



THE CITY OF SAN DIEGO
REPORT TO THE CITY COUNCIL

DATE ISSUED: March 8, 2011

REPORT NO: 11-037

ATTENTION: Budget & Finance Committee

SUBJECT: Deferred Capital Update

REQUESTED ACTION: Information only.

STAFF RECOMMENDATION: None – information only.

BACKGROUND:

Over the last five years, the City of San Diego has undertaken an aggressive program to assess the condition and needs of its infrastructure assets. This assessment effort has been unprecedented within the City for breadth and depth. As a result, the City has gained better information on its capital assets than it has had in many years.

Using this detailed information on the City's infrastructure assets, a model has been developed to evaluate and estimate both the short- and long-term funding requirements for maintenance, repair and recapitalization of these immensely valuable assets.

DISCUSSION:

1. Scope: The infrastructure assets addressed in this report include only those capital assets which receive funding for maintenance, repair and recapitalization from the General Fund. Furthermore, this discussion includes only those capital assets for which there is a significant identified backlog of funding requirements. The following assets are included:

- Streets
- Buildings
- Storm drains

The following assets are not included for the reasons listed:

- Water and sewer infrastructure: All projects required for the water and sewer infrastructure are funded from the ratepayer water and sewer funds. The General Fund is not used for any of the water and sewer infrastructure requirements.

- Alleys and sidewalks: Assessments have not been done.
- Right of way features (signs, signals, guardrails): Each of these features is considered a critical public safety issue when maintenance or repairs are required, and, therefore, there is generally not a significant backlog of work requirements. When needs in this area arise, Transnet funds can be used for timely repairs.
- Piers, seawalls and related Park & Recreation managed structures.
- Drainage channels: Drainage channels require regular cleaning to function properly as flood control structures. However, the City is currently not able to provide the required routine cleaning due to the difficulty in obtaining the necessary permits. Until this permit process is streamlined or improved, it is difficult to assess the level of work or funding that could be applied on an annual basis to these projects.
- Bridges: Bridges are assessed on a regularly-scheduled basis by the California Department of Transportation (Caltrans). Region-wide rankings of bridge conditions are published by Caltrans. Although ongoing maintenance and minor repairs are performed when needed by the City's Street Division, funding for major repairs or recapitalization is generally available from State or Federal funding sources.
- Convention Center: The General Fund is not used for the maintenance, repair and recapitalization requirements at the San Diego Convention Center.
- Qualcomm Stadium/Petco Park: Funding of the maintenance, repair and recapitalization requirements at the two City stadiums are generally the responsibility of the special funds associated with each facility.

2. Condition Assessments: Condition assessments involve a detailed inspection of capital assets, documentation of the condition of those assets and an analysis of the needs of the assets. The condition assessment reports provide the City with the following documentation:

- Lists of required repairs and capital projects
- Prioritization of the projects
- Cost estimate for each of the projects
- Recommended time sequencing or phasing of each of the projects

From 2007 through 2009, condition assessments were conducted for a large portion of the City's General Fund infrastructure assets. These assessments included:

Streets

- 2007 - Assessment of asphalt streets with average daily traffic over 2,500 vehicles
- 2009 - Assessment of all concrete streets

Buildings

- 2007 - Assessment of 31 public safety buildings
- 2008 - Assessment of the five Civic Center buildings
- 2009 - Assessment of 443 major buildings

Storm Drains

- 2008-2009 - Assessment of corrugated metal pipe (CMP) drains in easements
- 2009-2011 - Assessment of CMP drains within the City's right-of-way
- 2010-2011 - Assessment of storm water pump stations

To maintain an informed, comprehensive management program for infrastructure assets, condition assessments must be conducted on a regular, scheduled basis. In the future, the City plans to continue to perform these assessments to ensure the effective management and application of its limited resources.

By Fall of 2011, an assessment of all asphalt streets and alleys within the City will be completed, with similar assessments planned every four years thereafter as funding becomes available. Likewise, assessments of 20% of the City's major buildings will be funded in 2013, with an additional 20% assessed each year thereafter. Under this plan, each building will be assessed every five years as funding becomes available.

For storm drains, the reinforced concrete pipe (RCP) portion of the system will be assessed as funding becomes available. Condition assessment of the storm drain system is the most expensive of the infrastructure assets, as the pipes must be televised, often in areas that are difficult to access. Over 700 miles of RCP storm drains remain to be assessed.

Both the Streets and Storm Water Divisions have ongoing assessment programs that continue to provide regularly updated information to City staff. For the purposes of providing a foundation for discussion of the City's Deferred Capital needs, this report is based on the data collected during the assessment efforts listed above. Staff will continue to provide the Mayor and Council with updated projections regarding potential capital project costs as additional assessment efforts are funded and completed.

A. Streets, Alleys and Sidewalks: The most recently completed assessment of the City's inventory of streets is based on 2,574 miles of asphalt streets and 111 miles of concrete streets. The City has continued to add miles of streets since that time and will include all added streets in the assessment effort set to conclude by the end of 2011. After the condition assessment of streets completed in 2007, each street section was assigned an Overall Condition Index (OCI) based on the street's ride quality and surface condition, including the amount of cracks, spalling, alligatoring, potholes, etc.

Following are the three OCI classifications:

- a. Good – OCI of 70 or greater
- b. Fair – OCI of 40 to 69
- c. Poor – OCI of less than 40

As result of the 2007 asphalt streets assessment, the OCIs for the thousands of street sections show that:

- a. 38% of street sections are "Good"
- b. 45% of street sections are "Fair"
- c. 17% of street sections are "Poor"

There has not been a formal assessment of City's alleys. As previously mentioned, a condition assessment of alleys will be done by the end of 2011. The City currently has a total of 271 miles of alleys, which includes 39 miles of asphalt alleys, 195 miles of concrete alleys, and 37 miles of unpaved alleys among its infrastructure assets. The amount of maintenance, repair and recapitalization work required for the alleys will be determined after completion of the condition assessment.

The City also has approximately 5,000 miles of sidewalks. The City manages its sidewalks in accordance with California Streets and Highways Code, Section 5610-5618, which requires “The owners of lots or portions of lots fronting on any portion of a public street...shall maintain any sidewalk in such condition that the sidewalk will not endanger persons or property and maintain it in a condition which will not interfere with the public convenience in the use of those works...”

The City manages a “50-50 Cost Share” program to assist City property owners to fulfill their requirements to maintain sidewalks in an acceptable and safe condition. Additionally, the City performs repairs to sidewalks that are damaged due to: uplift of tree roots in the public right of way, grade subsidence, City utility cuts, and heat expansion.

B. Buildings: Between 2007 and 2009, the City conducted assessments of its major buildings. The assessments were limited to general fund supported structures including all libraries, recreation centers, fire and police stations, Balboa Park facilities, swimming pools, and employment centers. The condition assessment of the Civic Center Complex was conducted in March 2008. Assessment of the 443 other major facilities were completed in August 2009.

Facilities inspected included:

- 44 fire stations
- 7 lifeguard stations
- 35 libraries
- 66 Balboa Park facilities
- 18 senior centers
- 146 public restrooms
- Parkade
- 20 police stations
- 19 operations facilities
- 63 recreation facilities
- 10 swimming pools
- 2 office buildings
- CAB, COB, Exhibition Hall
- 13 others

The assessments included the parking lots associated with facilities. As result of the condition assessments, a Facility Condition Index (FCI) was calculated for each building. The calculation of the FCI is relatively straightforward, and is simply the “Total Cost of Required Repairs” divided by the “Current Replacement Value” of the facility.

The FCI categories are as follows:

- a. Good – FCI of 5.00% or less
- b. Fair – FCI of 5.01% to 10.00%
- c. Poor – FCI of 10.01% or more
- d.

The 2009 assessment of 443 buildings produced the following results:

- a. 45% of buildings are “Good”
- b. 22% of buildings are “Fair”
- c. 33% of buildings are “Poor”

C. Storm Drains: The City’s storm drain system includes 24,078 storm drain structures, 754 miles of drainage pipe, and 84 miles of drainage channels and ditches. Of the drainage pipe, approximately 38 miles of pipeline is Corrugated Metal Pipe (CMP). This portion of the system has the shortest expected service life and is the most problematic part of the system. Condition

assessment of CMP drains within private easements (approximately 15 miles) was completed in 2009, and assessment of CMP drains within the City’s right-of-way (approximately 23 miles) is scheduled for completion this year. Future assessment of the remainder of the storm drain system will be conducted as funding becomes available.

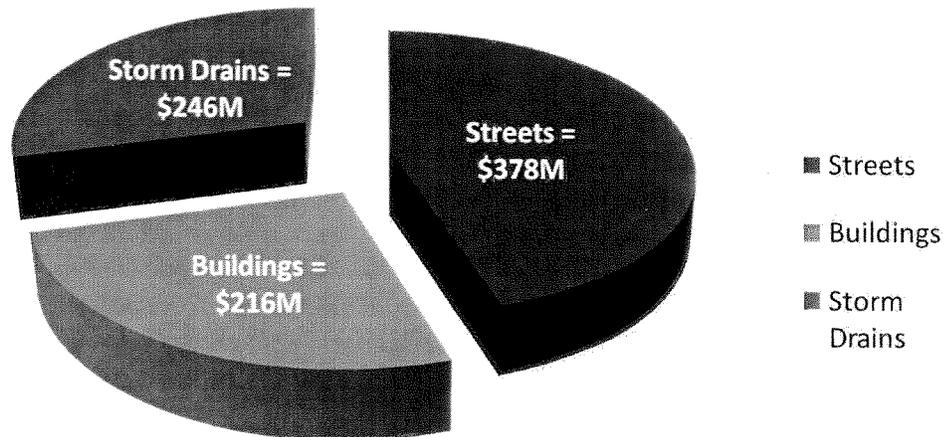
D. Summary of Condition Assessments: As result of the condition assessments completed to date, the total backlog of deferred capital projects is estimated to be:

(All costs are in 2010 dollars)

Streets	\$378 million
Buildings	\$216 million
Storm Drains	<u>\$246 million</u>
Total backlog	\$840 million*
Funding From Bond Proceeds	<u>\$ 94 million</u>
Total unfunded	\$746 million

*This total does not include the cost of any future capital replacements projects that may be approved by Council and included as part of the City’s CIP plan and schedule.

Estimated Deferred Capital Needs
(All costs are in 2010 dollars)



3. Levels of Service: Although municipalities would like to eliminate deferred capital backlogs, that objective is not possible or even considered a “best practice” in asset management. Instead, it is more practicable to establish an objective, achievable level of service for the condition of the assets. The required funding levels can then be determined from the projects required to reach and then maintain the asset service levels.

To further facilitate the discussion of the appropriate service levels for the City’s infrastructure assets, staff has established two alternative service levels for each of the asset types (streets, buildings and storm drains). These alternatives include two discreet funding requirements related to the defined service levels to be determined for the assets included in this report. After reaching the desired service level, annual funding will be required to maintain the assets at that service level.

The following terminology is used for these two funding requirements:

1. "Catch-up" funding: Funding required to reach the designated service level
2. "On-going" funding: Annual, recurring funding required after catch-up to maintain the desired service level

4. Streets Funding Requirements: As mentioned above, the 2007 and 2009 streets condition assessments identified City streets to be in the following condition:

- a. 38% of street sections are "Good"
- b. 45% of street sections are "Fair"
- c. 17% of street sections are "Poor"

The level of service for streets can be objectively defined through the amount of the street system that has a good, fair and poor overall condition index.

4a. Alternative 1 Service Level:

The Alternative 1 service level for streets is defined as:

- 45% of streets in "Good" condition
- 40% of streets in "Fair" condition
- 15% of streets in "Poor" condition

"Catch-up" street projects required to achieve this service level include:

- Slurry seal of 129 miles of streets
- Asphalt overlay of 52 miles of streets
- Concrete street replacement of 16 miles of streets

The total estimated cost of these catch up projects is \$57 million which should be applied to the \$378 million backlog.

To maintain the Alternative 1 service level, the following work will be required:

- Slurry seal at Year 10 and Year 20
- Overlay at Year 30
- Normal operations and maintenance (includes pot hole repairs, crack sealing, cut-outs, and other routine street maintenance)

The on-going funding required to maintain the street network at the Alternative 1 service level is estimated as follows:

Ongoing Maintenance/Capital Needs	\$56 million*
Operations & Maintenance	<u>\$14 million</u>
Total Annual Requirement	\$70 million

* Includes an annual program of 172 miles of slurry seal, 86 miles of asphalt overlay, and 2 miles of concrete street replacement.

The fiscal year 2011 budget for street maintenance was \$26 million.

4b. Alternative 2 Service Level:

The Alternative 2 service level for streets is defined as:

- 60% of streets in “Good” condition
- 30% of streets in “Fair” condition
- 10% of streets in “Poor” condition

“Catch-up” street projects required to achieve this service level include:

- Slurry seal of 386 miles of streets
- Asphalt overlay of 180 miles of streets
- Concrete street replacement of 33 miles of streets

The total estimated cost of these catch up projects is \$157 million which should be applied to the \$378 million backlog.

To maintain the Alternative 2 service level, the following work will be required:

- Slurry seal at Year 7 and Year 14
- Overlay at Year 21
- Normal operations and maintenance (includes pot hole repairs, crack sealing, cut-outs, and other routine street maintenance)

The on-going funding required to maintain the street network at the Alternative 2 service level is estimated as follows:

Ongoing Maintenance/Capital Needs	\$79 million*
Operations & Maintenance	<u>\$10 million</u>
Total Annual Requirement	\$89 million

* Includes an annual program of 245 miles of slurry seal, 123 miles of asphalt overlay, and 2 miles of concrete street replacement.

The fiscal year 2011 budget for street maintenance was \$26 million.

5. Buildings Funding Requirements: As mentioned above, the 2009 facility condition assessment identified the City’s 443 major facilities to be in the following condition:

- a. 45% of buildings are “Good”
- b. 22% of buildings are “Fair”
- c. 33% of buildings are “Poor”

The level of service for facilities can be objectively defined through the number of the facilities that have a good, fair and poor facility condition index.

5a. Alternative 1 Service Level:

For facilities, Alternative 1 service level is defined as:

- 45% of facilities in “Good” condition
- 40% of facilities in “Fair” condition
- 15% of facilities in “Poor” condition

The initial “Catch-up” projects required to achieve this service level include:

Interior finishes	\$12 million
Electrical	\$ 8 million
Windows, doors, exterior	\$ 6 million
HVAC	\$ 5 million
Sitework & utilities	\$ 5 million
Roofing	\$ 4 million
Plumbing	\$ 3 million
Other	\$ 4 million

The total estimated cost of these projects is \$47 million which should be applied to the \$216 million backlog.

To maintain the City facilities at this designated level, regular on-going maintenance, repair and recapitalization work will be required. On-going investment required for facilities to remain at the Alternative 1 service level is 1.0% of the current replacement value (CRV).

Ongoing Maintenance/Capital Needs: \$32 million*

* 1.0% of current replacement value of facilities

The fiscal year 2011 budget for facilities maintenance was \$14 million.

5b. Alternative 2 Service Level:

For buildings, the Alternative 2 service level is defined as:

- 60% of facilities in “Good” condition
- 30% of facilities in “Fair” condition
- 10% of facilities in “Poor” condition

“Catch-up” projects required to achieve this service level include:

Interior finishes	\$18 million
Electrical	\$12 million
Windows, doors, exterior	\$10 million
HVAC	\$ 8 million
Sitework & utilities	\$ 8 million
Roofing	\$ 5 million
Plumbing	\$ 4 million
Other	\$ 5 million

The total estimated cost of these projects is \$70 million which should be applied to the \$216 million backlog.

To maintain the City facilities at the designated level, regular on-going maintenance, repair and recapitalization work will be required. On-going investment required for facilities to remain at the Alternative 2 service level is 1.5% of the current replacement value (CRV).

Ongoing Maintenance/Capital Needs: \$48 million*

* 1.5% of current plant value of facilities

The fiscal year 2010 budget for facilities maintenance was \$14 million.

6. Storm Drains Funding Requirements: The focus of the initial assessment projects for storm drains has been for the part of the system that has the shortest service life and is in the worst condition. Due to the relatively small part of the drain system that has been inspected to date, a condition index for the system has not been determined. Staff has established service levels based on the allowable service life for the major components of the system.

6a. Alternative 1 Service Level:

For the Alternative 1 service level, pipelines would be targeted for rehabilitation at the 45th year of their service life and replaced at 90 years. Pump stations would be targeted for rehabilitation every 30 years; and other storm drain structures would generally be replaced after 90 years of service life in conjunction with replacement of the associated pipelines.

“Catch-up” projects required to achieve this service level include:

Major pipeline and structure replacement/rehabilitation	\$86 million
Pump station rehabilitation	\$ 2 million

The total estimated cost of these projects is \$88 million which should be applied to the \$246 million backlog.

To maintain the storm drain system at the designated level, regular on-going maintenance, repair and recapitalization work will be required. The following on-going projects are required to maintain the Alternative 1 service level:

- Pipelines are rehabilitated at 45 years, and replaced at 90 years
- Pump stations are rehabilitated at 30 years
- Structures are replaced at 90 years in conjunction with the associated pipelines
- Annual operations & maintenance (pipe and channel cleaning, repairs as required)

The on-going funding required to maintain the storm drain system at the Alternative 1 service level is estimated as follows:

Major pipeline and structure replacement/rehabilitation	\$26 million
Pump station rehabilitation	\$ 1 million
Routine O&M	<u>\$18 million</u>
Total Annual Requirement	\$45 million

The fiscal year 2011 budget for storm drain maintenance is \$10 million.

6b. Alternative 2 Service Level:

For the Alternative 2 service level, pipelines should be rehabilitated at 35 years and replaced at 75 years; pump stations should be rehabilitated every 15 years; and storm drain structures would continue to be targeted for replacement at 75 years.

“Catch-up” projects required to achieve this service level include:

Major pipeline and structure replacement/rehabilitation	\$162 million
Pump station rehabilitation	\$ 3 million

The total estimated cost of these projects is \$165 million which should be applied to the \$246 million backlog.

To maintain the storm drain system at the designated level, regular on-going maintenance, repair and recapitalization work will be required. The following on-going projects are required to maintain the Alternative 2 service level:

- Major pipelines and related structures are rehabilitated at 35 years and replaced at 75 years
- Pump stations are rehabilitated at 15 years
- Annual operations & maintenance (pipe and channel cleaning, repairs as required)

The on-going funding required to maintain the storm drain system at the Alternative 2 service level is estimated as follows:

Major pipeline and structure replacement/rehabilitation	\$26 million
Pump station rehabilitation	\$ 1 million
Routine O&M	<u>\$18 million</u>
Total Annual Requirement	\$45 million

The fiscal year 2011 budget for storm drain maintenance is \$10 million.

SUMMARY:

The City has a current backlog of approximately \$840 million for deferred capital projects for the streets, buildings and storm drain infrastructure funded by the General Fund. This backlog was identified by conducting extensive condition assessments, some of which are still in progress. Based on information available in 2010, the backlog for each of the asset classes is as follows:

Streets	\$378 million
Buildings	\$216 million
Storm Drains	<u>\$246 million</u>
Total backlog	\$840 million*

*This total does not include the cost of any future capital replacement projects that may be approved by Council and included as part of the City’s CIP plan and schedule.

To date, the City Council has allocated a total of \$94 million in bond funding to be applied to the “catch up” funding requirements needed to address this backlog. The capital portion of the ongoing capital/maintenance needs for these asset categories could be financed through additional bond funds. As future funding permits, additional condition assessments will be conducted in the future to continue updating the status of the backlog and projects undertaken to “catch up” with the City’s deferred capital project needs. This report is based on the condition assessments completed to date and is provided to support the policy discussion of the appropriate service levels for the three asset types. The short-term (“catch-up”) and long-term (“on-going”) costs associated with two alternative service levels were provided. Tables 1 and 2 below provide a summary of the costs for the three asset types and two service levels. It is acknowledged that the deferred capital funding identified in the current five year financial outlook for FY 2012-2016 is insufficient to address fully the catch up and on-going costs for either of the alternative service levels.

ALTERNATIVE 1 SERVICE LEVEL			
<u>“Catch-up” Costs</u>		<u>“On-going” Costs</u>	
(All costs are in 2010 dollars)		(All costs are in 2011 dollars)	
Streets	\$ 57 million	Streets Annual Needs	\$ 70 million
Buildings	\$ 47 million	FY11 Streets O&M Budget	<u>\$ 26 million</u>
Storm Drains	<u>\$ 88 million</u>	Shortfall	\$ 44 million
Total	\$192 million	Buildings Annual Needs	\$ 32 million
Current Bond Funding Available	<u>\$ 94 million</u>	FY11 Facilities O&M Budget	<u>\$ 14 million</u>
Funding needed	\$ 98 million	Shortfall	\$ 18 million
		Storm Drains Annual Needs	\$ 45 million
		FY11 Storm Water O&M Budget	<u>\$ 10 million</u>
		Shortfall	\$ 35 million
		Total Annual Shortfall	\$ 97 million

Table 1 – Summary of Costs for Alternative 1 Service Level

ALTERNATIVE 2 SERVICE LEVEL			
<u>“Catch-up” Costs</u>		<u>“On-going” Costs</u>	
(All costs are in 2010 dollars)		(All costs are in 2011 dollars)	
Streets	\$157 million	Streets Annual Needs	\$ 89 million
Buildings	\$ 70 million	FY11 Streets O&M Budget	<u>\$ 26 million</u>
Storm Drains	<u>\$165 million</u>	Shortfall	\$ 63 million
Total	\$392 million	Buildings Annual Needs	\$ 48 million
Current Bond Funding Available	<u>\$ 94 million</u>	FY11 Facilities O&M Budget	<u>\$ 14 million</u>
Funding needed	\$298 million	Shortfall	\$ 34 million
		Storm Drains Annual Needs	\$ 45 million
		FY11 Storm Water O&M Budget	<u>\$ 10 million</u>
		Shortfall	\$ 35 million
		Total Annual Shortfall	\$132 million

Table 2 – Summary of Costs for Alternative 2 Service Level

FISCAL CONSIDERATIONS: Not applicable

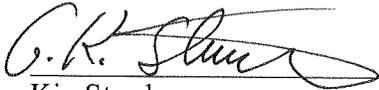
EQUAL OPPORTUNITY CONTRACTING: Not applicable

ENVIRONMENTAL IMPACT ANALYSIS: Not applicable

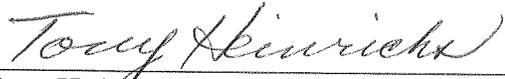
PREVIOUS COUNCIL and/or COMMITTEE ACTION: Not applicable

COMMUNITY PARTICIPATION AND PUBLIC OUTREACH EFFORTS: Not applicable

KEY STAKEHOLDERS AND PROJECTED IMPACTS: Not applicable



Kip Sturdevan
Interim Director
Transportation and Storm Water Department



Tony Heinrichs
Director
General Services Department



Jay M. Goldstone
Chief Operating Officer