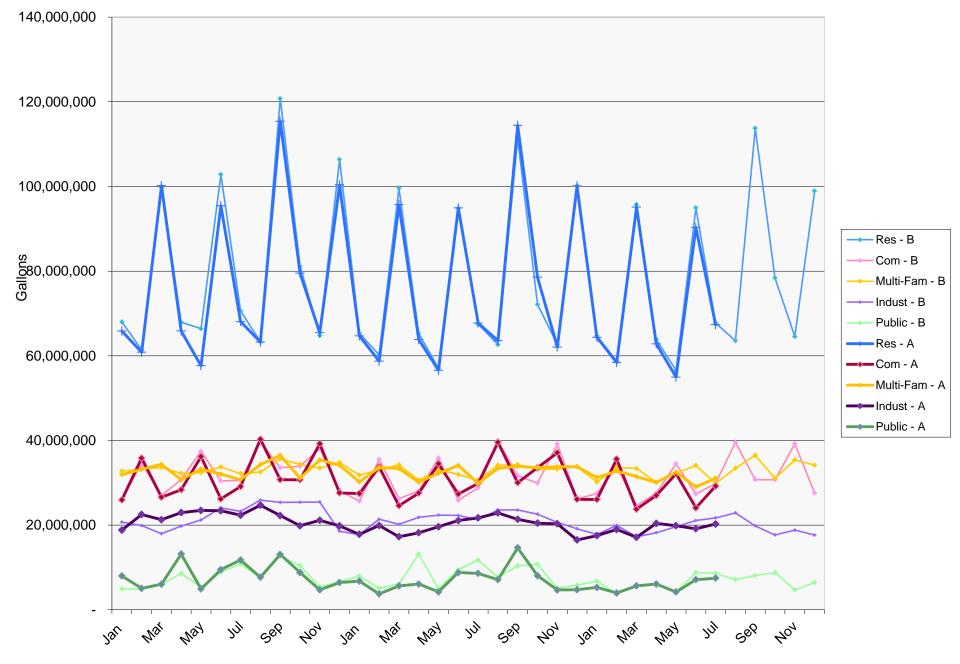
#### WAUKESHA WATER UTILITY STATEMENT OF REVENUES & EXPENSES MONTH ENDED 7/31/2017

|                                |                | CURRENT M    | IONTH          |          |                |                | ANNUAL BUDGET  |           |                 |  |
|--------------------------------|----------------|--------------|----------------|----------|----------------|----------------|----------------|-----------|-----------------|--|
|                                | ACTUAL'17      | BUDGET'17    | VARIANCE       | %        | ACTUAL'17      | BUDGET'17      | VARIANCE       | %         |                 |  |
| OPERATING REVENUES:            |                |              |                |          |                |                |                |           |                 |  |
| Residential                    | \$342,963.87   | \$380,073.07 | (\$37,109.20)  | (9.76)   | \$2,536,338.51 | \$2,714,521.81 | (\$178,183.30) | (6.56)    | \$5,030,437.72  |  |
| Commercial                     | 117,412.64     | 132,685.95   | (15,273.31)    | (11.51)  | 783,006.82     | 847,808.01     | (64,801.19)    | (7.64)    | 1,569,599.84    |  |
| Industrial                     | 66,065.43      | 78,247.02    | (12,181.59)    | (15.57)  | 433,297.39     | 479,321.11     | (46,023.72)    | (9.60)    | 827,015.90      |  |
| Public                         | 27,717.21      | 34,619.82    | (6,902.61)     | (19.94)  | 152,986.10     | 180,321.99     | (27,335.89)    | (15.16)   | 326,294.38      |  |
| Multi Family                   | 125,153.79     | 134,372.59   | (9,218.80)     | (6.86)   | 863,435.81     | 930,709.38     | (67,273.57)    | (7.23)    | 1,668,162.54    |  |
| Total Metered Sales            | \$679,312.94   | \$759,998.45 | (\$80,685.51)  | (10.62)  | \$4,769,064.63 | \$5,152,682.30 | (\$383,617.67) | (7.45)    | \$9,421,510.38  |  |
| Private Fire Capacity          | \$15,883.22    | \$17,319.33  | (\$1,436.11)   | (8.29)   | \$109,642.63   | \$113,939.44   | (\$4,296.81)   | (3.77)    | \$199,976.65    |  |
| Public Fire Capacity           | 139,335.80     | 151,533.87   | (12,198.07)    | (8.05)   | 1,027,251.92   | 1,084,407.19   | (57,155.27)    | (5.27)    | 1,927,919.50    |  |
| Other Operating Revenues       | 30,213.84      | 28,545.06    | 1,668.78       | 5.85     | 228,947.50     | 241,138.03     | (12,190.53)    | (5.06)    | 496,500.37      |  |
| TOTAL OPERATING REVENUES       | \$864,745.80   | \$957,396.71 | (\$92,650.91)  | (9.68)   | \$6,134,906.68 | \$6,592,166.96 | (\$457,260.28) | (6.94)    | \$12,045,906.90 |  |
| OPERATING EXPENSES:            |                |              |                |          |                |                |                |           |                 |  |
| Source                         | \$70,008.06    | \$64,128.89  | \$5,879.17     | 9.17     | \$1,329,782.73 | \$448,902.23   | \$880,880.50   | 196.23    | \$769,546.68    |  |
| Pumping                        | 76,562.58      | 82,634.79    | (6,072.21)     | (7.35)   | 481,575.75     | 585,321.00     | (103,745.25)   | (17.72)   | 1,015,429.53    |  |
| Treatment                      | 26,595.89      | 31,468.90    | (4,873.01)     | (15.49)  | 241,015.44     | 268,069.80     | (27,054.36)    | (10.09)   | 473,201.80      |  |
| Distribution                   | 63,455.72      | 118,327.12   | (54,871.40)    | (46.37)  | 553,046.84     | 863,257.79     | (310,210.95)   | (35.93)   | 1,476,932.94    |  |
| Customer Service               | 12,443.96      | 17,502.81    | (5,058.85)     | (28.90)  | 113,059.44     | 109,593.90     | 3,465.54       | 3.16      | 203,204.17      |  |
| Administrative                 | 157,893.05     | 119,136.18   | 38,756.87      | 32.53    | 977,312.03     | 1,002,777.66   | (25,465.63)    | (2.54)    | 1,626,498.94    |  |
| Total                          | \$406,959.26   | \$433,198.69 | (26,239.43)    | (6.06)   | \$3,695,792.23 | \$3,277,922.38 | 417,869.85     | 12.75     | \$5,564,814.06  |  |
| MANAGERS' MARGIN               | 457,786.54     | 524,198.02   | (66,411.48)    | (12.67)  | 2,439,114.45   | 3,314,244.58   | (\$875,130.13) | (26.41)   | 6,481,092.84    |  |
| Depreciation                   | 166,260.51     | 156,724.04   | 9,536.47       | 6.08     | 1,119,892.22   | 1,097,068.28   | 22,823.94      | 2.08      | 1,880,688.48    |  |
| Tax Equivalent                 | 146,566.83     | 145,847.99   | 718.84         | 0.49     | 1,025,652.51   | 1,020,935.93   | 4,716.58       | 0.46      | 1,750,175.88    |  |
| Other Taxes                    | 11,254.38      | 12,017.86    | (763.48)       | (6.35)   | 83,887.35      | 84,250.02      | (362.67)       | (0.43)    | 154,451.82      |  |
| TOTAL OPERATING EXPENSES       | \$731,040.98   | \$747,788.58 | (\$16,747.60)  | (2.24)   | \$5,925,224.31 | \$5,480,176.61 | \$445,047.70   | 8.12      | \$9,350,130.24  |  |
| TOTAL OPERATING INCOME(LOSS)   | \$133,704.82   | \$209,608.13 | (\$75,903.31)  | (36.21)  | \$209,682.37   | \$1,111,990.35 | (\$902,307.98) | (81.14)   | \$2,695,776.66  |  |
| NON OPERATING INCOME&(EXPENSE) | (260,512.59)   | (145,143.82) | (115,368.77)   | 79.49    | (888,792.32)   | (1,037,382.04) | 148,589.72     | (14.32)   | (1,009,821.75)  |  |
| NET INCOME(LOSS)               | (\$126,807.77) | \$64,464.31  | (\$191,272.08) | (296.71) | (\$679,109.95) | \$74,608.31    | (\$753,718.26) | (1010.23) | \$1,685,954.91  |  |

WWU Billed Gallons Actual v Budget 2015 - 2017



# WAUKESHA WATER UTILITY STATEMENT OF SOURCES AND USES OF CASH PERIOD ENDING JULY 31, 2017

# Cash Balance - June 30, 2017

\$37,066,517

# SOURCES:

USES:

| Operations:   |  |             |              |
|---|--|-------------|--------------|
| Customers - water sales   | \$877,971  |             |              |
| Waste Water Utility - joint metering billing  | 56,968   |             |              |
| Rent of utility property - cellular leases  | 12,028   |             |              |
| Receipts on sewer bills   | 1,181,203  |             |              |
| Other - miscellaneous   | 14,138   |             |              |
| Total Cash From Operating Activities  | \$2,142,308  |             |              |
| <b>Capital and Related Financing Activities:</b>  |  |             |              |
| Grants  |  |             |              |
| Contributions   | 17,314   |             |              |
| Issuance of long-term debt  |  |             |              |
| Sale of short-term debt   |  |             |              |
| Interest income   | 28,783   |             |              |
| Total Cash From Capital/ Investing Activities   | \$46,097   |             |              |
| Total Cash Receipts   |  | \$2,188,405 | -            |
| Salaries, wages, payroll taxes and benefits<br>Subcontracted and outside services<br>Disbursement to city for sewer transfer<br>Pumping power<br>Purchase of materials and supplies | \$245,031<br>24,922<br>1,004,051<br>59,042<br>65,093 |             |              |
| Tax equivalent - PILOT  | 00,000   |             |              |
| Acquisition of capital assets<br>Debt service - principal<br>Debt service - interest  | 1,344,666  |             |              |
| Total Cash Used   |  | \$2,742,805 |              |
| Net Change in Cash  |  |             | (\$554,400)  |
| Cash Balance - July 31, 2017  |  |             | \$36,512,117 |

# WAUKESHA WATER UTILITY BALANCE SHEET 7/31/2017

| ASSETS  | THIS YEAR                                   |
|---|---|
|   | <b>\$00.050.044.07</b>                      |
|   | \$22,856,611.87                             |
| ACCOUNTS RECEIVABLE   | 4,856,255.71                                |
| RECEIVABLE FROM SEWER REIMB   | 0.00  |
| MATERIALS & SUPPLIES  | 559,715.40                                  |
|   | 15,997.00                                   |
| ACCRUED UTILITY REVENUE<br>TOTAL CURRENT ASSETS                                 | 0.00  |
| DEFERRED  | \$28,288,579.98                             |
| DEFERRED ASSETS   | \$10,199,768.42                             |
| TOTAL DEFERRED DEBITS   | 10,199,768.42                               |
| RESTRICTED  |   |
| DEBT PAYMENT ACCOUNT  | \$1,058,952.04                              |
| DEBT RESERVE ACCOUNT  | 475,489.44                                  |
| CONSTRUCTION FUND   | 10,478,908.60                               |
| TAX EQUIV RESERVE ACCOUNT   | 1,642,155.33                                |
| TOTAL RESTRICTED FUNDS  | \$13,655,505.41                             |
| LONG TERM   |   |
| UTILITY PLANT IN SERVICE-NET  | \$89,262,522.37                             |
| PROPERTY HELD FOR FUTURE USE  | 435,089.69                                  |
| CONSTRUCTION WORK IN PROGRESS   | 1,781,023.24                                |
| RESTRICTED NET PENSION  | (225,396.00)                                |
| TOTAL UTILITY PLANT   | \$91,253,239.30                             |
| TOTAL ASSETS  | \$143,397,093.11                            |
| LIABILITIES<br>CURRENT<br>CUR PORTION BOND<br>NOTES PAYABLE<br>ACCOUNTS PAYABLE | 420,134.14<br>27,285,000.00<br>1,831,047.33 |
| PAYABLE TO OTHER FUNDS  | 2,931,143.38                                |
| CUSTOMER DEPOSITS   | 96,269.68                                   |
| A/P MISCELLANEOUS   | 0.00  |
| TAXES ACCRUED   | 1,046,283.00                                |
| INTEREST ACCRUED  | 539,629.89                                  |
| EMPLOYEE WITHHOLDING  | 15,056.82                                   |
| ACCRUED PAYROLL   | 93,962.00                                   |
| ACCRUED VACATION  | 227,813.40                                  |
| TOTAL CURRENT LIABILITIES   | \$34,486,339.64                             |
| DEFERRED CREDITS<br>CUSTOMER ADVANCES CONSTRUCTION                              | \$0.00                                      |
| REGULATORY LIABILITY  | 50.00<br>1,226,261.98                       |
| OPEB LIABILITY  | 1,235,875.73                                |
| OTHER DEFERRED CREDITS  | 3,160,701.04                                |
| TOTAL DEFERRED CREDITS  |   |
| LONG-TERM   | \$5,622,838.75                              |
| 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)   | (679,109.95)                                |
| TOTAL EQUITY  | \$75,159,007.21                             |
| TOTAL EQUITY AND LIABILITIES  | \$143,397,093.11                            |
|   |   |

### WWU TRANSMISSION AND DISTRIBUTION BUDGET VARIANCE ANALYSIS

| Project   | Project #      | Description/Location   | Budget                     |          | Current<br>Estimate  | P         | JC Total            | Ald | ermanic District | Construction<br>Completion |
|---|----------------|--|----------------------------|----------|----------------------|-----------|---------------------|-----|------------------|----------------------------|
| WM offsets from WSB<br>from Fiddlers Creek to<br>Northview Road               | M00500         | Water Main offsets to<br>accommodate changes in the<br>storm sewer and roadway<br>alignments. Project run by CH2M<br>on behalf of the County.  |                            | \$       | 58,407               | \$        | 49,488              | 14  | Bill Boyle       | December<br>2017           |
| WM offsets from WSB   |                | Water Main offsets to  |                            |          |                      |           |                     | 6   | Adam Jankowski   |                            |
| from Genesee Road   | M00501         | accommodate changes in the storm sewer and roadway   |                            | \$       | 250,000              | \$        | 9,432               | 7   | Daniel J. Manion | Fall 2018                  |
| to Fiddlers Creek<br>Drive  |                | alignments. Project run by   |                            | Ŷ        | 200,000              | Ť         | 0,.02               | 13  | Dean Lemke       |                            |
| Biwe  |                | WDOT.  |                            |          |                      |           |                     | 14  | Bill Boyle       |                            |
| WM offsets from WSB<br>from Northview to                                      | M00502         | Water Main offsets to<br>accommodate changes in the<br>storm sewer and roadway   |                            | \$       | 298,751              | \$        | 251,308             | 5   | Peter Bartels    | November<br>2017           |
| Rolling Ridge Drive   |                | alignments. Project run by the City.   |                            |          |                      |           |                     | 14  | Bill Boyle       |                            |
| N Grand - 5 Points to<br>Wisconsin and South<br>St - Clinton to Grand<br>Ave. | M00507         | Replace 600 feet if 10" main from<br>1908 with 12" on South Street<br>from Clinton to Grand and on N.<br>Grand from 5 Points to<br>Wisconsin. Project done with the<br>City.                       |                            | \$       | 298,945              | \$        | 249,150             | 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  | 1400500        | Replace 750 of 6" main from 1911   | \$2,787,447                | ¢        | 470.000              | ¢         | \$ 9,818            | 3   | Cassie Rodriguez | November                   |
| to Main St.   | M00509         | with 8" on Caroline between<br>Arcadian and Main Street. Project<br>done with City Sanitary.   |                            | \$       | 176,392              | \$        |                     | 11  | Erik Helgestad   | 2017                       |
| NW Barstow - Buena<br>Vista to Lemira Ave.                                    | M00510         | Replace 1,560 feet of 6" main<br>from 1909, 1915, and 1930 with<br>8" on NW Barstow from Buena<br>Vista to Lemira. Project done with<br>the City.  |                            | \$       | 312,364              | \$        | 256,569             | 2   | Eric Payne       | June 2017                  |
| Arcadian - Eugene to<br>Greenfield Ave.                                       | M00512         | Replace 1,500 feet of 6" main<br>from 1924 with 550' of 8" and 950'<br>12" on NW Barstow from Buena<br>Vista to Lemira. Project done with<br>the City.   |                            | \$       | 363,087              | \$        | 236,869             | 3   | Cassie Rodriguez | October<br>2017            |
| Oscar Street -<br>Jefferson to Highland<br>Ave.                               | M00513         | Lower services on Oscar between<br>Jefferson & Highland to eliminate<br>annual water runs due to large<br>storm sewer. Main is from 1958<br>but will not be replaced due to<br>budget constraints. |                            | \$       | 41,622               | \$        | 6,633               | 3   | Cassie Rodriguez | October<br>2017            |
| Waukesha County<br>Expo Center  | M00514         | Eliminate water meter pit and<br>install 20 feet of 8" ductile iron<br>pipe.   |                            | \$       | 7,508                | \$        | 7,508               | 2   | Eric Payne       | May 2017                   |
|   | Routine Misc R |  | \$ 2,787,447<br>\$ 558,809 | \$<br>\$ | 1,807,077            | \$1<br>\$ | ,077,571            |     |                  |                            |
|   | Total R        |  | \$ 558,809<br>\$ 3,346,256 |          | 558,809<br>2,365,886 | · ·       | 558,809<br>,636,380 |     |                  |                            |
|   |                |  |                            |          |                      | 1         |                     |     |                  |                            |
| West Ave from<br>Wisconsin to<br>Glenwood, West on                            | GLCD0008       | Replacing 8" from 1913 on West<br>from Wisconsin to Glenwood, 6"<br>from 1927 on Glenwood, with 24"<br>main, then new 24" crossing river,  | \$ 1,924,600               | \$       | 1,632,662            | \$        | 72,315              | 2   | Eric Payne       | November                   |
| Glenwood, under Fox<br>River to Mountain<br>Ave.                              |                | passing through Grede Park and<br>connecting to 20" main on<br>Mountain. Project done with City<br>Sanitary.   |                            |          | , ,                  |           | ,                   | 11  | Erik Helgestad   | 2017                       |
| Dist  | ibution Syste  | m Improvements   | \$1,924,600                | \$       | 1,632,662            | \$        | 72,315              |     | •                | •                          |
| Disti   | ,              | 1  |                            |          | .,,                  |           | 7                   |     |                  |                            |

# Monthly Interim Report

# Waukesha Water Utility Future Water Supply

August 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





Candor. Insight. Results.





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**

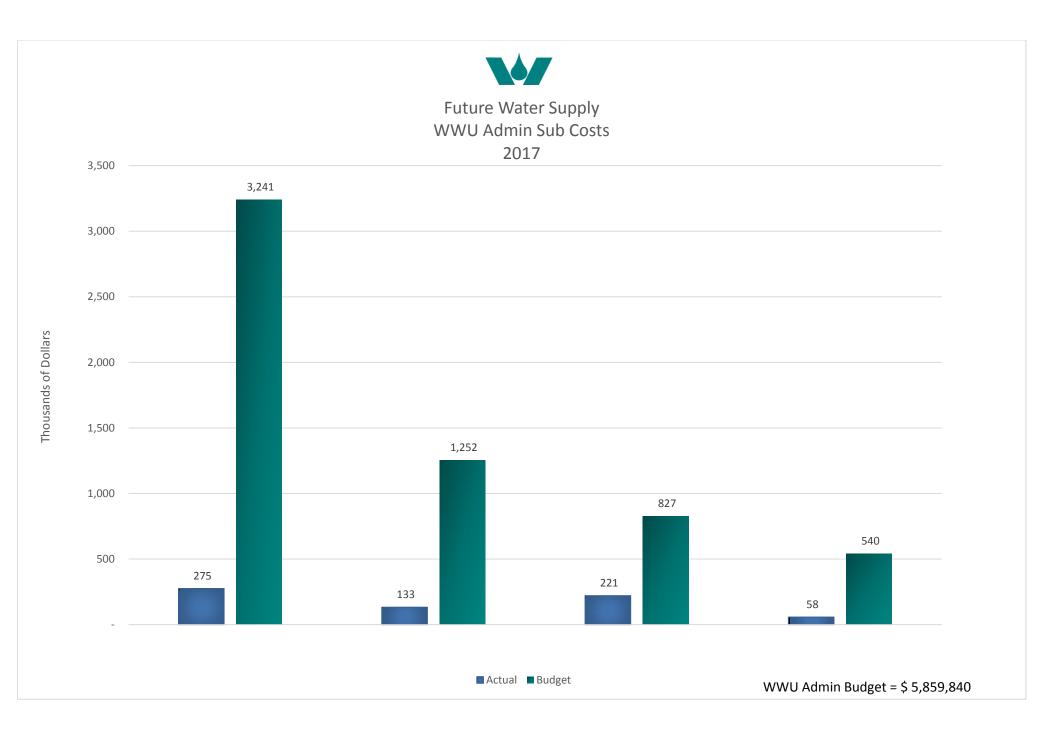
This section of the monthly interim report summarizes Audit Issues and Requests for Information during the current period. The project-to-date Audit Issues (AI) and Request for Information (RFI) logs are included as attachments with this document.

# **Current Period Audit Issues**

During the current period we reviewed Invoice No. 11 from Greeley and Hansen. Additional information is required to verify the Earned Value Analysis included as Exhibit 5 in Monthly Program Status Report No. 11 (see AI-003). We met with Greeley and Hansen on July 27, 2017 and conducted a follow up call on August 7, 2017 to discuss the earned value calculations provided with monthly progress reporting. Specifically we inquired about the Budget at Completion for each task, actual costs utilized in the calculations, and the methodology for determining earned value for the period. Greeley and Hansen provided additional support on August 7, 2017; however, the values per the support did not reconcile to Exhibit 5 in Monthly Program Status Report No. 11. We will continue to follow up with Greeley and Hansen during August 2017 in order to close this audit issue.

# **Current Period Request for Information**

Additional documentation was requested to validate labor hours for four Greeley and Hansen employees whose hours did not reconcile to billings on Invoice No. 11 (see RFI-012). Greeley and Hanson provided the requested documentation, the labor hours were verified, and this item was closed.





# Great Lakes Water Supply Program PM/CM

### Budget Summary (Phase 1 and Phase 2)

# Greeley and Hansen LLC Thru July 17, 2017

|                | Phase 1 Budget Summary   |  |                                 | Phase 2 Budget Summary         |                 |   |                | Program Budget Summary |                                |                            |   |  |                           |                     |
|----------------|--|--|---------------------------------|--------------------------------|-----------------|---|----------------|------------------------|--------------------------------|----------------------------|---|--|---------------------------|---------------------|
| Task<br>Number | Description  | Previously<br>Phase 1 Budget Invoiced (thru<br>Inv 10) | Invoice No. 11 Invoiced to Date | Phase 1<br>Remaining<br>Budget | Phase 2 Budget  | Previously<br>Invoiced (thru<br>Inv 10) | Invoice No. 11 | Invoiced to Date       | Phase 2<br>Remaining<br>Budget | Program<br>Approved Budget | Previously<br>Invoiced (thru<br>Inv 10) | Total Invoice<br>No. 11 (Phase 1<br>+ 2) | Total Invoiced to<br>Date | Remaining<br>Budget |
| Task 1         | Program Management   | \$ 526,460.00 \$ 462,949.38                            | \$ 2,957.15 \$ 465,906.53       | \$ 60,553.47                   | \$ 1,880,329.00 | \$ 954,720.63                           | \$ 147,441.52  | \$ 1,102,162.15        | \$ 778,166.85                  | \$ 2,406,789.00            | \$ 1,417,670.01                         | \$ 150,398.67                            | \$ 1,568,068.68           | \$ 838,720.32       |
| Task 2         | Programmatic Support<br>Services   | \$ 336,701.00 \$ 316,708.36                            | \$ - \$ 316,708.36              | \$ 19,992.64                   | \$ 952,370.00   | \$ 621,375.52                           | \$ 87,978.21   | \$ 709,353.73          | \$ 243,016.27                  | \$ 1,289,071.00            | \$ 938,083.88                           | \$ 87,978.21                             | \$ 1,026,062.09           | \$ 263,008.91       |
| Task 3         | Permitting   | \$ 649,764.00 \$ 403,114.48                            | \$ 22,683.54 \$ 425,798.02      | \$ 223,965.98                  | \$ 1,145,304.00 | \$ 575,713.18                           | \$ 131,800.83  | \$ 707,514.01          | \$ 437,789.99                  | \$ 1,795,068.00            | \$ 978,827.66                           | \$ 154,484.37                            | \$ 1,133,312.03           | \$ 661,755.97       |
| Task 4         | Route Study and Pipeline   | \$ 440,700.00 \$ 367,058.70                            | \$ - \$ 367,058.70              | \$ 73,641.30                   | \$ 1,882,754.00 | \$ 1,186,919.78                         | \$ 273,963.56  | \$ 1,460,883.34        | \$ 421,870.66                  | \$ 2,323,454.00            | \$ 1,553,978.48                         | \$ 273,963.56                            | \$ 1,827,942.03           | \$ 495,511.97       |
| Task 5         | Distribution System and Water Quality  | \$ 259,751.00 \$ 139,808.12                            | \$ 14,391.87 \$ 154,199.99      | \$ 105,551.01                  | \$ 438,654.00   | \$-                                     | \$ 1,396.08    | \$ 1,396.08            | \$ 437,257.92                  | \$ 698,405.00              | \$ 139,808.12                           | \$ 15,787.95                             | \$ 155,596.07             | \$ 542,808.93       |
| Task 6         | Pump Stations, Storage and<br>Chemical Treatment                                   |  |                                 |                                | \$ 908,390.00   | \$ 423,305.73                           | \$ 211,103.27  | \$ 634,409.00          | \$ 273,981.00                  | \$ 908,390.00              | \$ 423,305.73                           | \$ 211,103.27                            | \$ 634,409.00             | \$ 273,981.00       |
| Task 7         | Construction and Construction<br>Management  |  |                                 |                                | \$ 99,105.00    |   | \$ 1,483.08    |                        | \$ 99,105.00                   | \$ 99,105.00               | \$-                                     | \$ 1,483.08                              | \$ 1,483.08               | \$ 97,621.92        |
|                | Miscellaneous Services<br>Allowances, Task<br>Authorizations, and<br>Contingencies | \$ 169,897.00 \$ 93,081.94                             | \$ 8,223.48 \$ 101,305.42       | \$ 68,591.58                   | \$ 761,271.00   |   | \$-            |                        | \$ 761,271.00                  | \$ 931,168.00              | \$ 93,081.94                            | \$ 8,223.48                              | \$ 101,305.42             | \$ 829,862.58       |
|                | TOTAL  | \$ 2,383,273.00 \$ 1,782,720.98                        | \$ 48,256.03 \$ 1,830,977.02    | \$ 552,295.98                  | \$ 8,068,177.00 | \$ 3,762,034.83                         | \$ 855,166.49  | \$ 4,615,718.30        | \$ 3,452,458.70                | \$ 10,451,450.00           | \$ 5,544,755.81                         | \$ 903,422.52                            | \$ 6,448,178.40           | \$ 4,003,271.60     |



Great Lakes Water Supply Program

Monthly Program Status Report No. 11 Invoice Period June 10, 2017 through July 7, 2017

Exhibit 4: Task-Hour Status





Great Lakes Water Supply Program PM/CM

Hours Summary (Phase 1 and Phase 2)

Greeley and Hansen LLC

Thru July 19, 2017

| Ph             | ase 1& 2 Hours Summary                           | Program Hour Summary      |   |  |                           |                    |  |  |  |  |
|----------------|--|---------------------------|---|--|---------------------------|--------------------|--|--|--|--|
| Task<br>Number | Description                                      | Program<br>Approved Hours | Previously<br>Invoiced (thru<br>Inv 10) | Current Invoice<br>No. 11 (Phase 1<br>+ 2) | Total Invoiced to<br>Date | Remaining<br>Hours |  |  |  |  |
| Task 1         | Program Management                               | 13,910.0                  | 8,557.0                                 | 1,001.5                                    | 9,558.5                   | 4,351.5            |  |  |  |  |
| Task 2         | Programmatic Support<br>Services                 | 6,430.0                   | 4,906.5                                 | 444.8                                      | 5,351.3                   | 1,078.8            |  |  |  |  |
| Task 3         | Permitting                                       | 10,754.0                  | 5,086.3                                 | 932.7                                      | 6,019.0                   | 4,735.1            |  |  |  |  |
| Task 4         | Route Study and Pipeline                         | 16,041.0                  | 10,372.2                                | 1,793.7                                    | 12,165.9                  | 3,875.1            |  |  |  |  |
| Task 5         | Distribution System and Water Quality            | 3,327.0                   | 390.9                                   | 109.8                                      | 500.7                     | 2,826.4            |  |  |  |  |
| Task 6         | Pump Stations, Storage and<br>Chemical Treatment | 7,010.0                   | 2,354.5                                 | 1,557.8                                    | 3,912.3                   | 3,097.8            |  |  |  |  |
| Task 7         | Construction and Construction<br>Management      | 600.0                     | 0.0                                     | 10.5                                       | 10.5                      | 589.5              |  |  |  |  |
|                | Miscellaneous Services<br>Allowance              | 1,066.0                   | 0.0                                     | 40.0                                       | 40.0                      | 1,026.0            |  |  |  |  |
|                | <br>TOTAL  | 59,138.0                  | 31,667.4                                | 5,890.6                                    | 37,558.0                  | 21,580.0           |  |  |  |  |

Great Lakes Water Supply Program

Monthly Program Status Report No. 11 Invoice Period June 10, 2017 through July 7, 2017

Exhibit 5: Earned Value Analysis

Great Lakes Water Supply Program

Monthly Program Status Report No. 11 Invoice Period June 10, 2017 through July 7, 2017

# Earned Value Narrative

The Earned Value (EV) technique is being used to monitor the Program scope, schedule and cost, and to assess overall Program performance. The components of EV are the work breakdown structure, the schedule and the estimated costs. By connecting these components, future Program performance can be predicted and proactive actions can be taken to stay on track.

The work breakdown structure is a grouping of Program elements that define and organize the scope of the Program. For this Program, the work breakdown structure is defined by the Task and subtask activities, deliverables, meetings and workshops. An estimated cost, or Planned Value (PV), duration and interdependencies are assigned to the Task and subtask activities, deliverables, meetings and workshop. A PV cumulative cost curve is used to identify the value at any point in time of the work that is planned to be done.

On a monthly basis, the value of the work completed as a percentage of the PV is determined by the Program Manager and defines the EV which is shown on the cumulative cost curve. The monthly Program invoices define the Actual Costs (AC) which are also shown on the cumulative cost curve. Using the cumulative cost curves developed for the overall Program and each Task, the Schedule Performance Index (SPI) and the Cost Performance Index (CPI) are calculated. SPI is calculated by dividing EV by PV. The CPI is calculated by dividing EV by AC.

The PV for the overall Program reflects that the full approved budget amount less allowances and contingencies will be spent by September 2017 with some Tasks sooner. The full approved budget of \$10,451,450 includes \$875,781.30 of allowances and contingencies. Please note that the budgets utilized for earned value analysis reflect only authorized amounts which does not include allowances and contingency.

In order to provide greater clarity for the development of overall Program costs and to be prepared to accelerate Program design and permitting activities to meet anticipated funding timelines, the Program Tasks originally anticipated to occur in 2018 are being expedited in 2017. The budget status and challenges for each Task are noted on the following graphs.





Great Lakes Water Supply Program PM/CM

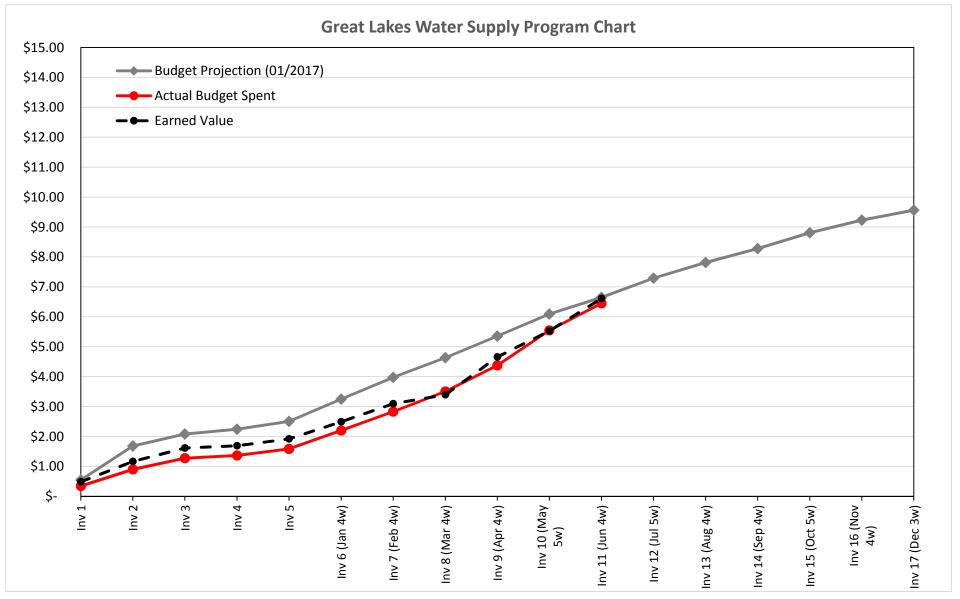
Program

Earned Value Chart

Phase 1 and 2

(Excluding Allowances and Contingencies)





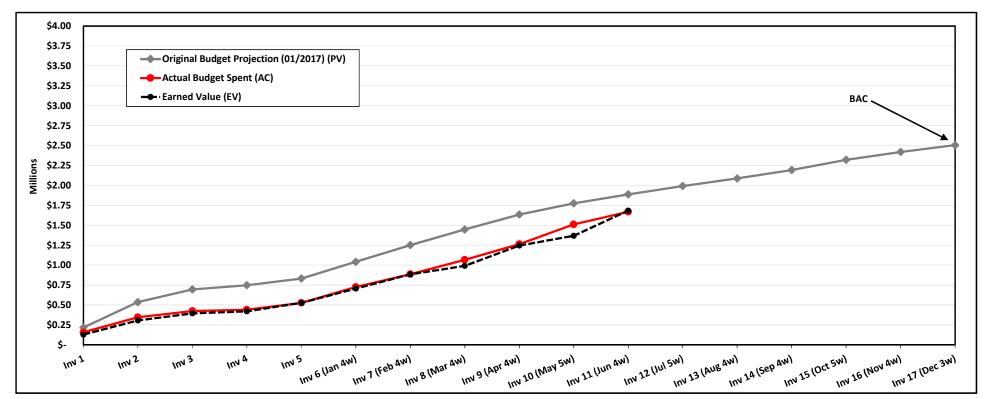
% Spent 61.7% Actual Budget Spent \$6,447,521.23 Schedule Performance Index (SPI) 0.99

Cost Performance Index (CPI) 1.03



#### Great Lakes Water Supply Program Phase 1 and 2 Task 1 - Program Management Earned Value Chart (Excluding Allowances and Contingencies)





| Earned Value Calculations                                |                    |
|--|--------------------|
| Budget at completion <sup>(BAC)(1)</sup> (BAC)           | \$<br>2,630,655.70 |
| Estimate to Complete <sup>(ETC1)</sup> (ETC1=EAC1-AC)    | \$<br>939,023.01   |
| Cost Variance <sup>(CV)</sup> (CV=EV-PV)                 | \$<br>(204,440.35) |
| Schedule Variance <sup>(SV)</sup> (SV=EV-AC)             | \$<br>14,245.41    |
| Cost Performance Index <sup>(CPI)</sup> (CPI=EV/AC)      | 1.01               |
| Schedule Performance Index <sup>(SPI)</sup> (SPI=EV/PV)  | 0.89               |
| Cost /Schedule Index <sup>(CSI)</sup> (CSI=CPI x SPI)    | 0.90               |
| Estimate at Completion <sup>(EAC1)</sup> (EAC1=BAC/CPI)  | \$<br>2,608,397.25 |
| Variance at Completion <sup>(VAC1)</sup> (VAC1=BAC-EAC1) | \$<br>22,258.45    |

#### Task 1 Program Management Plan/Progress

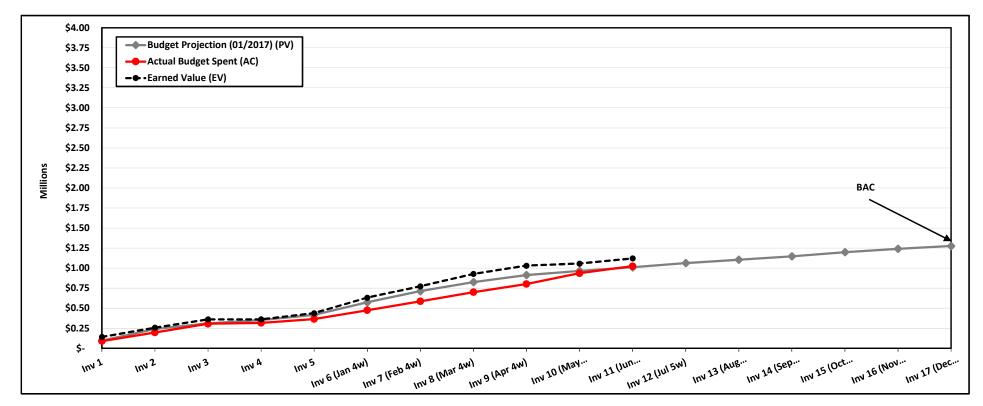
- The AWWA conference presentation was given by Dan Duchniak and Nicole Spieles.
- Program Cost was reviewed and further updated based on design refinements.
- The Financial Management Dashboard has been drafted and is under review.

#### Task 1 Program Management Challenges

- It is anticipated that the Task 1 budget will be expended by the end of November 2017. An estimate of 2018 budget needed in 2017 to continue providing Program Management will be developed and reviewed with WWU in advance of November 2017.
- Development of the Design Reports for the Public Service Commission is being expedited to be prepared to meet anticipated funding timelines and provide greater design refinement for Program Cost update.







| Earned Value Calculations                                |                 |
|--|-----------------|
| Budget at completion <sup>(BAC)</sup> (BAC)              | \$ 1,289,071.00 |
| Estimate to Complete <sup>(ETC1)</sup> (ETC1=EAC1-AC)    | \$ 153,172.87   |
| Cost Variance <sup>(CV)</sup> (CV=EV-PV)                 | \$ 96,413.87    |
| Schedule Variance <sup>(SV)</sup> (SV=EV-AC)             | \$ 110,520.42   |
| Cost Performance Index <sup>(CPI)</sup> (CPI=EV/AC)      | 1.09            |
| Schedule Performance Index <sup>(SPI)</sup> (SPI=EV/PV)  | 1.11            |
| Cost /Schedule Index <sup>(CSI)</sup> (CSI=CPI x SPI)    | 1.21            |
| Estimate at Completion <sup>(EAC1)</sup> (EAC1=BAC/CPI)  | \$ 1,178,250.42 |
| Variance at Completion <sup>(VAC1)</sup> (VAC1=BAC-EAC1) | \$ 110,820.58   |

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

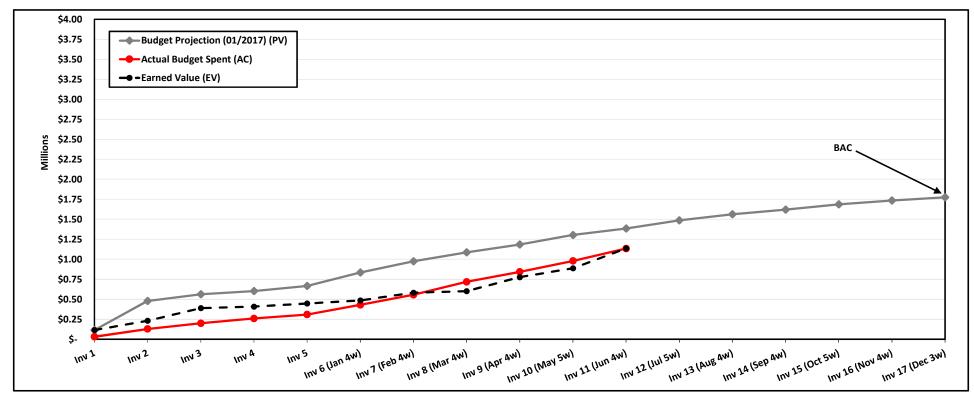
- The Strategic Communication Plan was resubmitted and approved by WWU.
- Open Houses in Franklin, Muskego and New Berlin were held. Planning for Open Houses in Waukesha and Oak Creek has started.
- Communication with local stakeholders continues to support Route Study field investigations.

#### Task 2 Programmatic Support Services Challenges

- To support the Program added programmatic support services have been performed, specifically:
  - o Maintenance of the WWU website,
  - o Increased social media presence,
  - Greater focus on multi-tiered community outreach,
     Additional strategic communication rapid response
  - needs, and
- Press release development
- The Task 2 budget will be expended by July 2017. Contingency budget will be requested to continue Task 2 until a budget shift is approved. An estimate of budget needed to continue providing Programmatic Support Services will be developed and reviewed with WWU in August 2017.







| Earned Value Calculations                                |                 |
|--|-----------------|
| Budget at completion <sup>(BAC)</sup> (BAC)              | \$ 1,774,155.80 |
| Estimate to Complete <sup>(ETC1)</sup> (ETC1=EAC1-AC)    | \$ 635,850.63   |
| Cost Variance <sup>(CV)</sup> (CV=EV-PV)                 | \$ (249,675.89) |
| Schedule Variance <sup>(SV)</sup> (SV=EV-AC)             | \$ 1,821.09     |
| Cost Performance Index <sup>(CPI)</sup> (CPI=EV/AC)      | 1.00            |
| Schedule Performance Index <sup>(SPI)</sup> (SPI=EV/PV)  | 0.82            |
| Cost /Schedule Index <sup>(CSI)</sup> (CSI=CPI x SPI)    | 0.82            |
| Estimate at Completion <sup>(EAC1)</sup> (EAC1=BAC/CPI)  | \$ 1,771,310.34 |
| Variance at Completion <sup>(VAC1)</sup> (VAC1=BAC-EAC1) | \$ 2,845.46     |

#### Task 3 Permitting Plan/Progress

- WDNR Workgroup Workshop meetings for construction and WPDES permitting occurred. The PM/CM team, Paul Kent, and Bruce Baker continue to contact WDNR weekly to maintain open lines of communication.
- Support and planning for field investigations is occurring with external entities regarding the routes.
- Meetings with local municipalities are being scheduled and prepared for.

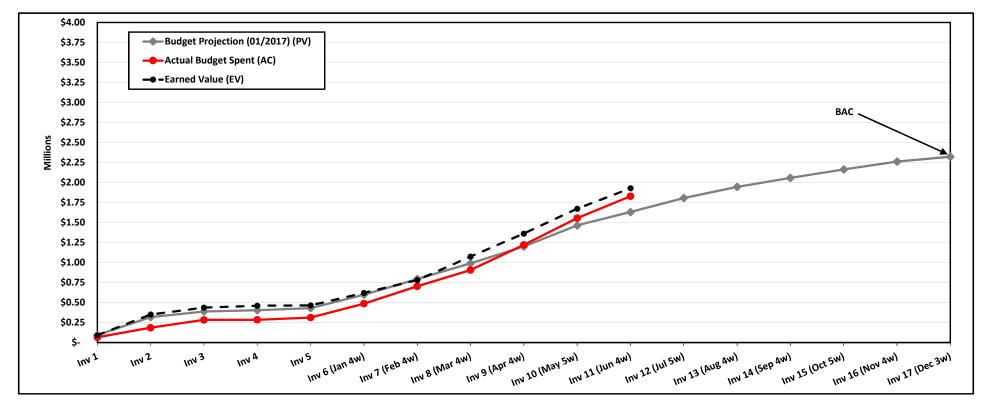
#### Task 3 Permitting Challenges

- It is anticipated that the Task 3 budget will be expended by the end of November 2017. An estimate of 2018 budget needed in 2017 will be developed and reviewed with WWU in advance of November 2017.
- Scheduling the water supply meeting with WDNR is awaiting final water supply agreement execution.



#### Great Lakes Water Supply Program Phase 1 and 2 Task 4 - Route Study and Pipeline Earned Value Chart (Excluding Allowances and Contingencies)





| Earned Value Calculations                                |                    |
|--|--------------------|
| Budget at completion <sup>(BAC)</sup> (BAC)              | \$<br>2,322,359.60 |
| Estimate to Complete <sup>(ETC1)</sup> (ETC1=EAC1-AC)    | \$<br>374,397.79   |
| Cost Variance <sup>(CV)</sup> (CV=EV-PV)                 | \$<br>99,616.30    |
| Schedule Variance <sup>(SV)</sup> (SV=EV-AC)             | \$<br>296,058.47   |
| Cost Performance Index <sup>(CPI)</sup> (CPI=EV/AC)      | 1.05               |
| Schedule Performance Index <sup>(SPI)</sup> (SPI=EV/PV)  | 1.18               |
| Cost /Schedule Index <sup>(CSI)</sup> (CSI=CPI x SPI)    | 1.25               |
| Estimate at Completion <sup>(EAC1)</sup> (EAC1=BAC/CPI)  | \$<br>2,202,339.96 |
| Variance at Completion <sup>(VAC1)</sup> (VAC1=BAC-EAC1) | \$<br>120,019.64   |

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

- Preliminary Design has been initiated to provide greater clarity for development of program costs and to be prepared to accelerate Program design and permitting activities to meet anticipated funding timelines.
- Open Houses occurred to share prospective routes with local communities. The process to secure permits for field investigations has been initiated and as well as conversations external entities regarding the routes.

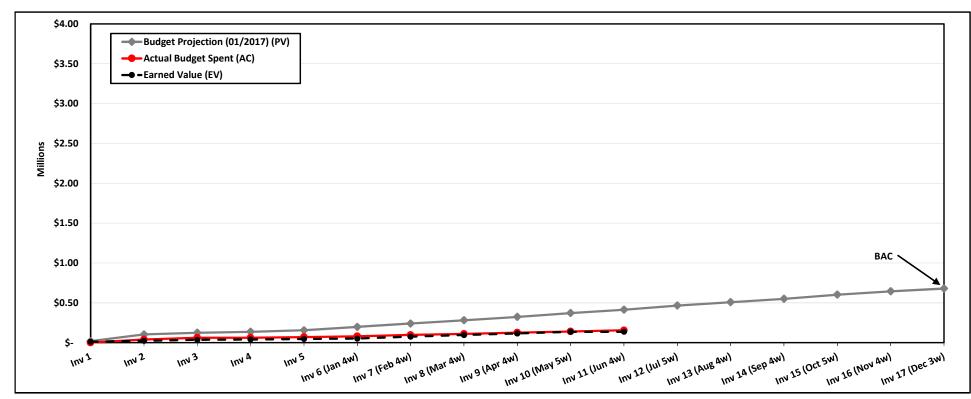
#### Task 4 Route Study and Pipeline Challenges

 It is anticipated that the Task 4 budget will be expended by the end of July 2017. An estimate of 2018 budget needed in 2017 to support the accelerated schedule will be developed and reviewed with WWU in August 2017.



#### Great Lakes Water Supply Program Phase 1 and 2 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)           | \$<br>678,580.90   |
| Estimate to Complete <sup>(ETC1)</sup> (ETC1=EAC1-AC)    | \$<br>622,386.29   |
| Cost Variance <sup>(CV)</sup> (CV=EV-PV)                 | \$<br>(19,880.39)  |
| Schedule Variance <sup>(SV)</sup> (SV=EV-AC)             | \$<br>(277,383.82) |
| Cost Performance Index <sup>(CPI)</sup> (CPI=EV/AC)      | 0.87               |
| Schedule Performance Index <sup>(SPI)</sup> (SPI=EV/PV)  | 0.33               |
| Cost /Schedule Index <sup>(CSI)</sup> (CSI=CPI x SPI)    | 0.29               |
| Estimate at Completion <sup>(EAC1)</sup> (EAC1=BAC/CPI)  | \$<br>777,982.87   |
| Variance at Completion <sup>(VAC1)</sup> (VAC1=BAC-EAC1) | \$<br>(99,401.96)  |

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

- The Pipe Loop Test Plan was submitted and accepted by WWU.
- Preliminary design documents for the pipe loop test apparatus will be initiated upon confirmation of water supplier.
- Preparation for field testing occurred for calibration of the distribution system model.

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

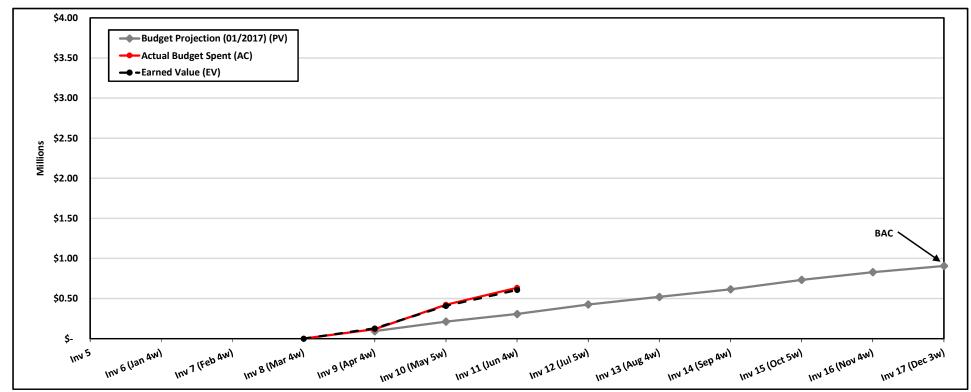
- Selection of the water supplier has resulted in a delay in having the WDNR Water Supply meetings for permitting has impacted Task 5 from a schedule perspective.
- No 2018 budget is anticipated in 2017 to achieve the Task 5 plan for 2017.

1. Task 6 total budget value has been corrected



#### Great Lakes Water Supply Program Phase 1 and 2 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)           | \$<br>906,741.60  |
| Estimate to Complete <sup>(ETC1)</sup> (ETC1=EAC1-AC)    | \$<br>312,470.10  |
| Cost Variance <sup>(CV)</sup> (CV=EV-PV)                 | \$<br>(26,892.13) |
| Schedule Variance <sup>(SV)</sup> (SV=EV-AC)             | \$<br>299,621.87  |
| Cost Performance Index <sup>(CPI)</sup> (CPI=EV/AC)      | 0.96              |
| Schedule Performance Index <sup>(SPI)</sup> (SPI=EV/PV)  | 1.97              |
| Cost /Schedule Index <sup>(CSI)</sup> (CSI=CPI x SPI)    | 1.89              |
| Estimate at Completion <sup>(EAC1)</sup> (EAC1=BAC/CPI)  | \$<br>946,879.10  |
| Variance at Completion <sup>(VAC1)</sup> (VAC1=BAC-EAC1) | \$<br>(40,137.50) |

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

 The Preliminary Design Report is being expedited in order to provide a basis for water supply contract negotiations with respect to operations, to provide greater clarity for the development of program costs and to be prepared to accelerate Program design and permitting activities to meet anticipated regulatory and funding schedules.

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

- It is anticipated that the Task 6 budget will be expended by September 2017. An estimate of 2018 budget needed in 2017 will be developed and reviewed with WWU in advance of September 2017.
- The water supplier has not been confirmed . The supplier will need to be identified in order to move project milestones and compliance with the justice department.

1. Task 5 total budget value has been corrected



### Great Lakes Water Supply Program Phase 1 and 2 Task 7 - Construction and Construction Management Earned Value Chart (Excluding Allowances and Contingencies)



|          | \$4.00 |      |               |              |       |                   |                   |                   |                   |                    |                    |                    |                    |                    |                    |                    |                    |
|----------|--------|------|---------------|--------------|-------|-------------------|-------------------|-------------------|-------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|          | \$3.75 |      | et Projection | (01/2017) (P | V)    |                   |                   |                   |                   |                    |                    |                    |                    |                    |                    |                    |                    |
|          | \$3.50 | Actu | al Budget Spe | nt (AC)      |       |                   |                   |                   |                   |                    |                    |                    |                    |                    |                    |                    |                    |
|          | \$3.25 | Earn | ed Value (EV) |              |       |                   |                   |                   |                   |                    |                    |                    |                    |                    |                    |                    |                    |
|          | \$3.00 |      |               |              |       |                   |                   |                   |                   |                    |                    |                    |                    |                    |                    |                    |                    |
|          | \$2.75 |      |               |              |       |                   |                   |                   |                   |                    |                    |                    |                    |                    |                    |                    |                    |
|          | \$2.50 |      |               |              |       |                   |                   |                   |                   |                    |                    |                    |                    |                    |                    |                    |                    |
| suo      | \$2.25 |      |               |              |       |                   |                   |                   |                   |                    |                    |                    |                    |                    |                    |                    |                    |
| Millions | \$2.00 |      |               |              |       |                   |                   |                   |                   |                    |                    |                    |                    |                    |                    |                    |                    |
|          | \$1.75 |      |               |              |       |                   |                   |                   |                   |                    |                    |                    |                    |                    |                    |                    |                    |
|          | \$1.50 |      |               |              |       |                   |                   |                   |                   |                    |                    |                    |                    |                    |                    |                    |                    |
|          | \$1.25 |      |               |              |       |                   |                   |                   |                   |                    |                    |                    |                    |                    |                    |                    |                    |
|          | \$1.00 |      |               |              |       |                   |                   |                   |                   |                    |                    |                    |                    |                    |                    |                    |                    |
|          | \$0.75 |      |               |              |       |                   |                   |                   |                   |                    |                    |                    |                    |                    |                    |                    |                    |
|          | \$0.50 |      |               |              |       |                   |                   |                   |                   |                    |                    |                    |                    |                    |                    | ВАС                |                    |
|          | \$0.25 |      |               |              |       |                   |                   |                   |                   |                    |                    |                    |                    |                    |                    |                    |                    |
|          | \$-    |      |               |              |       |                   |                   |                   |                   | <b>_</b>           |                    |                    |                    |                    |                    |                    |                    |
|          |        |      | Inv 3         | lnv 4        | lnv 5 | v)                | (Feb<br>v)        | (Mai              | (Apr              | (May               | ) (Jur             | 2 (Ju              | (Au£               | (Sep<br>/)         | ,<br>(Oct          | Nov.               | (Dec               |
|          |        |      |               |              |       | Inv 6 (Jan<br>4w) | Inv 7 (Feb<br>4w) | Inv 8 (Mar<br>4w) | Inv 9 (Apr<br>4w) | Inv 10 (May<br>5w) | lnv 11 (Jun<br>4w) | Inv 12 (Jul<br>5w) | Inv 13 (Aug<br>4w) | lnv 14 (Sep<br>4w) | lnv 15 (Oct<br>5w) | lnv 16 (Nov<br>4w) | Inv 17 (Dec<br>3w) |
|          |        |      |               |              |       |                   | -                 | =                 | -                 | Ę                  | 5                  | -                  | Ē                  | 드                  | 5                  | Ē                  | 드                  |

| Earned Value Calculations                                |    | ٦         | Task 7         Construction and Construction Management           Plan/Progress | Ta   | sk 7 | Construction and Construction Management<br>Challenges |               |  |
|--|----|-----------|---|--|------|--|---------------|--|
| Budget at completion <sup>(BAC)(1)</sup> (BAC)           | \$ | 99,105.00 |   | 1 101/1 105.000  |      |  | Ū.            |  |
| Estimate to Complete <sup>(ETC1)</sup> (ETC1=EAC1-AC)    |    | -         | •   | <ul> <li>Preliminary evaluation of contracting strategies has been<br/>initiated.</li> </ul> | •    | No   | o challenges. |  |
| Cost Variance <sup>(CV)</sup> (CV=EV-PV)                 | \$ | -         |   |  |      |  |               |  |
| Schedule Variance <sup>(SV)</sup> (SV=EV-AC)             | \$ | -         |   |  |      |  |               |  |
| Cost Performance Index <sup>(CPI)</sup> (CPI=EV/AC)      |    | 0.00      |   |  |      |  |               |  |
| Schedule Performance Index <sup>(SPI)</sup> (SPI=EV/PV)  |    | 0.00      |   |  |      |  |               |  |
| Cost /Schedule Index <sup>(CSI)</sup> (CSI=CPI x SPI)    |    | 0.00      |   |  |      |  |               |  |
| Estimate at Completion <sup>(EAC1)</sup> (EAC1=BAC/CPI)  | \$ | -         |   |  |      |  |               |  |
| Variance at Completion <sup>(VAC1)</sup> (VAC1=BAC-EAC1) | \$ | -         | L   |  |      |  |               |  |

1. Task 7 total budget value is added