

TO: The Mayor and Members of the City Council

DATE: September 6, 2006

SUBJECT: Study Session Agenda for September 12, 2006

PREPARED BY: J. Brent McFall, City Manager

Please Note: Study Sessions and Post City Council meetings are open to the public, and individuals are welcome to attend and observe. However, these meetings are not intended to be interactive with the audience, as this time is set aside for City Council to receive information, make inquiries, and provide Staff with policy direction.

Looking ahead to next Monday night's Study Session, the following schedule has been prepared:

A light dinner will be served in the Council Family Room

6:00 P.M.

### CITY COUNCIL REPORTS

- 1. Report from Mayor (5 minutes)
- 2. Reports from City Councillors (10 minutes)

PRESENTATIONS 6:30 P.M.

- 1. Water and Sewer Infrastructure Master Plan (Attachment)
- 2. Fiscal Policies Utility Reserves

#### EXECUTIVE SESSION

- 1. Discuss Strategy and Progress on the Lease of Water to Federal Heights, Including Contract Terms and Rates, Pursuant to the Provisions of WMC Section 1-11-3 (C)(2) and (7) and CRS Section 24-6-402 (a) and (e).
- 2. Obtain Direction from City Council re Proposed Economic Development Incentive Agreement for the Sedona Office Project Pursuant to WMC 1-11-3 (C)(4), WMC 1-11-3 (C)(7) and CRS 24-6-402 (4)(e).

#### INFORMATION ONLY STAFF REPORTS

1. Delivery of Proposed 2007/2008 Budget Supplemental Documents

Additional items may come up between now and Monday night. City Council will be apprised of any changes to the Study Session meeting schedule.

Respectfully submitted,

J. Brent McFall City Manager



City Council Study Session Meeting September 12, 2006



SUBJECT: Water and Sewer Infrastructure Master Plan

PREPARED BY: Jim Arndt, P.E., Director of Public Works and Utilities

## **Recommended City Council Action**

Review the Water and Sewer Infrastructure Master Plan Summary Report and provide feedback to staff on the recommendations contained in the report.

### **Summary Statement**

- The Water and Sewer Infrastructure Master Plan (IMP), along with the Utilities Financial Policies, help the City achieve the Strategic Goals of "Financially Sound City Government," "Vibrant Neighborhoods and Commercial Areas," "Balanced, Sustainable Local Economy," and "Safe and Secure Community."
- The City entered into a contract with URS in the fall of 2005 to assess the current condition of both water and wastewater infrastructure and chart a strategy to construct improvements to ensure a sustainable infrastructure.
- The URS "Summary Report of the Infrastructure Master Plan" highlights findings of the system and costs to keep up with the use of the system.
- 20-year costs are estimated at over \$357,000,000 for water and \$87,000,000 for wastewater infrastructure.
- The recommendations contained in the report are incorporated into the Utility Fund Fiscal policies that will be discussed during Monday's Study Session, and into the five year capital improvement plan that City Council is currently reviewing for adoption in October.

**Expenditure Required:** \$0

**Source of Funds:** N/A

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### **Policy Issue**

Should the City begin the implementation of recommendations of the Infrastructure Master Plan by the inclusion of projects into the City's Capital Improvement Program at a funding level that matches the financial strategy put in place by the City?

#### Alternative

The City could continue to plan and build utility infrastructure at a lower funding level. This would lead to inadequate repair and replacement of critical infrastructure and a continued deterioration of facilities. This alternative is not recommended.

## **Background Information**

### **History**

In the fall of 2005, URS Consulting Engineers were hired to provide a comprehensive assessment of the water and wastewater infrastructure, including new water storage, water treatment facilities, water transmission and distribution, and wastewater collection. Specifically excluded were Standley Lake Dam and Outlet Works, Big Dry Creek Wastewater Treatment Facility (because of their recent improvements), all reclaimed water systems, and water meters (previously reviewed with recommended actions forthcoming at an upcoming Council meeting).

The Infrastructure Master Plan (IMP) is the assessment of the existing condition of the infrastructure and how the City may proceed in replacing infrastructure (with necessary funding levels) to ensure sustainability that provides service at acceptable standards. The identified funding needs are consistent with the recommendations of the Utility Financial Policies prepared by the Financial Consulting Solutions Group (FCS).

The combination of both the URS Infrastructure Master Plan and the FCS Utility Financial Policies address one of the key City Strategic Goals – "Financially Sound City Government." Proceeding with an IMP and Utility Financial Policies clearly positions the City to provide essential utility services in a pragmatic manner with structured financial investments in utility infrastructure. The body of work also contributes to the Strategic Goals of "Vibrant Neighborhoods and Commercial Areas," "Balanced, Sustainable Local Economy," and "Safe and Secure Community."

# **Available Information**

To assist City Council for the September 12 City Council Study Session, included is a copy of the URS "Summary Report of the Water and Sewer Infrastructure Master Plan." The Executive Summary highlights the findings that will be presented on September 12. Leading up to the Summary Report are Technical reports on each of the key areas addressed by URS, which are available if further details would be of interest to the City Council. URS provided condition assessments, performance criteria, and system improvement recommendations that are both generic (miles of water and sewer line replacements), and specific (such as elimination of the 94<sup>th</sup> and Quitman Sewer Lift Station). Priority was given to projects that help the City meet its recommended performance criteria, provide reliability and yield flexibility of operations.

Also included is the proposed 2007-2008 Utilities CIP that was previously reviewed by the City Council and will be a part of the Budget the Council considers in October. Utility projects proposed are tied closely with the recommendations contained in the IMP, although 2007 projects include

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several projects that have been in progress for several years (such as the MSC renovation and a significant water meter replacement program). That said, levels of both water main replacements and sewer line upgrades recommended in the IMP are recommended to begin in 2007. Proposed water and sewer line construction are coordinated with the City's street rehabilitation programs for 2007 and 2008

#### Water System

Components analyzed included raw water storage, water treatment, pumping, and distribution (mains, storage tanks and pressure zones).

The approximate 480 miles of water distribution system piping, pump stations, water storage tanks, and two treatment facilities have an estimated replacement value of \$408,000,000. Over the next 20 years, URS recommends approximately \$357,400,000 of replacement projects. Significant effort is called for in replacement of deteriorated water lines, as well as re-defining existing pressure zones and adding more water storage requirements to provide more service reliability and better meet performance criteria.

The relatively large expenditure required over 20 years may be attributed to some deferred maintenance, the need for accelerated maintenance where facilities have deteriorated more rapidly then ordinarily seen in other areas, and capacity and performance improvements.

#### Wastewater Collection System

Westminster's wastewater collection system is contained in two geographic areas; the Big Dry Creek (BDC) and the Little Dry Creek (LDC) area south of 97<sup>th</sup> Avenue. BDC flows to the City's Big Dry Creek Wastewater Treatment Facility (BDCWWTF), and LDC flows to Metro and is treated at the Metro Wastewater Reclamation District's Central Waste Water Treatment Plant. Collection systems include gravity mains, lift stations, and forces mains to transport the wastewater.

The estimated replacement value of the wastewater collection system is \$237,000,000 (excludes BDCWWTF). Over 20 years, URS recommends approximately \$87,500,000 of improvement projects. Significant effort is called for in lining and replacing structurally failing sewer lines, and lines that exhibit infiltration/inflow (I/I) tendencies. Also significant work is scheduled for all six lift stations and associated electrical, and instrumentation and control functions.

# Conclusion

Representatives of URS and Staff will be present at the September 12 City Council Study Session to present findings of the report and answer any questions City Council may have.

Respectfully submitted,

J. Brent McFall City Manager

Attachment(s): 2007-2008 CIP (Recommended)

**URS Summary Report** 

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	FUNDING SOURCE	REQ 2007	REC 2007	REQ 2008	REC 2008	REQ 2009	REC 2009	REQ 2010	REC 2010	REQ 2011	REC 2011	REQ TOTAL	REC TOTAL
UTILITY ENTERPRISE FUND													
Wastewater System Improvements													
SSES / I&I Study for Sewer Collection System	WWFd	\$0	\$0	\$0	\$0	\$1,000	\$1,000	\$0	\$0	\$0	\$0	\$1,000	\$1,000
Permanent Sanitary Sewer Flowmeters	WWFd	\$0	\$0	\$0	\$0	\$100	\$100	\$0	\$0	\$0	\$0	\$100	\$100
95th/Federal Lift Station Improvements	WWFd	\$0	\$0	\$0	\$0	\$0	\$0	\$200	\$200	\$0	\$0	\$200	\$200
80th/Clay Lift Station Improvements	WWFd	\$0	\$0	\$0	\$0	\$0	\$0	\$800	\$800	\$0	\$0	\$800	\$800
87th Ave & Wadsworth Lift Station Improvements	WWFd	\$0	\$0	\$0	\$0	\$1,000	\$1,000	\$0	\$0	\$0	\$0	\$1,000	\$1,000
PACP Sanitary Sewer Line Trenchless Rehabilitation	WWFd	\$2,100	\$2,100	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$10,100	\$10,100
PACP Sewer Line Open-Cut Replacement	WWFd	\$1,686	\$1,686	\$1,500	\$1,500	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$2,000	\$9,186	\$9,186
94th Ave and Quitman Lift Station Elimination	WWFd	\$200	\$200	\$1,800	\$1,800	\$0	\$0	\$0	\$0	\$0	\$0	\$2,000	\$2,000
Hyland Village Sewer Upsizing - McStain/98th & Sheridan	WWFd	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100	\$100
99th/Wadsworth Sewer Line Improvements	WWFd	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100	\$100
GIS Mapping/Modeling Imrovements - Wastewater System	WWFd	\$50	\$50	\$125	\$125	\$0	\$0	\$0	\$0	\$0	\$0	\$175	\$175
Subtotal Wastewater - Pay As You Go	WWFd	\$4,236	\$4,236	\$5,425	\$5,425	\$6,100	\$6,100	\$5,000	\$5,000	\$4,000	\$4,000	\$24,761	\$24,761
Subtotal Wastewater - Debt	Debt	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total Wastewater System Improvements</b>		\$4,236	\$4,236	\$5,425	\$5,425	\$6,100	\$6,100	\$5,000	\$5,000	\$4,000	\$4,000	\$24,761	\$24,761
Water System Improvements													
Gravel Lakes Storage- Wattenberg	WFd	\$0	\$0	\$0	\$0	\$555	\$555	\$515	\$515	\$15	\$15	\$1,085	\$1,085
Reclaimed Water Treatment Plant Expansion	WFd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,900	\$5,900	\$5,900	\$5,900
Major Software Upgrades	GCIF/WFd/PST	\$40	\$0	\$40	\$45	\$40	\$45	\$40	\$0	\$40	\$0	\$200	\$90
Computer Room Air Conditioning System	WFd	\$55	\$55	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$55	\$55
Water Meter & Transponder Replacement Program	WFd	\$4,000	\$4,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,000	\$4,000
Open-Cut Water Line Replacements	WFd	\$3,000	\$3,000	\$4,355	\$4,355	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$22,355	\$22,355
Reclaimed Raw Water System Interconnection	WFd	\$1,000	\$1,000	\$6,200	\$6,200	\$0	\$0	\$0	\$0	\$0	\$0	\$7,200	\$7,200
Municipal Service Center Renovation	WFd	\$4,000	\$3,750	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,000	\$3,750
Zone 14 Pump Station	WFd	\$500	\$500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$500	\$500

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	FUNDING SOURCE	REQ 2007	REC 2007	REQ 2008	REC 2008		REC 2009	REQ 2010	REC 2010		REC 2011	REQ TOTAL	REC TOTAL
SWTF Filter 1-14 Media Replacement	WFd	\$250	\$250	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250
SWTF Backwash Pump Replacement	WFd	\$85	\$85	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$85	\$85
SWTF HSPS Meter Replacement	WFd	\$70	\$70	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70	\$70
SWTF Raw Water Vault Re-Build	WFd	\$200	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200	\$200
80th / Federal Water Line Improvements	WFd	\$100	\$100	\$400	\$400	\$0	\$0	\$0	\$0	\$0	\$0	\$500	\$500
Phase 3 Filing - Country Club Highlands Zuni Main Upsizing	WFd	\$200	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200	\$200
SWTF Filter 1-6 Effluent Valve Replacement	WFd	\$80	\$80	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$80	\$80
102nd Avenue Reclaimed Pipeline Extension	WFd	\$185	\$185	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$185	\$185
Reclaimed Water Project New Customer Connections	WFd	\$165	\$165	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$265	\$265
Wandering View Roof Replacement	WFd	\$75	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$75	\$75
Reclaimed Water Project User Retrofits	WFd	\$169	\$169	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$169	\$169
GIS Elevation Update	WFd	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50	\$50
System-Wide SCADA Enhancements	WFd	\$125	\$125	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$125	\$125
GIS Mapping/Modeling Improvements - Water System	WFd	\$50	\$50	\$125	\$125	\$0	\$0	\$0	\$0	\$0	\$0	\$175	\$175
JBR Aeration System Replacement	WFd	\$50	\$50	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50	\$50
RWTF Security fencing	WFd	\$78	\$78	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$78	\$78
TEAM System Enhancements	WFd	\$50	\$50	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$150	\$150
Zone 4 Pump Station Replacement	WFd	\$0	\$0	\$1,000	\$1,000	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000	\$1,000
Northridge Tank Improvements	WFd	\$0	\$0	\$100	\$100	\$0	\$0	\$0	\$0	\$1,000	\$1,000	\$1,100	\$1,100
SWTF Maintenance Shop Expansion	WFd	\$0	\$0	\$100	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$100	\$100
SWTF BIF SCADA Replacement	WFd	\$0	\$0	\$236	\$236	\$236	\$236	\$0	\$0	\$0	\$0	\$472	\$472
SWTF Permanganate Bulk Storage	WFd	\$0	\$0	\$75	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$75	\$75
SWTF North Trac Vac Pump System Improvements	WFd	\$0	\$0	\$54	\$54	\$0	\$0	\$0	\$0	\$0	\$0	\$54	\$54
Westmoor Tech Park Pipeline Extensions/User Connections	WFd	\$0	\$0	\$200	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$200	\$200
SWTF Lime System Improvements	WFd	\$0	\$0	\$75	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$75	\$75
SWTF Electrical System Improvements	WFd	\$0	\$0	\$150	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$150	\$150
SWTF Clearwell Site Fencing	WFd	\$0	\$0	\$75	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$75	\$75
NWTF Site Fencing	WFd	\$0	\$0	\$75	\$75	\$0	\$0	\$0	\$0	\$0	\$0	\$75	\$75

	FUNDING SOURCE	REQ 2007	REC 2007	REQ 2008	REC 2008		REC 2009	REQ 2010	REC 2010		REC 2011	REQ TOTAL	REC TOTAL
SWTF Access Control System	WFd	\$0	\$0	\$345	\$345	\$0	\$0	\$0	\$0	\$0	\$0	\$345	\$345
SWTF North Basin Roof Replacement	WFd	\$0	\$0	\$150	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$150	\$150
Water Pressure Zones Enhancements	WFd	\$0	\$0	\$1,000	\$1,000	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$13,000	\$13,000
South Westminster Non-Potable System	WFd	\$0	\$0	\$100	\$100	\$125	\$125	\$0	\$0	\$0	\$0	\$225	\$225
England WTF Decommissioning	WFd	\$0	\$0	\$300	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$300	\$300
Utility Fund Facilities Parking Lot Management	WFd	\$0	\$0	\$25	\$25	\$0	\$0	\$0	\$0	\$25	\$25	\$50	\$50
SWTF Trac Vac Sludge Removal System Replacement	WFd	\$0	\$0	\$0	\$0	\$250	\$250	\$0	\$0	\$0	\$0	\$250	\$250
SWTF Admin Roof Replacement	WFd	\$0	\$0	\$0	\$0	\$100	\$100	\$0	\$0	\$0	\$0	\$100	\$100
SWTF Filter Valve Replacement (26x4)	WFd	\$0	\$0	\$0	\$0	\$150	\$150	\$150	\$150	\$150	\$150	\$450	\$450
NWTF Bleach Tank Re-Build	WFd	\$0	\$0	\$0	\$0	\$30	\$30	\$0	\$0	\$0	\$0	\$30	\$30
SWTF System SCADA Video Improvements	WFd	\$0	\$0	\$0	\$0	\$385	\$385	\$0	\$0	\$0	\$0	\$385	\$385
NWTF Compressed Air Replacement	WFd	\$0	\$0	\$0	\$0	\$75	\$75	\$0	\$0	\$0	\$0	\$75	\$75
NWTF HVAC Improvement	WFd	\$0	\$0	\$0	\$0	\$43	\$43	\$0	\$0	\$0	\$0	\$43	\$43
Standley Lower Bypass Pipeline to Valve House	WFd	\$0	\$0	\$0	\$0	\$586	\$586	\$2,000	\$2,000	\$0	\$0	\$2,586	\$2,586
Church Ditch Little Dry Creek By-Pass	WFd	\$0	\$0	\$0	\$0	\$150	\$150	\$0	\$0	\$0	\$0	\$150	\$150
72nd/Tennyson PRV Improvements	WFd	\$0	\$0	\$0	\$0	\$125	\$125	\$0	\$0	\$0	\$0	\$125	\$125
72nd/Lowell PRV Improvements	WFd	\$0	\$0	\$0	\$0	\$175	\$175	\$0	\$0	\$0	\$0	\$175	\$175
New Zone 9 Pump Station	WFd	\$0	\$0	\$0	\$0	\$1,000	\$1,000	\$0	\$0	\$0	\$0	\$1,000	\$1,000
Zones 6, 7, & 11 PRV Improvements	WFd	\$0	\$0	\$0	\$0	\$150	\$150	\$0	\$0	\$0	\$0	\$150	\$150
Zone 10 PRV Rehabilitation	WFd	\$0	\$0	\$0	\$0	\$175	\$175	\$0	\$0	\$0	\$0	\$175	\$175
Countryside Pump Station Improvements	WFd	\$0	\$0	\$0	\$0	\$0	\$0	\$125	\$125	\$0	\$0	\$125	\$125
Gregory Hill Pump Station Improvements	WFd	\$0	\$0	\$0	\$0	\$0	\$0	\$400	\$400	\$0	\$0	\$400	\$400
85th/Zuni Pump Station Improvements	WFd	\$0	\$0	\$0	\$0	\$75	\$75	\$0	\$0	\$0	\$0	\$75	\$75
Sunset Ridge Storage Reservoir Improvements	WFd	\$0	\$0	\$0	\$0	\$600	\$600	\$0	\$0	\$0	\$0	\$600	\$600
Standley Lake Raw Water Pump Station Improvements	WFd	\$0	\$0	\$0	\$0	\$75	\$75	\$0	\$0	\$0	\$0	\$75	\$75
Kershaw Ditch Non-Potable Water Pump Station Improvements	WFd	\$0	\$0	\$0	\$0	\$120	\$120	\$0	\$0	\$0	\$0	\$120	\$120
36" PCCP Raw Water Line Improvements	WFd	\$0	\$0	\$0	\$0	\$500	\$500	\$0	\$0	\$0	\$0	\$500	\$500
Wandering View Pump Station Improvements	WFd	\$0	\$0	\$0	\$0	\$0	\$0	\$1,100	\$1,100	\$0	\$0	\$1,100	\$1,100

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	FUNDING SOURCE	REQ 2007	REC 2007	REQ 2008	REC 2008		REC 2009	REQ 2010	REC 2010	REQ 2011	REC 2011	REQ TOTAL	REC TOTAL
Hydropillar Elevated Storage Reservoir Improvements	WFd	\$0	\$0	\$0	\$0	\$0	\$0	\$1,800	\$1,800	\$0	\$0	\$1,800	\$1,800
New Zone 5 Storage Reservoir	WFd	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000	\$1,000	\$1,500	\$1,500	\$2,500	\$2,500
SWTF Clearwell Baffling System	WFd	\$0	\$0	\$0	\$0	\$0	\$0	\$250	\$250	\$0	\$0	\$250	\$250
SWTF Bleach Tank Re-Build	WFd	\$0	\$0	\$0	\$0	\$0	\$0	\$50	\$50	\$0	\$0	\$50	\$50
Reclaimed Additional Pump Stations & Storage	WFd	\$0	\$0	\$0	\$0	\$0	\$0	\$500	\$500	\$500	\$500	\$1,000	\$1,000
Bradburn Raw Water Main Replacement	WFd	\$0	\$0	\$0	\$0	\$0	\$0	\$200	\$200	\$800	\$800	\$1,000	\$1,000
SWTF Filter 15-26/Chem building Roof Replacement	WFd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100	\$100	\$100	\$100
Standley Dam, Shaft, Spillway	WFd	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100	\$100	\$100	\$100
Subtotal Water - Pay As You Go	WFd	\$14,577	\$14,287	\$15,380	\$15,385	\$14,720	\$14,725	\$17,130	\$17,090	\$19,130	\$19,090	\$80,937	\$80,577
Subtotal Water - Debt	Debt	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Water System Improvements		\$14,577	\$14,287	\$15,380	\$15,385	\$14,720	\$14,725	\$17,130	\$17,090	\$19,130	\$19,090	\$80,937	\$80,577
<b>Total Water and Wastewater System Improvements</b>		\$18,813	\$18,523	\$20,805	\$20,810	\$20,820	\$20,825	\$22,130	\$22,090	\$23,130	\$23,090	\$105,698	\$105,338
Stormwater System Improvements													
Misc Storm Drainage Improvements	SWTR	\$61	\$80	\$625	\$625	\$625	\$625	\$625	\$625	\$625	\$625	\$2,561	\$2,580
City Park Channel Improvements (Lowell to Big Dry Creek)	SWTR	\$214	\$214	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$214	\$214
Cozy Corner Tributary Number 5	SWTR	\$150	\$150	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$150	\$150
Quail Creek Osage to Huron	SWTR	\$200	\$200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$200	\$200
Stormwater Capital Reserve	SWTR	\$0	\$0	\$639	\$639	\$640	\$640	\$640	\$640	\$640	\$640	\$2,559	\$2,559
Subtotal Stormwater - Pay As You Go	SWTR	\$625	\$644	\$1,264	\$1,264	\$1,265	\$1,265	\$1,265	\$1,265	\$1,265	\$1,265	\$5,684	\$5,703
Subtotal Stormwater - Debt	Debt	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Stormwater System Improvements		\$625	\$644	\$1,264	\$1,264	\$1,265	\$1,265	\$1,265	\$1,265	\$1,265	\$1,265	\$5,684	\$5,703
UTILITY FUND CAPITAL IMPROVEMENT TOTAL - ALL PROJECTS		\$19,438	\$19,167	\$22,069	\$22,074	\$22,085	\$22,090	\$23,395	\$23,355	\$24,395	\$24,355	\$111,382	\$111,041

NOTE: All amounts are dollars in thousands.

Funding Source Key: WFd-Water fees WWFd-Wastewater fees SWTR-Stormwater Fees



City Council Study Session Meeting September 12, 2006



SUBJECT: Fiscal Policies – Utility Reserves

PREPARED BY: Jim Arndt, P.E., Director Public Works and Utilities

## **Recommended City Council Action**

Review various Utility Reserves and their operation and confirm staff recommendation regarding funding levels and minimum/maximum levels of appropriate reserve funds (Operating Reserve, Rate Stabilization Reserve, and Capital Project Reserve). Direct staff to prepare a Resolution to adopt policies regarding reserves as recommended.

#### **Summary Statement**

- City Council has adopted revised tap fees and 2007, 2008 utility rates to ensure sustainability of operations and infrastructure.
- Adoption of Reserve policies is the final piece of the financial study performed by FCS Group.
- Key concepts are explained in the background section of this Staff Report as these
  provide the context for the implementation and interrelatedness of tap fees, rates, and
  reserve policies.
- Operating Reserves (OR) provide a "cushion" to cover balance fluctuations. It is recommended that Operating Reserves be established at 45 days and 30 days, respectively, for water and wastewater operating expenses.
- Rate Stabilization Reserves (RSR) are recommended to be established at 25% of water revenue and 5% of sewer revenue. Rate adjustments would only occur when the balance falls below 80% of the target. Excess reserves over 40% of the target would be transferred to the Capital Projects Reserve, until the maximum Reserve is exceeded, at which time a rate reduction would occur.
- Capital Project Reserve (CPR) maximum shall be capped at three years of adopted CIP costs. Funding the CPR should come from rates, debt, and tap fees. If the CPR falls below \$5,000,000, rate increases, increased debt or CIP reduction would be necessary. If debt exceeds 25% of asset value, reduction of CIP shall be considered.

**Expenditure Required:** \$0

**Source of Funds:** N/A

September 12, 2006

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## **Policy Issue**

Should the City establish Operating, Rate, Stabilization, and Capital Project Reserves with set funding levels, as well as minimum/maximum levels for their operation?

#### Alternative

The City could continue to operate reserves without policies that govern minimum or maximums or define their specific use. By adopting the staff recommendation, future rate and tap fee revenue will be directed to specific reserves to ensure adequate resources for operations and replacement of aging infrastructure. With the adoption of the recommendations, rates will be protected from radical impacts of an adverse revenue year and the capital project revenue will provide for replacement of aging infrastructure.

### **Background Information**

#### HISTORY

In 2005, the City of Westminster hired Financial Consulting Solutions Group, Inc. (FCS) to assist in reviewing the City's utilities fees, tap fees, infrastructure replacement needs, as well as review reserve policies. Information provided to date has led to the adoption of revised tap fees (beginning in October, 2006) and utility rates effective in January 2007 and January 2008. The intent of the fiscal analysis (resulting in revenue increases) is to ensure a sustainability of utility operations, provide a long term quality water supply, and a sustainable infrastructure system that delivers water and wastewater services at acceptable standards.

The discussion of Utility Reserves is the final piece of information as part of this three part utility financial study.

#### **KEY CONCEPTS**

Throughout the year-long review, several key concepts have emerged as driving the options and outcomes of the review. They include:

- Water and sewer rates should include a component that pays for the repair and replacement of deteriorating physical assets;
- Tap fees should pay for growth of the system and be dedicated to the Capital Improvement Program, and should not contribute to the operation of the utility;
- Provision should be made to establish a funding strategy that both allows the utility to
  weather adverse revenue years without dramatic rate swings, as well as establish policy
  to set rates over time, to recover long term revenue loss.
- Establish a capital improvement program that fully covers repair and replacement of deteriorating infrastructure and infrastructure growth;
- Include up to 25% debt funding of capital to ensure that future beneficiaries are included in payment for their use;
- Existing capital project reserves should fund a portion of capital improvements constructed early on as rate structure builds to cover capital costs in out years; and,
- Rate modeling provided by FCS relies on dedication of revenues to specific areas, as well as establishing reserves policies and operations consistent with those recommended.

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# Operating (Working Capital) Reserves

This is essentially a minimum unrestricted fund balance needed to accommodate the short-term cycles of revenues and expenses. Operating Reserves provide a "cushion" that can be used to cover cash balance fluctuations.

Target funding levels are often characterized in terms of a recommended number of days of cash operating expense, with the minimum number of days varying with the expected risk of unanticipated needs – these are likely to vary among the utilities based on the relative volatility of revenues and expenses.

Water utilities that recover a significant portion of their costs through volume charges exhibit greater seasonality in their revenue collection and a greater degree of revenue risk. Given that the expenses of a water utility are largely fixed, Operating Reserves may be used to cover deficits in the winter months (when lower demand results in lower revenues) until surpluses can be accumulated in the summer months (when higher demand results in higher revenues). Target operation balances of 45 - 60 days (12 - 16 percent) of operating expenses are common.

## Recommendation:

Staff recommends 45 days of operating expense for water operating budget.

Sewer utilities rely to a far lesser extent on volumes, and specifically exclude the most volatile irrigation volumes from their rate basis. Therefore, sewer utilities do not require as much of a cushion – typically, Operating Reserves on the order of 30 - 45 days (8 - 12 percent) of operating expenses are appropriate.

## Recommendation:

Staff recommends 30 days of operating expense for the wastewater operating budget.

If established for 2007, the 2007 Operating Reserve would be \$2,969,092 (water) and \$776,924 (wastewater), for a total 2007 Operating Reserve of \$3,746,016 (staff will be proposing these amounts in an October 2006 amendment to the 2006 budget).

The Operating Reserve should be reviewed and recalibrated through the normal biennial budget and rate-setting process. With expenses typically increasing over time, the reserve target also increases, meaning that rates would incorporate small increments of additions to the Operating Reserve.

#### Rate Stabilization Reserves

A form of reserve that has gained broad acceptance and use in the recent past is a "Rate Stabilization Reserve." Conceptually, this reserve is simple: deposit money in good years to have available to offset losses in bad years. The reserve would be based on the potential revenue risk during a severe water year, such as a drought with restrictions in place. It is usually structured so that the use of this reserve also helps to meet bond covenants.

Typically a Rate Stabilization Reserve is established and funded to meet a specific risk such as revenue loss related to a certain level of demand curtailment. This reserve can be 10-25% of annual rate revenues. The reserve is established with specific rules and regulations

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regarding contributions, withdrawals and replenishments. <u>Those rules are generally constructed to minimize or mitigate rate impacts.</u> Impacts to the rate stabilization reserves are determined by the annual performance of rates versus the budgeted rate revenue. In 2007, the budgeted rate revenue is estimated at \$35,876,048.

Revenues less than budgeted revenues will reduce the Reserve and revenue greater will increase the Reserve above the target. The Rate Stabilization Reserve target will also generally increase annually, with revenues. The budget and rate forecast will identify contributions to the Reserve to reflect increases to the target level over time.

In general, normal year budgeting should lead to a relative long-term balance of surpluses and shortfalls. If predictable, there would be no need for a rate response to replenish the reserve, since a surplus would ultimately occur and provide a funding source. However, the risk of multiple-year deficits necessarily leads to consideration of rate response when shortfalls occur below established levels.

When funds are used from the Rate Stabilization Reserve, the magnitude of the withdrawal will influence the timing and extent of response.

#### Recommendation:

Rate Stabilization Reserve target be established at 25% of rate revenues for water, and 5% of rate revenues for wastewater.

For 2007, the Rate Stabilization Reserve for water would be \$6,395,382 and wastewater \$514,606, for a total target of \$6,910,588.

Rate adjustments will be necessary to meet the target, should a shortfall as established in this policy occur. Rate adjustments and time to replenish the target would occur anytime that the Rate Stabilization Reserve falls below 80% of the target (for example if there was a revenue shortfall of \$1,382,118 in 2007, which is not anticipated to occur).

To expend surpluses, all surplus above 40% over the target (revenue increase of \$2,764,235 – 2007) would be transferred to the Capital Project Reserve until the maximum Capital Project Reserve target is exceeded, at which time rate reductions would occur.

Historically, in the past five years, the City has only been below revenue projections one year. The City has in actuality experienced surpluses in most years. If that continues, the RSR would generally operate at or near the 40% above target, thus buffering that occasional negative revenue year.

### Capital Project Reserves

The City will establish a Capital Improvement Program capable of sustaining long-term utility capital requirements. A dominant factor in long-term needs is the escalating cost of system infrastructure replacement and rehabilitation. To ensure the sustainability of utility service, the City will fund an annual provision for system repair and replacement (R&R) equivalent to annual depreciation within the utility user fees with additional sources of funding including debt and tap fees. This depreciation will be based on the estimated replacement cost of utility infrastructure.

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Given that repair and replacement is not currently 100% funded in the rate structure, the City has begun transition strategy to implement this policy. A phasing program consistent with the rate setting philosophy endorsed by Council has been developed to reach intended level of repair and replacement funding by 2015. Concurrent with this funding strategy, tap fees will be considered as a source of funding toward this target level to the extent that they are not used for debt service. Over time, debt service will become a rate burden, with less reliable tap fee revenues designated directly for capital funding. Rates will then supplement tap fees to attain the target funding level for the Capital Project Reserve.

A funding strategy for long-term capital needs will provide a steady source of funding; however, while capital expenditures may vary both in the near and long-term, the City will establish a capital reserve to accumulate funds in excess of near-term needs. This policy is intended to foster timely system reinvestment, while providing resources for periodic increases in outlays without undue rate burden. A maximum accumulation of capital funds is recommended at three years of adopted CIP, as determined by the current annual average of the CIP, times three. Should such maximum be reached, annual funding would be appropriately reduced until capital reserves fall below this threshold.

#### Recommendation:

Once rate phasing is completed, rates will be set so that annual capital funding is approximately 75% of annual replacement-based deprecation. This funding will come from a combination of rates and tap fees. New debt will account for up to 25% of funding.

The Capital Project Reserve is recommended to be funded up to a fund maximum of three years of CIP expenditure. If the Capital Project Reserve falls below \$5,000,000, rate increases, increased debt or reduction of the CIP will be required to fund the CIP. When new debt exceeds 25% of the planned CIP, or existing debt outstanding 25% of the asset value of the utility, reduction of the CIP shall be considered to reduce debt burdens.

With these limits, the 2007-2011 CIP target maximum would be \$65,955,000. The current Capital Projects Reserve balance is estimated to be \$28,673,779 by the end of 2006. Additional funds will likely be available from carryover from excess revenue/under-expenditures and project clean up of the current CIP.

FCS and staff will be available to present information and recommendations and answer questions at the City Council's September 12, 2006 Study Session.

Respectfully submitted,

J. Brent McFall City Manager



# Information Only Staff Report September 6, 2006



SUBJECT: Delivery of Proposed 2007/2008 Budget Supplemental Documents

PREPARED BY: Barbara Opie, Assistant to the City Manager

# **Summary Statement:**

This report is for City Council information only and requires no action by City Council.

Attached are two supplemental documents for the Proposed 2007/2008 Budget document that City Council received on September 1. Updated Revenues & Expenditures Summary pages and the Line Item Accounts section are attached. Per the City Charter, revenues and expenditures for the current fiscal year to September 1 must be included in the proposed budget submitted to City Council. The budget document delivered last week included all key financial information for the 2007 and 2008 budgets. The attached supplemental documents include the revenues and expenditures to September 1 as required by the City Charter.

City Council is requested to insert the updated pages 45-58 behind the Revenues & Expenditures Summary tab in the front section of the budget document. Also, the City Council is requested to insert the line item account pages behind the Line Item Accounts tab in the Appendix in the back of the budget document. Staff apologizes for the inconvenience of having these separate inserts; however, the Charter requirement for actual expenditures to September 1 of the current year makes this two part approach necessary.

Please note that adjustments may be made to the revenues and expenditures for the month of August as the financial books for the month have not been closed as of September 1. The books for the month of August will be closed by September 11, and City Council will receive their monthly financial report by the end of the month. For example, these revenue figures exclude a few days of daily revenue such as revenues collected from the recreation centers, building permits and utility billing. Other anomalies related to the timing of revenues received from the other agencies (such as the Adams County Open Space - City Share in the General Capital Improvement Fund) are reflected in these figures. Staff is confident that these revenues will be collected by year-end.

A correction made to page 49 (transfer payments to Legacy Ridge, The Heritage, Fleet Maintenance and GCORF were excluded) of the document results in a change to the total 2006 estimated General Fund expenditures that makes one change in the budget message necessary (on page 11, rather than a 0.2% decrease from the 2006 estimated, the 2007 proposed expenditures are a 1.6% decrease from 2006). A corrected page 49 is included as an attachment to this Staff Report and the correction to the budget message will be made to the final budget document presented to City Council for official adoption in October.

As noted previously, City Council is scheduled for their annual Budget Retreat on Saturday,

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September 23 at 8:00 AM at the Northwest Water Treatment Plant located at 8595 West 104<sup>th</sup> Avenue (104<sup>th</sup> Avenue and Wadsworth Parkway, east of Standley Lake High School). At the Budget Retreat, Staff will provide an overview of the two-year budget, reviewing revenues, expenditures, proposed compensation and benefits plan adjustments plan, human service agency funding and citizen budget requests.

If you have any questions about these inserts or about the proposed budget in general, please contact Barbara Opie at 303-430-2400, ext. 2009, or via e-mail at <a href="mailto:bopie@ci.westminster.co.us">bopie@ci.westminster.co.us</a>.

Respectfully submitted,

J. Brent McFall City Manager

Attachments