



OFFICE OF THE CITY CLERK

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SPECIAL MEETING OF THE CITY COUNCIL

September 20, 2016

In accordance with Title 1, Chapter 6, Section 1-6-3B, of the City Code, I hereby request a Special Meeting of the City Council to be held on Thursday, October 13, 2016 at 6:00 p.m. in Room 102 of Des Plaines City Hall, 1420 Miner Street, Des Plaines, Illinois for the purpose set forth in the agenda below. Please give notice of this Special Meeting to each member of the City Council.

AGENDA

CALL TO ORDER

ROLL CALL

BUDGET HEARING – Alderman Don Smith

Library, Overhead, TIF #1, TIF #3, TIF #5, TIF #6, TIF #7, Motor Fuel Tax Fund, CDBG Fund, Grant Funded Projects, Gaming Tax Fund, Emergency Telephone System Fund, Debt Service, Capital Projects, Equipment Replacement, IT Replacement, Water/Sewer Fund, City-Owned Parking, Metra-Leased Parking, Risk Management, and Health Benefits

UNFINISHED BUSINESS

1. Discussion and Presentation Regarding the Water/Sewer Fund (*deferred from 9/19/2016 City Council Meeting*)

PUBLIC COMMENT

CLOSED SESSION – IF NECESSARY

ADJOURNMENT

A handwritten signature in black ink, appearing to read 'Matthew J. Bogusz', written over a horizontal line.

Matthew J. Bogusz
MAYOR

The City of Des Plaines, in compliance with the Americans With Disabilities Act, requests that persons with disabilities, who require certain accommodations to allow them to observe and/or participate in the meeting(s) or have questions about the accessibility of the meeting(s) or facilities, contact the ADA Coordinator at 391-5486 to allow the City to make reasonable accommodations for these persons.



FINANCE DEPARTMENT

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MEMORANDUM

Date: September 16, 2016

To: Michael G. Bartholomew, City Manager

From: Dorothy Wisniewski, Assistant City Manager / Director of Finance
Tim Oakley, Director of Public Works and Engineering

Subject: Water/Sewer Fund Analysis

A handwritten signature in blue ink, appearing to be 'DW', is located to the right of the 'From:' field.

Issue: The City Council requested an analysis regarding the water sewer fund and how the alternate water source impacts this fund financially.

Analysis: The Water/Sewer Fund is considered an enterprise fund. Enterprise funds are established to account for the financing of self-supporting activities of the City that render services on a user-charge basis. As part of the City's water allocation permit, the Illinois Department of Natural Resources states that all permittees adopt water rate structures based on metered water use and that water rate structures be developed that will discourage excessive water use. The Department also recommends that water rates reflect the full cost of water, including the long term cost to properly maintain and operate the water supply distribution system in such a manner as to keep system losses to a minimum (17 Ill. Adm. Code 3730).

In 2011, the City commissioned a water/sewer rate study which was conducted by Baxter & Woodman, Inc. The purpose of the study was to ensure that the water and sewer utilities were self-sustaining. The study included an in-depth evaluation of the current and projected revenues and expenses of the water and sanitary sewer systems. The findings gathered from the study in 2011 indicated that the annual water and sewer costs have gradually outpaced revenues over a few years prior to the study due to inflation and deferral of rate increases since 2006. Each year that a rate increase was deferred, the gap between revenues and expenditures widened. The study indicated that rate increases were needed not only to reverse the operating spending deficit and preserve enterprise fund reserves, but to also provide for increased investment in equipment and infrastructure. Those increases would have allowed the water/sewer fund to maintain a stable financial position. Several recommendations were made within the study, such as modifications to the rate structure by including a minimum water and minimum sewer bill charges to all accounts regardless of consumption. Another recommendation was to include an escalator on charges over a 5 year period of 4% rather than just passing on the City of Chicago increases in order to keep pace with increased expenditures. A third recommendation was to optimize shut-off procedures by sending pre-shutoff notices within 30 days of non-payment regardless of the amount outstanding. Current practice is to send pre-shut off notices after being 2 cycles delinquent.

While the study made recommendations on increasing the water rates, given the increases passed by the City of Chicago during fiscal years 2012 of 25%, 2013 of 15%, 2014 of 15% and 2015 of 15%, the City only

provided for an increase to the operational rate portion in 2012 of 15% with no further increases between 2013 through 2016. Prior to that timeframe, the last operational rate increase was in 2006 of 3.7%. As such, based on the continued increases to expenditures primarily due to inflation as well as aged infrastructure, the water/sewer fund depleted all of its reserves beginning in 2014 and had a negative balance position of \$1.5M at the end of the 2014 fiscal year.

As of December 31, 2015 the Water/Sewer fund had an unrestricted net position of negative \$3.4 million. The expenditures of the water/sewer fund began outpacing the revenues in 2010, and the balance began declining in 2011. Due to an aging infrastructure and limited rate increases, the water/sewer fund expenditures continue to outpace revenues at a higher rate annually. The following chart provides a historical overview between the years of 2010 through 2015:

	2010 Actual	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Actual
Beginning Balance	5,537,957	5,031,860	3,473,407	3,469,874	1,421,852	(1,497,649)*
Revenues	11,906,919	11,293,637	14,172,242	13,825,722	14,762,310	14,661,781
Expenses	(12,225,806)	(12,763,270)	(14,196,533)	(15,894,502)	(17,417,766)	(22,751,951)
Transfers	(187,210)	(88,820)	20,758	20,758	320,758	6,126,775
Prior Period Adjustment due to change in accounting principles					(584,803)	
Ending Balance	5,031,860	3,473,407	3,469,874	1,421,852	(1,497,649)	(3,461,044)

In May 2016, the City completed construction of an alternate water source that allows for the purchase of water from the Northwest Water Commission (NWWC). The total cost of this infrastructure buildout was \$9.0M of which \$8.5M has been paid to date utilizing gaming revenues. The City began flowing water from NWWC in May 2016. The amount of water allowed from the NWWC is not to exceed 5 million gallons per day. The average usage on a daily basis is approximately 6.324 million gallons per day (MGD) and during the summer months the average demand is 7.4 MGD. As such the remaining demand is still supplied by the City of Chicago. During the months of May, June and July 2016, the City has saved approximately \$731K by purchasing water through the NWWC. Once facilities are fully operational savings could reach a maximum of approximately \$3M annually, depending on demand. Given the limited amount of funding allocated toward infrastructure projects over the past 10 years, the City will need to address the aging infrastructure improvements over the next several years. Past budget funding for this replacement and rehabilitation work has been minimal at roughly \$1 million per year.

Based on the water/sewer study conducted in 2011 as well as industry standard replacement and rehabilitation schedules for the various components of the system, the above target annual budget allocation of \$3.3M toward infrastructure improvements has been created. This amount should be set aside for replacement and rehabilitation of the water system each year as part of the City’s Water System budget under the Capital Outlay section. It should be noted that this funding is necessary for maintaining the existing infrastructure.

The following table provides a water system inventory along with a recommended annual target allocation based on 2011 Baxter Woodman study.

	Activity	Estimated Cost	Service Life (years)	Target Annual Allocation
Water Distribution				
Water Main	Replacement	\$205,000,000	75	\$2,733,333
Meters	Replacement	\$6,000,000	20	\$300,000
				\$3,033,333
Water Pumping Stations				
Maple Street Pumps	Replace Pumps	\$300,000	20	\$15,000
Central Road Pumps	Replace Pumps	\$300,000	20	\$15,000
Generators	Replace Generators	\$1,000,000	20	\$50,000
Controls & Instrumentation	Replacement	\$500,000	20	\$25,000
				\$105,000
Water Storage				
Maple Street Reservoir	Inspect, Clean, Repair	\$100,000	15	\$6,667
Central Road Reservoir	Inspect, Clean, Repair	\$100,000	15	\$6,667
Dulles Road Elevated	Inspect, Repair, Paint	\$650,000	15	\$43,333
Holy Family Elevated	Inspect, Repair, Paint	\$375,000	15	\$25,000
Miner Street Elevated	Inspect, Repair, Paint	\$375,000	15	\$25,000
Oakton Street Elevated	Inspect, Repair, Paint	\$550,000	15	\$36,667
Howard Avenue Elevated	Inspect, Repair, Paint	\$550,000	15	\$36,667
				\$180,000
			Total =	\$3,318,333

The need for water main replacement, the largest component of the water system, is evidenced by the number of water main breaks we experience each year. On the average, we have 100 main breaks per year that result in approximately \$600,000 in water loss cost and \$130,000 in overtime costs on an annual basis.

The following chart provides details of the total water main breaks experienced between the years of 2010 through 2016:

Year	Number of Breaks	Approximate Unaccounted Flow	Meter Unaccounted Flow	Water Maint Break Unaccounted Flow	Estimated Water Loss Cost	Actual Water Main Overtime Cost	Estimated Total Cost
2010	110	8.88%	3.00%	5.88%	411,043	182,298	593,341
2011	96	10.90%	3.00%	7.90%	504,546	159,096	663,642
2012	170	8.73%	3.00%	5.73%	505,125	193,004	698,129
2013	141	7.41%	3.00%	4.41%	493,003	161,547	654,550
2014	105	7.50%	3.00%	4.50%	573,747	147,725	721,472
2015	80	11.90%	3.00%	8.90%	1,046,586	132,580	1,179,166
2016	92				1,203,574	61,582	1,265,156
Total	794				4,737,624	1,037,832	5,775,455

The City is in the process of replacing our aged water meters. As water meters age, they lose accuracy and under read the amount of water passing through them. The maximum recommended service life for a residential meter is 20 years and 12 years for larger commercial meters. The city's average residential meter age is 28 years and 21 years for commercial meters. Based on regular meter testing, the City is losing approximately 3% of unaccounted for water.

The American Water Works Association guidelines for water system operation recommends less than 25 water main breaks per year per 100 miles of pipe. Given our 221 miles of pipe, our break history should be 55 breaks per year under the guideline. Part of the reason why the City is experiencing a high level of water main breaks is due to the aging infrastructure. As you will note in the table below, close to 60% of the total miles of water mains are over 40 years old and 20% are over 60 years old. The cost of replacing just the 42 miles of water main which are over 60 years old is estimated at \$38.9M.

Pipe Age	Miles	% of Total
< 20 Years	53	24%
20 – 40 Years	40	18%
40 – 60 Years	86	39%
> 60 Years	42	19%
Total	221	100%

In addition to the above costs, there is movement at the Illinois Environmental Protection Agency to add additional lead / copper testing requirements and possible lead service line replacement mandates for water systems. The costs associated with this is unknown at this time but any new regulations will affect our Water System budget.

Based on the City Councils request to provide options for the potential water rate reduction, the following options are presented for discussion which yield the financial results as indicated in Water/Sewer Fund Balance Chart below. Additionally, it is important to note that the 2017 Projection assumed the Proposed Budget numbers which will be discussed during budget deliberations.

Option #1

Assumptions: No increase to the rates are proposed and the capital improvements are funded through the water/sewer fund.

Results: The deficit in the water/sewer fund continues to increase and by 2022 is projected to be at a negative \$16.5M with continued deficit increases years beyond.

Option #2

Assumptions: No increase to the rates are proposed and the capital improvements are 100% funded through a transfer from the gaming fund.

Results: Based on this option, the fund has a positive projected fund balance of \$441K in year 2022. It is important to note that with this option approximately 40% of gaming revenues received would be utilized towards capital improvement projects within the water/sewer fund.

Option #3

Assumptions: Should the City of Chicago increase the water rates as recently proposed in the amount of 7% over the next 3 years, the rates are assumed to be passed on to the residents. In terms of capital projects, those are assumed to be funded at 50% from gaming revenues 50% from water/sewer fund revenues.

Results: Based on this option, the fund has a positive projected fund balance of \$175K in year 2024. It is important to note that with this option approximately 20% of gaming revenues received would be utilized towards capital improvement projects within the water/sewer fund.

Option #4

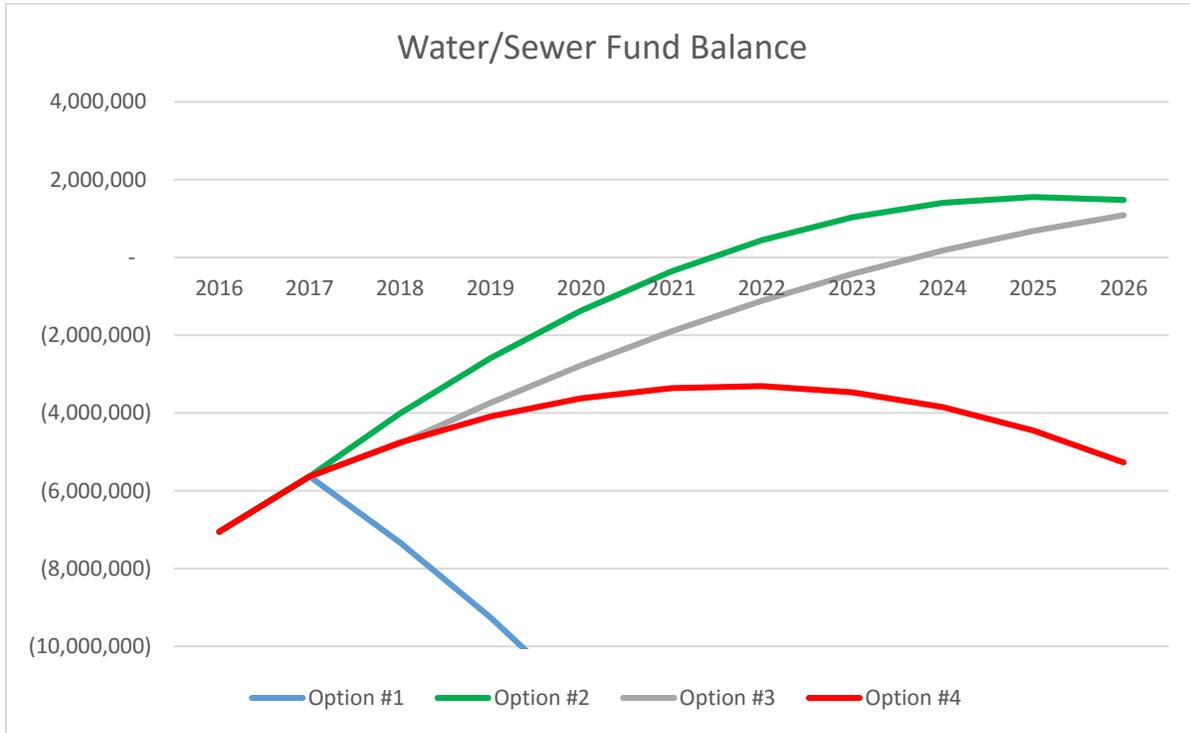
Assumptions: This option assumes a 25% sharing of the savings achieved by purchasing water from the Northwest Water Commission. No increase from the City of Chicago has been assumed. In terms of capital

projects, those continue to be funded through gaming funds at the 100% level as mentioned in Option #2 above.

Results: Based on this option, while the fund begins to move toward a positive direction, in year 2023 the operational expenses exceed the revenues and therefore the fund never reaches a positive balance.

All options assume a minimal 2% increase to the operating expenses and a 1% increase to water cost and capital infrastructure projects. In terms of capital infrastructure projects, it is important to note that the initial funding level used is \$3.3M which was estimated back in 2011.

The following chart graphically depicts each of the above options and the year in which the water/sewer fund is able to reverse the negative trend in declining balances which is only possible in Options #2 and #3.



Additionally, while the commercial/industrial utility accounts comprise 5.7% of the total utility billing accounts, they account for 34.1% of the annual consumption. Residential properties account of 94.3% of the total utility billing accounts and 65.9% of the average annual consumption. As such, any decrease in water rates would be realized proportionately based on consumption.

Conclusion: The above information is provided for City Council discussion.

Attachments:

Attachment 1: Water/Sewer Fund Financial Projection

Water/Sewer Fund Financial Projection												
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	
	Projection	Budget	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	Projection	
Option #1												
Revenues		14,551,000	14,604,000	14,604,000	14,604,000	14,604,000	14,604,000	14,604,000	14,604,000	14,604,000	14,604,000	14,604,000
Transfers		4,620,758										
Operating Expenses		6,827,826	6,964,383	7,103,670	7,245,744	7,390,658	7,538,472	7,689,241	7,843,026	7,999,886	8,159,884	8,159,884
Water Cost (Avg Increase)		6,300,000	6,019,297	6,079,490	6,140,285	6,201,688	6,263,705	6,326,342	6,389,605	6,453,502	6,518,037	6,518,037
Capital Improvements		4,620,758	3,318,333	3,351,516	3,385,031	3,418,882	3,453,071	3,487,601	3,522,477	3,557,702	3,593,279	3,593,279
Balance	(7,054,633)	(5,631,459)	(7,329,472)	(9,260,149)	(11,427,209)	(13,834,437)	(16,485,685)	(19,384,869)	(22,535,978)	(25,943,068)	(29,610,268)	
Option #2												
Revenues		14,551,000	14,604,000	14,604,000	14,604,000	14,604,000	14,604,000	14,604,000	14,604,000	14,604,000	14,604,000	14,604,000
Transfers		4,600,000	3,318,333	3,351,516	3,385,031	3,418,882	3,453,071	3,487,601	3,522,477	3,557,702	3,593,279	3,593,279
Operating Expenses		6,827,826	6,964,383	7,103,670	7,245,744	7,390,658	7,538,472	7,689,241	7,843,026	7,999,886	8,159,884	8,159,884
Water Cost (Avg Increase)		6,300,000	6,019,297	6,079,490	6,140,285	6,201,688	6,263,705	6,326,342	6,389,605	6,453,502	6,518,037	6,518,037
Capital Improvements		4,600,000	3,318,333	3,351,516	3,385,031	3,418,882	3,453,071	3,487,601	3,522,477	3,557,702	3,593,279	3,593,279
Balance	(7,054,633)	(5,631,459)	(4,011,139)	(2,590,299)	(1,372,328)	(360,675)	441,149	1,029,565	1,400,934	1,551,546	1,477,626	
Option #3												
Revenues		14,551,000	15,604,000	16,154,000	16,291,500	16,430,375	16,570,639	16,712,305	16,855,388	16,999,902	17,145,861	17,145,861
Transfers		4,620,758	1,659,167	1,675,758	1,692,516	1,709,441	1,726,535	1,743,801	1,761,239	1,778,851	1,796,640	1,796,640
Operating Expenses		6,827,826	6,964,383	7,103,670	7,245,744	7,390,658	7,538,472	7,689,241	7,843,026	7,999,886	8,159,884	8,159,884
Water Cost (Avg Increase)		6,300,000	6,135,225	6,328,313	6,391,596	6,455,512	6,520,067	6,585,268	6,651,121	6,717,632	6,784,808	6,784,808
Capital Improvements		4,620,758	3,318,333	3,351,516	3,385,031	3,418,882	3,453,071	3,487,601	3,522,477	3,557,702	3,593,279	3,593,279
Balance	(7,054,633)	(5,631,459)	(4,786,233)	(3,739,974)	(2,778,330)	(1,903,567)	(1,118,002)	(424,007)	175,996	679,529	1,084,058	
Option #4												
Revenues (25% Savings)		14,551,000	13,854,000	13,854,000	13,854,000	13,854,000	13,854,000	13,854,000	13,854,000	13,854,000	13,854,000	13,854,000
Transfers		4,620,758	3,318,333	3,351,516	3,385,031	3,418,882	3,453,071	3,487,601	3,522,477	3,557,702	3,593,279	3,593,279
Operating Expenses		6,827,826	6,964,383	7,103,670	7,245,744	7,390,658	7,538,472	7,689,241	7,843,026	7,999,886	8,159,884	8,159,884
Water Cost (Avg Increase)		6,300,000	6,019,297	6,079,490	6,140,285	6,201,688	6,263,705	6,326,342	6,389,605	6,453,502	6,518,037	6,518,037
Capital Improvements		4,620,758	3,318,333	3,351,516	3,385,031	3,418,882	3,453,071	3,487,601	3,522,477	3,557,702	3,593,279	3,593,279
Balance	(7,054,633)	(5,631,459)	(4,761,139)	(4,090,299)	(3,622,328)	(3,360,675)	(3,308,851)	(3,470,435)	(3,849,066)	(4,448,454)	(5,272,374)	