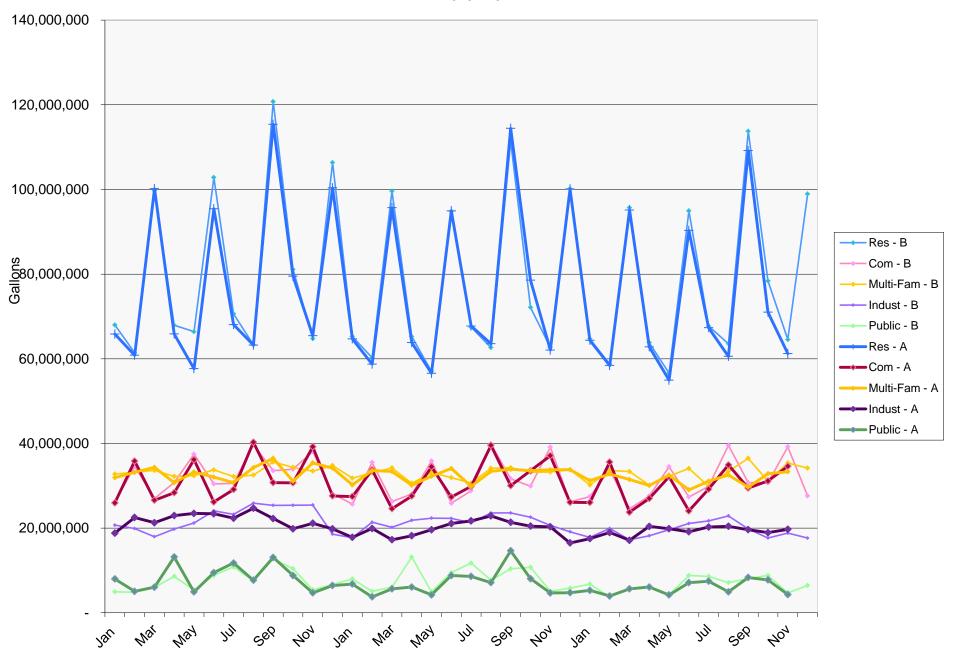
#### WAUKESHA WATER UTILITY STATEMENT OF REVENUES & EXPENSES MONTH ENDED 11/30/2017

	-	CURRENT N	IONTH				ANNUAL BUDGET		
	ACTUAL'17	BUDGET'17	VARIANCE	%	ACTUAL'17	BUDGET'17	VARIANCE	%	
OPERATING REVENUES:									
Residential	\$317,294.92	\$356,153.41	(\$38,858.49)	(10.91)	\$4,067,185.78	\$4,472,587.41	(\$405,401.63)	(9.06)	\$5,030,437.72
Commercial	135,833.38	166,091.76	(30,258.38)	(18.22)	1,295,366.19	1,448,662.53	(153,296.34)	(10.58)	1,569,599.84
Industrial	63,706.85	67,981.57	(4,274.72)	(6.29)	687,889.99	763,808.03	(75,918.04)	(9.94)	827,015.90
Public	17,045.16	20,346.68	(3,301.52)	(16.23)	248,505.36	298,815.50	(50,310.14)	(16.84)	326,294.38
Multi Family	130,978.02	152,435.36	(21,457.34)	(14.08)	1,369,830.31	1,522,536.42	(152,706.11)	(10.03)	1,668,162.54
Total Metered Sales	\$664,858.33	\$763,008.78	(\$98,150.45)	(12.86)	\$7,668,777.63	\$8,506,409.89	(\$837,632.26)	(9.85)	\$9,421,510.38
Private Fire Capacity	\$16,719.47	\$18,575.85	(\$1,856.38)	(9.99)	\$174,320.18	\$183,630.79	(\$9,310.61)	(5.07)	\$199,976.65
Public Fire Capacity	131,930.60	146,494.47	(14,563.87)	(9.94)	1,614,510.94	1,729,011.94	(114,501.00)	(6.62)	1,927,919.50
Other Operating Revenues	105,973.91	117,911.26	(11,937.35)	(10.12)	315,051.95	468,506.20	(153,454.25)	(32.75)	496,500.37
TOTAL OPERATING REVENUES	\$919,482.31	\$1,045,990.36	(\$126,508.05)	(12.09)	\$9,772,660.70	\$10,887,558.82	(\$1,114,898.12)	(10.24)	\$12,045,906.90
OPERATING EXPENSES:									
Source	\$54,467.19	\$64,128.89	(\$9,661.70)	(15.07)	\$1,595,305.70	\$705,417.79	\$889,887.91	126.15	\$769,546.68
Pumping	73,794.20	88,730.05	(14,935.85)	(16.83)	788,330.89	933,384.17	(145,053.28)	(15.54)	1,015,429.53
Treatment	25,184.22	31,468.90	(6,284.68)	(19.97)	371,694.87	417,839.15	(46,144.28)	(11.04)	473,201.80
Distribution	111,013.75	139,406.97	(28,393.22)	(20.37)	880,120.75	1,358,605.82	(478,485.07)	(35.22)	1,476,932.94
Customer Service	23,127.48	17,117.43	6,010.05	35.11	190,627.27	178,963.69	11,663.58	6.52	203,204.17
Administrative	114,401.98	126,524.77	(12,122.79)	(9.58)	1,403,723.09	1,502,893.32	(99,170.23)	(6.60)	1,626,498.94
Total	\$401,988.82	\$467,377.01	(65,388.19)	(13.99)	\$5,229,802.57	\$5,097,103.94	132,698.63	2.60	\$5,564,814.06
MANAGERS' MARGIN	517,493.49	578,613.35	(61,119.86)	(10.56)	4,542,858.13	5,790,454.88	(\$1,247,596.75)	(21.55)	6,481,092.84
Depreciation	159,893.50	156,724.04	3,169.46	2.02	1,756,652.67	1,723,964.44	32,688.23	1.90	1,880,688.48
Tax Equivalent	146,566.83	145,847.99	718.84	0.49	1,611,919.83	1,604,327.89	7,591.94	0.47	1,750,175.88
Other Taxes	11,024.45	12,017.86	(993.41)	(8.27)	140,537.51	142,433.96	(1,896.45)	(1.33)	154,451.82
TOTAL OPERATING EXPENSES	\$719,473.60	\$781,966.90	(\$62,493.30)	(7.99)	\$8,738,912.58	\$8,567,830.23	\$171,082.35	2.00	\$9,350,130.24
TOTAL OPERATING INCOME(LOSS)	\$200,008.71	\$264,023.46	(\$64,014.75)	(24.25)	\$1,033,748.12	\$2,319,728.59	(\$1,285,980.47)	(55.44)	\$2,695,776.66
NON OPERATING INCOME&(EXPENSE)	(135,193.69)	(126,812.57)	(8,381.12)	6.61	(1,298,827.76)	(1,592,626.07)	293,798.31	(18.45)	(1,009,821.75)
NET INCOME(LOSS)	\$64,815.02	\$137,210.89	(\$72,395.87)	(52.76)	(\$265,079.64)	\$727,102.52	(\$992,182.16)	(136.46)	\$1,685,954.91

WWU Billed Gallons Actual v Budget 2015 - 2017



#### WAUKESHA WATER UTILITY STATEMENT OF SOURCES AND USES OF CASH PERIOD ENDING NOVEMBER 30, 2017

Cash	Balance	<ul> <li>October</li> </ul>	31, 2017
------	---------	-----------------------------	----------

\$32,337,174

#### **SOURCES:**

**USES:** 

Operations:		
Customers - water sales	\$900,228	
Waste Water Utility - joint metering billing	56,968	
Rent of utility property - cellular leases	47,653	
Receipts on sewer bills	1,158,495	
Other - miscellaneous	191,854	
Total Cash From Operating Activities	\$2,355,199	
Capital and Related Financing Activities:		
Grants		
Contributions	2,672	
Issuance of long-term debt		
Sale of short-term debt		
Interest income	29,598	
Total Cash From Capital/ Investing Activities	\$32,270	
Total Cash Receipts	-	\$2,387,469
Total Cash Receipts	-	\$2,387,469
Total Cash Receipts  Salaries, wages, payroll taxes and benefits	- \$241,012	\$2,387,469
·	\$241,012 19,163	\$2,387,469
Salaries, wages, payroll taxes and benefits	. ,	\$2,387,469
Salaries, wages, payroll taxes and benefits Subcontracted and outside services	19,163	\$2,387,469
Salaries, wages, payroll taxes and benefits Subcontracted and outside services Disbursement to city for sewer transfer	19,163 1,488,232	\$2,387,469
Salaries, wages, payroll taxes and benefits Subcontracted and outside services Disbursement to city for sewer transfer Pumping power	19,163 1,488,232 55,096	\$2,387,469
Salaries, wages, payroll taxes and benefits Subcontracted and outside services Disbursement to city for sewer transfer Pumping power Purchase of materials and supplies	19,163 1,488,232 55,096	\$2,387,469
Salaries, wages, payroll taxes and benefits Subcontracted and outside services Disbursement to city for sewer transfer Pumping power Purchase of materials and supplies Tax equivalent - PILOT	19,163 1,488,232 55,096 74,426	\$2,387,469
Salaries, wages, payroll taxes and benefits Subcontracted and outside services Disbursement to city for sewer transfer Pumping power Purchase of materials and supplies Tax equivalent - PILOT Acquisition of capital assets	19,163 1,488,232 55,096 74,426	\$2,387,469
Salaries, wages, payroll taxes and benefits Subcontracted and outside services Disbursement to city for sewer transfer Pumping power Purchase of materials and supplies Tax equivalent - PILOT Acquisition of capital assets Debt service - principal	19,163 1,488,232 55,096 74,426	\$2,387,469

Total Cash Used \$3,757,046

Net Change in Cash (\$1,369,577)

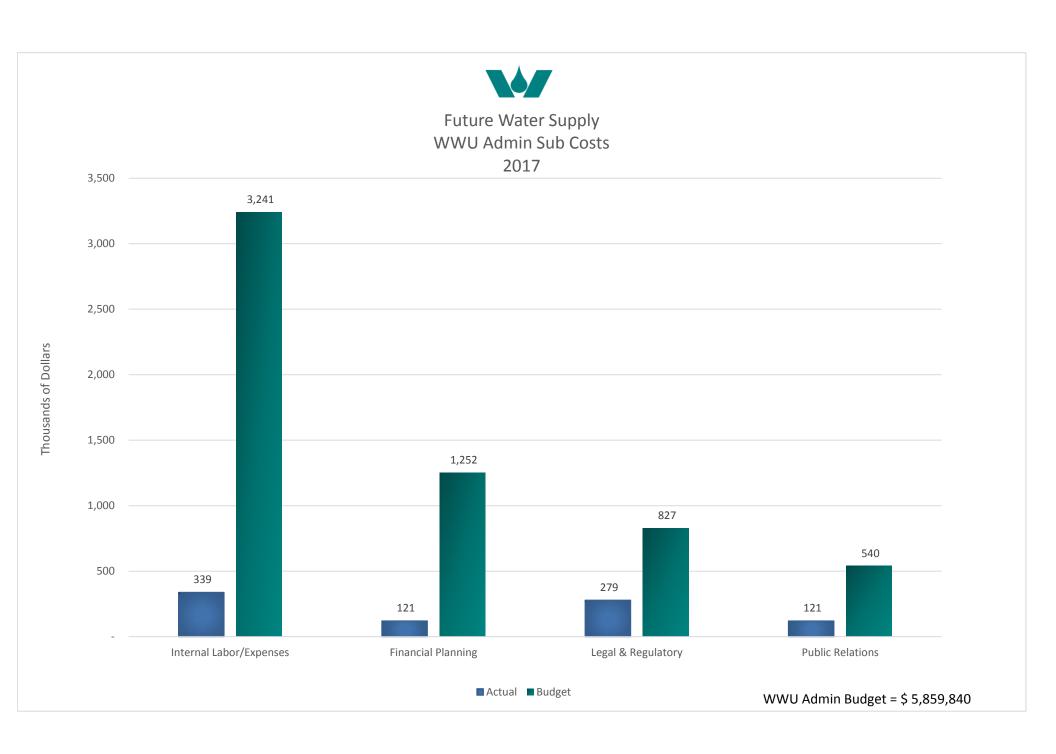
**Cash Balance - November 30, 2017** \$30,967,597

#### WAUKESHA WATER UTILITY BALANCE SHEET 11/30/2017

<u>ASSETS</u>	THIS YEAR
CURRENT	
CASH AND INVESTMENTS	\$23,424,361.41
ACCOUNTS RECEIVABLE	4,407,303.65
RECEIVABLE FROM SEWER REIMB	0.00
MATERIALS & SUPPLIES OTHER CURRENT ASSETS	516,941.87
ACCRUED UTILITY REVENUE	66,610.61
TOTAL CURRENT ASSETS	0.00 \$28,415,217.54
DEFERRED	Ψ20,413,217.34
DEFERRED ASSETS	\$16,059,350.14
TOTAL DEFERRED DEBITS	16,059,350.14
RESTRICTED	. 0,000,000
DEBT PAYMENT ACCOUNT	\$428,560.97
DEBT RESERVE ACCOUNT	475,775.53
CONSTRUCTION FUND	4,392,291.07
TAX EQUIV RESERVE ACCOUNT	2,246,607.75
TOTAL RESTRICTED FUNDS	\$7,543,235.32
LONG TERM	
UTILITY PLANT IN SERVICE-NET	\$88,602,545.74
PROPERTY HELD FOR FUTURE USE	435,089.69
CONSTRUCTION WORK IN PROGRESS	3,030,211.87
RESTRICTED NET PENSION	(225,396.00)
TOTAL UTILITY PLANT	\$91,842,451.30
TOTAL ASSETS	\$143,860,254.30
LIABILITIES CURRENT CUR PORTION BOND	50,134.14
NOTES PAYABLE	27,285,000.00
ACCOUNTS PAYABLE	2,449,159.45
PAYABLE TO OTHER FUNDS	2,499,950.03
CUSTOMER DEPOSITS	192,122.27
A/P MISCELLANEOUS	0.00
TAXES ACCRUED	1,644,159.00
INTEREST ACCRUED	236,873.38
EMPLOYEE WITHHOLDING	18,061.98
ACCRUED PAYROLL	76,878.00
ACCRUED VACATION	227,813.40
TOTAL CURRENT LIABILITIES  DEFERRED CREDITS	\$34,680,151.65
CUSTOMER ADVANCES CONSTRUCTION	\$0.00
REGULATORY LIABILITY	1,162,560.06
OPEB LIABILITY	1,272,827.73
OTHER DEFERRED CREDITS	3,042,769.83
TOTAL DEFERRED CREDITS LONG-TERM	\$5,478,157.62
BONDS	\$28,128,907.51
EQUITY	
CAPITAL PAID IN BY MUNICIPALITY	\$2,666,484.02
EQUITY FINANCED BY UTILITY	39,949,268.22
EQUITY FROM CONTRIBUTIONS	32,526,407.92
RESTRICTED EQUITY	695,957.00
NET PROFIT (LOSS)	(265,079.64)
TOTAL EQUITY	\$75,573,037.52
TOTAL EQUITY AND LIABILITIES	\$143,860,254.30

# WWU TRANSMISSION AND DISTRIBUTION BUDGET VARIANCE ANALYSIS

Project	Project #	Description/Location	Budget		Current Stimate	P.	JC Total	Ald	ermanic District	Construction Completion
WM offsets from WSB from Fiddlers Creek to Northview Road	M00500	Water Main offsets to accommodate changes in the storm sewer and roadway alignments. Project run by CH2M on behalf of the County.		\$	74,134	\$	68,413	14	Bill Boyle	November 2017
WM offsets from WSB from Genesee Road to Fiddlers Creek Drive	M00501	Water Main offsets to accommodate changes in the storm sewer and roadway alignments. Project run by WDOT.		\$	250,000	\$	13,803	6 7 13 14	Adam Jankowski Daniel J. Manion Dean Lemke Bill Boyle	Fall 2018
WM offsets from WSB from Northview to Rolling Ridge Drive	M00502	Water Main offsets to accommodate changes in the storm sewer and roadway alignments. Project run by the City.		\$	349,790	\$	311,365	5	Peter Bartels Bill Boyle	November 2017
N Grand - 5 Points to Wisconsin and South St - Clinton to Grand Ave.	M00507	Replace 600 feet if 10" main from 1908 with 12" on South Street from Clinton to Grand and on N. Grand from 5 Points to Wisconsin. Project done with the City.		\$	298,945	\$	254,478	11	Erik Helgestad	June 2017
Prairie Ave - College to St Paul Ave.	M00508	Cancelled by the City until a Future Year	447	\$	-	\$	794			Cancelled
Caroline St - Arcadian	MOOFOO	Replace 750 of 6" main from 1911	\$2,787,447	¢	494 045	e	472.200	3	Cassie Rodriguez	October 2017
to Main St.	M00509	with 8" on Caroline between Arcadian and Main Street. Project done with City Sanitary.		\$	181,045	\$	173,298	11	Erik Helgestad	October 2017
NW Barstow - Buena Vista to Lemira Ave.	M00510	Replace 1,560 feet of 6" main from 1909, 1915, and 1930 with 8" on NW Barstow from Buena Vista to Lemira. Project done with the City.		\$	312,364	\$	260,650	2	Eric Payne	June 2017
Arcadian - Eugene to Greenfield Ave.	M00512	Replace 1,500 feet of 6" main from 1924 with 550' of 8" and 950' 12" on NW Barstow from Buena Vista to Lemira. Project done with the City.		\$	363,087	\$	349,780	3	Cassie Rodriguez	October 2017
Oscar Street - Jefferson to Highland Ave.	M00513	Lower services on Oscar between Jefferson & Highland to eliminate annual water runs due to large storm sewer. Main is from 1958 but will not be replaced due to budget constraints.		\$	43,769	\$	43,769	3	Cassie Rodriguez	October 2017
Waukesha County Expo Center	M00514	Eliminate water meter pit and install 20 feet of 8" ductile iron pipe.		\$	7,508	\$	7,260	2	Eric Payne	May 2017
	Routine I Misc Re		\$ 2,787,447 \$ 558,809	\$	1,880,643 558,809	\$1 \$	,483,612 558,809			
	Total R		\$ 3,346,256				,042,421			
West Ave from Wisconsin to Glenwood, West on Glenwood, under Fox River to Mountain	GLCD0008	Replacing 8" from 1913 on West from Wisconsin to Glenwood, 6" from 1927 on Glenwood, with 24" main, then new 24" crossing river, passing through Grede Park and connecting to 20" main on	\$ 1,924,600	\$	1,134,906	\$	815,514	2	Eric Payne Erik Helgestad	December 2017
Ave.		Mountain. Project done with City Sanitary.						''		
Distr	ribution Syste	m Improvements	\$1,924,600	\$	1,134,906	\$	815,514			
Totals are Based on B		on & Distribution	\$ 5,270,856	\$	3,574,358	\$2	2,857,934			



## Monthly Interim Report

# Waukesha Water Utility Future Water Supply

November 15, 2017

This update is solely intended for the use of Waukesha Water Utility's internal management and for Waukesha Water Utility's discussions with the Owner's Engineer and Contractor. The update is not intended to be and should not be used by any other parties without prior written consent from Baker Tilly Virchow Krause, LLP



BAKER TILLY



#### **Scope and Objectives**

Waukesha Water Utility ("WWU" or "Owner") engaged Baker Tilly Virchow Krause, LLP (Baker Tilly, "we" or "our") to perform construction audit services on the Future Water Supply project. Greeley and Hansen ("GH" or "PM/CM") is the Program Manager and Construction Manager engaged by the Owner.

The primary objective of this engagement is to verify whether project expenditures billed to Waukesha Water Utility are adequately supported, verifiable and appropriately allocated to the project.

#### **Current Period Significant Events**

This section of the monthly interim report summarizes Audit Issues and Requests for Information during the current period. The project-to-date Audit Issues (AI) and Request for Information (RFI) logs are included as attachments with this document.

#### **Current Period Audit Issues**

Invoice No. 14 from Greeley and Hansen was provided to Baker Tilly on November 14, 2017. We will review the invoice during November and report any audit issues on the December Status update.

#### **Current Period Request for Information**

There are no current period requests for information.

Great Lakes Water Supply Program

## Monthly Program Status Report No. 15 Invoice Period October 7, 2017 through November 10, 2017

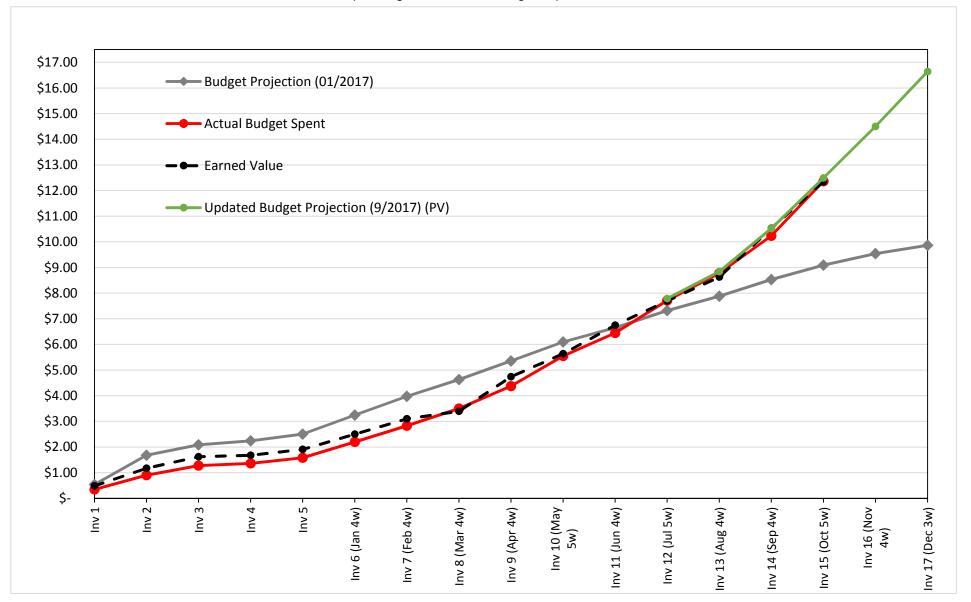
Exhibit 5: Earned Value Analysis



# Great Lakes Water Supply Program PM/CM Program Earned Value Chart Phase 1 and 2



(Excluding Allowances and Contingencies)

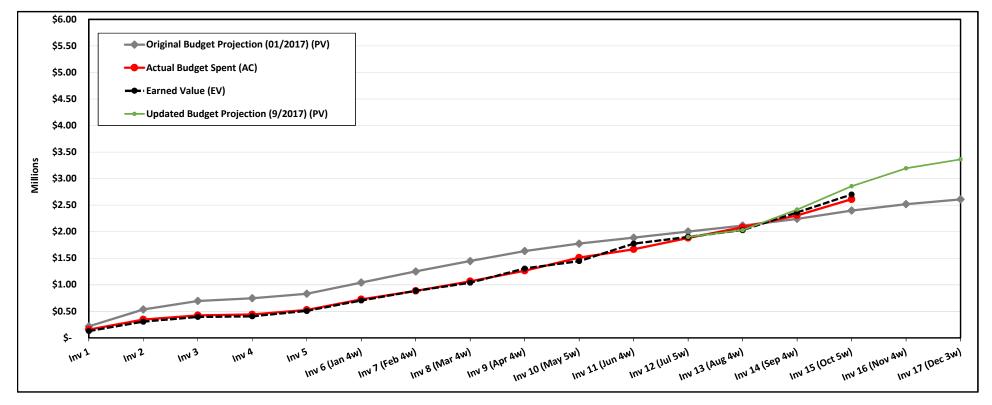


% Spent 72.7% Actual Budget Spent \$12,363,126.58 Schedule Performance Index (SPI) 1.17
Cost Performance Index (CPI) 1.00



## Task 1 - Program Management Earned Value Chart (Excluding Allowances and Contingencies)





Earned Value Calculations	
Budget at completion <sup>(BAC)(1)</sup> (BAC)	\$ 3,376,225.00
Estimate to Complete (ETC1) (ETC1=EAC1-AC)	\$ 652,716.66
Cost Variance <sup>(CV)</sup> (CV=EV-AC)	\$ 90,113.37
Schedule Variance <sup>(SV)</sup> (SV=EV-PV)	\$ (155,074.65)
Cost Performance Index <sup>(CPI)</sup> (CPI=EV/AC)	1.03
Schedule Performance Index <sup>(SPI)</sup> (SPI=EV/PV)	0.95
Cost /Schedule Index <sup>(CSI)</sup> (CSI=CPI x SPI)	0.98
Estimate at Completion (EAC1) (EAC1=BAC/CPI)	\$ 3,263,583.29
Variance at Completion (VAC1=BAC-EAC1)	\$ 112,641.72

#### (1) Task 1 Budget at Completion includes Program Contingency Authorizations

#### Task 1 Program Management Plan/Progress

- Selected Milwaukee as the wholesale water supplier.
- Submitted 2017 and 2018 Milwaukee Route Study cost and schedule.
- Submitted and obtained approval of a Task Authorizations and executed 5 Subconsultant Amendments for the approved Budget Shift.

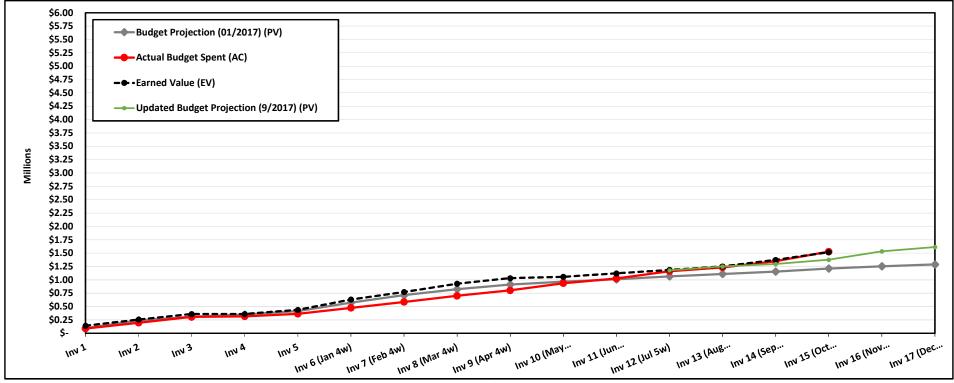
#### Task 1 Program Management Challenges

- The Task 1 budget was increased by the 2018 to 2017 Budget Shift approved by the Commission at their September 2017 meeting.
- The updated Planned Value is depicted starting at Invoice 12 and through the end of 2017.



## Task 2 - Programmatic Support Services Earned Value Chart (Excluding Allowances and Contingencies)





Note: Task 2 amount for Invoice 6 was reported incorrectly in the pervious version of this earned value analysis. The corrected cumulative amount is \$984.33 higher.

Earned Value Calculations	
Budget at completion <sup>(BAC)</sup> (BAC)	\$ 1,614,920.57
Estimate to Complete (ETC1) (ETC1=EAC1-AC)	\$ 97,575.97
Cost Variance <sup>(CV)</sup> (CV=EV-AC)	\$ (10,664.86)
Schedule Variance <sup>(SV)</sup> (SV=EV-PV)	\$ 141,827.34
Cost Performance Index <sup>(CPI)</sup> (CPI=EV/AC)	0.99
Schedule Performance Index <sup>(SPI)</sup> (SPI=EV/PV)	1.10
Cost /Schedule Index <sup>(CSI)</sup> (CSI=CPI x SPI)	1.10
Estimate at Completion (EAC1=BAC/CPI)	\$ 1,626,266.17
Variance at Completion <sup>(VAC1)</sup> (VAC1=BAC-EAC1)	\$ (11,345.60)

#### Task 2 Programmatic Support Services Plan/Progress

- Assisted WWU with communications and negotiations with the City of Milwaukee regarding the City of Milwaukee's proposal to supply water.
- Refined the stakeholder database based on stakeholder engagement during Open House and Field Investigations.
- Website functionality completed to include design and concept for the next phase of the Program, website maintenance for mobile use, general updates, and issue on Compact Documents page.

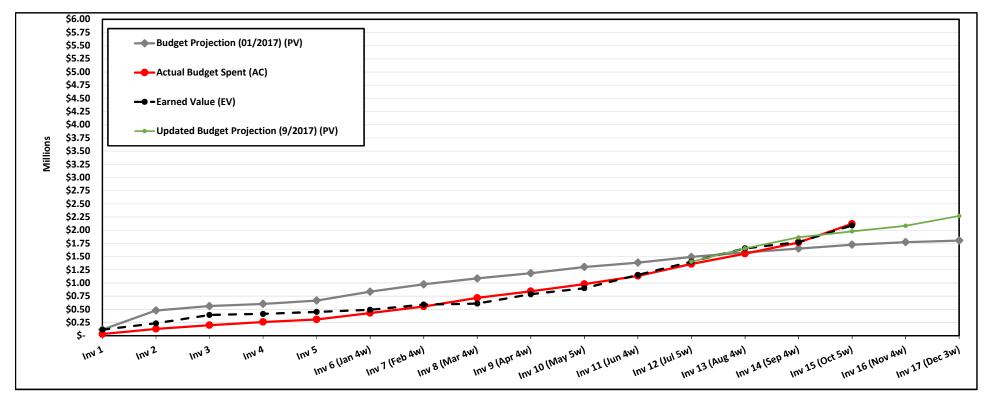
#### Task 2 Programmatic Support Services Challenges

- The Task 1 budget was increased by the 2018 to 2017 Budget Shift approved by the Commission at their September 2017 meeting.
- The updated Planned Value is depicted starting at Invoice 12 and through the end of 2017.



## Task 3 - Permitting Earned Value Chart (Excluding Allowances and Contingencies)





Note: The Task 3 amount for Invoice 5 was reported incorrectly in the pervious version of this Report. The correct cumulative amount is \$263.96 lower.

Earned Value Calculations	
Budget at completion <sup>(BAC)(1)</sup> (BAC)	\$ 2,273,029.42
Estimate to Complete <sup>(ETC1)</sup> (ETC1=EAC1-AC)	\$ 184,501.55
Cost Variance <sup>(CV)</sup> (CV=EV-AC)	\$ (30,580.79)
Schedule Variance (SV) (SV=EV-PV)	\$ 113,951.27
Cost Performance Index <sup>(CPI)</sup> (CPI=EV/AC)	0.99
Schedule Performance Index <sup>(SPI)</sup> (SPI=EV/PV)	1.06
Cost /Schedule Index <sup>(CSI)</sup> (CSI=CPI x SPI)	1.04
Estimate at Completion (EAC1) (EAC1=BAC/CPI)	\$ 2,306,269.41
Variance at Completion <sup>(VAC1)</sup> (VAC1=BAC-EAC1)	\$ (33,239.99)

#### Task 3 Permitting Plan/Progress

- Continued progress on pipeline thermal modeling and Root River thermal modeling.
- Advanced a plan to communicate with water softener organization and local representatives for chloride reduction and held water softener organization meeting to further discuss optimization strategies with stakeholders.
- Coordinated calls from Waukesha County regarding installation application for Fiber Duct Package potentially in conflict with proposed return flow and water pipeline.

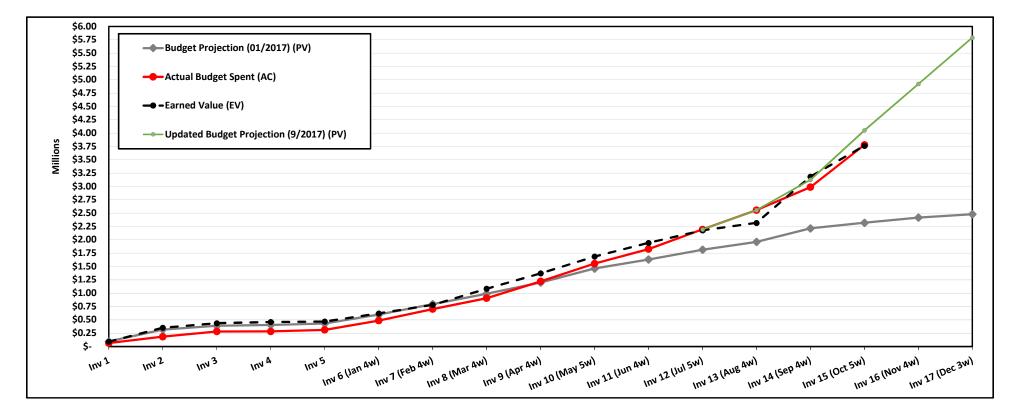
#### Task 3 Permitting Challenges

 The Task 3 budget was increased by the 2018 to 2017 Budget Shift approved by the Commission at their September 2017 meeting. The updated Planned Value is depicted starting at Invoice 12 and through the end of 2017.



## Task 4 - Route Study and Pipeline Earned Value Chart (Excluding Allowances and Contingencies)





Earned Value Calculations	
Budget at completion <sup>(BAC)</sup> (BAC)	\$ 5,790,482.98
Estimate to Complete <sup>(ETC1)</sup> (ETC1=EAC1-AC)	\$ 2,035,136.14
Cost Variance <sup>(CV)</sup> (CV=EV-AC)	\$ (15,724.61)
Schedule Variance (SV) (SV=EV-PV)	\$ (289,524.15)
Cost Performance Index <sup>(CPI)</sup> (CPI=EV/AC)	1.00
Schedule Performance Index <sup>(SPI)</sup> (SPI=EV/PV)	0.93
Cost /Schedule Index <sup>(CSI)</sup> (CSI=CPI x SPI)	0.92
Estimate at Completion (EAC1=BAC/CPI)	\$ 5,814,674.69
Variance at Completion (VAC1=BAC-EAC1)	\$ (24,191.71)

#### Task 4 Route Study and Pipeline Plan/Progress

- Submitted the Draft Route Study: Oak Creek to WWU for review.
- Initiated the Milwaukee Route Study.
- Submitted Draft Preliminary Design Report for QM review.
- Determined the minimum horizontal separation distance allowed without exception between the Water Supply and Return Flow Pipelines with input from WDNR.
- Continued with field investigations along the return flow corridor.

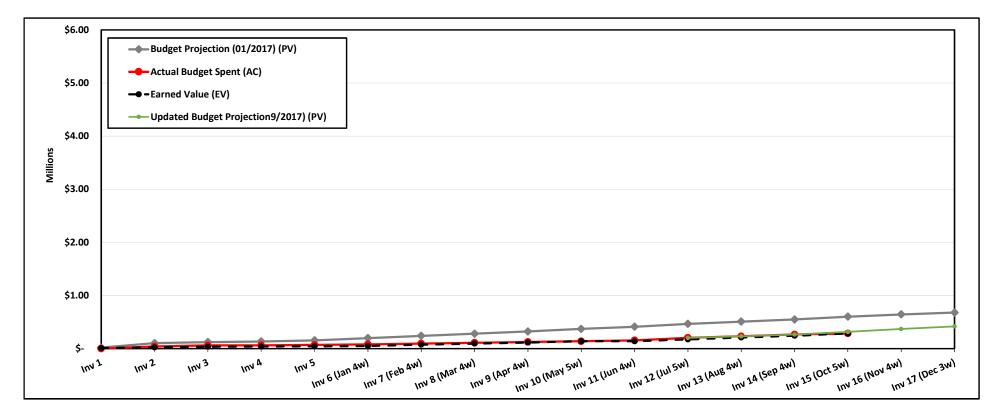
#### Task 4 Route Study and Pipeline Challenges

- The Task 4 budget was increased by the 2018 to 2017 Budget Shift approved by the Commission at their September 2017 meeting.
- The updated Planned Value is depicted starting at Invoice 12 and through the end of 2017.



## Task 5 - Distribution System and Water Quality Earned Value Chart (Excluding Allowances and Contingencies)





Earned Value Calculations	
Budget at completion <sup>(BAC)(1)</sup> (BAC)	\$ 698,405.42
Estimate to Complete <sup>(ETC1)</sup> (ETC1=EAC1-AC)	\$ 409,752.70
Cost Variance <sup>(CV)</sup> (CV=EV-AC)	\$ 1,602.82
Schedule Variance <sup>(SV)</sup> (SV=EV-PV)	\$ (27,936.22)
Cost Performance Index <sup>(CPI)</sup> (CPI=EV/AC)	1.01
Schedule Performance Index <sup>(SPI)</sup> (SPI=EV/PV)	0.91
Cost /Schedule Index <sup>(CSI)</sup> (CSI=CPI x SPI)	0.92
Estimate at Completion (EAC1) (EAC1=BAC/CPI)	\$ 694,496.10
Variance at Completion <sup>(VAC1)</sup> (VAC1=BAC-EAC1)	\$ 3,909.32

## Task 5 Distribution System and Water Quality Plan/Progress

- Completed modeling calibration and presented connection point evaluation.
- Initiated discussion regarding scheduling meeting for revisiting pipe loop testing plan in light of selection of Milwaukee as the water supplier.

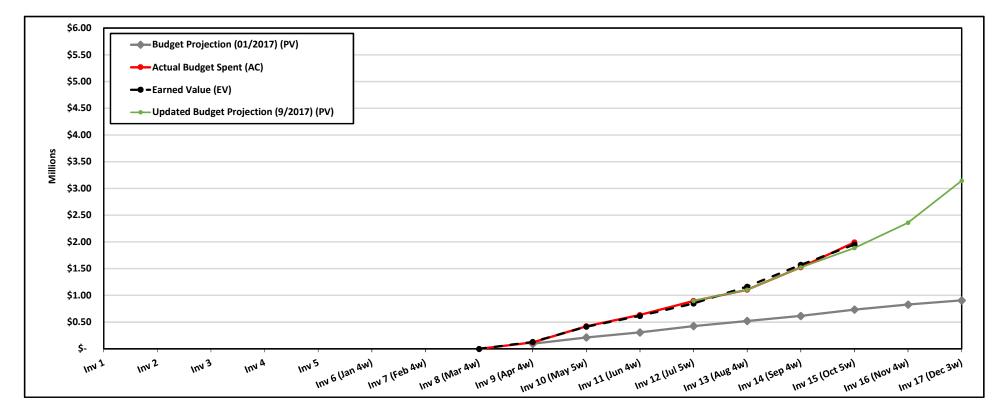
#### Task 5 Distribution System and Water Quality Challenges

 Selection of the water supplier has resulted in a delay in having the WDNR Water Supply meetings for permitting has impacted the schedule for Pipe Loop Testing and water quality analysis.



## Task 6 - Pump Stations, Storage, and Chemical Treatment Earned Value Chart (Excluding Allowances and Contingencies)





Earned Value Calculations	
Budget at completion <sup>(BAC)(1)</sup> (BAC)	\$ 3,145,270.73
Estimate to Complete <sup>(ETC1)</sup> (ETC1=EAC1-AC)	\$ 1,221,087.58
Cost Variance <sup>(CV)</sup> (CV=EV-AC)	\$ (42,232.94)
Schedule Variance <sup>(SV)</sup> (SV=EV-PV)	\$ 62,905.41
Cost Performance Index <sup>(CPI)</sup> (CPI=EV/AC)	0.98
Schedule Performance Index <sup>(SPI)</sup> (SPI=EV/PV)	1.03
Cost /Schedule Index <sup>(CSI)</sup> (CSI=CPI x SPI)	1.01
Estimate at Completion (EAC1=BAC/CPI)	\$ 3,213,388.37
Variance at Completion (VAC1=BAC-EAC1)	\$ (68,117.64)

## Task 6 Pump Stations, Storage and Chemical Treatment Plan/Progress

- Produced the Draft Preliminary Design Report for review by the QM team.
- Continued development of the Phase 1 Environmental Site Assessment for BPS Site.
- Continued with field investigations for the Booster Puming Station.

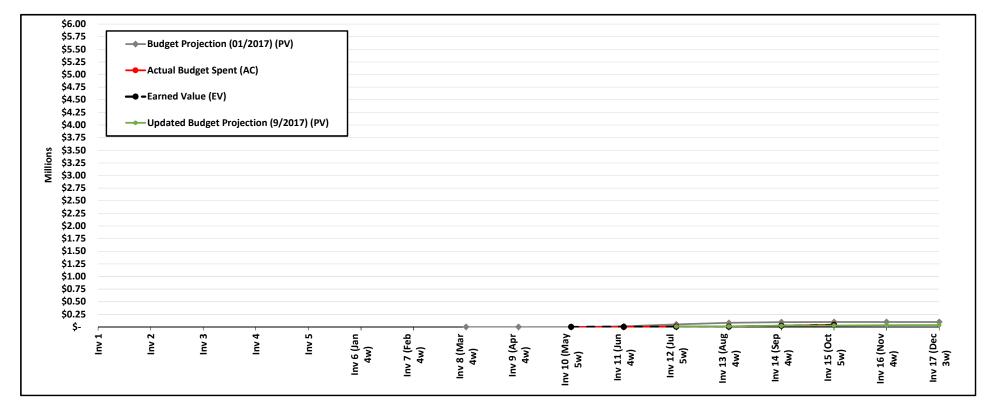
## Task 6 Pump Stations, Storage and Chemical Treatment Challenges

- The Task 6 budget was increased by the 2018 to 2017 Budget Shift approved by the Commission at their September 2017 meeting.
- The updated Planned Value is depicted starting at Invoice 12 and through the end of 2017.



## Task 7 - Construction and Construction Management Earned Value Chart (Excluding Allowances and Contingencies)





Earned Value Calculations	
Budget at completion <sup>(BAC)(1)</sup> (BAC)	\$ 99,105.00
Estimate to Complete <sup>(ETC1)</sup> (ETC1=EAC1-AC)	\$ 67,828.73
Cost Variance <sup>(CV)</sup> (CV=EV-AC)	\$ (5,577.15)
Schedule Variance (SV) (SV=EV-PV)	\$ 9,910.50
Cost Performance Index <sup>(CPI)</sup> (CPI=EV/AC)	0.88
Schedule Performance Index <sup>(SPI)</sup> (SPI=EV/PV)	1.33
Cost /Schedule Index <sup>(CSI)</sup> (CSI=CPI x SPI)	1.17
Estimate at Completion <sup>(EAC1)</sup> (EAC1=BAC/CPI)	\$ 113,047.88
Variance at Completion <sup>(VAC1)</sup> (VAC1=BAC-EAC1)	\$ (13,942.88)

## Task 7 Construction and Construction Management Plan/Progress

- Construction services planning was provided including determination of possible duration and scheduling of contract packages, required personnel for Construction Engineering Inspection (CEI)services and scope of CEI services.
- Development of draft construction procedure manual has been initiated.

## Task 7 Construction and Construction Management Challenges

No challenges identified.