



2003
INFRASTRUCTURE REPORT CARD
for the City of Los Angeles
Executive Summary



Prepared By

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Bureau of Engineering
Department of Public Works

January 2003

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April 7, 2003

Infrastructure Report Card for the City of Los Angeles – Executive Summary

On March 26, 2003, Mayor James K. Hahn convened a Blue Ribbon Task Force on Infrastructure that consisted of approximately 35 stakeholders representing the infrastructure community. The purpose of this Infrastructure Task Force (Task Force) is to assess the condition of the City's infrastructure, identify the level at which it should be maintained, determine funding shortfalls, identify how to pay for maintenance, and prepare an infrastructure investment plan that addresses needs. The Mayor gave the Task Force six months to achieve its purposes.

The Task Force will focus on the following infrastructure components:

Airports	Street Lighting
Bridges	Streets and Highways
Buildings, Public	Telecommunications
Parks	Wastewater Collection
Port of Los Angeles	Wastewater Treatment
Power System	Water System
Stormwater System	

To assist the Task Force, I am enclosing the 2003 Infrastructure Report Card for the City of Los Angeles. The Report Card is a work in progress and reflects efforts undertaken to date. It includes work on all infrastructure components except the Power System and Telecommunications, which the Task Force recommended adding at the March 26th meeting. Special appreciation is offered to the General Managers and staff who provided input to this massive undertaking.

The overall grade for the Los Angeles City Infrastructure is C+.

The estimated investment need, identified to date, for the City's infrastructure for the next decade totals \$ 9.5 billion.

During the next six months, the General Managers responsible for each infrastructure component will be discussing this report with you and seeking approaches to keeping Los Angeles vibrant. I look forward to working with you on this challenging assignment.

Sincerely,

Vitaly B. Troyan, P.E.
City Engineer

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INFRASTRUCTURE REPORT CARD

for the CITY OF LOS ANGELES – *January 2003*

Completed Assessments

INFRASTRUCTURE	GRADE	GOALS	TEN-YEAR INVESTMENT NEED
Bridges	B+	Bridges shall be maintained such that 70% of bridges are rated "B" or better, with no bridge rated less than "D".	\$0.5 Billion
Stormwater System	C+	Stormwater System shall be maintained at a condition "D" or better.	\$0.1 Billion
Streets & Highways	D+	Street network pavement condition shall be maintained at "B-" or better, with no pavement rating below "D".	\$1.5 Billion for pavement. \$0.7 Billion for congestion relief.
Street Lighting	C	Streetlights shall be maintained at a condition of "C".	\$1.0 Billion
Wastewater Collection	B+	Sewer systems shall be maintained at a condition of "B" or better and condition "F" sewers shall be repaired immediately.	\$1.8 Billion.
Wastewater Treatment	B+	Treatment facilities shall be maintained at a minimum operating condition of "B" or better with no individual treatment process less than "C".	\$0.5 Billion
Water	C	Water systems shall be maintained at a minimum operating condition of "B" or better.	\$3.2 Billion

Overall Grade = C+



INFRASTRUCTURE REPORT CARD for the CITY OF LOS ANGELES – *January 2003*

Assessments Underway

INFRASTRUCTURE	GRADE	GOALS	TEN-YEAR INVESTMENT NEED
Airports	To be determined	To be determined.	To be determined.
Buildings, Public	To be determined	To be determined.	To be determined.
Parks	C	To be determined.	To be determined.
Port	B	To be determined.	\$0.2 Billion



Bridges

Grade
B+

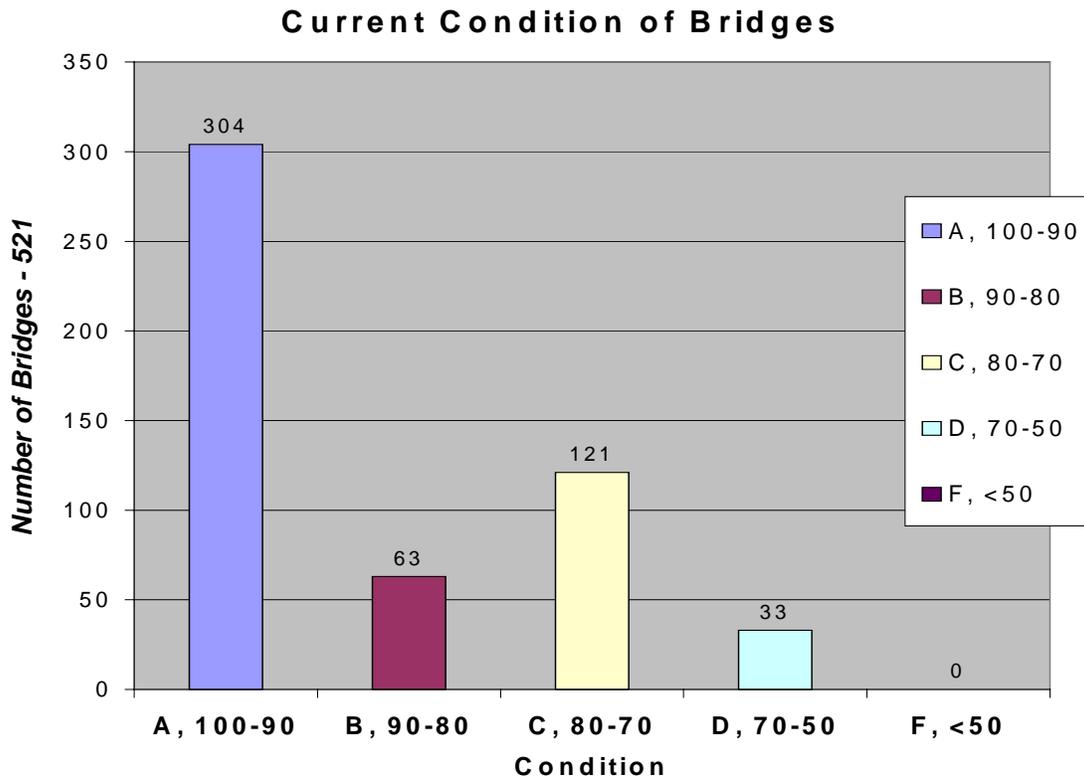
EXECUTIVE SUMMARY

Introduction

The City of Los Angeles is responsible for 521 bridges – 418 vehicular, 67 pedestrian, 13 railroad, 13 tunnel, and 10 miscellaneous. The replacement cost of these bridges is \$1.1 billion. The Bureau of Engineering of the Department of Public Works manages inspection, maintenance, and capital improvement of these bridges.

Current Condition

Each bridge is inspected biannually and given a Sufficiency Rating (SR) in accordance with national standards developed by the Federal Highway Administration (FHWA). The Sufficiency Rating ranges from 0% to 100% and is composed of three elements: Structural Safety and Adequacy (55%), Serviceability and Functional Obsolescence (30%), and Essentiality for Public Use (15%). As of July 1, 2002, only 70% of the City’s bridges were rated “B” or better, as shown in the figure below.



The overall grade for bridges is based on the average SR value of 87.6 for the 521 bridges. Based on the letter grade scale developed for SR values this average corresponds to a B+.

Current Capacity

Bridge capacity is included in two elements of the SR method. The elements are Structural Adequacy, and Serviceability and Functional Obsolescence. Measurement of a bridge's load carrying capacity is determined in the Structural Adequacy element. Traffic volume and speed is measured in the Serviceability and Functional Obsolescence element.

Current Funding

BRIDGE PROGRAM FUNDING PLAN (10 years, in Millions)

Expenditures	FISCAL YEARS										TOTAL
	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	
A. Inspection & Maintenance	0.4	0.8	0.8	0.8	0.9	0.9	0.9	0.9	.09	0.9	8.2
B. Capital Improvements	5.0	12.3	29.9	66.1	91.9	95.9	74.3	58.7	50.0	50.0	534.1
Total Expenditures	5.4	13.1	30.7	66.9	92.8	96.8	75.2	59.6	50.9	50.9	542.3
Funding Sources:											
Caltrans/FHWA	3.8	9.2	22.4	49.4	69.3	72.5	56.4	44.9	40.0	40.0	407.9
MTA	0.7	1.7	4.2	9.2	11.1	11.7	8.6	6.4	2.0	2.0	57.6
Proposition G	0.6	1.6	3.5	7.7	9.2	9.4	6.9	5.0	0.0	0.0	43.9
General Fund	0.3	0.6	0.6	0.6	3.2	3.2	3.3	3.3	3.0	3.0	21.1
Total Funding	5.4	13.1	30.7	66.9	92.8	96.8	75.2	59.6	45.0	45.0	530.5

Recommended Policy

The following policy statement regarding bridge condition has been adopted by the City Council:

"The bridges of the City of Los Angeles shall be maintained so that at least 70% of the bridges are rated "B" (FHWA Sufficiency Rating = 80) or better, and no bridge shall have a rating less than "D" (Sufficiency Rating = 50)."

Bridges currently meet this policy.

Investment Need

At present, the City has identified \$386M to upgrade bridges - \$288M from FHWA Bridge Rehabilitation and Restoration (HBRR) grants, \$44M from Proposition G Seismic Bonds, and \$54M from MTA Call for Projects grants.

The remaining \$48M (\$10M from HBRR and \$2M from Proposition G interest or other fund sources per year) will be required starting in FY 2006-07 to continue bridge capital improvements. \$0.8M is available or can be made available as needed for inspection and maintenance from the City's Annual Budget and Annual Capital Improvement Expenditure Program.

Once this eight year bridge improvement program is complete, it is anticipated that at least 84% of City bridges will be rated "B" or better, and no bridges will be rated below "D".



Stormwater System

EXECUTIVE SUMMARY

Introduction

The Department of Public Works, Bureau of Engineering has conducted a preliminary stormwater system assessment using existing records (paper study only, no field data). The preliminary system assessment is called the “Rapid Assessment”. The physical condition of stormwater facilities was identified and rated from A to F (with A being the best and F being the poorest). System capacity was not addressed during the Rapid Assessment process.

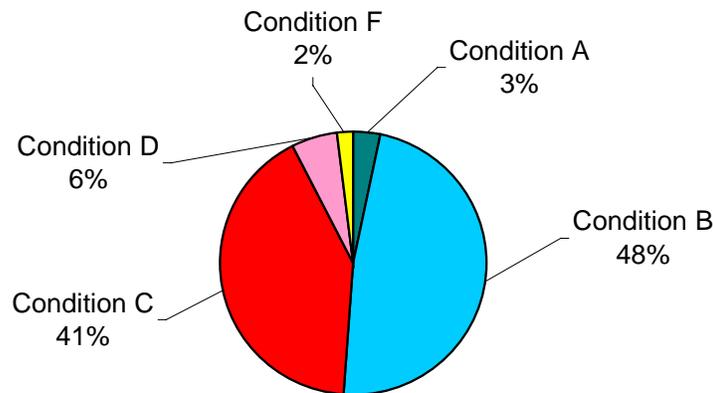
A comprehensive Condition Assessment Program for stormwater infrastructure is in the early stages of development. The program will include extensive field data collection and mapping/inventory efforts. Condition Assessment will be conducted jointly by the Bureaus of Engineering and Sanitation with significant assistance from consultants.

Current Condition

The results of the Rapid Assessment indicated that

- ◆ approximately 3% of the system is in condition “A,”
- ◆ approximately 48% is in condition “B,”
- ◆ approximately 41% is in condition “C,”
- ◆ approximately 6% is in condition “D,” and
- ◆ approximately 2% is in condition “F.”

Condition of Existing City Storm Drain Lines (As of 10/14/01)



INFRASTRUCTURE CONDITION ASSESSMENT SUMMARY		Revised: 10/14/01	
Department of Public Works Bureaus of Engineering and Sanitation	Name of Network: Stormwater		
	Name of Subsystem: Drainage		
Current Condition Level Assessment – Description of Area or Component Evaluated	Evaluation Grade	% at this Level	Narrative comments, notes, or explanations
1,200 miles of drainage conduits, including open channels, corrugated metal pipes, vitrified clay pipes, and other devices.	A	3	Built in last 20 years or less. Assumed minimal wear with no apparent structural defects.
	B	48	Built 20 to 50 years ago. Assumed minor wear with minimal structural defects.
	C	41	Built 50 to 80 years ago. Assumed moderate wear with moderate structural defects.
	D	6	Built 80 to 100 years ago. Assumed severe wear with severe structural issues. Also used to indicate drainage deficient areas where proposed storm drain projects will be constructed.
	F	2	Built over 100 years ago or constructed of Corrugated Metal Pipe. Also, reserved for emergency projects where failure has occurred.
	Total	100%	System not yet rated for capacity.

Current Capacity

The Bureau of Sanitation has not yet rated the stormwater system for capacity. However, in general, the City’s current stormwater system is deficient in capacity. The existing system cannot handle flows generated by a 10 year storm (a large storm that is expected to occur once every 10 years).

Current Funding

For the past ten years, stormwater system construction projects have been funded by the Stormwater Pollution Abatement Fund (SPAF). The average annual construction funding level has been approximately \$2.6 million for flood control, \$2 million for pollution abatement, and \$800,000 for emergency repairs. These funding constraints have meant that the Department has only been able to remedy about 2% of the known drainage deficient areas within the City each year (approximately 10 projects out of a proposed 385). This also corresponds to a total annual construction and/or repair of approximately 2 miles of storm drain pipes each year; this represents less than 0.2% of the stormwater system.

The proposed funding for the Stormwater Program is based on a goal of constructing 8.2 miles of new storm drain pipe each year for the next 10 years.

PROPOSED STORMWATER PROGRAM FUNDING PLAN (10 years, in Millions)

Expenditures	FISCAL YEARS										TOTAL	
	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-2012	2012-2013		
Capital Cost for 8.2 miles of improvement per year	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	144.0
Total Expenditures	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	14.4	144.0
Funding Sources:												
Stormwater Pollution Abatement Fund (SPAF), Flood Control	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	26.0
SPAF, Emergency Repair	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	8.0
Total Funding	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	34.0
Capital Shortfall	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	110.0

Recommended Policy

The Bureau of Engineering recommends adoption of the following policy:

“The stormwater system infrastructure of the City of Los Angeles shall be maintained at a condition rating of ‘D’ or better, i.e., no major portions are more than 100 years in age, out-dated materials are replaced in priority order, and areas of failure are remedied on an as-needed basis.”

Investment Need

Since the methodology behind the Rapid Assessment is time-dependent, portions of the system will continuously be transitioning to a lesser condition level. Therefore, the replacement and maintenance efforts need to be on going. For the purposes of this report, five-year cycles were analyzed. Based on these assumptions, an average of \$14.4 million per year would be needed to replace systems rated less than “D”. This also assumes that the replacement of those portions currently rated condition “F” does not have to be performed immediately, and can be distributed over the next five years.

It should be noted that while additional funds are needed to address the physical condition of the stormwater system, this need is dwarfed by the costly requirements of the recently adopted National Pollutant Discharge Elimination System Municipal Stormwater Permit (implementation of which is expected to cost upwards of a billion dollars). Legal mandates, such as the Permit and accompanying Total Maximum Daily Load compliance need to take precedence over other capital improvements. It is likely that a ballot measure will be required to address the capital needs of the Stormwater Program which should address both permit compliance and funding to improve the physical condition of the existing system.

Other Recommendations

Since its creation, the Stormwater Pollution Abatement Fund (SPAF) has been the sole source of construction funding for the Flood Control Program, at an average level of approximately \$3.4 million per year (construction dollars only). Prior to the creation of the SPAF, the Flood Control Program was funded by Gas Tax. It does not appear that the requisite funding to bring the stormwater system to a minimal condition "D" (an additional \$11 million annually) is available from the SPAF or Gas Tax.

After the Comprehensive Condition Assessment Program is complete and more specific information is available, it is almost certain that the Bureau will revise our recommendations regarding the necessary Level of Service (LOS), and the requisite capital expenditure and annual maintenance expenditure to maintain the agreed upon LOS.



Streets & Highways

Grade
D+

EXECUTIVE SUMMARY

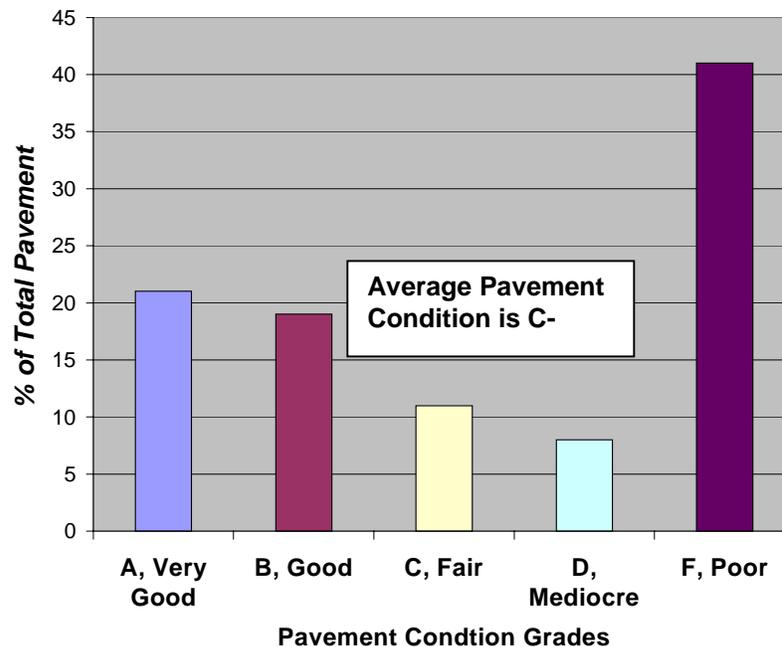
Introduction

The condition assessment of the City of Los Angeles streets and highway system consisted of grading the condition of pavement and traffic congestion. The pavement condition was scored based on the Department of Public Works, Bureau of Street Services (BSS) Rapid Condition Assessment. Traffic congestion was evaluated using City of Los Angeles traffic data contained in the 2002 Metropolitan Transportation Authority (MTA) Congestion Management Program.

Current Condition

Pavement condition was based on a “Rapid Condition Assessment” that graded the condition of City pavements using an A to F system, with a street in “very good” condition scoring an A and a street in “poor” condition scoring an F. Pavement age was the basis for assessing the “very good” to “poor” condition of pavements. Age was defined as the date from which the street had its last rehabilitation work (maintenance blanket, resurfacing, or reconstruction). A grade of “F” was assigned to Local streets with an age greater than 30 years and Select streets with an age greater that 20 years. A total of 1.25 billion square feet of City street pavement was studied.

The average pavement grade is “C-“.



Current Capacity

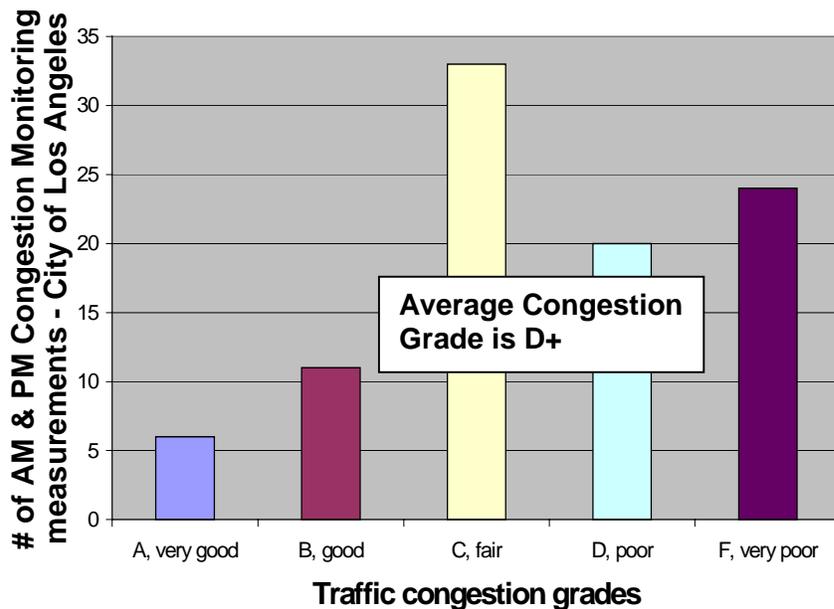
The capacity of streets and highways of the City is based on City traffic data contained in the 2002 MTA Congestion Management Program. 47 congestion monitoring stations at City arterial intersections were studied. The traffic congestion grade is based on City arterial intersection level of service (LOS) grades that are determined using the Intersection Capacity Utilization (ICU) method. The ICU method utilizes a volume over capacity ratio or a “V/C ratio”. Traffic volumes are based on actual vehicle counts obtained during both morning and evening peak traffic conditions. A V/C ratio less than 1.0 means that the intersection has more capacity than vehicle volume passing through it. A V/C ratio of 1.0 or greater means that the intersection has less capacity than the vehicle volume passing through it. Therefore, an intersection with a higher V/C ratio is more congested than one with a lower V/C ratio.

Level of Service Grades

LOS grades are assigned to V/C ratio values.

Level of Service (LOS)	Volume/Capacity Ratio (V/C Ratio)
A	<0.6
B	0.6-0.7
C	0.7-0.8
D	0.8-0.9
F	>0.9

At LOS grade “A”, the intersection operates with no traffic signal cycles fully loaded. No vehicle waits longer than one red indication. Typically, the approach appears quite open, turning movements are easily made, and nearly all drivers find freedom of operation. LOS grade “F” represents a condition where the intersection is operating at the maximum amount of vehicles the intersection can accommodate. There may be long queues of vehicles waiting upstream of the intersection and delays may be up to several traffic signal cycles.



The average LOS grade for morning and evening peak hours for the 47 intersections studied (174 congestion monitoring measurements) was “D+”

Current Funding

Two Funding Tables are presented here; the first exhibits the annual expenditures for pavement rehabilitation and maintenance, the second describes the expenditures and funding for traffic congestion relief.

Estimated Annual Expenditure Needed to Eliminate Street Maintenance Backlog over 10 Years

(in Millions)

Street Functional Classification	Annual Cost for Rehabilitation	Annual Cost for Maintenance	Ten-Year Need
Primary Arterial	\$30.6	\$6.8	\$37.4
Secondary Arterial	\$23.8	\$5.2	\$29.0
Collector	\$17.3	\$4.5	\$21.8
Residential	\$42.7	\$18.0	\$60.7
TOTAL	\$114.4	\$34.5	\$148.9

10-Year Paving Need: \$1.5 billion
10-Year Funding Available: \$0.5 billion
10-Year Paving Shortfall: \$1.0 billion

Traffic Congestion Relief Expenditure and Funding Plan

(in \$ Millions)

FISCAL YEARS										
2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	TOTAL

Expenditures:

Traffic Congestion Relief Projects	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1	72.1	721
Total Expenditures	72.1	721									

Funding Sources:

Capital Improvement Program	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	90
MTA Grant Funding	10.0	10.0	10.0	10.0	10.0	15.0	20.0	25.0	25.0	25.0	160
Total Funding Sources	19.0	19.0	19.0	19.0	19.0	24.0	29.0	34.0	34.0	34.0	250
<u>Capital Shortfall</u>	53.1	53.1	53.1	53.1	53.1	48.1	43.1	38.1	38.1	38.1	471
Total Funding Required	53.1	53.1	53.1	53.1	53.1	48.1	43.1	38.1	38.1	38.1	471

Recommended Policy

“The street network condition of the City of Los Angeles shall be maintained at an average condition level of ‘B-’ or better, and no streets in the network shall have a condition rating below ‘D’.”

Once this goal is reached, BSS will be able to economically sustain the City streets perpetually in good to excellent condition while providing desirable standards of safety, appearance, and convenience to the residents and the traveling public within its jurisdiction.

Investment Need - Paving

BSS has prepared a 10-year plan to maintain and preserve street pavements. This plan consists of performing annual routine maintenance for an estimated cost of \$35 million in conjunction with street rehabilitation (maintenance blanket, resurfacing, and reconstruction) at a cost of \$115 million. The total cost per year to implement this plan is \$150 million, for a 10-year cost of \$1.5 billion.

If a proposed budget of \$1.5 billion to support a 10-year Resurfacing/Reconstruction Program is approved, BSS will be capable of performing routine maintenance on the roadways while eliminating the current backlog generated from historical under budgeting.

As a result, the City’s current average street condition level of “C-“ will evolve into an average level of “B+”.

The Rapid Condition Assessment is a time-dependent methodology; portions of the street system that do not receive routine maintenance will continue transitioning to a lower condition grade. Therefore, routine maintenance and elimination of the current backlog are tasks that must be given very high priority.

Investment Need - Congestion Relief

In 2002, the Bureau of Engineering, Bureau of Street Services, Department of Transportation, and Department of City Planning identified over 800 street improvement projects totaling billions of dollars. These projects were prioritized by evaluating impact on congestion, cost effectiveness, community benefit, impact on public safety, implementation complexity and project readiness. Based on these criteria, a list of 95 projects totaling \$721 million was proposed for implementation over the next 10 years (\$72 million per year).

In addition, the figure on page 8 shows 44 of 140 intersections have traffic congestion rated "poor" or "very poor" during AM and PM commute hours. Additional analysis needs to be performed to determine if all 44 intersections were addressed in the \$721 million needs currently identified. Furthermore, the costs of traffic signal improvements, sidewalks, pedestrian stairways and street trees still need to be identified.

Final Grade

Pavement condition and traffic congestion grades were given equal weight when considering the overall grade for streets and highways. The “C-“ pavement grade and the “D“ traffic congestion grade averages to a final streets & highways grade of “D+”.



Street Lighting

Grade
C

EXECUTIVE SUMMARY

Introduction

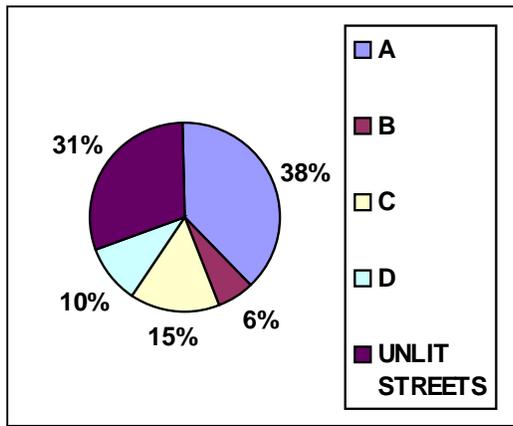
The condition assessment of the City of Los Angeles’ street lighting system is based on age, maintainability, and energy efficiency. This method is currently used as evaluation criteria for the eventual replacement of the street lighting system.

A street lighting system’s life span is estimated at approximately 30 to 40 years. At this point the pole, conduit, and foundation begin to erode, causing maintenance problems. Categorizing the street lighting system by age and light source (lamp type) provides a direct relationship to energy efficiency, maintenance needs and lumen output.

Current Condition

The overall average grade for the street lighting system is a “C”, with a significant number of streetlights below an acceptable level.

Category	Definition	Total number of streetlights
A Very Good	Not in need of energy efficiency upgrade. Safe and efficient multiple circuit. Maintainable and reliable. Less than 30 years old (HPS and MH)	107,561
B Fair to Good	Candidate for Energy Efficiency upgrade. Safe and efficient multiple circuit. Less than 30 years old (MV and Inc)	17,355
C Poor to Fair	Candidate for energy efficiency upgrade. Expensive to maintain/unreliable. 30 to 40 years old(any light sources)	41,594
D Very Poor	Candidate for energy efficiency upgrade and system replacement. Dangerous high voltage series circuits. Not maintainable/unreliable. Over 40 years old(any light source)	29,222
F	Unlit streets	69,000 (not in total)
TOTAL		195,732



Street Lighting Grades

Current Funding

Table 1 - STREET LIGHTING EXPENDITURE AND FUNDING PLAN (in Millions)

Expenditures	FISCAL YEARS										TOTAL
	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	
Construct and Install – Local Streets	41.7	42.7	43.8	44.9	46.0	47.2	48.4	49.6	50.8	52.1	467.1
Reconstruction - 1,900 Streetlights/Yr.	11.4	11.7	12.0	12.3	12.6	12.9	13.2	13.6	13.9	14.2	127.7
Reconstruction - 2,993 Streetlights/Yr.	18.0	18.0	18.1	18.2	18.3	18.3	18.4	18.5	18.6	18.6	183.0
Reconstruction Backlog to Level C	17.5	18.0	18.4	18.9	19.4	19.8	20.3	20.8	21.4	21.9	196.4
Total Expenditures	88.6	90.4	92.3	94.2	96.2	98.2	100.3	102.4	104.6	106.8	974.2
Funding Sources											
SLMAF	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.2	5.3	50.5
Gas Tax (CIEP)	4.5	4.5	4.6	4.7	4.7	4.8	4.9	5.0	5.0	5.1	47.8
MTA	2.1	2.1	2.2	2.2	2.3	2.3	2.4	2.4	2.5	2.6	23.0
Proposition K **		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	9.0
CDBG **		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	45.0
General Fund	-	-	-	-	-	-	-	-	-	-	-
Total Funding Sources	11.5	17.6	17.8	17.9	18.0	18.1	18.3	18.4	18.7	19.0	175.2
Capital Shortfall	77.1	72.8	74.6	76.4	78.2	80.1	82.1	84.0	85.9	87.9	799.0
Total Funding Required	88.6	90.4	92.3	94.2	96.2	98.2	100.3	102.4	104.6	106.8	974.2

Recommended Policy

The Bureau of Street Lighting recommends the reconstruction of the existing lighting system to bring the entire system up to grade “C”. Maintaining the street lighting system at a “C” level will provide a safe, energy efficient street lighting system that will require less maintenance. The efficiency and low maintenance will translate into more illumination and less lights out.

Investment Needs

About 30% of the City's streets do not have streetlights, 85% of which are in residential areas. The plan will construct and install 69,489 streetlights on unlit local streets, of which, 3,021 streetlights are for parks and schools. The estimated expenditure amounts to approximately \$467.1 million spread throughout the ten-year period.

The City currently has 29,222 street lighting units that rate at Grade "D". To bring these units up to standard and to maintain an overall street lighting system rating of "C" or better will require the replacement of 4,893 streetlights per year. Current funding of \$128 million will replace only 1,900 streetlights per year for the next ten years.

An additional \$183 million over the next 10 years is required to replace the remaining 2,993 streetlights per year.

As the years progress, more streetlights will deteriorate into the Grade "D" category and will require replacement. In order to eliminate this backlog to maintain the overall system level of "C", an additional expenditure of \$196 million is required.



Wastewater Collection

Grade

B+

EXECUTIVE SUMMARY

Introduction

The Bureau of Sanitation, Wastewater Engineering Services Division has prepared a Citywide Sewer Condition Assessment Report to include in this Infrastructure Assessment Study. This report, along with future annual updates, is intended to provide a condition assessment of the City's sewer infrastructure and will be used to monitor and document future progress in the City's proactive effort to identify and address system requirements on a continuous basis. This first initial report made a system wide assessment by utilizing existing condition assessment records and extrapolating those results for a system wide assessment.

In order to improve the City's knowledge of the sewer system, the Bureau of Sanitation is putting together an aggressive Closed Circuit Television (CCTV)/condition assessment program. Starting this year, the Bureau of Sanitation has increased the CCTV/condition assessment schedule to about 600-650 miles of sewer per year, which will provide a complete survey of the City's collection system, including both primary and secondary sewers, over the next ten years. Future editions of this report will provide more detail and greater accuracy as the City embarks on an aggressive 10-year program to assess the entire 6,500 miles of sewer in the system.

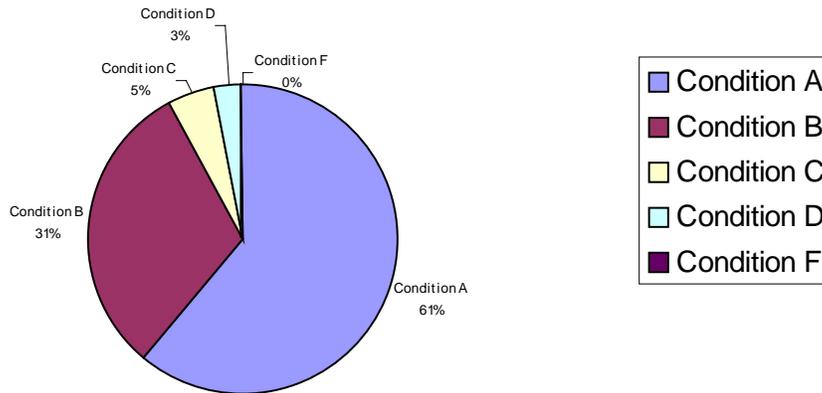
Current Condition

The physical condition and hydraulic capacity of the sanitary sewer system facilities, including the collection system and pumping plants, was identified and rated from A to F with A being the best, and F the poorest. This scoring system is adopted from the American Society of Civil Engineers (ASCE) scoring system on evaluating City infrastructure. Condition "F" used in this report is the same as a condition "E" which has traditionally been used in the City's sewer condition assessment program. For the sewer reaches that have not been assessed, the condition rating was projected based on existing information. The projected ratings were then combined with the actual ratings to come up with an overall condition rating.

The current average overall system condition rating is a "B+."

Based on the existing and projected assessment, it is estimated the primary system (sewers large than or equal to 16-inches in diameter) has 133 miles of "C" and 85 miles of "D" sewers and the secondary system (sewers less than or equal to 15-inches in diameter) has 181 miles of "C" and 103 miles of "D" sewers. It would cost about \$763 million to rehabilitate or replace the "C" and "D" primary sewers and \$213 million to renew the secondary system. Other estimated cost for pump plant upgrades, emergency repairs, and earthquake repairs amount to about \$141 million over the next 10 years.

Structural Condition of Existing City Sanitary Sewer System (as of 5/15/02)



**City of Los Angeles
Wastewater Collection System
Total (Primary and Secondary) Sewer Structural Condition Summary (as of May 2002)**

Category	Condition	Action/Estimated Response Period	Inspected and Projected* Sewers	
			(miles)	Percent of Total
A	Very Good	No repairs—follow-up inspection 25 years.	3,960	60.9
B	Good	No immediate repairs—follow-up inspection 15 years	2,037	31.3
C	Fair	Routine repairs—5 - 10years	314	4.9
D	Poor	Expedite repairs—2 - 5 years	188	2.9
F**	Emergency	Emergency repair	0	0
Total			6,500	100.0

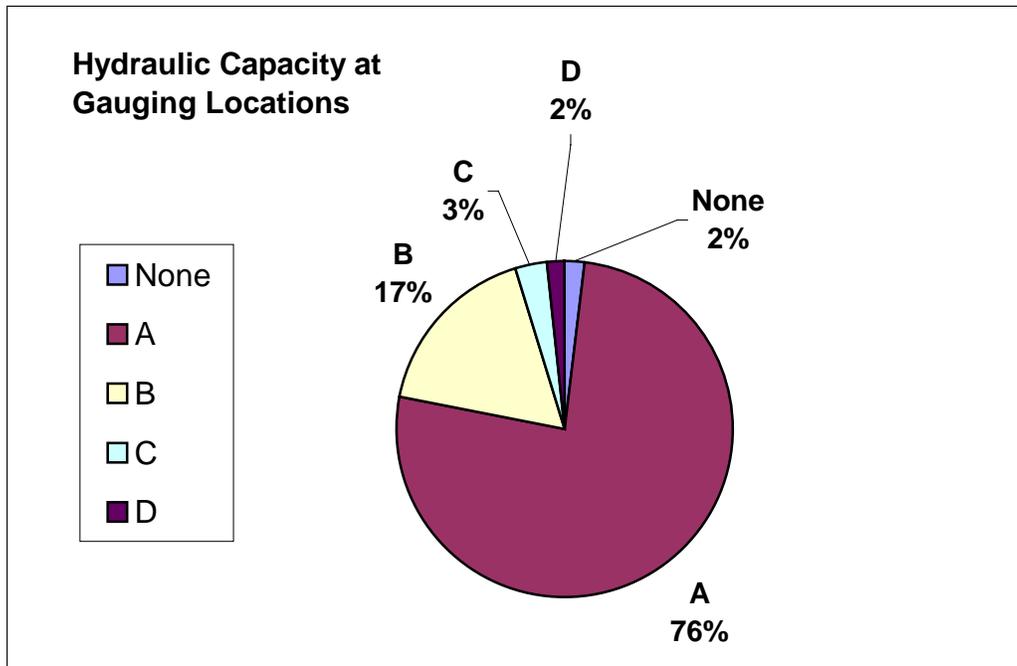
* Inspected sewers have actually been CCTVed. Projected (uninspected) sewers have not been CCTVed, but their conditions were rated based on representative samples of similar sewers.

** The “F” segments will be renewed as soon as they are identified. There is a high priority to ensure that all “F” segments be repaired promptly. The Bureau of Sanitation has a budget of \$9 million for emergency (“F”) repairs annually.

Current Capacity

The hydraulic capacity of the collection system was also assessed based on an extensive gauging program. 35 out of 743 (4.7%) gauging locations indicate high flow levels and thus receive ratings of "C" and "D." These locations are being addressed with either relief sewer projects, at an estimated cost of \$600 million, or with maintenance programs to re-clean, re-inspect and verify the gauging results before plans are started for new relief projects.

Even though the City's wastewater collection system has an aggregate average grade of "B+" individual elements that are below a "B" grade will need to be addressed. Approximately, \$1.8 billion is needed to upgrade and/or renew these elements.



Grade	Grade Description	# of Gauging Locations	% of Total Locations
None	No data available	15	2.0%
A	$d/D \leq 50\%$	564	75.9%
B	$50\% < d/D \leq 75\%$	129	17.4%
C	$75\% < d/D \leq 90\%$	22	3.0%
D	$90\% < d/D$	13	1.7%
Totals		743	100.0%

Current Funding

User Fees fund the operation and maintenance of the Wastewater Collection System. Funding for Capital Improvement Projects are provided through user fees and the issuance and sale of bonds by the City.

Expenditures (Year)	Fiscal Years (Based on FY2002/03 Wastewater Capital Improvement Expenditures Plan [WCIEP]) (\$ in millions)										Item Total	
	2002 -03	2003 -04	2004 -05	2005 -06	2006 -07	2007 -08	2008 -09	2009 -10	2010 -11	2011 -12		
Emergency Repairs	9.2	9.2	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.8
Primary Sewers	38.6	84.7	74.5	74.7	125.2	117.4	40.9	28.5	5.6	0		590.0
Secondary Sewers	6.7	5.5	36.0	7.3	10.8	50.2	95.7	95.9	94.8	94.8		497.7
Earthquake Repair	16.6	14.4	13.2	12.6	1	0	0	0	0	0		57.8
Pumping Stations Upgrade	2.8	8.2	5.4	0	0	0	0	0	0	0		16.4
Other Sewers (Relief sewers, interceptors, etc.)	158.5	104.5	81.1	33.7	52.9	66.6	49.9	50.8	0.46	0.46		599.3
Total Expenditures	232.3	226.6	216.3	134.4	196.0	240.4	192.6	181.2	106.9	101.3		Grand Total 1,827
Funding Sources: SCM*	Based on FY 02/03 WCIEP											
Collection System (Includes CIP, excluding relief sewers & emergency repairs)	54.4	99.4	116.6	88.1	142.1	173.7	142.6	130.4	106.4	100.9		1,154.5
Earthquake (ASRP)	16.6	14.4	13.2	12.6	1	0	0	0	0	0		57.8
Pumping Plants	2.8	8.3	5.4	0	0	0	0	0	0	0		16.4
Other Sewers (Relief sewers, interceptors, etc.)	158.5	104.5	81.1	33.7	52.9	66.6	46.9	50.8	0.46	0.46		599.3
Total Funding	232.3	226.6	216.3	134.4	196.0	240.4	192.6	181.2	106.9	101.3		Grand Total 1,827

*Sewer Construction and Maintenance Fund

Recommended Policy

The Bureau of Sanitation recognizes the importance of the sanitary sewer system and recommends the following policy:

“The sanitary sewer system infrastructure of the City of Los Angeles shall be maintained at a condition rating of “B” or better, i.e. condition “C” and “D” sewers should be rehabilitated or replaced and “F” sewers should be immediately repaired or remedied as-needed”.

This policy recognizes that although an ideal grade is an "A", a huge incremental increase in expenditures is required to go from the City's current average condition rating of "B+" to an "A" and such expenditures would probably not significantly improve system performance. Furthermore, the City's "B+" grade compares quite favorably to a national average grade of "D" recently given by the ASCE.

The City intends to address all condition "C" and "D" sewers by bringing them up to a B or better condition and then maintain them at that level. This is to be done in a systematic manner over the next 10 years. Once all condition "C" and "D" sewers have been renewed, the overall score of the system will be "A".

Investment Need

This assessment represents a snapshot of the current conditions of the wastewater collection system. Future improvements and rehabilitation schedules are reflected in the Wastewater Capital Improvement Expenditure Plan for the next ten years. At the present, the City of Los Angeles has extensive Capital Improvement Expenditure Plan in place to address deteriorating sewers such as condition "C" and "D" sewers, cement sewers, hydraulic-deficient sewers, etc. Total expenditure planned for the Capital Improvement Projects for all sewers is \$1.8 billion (including relief sewers and interceptors) for the next ten (10) years. The current funding for the operation and maintenance for the City of Los Angeles Wastewater Collection System comes from user fees. Funding for Capital Improvement Projects are provided through user fees and the issuance and sale of bonds by the City of Los Angeles.

In order to meet the funding requirements, a rate increase in the sewer service charge is needed. The estimated sewer rate increase is a 3% per year for 4 years starting July 2003.



Wastewater Treatment

Grade

B+

EXECUTIVE SUMMARY

Introduction

The Department of Public Works, Bureau of Engineering conducted a Wastewater Treatment Plant Process Assessment using existing records (Capital Improvement Projects listing, Project Schedules, and Plant Drawings) and interviews with key on site personnel. The physical condition and capacity of the Wastewater Treatment Plants were identified and graded from A to F. The grading system was established by a Board Report, titled "Infrastructure Condition Assessment Summaries". That report was written by the Department of Public Works, Office of Strategic Planning, and adopted on January 10, 2000.

According to American Society of Civil Engineers (ASCE) the national average for the wastewater treatment plants is "D+". In comparison, the City of Los Angeles grade is "B+".

A grade of "B+" indicates that the treatment plants are meeting current peak wet weather flow requirements, require routine maintenance and comply fully with regulatory requirements. Even though the grading system resembles the collegiate format, attaining an "A" rating in our stringent structure is highly improbable since it requires having facilities currently in-place to accommodate future peak wet weather flow condition, as well as other future regulatory requirements.

Assessment criteria for Treatment Plants are listed in the table on page 21 herein. The grade given to each category listed in this report is not based on an overall plant average but rather on the most limiting factor of the process. Although some facilities did not receive superior ratings, each plant meets or exceeds mandated operational parameters.

Current Condition

The results presented below for each plant are a composite of the capacity, equipment condition, and physical condition of each plant. The program's overall grade is a weighted composite of the individual plant grades, where the weighting is based on the relative capacity of each plant (i.e. the individual grade associated with a large plant influences the composite program grade more than the grade associated with a smaller plant).

Overall rating for the City of Los Angeles wastewater treatment plants is "B+". That being said, it is important to note that the Los Angeles Regional Water Quality Control Board will be renewing various discharge permits for all treatment plants, which may result in additional capital improvement expenditures. One of these mandates will require limiting the amount of effluent nitrogen discharged to the Los Angeles River. In addition, Kern County (recipient of biosolids from the City) has adopted a new ordinance requiring all biosolids to be Class A as defined by EPA (Environmental Protection Agency) 503 regulations. These regulations require that biosolids produced at each treatment plant be treated to a level where pathogens

are no longer detectable and can be deposited on farms producing food for human consumption. The Department of Public Works has recognized both of these new requirements and has reflected the associated costs in the 2002/2003 Proposed Capital Improvement Projects (CIP) Report.

Currently, three wastewater treatment plants are assigned a “B” rating with a few unit processes within at grade “C” or lower. One treatment plant is at grade “C” rating with a few processes at lower grade level. Further discussion of each plant is as follows:

- Overall rating for the Hyperion Treatment Plant is a “B” with a few processes such as the Intermediate Pumping Station at “F” grade.
- Overall rating for the Terminal Island Treatment Plant is a “C” with a few processes such as Dewatering and Cogeneration rated as a “D”. Planned capital expenditure over the next ten years will achieve a “B” rating for this plant.
- Overall rating for the Donald C. Tillman Water Reclamation Plant is a “B” with a few processes such as the Filter Pump Station in Phase I rated as a “D”.
- Overall rating for the LA-Glendale Water Reclamation Plant is a “B” with a few processes such as the Mixed Media Filters Phase II rated as a “D”.

Current Capacity

In general, the current capacities for the City's treatment plants are very good.

- Hyperion Treatment Plant (HTP) – **A-**
- Terminal Island Treatment Plant (TITP) – **A**
- Donald C. Tillman Water Reclamation Plant Ph. 2 (DCT) – **A-**
- Donald C. Tillman Water Reclamation Plant Ph. 1 (DCT) – **B+**
- Los Angeles – Glendale Water Reclamation Plant (LAG) – **A-**

INFRASTRUCTURE CONDITION ASSESSMENT CRITERIA		
GRADE	TREATMENT PLANTS	
	Capacity	Physical Condition
A VERY GOOD	No Action	No Action
	Meets future peak wet weather flow requirements, requires routine maintenance, full regulatory compliance	Needs inspection every 10 years and routine maintenance
B GOOD TO FAIR	No Immediate Action	No immediate Action
	Meets current peak wet weather flow requirements, requires routine maintenance, full regulatory requirements	Needs inspection every 5 years and routine maintenance
C FAIR TO POOR	Routine Action	Routine Action
	Meets current and future dry weather flow requirements, requires constant maintenance and observation, need reliability improvement, partial regulatory compliance	Requires constant maintenance, needs action as it arises, minor to major repairs and/or upgrades
D VERY POOR	Significant Action	Significant Action
	Meets current peak dry weather flow requirements, requires extensive maintenance and observation, needs significant improvements, does not meet regulatory requirements	Requires extensive maintenance, needs significant improvements, repairs and/or upgrades
F FAILURE	Emergency Action	Emergency Action
	Requires Emergency Upgrade	Requires Emergency Upgrade
NR Not Rated	Not Rated	Not rated

Current Funding

The table below provides a summary of expenditures planned for the wastewater treatment program over the next ten years as identified in the Wastewater Capital Improvement Expenditure Plan (CIP) dated August 9, 2002. The CIP does not include allowances for future regulatory requirements that may require increased treatment levels. These amounts do not include City labor costs.

Wastewater Treatment Expenditure⁽¹⁾ Plan Assuming Rate Increase (in \$ millions)

Plant	Fiscal Years										Total
	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	
HTP	37.5	36.0	42.7	40.5	54.5	45.1	38.0	27.6	13.8	1.2	336.9
TITP	10.2	9.8	4.8	16.2	28.2	16.5	0.7	0.7	0.7	0.7	88.5
DCT	7.3	31.6	30.7	13.4	0.1	0	0	0	0	0	83.1
LAG	6.3	9.1	7.4	2.7	4.8	1.8	0	0	0	0	32.1
Total⁽²⁾	61.3	86.5	85.6	72.8	87.6	63.4	38.7	28.3	14.5	1.9	540.6

(1) Wastewater Expenditure does not include capital labor.

(2) Total based on 3% rate increase per annum starting FY 2003/04.

Recommended Policy

The Bureau of Engineering recommends that the Mayor and the Council adopt the following policy:

"The Wastewater Treatment and Water Reclamation Facilities of the City of Los Angeles shall be maintained at a minimum overall operating condition of "B" or better with no individual treatment process less than "C"."

Investment Needs

In 1987, the citizens of Los Angeles passed a \$500 million bond measure for upgrading wastewater treatment plants in the City, additional bond measures were passed in 1988 and 1992 and the authority was increased to \$3.5 billion. Over the next decade starting in 1988 and at a cost of \$1.6 billion, the Hyperion Treatment Plant (which was originally built in the early 1920's) was transformed to one of the most advanced wastewater treatment plants in the world. Currently, the Hyperion Treatment Plant is capable of treating 460 million gallons of wastewater daily.

At the present, City of Los Angeles has an extensive Capital Improvement Expenditure Plan in place to address lower grade processes and regulatory requirements such as Nitrogen removal, and production of Class A biosolids. Total expenditure planned for the Capital Improvement Projects (CIP) for all treatment plants is \$541 million for the next ten (10) years.



Water

Grade
C

EXECUTIVE SUMMARY

Introduction

The City of Los Angeles' drinking water system is large and complex. The Department of Water and Power serves approximately 3.8 million residents. Securing a reliable water supply has been in the forefront enabling the growth and improving the lifestyles of people in the City.

The essential elements of the City's water system's infrastructure include storage facilities, local distribution systems, treatment facilities, and an available, reliable water supply. Although local groundwater supply is tapped for use, the City is largely dependent on water from the Colorado River and Northern California. Aqueducts, tunnels, and feeders deliver this imported water to the City.

Current Condition

Local and imported water facilities were generally in fair to good condition. There are concerns over the condition of older piping and/or age and condition of the well collection and pump facilities. Corrosion protection and seismic integrity were questions for some systems. Improvements are needed in service areas where system's redundancies and backup equipment are none existent. Other areas are in need of improved hydraulics whereby original facilities marginally maintain pressures and flows as a result of increasing urban growth.

	Category Description	Basis for Evaluation/ Criteria for Grading	Score	Max Score
Condition	Condition of local distribution system facilities	Age of facilities. Condition of facilities. Known materials issues.	8	10
	Condition of imported water delivery and treatment facilities	Age of facilities. Condition of facilities. Known materials issues.	8	10
	Condition of groundwater basin and production facilities	Age and condition of production wells, seawater barrier, and spreading facilities.	7	10

Current Capacity and Operations

	Category Description	Basis for Evaluation/ Criteria for Grading	Score	Max Score
Capacity	Availability of Adequate Supply	Sufficient supply for next 20 year period (from SB 221/610). Risks to supply. Strategy/contingency plan for various components of local/imported supply.	7	10
	Reliability of delivery systems	Storage, flexibility and redundancy to deal with planned or unplanned outages.	8	10
	Capacity of Local Facilities	Capacity to meet peak day and fire flow demands. Bottlenecks or needed upgrades.	8	10
	Capacity of Regional Facilities	Capacity of imported water facilities to meet peak day demand. Capacity of basin wells to sustain pumping levels.	6	10
Operations	Water quality	Compliance w/ State/Federal drinking water quality regulations. Consumer confidence reports, etc.	10	10
	Maintenance/ Repair and Replacement Funding Levels	Annual Maintenance and R&R funding / or deferral as compared to some benchmark. Reserve levels for R&R.	5	10
	Water Use Efficiency (Best Management Practices Implementation)	Level of adoption of the BMP's. Level of implementation of BMP's.	9	10

Giving each Category Description equal weight, the average score equals 7.6. This corresponds to an overall system grade of "C."

Current Funding

Department of Water and Power, Water Services Organization Capital Infrastructure Funding (in \$ millions)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Total
Capital Program*	341	383	539	426	367	254	207	229	217	222	3,186
Funding Sources											
Base Rate Revenue	60	53	0	5	0	1	0	0	2	0	122
Pass-Through Revenue	75	70	26	65	65	65	63	63	65	64	620
Contributions in Aid of Construction	11	11	11	11	11	11	11	11	11	11	111
Borrowing	194	248	40	0	0	0	0	0	0	0	483
	341	383	77	81	76	77	74	74	78	75	1,335
Capital Short Fall	0	0	463	345	291	178	133	155	139	147	1,850

*Includes programs for trunk and main line replacement, service and meter projects, improvements to water distribution facilities, and seismic upgrade projects.

Recommended Policy

The Drinking Water infrastructure is in fair condition. There are scattered areas of older facilities, including facilities that are undersized to meet future demands. New resources and technologies are needed to continue meeting growth and stringent water quality standards. Prudent management will be needed to stabilize a shrinking water supply, and develop skilled people to properly operate and maintain a reliable and safe water distribution network.

Investment Need

Investments in the range of \$3.2 billion within the next 10 years are needed in a systematic and timely manner for constructing water projects including appropriating funding for rehabilitation and replacement of the aging infrastructure. A funding shortfall of \$1.9 billion will be covered from bond issues and anticipated rate increases. The Water Department has the ultimate responsibility for keeping the drinking water reliable and safe by adhering to standards and seeking improvements



Airports

Grade
To Be
Determined

EXECUTIVE SUMMARY

Introduction

The City of Los Angeles owns and operates four airports; three commercial airports, Los Angeles International (LAX), Ontario International (ONT), Palmdale Regional (PMD), and one general aviation airport, Van Nuys (VNY) Airport. Together, these airports play a significant role in satisfying the regional aviation demand and ensuring economic stability and growth for the City of Los Angeles, and for the entire region.

Current Condition

The infrastructure at LAX is growing increasingly outdated and strained causing delays in arrivals and departures. The runway configuration contributes to increased possibility of runway incursions. The increased security requirements imposed by the federal Transportation Security Administration have demanded greater space requirements for the terminals at LAX, further straining the facilities. Even with newer terminals, ONT's current facilities are strained by the increased security requirements. However, ample space is available at ONT for terminal and cargo development. PMD has had recent upgrades to its terminal and efforts are underway for a new cargo ramp, taxiway upgrades, installation of new pavement markings, and construction of taxiway/ramp edge lighting. Both of the runways at VNY were resurfaced in 1996 and 90% of the taxiways will need to be resurfaced or replaced in the next 3-7 years.

The aging infrastructure also hampers operational efficiency at the airports and compounds passenger inconveniences and operational delays at LAX and ONT. The lack of modernized runways and taxiways limits the efficient movement of aircraft. Operational delays will increase as demand rises in the future. Establishing and increasing operations at PMD is challenged by the distance and limited ground access from the City's central business and population areas.

Operations at the City's general aviation airports are significant in the relief they provide for the commercial airports. In 2002, Van Nuys Airport accommodated just under 500,000 aircraft operations but physical constraints and legal restrictions limit operations.

Current Capacity

LAX as the primary and dominant airport in the City provides the majority of service. However, with the last major infrastructure improvements made in 1984, with design capacity of 40 million annual passengers (MAP), LAX capacity is straining to meet demand and in

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peak times can experience near gridlock conditions. ONT, capable of handling 10 MAP, and with approvals to build a third terminal, offers additional capacity for handling air passenger demand. PMD also offers capacity through the utilization of existing facilities and a current Joint Use Agreement with the US Air Force Plant 42, and well as potential use of adjacent LAWA property. Capacity at VNY is predicted to be sufficient for the next 5 to 10 years, however, new FAA requirements have impacted and reduced capacity.

Other Recommendations

Determining the grade for Airports is currently in progress. The City assets include an aging, inefficient LAX infrastructure but also modern facilities at ONT with excess capacity, and large capacity potential at PMD. VNY serves as a necessary reliever airport to the congestion at LAX and have a significant and growing role in satisfying the aviation demands of the City and the region.

Each airport in the City's aviation system has a unique set of factors that affects its supply and demand. These unique factors consequently provide the airports the opportunity to work collaboratively and complementary rather than competitively. Infrastructure improvements and expansion are necessary to accommodate the increased security and safety measures imposed by the federal government post September 11th. It is also infrastructure expansion and development that offer the opportunity to develop necessary aviation capacity to handle expected demand and to fuel the economic growth of the City and the region.

Specific recommendations:

- Immediate progress to implement airport infrastructure modernization and improvements.
- Expedited process for obtaining local and federal approvals.
- Increased federal funding for airport capital improvement programs.
- Promotion of airports for sustained economic growth in the City.

Investment Needs

Infrastructure improvements and modernization at the City's airports are estimated to cost upwards of \$9 billion.



Buildings, Public

Grade
To Be
Determined

EXECUTIVE SUMMARY

Introduction

Public buildings provide gathering spaces for the general public and work spaces for public employees and representatives. Within the walls of these buildings city officials plan and manage various community projects, make or oversee public policy, protect, and administer justice. Police and fire stations house the equipment and people that protect our homes and lives. Libraries are dynamic centers of exploration and learning. The City Hall strengthens the function of democracy.

The City of Los Angeles owns 842 public buildings. Total area of these buildings is more than 15 million square feet. Public buildings are generally identified on the basis of their use such as recreation and parks facilities, community centers, and equipment repair facilities in addition to the previously mentioned facilities. The Department of General Services (DGS) maintains all of these facilities.

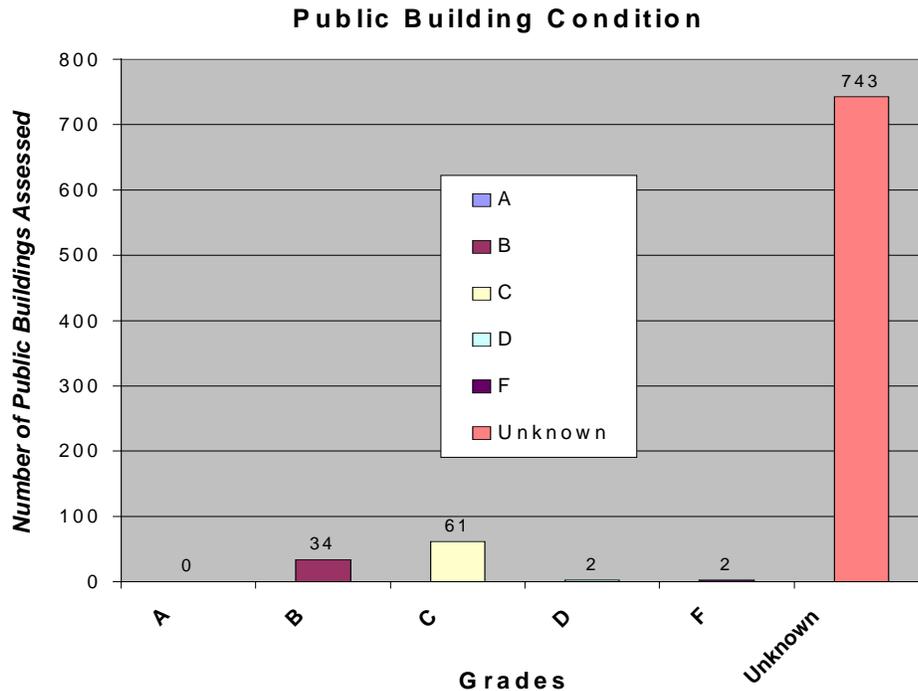
Recently, the Department of Public Works (DPW) assessed one hundred and one (101) buildings that represent the different types of public buildings of the City. The assessment process evaluated the condition of each building and its systems. This report is based on information collected from that assessment.

DGS is currently partnering with the Bureau of Engineering to prepare a more comprehensive public building assessment. This joint effort will expand the assessment to include all 842 public buildings and will determine a public building grade, identify the grade at which public building should be maintained, identify funding shortfalls, and include a recommendation on investment needs.

Current Condition

To ensure a consistent grading process for all assessed buildings, we established grading criteria, and grading levels. The grading system evaluated the condition of exterior and interior finishes including walls, roofs, floors, ceilings, windows and doors and building systems including electrical, plumbing, Heating-Ventilation-Air Conditioning, and vertical transport.

Buildings were graded A, B, C, D and F, with A grades given to the newly constructed buildings or those in excellent condition, and F to buildings that are in very poor condition.



Current Capacity

To be determined.

Current Funding

To be determined.

Recommended Policy

Safety, well being, economic vitality, and quality of life in the City of Los Angeles are intimately tied to the services administered and delivered from our public buildings. Continuous maintenance and renovation of buildings can extend their useful life and enhance their functionality. In order to protect and increase the value of this asset, we recommend the following:

1. Develop a comprehensive long-term plan for the maintenance of existing buildings.
2. Renovate buildings to comply with guidelines that minimize the impact of buildings on the environment and improve their efficiency.
3. Access rebates or grants available from power providers for increasing energy efficiency.
4. Increase funding for building maintenance.

Investment Need

To be determined.



Parks

Grade

C

EXECUTIVE SUMMARY

Introduction

Parks are vital to the quality of life in a city. The Department of Recreation and Parks offers hundreds of outdoor spaces and recreational facilities for Los Angeles residents from the mountains to the sea. There are 628 parks and recreation facilities that include Neighborhood and Community parks; Recreation Centers, Senior Citizen Centers, Child Care Centers, golf courses, children play areas, ball fields, soccer fields, tennis courts, swimming pools, skate parks, hiking trails, off-leash dog parks, beaches, lakes, camps, museums, horticultural, and historic sites. The infrastructure of the park system can be likened to a small city within the City of Los Angeles. The large variety of parks and facilities requires the same type of infrastructure found in the City including streets, lighting, sewers, bridges, storm drains, and buildings. In addition, the Department is also responsible for infrastructure specifically needed for park and recreational purposes such as sports fields, game courts, golf courses, picnic areas, play areas, gymnasiums, community centers, maintenance yards, irrigation systems and community gardens.

Current Condition

Existing park facilities were evaluated and given a letter grade. Evaluators were provided with specific criteria for each component. The resulting grades are a current snapshot of the park system's condition. The overall grade of the park system is a C. The Department celebrates the A, B, and C grades and approximately 70 percent of the park and recreation facilities which are at this level. However, the remaining 30 percent were graded with D and F, and do not fully satisfy the recreational needs of the population, especially for active recreational facilities and programs.

The Department's infrastructure was divided into three sections: Buildings, Outdoor Areas, and Special Facilities/Features. Below are the grades for the major components of the park and recreation facilities.

Table 1	P E R C E N T A G E				
	Grade	A	B	C	D
Buildings					
<i>Gym/Rec.Ctr.</i>	7.27%	20.91%	40.00%	24.55%	7.27%
<i>Child Care Ctr.</i>	15.00%	10.00%	45.00%	25.00%	5.00%
<i>Senior Center</i>	5.00%	25.00%	45.00%	15.00%	10.00%
<i>Stand Alone Restroom</i>	5.77%	14.42%	33.65%	24.04%	22.12%
Outdoor Areas					
Active					
<i>Turf Fields</i>	3.76%	21.05%	36.09%	24.06%	15.04%
<i>Irrigation</i>	3.60%	20.14%	35.97%	25.90%	14.39%
<i>Basketball Courts</i>	4.08%	13.27%	48.98%	24.49%	9.48%
<i>Ball Diamonds</i>	2.44%	18.29%	40.24%	29.27%	9.76%
<i>Play Areas</i>	15.35%	31.68%	39.60%	10.89%	2.48%
Passive					
<i>Picnic Areas</i>	2.82%	27.68%	46.89%	20.34%	2.26%
<i>Field/Ball Diamond Lighting</i>	11.24%	34.83%	31.46%	11.24%	11.24%
<i>Walkways/Paths/Trails</i>	2.19%	21.93%	39.47%	25.44%	10.96%
<i>Parking Lots</i>	2.45%	22.70%	33.74%	32.52%	8.59%
<i>Trees</i>	0.61%	16.39%	72.34%	10.66%	0.00%
Special Facilities/Features					
<i>Pool</i>	7.94%	9.52%	26.98%	28.57%	26.98%
<i>Golf Course</i>	8.33%	50.00%	25.00%	0.00%	16.67%
<i>Lakes</i>	8.33%	8.33%	16.67%	50.00%	16.67%
<i>Camps</i>	0.00%	12.50%	50.00%	12.50%	25.00%

The evaluations and resulting grades demonstrate that there are older or heavily used park and recreation facilities that are below a desirable standard. It has been the Department's experience that funding does not include on-going or preventive maintenance of facilities after they are constructed, renovated, or replaced. There are three contributing factors for facilities to receive D and F evaluations: maintenance, over usage, and age. These factors will reduce the life cycle of the facility and/or reach a critical period when it will quickly deteriorate.

Current Capacity

Many of the park system facilities operate beyond their intended capacity. This puts stress on park infrastructure (For example-playing fields cannot be properly maintained, parking lots deteriorate and quickly become inadequate). These and other factors decay the quality of the facilities, and the needs of the community are not met.

Current Funding

The Department is developing a plan to enhance and maintain a good recreation and park system of facilities and programs. Further research and analysis will be conducted to determine specific recommendations for maintenance, operations and construction costs for additional facilities as well as improving existing facilities.

Policy Recommendation

Overall the park systems' infrastructure has been evaluated as average for existing facilities that provide some of the park and recreational needs of the City. The Department is aware that there is still room for improvement. Additional analysis will be made of this evaluation to generate supplemental reports, recommendations, and strategic planning. The Department will conduct regular updates of this evaluation process, and review those results for future recommendations. Funding requests will reflect the needs of the park system to provide future sites, facilities, and programs for the neighborhoods and communities of the City, while providing desirable standards of safety, appearance, and accessibility for existing facilities.

Investment Need

To be determined.

Parks can raise the value of neighboring property and reduce crime in their vicinity, especially parks with active recreational facilities. Park and recreation areas provide opportunities for increasing physical and social health, as well as bringing communities together. The investment in a community feature that promotes many positive attributes such as a park and recreation area is in the City's interest.



Port

Grade

B

EXECUTIVE SUMMARY

Introduction

The Port of Los Angeles (Port) is the busiest shipping terminal complex in the nation and the 7th busiest in the world. The purpose of the Port is to provide for the safe and efficient transport of people and goods. The Port consists of 43 miles of water frontage, 7500 acres of space (water and land), 5 intermodal rail yards, 27 cargo terminals, and 80 shipping lines.

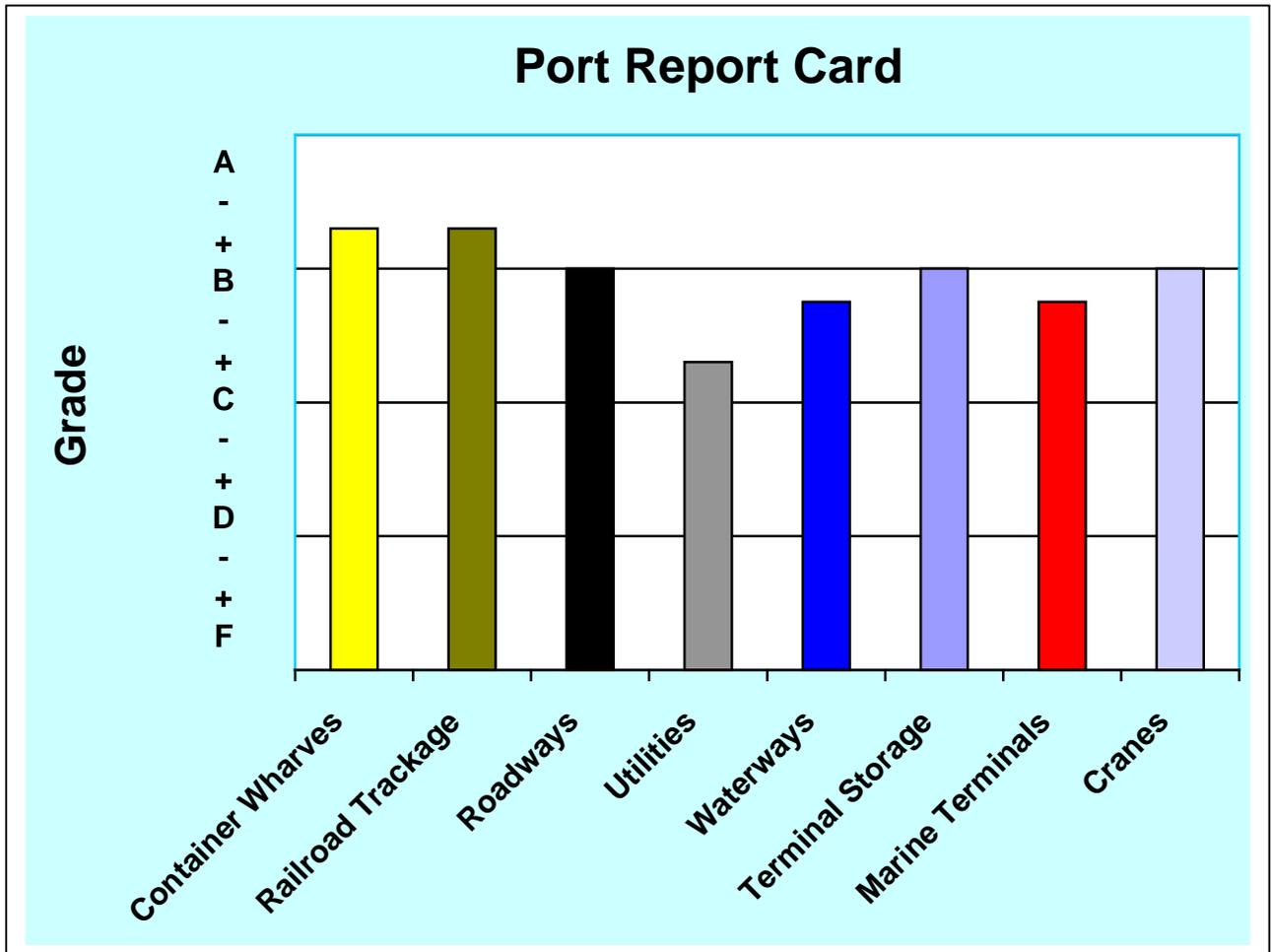
The Port has conducted an infrastructure assessment of the entire harbor district using existing records. This assessment consisted of evaluating eight different components of the Ports' infrastructure, including wharves, railroad trackage, roadways, utilities, waterways, terminal storage, marine terminals, and gantry cranes. Together they provide the basis for the efficient operation of the Ports' system.

Current Condition

The scoring system was generally based on the age of facilities as compared to its useful life. The scale of grades for each of the eight types of facilities was A, B, C, D, and F, with A representing the highest grade. In addition, "+" or "-" qualifiers were used in the scale of letter grades. Using this scoring system, a higher grade was given for the more recently constructed improvement with an "F" given when the useful life was exceeded.

The useful life utilized was: container wharves, 50 years; other wharves, 75 years; railroad trackage, 50 years; roadway and pavements, 20 years; utilities, 50 years; and cranes 30 years. The results of "levels of service" analysis were factored into the scoring for roadways; water depth and sufficient terminal acreage were factored into the waterway, backland acreage, and marine terminals components.

A graph showing the grades for the eight types of Port components is shown on the following page.



Based on the grades of the eight Port components, the overall grade for the Port of Los Angeles is “B”. Each of the eight components was given equal weight in the final grade.

Current Funding

Funding sources for Port capital improvements include land lease revenue, port container tariffs, bonds, and State and Federal grants. A specific evaluation of current funding availability is in progress.

Recommended Policy

To be determined.

Investment Needs

The Port of Los Angeles is looking at continued major improvements over the next decade for both new and upgraded infrastructure. Although a large portion of the funding for these improvements comes from revenue generated by the shipping companies, there is a need for state and federal assistance for a portion of the infrastructure improvements and particularly for assistance of some of the neighboring jurisdictional needs in roadway and bridge funding.

It is equally important that the adjoining roadways, freeways, bridges, and railways in the surrounding region receive improvements in order to accommodate the ever-increasing traffic that the Ports generate. Increased funding for air quality improvement is also needed to enhance the environment.

The following is a list of Port infrastructure investment need.

Dredging	\$10.0 million (annual funding over 10 yrs)
Roadways and Grade Separations	\$120.0 million (shortfall funding)
Railroads	\$23.0 million (capital costs)
Security	\$50.0 million (capital costs)



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ACKNOWLEDGEMENTS

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Peter See
John Koo

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