

May 31, 2017

### Sanitary Sewer User Rate Study

Village of Bradley, Illinois



### Prepared by:

Jon Cameron, CIPMA Municipal Advisor

Brian Roemer Financial Specialist

### Memo

**To:** Village of Bradley Village Board

From: Jon Cameron

Cc: Mark Pries, Finance Director

**Date:** May 31, 2017

**Subject:** Sanitary Sewer User Rate Study

Ehlers has completed the update to the Sanitary Sewer User Rate Study for the Village of Bradley. The initial rate study was presented to the Village in 2015. The study consisted of developing detailed user rates for the current year as well as long range projections for future years based upon future capital improvement needs, projected future billable sewer volumes and projected changes to operating expenses. In addition, one of the primary purposes of the study was to calculate the increase in user rates required to abate the need for property tax revenues to be used to fund part or all of the 2015 G.O. Alternate Revenue Source Refunding Bonds, and have the Sewer Utility be a self-sustaining entity.

At the request of Village staff, a plan was completed for evaluation by the Village Board. The plan establishes user rates sufficient to abate the need for property tax revenues to be used in paying for the utility's debt service payments.

Enclosed with this memo please find a summary PowerPoint presentation and the detailed rate study this case. We will be at the June 5th Village Board Workshop session to present the PowerPoint presentation and answer any questions.



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# Village of Bradley Sewer User Rate Study Workshop

Jon Cameron, Municipal Advisor June 5, 2017



### Study Purpose

- Develop Sewer Rates that are sufficient to meet all existing financial obligations of the Sewer Fund
  - Operating and Maintenance Expenses
  - Existing Debt Service Payments
  - Cash funded capital improvement expenditures
- Develop rates that do away with reliance on property tax revenues to pay for debt service
- Establish preliminary plan for future capital improvement needs
  - Identify future sewer rate increases necessary to fund future capital improvement projects
- Ensure user rates are fair and equitable to all customer classes





### Village's Sewer Use Ordinance

- Commits the Village to an Annual Review of User Rates
- 54-204(G): Annual estimates of costs and review of user charge rates.
- (3) User charge rates shall be reviewed annually by the superintendent to determine if the rates will provide sufficient revenues to pay the future costs of operation, maintenance, replacement and debt service. If the present revenues are not sufficient or do not maintain proportionally, as determined by the superintendent, a new user charge rate, as calculated in the superintendent's review, shall be enacted by the village to replace the rates then in effect. User charge rates so enacted by the village by ordinance shall remain in effect until modified or rescinded by a subsequent duly passed ordinance.





## Historical Analysis of the Sewer Utility

|                                  | Actual               | Actual               | Estimated <sup>2</sup> | Budgeted <sup>2</sup> |
|----------------------------------|----------------------|----------------------|------------------------|-----------------------|
| Analysis of Operating Income     | 2014-15 <sup>1</sup> | 2015-16 <sup>1</sup> | 2016-17                | 2017-18               |
| Revenues                         |                      |                      |                        |                       |
| User Rates                       | \$1,815,446          | \$1,493,029          | \$1,466,300            | \$1,479,665           |
| I-DROP Sewer Collections         | \$0                  | \$681                | \$0                    | \$0                   |
| KRMA Reimbursement               | \$0                  | \$0                  | \$80,000               | \$80,000              |
| Property Taxes                   | \$425,493            | \$425,170            | \$399,363              | \$400,550             |
| Interest                         | \$612                | \$400                | \$300                  | \$300                 |
| Lien Shut-off Fee                | \$2,098              | \$0                  | \$0                    | \$0                   |
| Tap-On-Fees                      | \$41,600             | \$41,700             | \$25,600               | \$30,000              |
| Other Income                     | \$119,383            | \$80,037             | \$1,015                | \$500                 |
| Total Operating Revenues         | \$2,404,632          | \$2,041,017          | \$1,972,578            | \$1,991,015           |
| Expenses                         |                      |                      |                        |                       |
| Operating and Maintenance        | \$1,781,284          | \$1,726,840          | \$2,348,355            | \$2,097,247           |
| Transfer In - General Fund       | \$0                  | \$0                  | \$0                    | \$0                   |
| Net Revenues before Debt Service | \$623,348            | \$314,177            | (\$375,777)            | (\$106,232)           |
| Debt Expense                     |                      |                      |                        |                       |
| Total Principal and Interest     | \$432,758            | \$486,395            | \$400,550              | \$400,550             |
|                                  |                      |                      |                        |                       |
| Net cash flow                    | \$190,590            | (\$172,218)          | (\$776,327)            | (\$506,782)           |

#### Notes

- 1. Source: Village of Bradley Annual Financial Report for Years ended April 30, 2015 and April 30, 2016.
- 2. Source: Village of Bradley FY2017-18 Annual Budget.





# 2017-2030 Estimated Sewer Utility Capital Improvement Plan

| Totals      |
|-------------|
| \$120,000   |
| \$20,000    |
| \$0         |
| \$760,000   |
| \$6,105,000 |
| \$7,005,000 |
|             |
|             |
| \$0         |
| \$6,865,000 |
| \$0         |
| \$140,000   |
| \$0         |
| \$7,005,000 |
|             |

Estimate of Sizing of GO Bonds (Grouping 3 Years of Projects)

#### Notes:

1. Source: Village of Bradley FY 2016-2020 Capital Improvement Plan for the Sewer Fund.

2. Source: M. Gingerich, Gereaux & Associates, received on 7/23/15.





# 2015-2030 Estimated Sewer Utility Capital Improvement Plan

- GO Bonds are planned to be issued every three years (3-years worth of projects)
  - \$1,140,000 GO Bond in 2017-18
  - \$1,515,000 GO Bond in 2020-21
  - \$1,650,000 GO Bond in 2023-24
  - \$1,920,000 GO Bond in 2026-27
  - \$1,920,000 GO Bond in 2029-30





## Full Phase Out of Property Tax Revenue Year One

### **Volumetric Rates**

|                            | Current | Proposed | Increase/  | Percent |
|----------------------------|---------|----------|------------|---------|
|                            | Rate    | Rate     | (Decrease) | Change  |
| Volumetric Rate Per CCF    | \$3.43  | \$6.05   | \$2.62     | 76%     |
| Unmetered Rate per Quarter |         |          |            |         |

|             |               |            | Current Monthly | Proposed Monthly | Percent |
|-------------|---------------|------------|-----------------|------------------|---------|
| Customer    | Monthly Usage | Meter Size | Sewer Charge    | Sewer Charge     | Change  |
| Residential | 134           | 5/8        | \$5             | \$8              | 76%     |
| Residential | 401           | 5/8        | \$14            | \$24             | 76%     |
| Residential | 613           | 5/8        | \$21            | \$37             | 76%     |
| Residential | 724           | 5/8        | \$25            | \$44             | 76%     |
| Commercial  | 1,671         | 5/8        | \$57            | \$101            | 76%     |
| Commercial  | 2,473         | 1          | \$85            | \$150            | 76%     |
| Commercial  | 4,011         | 2          | \$138           | \$243            | 76%     |
| Industrial  | 16,711        | 1          | \$573           | \$1,011          | 76%     |
| Industrial  | 71,190        | 2          | \$2,442         | \$4,307          | 76%     |
| Industrial  | 91,912        | 3          | \$3,153         | \$5,561          | 76%     |





## Full Phase Out of Property Tax Revenue Year One

|  | 1           | 1           | 2           | 3           | 4           | 5           |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
|  | Estimated   | Test Year   |             |             |             |             |
| Fiscal Year Ending                             | 2017        | 2018        | 2019        | 2020        | 2021        | 2022        |
| User Rate Increase %                           |             | 76.38%      | 10.00%      | 3.00%       | 7.00%       | 3.00%       |
| Cumulative Percent Rate Increase               |             | 76.38%      | 84.02%      | 86.54%      | 92.60%      | 95.38%      |
| Cash Sources                                   |             |             |             |             |             |             |
| Sewer Usage                                    | \$1,466,300 | \$2,550,801 | \$2,812,896 | \$2,904,526 | \$3,115,612 | \$3,217,103 |
| Other Income                                   | \$1,015     | \$500       | \$0         | \$0         | \$0         | \$0         |
| KRMA Reimbursement                             | \$80,000    | \$80,000    | \$0         | \$0         | \$0         | \$0         |
| Property Taxes                                 | \$399,363   | \$0         | \$0         | \$0         | \$0         | \$0         |
| Tap On Fees                                    | \$25,600    | \$30,000    | \$45,000    | \$45,000    | \$45,000    | \$45,000    |
| Investment Income                              | \$300       | \$300       | (\$298)     | (\$254)     | (\$101)     | \$107       |
| Total Revenues                                 | \$1,972,578 | \$2,661,601 | \$2,857,597 | \$2,949,272 | \$3,160,512 | \$3,262,210 |
| Cash Uses                                      |             |             |             |             |             |             |
| Operating and Maintenance <sup>2</sup>         | \$2,348,355 | \$2,097,247 | \$2,160,164 | \$2,224,969 | \$2,291,718 | \$2,360,470 |
| Net before Debt Service                        | (\$375,777) | \$564,354   | \$697,433   | \$724,303   | \$868,793   | \$901,740   |
| Debt Service                                   |             |             |             |             |             |             |
| 2015 GO Sewer Refunding Bonds                  | \$400,550   | \$400,550   | \$397,900   | \$400,100   | \$397,000   | \$393,750   |
| 2018 G.O. Bonds @4.0% (level P&I 15 Yr period) |             |             | \$120,071   | \$120,071   | \$120,071   | \$120,071   |
| 2021 G.O. Bonds @4.0% (level P&I 15 Yr period) |             |             |             |             |             | \$176,734   |
| 2024 G.O. Bonds @4.5% (level P&I 15 Yr period) |             |             |             |             |             |             |
| 2027 G.O. Bonds @4.5% (level P&I 15 Yr period) |             |             |             |             |             |             |
| Total Debt Service                             | \$400,550   | \$400,550   | \$517,971   | \$520,171   | \$517,071   | \$690,556   |
| Capital Outlay/Equipment Replacement           | \$15,000    | \$120,000   | \$120,000   | \$0         | \$75,000    | \$76,500    |
| Net Cash Flow                                  | (\$791,327) | \$43,804    | \$59,462    | \$204,131   | \$276,722   | \$134,685   |
| Cash Balance                                   |             |             |             |             |             |             |
| Beginning of Year Balance <sup>1</sup>         | \$349,711   | (\$441,616) | (\$397,812) | (\$338,350) | (\$134,219) | \$142,503   |
| Additions/(Subtractions)                       | (\$791,327) | \$43,804    | \$59,462    | \$204,131   | \$276,722   | \$134,685   |
| End of Year Balance                            | (\$441,616) | (\$397,812) | (\$338,350) | (\$134,219) | \$142,503   | \$277,188   |
| Minimum Recommended Fund Balance <sup>3</sup>  | 987,639     | 1,042,283   | 1,060,212   | 1,073,314   | 1,263,485   | 1,282,273   |
| Estimated Balance vs. Recommended Bal          | (1,429,255) | (1,440,095) | (1,398,563) | (1,207,533) | (1,120,982) | (1,005,086) |





## Comparison of User Rates to Other Municipalities

|                               |              | Volumetric Rate | Monthly Bill        | Annual Bill     |
|-------------------------------|--------------|-----------------|---------------------|-----------------|
| Municipality                  | Fixed Charge | Per CCF         | for Avg SF Home (1) | for Avg SF Home |
| City of Kankakee              | \$27.50      | \$4.40          | \$54.47             | \$653.66        |
| Village of Manteno            | \$11.00      | \$6.66          | \$51.81             | \$621.70        |
| Village of Bradley - Proposed | \$0.00       | \$6.05          | \$37.09             | \$445.04        |
| Village of Bourbonnais        | \$34.25      | \$0.00          | \$34.25             | \$411.00        |
| Village of Bradley - Current  | \$0.00       | \$3.43          | \$21.03             | \$252.31        |

### Notes:

(1) Based upon 613 CCF usage per month.







### Jon Cameron, CIPMA Municipal Advisor



Table 1 Comparison of Sewer Utility Historical Operating Income and Cash Flow Village of Bradley, IL



| I-DROP Sewer Collections   |                                       | Actual               | Actual               | Estimated 2 | Budgeted <sup>2</sup> |
|--|---------------------------------------|----------------------|----------------------|-------------|-----------------------|
| User Rates         \$1,815,446         \$1,493,029         \$1,466,300         \$1,479,665           I-DROP Sewer Collections         \$0         \$681         \$0         \$0           KRMA Reimbursement         \$0         \$0         \$80,000         \$80,000           Property Taxes         \$425,493         \$425,170         \$399,363         \$400,550           Interest         \$612         \$400         \$300         \$300           Lien Shut-off Fee         \$2,098         \$0         \$0         \$0           Tap-On-Fees         \$41,600         \$41,700         \$25,600         \$30,000           Other Income         \$119,383         \$80,037         \$1,015         \$500           Total Operating Revenues         \$2,404,632         \$2,041,017         \$1,972,578         \$1,991,015           Expenses         Operating and Maintenance         \$1,781,284         \$1,726,840         \$2,348,355         \$2,097,247           Transfer In - General Fund         \$0         \$0         \$0         \$0           Net Revenues before Debt Service         \$623,348         \$314,177         (\$375,777)         (\$106,232) | Analysis of Operating Income          | 2014-15 <sup>1</sup> | 2015-16 <sup>1</sup> | 2016-17     | 2017-18               |
| I-DROP Sewer Collections   | Revenues                              |                      |                      |             |                       |
| KRMA Reimbursement         \$0         \$0         \$80,000         \$80,000           Property Taxes         \$425,493         \$425,170         \$399,363         \$400,550           Interest         \$612         \$400         \$300         \$300           Lien Shut-off Fee         \$2,098         \$0         \$0         \$0           Tap-On-Fees         \$41,600         \$41,700         \$25,600         \$30,000           Other Income         \$119,383         \$80,037         \$1,015         \$500           Total Operating Revenues         \$2,404,632         \$2,041,017         \$1,972,578         \$1,991,015           Expenses         Operating and Maintenance         \$1,781,284         \$1,726,840         \$2,348,355         \$2,097,247           Transfer In - General Fund         \$0         \$0         \$0         \$0           Net Revenues before Debt Service         \$623,348         \$314,177         (\$375,777)         (\$106,232)   | User Rates                            | \$1,815,446          | \$1,493,029          | \$1,466,300 | \$1,479,665           |
| Property Taxes         \$425,493         \$425,170         \$399,363         \$400,550           Interest         \$612         \$400         \$300         \$300           Lien Shut-off Fee         \$2,098         \$0         \$0         \$0           Tap-On-Fees         \$41,600         \$41,700         \$25,600         \$30,000           Other Income         \$119,383         \$80,037         \$1,015         \$500           Total Operating Revenues         \$2,404,632         \$2,041,017         \$1,972,578         \$1,991,015           Expenses         Operating and Maintenance         \$1,781,284         \$1,726,840         \$2,348,355         \$2,097,247           Transfer In - General Fund         \$0         \$0         \$0         \$0           Net Revenues before Debt Service         \$623,348         \$314,177         (\$375,777)         (\$106,232)  | I-DROP Sewer Collections              | \$0                  | \$681                | \$0         | \$0                   |
| Interest         \$612         \$400         \$300         \$300           Lien Shut-off Fee         \$2,098         \$0         \$0         \$0           Tap-On-Fees         \$41,600         \$41,700         \$25,600         \$30,000           Other Income         \$119,383         \$80,037         \$1,015         \$500           Total Operating Revenues         \$2,404,632         \$2,041,017         \$1,972,578         \$1,991,015           Expenses         Operating and Maintenance         \$1,781,284         \$1,726,840         \$2,348,355         \$2,097,247           Transfer In - General Fund         \$0         \$0         \$0         \$0           Net Revenues before Debt Service         \$623,348         \$314,177         (\$375,777)         (\$106,232)           Debt Expense  | KRMA Reimbursement                    | \$0                  | \$0                  | \$80,000    | \$80,000              |
| Lien Shut-off Fee         \$2,098         \$0         \$0         \$0           Tap-On-Fees         \$41,600         \$41,700         \$25,600         \$30,000           Other Income         \$119,383         \$80,037         \$1,015         \$500           Total Operating Revenues         \$2,404,632         \$2,041,017         \$1,972,578         \$1,991,015           Expenses         Operating and Maintenance         \$1,781,284         \$1,726,840         \$2,348,355         \$2,097,247           Transfer In - General Fund         \$0         \$0         \$0         \$0           Net Revenues before Debt Service         \$623,348         \$314,177         (\$375,777)         (\$106,232)           Debt Expense   | Property Taxes                        | \$425,493            | \$425,170            | \$399,363   | \$400,550             |
| Tap-On-Fees Other Income         \$41,600 \$41,700 \$25,600 \$30,000         \$30,000 Other Income           Total Operating Revenues         \$2,404,632 \$2,041,017 \$1,972,578 \$1,991,015           Expenses Operating and Maintenance         \$1,781,284 \$1,726,840 \$2,348,355 \$2,097,247           Transfer In - General Fund         \$0 \$0 \$0           Net Revenues before Debt Service         \$623,348 \$314,177 (\$375,777) (\$106,232)           Debt Expense  | Interest                              | \$612                | \$400                | \$300       | \$300                 |
| Other Income         \$119,383         \$80,037         \$1,015         \$500           Total Operating Revenues         \$2,404,632         \$2,041,017         \$1,972,578         \$1,991,015           Expenses<br>Operating and Maintenance         \$1,781,284         \$1,726,840         \$2,348,355         \$2,097,247           Transfer In - General Fund         \$0         \$0         \$0         \$0           Net Revenues before Debt Service         \$623,348         \$314,177         (\$375,777)         (\$106,232)           Debt Expense  | Lien Shut-off Fee                     | \$2,098              | \$0                  | \$0         | \$0                   |
| Total Operating Revenues         \$2,404,632         \$2,041,017         \$1,972,578         \$1,991,015           Expenses<br>Operating and Maintenance         \$1,781,284         \$1,726,840         \$2,348,355         \$2,097,247           Transfer In - General Fund         \$0         \$0         \$0         \$0           Net Revenues before Debt Service         \$623,348         \$314,177         (\$375,777)         (\$106,232)           Debt Expense  | Tap-On-Fees                           | \$41,600             | \$41,700             | \$25,600    | \$30,000              |
| Expenses         \$1,781,284         \$1,726,840         \$2,348,355         \$2,097,247           Transfer In - General Fund         \$0         \$0         \$0         \$0           Net Revenues before Debt Service         \$623,348         \$314,177         (\$375,777)         (\$106,232)           Debt Expense  | Other Income                          | \$119,383            | \$80,037             | \$1,015     | \$500                 |
| Operating and Maintenance         \$1,781,284         \$1,726,840         \$2,348,355         \$2,097,247           Transfer In - General Fund         \$0         \$0         \$0         \$0           Net Revenues before Debt Service         \$623,348         \$314,177         (\$375,777)         (\$106,232)           Debt Expense   | Total Operating Revenues              | \$2,404,632          | \$2,041,017          | \$1,972,578 | \$1,991,015           |
| Net Revenues before Debt Service         \$623,348         \$314,177         (\$375,777)         (\$106,232)           Debt Expense  | · · · · · · · · · · · · · · · · · · · | \$1,781,284          | \$1,726,840          | \$2,348,355 | \$2,097,247           |
| Debt Expense   | Transfer In - General Fund            | \$0                  | \$0                  | \$0         | \$0                   |
|  | Net Revenues before Debt Service      | \$623,348            | \$314,177            | (\$375,777) | (\$106,232)           |
|  | ·                                     | \$432,758            | \$486,395            | \$400,550   | \$400,550             |
| Net cash flow \$190,590 (\$172,218) (\$776,327) (\$506,782)  | Net cash flow                         | \$190,590            | (\$172,218)          | (\$776,327) | (\$506,782)           |

### Notes:

1. Source: Village of Bradley Annual Financial Report for Years ended April 30, 2015 and April 30, 2016.

2. Source: Village of Bradley FY2017-18 Annual Budget.

Table 2 Historical and Test Year Projected Sewer Utility Flows  $Village\ of\ Bradley,\ IL$ 



|           |                           |            | Flow in CCF |             |         |
|-----------|---------------------------|------------|-------------|-------------|---------|
|           | Month                     | Commercial | Industrial  | Residential | Totals  |
| 2015      | July                      | 7,403      | 834         | 27,180      | 35,417  |
|           | August                    | 7,468      | 834         | 27,355      | 35,657  |
|           | September                 | 7,473      | 834         | 27,104      | 35,411  |
|           | October                   | 7,341      | 834         | 27,029      | 35,204  |
|           | November                  | 7,414      | 834         | 26,947      | 35,195  |
|           | December                  | 7,418      | 834         | 27,051      | 35,303  |
| 2016      | January                   | 7,422      | 834         | 27,082      | 35,338  |
|           | February                  | 7,407      | 834         | 27,108      | 35,349  |
|           | March                     | 7,337      | 834         | 27,121      | 35,292  |
|           | April                     | 7,339      | 834         | 27,133      | 35,306  |
|           | 2015-16 Monthly Average   | 7,402      | 834         | 27,111      | 35,347  |
|           | 2015-16 Annualized Flow   | 88,826     | 10,008      | 325,332     | 424,166 |
|           |                           |            |             |             |         |
| 2016      | May                       | 7,341      | 834         | 27,144      | 35,319  |
|           | June                      | 6,909      | 564         | 26,736      | 34,209  |
|           | July                      | 7,033      | 564         | 26,725      | 34,322  |
|           | August                    | 6,930      | 564         | 26,791      | 34,285  |
|           | September                 | 6,802      | 564         | 26,832      | 34,198  |
|           | October                   | 7,371      | 564         | 26,998      | 34,933  |
|           | November                  | 7,380      | 609         | 27,167      | 35,156  |
|           | December                  | 7,349      | 609         | 27,463      | 35,421  |
| 2017      | January                   | 7,347      | 609         | 27,385      | 35,341  |
|           | February                  | 7,347      | 609         | 27,468      | 35,424  |
|           | March                     | 7,347      | 609         | 27,427      | 35,383  |
|           | April                     | 7,355      | 609         | 27,494      | 35,458  |
|           | 2016-17 Monthly Average   | 7,209      | 609         | 27,136      | 34,954  |
|           | 2016-17 Annualized Flow   | 86,511     | 7,308       | 325,630     | 419,449 |
|           |                           |            |             |             |         |
|           |                           |            |             |             |         |
| 17-18 Tes | st Year Projections (CCF) | 88,000     | 8,000       | 325,620     | 421,620 |

### Notes:

1. July 2015-April 2017 flows taken from monthly billing records provided by the Village of Bradley.

## Table 3 2017-18 Sewer Fund Capital Budget

Village of Bradley, IL



|   | 2017-18<br>Budget |
|---|-------------------|
| Sewer Operations and Maintenance (80-65-00) 8900 Depreciation | \$390,000         |
| Return on Net Investment Rate Base (ROI)                      | \$62,207          |
| Total Capital Improvement/Outlay Revenue Req                  | \$452,207         |
|   |                   |
| Calculation of Capital Recovery                               |                   |
| P&I 2016 Refunding G.O. Sewerage Bonds (Alt Series)           | \$400,550         |
| Capital Outlay Expense 1                                      | \$120,000         |
| Total Capital Expenses  | \$520,550         |
| Depreciation/ROI  | \$452,207         |
| Property Tax Revenue  | \$0               |
| Total Capital Recovery  | \$452,207         |
| Difference  | (\$68,343)        |

### Notes:

1. See Table 11 for listing of full capital improvement projects in the budget year.

## Table 4 2015-16 Return on Net Investment Rate Base Calculation $Village\ of\ Bradley,\ IL$



### **Rate of Return Calculation**

| 4/30/14 Net Book Value of Sewer Assets <sup>1</sup> | \$6,814,992      |
|---|------------------|
| 2014/15 Additions <sup>2</sup> 2014/15 Retirements  | \$34,414<br>\$0  |
| 2014-15 Depreciation Expense <sup>1</sup>           | \$373,659        |
| 4/30/15 Net Book Value of Sewer Assets              | \$6,475,747      |
| 2015/16 Additions <sup>3</sup> 2015/16 Retirements  | \$120,000<br>\$0 |
| 2015-16 Depreciation Expense <sup>4</sup>           | \$375,000        |
| 4/30/16 Net Book Value of Sewer Assets              | \$6,220,747      |
| % Return on Net Investment Rate Base                | 1.00%            |
| Return on Net Investment Rate Base (ROI)            | \$62,207         |

### Notes:

- 1. Source: Village of Bradley Fixed Asset List as of 4/30/2014.
- 2. Source: Village Finance Director, cost of pick up truck purchased in fiscal year.
- 3. See Table 11 for listing of assets.
- 4. Budgeted 2015-16 depreciation expense for the sewer fund.

## Table 5 2015-16 Sewer Fund Operating and Maintenance Costs Village of Bradley, IL



|           |                                   | 2017-18<br>Budget |
|-----------|-----------------------------------|-------------------|
| Operation | and Maintenance                   | Buaget            |
| 5110      | Telephone-Office                  | \$4,500           |
| 5115      | JULIE Locates                     | \$3,000           |
| 5120      | Electric                          | \$8,000           |
| 5130      | Heating-Gas                       | \$2,500           |
| 5140      | Water & Sewer                     | \$1,000           |
| 5220      | Vehicle Fuel, Gas, Oil            | \$5,000           |
| 5310      | Equipment Repair                  | \$1,000           |
| 5330      | Equipment Purchase                | \$57,588          |
| 5410      | Office Supplies                   | \$1,000           |
| 5430      | Postage                           | \$25,000          |
| 5460      | Hardware Purchase                 | \$1,000           |
| 5890      | General Supplies                  | \$1,000           |
| 6210      | Audit Fees                        | \$6,000           |
| 7020      | Exterminating                     | \$1,000           |
| 7310      | Engineering Service               | \$60,000          |
| 7340      | Other Fees & Service              | \$32,000          |
| 7343      | Lien Filing Fee                   | \$0               |
| 7346      | Direct Debit Service              | \$0               |
| 7550      | Metro Sewer Service               | \$1,186,800       |
|           | Subtotal Operations & Maintenance | \$1,396,388       |
|           |                                   | + ,,              |
| Managem   |                                   |                   |
| 5010      | Salary-Management                 | \$52,000          |
| 5023      | Stipends                          | \$0               |
| 5109      | Telephone-Mobile                  | \$1,200           |
| 5210      | Vehicle Repair & Maintenance      | \$500             |
| 6046      | Dental Insurance                  | \$540             |
| 6047      | Life & Disability Insurance       | \$145             |
| 6050      | Medical Insurance                 | \$10,772          |
| 6052      | Village Share-IMRF                | \$6,454           |
| 6053      | Village Share-FICA                | \$3,224           |
| 6054      | Village Share-Medicare            | \$816             |
| 6410      | Memberships                       | \$300             |
| 6610      | Conventions & Meetings            | \$400             |
| 7210      | Training & Schooling              | \$500             |
| 7213      | Meals & Per Diem                  | \$100             |
|           | Subtotal Management               | \$76,951          |
| Support S | Staff (80-65-10)                  |                   |
| 5011      | Wages-Support Staff               | \$80,477          |
| 5013      | Overtime-Support Staff            | \$2,500           |
| 5023      | Stipends                          | \$1,800           |
| 6046      | Dental Insurance                  | \$1,143           |
| 6047      | Life & Disability Insurance       | \$434             |
| 6050      | Medical Insurance                 | \$21,216          |
| 6052      | Village Share-IMRF                | \$9,813           |
| 6053      | Village Share-FICA                | \$5,155           |
| 6054      | Village Share-Medicare            | \$1,204           |
| 7210      | Training & Schooling              | \$250             |
|           | <u> </u>                          | +                 |

## Table 5 2015-16 Sewer Fund Operating and Maintenance Costs $Village\ of\ Bradley,\ IL$



|          |                                       | 2017-18<br>Budget |
|----------|---------------------------------------|-------------------|
|          | Subtotal Support Staff                | \$123,992         |
| Sewer Ma | intenance (80-65-81)                  |                   |
| 5011     | Wages-Sewer Maintenance               | \$251,537         |
| 5013     | Overtime                              | \$6,000           |
| 5016     | Premium Overtime                      | \$4,000           |
| 5023     | Stipends                              | \$6,400           |
| 5210     | Vehicle Repair & Maintenance          | \$7,500           |
| 5310     | Equipment Repair                      | \$9,000           |
| 5330     | Equipment Purchase                    | \$5,000           |
| 5340     | Equipment Rental                      | \$250             |
| 5420     | Department Projects                   | \$400,000         |
| 5815     | Sewer Main Maintenance <sup>3</sup>   | \$65,000          |
| 5830     | Gravel & Sand                         | \$2,000           |
| 5890     | General Supplies                      | \$8,000           |
| 6046     | Dental Insurance                      | \$3,492           |
| 6047     | Life and Disability Insurance         | \$1,158           |
| 6050     | Medical Insurance                     | \$72,343          |
| 6052     | Village Share-IMRF                    | \$31,112          |
| 6053     | Village Share-FICA                    | \$16,309          |
| 6054     | Village Share-Medicare                | \$3,815           |
| 7210     | Training & Schooling                  | \$2,000           |
| 7555     | Chemicals                             | \$5,000           |
|          | Subtotal Sewer Maintenance            | \$899,916         |
|          | Less: KRMA Reimbursement <sup>2</sup> | (\$400,000)       |
| 7        | Fotal Operating and Maintenance       | \$2,097,247       |

### Notes:

- 1. Source: 2017-18 Village of Bradley Sewer Fund Budget.
- 2. Source: 2017-18 Village of Bradley Sewer Fund Budget. The Village is completing work for KRMA in this fiscal year, and the expenses are incorporated above but are being offset by 5-year direct payments of \$80,000 from KRMA for the work performed.
- 3. Acct 5815 at \$65,000 for year because \$100,000 is in CIP for sewer system evaluation project

## Table 6 Summary of Allocation of Revenue Requirements to Utility Function Village of Bradley, IL



|  | Total       | Volur | ne          | Fixed Charge |      |  |
|--|-------------|-------|-------------|--------------|------|--|
| Revenue Requirements                   | Cost        | %     | Cost        | %            | Cost |  |
| Operating and Maintenance              | \$2,097,247 | 100%  | \$2,097,247 | 0%           | \$0  |  |
| Capital Outlay & Equipment Replacement | \$452,207   | 100%  | \$452,207   | 0%           | \$0  |  |
| Total Revenue Requirements             | \$2,549,454 | 100%  | \$2,549,454 | 0%           | \$0  |  |

### Table 7 Calculation of Sewer User Rates

Village of Bradley, IL



### **Calculation of Fixed Charge**

|                           |      |       |   | Annual        |
|---------------------------|------|-------|---|---------------|
|                           | Cost | Units |   | Cost per Unit |
| Operating & Maintenance   | \$0  |       | 0 | \$0.00        |
| Capital Recovery          | \$0  |       | 0 | \$0.00        |
| Total Debt/Capital Charge |      |       |   | \$0.00        |

### **Calculation of Volumetric Rates**

|                               |             | Billable Units |           |
|-------------------------------|-------------|----------------|-----------|
|                               | Cost        | (ccf)          | Rate/Unit |
| Operating & Maintenance       | \$2,097,247 | 421,620        | \$4.974   |
| Capital Recovery              | \$452,207   | 421,620        | \$1.073   |
| Total Volumetric Rate per CCF |             |                | \$6.047   |

### **Summary of User Rates**

| Monthly Debt/Capital Charge                        | \$0.00 |
|--|--------|
| Volumetric Rate Per CCF Unmetered Rate per Quarter | \$6.05 |

## Table 8 Revenue Check Village of Bradley, IL



### Fixed Charge

| Ç                         |           | Annual Debt/<br>Capital Charge | Revenue        |
|---------------------------|-----------|--------------------------------|----------------|
| Total Customers           | 0         | \$0                            | \$0            |
| Volumetric Rates          |           |                                |                |
|                           | Volume    | Volumetric                     |                |
| Customer Class            | CCF       | Rate/000 Gal                   | Revenue        |
| Total Billable Flow       | 421,620   | \$6.05                         | \$2,550,801    |
|                           | Customers | Annual Rate                    | Revenue        |
| Unmetered Customers       |           |                                |                |
|                           |           |                                |                |
| Total Calculated Revenues |           |                                | \$2,550,801.00 |
| Revenue Requirement       |           |                                | \$2,549,454.47 |
| Difference                |           |                                | \$1,346.53     |

## Table 9 Comparison of Existing to Proposed Sewer User Rates $Village\ of\ Bradley,\ IL$



### **Debt/Capital Charge**

Unmetered Rate per Quarter

|                         | Current Monthly<br>Service Charge | Proposed Monthly<br>Service Charge | Monthly<br>Increase/(Decrease) | Percent<br>Change |
|-------------------------|-----------------------------------|------------------------------------|--------------------------------|-------------------|
|                         | \$0.00                            | \$0.00                             | \$0.00                         | 0%                |
| Volumetric Rates        |                                   |                                    |                                |                   |
|                         | Current                           | Proposed                           | Increase/                      | Percent           |
|                         | Rate                              | Rate                               | (Decrease)                     | Change            |
| Volumetric Rate Per CCF | \$3.43                            | \$6.05                             | \$2.62                         | 76%               |

Table 10 Comparison of Existing and Proposed Sewer User Rates For Example Customers  $Village\ of\ Bradley,\ IL$ 



|             |               |            | Current Monthly | Proposed Monthly | Percent |
|-------------|---------------|------------|-----------------|------------------|---------|
| Customer    | Monthly Usage | Meter Size | Sewer Charge    | Sewer Charge     | Change  |
| Residential | 134           | 5/8        | \$5             | \$8              | 76%     |
| Residential | 401           | 5/8        | \$14            | \$24             | 76%     |
| Residential | 613           | 5/8        | \$21            | \$37             | 76%     |
| Residential | 724           | 5/8        | \$25            | \$44             | 76%     |
| Commercial  | 1,671         | 5/8        | \$57            | \$101            | 76%     |
| Commercial  | 2,473         | 1          | \$85            | \$150            | 76%     |
| Commercial  | 4,011         | 2          | \$138           | \$243            | 76%     |
| Industrial  | 16,711        | 1          | \$573           | \$1,011          | 76%     |
| Industrial  | 71,190        | 2          | \$2,442         | \$4,307          | 76%     |
| Industrial  | 91,912        | 3          | \$3,153         | \$5,561          | 76%     |

Table 11
Long-Term Capital Improvement Plan <sup>2</sup>
Village of Bradley, IL



|   | 1         | 2           | 3         | 4         | 5           | 6         | 7         | 8           | 9         | 10        | 11          | 12        | 13        |             |
|---|-----------|-------------|-----------|-----------|-------------|-----------|-----------|-------------|-----------|-----------|-------------|-----------|-----------|-------------|
|   | Budget    | Budget      | Budget    | Budget    |             |
| Project   | 2017-18   | 2018-19     | 2019-20   | 2020-21   | 2021-22     | 2022-23   | 2023-24   | 2024-25     | 2025-26   | 2026-27   | 2027-28     | 2028-29   | 2029-30   | Totals      |
| Cues Sewer Camera Software <sup>1</sup>                       |           |             |           |           |             |           |           |             |           |           |             |           |           | \$0         |
| SCADA System <sup>1</sup>                                     |           |             |           |           |             |           |           |             |           |           |             |           |           | \$0         |
| Backhoe <sup>1</sup>  |           | \$120,000   |           |           |             |           |           |             |           |           |             |           |           | \$120,000   |
| Pull-behind Generator <sup>1</sup>                            | \$20,000  |             |           |           |             |           |           |             |           |           |             |           |           | \$20,000    |
| Air Compressor <sup>1</sup>                                   |           |             |           |           |             |           |           |             |           |           |             |           |           | \$0         |
| Sewer System Evaluation                                       | \$100,000 | \$150,000   | \$150,000 | \$150,000 | \$150,000   | \$150,000 | \$150,000 | \$150,000   | \$90,000  |           |             |           |           | \$1,140,000 |
| Sewer Main Repair/Lining/Replacement <sup>2</sup>             | \$0       | \$0         | \$380,000 | \$505,000 | \$505,000   | \$505,000 | \$505,000 | \$505,000   | \$640,000 | \$640,000 | \$640,000   | \$640,000 | \$640,000 | \$6,105,000 |
| Totals  | \$120,000 | \$270,000   | \$530,000 | \$655,000 | \$655,000   | \$655,000 | \$655,000 | \$655,000   | \$730,000 | \$640,000 | \$640,000   | \$640,000 | \$640,000 | \$7,385,000 |
| Source of Funding   |           |             |           |           |             |           |           |             |           |           |             |           |           |             |
| IEPA Loan   |           |             |           |           |             |           |           |             |           |           |             |           |           | \$0         |
| GO Bonds  |           | \$150,000   | \$530,000 | \$655,000 | \$655,000   | \$655,000 | \$655,000 | \$655,000   | \$730,000 | \$640,000 | \$640,000   | \$640,000 | \$640,000 | \$7,245,000 |
| Tap-On Fees   |           |             |           |           |             |           |           |             |           |           |             |           |           | \$0         |
| Capital Outlay  | \$120,000 | \$120,000   |           |           |             |           |           |             |           |           |             |           |           | \$240,000   |
| Developer Paid  |           |             |           |           |             |           |           |             |           |           |             |           |           | \$0         |
| Total   | \$120,000 | \$270,000   | \$530,000 | \$655,000 | \$655,000   | \$655,000 | \$655,000 | \$655,000   | \$730,000 | \$640,000 | \$640,000   | \$640,000 | \$640,000 | \$7,485,000 |
| Estimate of Sizing of GO Bonds (Grouping 3 Years of Projects) |           | \$1,335,000 |           |           | \$1,965,000 |           |           | \$2,025,000 |           |           | \$1,920,000 |           |           |             |

### Notes:

<sup>1.</sup> Source: Village of Bradley FY 2016-2020 Capital Improvement Plan for the Sewer Fund.

<sup>2.</sup> Source: M. Gingerich, Gereaux & Associates, received on 7/23/15.

Table 12 Cash Flow Analysis Village of Bradley, IL



|  | 1           | 1           | 2           | 3           | 4           | 5           | 6           | 7           | 8           | 9           | 10          | 11          | 12          | 13          |
|--|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|  | Estimated   | Test Year   |             |             |             |             |             |             |             |             |             |             |             |             |
| Fiscal Year Ending                             | 2017        | 2018        | 2019        | 2020        | 2021        | 2022        | 2023        | 2024        | 2025        | 2026        | 2027        | 2028        | 2029        | 2030        |
| User Rate Increase %                           |             | 76.38%      | 10.00%      | 3.00%       | 7.00%       | 3.00%       | 3.00%       | 3.00%       | 5.00%       | 3.00%       | 3.00%       | 5.00%       | 3.00%       | 3.00%       |
| Cumulative Percent Rate Increase               |             | 76.38%      | 84.02%      | 86.54%      | 92.60%      | 95.38%      | 98.24%      | 101.19%     | 106.25%     | 109.44%     | 112.72%     | 118.35%     | 121.91%     | 125.56%     |
|  |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| Cash Sources                                   |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| Sewer Usage                                    | \$1,466,300 | \$2,550,801 | \$2,812,896 | \$2,904,526 | \$3,115,612 | \$3,217,103 | \$3,321,901 | \$3,430,111 | \$3,610,621 | \$3,728,237 | \$3,849,684 | \$4,052,274 | \$4,184,277 | \$4,320,580 |
| Other Income                                   | \$1,015     | \$500       | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         |
| KRMA Reimbursement                             | \$80,000    | \$80,000    | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         |
| Property Taxes                                 | \$399,363   | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         | \$0         |
| Tap On Fees                                    | \$25,600    | \$30,000    | \$45,000    | \$45,000    | \$45,000    | \$45,000    | \$50,000    | \$50,000    | \$50,000    | \$50,000    | \$50,000    | \$55,000    | \$55,000    | \$55,000    |
| Investment Income                              | \$300       | \$300       | (\$298)     | (\$254)     | (\$101)     | \$107       | \$208       | \$336       | \$489       | \$577       | \$696       | \$843       | \$952       | \$1,091     |
| Total Revenues                                 | \$1,972,578 | \$2,661,601 | \$2,857,597 | \$2,949,272 | \$3,160,512 | \$3,262,210 | \$3,372,108 | \$3,480,447 | \$3,661,110 | \$3,778,814 | \$3,900,380 | \$4,108,117 | \$4,240,229 | \$4,376,671 |
|  |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| Cash Uses                                      |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| Operating and Maintenance <sup>2</sup>         | \$2,348,355 | \$2,097,247 | \$2,160,164 | \$2,224,969 | \$2,291,718 | \$2,360,470 | \$2,431,284 | \$2,504,223 | \$2,579,349 | \$2,656,730 | \$2,736,432 | \$2,818,525 | \$2,903,080 | \$2,990,173 |
|  |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| Net before Debt Service                        | (\$375,777) | \$564,354   | \$697,433   | \$724,303   | \$868,793   | \$901,740   | \$940,824   | \$976,225   | \$1,081,761 | \$1,122,084 | \$1,163,949 | \$1,289,593 | \$1,337,149 | \$1,386,498 |
|  |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| Debt Service                                   |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| 2015 GO Sewer Refunding Bonds                  | \$400,550   | \$400,550   | \$397,900   | \$400,100   | \$397,000   | \$393,750   | \$395,350   | \$395,200   | \$398,200   | \$395,600   | \$397,600   | \$394,000   | \$400,000   | \$400,000   |
| 2018 G.O. Bonds @4.0% (level P&I 15 Yr period) |             |             | \$120,071   | \$120,071   | \$120,071   | \$120,071   | \$120,071   | \$120,071   | \$120,071   | \$120,071   | \$120,071   | \$120,071   | \$120,071   | \$120,071   |
| 2021 G.O. Bonds @4.0% (level P&I 15 Yr period) |             |             |             |             |             | \$176,734   | \$176,734   | \$176,734   | \$176,734   | \$176,734   | \$176,734   | \$176,734   | \$176,734   | \$176,734   |
| 2024 G.O. Bonds @4.5% (level P&I 15 Yr period) |             |             |             |             |             |             |             |             | \$188,555   | \$188,555   | \$188,555   | \$188,555   | \$188,555   | \$188,555   |
| 2027 G.O. Bonds @4.5% (level P&I 15 Yr period) |             |             |             |             |             |             |             |             |             |             |             | \$178,779   | \$178,779   | \$178,779   |
| Total Debt Service                             | \$400,550   | \$400,550   | \$517,971   | \$520,171   | \$517,071   | \$690,556   | \$692,156   | \$692,006   | \$883,561   | \$880,961   | \$882,961   | \$1,058,140 | \$1,064,140 | \$1,064,140 |
|  |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| Capital Outlay/Equipment Replacement           | \$15,000    | \$120,000   | \$120,000   | \$0         | \$75,000    | \$76,500    | \$78,030    | \$79,591    | \$81,182    | \$82,806    | \$84,462    | \$86,151    | \$87,874    | \$89,632    |
|  |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| Net Cash Flow                                  | (\$791,327) | \$43,804    | \$59,462    | \$204,131   | \$276,722   | \$134,685   | \$170,639   | \$204,628   | \$117,018   | \$158,317   | \$196,525   | \$145,302   | \$185,135   | \$232,726   |
|  |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| Cash Balance                                   |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| Beginning of Year Balance <sup>1</sup>         | \$349,711   | (\$441,616) | (\$397,812) | (\$338,350) | (\$134,219) | \$142,503   | \$277,188   | \$447,826   | \$652,455   | \$769,472   | \$927,790   | \$1,124,315 | \$1,269,616 | \$1,454,751 |
| Additions/(Subtractions)                       | (\$791,327) | \$43,804    | \$59,462    | \$204,131   | \$276,722   | \$134,685   | \$170,639   | \$204,628   | \$117,018   | \$158,317   | \$196,525   | \$145,302   | \$185,135   | \$232,726   |
| End of Year Balance                            | (\$441,616) | (\$397,812) | (\$338,350) | (\$134,219) | \$142,503   | \$277,188   | \$447,826   | \$652,455   | \$769,472   | \$927,790   | \$1,124,315 | \$1,269,616 | \$1,454,751 | \$1,687,477 |
| 3  |             | ,           | ,           | ,           |             |             |             |             |             |             |             |             |             |             |
| Minimum Recommended Fund Balance               | 987,639     | 1,042,283   | 1,060,212   | 1,073,314   | 1,263,485   | 1,282,273   | 1,299,827   | 1,509,617   | 1,525,798   | 1,547,144   | 1,742,248   | 1,768,771   | 1,789,910   | 1,789,910   |
| Estimated Balance vs. Recommended Bal          | (1,429,255) | (1,440,095) | (1,398,563) | (1,207,533) | (1,120,982) | (1,005,086) | (852,000)   | (857,162)   | (756,326)   | (619,354)   | (617,933)   | (499,154)   | (335,159)   | (102,432)   |

#### Notes

- 1. Source: Village of Bradley FY 15-16 Budget. Cash balance shown in budget increased by \$100,000 per Finance Director from 6/25/2015 Email.
- 2. O&M Expenses in 2017 and beyond take into consideration planned revenue figures for wastewater treatment for Bradley from KRMA. Remaining O&M Expenses are inflated by 3% annually.
- 3. Equal to 3 months operating and maintenance expenses plus one full year's debt service payment on outstanding debt.

Table 13 Single Family Home Rate Comparison - Surrounding Communities  $Village\ of\ Bradley,\ IL$ 



|                               |              | Volumetric Rate | Monthly Bill        | Annual Bill     |
|-------------------------------|--------------|-----------------|---------------------|-----------------|
| Municipality                  | Fixed Charge | Per CCF         | for Avg SF Home (1) | for Avg SF Home |
| City of Kankakee              | \$27.50      | \$4.40          | \$54.47             | \$653.66        |
| Village of Manteno            | \$11.00      | \$6.66          | \$51.81             | \$621.70        |
| Village of Bradley - Proposed | \$0.00       | \$6.05          | \$37.09             | \$445.04        |
| Village of Bourbonnais        | \$34.25      | \$0.00          | \$34.25             | \$411.00        |
| Village of Bradley - Current  | \$0.00       | \$3.43          | \$21.03             | \$252.31        |

### Notes:

<sup>(1)</sup> Based upon 613 CCF usage per month.