has a unique identifying number and is tracked in an Access database maintained by DOT.

Curbs and Gutters:

Since curb and gutter maintenance is the responsibility of the adjoining property owner the City does not maintain a curb and gutter asset management system.

ADA Compliant Curb Ramps:

Citywide, approximately 800 of the 28,600 curb corners that should have ADA compliant curb ramps have ADA compliant ramps. The 28,600 number was based on all intersections identified in the City’s GIS system and it is assumed that all necessary locations will receive an ADA compliant ramp.

Sidewalk Repair:

Since sidewalk repair is the responsibility of the adjoining property owner and the City does not maintain a sidewalk asset management system. The total number of miles of sidewalk is estimated at 4,500, which is based on the number of centerline miles of street with a reduction for sidewalk gaps. The City does maintain a record of all repairs performed by property owners of which approximately 1,500 locations are repaired each year.

Street Trees:

- 1 Inventory - The current estimate of 306,000 street trees in front of private property is based on a 1% sampling performed each year.
- 2 There are also estimated to be 60,000 locations that could support a street tree.

Street/Median Island Landscaping:

There are 228 acres of street landscape. All parcels are inventoried and tracked. In 2001, staff prepared an assessment of the median island landscape throughout the City. It identified several locations where median island landscape would be appropriate. Those locations totaled approximately 50 acres of new landscaping. To date, approximately 24 acres have been installed. It is estimated that there are 26 acres left to install. There is no current funding identified for installing the remaining landscaping projects.

Public Parking Facilities:

There is currently no asset management system in place. The department is relying on consultant services and field assessments to manage parking assets. This approach is appropriate for managing parking facilities and the department does not plan to develop an asset management system for off-street parking facilities.

Anticipated capital improvements and maintenance needs

Transportation Maintenance Backlog:

This includes one-time rehabilitation or capital improvements for all of the transportation assets. Total value of one time investment: \$453.9 million

The detailed breakdown is as follows:

- 1 \$268.1 million for pavement maintenance
- 2 \$14.2 million for traffic signal system rehabilitation
- 3 \$2.1 million for roadway markings
- 4 \$1.0 million for traffic control signs and street name signs
- 5 \$23.6 million for street lighting (galvanizing and refurbishing poles and lights)
- 6 \$35.8 million for curb and gutter damage repair
- 7 \$78.5 million for ADA compliant curb ramps
- 8 \$15.0 million to plant new street trees
- 9 \$15.6 million to finish Median Island Landscape

Annual Ongoing Maintenance Shortfall:

The estimated total annual ongoing maintenance shortfall: \$28.7 million. The detailed breakdown is as follows:

- 1 \$10.0 million for pavement maintenance
- 2 \$1.5 million for traffic signal system maintenance
- 3 \$0.9 million for roadway markings and striping maintenance
- 4 \$0.5 million for traffic control and street name sign maintenance
- 5 \$0.2 million for street light maintenance
- 6 \$0.7 million for curb and gutter repair
- 7 \$5.8 million for sidewalk repair grants
- 8 \$5.1 million for street tree pruning
- 9 \$4.0 million for street landscaping maintenance

Public Parking Facilities:

The major capital maintenance shortfalls are as follows:

- 1 Third Street Garage Stairwell Repair: \$640,000. This project is currently unfunded in the five year capital program. It is a priority project.
- 2 Convention Center Crack Repair Project: \$0.5 million to \$1.3 million. This project has \$280,000 in funding in the five year capital program. It is a priority project.

In the current five year Parking Capital Program, these two projects have an estimated unfunded balance of \$0.9 million to \$1.6 million.

Funding Strategy for Transportation Infrastructure

DOT is in the process of developing a Transportation Maintenance Master Plan (TMMP) that will address funding alternatives and recommended funding strategies for tackling

the one-time capital improvement and rehabilitation costs as well as the ongoing maintenance shortfall amounts detailed in this document. It is anticipated that these recommendations will be presented to the Transportation and Environment Committee in October 2007. Options such as a parcel tax, special assessment districts, bond measures and others are currently being evaluated.

Staff is currently evaluating two options for repair of the deck cracks at the Convention Center Garage. The preferred option would be phased over at least two years. The Third Street Garage Stairwell project would also be phased and funded over several years. In the past, the parking fund has had a substantial unrestricted cash balance, which has been adequate to fund the ongoing capital improvement program. A substantial portion of that cash balance has been committed to the purchase of the Greyhound property, a key downtown parking site. In light of this reduced fund balance, the department has adopted a policy of funding next year's capital improvement program out of the current year's net operating income. Funding capital improvements, including deferred maintenance projects, will continue to be a challenge in coming years.

Anticipated 2007-2008 Highlights

Transportation Infrastructure:

The TMMP is expected to be completed in Fall 2007. The report will present an analysis of the results of DOT's extensive Public Outreach Plan. The purpose of the outreach effort was to determine community and stakeholder priorities for addressing the transportation infrastructure needs and to ascertain the public's willingness to pay for these needs.

Public Parking Facilities:

In the current year, the capital maintenance program includes a concrete repair project at the Convention Center where portions of the deck were damaged by a leaking boiler. This is a separate project from the crack repair project. The budget also includes funding for replacement of the parking revenue control equipment at the Second/San Carlos Garage and pay stations on various surface lots.

Anticipated 2008-2009 Highlights

To be determined pending the Council's review of the TMMP and funding recommendations.

No deferred maintenance projects have been identified for the 2008-2009 fiscal year for the Public Parking Facilities.

Water Pollution Control Plant

Overview

The San José/Santa Clara Water Pollution Control Plant (Plant) is a regional wastewater treatment facility that treats and cleans wastewater from homes and businesses in San José, Santa Clara, Milpitas, Campbell, Cupertino, Los Gatos, Monte Sereno, Saratoga, and unincorporated areas within Santa Clara County. The Plant serves a population of over 1.4 million people and has a capacity to treat 167 million gallons of wastewater per day. Of this amount, about 10 million gallons per day (mgd) is distributed to the cities of Milpitas, Santa Clara and San José for irrigation and industrial use in order to reduce Plant discharge to the San Francisco Bay and to increase the use of recycled water and promote water conservation.

The Plant, constructed in different stages over the last fifty years, consists of multiple treatment unit processes that continuously treat wastewater and settled solids. Wastewater treatment processes include screening, grit removal, sedimentation, biological nutrient removal, filtration, and disinfection. Solids treatment processes include sludge thickening, anaerobic digestion, and sludge drying. Treatment unit processes or facilities consist of concrete tanks, equipment, piping, valves, and instrumentation and control systems. All treatment unit processes are connected by isolation valves and pipelines ranging from ½-inch PVC piping to 120-inch diameter concrete pipes. Support facilities at the Plant include electrical generation and distribution systems, plant water systems, paint shops, electric shops, a machine shop, a warehouse, etc. The various elements comprising the wastewater treatment system are on average 30 to 50 years old. The recycled water distribution system includes four (4) pump stations, three (3) reservoirs, and over 100 miles of distribution pipeline.

Over the past decade Plant expenditures for capital maintenance and rehabilitation have decreased. As a result, reliability of aging assets has decreased and maintenance demand has increased.

Condition Standards and Assessment

The Plant initiated a study in 2006 to do a high-level assessment of the condition of existing infrastructure at the Plant and to identify capital improvements required to maintain adequate wastewater service for existing customers under current regulations and operating permits. As part of the study, risk analyses were completed to help prioritize proposed capital improvements. Risk was measured as a function of the likelihood of a failure, triggers that may require replacement of assets, and the consequences of failures. The likelihood of failure was determined based on overall condition of the asset, reliability of the asset, and existence of planned redundancy. Triggers for replacement of assets was determined based on inadequate capacity or over utilization, obsolescence, and excessive maintenance requirements. Consequences of failure were measured based on service reliability, compliance with regulations and

permits, health and safety of Plant employees and the community, ability to return to service after a failure, financial impacts, and disruption to the community.

In general, the conditions of assets at the Plant correlate with the age and type of assets. Mechanical and electrical systems, which are expected to have relatively short useful lives, and older structures were found to be in generally fair to poor condition. Structures constructed after 1980 were found to be in relatively good condition. The most significant risks are associated with the Plant's high voltage and medium voltage power distribution systems, which are in poor condition, are over utilized, and have significant consequences of failure. The anaerobic digestion systems and yard piping are also high-priority items due to poor condition and lack of standby capacity.

On March 5, 2007, ESD staff presented a report on Water Pollution Control System Infrastructure Condition, based on findings from the consultant study, to the Transportation and Environment Committee. This item was subsequently heard and accepted by the City Council on March 20, 2007.

Asset Management System

The Plant is in the process of purchasing and implementing a Computerized Maintenance Management System (CMMS). The software package is called DataStream. DataStream is a comprehensive solution for asset life cycle management. This new system will have modules such as Asset Tracking, Work Order Management, Maintenance Management, inventory management and mobile work order tracking features. This system is expected to be online by end 2008.

Anticipated Capital Improvements and Maintenance Needs

The types of capital improvements needed in the next five years include repair and rehabilitation of the digestion facility, replacement of digester gas lines, improvements to the Plant electrical generation and distribution system, replacement of valves in the filter building, and rehabilitation of the secondary and nitrification clarifiers.

While preventive maintenance to keep assets working and/or extend the life of the assets has been performed at the Plant, this effort has been minimal. Current estimates, based on types of work orders completed, show the ratio of preventive versus corrective maintenance to be approximately 25% (preventive) versus 75 % (corrective). In the next five years, there is a need to reallocate and add staff to implement an aggressive preventive maintenance program and an asset management program. Efforts will be focused on increasing maintenance planning and scheduling, improving parts availability, and improving materials management.

The Infrastructure Condition Assessment report addressed the short-term critical infrastructure needs at the Plant required to maintain current Plant operations. The report identified \$249 million in capital improvement needs in the next five years. However, in an effort to maintain rate increases below 20%, the five-year CIP has been scaled back to

\$166 million by pushing out many of the needed capital projects into years six through 10. Therefore, the total five-year unfunded capital is \$83 million (\$249 million – \$166 million). Since the Plant has other partner agencies, the City's portion of these needs would be \$55 million.

The Plant however, is currently in the process of developing a Plant Master Plan (PMP), which will further integrate the projected needs for repair and replacement of aging infrastructure with other high-priority and long-term facility needs. One of the goals of the PMP is to more effectively manage risk and utilize available resources and funding to address infrastructure needs. Therefore the total unfunded capital needs could change, depending on the outcome of the PMP. The PMP is scheduled for completed in 2010.

Maintenance expenditures have been increasing over the years as capital needs have been deferred. The annual Plant maintenance budget in the next five years is about \$19 to \$20 million, which includes additional staffing needs to implement the asset management and preventive maintenance programs. Assuming capital needs are not deferred, there is still an estimated deferred preventive maintenance need of about \$2-3M/year at the Plant, with the City's portion of it being \$1.3-\$2 million. It is anticipated that with the implementation of a rigorous preventive maintenance program, an estimated reduction in maintenance costs of 5-10% per year could be achieved, based on current industry research.

Funding Strategy

On June 19, 2007, Council adopted a resolution to set a 9% residential rate increase for Sewer Service and Use Charge for 2007-08 and directed staff to return in 2008-09 and 2009-10 budget cycles with recommendations for rate increases in 2008-09 and 2009-10 of up to 15% annually. Other funding options include:

1. Issuing revenue bond to fund major improvements
2. Increasing the "Connection Fees" collected from new developments and adopt "Major Facilities" Fees
3. Increasing the wholesale price of recycled water to produce additional revenue.

Anticipated 2007-2008 Highlights

- Preventive Maintenance Program (development)
- Asset Management Program (procurement and development)
- Plant Master Plan
- Electrical reliability improvement program
- Extended outreach and citizen education campaign as strategies for raising awareness for the need for rate increases

Anticipated 2008-2009 Highlights

- Preventive Maintenance Program (development)
- Asset Management Program (development)
- Plant Master Plan
- Electrical reliability improvement program
- Extended outreach and citizen education campaign as strategies for raising awareness for the need for rate increases

Water Utility System

Overview

The water utility capital program is developed to ensure reliable utility infrastructure for the San José Municipal Water System. The San José Municipal Water System provides water utility service, in accordance with State of California Department of Health Services requirements, to areas approved for development by the City Council and within the City's water service area. The program's mission is to provide superior water service at competitive rates.

Projects are programmed, as funding allows, to provide facilities necessary for new development and to provide the fire flow pressure and volume recommended by the San José Fire Department. Projects include the construction of new facilities, maintenance of existing infrastructure, and improvements to the Water Utility System facilities. In addition, a Reserve for System Rehabilitation/Replacement Projects continues accumulating funds for future System needs. Consistent with Ordinance No. 26903, this reserve totals \$2.6 million in the 2008-2012 CIP.

The types of assets being utilized include but are not limited to storage reservoirs, pumps, pipelines, valves, a system control and data acquisition (SCADA) system, water meters and hydrants. The assets of the utility are currently well maintained and are in good to excellent condition.

Condition standards and assessment

The assessment of existing condition, along with the maintenance and planned rehabilitation/replacement cycles are based on the function and operating characteristics of each asset type.

Reservoirs: are cleaned, inspected, and the physical condition thoroughly evaluated on a 5-year cycle. The interior condition is rated based on the level of deterioration of the coating or corrosion observed utilizing a three-tiered scale, slight, moderate, and severe. Once the inspection is complete, a report is prepared showing where deficiencies exist and includes recommendations on needed intermediate repairs. When the protective coating reaches the end of its useful life, a capital project is programmed to completely rehabilitate the reservoir. Reservoir maintenance is current. Based on the results of the condition assessment, a CIP project is currently under design to rehabilitate the Villa Vista reservoir, which was identified as needing a complete rehabilitation during the last inspection. All other reservoirs are in good to excellent condition.

Pumps: tested on a regular basis to check for signs of deterioration, such as excessive vibration, high heat, low output etc. Pumps are repaired or replaced when operation characteristics fall outside established parameters as recommended by the manufacturers. Currently all pumps are functional and operating within acceptable ranges.

Pipelines: The Utility tracks main breaks and evaluates pipelines for replacement based on the frequency of breaks as well as type and age of pipe. In addition, any time a water main is tapped, staff performs an inspection to evaluate and determine the condition of the pipeline in that area. Staff has recently implemented a program to utilize GPS technology to accurately identify the location of the breaks, apparent cause and all relevant information and store this data in the Department's GIS database. This will allow more efficient location of main breaks and identify patterns of failure to facilitate both near term CIP project development and long-term planning. Based on currently available data, the Utility has embarked upon a long-term water main replacement program to replace approximately 16 miles of water mains, constructed in the 1960's and 70's, that have been experiencing unacceptably high failure rates. Expenditure levels for this pipeline replacement program are approximately \$1 million annually.

Valves: Valves are exercised on a 5-year schedule. All valves are currently being exercised. Any deficiencies discovered during this process are corrected as soon as possible. To date very few deficiencies have been noted and correction is being performed.

SCADA: SCADA hardware, such as computers, and radios and programmable logic controllers, are replaced on an as needed basis or when failure occurs. Software is upgraded as needed. The supplier of the current software has indicated that they will no longer be supporting the control program. Staff is evaluating alternative software packages to replace the current system.

Water Meters: Residential water meters (5/8-inch and 3/4-inch), which constitute the majority of our inventory, are replaced on a 15-year cycle to insure continued accurate readings and billings. Larger meters are tested every three years and are repaired or replaced as needed.

Hydrants: Routine hydrant maintenance occurs on a three-year cycle. Hydrants are repaired or replaced as needed usually within two weeks of failure.

Asset Management System

The Water Utility is migrating asset management to a computerized system utilizing Data Stream software. Currently, only hydrant data has been migrated to the new system. The remaining asset records are contained in hard copy format.

Anticipated capital improvements and maintenance needs

The current 2008-2012 CIP budget contains all currently foreseeable projects needed for the next 5 years.

Anticipated Funding Needs

The current 2008-2012 CIP budget contains sufficient funding to meet anticipated needs both in 2007-2008 as well as in the out years.

Funding Strategy

All maintenance, rehabilitation and replacement needs are funded through revenue collected from the sale of water. Over time, as the water system ages, an increasing amount of funding will likely be necessary to maintain the system in good to excellent condition. A capital reserve has been established to fund a portion of these future needs, however the level of reserves allowed under the current policy is limited to 7% of current annual revenue. This level of reserves may prove insufficient to fund future needs without significant increases in future water rates.

Establishment of a “sinking fund” that would increase reserves by some percentage of the depreciation value of the assets each year would mitigate some of the adverse impacts of future rehabilitation replacement needs.

Anticipated 2007-2008 Highlights

Water utility has no deferred maintenance. Highlights of some preventative maintenance or replacement projects scheduled for 2007-2008 include Norwood Pump Station Replacement, Villa Vista Reservoir Rehabilitation, continuation of the Water Valve Rehabilitation project, and other miscellaneous Infrastructure Improvement projects.

Anticipated 2008-2009 Highlights

Water utility has no deferred maintenance. Highlights of some preventative maintenance or replacement projects scheduled for 2008-2009 include North First Street Parallel Main Phase III, design, Nortech Parkway East Loop Main, and other miscellaneous Infrastructure Improvement projects.

Conclusions

A majority of the thirteen programs have deferred maintenance and infrastructure improvement needs that are currently unfunded.

Total unfunded one time needs – Upwards of \$915 million

1. Airport - None
2. Building Facilities - \$19 million (five- year)
3. City Facilities Operated by Others - \$4.3 million (2007-2008)
4. Convention Center and Other Cultural Facilities – \$24.6 million (five-year)
5. Fleet - \$1.12 million
6. Parks, Open Space and Pools - \$33.3 million (five-year)
7. Sanitary Sewer System - \$250 million. Cost of Sanitary Sewers Condition Assessment Study is estimated at \$2-\$3 million
8. Service Yards - None
9. Storm Sewer System - Currently unknown. Need Master Plan and a Storm Sewers Condition Assessment Study. Estimated at \$2-\$3 million for each study.
10. Technology – \$66.5 million (five-year)
11. Transportation Infrastructure - \$455 million
12. Water Pollution Control Plant - \$55 million (five-year)
13. Water Utility System - None

Total unfunded on-going needs (annual) – Upwards of \$45 million

1. Airport - None
2. Building Facilities - None
3. City Facilities operated by Others – Currently unknown. Ongoing maintenance is typically the responsibility of the operator with a few exceptions.
4. Convention Center and Other Cultural Facilities – Included in the above number
5. Fleet - \$500,000
6. Parks, Open Space and Pools – Currently unknown
7. Sanitary Sewer System – Partial needs of about \$3-\$5 million. Total needs to be determined by “Sanitary Sewers Condition Assessment Study.
8. Service Yards - None
9. Storm Sewer System- A Storm Sewers Condition Assessment Study is needed to accurately estimate the long-term, ongoing maintenance needs.
10. Technology – \$8.5 million
11. Transportation Infrastructure - \$29 million
12. Water Pollution Control Plant - \$1.3 - \$2 million
13. Water Utility System - None

As stated above, these are very significant needs that cannot be met through internal budgeting strategies. Given the recent and projected General Fund shortfall, it is a challenge to provide funding for even the minimum maintenance needs. It is imperative for the City to look at the possibility of new funding sources to adequately address the needs. At the same time, it is also important to consider the limitations of garnering

Conclusions

community support for several initiatives in the same timeframe. Thus, staff will be taking into consideration the program needs, potential extent of community support for some needs over others as well as looking at how effectively existing funding is being used prior to drafting any recommendations.

Staff will also be evaluating the criticality of the needs based on the following criteria:

- a. health and safety code requirements,
- b. risk analysis,
- c. return on investment and,
- d. alignment with the City's goals of environmental sustainability.

Funding options that address the critical needs over the next two years shall be brought forward for Council consideration during a Council Study Session in October 2007. Based on input and discussions at the October T&E Committee meeting and the October 25, 2007 Council Study Session, staff will refine recommended strategies and present them to Council in December 2007.

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No.	Funding Mechanisms	Capital	O&M	Description	Approval Process	Comments
A. City Budgeting Strategies						
1	General Fund Ending Fund Balance	✓	✓	The current policy allocates the first increment of any General Fund "Ending Fund Balance" identified in the Manager's Annual Report split 50% for deferred street maintenance and repair projects and 50% to offset any projected deficit for the following fiscal year.	Requires City Council approval of policy.	Use of General Fund monies would require City Council approval subject to cost/benefit analysis with consideration to all other unfunded needs (eg. GASB 43/45, Police Staffing, etc.) Generally, not recommended as a funding strategy for Unmet Infrastructure needs. Potential if funding is available during Annual Report. The current policy dedicates 50% of Ending Fund Balance identified in the Manager's Annual Report for deferred street maintenance and repair.
2	Internal Service Fund	See Comments	See Comments	Similar to the Vehicle Maintenance and Operations Fund (552) collects funding from departments, including General and Special Fund funding to fund the M&O and replacement costs related to the fleet. A similar fund could potentially be set up to recover the fair share of other costs centrally.	Requires City Council approval.	There may be challenges to implementing this type of fund, especially if legal restrictions placed on the sources of funding require separate tracking mechanisms. Needs to be explored further in order to be a viable option. Expenditure for O&M or capital purposes. The use of Internal Service Fund for either O&M or capital costs depends on whether there are restrictions on the particular fund.
3	Program Reserves	See Comments	See Comments	Set aside a fixed amount of money based on maintenance needs and replacement cycles	Council approval as part of the budget process	To maintain flexibility in each program, setting policy that requires a specific reserve level is not recommended by the Budget Office, however, could incorporate setting aside funding during the budget process toward unfunded capital project needs. Expenditure for O&M or Capital purposes. The ability to establish a reserve and the allowable use of the reserve would depend on the source of funding for the program. For example, increasing a fee that is limited to cost recovery would not be permitted to establish a reserve for future year operating costs, or to fund both current year capital costs and a reserve for future capital costs; and increasing a capital cost recovery fee, or using bond derived capital funding to establish an O&M reserve would not be allowed.
4	Reserves as percentage of fees	See Comments	See Comments	Set aside reserves as a % of fees received e.g. Muni Water	Council approval as part of the budget process	To maintain flexibility in each program, setting policy that requires a specific reserve level is not recommended by the Budget Office, however, could incorporate setting aside funding during the budget process toward unfunded capital project needs. Expenditure for O&M or Capital Purposes. The ability to establish a reserve and the allowable use of the reserve would depend on the source of funding for the program. For example, increasing a fee that is limited to cost recovery would not be permitted to establish a reserve for future year operating costs, or to fund both current year capital costs and a reserve for future capital costs; and increasing a capital cost recovery fee, or using bond derived capital funding to establish an O&M reserve would not be allowed.

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No.	Funding Mechanisms	Capital	O&M	Description	Approval Process	Comments
A. City Budgeting Strategies (Continued)						
5	Reserves as percentage of capital projects	See Comments	See Comments	Set aside a certain % when a capital project is budgeted	Council approval as part of the budget process.	To maintain flexibility in each program, setting policy that requires a specific reserve level is not recommended by the Budget Office, however, could incorporate setting aside funding during the budget process toward unfunded capital project needs. Expenditure for O&M or Capital Purposes. The ability to establish a reserve and the allowable use of the reserve would depend on the source of funding for the program. For example, increasing a fee that is limited to cost recovery would not be permitted to establish a reserve for future year operating costs, or to fund both current year capital costs and a reserve for future capital costs; and increasing a capital cost recovery fee, or using bond derived capital funding to establish an O&M reserve would not be allowed.
6	Sale of Surplus Real Property	See Comments	See Comments	Sale of Surplus Real Property	Per the Municipal Code, City Council would be required to declare the real property as surplus to the City's needs. Method of sale (auction or negotiated sale) would need to conform to Municipal Code requirements. State law requirements may also be triggered. City Council approval required for sale of real property.	Expenditure for O&M or Capital Purposes. The use of the sale proceeds of surplus property may depend on the original source of funding for the property or grant deed restrictions on the use of the property. This would require a case by case analysis.
7	Savings through leasing of technology - software and hardware	✓	✓	Look into possible savings through leasing of technology instead of purchase.	Council approval	<i>This option needs to be further researched and coordinated interdepartmentally.</i>
8	Capital Sinking fund	✓		Establish a sinking fund that will grow to address major capital improvement needs	Council approval as part of the budget process	To maintain flexibility in each program, setting policy that requires a specific reserve level is not recommended by the Budget Office, however, could incorporate setting aside funding during the budget process toward unfunded capital project needs. Establishment of a capital sinking fund depends on the limitations imposed on the funding source.

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No.	Funding Mechanisms	Capital	O&M	Description	Approval Process	Comments
B. Service Rate Increases						
1	Airport Customer Facility Charge Fees	See Comments	See Comments	Fee paid per rental car contract by the rental car customer to the rental car company for cars rented at the Airport. Rental car companies then remit the fees to the Airport.	The amount, duration and expenditure of the fee are controlled by State law. Fee is established by ordinance and Council resolution.	Expenditure for O&M or Capital Purposes. State law limits the expenditure of the Customer Facility Charge to the construction of consolidated rental car facilities and transportation to these facilities.
2	Airport Passenger Facility Charge Fees	See Comments	See Comments	Fees paid by airline passengers to airlines and then transmitted by airlines to airport.	Both amount of fee and the purpose for which fee is expended are subject to FAA regulations and FAA approval. Council approval required.	Expenditure for O&M or Capital Purposes. Federal law limits the expenditure of the Passenger Facility Charge for specific airport capital improvements, such as terminal or gate development and for noise mitigation purposes.
3	General Purpose Parking Revenue	✓	✓	Fees paid for parking at meters or in City lots and garages. These revenues currently are used to maintain the parking facilities. Parking revenues may also be used for capital purposes.	Council approval	Increase recently approved. Parking revenues are subject to bond restrictions for the 4th and San Fernando Garage.
4	Municipal Water Rate Increase	✓	✓	A one time or progressive rate increase in water utility fees (metered and quantity changes).	Notice and hearing requirement. Council approval required.	Percentage of water sales already dedicated in a Capital reserve. Other competing operating needs. Past Council direction on Muni Water rate increases have been geared toward recovery of wholesale water costs only. Limitations on expenditures of revenues.
5	Sewer Service and Use Fee	✓	✓	A one time or progressive rate increase in sewer fees which funds Sanitary Sewer and Water Pollution Control capital improvements.	Per Proposition 218, subject to public notice and hearing and majority protest by fee payers. Council approval required.	Other competing operating budget needs. Rate increase strategy in process. Limited to sewer purposes.
6	Storm Sewer Use Fee	✓	✓	A one time or progressive rate increase in storm sewer fees	Per Proposition 218, subject to public notice and hearing and majority protest by fee payers. Council approval required.	Limited to storm sewer purposes. Other competing operating budget needs.

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No.	Funding Mechanisms	Capital	O&M	Description	Approval Process	Comments
C. Impact Fee Increases						
1	Municipal Water Fees (Service Connection Fee, Advance System Design Fees, Major Water Facilities Fee)	✓		A one time or progressive rate increase in water service connection fees including Area and Frontage, Service Installation, Meter, E&I, and Major Water Facilities Fees)	Public hearing. Council approval.	Restricted source, can only be used for expansion of water system to meet needs of new development. The fee must reflect the reasonable cost of providing the improvement.
2	North San Jose Impact Fee	✓		Impact fee for development/intensification of North San José designed to generate funding for traffic mitigation projects.	City Council approval needed to change the fee or application of a traffic impact fee in other areas.	Restricted source, can only be used for traffic mitigation projects in North San José. In order to increase fee or establish a new impact fee, there must be nexus between the need created by the project and the mitigation measure. The fee must reflect the reasonable cost of providing the improvement.
3	Parkland Dedication Ordinance and Park Impact Ordinance Fees	✓		In-lieu fees paid by residential developers for park and recreational capital improvements in order to meet the need for these improvements created by new residents.	City Council approval needed to change the fee.	Fees may only be expended on park or recreational improvements that serve the residential project generating the fees. Council approved the adjustment of fees from 70% of 2001 land values to 100% of 2005 land values in January 2007. On August 9, 2007, the NSE Committee approved adjusting these fees to 100% of 2006 land values.
4	Sanitary Sewer Connection Fee	✓		A one time or progressive rate increase in sewer connection fees	Public hearing. Council approval.	Restricted to costs of construction and reconstruction of the system and land acquisition for the system.
5	Treatment Plant Connection Fee	✓		A one time or progressive rate increase in water major facilities fees	Public hearing. Council approval.	Restricted to costs of construction and reconstruction of the system and land acquisition for the system.

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No.	Funding Mechanisms	Capital	O&M	Description	Approval Process	Comments
D. Special Districts						
1	Assessment District	✓	✓	Special assessment on real property located within boundaries of the district. Districts may be formed to fund services or capital improvements. The amount of the assessment must be proportional to the special benefit received from the service/capital improvement funded.	Notice and multiple hearings before the City Council. Requires majority vote of property owners weighted by proposed assessment.	Cannot be used to fund general City services (e.g. police/fire).
2	Business Improvement District (BID)	✓	✓	Special assessment on businesses [Not Real Property] located within boundaries of the district. Districts may be formed to fund maintenance, security, marketing or capital improvements with a useful life of at least 5 years. The amount of the assessment must be proportional to the special benefit received from the service/capital improvement funded.	Annual approval of assessment required. Majority protest (weighted by proposed assessment) defeats formation of the district or imposition of the annual assessment.	
3	Community Facilities District (CFD)	✓	✓	Special Tax on real property located within boundaries of the district. Tax rate imposed based on reasonable analysis. Districts may be formed to fund services or capital improvements.	Requires multiple public hearings before the City Council. If proposed district includes more than 12 registered voters, then 2/3rds approval of voters required. If fewer than 12 registered voters, then approval of landowners is required by 2/3rds vote weighted on amount of property owned.	CFDs typically are for discrete areas. It would be cumbersome to form a city-wide district. It is unlikely that required vote would be obtained.
4	Landscaping and Lighting Assessment District	✓	✓	Special assessment on real property located within boundaries of the district. Districts may be formed to fund certain types maintenance services or capital improvements, such as landscaping, lighting, street improvements, parks, or open space. The amount of the assessment must be proportional to the special benefit received from the service/capital improvement funded.	Notice and multiple hearings before the City Council. Requires majority vote of property owners weighted by proposed assessment.	
5	Property Based Improvement District (PBID)	✓	✓	Similar to the BID, however, special assessment on real property located within boundaries of the district. Districts may be formed to fund services or capital improvement improvements. The amount of the assessment must be proportional to the special benefit received from the service/capital improvement funded. The services funded by the district must be in addition to existing services provided by the City. The term of the initial district is limited to 5 years.	To initiate formation, a petition signed by property owners who will pay at least 50% of the proposed assessment must be presented to the City Council. If Council supports the petition, then mailed election conducted. Requires majority vote of property owners weighted by proposed assessment.	

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No.	Funding Mechanisms	Capital	O&M	Description	Approval Process	Comments
E. Tax Revenue						
1	Building and Structure Tax	✓		Tax imposed upon the construction, repair, or improvement of any building or structure where a building permit is required.	This tax is a special tax as expenditures are limited to certain purposes. Tax increase or change in tax methodology/use requires 2/3rds voter approval.	Restricted by the Municipal Code for use on traffic capital improvements related to major arterials and collectors. Funds cannot be used for maintenance.
2	Construction and Conveyance Taxes	✓	See Comments	Construction tax is imposed at varying tax rates for the construction of buildings or mobilehome lots. The Conveyance Tax is a tax imposed on the transfer of real property at the rate of \$1.65 per \$500 of value. Revenues from both taxes are allocated per a methodology set forth in the Municipal Code for the following purposes: parks and recreation; libraries; fire stations & equipment; park service yards; public works maintenance facilities; communications facilities; and other general municipal improvements as determined by the City Council.	These taxes are a special tax as expenditures are limited to certain purposes. Tax increase or change in tax methodology/use requires 2/3rds voter approval.	Expenditure for O&M or Capital Purposes. The Municipal Code restricts the expenditures of these revenues primarily to capital and capital maintenance purposes for the following facilities: parks and recreation; libraries; fire stations and equipment; park service yards; public works maintenance facilities; communications facilities; and other general municipal improvements as determined by the City Council. The Municipal Code permits limited expenditures of these revenues for operating and maintenance costs (up to 15% of the revenues allocated for parks purposes may be used for parks operating and maintenance costs and up to 10% of the revenues allocated for each of the other purposes may be used for the operating and maintenance costs of those facilities, subject to the limitations specified in the Municipal Code). Mentioned in Parks Maintenance Subcommittee letter dated June 11, 2007.
3	Construction Excise Tax (Commercial-Residential-Mobilehome Park Building Tax)	✓	✓	Tax imposed upon the construction, alteration, repair or improvement of any building or structure, which is for residential or commercial purposes or is associated with a mobile home.	This tax is a general tax. Tax increase or change in methodology requires a majority vote.	
4	Parcel Tax	✓	✓	This is a tax imposed on real property; however, tax rate cannot be based on property value. Tax revenues may fund any kind of municipal service or capital improvement.	Per Constitution, 2/3rds voter approval required.	Mentioned in Parks Maintenance Subcommittee letter dated June 11, 2007.
5	Residential Construction Tax	✓		This tax is imposed on construction of residential dwellings or mobilehomes at varying rates. Tax revenues are restricted to street improvements constructed in connection with residential development.	This tax is a special tax as expenditures are limited to certain purposes. Tax increase or change in tax methodology/use requires 2/3rds voter approval.	Restricted by the Municipal Code to fund eligible street improvements in connection with new residential developments.

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No.	Funding Mechanisms	Capital	O&M	Description	Approval Process	Comments
E. Tax Revenue (Continued)						
6	Transaction and Use Tax (sometimes referred to as "District Tax")	✓	✓	Transaction and Use Tax is similar to the State sales and use tax. Under State law, 2% cap is in place for transactions and use taxes within a County. The tax may be imposed in multiples of 0.25%. Currently, there are two taxes being imposed in Santa Clara County, 0.50% for the Santa Clara County Transit District and 0.50% for Santa Clara Valley Transportation Authority. Therefore, 1% is available to the City under the cap.	If tax is imposed for specific purposes: 2/3rds vote of Council is required to place measure on the ballot and 2/3rds approval by voters is required. Tax may be imposed for a limited period or indefinitely.	
7	Transient Occupancy Taxes	See Comments	See Comments	Two taxes are imposed on occupants of hotel/motel rooms in the City. One is at the rate of 6% of the room rent and the other is at the rate of 4% of the room rent. The tax imposed at the 6% rate is a special tax as the proceeds of the tax are designated for various purposes including convention center operations and maintenance and funding arts organizations. The tax imposed at the 4% rate is a general tax and the proceeds may be used for any purpose.	Increase of the special tax or change in tax methodology/use requires 2/3rds voter approval. Increase of the general tax requires majority voter approval. If either of these taxes is amended to designate particular uses of the tax proceeds, then 2/3rds voter approval would be required.	Expenditure for O&M or Capital Purposes. The general tax may be expended for either O&M or capital purposes. The special tax is limited by the Municipal Code to specific purposes: funding for the convention and visitors bureau; funding for cultural grant program; and funding for the City's operating subsidy for the City's convention and cultural facilities.
8	Utility Taxes	✓	✓	A tax at the rate of 5% of the charges billed is imposed on the following utility services: electricity, thermal energy, gas, telephone and water. Revenues from these taxes may be used for any purpose.	This taxes are a general tax as the tax revenues may be expended for any purpose. Tax increase or change in methodology requires majority approval.	An increase to the Utility Tax (phone, water, etc.) would increase revenue to the General Fund. The use of these funds would be subject to cost/benefit analysis with other competing high priority unfunded General Fund needs which may include deferred maintenance or unfunded infrastructure needs.

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No.	Funding Mechanisms	Capital	O&M	Description	Approval Process	Comments
F. Bond Funding						
1	Certificates of Participation	✓		Secured by lease or installment purchase payments on City owned or financed facilities	Council authorization, majority Council vote	Ultimately considered a General Fund obligation, receives same or lower ratings than Lease Revenue bonds. May have higher borrowing cost than Lease Revenue bonds. Bond proceeds cannot be used for routine maintenance or operations.
2	Commercial Paper	✓		Short-term debt instrument used either for interim financing (to be redeemed with bonds) or for financing short-lived assets (to be amortized over the life of the asset, typically less than seven years)	Approval by the Council (enterprise or lease revenue) and the City of San Jose Financing Authority (if lease revenue, majority vote).	The City currently has lease revenue and airport revenue commercial paper programs, each of which has considerations similar to the comparable types of bonds.
3	Enterprise Revenue Bond	✓		Payable from revenues generated by the financed facilities or systems. There are Charter requirements and limitations for issuance of revenue bonds, e.g. voter approval required for revenue bonds for certain types of public utilities.	Council authorization, majority Council vote	Requires issuer to set fees, rates and charges at levels that will generate more than enough revenue to pay operating costs and debt service. Bond proceeds can't be used for routine maintenance or operations.
4	General Obligation Bond	✓		Bond proceeds that are limited to the acquisition or improvement of real property. Bonds are repaid through an ad valorem property tax placed on real property. Use of the bond proceeds depends on the wording of the bond measure.	2/3rds approval by voters is required.	Receives highest ratings from bond rating agencies, so lowest borrowing cost. Bond proceeds can't be used for routine maintenance, operations or purchase of equipment.
5	Lease Revenue Bond	✓		Secured by lease payments on City owned or financed facilities	Approval by the Council and the City of San Jose 2/3rds approval by voters is required. Financing Authority (majority vote).	Ultimately considered a General Fund obligation, receives slightly lower bond ratings than GC debt, so slightly higher borrowing cost. Bond proceeds cannot be used for routine maintenance or operations.
6	Redevelopment Agency Tax Allocation Bond	✓		Payable from tax increment revenue generated in redevelopment project areas, limited to redevelopment project areas	Agency Board and Council authorization, majority Agency Board and Council vote	Must pass additional bonds test so future tax increment revenues can pay new debt and outstanding debt. Bond proceeds can't be used for routine maintenance and operations.

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No.	Funding Mechanisms	Capital	O&M	Description	Approval Process	Comments
G. Public / Private Partnerships						
1	Parks Maintenance		✓	Adopt-a-Park or maintenance agreements with developers	Council authorization required for maintenance agreements that exceed City Manager's contract authority.	
2	Partnerships and Donations					Under separate analysis as part of the public-private partnership effort being undertaken by PRNS and the City Manager's Office.
H. External Funding Sources						
1	Developer Assisted Projects Contributions			Explore/Implement additional fees on utilities to address backlog	Council approval; agreement with utilities impacted	This option is still in the preliminary stages of evaluation. Staff to explore possibility of increasing in lieu fees and/or redefining the nexus requirements.
2	Grants	✓		Funding may be attained from local, State, or Federal grants	Must submit a grant application to a government agency. Requires Council approval to accept grants; usually requires matching or fronting of funding. Requires Council approval to accept grants that exceed \$100,000.	Limited availability; usually cannot be used for maintenance purposes; requires matching or fronting of funds.
3	Joint Participation	✓	✓	Contributions from other Agencies (SJRA, Santa Clara, West Valley, etc.) for the fair share of costs (Sanitary, Storm, Water Pollution Control).	Changes would require amendments to cost sharing agreements with respective agencies	
4	Loans	✓		Federal Programs designed to finance specific initiatives such as clean water and safe drinking water.	Must submit a loan application for an acceptable project. Requires Council approval.	Not always available when needed, requires payback mechanism. Constitutional limitations.