



Resiliency and Cash Balance Study

Independence Water Department

February 12, 2021

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Agenda

- I. Purpose**
- II. Observations and Trends**
- III. Risk Analysis Updates**
- IV. Next Steps**
- V. Supporting Data**



I. Purpose of the Resiliency and Cash Balance Policy



Background of a Resiliency and Cash Reserves Policy

- **Utilities require a stable level of cash reserves to:**
 - Address risk that may materialize over the course of the year
 - Provide rate stability to customers
 - Allow for solid credit ratings from the rating agencies
- **Determining appropriate level of cash involves risk analysis:**
 - Revenues that may not materialize
 - Expenses that may be more than forecast
 - Working capital must be appropriate to address the delays in the billing cycle
 - Capital reserves need to be sufficiently flexible to address construction projects
- **Several Tools also provide stability along with a Cash Reserve Policy:**
 - *Budgeting* *Assumptions with cash reserve targets as a critical metric*
 - *Insurance* *Manages unexpected/exceedingly expensive risk*
 - *Hedging* *Manages expected and unexpected risks*
 - *Borrowing* *Provides liquidity for uncertainty or large risks*



Background of the Water Department's Cash Balances

Account	30-Jun-20	30-Jun-19
Total Cash	42,344,968	35,640,683
Less: Legally Restricted Funds		
Debt Service Reserve	3,603,550	3,591,604
Available after Legally Restricted Funds	38,741,418	32,049,079
Less: Unrestricted BUT Unavailable funds		
Bond Construction and CIP Projects Approved but Not Completed	11,051,314	10,209,371
Emergency Improvement Reserve	500,000	500,000
Customer Advance Payments	755,038	725,010
Cust Deposits Portable Meters	1,286	1,286
Customer Deposits - Ab. Taps	15,906	23,206
Cust Deposits Bankruptcy	620	620
Customer Deposits Billed	(32,447)	(34,546)
Restricted Cash & Inv - Current	12,291,718	11,424,947
Amount Unrestricted AND Available	26,449,701	20,624,131

1 Total Cash (year end)

2 Less: Legally required Debt Service Reserve for existing bonds

3 Less: Funds available but designated for other purposes

4 Equals: Funds available for the cash reserve target
\$26.4 million on June 30, 2020

~35% of the Department's cash balances are "Unavailable" and designated for specific purposes when including CIP projects not completed



Background of the Financial Reserves Policy

- Examines many facets of the Department's strategy, operations and finance through:
 - Revenue Risk
 - Expense Risk
 - Working Capital
 - Capital
- “Bottom Up” Review of Risk and providing
(1) Dollar value to address that risk
(2) Based on three categories (Less Conservative, Moderate, More Conservative Levels)
- Develops a target for Financial Reserves (and bandwidth of +/- 10%)

– Current Cash on Hand =	\$26.4 million
– Recommended level =	<u>\$15.3 million</u>
	\$ 11.1 million of cash above target
 - Approved by City Council
 - Briefed and discussed with Rating Agencies (with positive feedback)
 - Incorporated in the budget cycle for the Water Department and the City



II. Observations and Trends



Observations and Trends

- Uncertainty of COVID-19 permeates the analysis:
 - Federal programs have helped
 - Lack of renewed stimulus could be problematic
 - Unclear about the strength, depth and breadth of the economic recovery
 - This trend leads to a higher cash balance
- Independence can be characterized by:
 - Stable employment rates
 - Consistent, but slow, economic growth
 - Strong customer base, large percentage of residential/commercial (+90%)
 - Low turnover of the largest wholesale and industrial customers of the system
 - This trend leads to a lower cash balance
- Some challenges remain in the service territory:
 - Low median income compared to state and U.S.
 - Elevated unemployment rate (8.8% in August)
 - Historically, variability in sales during periods of economic downturns (-8%) has been significant
 - This trend leads to a higher cash balance



Observations and Trends

- Water Department's in general face a unique environment:
 - Providing an essential service to customers
 - Promote customers not using your product through
 - Conservation measures
 - Efficient appliances
 - Significant regulatory and headline risk
 - Lead and Copper Rule
 - Discharge Rules
 - Flint, Michigan headlines
 - Overall demand for the product driven by
 - Customer's behavior
 - Weather
 - Local area economic and population growth
- Limited ability to expand (service territory, number of wells)

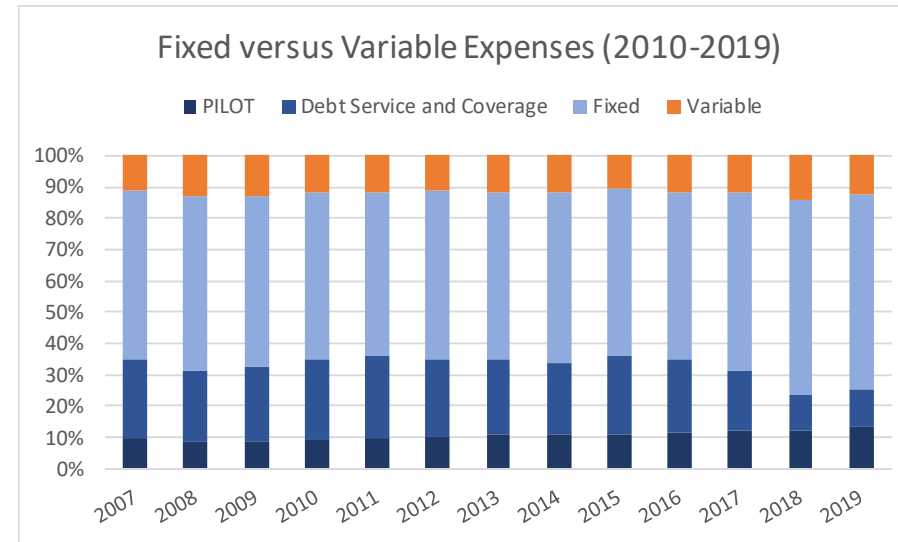


III. Risk Analysis



Allocation of Fixed and Variable Costs

- Purpose: Identify those fixed costs that will need to be addressed regardless of amount of water delivered
- Assumes most cost categories have at least a 50% fixed component



		2015	2016	2017	2018	2019
Total Operating Expense	Fixed	12,979,524	13,836,859	14,272,169	15,902,941	14,398,181
	Variable	2,585,429	3,015,703	2,896,497	3,636,376	2,916,394
	Total	15,564,952	16,852,562	17,168,666	19,539,317	17,314,575

- Adding to operating expense are: PILOT, debt service as well as debt service coverage totaling ~\$7.5 million
 - Just these three areas equate to ~160 days of cash for the Department
- Fixed costs impact next 2 categories of revenue risks (next 2 slides):
 - ~\$21.8 million (average) in fixed costs is then adjusted for inflation (3%)
 - Fixed cost base equates to **~\$23.9 million**

~85% of the Water Department's expenses are fixed



Revenue Risk

General Sales Decrease (Economic Recession)

(\$ in Millions)	Less Conservative Level	Moderate Level	More Conservative Level
Assumed fixed base (annual)	\$23.9 million	\$23.9 million	\$23.9 million
Assumed variance	2.0%	6.0%	8.0%
Variance explanation	2014 Reduction	2015 reduction	2009 reduction from Great Recession
Period of Coverage	12 months	12 months	12 months
Cash to Address	\$0.5 million	\$1.4 million	\$1.9 million

Purpose: Cover fixed costs due to large scale economic shock similar to the Great Recession of 2008-2012 and other historical demand shocks

Discussion

- COVID-19 recession uncertainty (“K Shaped recovery”)
- Longer period of coverage spans 2 budget cycles to address into rates
- Unclear of depth or duration of expected economic difficulty or recovery
- The most conservative case, -8%, represents the largest reduction in sales (2009) while -2% was experienced in 2014

Recommendation: More Conservative level given the COVID environment and economic uncertainty



Revenue Risk

Loss of Large Wholesale Customer

(\$ in Millions)	Less Conservative Level	Moderate Level	More Conservative Level
Assumed fixed base (annual)	\$23.9 million	\$23.9 million	\$23.9 million
Assumed variance	0.1%	2.5%	5.0%
Variance explanation	Loss of smallest wholesale customer	Loss of the average wholesale customer	Loss of one of the largest wholesale customer
Months of Coverage	12 months	12 months	12 months
Cash to Address	\$0.0 million	\$0.6 million	\$1.2 million

Purpose: Cover fixed costs due to loss of one of the Wholesale Customers. Can also represent loss of sales due to conservation efforts

Discussion

- Economic uncertainty due to COVID-19 and impacts on community businesses
- Unclear about the strength of the recovery despite programs and initiatives
- Unclear if consumer behavior and spending will return to “normal”
- Can also reflect conservation efforts.
 - Several Wholesale Customers have agreements with other providers and a minimum quantity. Triggering would result in loss of Water Dept sales

Recommendation: More Conservative level given COVID environment, economic uncertainty and conservation efforts



Revenue Risk

Loss of Large Commercial Customer

(\$ in Millions)	Less Conservative Level	Moderate Level	More Conservative Level
Assumed fixed base (annual)	\$23.9 million	\$23.9 million	\$23.9 million
Assumed variance	0.1%	0.4%	1.0%
Variance explanation	Loss of the smallest (large) customer	Loss of the average (large) customer	Loss of the largest (large) customer
Months of Coverage	12 months	12 months	12 months
Cash to Address	\$0.0 million	\$0.1 million	\$0.2 million

Purpose: Cover fixed costs due to loss of one of the larger customers of the department.
Can also represent loss of sales due to conservation efforts

Discussion

- Economic uncertainty due to COVID-19 and impacts on community businesses
- Unclear about the strength of the recovery despite programs and initiatives
- Difficult to determine the financial condition and corporate decisions of these entities
- Unclear if consumer behavior and spending will return to “normal”

Recommendation: Less Conservative level (addressed in previous 2 areas of risk)



Revenue Risk

Loss of Sales for Resale and Other Revenue

(\$ in Millions)	Less Conservative Level	Moderate Level	More Conservative Level
Average Amount	\$12.0 million	\$12.0 million	\$12.0 million
Associated profit margin	24%	27%	31%
Contribution to Operating Income	\$2.9 million	\$3.2 million	\$3.7 million
Reduction in Resale and Other Rev	10%	25%	50%
Period of Coverage	12 months	12 months	12 months
Cash to Address	\$0.3 million	\$0.8 million	\$1.9 million

Purpose: Address risk of loss of resale sales and other revenue

Discussion

- The Water Department has enjoyed strong sales for resale and other revenue
- There is a profit margin associated with each of these categories of sales
- This profit can “subsidize” the operations of the utility
- Can also represent conservation efforts

Recommendation: Given the stability of these customers and their (likely) inability to improve/enhance their own water sources, Less Conservative level is fair



Revenue Risk

Interest Income

(\$ in Millions)	Less Conservative Level	Moderate Level	More Conservative Level
Interest and Investment Income			
Assumed unhedged short-term investments	\$40.0 million	\$40.0 million	\$40.0 million
Assumed interest rate movement (basis points)	25 basis points	50 basis points	100 basis points
Period of Coverage	12 months	12 months	12 months
Cash to Address	\$.1 million	\$.2 million	\$.4 million

Purpose: Address risk of loss of interest income on invested cash

Discussion

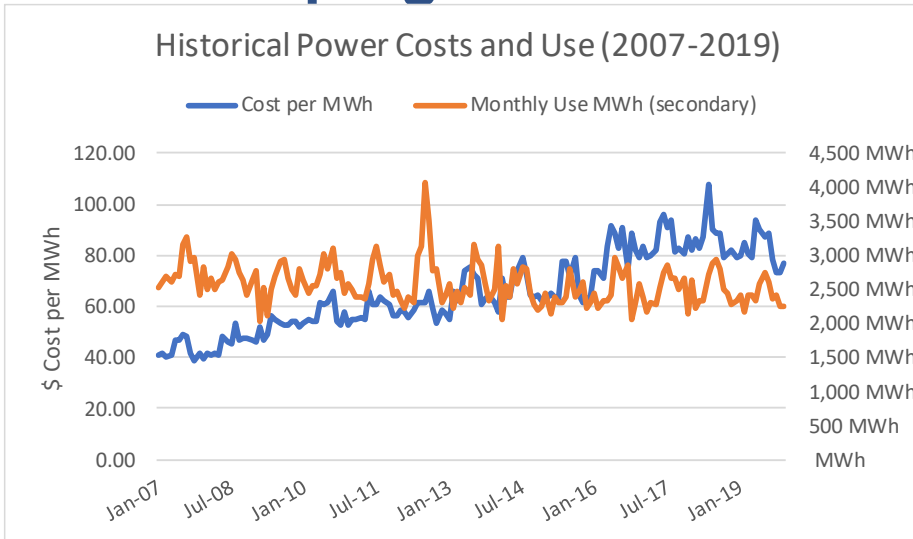
- The Water department has enjoyed strong returns on invested cash balances of ~\$40 million
 - Pooled Cash and Investments + Debt Service Reserves
- Provides a cushion for the Department during the execution of the budget
- Recent Federal Reserve action has moved rates significantly lower in 2020 with expectation that rates will remain lower through 2022

Recommendation: More Conservative level given historically low current rates that are not expected to increase for the next several years due to Federal Reserve actions



Expense Risk

Power and Pumping



Historically, significant increase in the cost of power while the use of power has been relatively constant over time

- Power and Pumping represents one of the largest expenses of the Department
- Power to the Department provided by Evergy
- Cost per MWh have increased by 90% since 2007
 - Represents an average annual rate increase of 5.5%
- Use of power has remained relatively steady
- Electric power is a commodity – subject to market and seasonal risks
- Significant variability with recent power prices in the region
- Evergy passes these costs through to customers



Expense Risk

Power and Pumping

(\$ in Millions)	Less Conservative Level	Moderate Level	More Conservative Level
Annual MWh	29,640 MWh	29,640 MWh	29,640 MWh
Price Environment	1 std dev	2 std dev	2 std dev
Standard Deviation	\$10 per MWh	\$10 per MWh	\$12 per MWh
Discussion	Weekend	Weekday Off	Weekday Peak
Cash to Address	\$0.3 million	\$0.3 million	\$0.4 million

Purpose: Address market risk of electric power needed by the Department

Discussion

- Power to the Department provided by Evergy
- Electric power is a commodity – subject to market and seasonal risks
 - Supply and demand over the course of the year
 - Influenced by weather trends
- Significant variability with recent power prices in the region
- Evergy passes these costs through to customers on a monthly basis
- Applies analysis from the IPL study of the power market to measure risk

Recommendation: Less Conservative Level given the general coordination with Evergy during the budget process. Even with coordination, risk remains



Expense Risk

Other Expenses (including Chemicals)

(\$ in Millions)	Less Conservative Level	Moderate Level	More Conservative Level
Operating Expense (less Power and Pumping)	\$14.8 million	\$14.8 million	\$14.8 million
Inflationary environment	1%	3%	5%
Period Covered	6 months	12 months	12 months
Cash to Address	\$1.1 million	\$4.4 million	\$7.7 million

Purpose: Address inflationary risk of operating expenses incurred by the Department

Discussion

- Given recent government borrowing, US economy could enter into an inflationary period
- Operating expenses are subject to cost increases (chemicals, salaries, benefits)
- However, many costs can be addressed through the budget process given unlikely that there will be, rapid increase in inflation

Recommendation: Less Conservative level given it is unlikely that there will be a sudden, rapid increase in price levels that can't be addressed in the budget cycle



Expense Risk Working Capital

(\$)	Less Conservative Level	Moderate Level	More Conservative Level
One Days Cash ¹	75,000	75,000	75,000
Days Working Capital	30 days	60 days	90 days
Capital Reserve	\$2.3 million	\$4.5 million	\$6.8 million

Purpose: Represents a level of cash on hand to address the billing cycle (up to 60 days to convert water treatment and delivery costs to an account receivable to cash)

Discussion

- Takes ~\$75,000 a day to run the utility (including debt service and PILOT)
- Billing cycle can take over 60 days from the customers and the delay could be longer
- 30 days likely “too short”
- COVID-19 could see late payments especially if no further stimulus (2Q2021)

Recommendation: More Conservative level given the delayed timing of the billing cycle and the uncertainty of the COVID-environment and strength of the recovery



Expense risk

Capital / Renewal and Replacement¹

Capital Reserve

- Many utilities establish a Capital Reserve to allow for the flexible execution of both routine and unexpected capital projects
- Capital Reserve level can be determined by examining
 - Annual Depreciation levels (~\$3.0 to \$3.2 million annually)
 - Executed annual CIP (2014-2019)
 - Projected CIP and other approved initiatives

	Less Conservative	Moderate	More Conservative
(\$ in Millions)	Level	Level	Level
Capital Reserve	\$3.8	\$4.3	\$5.4
Explanation	~Smallest capital plan	Average capital Plan	Max Capital Plan
Capital Reserve	\$3.8 million	\$4.3 million	\$5.4 million

- **Recommendation:** Moderate Level as it represents what the department has executed or is expected to execute, on average. The Department would likely need to replenish this account each year based on actual CIP executed

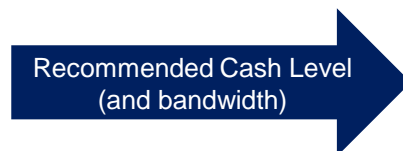


Cash Balance

Summary of Revenue and Expense Risks

(\$ in Millions)	Less Conservative	Moderate	More Conservative
Area	Levels	Levels	Levels
Revenue Risk			
General Sales Decrease	\$0.5	\$1.4	\$1.9
Large Wholesale Customer Exposure	\$0.0	\$0.6	\$1.2
Large Commercial Customer Exposure	\$0.0	\$0.1	\$0.2
Loss of Sales for Resale / Other Revenue	\$0.3	\$0.8	\$1.9
Other Revenue: Interest Inc	\$0.1	\$0.2	\$0.4
Expense Risk			
Power and Pumping	\$0.3	\$0.3	\$0.4
Other Expenses	\$0.1	\$0.4	\$0.7
Operational Risks / Working Capital			
Working Capital	\$2.3	\$4.5	\$6.8
Capital Reserve / Renewal and Replacement			
Capital Reserve	\$3.8	\$4.3	\$5.4

\$7.3 million	\$12.7 million	\$18.9 million
\$15.3 million	Recommended	



\$13.7 million	Lower Bandwidth
\$15.3 million	Target
\$16.8 million	Upper Bandwidth



Cash Balance

Cash Available

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Restricted Cash & Inv - Current	12,291,718	11,424,947
Amount Unrestricted AND Available	26,449,701	20,624,131
	Target	Available
Cash Balance Target	15,261,140	11,188,560
Upper Bound of Target	16,787,254	9,662,446
Lower Bound of Target	13,735,026	12,714,674
	Target	Available

- 1 Funds available for the cash reserve target = \$26.4 million
- 2 Less: Cash Reserve Targets (Target and upper/lower bound)
- 3 Equals: Cash amount above target, \$11.18 million (~\$9.7 to \$12.7 million based on bandwidth)



Cash Balance

Comparable Utilities

City / Water Utility	State	City Pop (000)	Operating Rev (\$000)	Ratings			Days cash
				Moody's	Fitch	S&P	
Independence	MO	117	\$30.8 million			A	318 days
Kansas City	MO	486	\$170.9 million	Aa2			710 days
Kansas City BPU	KS	152	\$50.8 million	A2	A		206 days
Des Moines	IA	215	\$70.8 million	Aa1		AA+	90 days
Overland Park	KS	191	\$104.2 million	Aaa		AAA	793 days
Springfield	MO	167	\$52.2 million		AA	AA+	295 days
Cedar Rapids	IA	132	\$37.7 million	Aa2			515 days
Topeka	KS	126	\$76.6 million	Aa3			788 days
Norman	OK	122	\$39.8 million	Aa2			425 days
Columbia	MO	121	\$154.4 million			A+	229 days
Broken Arrow	OK	108	\$46.1 million	Aa3		AA-	475 days
Lee's Summit	MO	97	\$40.7 million	Aa1			814 days
Lawton	OK	94	\$45.1 million			AA-	200 days

- Generally, water and sewer enterprises:
 - have higher days cash compared to electric utilities
 - are rated higher than the electric utilities (there are no “AAA” rated municipal electric utilities)
- The comparable utilities listed above have an average of +400 days cash
 - Moving to target would actually be over 100 days below the average of comparable utilities



Cash Balance

Rating Agencies Perspective

Purpose: What are the implications of moving to a lower cash amount and would a reduction in available cash place the Department's rating at risk for downgrade?

S&P: Adjustment would not move the Department out of the days cash bin but would result in a lower bin for the amount of overall cash

Other Rating Agencies:

- **Fitch:** New criteria subtracts available cash from debt outstanding for an overall leverage calculation. Given low Water Department debt levels, likely not a concern. Threshold is 90 days as a “constraining factor”
- **Moody's:** Adjustment would not move Department out of “Aaa Bin” for days cash (250 day threshold)

Likely Outcome: Moving to a lower cash target will require thorough communication effort with Ratings Analysts but would likely not result in a downgrade given the overall level of debt and strong debt service coverage metrics



Observations and Trends

- Recommended Level = **\$15.3 million**
- The Department should operate withing a +/- 10% bandwidth for flexibility
 - Upper Level = \$16.8 million
 - Lower Level = \$13.7 million
- The Department has \$26.4 million of unrestricted cash available (as of June 2020) when accounting for the previously approved CIP projects not completed
- Unrestricted cash level exceeds the recommended target by \$11.18 million (and bandwidth levels by \$9.7 million to \$12.7 million, respectively)
- Several options exist for the cash level above the target:
 1. Pay off a portion of the 2013 bonds, creating savings for utility and customers
 2. Contribute to additional CIP needs, eliminating future required rate increases for these projects
 3. Targeted rate adjustments (likely one time)
- Rating Agencies would view the adoption of the policy favorably



Cash Balance

Other Cash Uses

Cash Defeasance of Existing Debt

- The Water Department has bonds outstanding that are callable in 2023

Water Fund Debt

<u>Series</u>	<u>Original Par Amount</u>	<u>Outstanding Par Amount</u>	<u>Interest Rates</u>	<u>Maturities</u>	<u>Call Date</u>
2013D	\$36,240,000	\$21,870,000	3.00% - 5.00%	November 1, 2020-2029	November 1, 2023

- Cash can be allocated to defease (pay off) this debt
- Savings is the avoided debt service
- Can be accomplished relatively quickly at minimal cost (legal and consulting fees)
- Can defease a portion of the bonds, the best candidates, or all
- Improves financial metrics (debt service coverage and leverage)
- **Recommendation:** Consider allocating cash to defease outstanding debt and improve the savings of a refunding transaction



IV. Next Steps



Next Steps

- **Schedule**

- 2021 Update to PUAB
18

February

- Approve final version of Policy
with new targets by City Council

February 22

