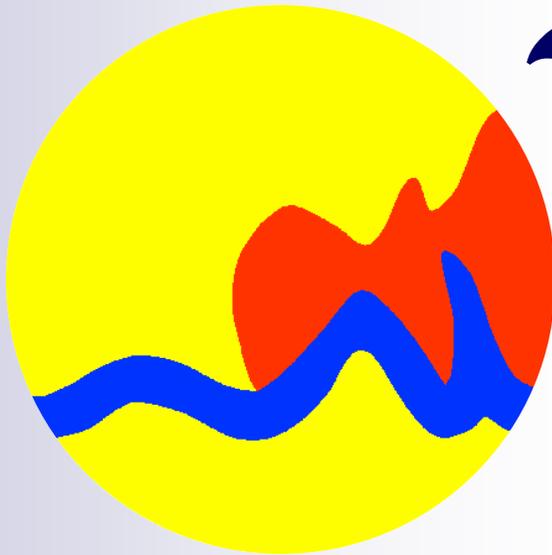


**City of Grand Rapids**

**WATER & SEWER**



**Rate Study  
2004**



**FINAL**

# MEMORANDUM

CITY OF GRAND RAPIDS

**DATE:** January 31, 2005

**TO:** Eric R. DeLong  
Deputy City Manager

**FROM:** Michael E. Wolski   
Utility Financial Officer

**SUBJECT:** 2004 WATER/SEWER RATE REVIEW- FINAL REPORT

This is the final report regarding water and sewer rates as of January 1, 2005 for Grand Rapids and all customer communities. The report continues to be two-tiered in nature, calculating recommended rates for customer communities based upon: (a) adherence to the rate-making methodology established in 1976-1977 for customer communities not party to the uniform water and sewer service agreements; (b) rate methodology changes, based upon the uniform service agreements with our UAB partners.

The 2005 water rates reflect increases to compensate for a decline in billed volume. Sewer rates for 2005 reflect increases for declined billed volume and increases for personal service costs, supplies and contractual repairs of service mains, and are partially offset by increased connection fees.

Overall water and sewer revisions for the systems are summarized as follows:

1. Revenue requirements for the Water Supply System increased by \$1,485,220 or 4.41% more than revenues generated by previous rates and charges.
2. Revenue requirements for the Sewage Disposal System increased by \$2,667,839 or 9.03% more than revenues generated by previous rates and charges.

Attached is a schedule of comparative 2003/2004/2005 water/sewer quarterly billings based on consumption averages for a typical domestic user in Grand Rapids and retail customer communities. Also included is a comparison of the 2004/2005 monthly charge for Wright Township's REU (Residential Equivalent Unit) rate structure. Three year comparative rate adjustments are also noted for our wholesale customer communities.

Announcement of proposed 2005 water and sewer rates was made to our UAB partners and all other customer communities on Thursday, November 18, 2004. Concurrence of customer community rates by the City Commission was approved by resolution (#73301) on December 21, 2004.

Public hearings for water and sewer rates and charges in Grand Rapids were held on December 14, 2004. The City Commission resolved (#73271 & #73272) final adoption of water and sewer rate ordinances (2004-81 & 2004-82) on December 21, 2004.

MW

Attachment

*Wsrs\04Final-Cover Memo*

CITY OF GRAND RAPIDS, MICHIGAN  
2004 FINAL WATER/SEWER RATE STUDY  
HISTORICAL IMPACT OF RATE ADJUSTMENTS ON DOMESTIC USERS  
BY RETAIL CUSTOMER COMMUNITY\*

|  | QUARTERLY BILL |           | 2003-2004 CHANGE |            | 2004-2005 CHANGE |          | 2003-2005 CHANGE |           | 2 YEAR CHANGE<br>(SIMPLE AVERAGE) |           |         |
|--|----------------|-----------|------------------|------------|------------------|----------|------------------|-----------|-----------------------------------|-----------|---------|
|  | 2003           | 2004      | 2005             | DOLLARS    | PERCENT          | DOLLARS  | PERCENT          | DOLLARS   | PERCENT                           | DOLLARS   | PERCENT |
| <b>GRAND RAPIDS</b>  |                |           |                  |            |                  |          |                  |           |                                   |           |         |
| WATER  | \$ 63.39       | \$ 62.25  | \$ 64.80         | \$ (1.14)  | -1.80%           | \$ 2.55  | 4.10%            | \$ 1.41   | 2.22%                             | \$ 0.70   | 1.10%   |
| SEWER  | \$ 58.92       | \$ 56.44  | \$ 62.26         | \$ (2.48)  | -4.21%           | \$ 5.82  | 10.31%           | \$ 3.34   | 5.67%                             | \$ 1.67   | 2.83%   |
| BASE RATIO   | 1.00           | 1.00      | 1.00             | \$ (3.62)  | -2.96%           | \$ 8.37  | 7.05%            | \$ 4.75   | 3.88%                             | \$ 2.37   | 1.94%   |
| <b>WALKER</b>  |                |           |                  |            |                  |          |                  |           |                                   |           |         |
| WATER  | \$ 65.76       | \$ 64.17  | \$ 67.98         | \$ (1.59)  | -2.42%           | \$ 3.81  | 5.94%            | \$ 2.22   | 3.38%                             | \$ 1.11   | 1.69%   |
| SEWER  | \$ 66.12       | \$ 57.32  | \$ 65.83         | \$ (8.80)  | -13.31%          | \$ 8.51  | 14.85%           | \$ (0.29) | -0.44%                            | \$ (0.15) | -0.23%  |
| RATIO TO GR  | 1.08           | 1.02      | 1.05             | \$ (10.39) | -7.88%           | \$ 12.32 | 10.14%           | \$ 1.93   | 1.46%                             | \$ 0.96   | 0.73%   |
| <b>KENTWOOD</b>  |                |           |                  |            |                  |          |                  |           |                                   |           |         |
| WATER  | \$ 80.67       | \$ 77.43  | \$ 79.74         | \$ (3.24)  | -4.02%           | \$ 2.31  | 2.98%            | \$ (0.93) | -1.15%                            | \$ (0.47) | -0.58%  |
| SEWER  | \$ 39.37       | \$ 33.99  | \$ 39.27         | \$ (5.38)  | -13.67%          | \$ 5.28  | 15.53%           | \$ (0.10) | -0.25%                            | \$ (0.05) | -0.13%  |
| RATIO TO GR  | 0.98           | 0.94      | 0.94             | \$ (8.62)  | -7.18%           | \$ 7.59  | 6.81%            | \$ (1.03) | -0.86%                            | \$ (0.52) | -0.43%  |
| <b>CASCADE TWP</b>   |                |           |                  |            |                  |          |                  |           |                                   |           |         |
| WATER  | \$ 104.64      | \$ 101.85 | \$ 110.55        | \$ (2.79)  | -2.67%           | \$ 8.70  | 8.54%            | \$ 5.91   | 5.65%                             | \$ 2.96   | 2.83%   |
| SEWER  | \$ 79.44       | \$ 70.99  | \$ 82.25         | \$ (8.45)  | -10.64%          | \$ 11.26 | 15.86%           | \$ 2.81   | 3.54%                             | \$ 1.41   | 1.77%   |
| RATIO TO GR  | 1.51           | 1.46      | 1.52             | \$ (11.24) | -6.11%           | \$ 19.96 | 11.55%           | \$ 8.72   | 4.74%                             | \$ 4.37   | 2.37%   |
| <b>GRAND RAPIDS TWP</b>  |                |           |                  |            |                  |          |                  |           |                                   |           |         |
| WATER  | \$ 76.83       | \$ 76.56  | \$ 80.49         | \$ (0.27)  | -0.35%           | \$ 3.93  | 5.13%            | \$ 3.66   | 4.76%                             | \$ 1.83   | 2.38%   |
| SEWER  | \$ 75.52       | \$ 69.92  | \$ 76.64         | \$ (5.60)  | -7.42%           | \$ 6.72  | 9.61%            | \$ 1.12   | 1.48%                             | \$ 0.56   | 0.74%   |
| RATIO TO GR  | 1.25           | 1.23      | 1.24             | \$ (5.87)  | -3.85%           | \$ 10.65 | 7.27%            | \$ 4.78   | 3.14%                             | \$ 2.39   | 1.57%   |
| <b>TALLMADGE TWP- Contributions: \$15.9K / \$0K / \$28.86K</b> |                |           |                  |            |                  |          |                  |           |                                   |           |         |
| WATER  | \$ 91.08       | \$ 104.52 | \$ 110.97        | \$ 13.44   | 14.76%           | \$ 6.45  | 6.17%            | \$ 19.89  | 21.84%                            | \$ 9.95   | 10.92%  |
| SEWER  | \$ 116.80      | \$ 108.68 | \$ 114.17        | \$ (8.12)  | -6.95%           | \$ 5.49  | 5.05%            | \$ (2.63) | -2.25%                            | \$ (1.32) | -1.13%  |
| RATIO TO GR  | 1.70           | 1.80      | 1.77             | \$ 5.32    | 2.56%            | \$ 11.94 | 5.60%            | \$ 17.26  | 8.30%                             | \$ 8.63   | 4.15%   |

\* TYPICAL DOMESTIC CUSTOMER  
QUARTERLY CONSUMPTION: WATER- 27.00 UNITS OR 20,196 GALLONS  
SEWER- 20.00 UNITS OR 14,960 GALLONS  
NO. OF MONTHS: 3

REU (RESIDENTIAL EQUIVALENT UNIT) CUSTOMER COMMUNITY- APPROXIMATE MONTHLY BILL

|   |     |          |          |       |
|---|-----|----------|----------|-------|
| WRIGHT TWP- Contributions: NA / \$0K / \$7,768. | N/A | \$ 47.37 | \$ 48.77 | 2.96% |
| SEWER (No. of REU 1.00)                         |     | \$ 1.40  |          |       |

CITY OF GRAND RAPIDS, MICHIGAN  
2004 FINAL WATER/SEWER RATE STUDY  
HISTORICAL IMPACT OF RATE ADJUSTMENTS ON WHOLESALE USERS

|                          | 2003        | 2004        | 2005        | 2003-2004<br>% CHANGE | 2004-2005<br>% CHANGE | 2003-2005<br>% CHANGE | 2 YEAR-<br>SIMPLE AVG-<br>% CHANGE |
|--------------------------|-------------|-------------|-------------|-----------------------|-----------------------|-----------------------|------------------------------------|
| <b>EAST GRAND RAPIDS</b> |             |             |             |                       |                       |                       |                                    |
| WATER                    | \$11,334.00 | \$14,828.00 | \$11,396.00 | 30.83%                | -23.15%               | 0.55%                 | 0.27%                              |
| - SERVICE (MONTHLY)      |             |             |             |                       |                       |                       |                                    |
| - COMMODITY (100 CF)     | 1.08        | 0.99        | 1.00        | -8.33%                | 1.01%                 | -7.41%                | -3.70%                             |
| SEWER                    | 2,621.00    | 2,727.00    | 1,744.00    | 4.04%                 | -36.05%               | -33.46%               | -16.73%                            |
| - SERVICE (MONTHLY)      |             |             |             |                       |                       |                       |                                    |
| - COMMODITY (MG)         | 992.00      | 896.00      | 957.00      | -9.68%                | 6.81%                 | -3.53%                | -1.76%                             |
| <b>ADA TWP</b>           |             |             |             |                       |                       |                       |                                    |
| WATER                    | \$27,129.00 | \$27,452.00 | \$29,115.00 | 1.19%                 | 6.06%                 | 7.32%                 | 3.66%                              |
| - SERVICE (MONTHLY)      |             |             |             |                       |                       |                       |                                    |
| - COMMODITY (100 CF)     | 1.12        | 1.05        | 1.06        | -6.25%                | 0.95%                 | -5.36%                | -2.68%                             |
| SEWER                    | 4,740.00    | 4,992.00    | 5,772.00    | 5.32%                 | 15.63%                | 21.77%                | 10.89%                             |
| - SERVICE (MONTHLY)      |             |             |             |                       |                       |                       |                                    |
| - COMMODITY (MG)         | 1,073.00    | 1,007.00    | 1,085.00    | -6.15%                | 7.75%                 | 1.12%                 | 0.56%                              |
| <b>OTTAWA COUNTY</b>     |             |             |             |                       |                       |                       |                                    |
| WATER                    | \$ -        | \$ 80.00    | \$ 169.00   | N/A                   | 111.25%               | N/A                   | N/A                                |
| - SERVICE (MONTHLY)      |             |             |             |                       |                       |                       |                                    |
| - COMMODITY (100 CF)     | 1.16        | 1.09        | 1.11        | -6.03%                | 1.83%                 | -4.31%                | -2.16%                             |
| <b>NORTH KENT AREA</b>   |             |             |             |                       |                       |                       |                                    |
| SEWER                    | \$33,924.00 | \$30,365.00 | \$23,944.00 | -10.49%               | -21.15%               | -29.42%               | -14.71%                            |
| - SERVICE (MONTHLY)      |             |             |             |                       |                       |                       |                                    |
| - COMMODITY (MG)         | 821.00      | 910.00      | 871.00      | 10.84%                | -4.29%                | 6.09%                 | 3.05%                              |
| <b>GAINES TWP</b>        |             |             |             |                       |                       |                       |                                    |
| SEWER                    | \$ 2,317.00 | \$ 1,374.00 | \$ 1,592.00 | -40.70%               | 15.87%                | -31.29%               | -15.65%                            |
| - SERVICE (MONTHLY)      |             |             |             |                       |                       |                       |                                    |
| - COMMODITY (MG)         | 821.00      | 910.00      | 871.00      | 10.84%                | -4.29%                | 6.09%                 | 3.05%                              |
| <b>MEIJER - ALGOMA</b>   |             |             |             |                       |                       |                       |                                    |
| SEWER                    | NA          | NA          | \$ 103.00   | NA                    | NA                    | NA                    | NA                                 |
| - SERVICE (MONTHLY)      |             |             |             |                       |                       |                       |                                    |
| - COMMODITY (MG)         | NA          | NA          | 1,212.00    | NA                    | NA                    | NA                    | NA                                 |

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
ANNUAL RATE REVIEW**

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**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ANNUAL RATE REVIEW**

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**CITY OF GRAND RAPIDS, MICHIGAN  
FINAL CONSIDERATIONS  
ANNUAL WATER-SEWER RATE REVIEW**

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# Water Rate Study

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 SYSTEM ADDITIONS AND IMPROVEMENTS  
 FOR THE YEAR ENDED JUNE 30, 2004  
 TASKS NO. 1, 2, & 3**

| COMMUNITY             | LOCAL                |                    | INTERMEDIATE        |                    | PRIMARY         |                 | TOTALS               |                    |
|-----------------------|----------------------|--------------------|---------------------|--------------------|-----------------|-----------------|----------------------|--------------------|
|                       | FEET                 | MILES              | FEET                | MILES              | FEET            | MILES           | FEET                 | MILES              |
| <b>Grand Rapids</b>   |                      |                    |                     |                    |                 |                 |                      |                    |
| Construction          | 17,572               | 3.33               | 14,059              | 2.66               |                 | 0.00            | 31,631               | 5.99               |
| Abandonment           | (8,837)              | (1.67)             | (11,285)            | (2.14)             |                 | 0.00            | (20,122)             | (3.81)             |
| CSO Construction      |                      | 0.00               |                     | 0.00               |                 | 0.00            | 0                    | 0.00               |
| CSO Abandonment       |                      | 0.00               |                     | 0.00               |                 | 0.00            | 0                    | 0.00               |
|                       | <u>8,735</u>         | <u>1.66</u>        | <u>2,774</u>        | <u>0.52</u>        | <u>0</u>        | <u>0.00</u>     | <u>11,509</u>        | <u>2.18</u>        |
| <b>Kentwood</b>       |                      |                    |                     |                    |                 |                 |                      |                    |
| Construction          | 3,951                | 0.75               | 69                  | 0.01               |                 | 0.00            | 4,020                | 0.76               |
| Abandonment           | (440)                | (0.08)             |                     | 0.00               |                 | 0.00            | (440)                | (0.08)             |
|                       | <u>3,511</u>         | <u>0.67</u>        | <u>69</u>           | <u>0.01</u>        | <u>0</u>        | <u>0.00</u>     | <u>3,580</u>         | <u>0.68</u>        |
| <b>Cascade Twp.</b>   |                      |                    |                     |                    |                 |                 |                      |                    |
| Construction          | 4,130                | 0.78               | 2,515               | 0.48               |                 | 0.00            | 6,645                | 1.26               |
| Abandonment           |                      | 0.00               | (40)                | (0.01)             |                 | 0.00            | (40)                 | (0.01)             |
|                       | <u>4,130</u>         | <u>0.78</u>        | <u>2,475</u>        | <u>0.47</u>        | <u>0</u>        | <u>0.00</u>     | <u>6,605</u>         | <u>1.25</u>        |
| <b>G.R. Twp.</b>      |                      |                    |                     |                    |                 |                 |                      |                    |
| Construction          | 15,427               | 2.92               | 2,339               | 0.44               |                 | 0.00            | 17,766               | 3.36               |
| Abandonment           |                      | 0.00               |                     | 0.00               |                 | 0.00            | 0                    | 0.00               |
|                       | <u>15,427</u>        | <u>2.92</u>        | <u>2,339</u>        | <u>0.44</u>        | <u>0</u>        | <u>0.00</u>     | <u>17,766</u>        | <u>3.36</u>        |
| <b>Tallmadge Twp.</b> |                      |                    |                     |                    |                 |                 |                      |                    |
| Construction          |                      | 0.00               |                     | 0.00               |                 | 0.00            | 0                    | 0.00               |
| Abandonment           |                      | 0.00               |                     | 0.00               |                 | 0.00            | 0                    | 0.00               |
|                       | <u>0</u>             | <u>0.00</u>        | <u>0</u>            | <u>0.00</u>        | <u>0</u>        | <u>0.00</u>     | <u>0</u>             | <u>0.00</u>        |
| <b>Walker</b>         |                      |                    |                     |                    |                 |                 |                      |                    |
| Construction          | 10,078               | 1.91               |                     | 0.00               |                 | 0.00            | 10,078               | 1.91               |
| Abandonment           |                      | 0.00               |                     | 0.00               |                 | 0.00            | 0                    | 0.00               |
|                       | <u>10,078</u>        | <u>1.91</u>        | <u>0</u>            | <u>0.00</u>        | <u>0</u>        | <u>0.00</u>     | <u>10,078</u>        | <u>1.91</u>        |
| <b>*TOTAL*</b>        | <u><u>41,881</u></u> | <u><u>7.94</u></u> | <u><u>7,657</u></u> | <u><u>1.44</u></u> | <u><u>0</u></u> | <u><u>-</u></u> | <u><u>49,538</u></u> | <u><u>9.38</u></u> |

WATER COSTS

| COMMUNITY         | COMMUNITY COST             |
|-------------------|----------------------------|
| Grand Rapids      | \$ 319,571                 |
| Kentwood          | 169,699                    |
| Cascade Twp.      | 161,589                    |
| Grand Rapids Twp. | 1,656,336                  |
| Tallmadge Twp.    | 0                          |
| Walker            | 396,070                    |
| <b>*TOTAL*</b>    | <u><u>\$ 2,703,265</u></u> |

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
OPERATING EXPENSE ALLOCATION BY COST CENTER - TASK #4, PART 1  
FISCAL YEAR ENDED JUNE 30, 2004**

| ACTIVITY CODE | ACTIVITY                   | EXPENSE BY ACTIVITY | PUMPING STATIONS |              |              | WATERMAINS        |                     |                    | RETAIL CUSTOMER METERING | ENGIN. SERVICES | ADMIN. EXPENSE |
|---------------|----------------------------|---------------------|------------------|--------------|--------------|-------------------|---------------------|--------------------|--------------------------|-----------------|----------------|
|               |                            |                     | FILTRATION PLANT | PRIMARY      | INTERM.      | PRIMARY TRANSPORT | INTERMED. TRANSPORT | LOCAL DISTRIBUTION |                          |                 |                |
| 0430          | TREASURER-CUSTOMER SERVICE | \$ 146,333          |                  |              |              |                   |                     | \$ 146,333         |                          |                 |                |
| 4312          | WATER-CUSTOMER SERVICE     | 2,908,481           |                  |              |              |                   |                     | 2,908,481          |                          |                 |                |
| 4315          | ENGINEERING                | 945,677             |                  |              |              |                   |                     |                    | 945,677                  |                 |                |
| 4320          | COLDBROOK CONTROL          | 1,204,857           |                  | 1,204,857    |              |                   |                     |                    |                          |                 |                |
| 4322          | COLDBROOK DISTRIBUTION     | 2,598,294           |                  | 823,165      | 1,775,129    |                   |                     |                    |                          |                 |                |
| 4331          | FIELD OPERATIONS           | 5,646,966           |                  |              |              | 271,619           | 1,408,523           |                    |                          |                 |                |
| 4342          | FILTRATION                 | 5,912,334           | 5,912,334        |              |              |                   |                     |                    |                          |                 |                |
|               | SUBTOTAL OPERATING EXPENSE | 19,362,942          | 5,912,334        | 2,028,022    | 1,775,129    | 271,619           | 1,408,523           | 3,054,814          | 945,677                  | -               |                |
| 4311          | ADMINISTRATION             | 2,707,201           |                  |              |              |                   |                     |                    |                          | 2,707,201       |                |
|               | TOTAL                      | \$ 22,070,143       | \$ 5,912,334     | \$ 2,028,022 | \$ 1,775,129 | \$ 271,619        | \$ 1,408,523        | \$ 3,054,814       | \$ 945,677               | \$ 2,707,201    |                |

**METHOD OF DISTRIBUTION**

|      |                            |          |          |          |         |        |         |          |          |          |
|------|----------------------------|----------|----------|----------|---------|--------|---------|----------|----------|----------|
| 0430 | TREASURER-CUSTOMER SERVICE | 100.000% |          |          |         |        |         | 100.000% |          |          |
| 4312 | WATER-CUSTOMER SERVICE     | 100.000% |          |          |         |        |         | 100.000% |          |          |
| 4315 | ENGINEERING                | 100.000% |          |          |         |        |         |          | 100.000% |          |
| 4320 | COLDBROOK CONTROL          | 100.000% |          | 100.000% |         |        |         |          |          |          |
| 4322 | COLDBROOK DISTRIBUTION     | 100.000% |          | 31.680%  | 66.320% |        |         |          |          |          |
| 4331 | FIELD OPERATIONS           | 100.000% |          |          |         | 4.810% | 24.943% | 70.247%  |          |          |
|      | TOTAL MILES OF MAIN        | 1,121.75 |          |          |         | 53.96  | 279.80  | 787.99   |          |          |
| 4342 | FILTRATION                 | 100.000% | 100.000% |          |         |        |         |          |          |          |
| 4311 | ADMINISTRATION             | 100.000% |          |          |         |        |         |          |          | 100.000% |

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
OPERATING EXPENSE ALLOCATION BY GOVERNMENTAL UNIT - TASK #4, PART 2  
FISCAL YEAR ENDED JUNE 30, 2004**

| COST CENTER                | EXPENSE BY COST CENTER | INTEGRATED SYSTEM | RETAIL       |                |                  |                  |             | WHOLESALE          |                 |                  |              |      |      |
|----------------------------|------------------------|-------------------|--------------|----------------|------------------|------------------|-------------|--------------------|-----------------|------------------|--------------|------|------|
|                            |                        |                   | CITY OF GR   | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP | TALLMADGE TOWNSHIP | CITY OF EAST GR | COUNTY OF OTTAWA | ADA TOWNSHIP |      |      |
| <b>FILTRATION PLANT</b>    |                        |                   |              |                |                  |                  |             |                    |                 |                  |              |      |      |
|                            | \$ 5,912,334           | \$ 5,912,334      |              |                |                  |                  |             |                    |                 |                  |              |      |      |
| <b>PUMPING STATIONS:</b>   |                        |                   |              |                |                  |                  |             |                    |                 |                  |              |      |      |
| A. PRIMARY TRANSPORT       | 2,028,022              | 2,028,022         |              |                |                  |                  |             |                    |                 |                  |              |      |      |
| B. INTERMEDIATE TRANSPORT  | 1,775,129              |                   | 1,488,537    | 45,046         | 241,546          |                  |             |                    |                 |                  |              |      |      |
| <b>WATERMAINS:</b>         |                        |                   |              |                |                  |                  |             |                    |                 |                  |              |      |      |
| A. PRIMARY TRANSPORT       | 271,619                |                   | 224,053      | 16,208         | 22,903           | 8,455            |             |                    |                 |                  |              |      |      |
| B. INTERMEDIATE TRANSPORT  | 1,408,523              |                   | 546,395      | 290,916        | 260,915          | 174,826          | 119,865     | 15,606             |                 |                  |              |      |      |
| C. LOCAL DISTRIBUTION      | 3,966,824              |                   | 3,008,558    | 296,044        | 241,857          | 197,588          | 217,779     | 4,998              |                 |                  |              |      |      |
| RETAIL CUSTOMER METERING   | 3,054,814              |                   | 2,367,726    | 233,296        | 189,062          | 120,421          | 139,330     | 4,979              |                 |                  |              |      |      |
| SUBTOTAL OPERATING EXPENSE | 18,417,265             | 7,940,356         | 7,635,269    | 881,510        | 956,283          | 501,290          | 476,974     | 25,583             |                 |                  |              |      |      |
| ENGINEERING SERVICES       | 945,677                | 407,720           | 392,049      | 45,260         | 49,100           | 25,741           | 24,493      | 1,314              |                 |                  |              |      |      |
| ADMINISTRATIVE EXPENSE     | 2,707,201              | 1,062,489         | 1,184,157    | 143,884        | 150,555          | 83,459           | 78,346      | 4,311              |                 |                  |              |      |      |
| <b>TOTAL</b>               | \$ 22,070,143          | \$ 9,410,565      | \$ 9,211,475 | \$ 1,070,654   | \$ 1,155,938     | \$ 610,490       | \$ 579,813  | \$ 31,208          | \$ -            | \$ -             | \$ -         | \$ - | \$ - |

**METHOD OF DISTRIBUTION**

|                              |           |         |           |          |          |          |          |        |  |  |  |  |  |
|------------------------------|-----------|---------|-----------|----------|----------|----------|----------|--------|--|--|--|--|--|
| FILTRATION PLANTS            | 100.00%   | 100.00% |           |          |          |          |          |        |  |  |  |  |  |
| PUMPING STATIONS             |           |         |           |          |          |          |          |        |  |  |  |  |  |
| A. PRIMARY TRANSPORT         | 100.00%   | 100.00% |           |          |          |          |          |        |  |  |  |  |  |
| B. INTERMEDIATE TRANSPORT    | 100.00%   |         | 83.855%   | 2.538%   | 13.607%  |          |          |        |  |  |  |  |  |
| <b>MEMO</b>                  |           |         |           |          |          |          |          |        |  |  |  |  |  |
| WATERMAINS                   |           |         |           |          |          |          |          |        |  |  |  |  |  |
| TOTAL MILES:                 | 1,121.75  |         |           |          |          |          |          |        |  |  |  |  |  |
| A. PRIMARY TRANSPORT         | 53.96     |         | 82.488%   | 5.967%   | 8.432%   | 3.113%   |          |        |  |  |  |  |  |
| MILES                        |           |         | 44.51     | 3.22     | 4.55     | 1.68     |          |        |  |  |  |  |  |
| B. INTERMEDIATE TRANSPORT    | 279.80    |         | 38.792%   | 20.654%  | 18.524%  | 12.412%  | 8.510%   | 1.108% |  |  |  |  |  |
| MILES                        |           |         | 108.54    | 57.79    | 51.83    | 34.73    | 23.81    | 3.10   |  |  |  |  |  |
| C. LOCAL DISTRIBUTION        | 787.99    |         | 75.843%   | 7.463%   | 6.097%   | 4.981%   | 5.490%   | 0.126% |  |  |  |  |  |
| MILES                        |           |         | 597.64    | 58.81    | 48.04    | 39.25    | 43.26    | 0.99   |  |  |  |  |  |
| RETAIL CUSTOMER METERING (1) | 77,771.00 |         | 77.508%   | 7.637%   | 6.189%   | 3.942%   | 4.561%   | 0.163% |  |  |  |  |  |
| NUMBER OF METERS             |           |         | 60,279.00 | 5,939.00 | 4,813.00 | 3,065.00 | 3,547.00 | 127.00 |  |  |  |  |  |
| ENGINEERING SERVICES (2)     |           |         | 41.457%   | 4.786%   | 5.192%   | 2.722%   | 2.590%   | 0.135% |  |  |  |  |  |
| ADMINISTRATIVE EXPENSE (3)   |           |         | 43.741%   | 5.315%   | 5.561%   | 3.083%   | 2.894%   | 0.159% |  |  |  |  |  |

NOTES:  
 (1) ALLOCATION BASED ON NUMBER OF METERS.  
 (2) ALLOCATION BASED ON DIRECT OPERATING EXPENSE.  
 (3) ALLOCATION BASED ON DIRECT OPERATING EXPENSE, ADJUSTED FOR ANY COST ASSIGNABLE EXCLUSIVELY TO GR OR RETAIL COMMUNITIES, IF APPLICABLE.



**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
ADJUSTED OPERATING EXPENSE ALLOCATION BY GOVERNMENTAL UNIT - TASK #5, PART 2  
FISCAL YEAR ENDED JUNE 30, 2004**

| COST CENTER                | ADJUSTED EXPENSE BY COST CENTER | INTEGRATED SYSTEM   | RETAIL              |                     |                     |                   |             | WHOLESALE          |                 |                  |              |  |           |
|----------------------------|---------------------------------|---------------------|---------------------|---------------------|---------------------|-------------------|-------------|--------------------|-----------------|------------------|--------------|--|-----------|
|                            |                                 |                     | CITY OF GR          | CITY OF WALKER      | CITY OF KENTWOOD    | CASCADE TOWNSHIP  | GR TOWNSHIP | TALLMADGE TOWNSHIP | CITY OF EAST GR | COUNTY OF OTTAWA | ADA TOWNSHIP |  |           |
| FILTRATION PLANT           | \$ 5,932,350                    | \$ 5,932,350        |                     |                     |                     |                   |             |                    |                 |                  |              |  |           |
| PUMPING STATIONS:          |                                 |                     |                     |                     |                     |                   |             |                    |                 |                  |              |  |           |
| A. PRIMARY TRANSPORT       | 2,002,817                       | 2,002,817           |                     |                     |                     |                   |             |                    |                 |                  |              |  |           |
| B. INTERMEDIATE TRANSPORT  | 1,560,362                       |                     | 1,308,444           | 39,596              | 212,322             |                   |             |                    |                 |                  |              |  |           |
| WATERMAINS:                |                                 |                     |                     |                     |                     |                   |             |                    |                 |                  |              |  |           |
| A. PRIMARY TRANSPORT       | 281,761                         |                     | 232,419             | 16,813              | 23,758              | 8,771             |             |                    |                 |                  |              |  |           |
| B. INTERMEDIATE TRANSPORT  | 1,461,117                       |                     | 566,797             | 301,779             | 270,657             | 181,354           |             |                    |                 | 16,189           |              |  |           |
| C. LOCAL DISTRIBUTION      | 4,114,945                       |                     | 3,120,899           | 307,098             | 250,888             | 204,965           |             |                    |                 | 5,185            |              |  |           |
| RETAIL CUSTOMER METERING   | 3,192,404                       |                     | 2,474,367           | 243,804             | 197,578             | 125,845           |             |                    |                 | 5,204            |              |  |           |
| SUBTOTAL OPERATING EXPENSE | 18,545,756                      | 7,935,167           | 7,702,926           | 909,090             | 955,203             | 520,935           |             |                    |                 | 495,857          |              |  |           |
| ENGINEERING SERVICES       | 980,164                         | 419,372             | 407,111             | 48,048              | 50,488              | 27,533            |             |                    |                 | 1,402            |              |  |           |
| ADMINISTRATIVE EXPENSE     | 2,859,494                       | 1,119,565           | 1,249,334           | 154,208             | 157,389             | 89,881            |             |                    |                 | 4,628            |              |  |           |
| <b>TOTAL</b>               | <b>\$ 22,385,414</b>            | <b>\$ 9,474,104</b> | <b>\$ 9,359,371</b> | <b>\$ 1,111,346</b> | <b>\$ 1,163,080</b> | <b>\$ 638,349</b> |             |                    |                 | <b>\$ 32,608</b> |              |  | <b>\$</b> |

**METHOD OF DISTRIBUTION**

|                              |           |         |           |          |          |          |  |  |  |  |  |  |  |
|------------------------------|-----------|---------|-----------|----------|----------|----------|--|--|--|--|--|--|--|
| FILTRATION PLANTS            | 100.00%   | 100.00% |           |          |          |          |  |  |  |  |  |  |  |
| PUMPING STATIONS             |           |         |           |          |          |          |  |  |  |  |  |  |  |
| A. PRIMARY TRANSPORT         | 100.00%   | 100.00% |           |          |          |          |  |  |  |  |  |  |  |
| B. INTERMEDIATE TRANSPORT    | 100.00%   |         | 83.855%   | 2.538%   | 13.607%  |          |  |  |  |  |  |  |  |
| MEMO                         |           |         |           |          |          |          |  |  |  |  |  |  |  |
| WATERMAINS                   |           |         |           |          |          |          |  |  |  |  |  |  |  |
| TOTAL MILES:                 | 1,121.75  |         |           |          |          |          |  |  |  |  |  |  |  |
| A. PRIMARY TRANSPORT         |           |         | 82.488%   | 5.967%   | 8.432%   | 3.113%   |  |  |  |  |  |  |  |
| MILES                        | 53.96     |         | 44.51     | 3.22     | 4.55     | 1.68     |  |  |  |  |  |  |  |
| B. INTERMEDIATE TRANSPORT    |           |         | 38.792%   | 20.654%  | 18.524%  | 12.412%  |  |  |  |  |  |  |  |
| MILES                        | 279.80    |         | 108.54    | 57.79    | 51.83    | 34.73    |  |  |  |  |  |  |  |
| C. LOCAL DISTRIBUTION        |           |         | 75.843%   | 7.463%   | 6.097%   | 4.981%   |  |  |  |  |  |  |  |
| MILES                        | 787.99    |         | 597.64    | 58.81    | 48.04    | 39.25    |  |  |  |  |  |  |  |
| RETAIL CUSTOMER METERING (1) |           |         | 77.508%   | 7.637%   | 6.189%   | 3.942%   |  |  |  |  |  |  |  |
| NUMBER OF METERS             | 77,771.00 |         | 60,279.00 | 5,939.00 | 4,813.00 | 3,066.00 |  |  |  |  |  |  |  |
| ENGINEERING SERVICES (2)     |           |         | 41.535%   | 4.902%   | 5.151%   | 2.809%   |  |  |  |  |  |  |  |
| ADMINISTRATIVE EXPENSE (3)   |           |         | 43.691%   | 5.393%   | 5.504%   | 3.143%   |  |  |  |  |  |  |  |

NOTES:

- (1) ALLOCATION BASED ON NUMBER OF METERS.
- (2) ALLOCATION BASED ON DIRECT OPERATING EXPENSE.
- (3) ALLOCATION BASED ON DIRECT OPERATING EXPENSE, ADJUSTED FOR ANY COST ASSIGNABLE EXCLUSIVELY TO GR OR RETAIL COMMUNITIES, IF APPLICABLE.

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 ADJUSTED ACTUAL EXPENSE  
 YEAR ENDED JUNE 30, 2004  
 RATE STUDY- TASKS NO. 4 & 5**

ORGANIZATIONAL UNIT: 4311- ADMINISTRATION

| EXPENDITURE SUB-OBJECT |                                | OPERATING              | ADJUSTED             | ADJUSTED               |
|------------------------|--------------------------------|------------------------|----------------------|------------------------|
| NO.                    | DESCRIPTION                    | EXPENSES               | COST                 | CURRENT                |
|                        |                                |                        | FACTORS              | ANNUAL                 |
|                        |                                |                        |                      | EXPENSES               |
| 706                    | PERMANENT EMPLOYEES            | \$ 443,512.56          | 13,305.38            | \$ 456,817.94          |
| 709                    | TIME & ONE-HALF                | 5,368.12               | 161.04               | 5,529.16               |
| 710                    | ACT.ASSIGNMENT                 | 633.04                 | 18.99                | 652.03                 |
| 715                    | EMPLOYERS SOCIAL SECURITY      | 33,391.49              | 1,001.74             | 34,393.23              |
| 717                    | SPECIAL PENSION BENEFITS       | 15,468.63              | -                    | 15,468.63              |
| 719                    | HOSPITALIZATION INSURANCE      | 72,303.49              | 6,261.48             | 78,564.97              |
| 721                    | LONGEVITY PAY                  | 3,371.27               | -                    | 3,371.27               |
| 722                    | RETIREMENT FUND CONTRIBUTION   | 40,631.81              | 15,391.33            | 56,023.14              |
|                        | TOTAL PERSONAL SERVICES        | <u>614,680.41</u>      | <u>36,139.96</u>     | <u>650,820.37</u>      |
| 728                    | SUPPLIES                       | 91.81                  | -                    | 91.81                  |
|                        | TOTAL SUPPLIES                 | <u>91.81</u>           | <u>-</u>             | <u>91.81</u>           |
| 810                    | BAD DEBT WRITE-OFFS            | 7,773.07               | -                    | 7,773.07               |
| 814                    | COMPUTER SERVICES              | 487,008.96             | -                    | 487,008.96             |
| 818                    | CONTRACTUAL SERVICES           | 127,351.97             | -                    | 127,351.97             |
| 872                    | PROFESSIONAL DEVELOPMENT       | 5,621.50               | -                    | 5,621.50               |
| 873                    | OTHER TRAVEL AND TRAINING      | 20,601.17              | -                    | 20,601.17              |
| 874                    | LOCAL BUSINESS EXPENSE         | 255.31                 | -                    | 255.31                 |
| 875                    | MEMBERSHIPS                    | 39,022.76              | -                    | 39,022.76              |
| 876                    | PUBLICATIONS AND SUBSCRIPTIONS | 3,184.22               | -                    | 3,184.22               |
| 912                    | CLAIMS                         | 3,585.89               | -                    | 3,585.89               |
| 919                    | INSURANCE PREMIUMS             | 93,127.00              | -                    | 93,127.00              |
| 928                    | TELEPHONE                      | 9,838.12               | -                    | 9,838.12               |
| 943                    | EQUIPMENT RENTALS OR LEASE     | 1,860.75               | -                    | 1,860.75               |
| 945                    | LAND RENTAL OR LEASE           | 132,710.55             | -                    | 132,710.55             |
| 947                    | VEHICLE RENTAL/CAR MILEAGE     | 5,511.85               | -                    | 5,511.85               |
| 963                    | PROPERTY TAXES                 | 199.60                 | -                    | 199.60                 |
|                        | TOTAL OTHER SERVICES & CHARGES | <u>937,652.72</u>      | <u>-</u>             | <u>937,652.72</u>      |
| 981                    | FURNITURE                      | 33,196.61              | (4,259.00)           | 28,937.61              |
|                        | TOTAL CAPITAL                  | <u>33,196.61</u>       | <u>(4,259.00)</u>    | <u>28,937.61</u>       |
| 999                    | OPERATING TRANSFERS OUT        | 1,121,579.00           | 120,412.00           | 1,241,991.00           |
|                        | TOTAL TRANSFERS/FEES           | <u>1,121,579.00</u>    | <u>120,412.00</u>    | <u>1,241,991.00</u>    |
|                        | ORGANIZATIONAL UNIT TOTAL      | <u>\$ 2,707,200.55</u> | <u>\$ 152,292.96</u> | <u>\$ 2,859,493.51</u> |

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 ADJUSTED ACTUAL EXPENSE  
 YEAR ENDED JUNE 30, 2004  
 RATE STUDY- TASKS NO. 4 & 5**

ORGANIZATIONAL UNIT: 4312- CUSTOMER SERVICES

| NO. | EXPENDITURE SUB-OBJECT<br>DESCRIPTION | OPERATING<br>EXPENSES  | ADJUSTED<br>COST<br>FACTORS | ADJUSTED<br>CURRENT<br>ANNUAL<br>EXPENSES |
|-----|---------------------------------------|------------------------|-----------------------------|---|
| 706 | PERMANENT EMPLOYEES                   | \$ 1,964,210.64        | \$ 58,926.32                | \$ 2,023,136.96                           |
| 707 | TEMPORARY EMPLOYEES                   | 13,886.72              | 416.60                      | 14,303.32                                 |
| 708 | SHIFT DIFFERENTIAL                    | 1,325.45               | -                           | 1,325.45                                  |
| 709 | TIME & ONE-HALF                       | 137,576.80             | 4,127.30                    | 141,704.10                                |
| 710 | ACT.ASSIGNMENT                        | 16,532.39              | 495.97                      | 17,028.36                                 |
| 712 | UNEMPLOYMENT COMPENSATION             | 11,243.56              | -                           | 11,243.56                                 |
| 714 | REGULAR HOURLY RATE                   | 10,119.67              | 303.59                      | 10,423.26                                 |
| 715 | EMPLOYERS SOCIAL SECURITY             | 163,620.26             | 4,908.61                    | 168,528.87                                |
| 719 | HOSPITALIZATION INSURANCE             | 689,940.01             | 59,748.80                   | 749,688.81                                |
| 721 | LONGEVITY PAY                         | 24,148.40              | -                           | 24,148.40                                 |
| 722 | RETIREMENT FUND CONTRIBUTION          | 242,873.17             | 92,000.36                   | 334,873.53                                |
|     | TOTAL PERSONAL SERVICES               | <u>3,275,477.07</u>    | <u>220,927.55</u>           | <u>3,496,404.62</u>                       |
| 728 | SUPPLIES                              | 55,759.11              | -                           | 55,759.11                                 |
| 730 | POSTAGE                               | 182,448.52             | -                           | 182,448.52                                |
|     | TOTAL SUPPLIES                        | <u>238,207.63</u>      | <u>-</u>                    | <u>238,207.63</u>                         |
| 814 | COMPUTER SERVICES                     | 321,399.00             | -                           | 321,399.00                                |
| 818 | CONTRACTUAL SERVICES                  | 303,698.85             | -                           | 303,698.85                                |
| 828 | MEDICAL/SUPPORTIVE SERVICES           | 7,429.46               | -                           | 7,429.46                                  |
| 875 | MEMBERSHIPS                           | 289.00                 | -                           | 289.00                                    |
| 876 | PUBLICATIONS AND SUBSCRIPTIONS        | 46.90                  | -                           | 46.90                                     |
| 880 | COMMUNITY PROMOTION                   | 12,459.66              | -                           | 12,459.66                                 |
| 900 | PRINTING & PUBLISHING                 | 1,393.65               | -                           | 1,393.65                                  |
| 912 | CLAIMS                                | 4,685.86               | -                           | 4,685.86                                  |
| 928 | TELEPHONE                             | 28,498.20              | -                           | 28,498.20                                 |
| 930 | MAINTENANCE REPAIR                    | 496,670.66             | -                           | 496,670.66                                |
| 943 | EQUIPMENT RENTALS OR LEASE            | 106,131.11             | -                           | 106,131.11                                |
| 947 | VEHICLE RENTAL/CAR MILEAGE            | 7,424.73               | -                           | 7,424.73                                  |
| 952 | CAPITAL CONTRIBUTIONS                 | 11,674.00              | -                           | 11,674.00                                 |
|     | TOTAL OTHER SERVICES & CHARGES        | <u>1,301,801.08</u>    | <u>-</u>                    | <u>1,301,801.08</u>                       |
| 981 | FURNITURE                             | 2,070.00               | -                           | 2,070.00                                  |
| 982 | EQUIPMENT                             | 21,690.00              | (20,000.00)                 | 1,690.00                                  |
|     | TOTAL CAPITAL                         | <u>23,760.00</u>       | <u>(20,000.00)</u>          | <u>3,760.00</u>                           |
|     | ORGANIZATIONAL UNIT TOTAL (GROSS)     | \$ 4,839,245.78        | \$ 200,927.55               | \$ 5,040,173.33                           |
|     | LESS: SDSF CONTRIBUTION               | (1,930,765.15)         | (80,166.19)                 | (2,010,931.34)                            |
|     | ORGANIZATIONAL UNIT TOTAL (NET)       | <u>\$ 2,908,480.63</u> | <u>\$ 120,761.36</u>        | <u>\$ 3,029,241.99</u>                    |

**CITY OF GRAND RAPIDS, MICHIGAN**  
**WATER SUPPLY SYSTEM FUND**  
**ADJUSTED ACTUAL EXPENSE**  
**YEAR ENDED JUNE 30, 2004**  
**RATE STUDY- TASKS NO. 4 & 5**

ORGANIZATIONAL UNIT: 4315- ENGINEERING

| NO. | EXPENDITURE SUB-OBJECT<br>DESCRIPTION | OPERATING<br>EXPENSES | ADJUSTED<br>COST<br>FACTORS | ADJUSTED<br>CURRENT<br>ANNUAL<br>EXPENSES |
|-----|---------------------------------------|-----------------------|-----------------------------|---|
| 706 | PERMANENT EMPLOYEES                   | \$ 541,877.12         | \$ 16,256.31                | \$ 558,133.43                             |
| 707 | TEMPORARY EMPLOYEES                   | 26,467.40             | 794.02                      | 27,261.42                                 |
| 709 | TIME & ONE-HALF                       | 8,937.76              | 268.13                      | 9,205.89                                  |
| 710 | ACT.ASSIGNMENT                        | 1,070.47              | 32.11                       | 1,102.58                                  |
| 712 | UNEMPLOYMENT COMPENSATION             | 7,053.00              | -                           | 7,053.00                                  |
| 714 | REGULAR HOURLY RATE                   | 167.93                | 5.04                        | 172.97                                    |
| 715 | EMPLOYERS SOCIAL SECURITY             | 43,056.09             | 1,291.68                    | 44,347.77                                 |
| 719 | HOSPITALIZATION INSURANCE             | 144,268.58            | 12,493.66                   | 156,762.24                                |
| 721 | LONGEVITY PAY                         | 3,274.20              | -                           | 3,274.20                                  |
| 722 | RETIREMENT FUND CONTRIBUTION          | 63,538.25             | 24,068.29                   | 87,606.54                                 |
|     | TOTAL PERSONAL SERVICES               | <u>839,710.80</u>     | <u>55,209.24</u>            | <u>894,920.04</u>                         |
| 728 | SUPPLIES                              | 18,353.15             | -                           | 18,353.15                                 |
|     | TOTAL SUPPLIES                        | <u>18,353.15</u>      | <u>-</u>                    | <u>18,353.15</u>                          |
| 818 | CONTRACTUAL SERVICES                  | 1,030.00              | -                           | 1,030.00                                  |
| 928 | TELEPHONE                             | 7,946.18              | -                           | 7,946.18                                  |
| 930 | MAINTENANCE REPAIR                    | 630.56                | -                           | 630.56                                    |
| 943 | EQUIPMENT RENTALS OR LEASE            | 37,268.50             | -                           | 37,268.50                                 |
| 947 | VEHICLE RENTAL/CAR MILEAGE            | 2,016.00              | -                           | 2,016.00                                  |
|     | TOTAL OTHER SERVICES & CHARGES        | <u>48,891.24</u>      | <u>-</u>                    | <u>48,891.24</u>                          |
| 982 | EQUIPMENT                             | 20,000.00             | (20,000.00)                 | -   |
|     | TOTAL CAPITAL                         | <u>20,000.00</u>      | <u>(20,000.00)</u>          | <u>-</u>                                  |
| 999 | OPERATING TRANSFERS OUT               | 18,722.04             | (722.04)                    | 18,000.00                                 |
|     | TOTAL TRANSFERS/FEES                  | <u>18,722.04</u>      | <u>(722.04)</u>             | <u>18,000.00</u>                          |
|     | ORGANIZATIONAL UNIT TOTAL             | <u>\$ 945,677.23</u>  | <u>\$ 34,487.20</u>         | <u>\$ 980,164.43</u>                      |

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 ADJUSTED ACTUAL EXPENSE  
 YEAR ENDED JUNE 30, 2004  
 RATE STUDY- TASKS NO. 4 & 5**

ORGANIZATIONAL UNIT: 4320- COLDBROOK CONTROL

| EXPENDITURE SUB-OBJECT |                                | OPERATING              | ADJUSTED            | ADJUSTED               |
|------------------------|--------------------------------|------------------------|---------------------|------------------------|
| NO.                    | DESCRIPTION                    | EXPENSES               | COST                | CURRENT                |
|                        |                                |                        | FACTORS             | ANNUAL                 |
|                        |                                |                        |                     | EXPENSES               |
| 706                    | PERMANENT EMPLOYEES            | \$ 715,522.21          | \$ 21,465.67        | \$ 736,987.88          |
| 708                    | SHIFT DIFFERENTIAL             | 8,118.17               | -                   | 8,118.17               |
| 709                    | TIME & ONE-HALF                | 20,187.09              | 605.61              | 20,792.70              |
| 710                    | ACT.ASSIGNMENT                 | 738.49                 | 22.15               | 760.64                 |
| 715                    | EMPLOYERS SOCIAL SECURITY      | 59,046.66              | 1,771.40            | 60,818.06              |
| 719                    | HOSPITALIZATION INSURANCE      | 223,965.84             | 19,395.44           | 243,361.28             |
| 721                    | LONGEVITY PAY                  | 7,200.72               | -                   | 7,200.72               |
| 722                    | RETIREMENT FUND CONTRIBUTION   | 82,166.29              | 31,124.59           | 113,290.88             |
|                        | TOTAL PERSONAL SERVICES        | <u>1,116,945.47</u>    | <u>74,384.86</u>    | <u>1,191,330.33</u>    |
| 728                    | SUPPLIES                       | 4,561.65               | -                   | 4,561.65               |
| 768                    | CLOTHING/CLEANING ALLOWANCE    | 435.00                 | -                   | 435.00                 |
|                        | TOTAL SUPPLIES                 | <u>4,996.65</u>        | <u>-</u>            | <u>4,996.65</u>        |
| 928                    | TELEPHONE                      | 26,315.55              | -                   | 26,315.55              |
| 930                    | MAINTENANCE REPAIR             | 18,026.72              | -                   | 18,026.72              |
| 943                    | EQUIPMENT RENTALS OR LEASE     | 38,069.05              | -                   | 38,069.05              |
| 947                    | VEHICLE RENTAL/CAR MILEAGE     | 504.00                 | -                   | 504.00                 |
|                        | TOTAL OTHER SERVICES & CHARGES | <u>82,915.32</u>       | <u>-</u>            | <u>82,915.32</u>       |
|                        | ORGANIZATIONAL UNIT TOTAL      | <u>\$ 1,204,857.44</u> | <u>\$ 74,384.86</u> | <u>\$ 1,279,242.30</u> |

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 ADJUSTED ACTUAL EXPENSE  
 YEAR ENDED JUNE 30, 2004  
 RATE STUDY- TASKS NO. 4 & 5**

ORGANIZATIONAL UNIT: 4322- COLDBROOK DISTRIBUTION

| NO. | EXPENDITURE SUB-OBJECT<br>DESCRIPTION | OPERATING<br>EXPENSES  | ADJUSTED<br>COST<br>FACTORS | ADJUSTED<br>CURRENT<br>ANNUAL<br>EXPENSES |
|-----|---------------------------------------|------------------------|-----------------------------|---|
| 706 | PERMANENT EMPLOYEES                   | \$ 446,188.64          | \$ 13,385.66                | \$ 459,574.30                             |
| 709 | TIME & ONE-HALF                       | 2,702.10               | 81.06                       | 2,783.16                                  |
| 715 | EMPLOYERS SOCIAL SECURITY             | 34,945.41              | 1,048.36                    | 35,993.77                                 |
| 719 | HOSPITALIZATION INSURANCE             | 148,709.70             | 12,878.26                   | 161,587.96                                |
| 721 | LONGEVITY PAY                         | 5,295.96               | -                           | 5,295.96                                  |
| 722 | RETIREMENT FUND CONTRIBUTION          | 56,507.86              | 21,405.18                   | 77,913.04                                 |
|     | TOTAL PERSONAL SERVICES               | <u>694,349.67</u>      | <u>48,798.52</u>            | <u>743,148.19</u>                         |
| 728 | SUPPLIES                              | 105,501.93             | -                           | 105,501.93                                |
| 768 | CLOTHING/CLEANING ALLOWANCE           | 736.75                 | -                           | 736.75                                    |
|     | TOTAL SUPPLIES                        | <u>106,238.68</u>      | <u>-</u>                    | <u>106,238.68</u>                         |
| 814 | COMPUTER SERVICES                     | 8,453.04               | -                           | 8,453.04                                  |
| 818 | CONTRACTUAL SERVICES                  | 92.90                  | -                           | 92.90                                     |
| 921 | ELECTRICITY                           | 920,235.95             | -                           | 920,235.95                                |
| 922 | WATER                                 | 2,241.86               | -                           | 2,241.86                                  |
| 923 | GAS                                   | 78,664.47              | -                           | 78,664.47                                 |
| 928 | TELEPHONE                             | 9,868.44               | -                           | 9,868.44                                  |
| 930 | MAINTENANCE REPAIR                    | 727,044.04             | (363,155.00)                | 363,889.04                                |
| 943 | EQUIPMENT RENTALS OR LEASE            | 48,491.91              | -                           | 48,491.91                                 |
| 959 | REFUSE COLLECTION CHARGES             | 2,612.79               | -                           | 2,612.79                                  |
|     | TOTAL OTHER SERVICES & CHARGES        | <u>1,797,705.40</u>    | <u>(363,155.00)</u>         | <u>1,434,550.40</u>                       |
|     | ORGANIZATIONAL UNIT TOTAL             | <u>\$ 2,598,293.75</u> | <u>\$ (314,356.48)</u>      | <u>\$ 2,283,937.27</u>                    |

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 ADJUSTED ACTUAL EXPENSE  
 YEAR ENDED JUNE 30, 2004  
 RATE STUDY- TASKS NO. 4 & 5**

ORGANIZATIONAL UNIT: 4331- FIELD OPERATIONS

| EXPENDITURE SUB-OBJECT |                                | OPERATING              | ADJUSTED             | ADJUSTED               |
|------------------------|--------------------------------|------------------------|----------------------|------------------------|
| NO.                    | DESCRIPTION                    | EXPENSES               | COST                 | CURRENT                |
|                        |                                |                        | FACTORS              | ANNUAL                 |
|                        |                                |                        |                      | EXPENSES               |
| 706                    | PERMANENT EMPLOYEES            | \$ 1,913,560.53        | \$ 57,406.82         | \$ 1,970,967.35        |
| 707                    | TEMPORARY EMPLOYEES            | 17,992.40              | 539.77               | 18,532.17              |
| 708                    | SHIFT DIFFERENTIAL             | 1,792.83               | -                    | 1,792.83               |
| 709                    | TIME & ONE-HALF                | 307,536.80             | 9,226.10             | 316,762.90             |
| 710                    | ACT.ASSIGNMENT                 | 1,206.33               | 36.19                | 1,242.52               |
| 715                    | EMPLOYERS SOCIAL SECURITY      | 169,756.56             | 5,092.70             | 174,849.26             |
| 719                    | HOSPITALIZATION INSURANCE      | 596,508.70             | 51,657.65            | 648,166.35             |
| 721                    | LONGEVITY PAY                  | 20,847.55              | -                    | 20,847.55              |
| 722                    | RETIREMENT FUND CONTRIBUTION   | 229,403.66             | 86,898.11            | 316,301.77             |
|                        | TOTAL PERSONAL SERVICES        | <u>3,258,605.36</u>    | <u>210,857.34</u>    | <u>3,469,462.70</u>    |
| 728                    | SUPPLIES/INVENTORY             | 25,789.45              | -                    | 25,789.45              |
| 730                    | POSTAGE                        | 37.00                  | -                    | 37.00                  |
| 780                    | INVENTORY - COST OF GOODS SOLD | (30,147.21)            | -                    | (30,147.21)            |
| 785                    | PAVEMENT REPAIR                | 575,166.16             | -                    | 575,166.16             |
|                        | TOTAL SUPPLIES                 | <u>570,845.40</u>      | <u>-</u>             | <u>570,845.40</u>      |
| 814                    | COMPUTER SERVICES              | 38,340.00              | -                    | 38,340.00              |
| 818                    | CONTRACTUAL SERVICES           | 25,137.10              | -                    | 25,137.10              |
| 835                    | FEES                           | 687.50                 | -                    | 687.50                 |
| 921                    | ELECTRICITY                    | 59,727.65              | -                    | 59,727.65              |
| 922                    | WATER                          | 1,036.83               | -                    | 1,036.83               |
| 923                    | GAS                            | 42,791.31              | -                    | 42,791.31              |
| 928                    | TELEPHONE                      | 24,070.28              | -                    | 24,070.28              |
| 930                    | MAINTENANCE REPAIR             | 834,024.72             | -                    | 834,024.72             |
| 943                    | EQUIPMENT RENTALS OR LEASE     | 689,241.63             | -                    | 689,241.63             |
| 947                    | VEHICLE RENTAL/CAR MILEAGE     | 2,046.00               | -                    | 2,046.00               |
| 952                    | CAPITAL CONTRIBUTIONS          | 97,900.00              | -                    | 97,900.00              |
|                        | TOTAL OTHER SERVICES & CHARGES | <u>1,815,003.02</u>    | <u>-</u>             | <u>1,815,003.02</u>    |
| 982                    | EQUIPMENT                      | 2,512.17               | -                    | 2,512.17               |
|                        | TOTAL CAPITAL                  | <u>2,512.17</u>        | <u>-</u>             | <u>2,512.17</u>        |
|                        | ORGANIZATIONAL UNIT TOTAL      | <u>\$ 5,646,965.95</u> | <u>\$ 210,857.34</u> | <u>\$ 5,857,823.29</u> |

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 ADJUSTED ACTUAL EXPENSE  
 YEAR ENDED JUNE 30, 2004  
 RATE STUDY- TASKS NO. 4 & 5**

ORGANIZATIONAL UNIT: 4342- LAKE MI. FILTRATION

| NO. | EXPENDITURE SUB-OBJECT<br>DESCRIPTION | OPERATING<br>EXPENSES  | ADJUSTED<br>COST<br>FACTORS | ADJUSTED<br>CURRENT<br>ANNUAL<br>EXPENSES |
|-----|---------------------------------------|------------------------|-----------------------------|---|
| 706 | PERMANENT EMPLOYEES                   | \$ 2,017,681.73        | \$ 60,530.45                | \$ 2,078,212.18                           |
| 707 | TEMPORARY EMPLOYEES                   | 2,302.21               | 69.07                       | 2,371.28                                  |
| 708 | SHIFT DIFFERENTIAL                    | 7,715.22               | -                           | 7,715.22                                  |
| 709 | TIME & ONE-HALF                       | 43,098.46              | 1,292.95                    | 44,391.41                                 |
| 710 | ACT.ASSIGNMENT                        | 1,618.78               | 48.56                       | 1,667.34                                  |
| 712 | UNEMPLOYMENT COMPENSATION             | 4,877.08               | -                           | 4,877.08                                  |
| 715 | EMPLOYERS SOCIAL SECURITY             | 156,285.62             | 4,688.57                    | 160,974.19                                |
| 718 | SICK PAY ALLOWANCE                    | 435.90                 | 13.08                       | 448.98                                    |
| 719 | HOSPITALIZATION INSURANCE             | 477,423.68             | 41,344.89                   | 518,768.57                                |
| 721 | LONGEVITY PAY                         | 15,636.22              | -                           | 15,636.22                                 |
| 722 | RETIREMENT FUND CONTRIBUTION          | 242,947.61             | 92,028.55                   | 334,976.16                                |
|     | TOTAL PERSONAL SERVICES               | <u>2,970,022.51</u>    | <u>200,016.12</u>           | <u>3,170,038.63</u>                       |
| 728 | SUPPLIES                              | 641,653.38             | -                           | 641,653.38                                |
| 730 | POSTAGE                               | 130.56                 | -                           | 130.56                                    |
| 768 | CLOTHING/CLEANING ALLOWANCE           | 3,292.75               | -                           | 3,292.75                                  |
|     | TOTAL SUPPLIES                        | <u>645,076.69</u>      | <u>-</u>                    | <u>645,076.69</u>                         |
| 814 | COMPUTER SERVICES                     | 34,941.96              | -                           | 34,941.96                                 |
| 818 | CONTRACTUAL SERVICES                  | 451,831.96             | (180,000.00)                | 271,831.96                                |
| 875 | MEMBERSHIPS                           | 400.00                 | -                           | 400.00                                    |
| 921 | ELECTRICITY                           | 1,180,297.86           | -                           | 1,180,297.86                              |
| 923 | GAS                                   | 265,487.25             | -                           | 265,487.25                                |
| 928 | TELEPHONE                             | 27,707.02              | -                           | 27,707.02                                 |
| 930 | MAINTENANCE REPAIR                    | 166,872.76             | -                           | 166,872.76                                |
| 943 | EQUIPMENT RENTALS OR LEASE            | 76,903.60              | -                           | 76,903.60                                 |
| 947 | VEHICLE RENTAL/CAR MILEAGE            | 1,512.00               | -                           | 1,512.00                                  |
| 959 | REFUSE COLLECTION CHARGES             | 1,808.64               | -                           | 1,808.64                                  |
|     | TOTAL OTHER SERVICES & CHARGES        | <u>2,207,763.05</u>    | <u>(180,000.00)</u>         | <u>2,027,763.05</u>                       |
| 982 | EQUIPMENT                             | 89,472.00              | -                           | 89,472.00                                 |
|     | TOTAL CAPITAL                         | <u>89,472.00</u>       | <u>-</u>                    | <u>89,472.00</u>                          |
|     | ORGANIZATIONAL UNIT TOTAL             | <u>\$ 5,912,334.25</u> | <u>\$ 20,016.12</u>         | <u>\$ 5,932,350.37</u>                    |

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 ADJUSTED ACTUAL EXPENSE  
 YEAR ENDED JUNE 30, 2004  
 RATE STUDY- TASKS NO. 4 & 5**

ORGANIZATIONAL UNIT: 0430- TREASURER- CUSTOMER SERV'S

| <u>EXPENDITURE SUB-OBJECT</u> |                                | <u>OPERATING</u>     | <u>ADJUSTED</u>     | <u>ADJUSTED</u>      |
|-------------------------------|--------------------------------|----------------------|---------------------|----------------------|
| <u>NO.</u>                    | <u>DESCRIPTION</u>             | <u>EXPENSES</u>      | <u>COST</u>         | <u>CURRENT</u>       |
|                               |                                |                      | <u>FACTORS</u>      | <u>ANNUAL</u>        |
|                               |                                |                      |                     | <u>EXPENSES</u>      |
| 706                           | PERMANENT EMPLOYEES            | \$ 70,253.00         | \$ 2,107.59         | \$ 72,360.59         |
| 715                           | EMPLOYERS SOCIAL SECURITY      | 5,524.26             | 165.73              | 5,689.99             |
| 719                           | HOSPITALIZATION INSURANCE      | 22,153.24            | 1,918.47            | 24,071.71            |
| 721                           | LONGEVITY PAY                  | 850.00               | -                   | 850.00               |
| 722                           | RETIREMENT FUND CONTRIBUTION   | 8,974.50             | 3,399.54            | 12,374.04            |
|                               | TOTAL PERSONAL SERVICES        | <u>107,755.00</u>    | <u>7,591.33</u>     | <u>115,346.33</u>    |
| 728                           | SUPPLIES                       | 6,136.05             | -                   | 6,136.05             |
|                               | TOTAL SUPPLIES                 | <u>6,136.05</u>      | <u>-</u>            | <u>6,136.05</u>      |
| 818                           | CONTRACTUAL SERVICES           | 7,811.50             | -                   | 7,811.50             |
| 835                           | FEES                           | 14,563.52            | 9,237.00            | 23,800.52            |
| 928                           | TELEPHONE                      | 1,081.53             | -                   | 1,081.53             |
| 930                           | MAINTENANCE REPAIR             | 1,790.75             | -                   | 1,790.75             |
| 942                           | BUILDINGS RENTALS OR LEASE     | 7,194.95             | -                   | 7,194.95             |
|                               | TOTAL OTHER SERVICES & CHARGES | <u>32,442.25</u>     | <u>9,237.00</u>     | <u>41,679.25</u>     |
|                               | ORGANIZATIONAL UNIT TOTAL      | <u>\$ 146,333.30</u> | <u>\$ 16,828.33</u> | <u>\$ 163,161.63</u> |

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 21, 2004

TO: Eric DeLong  
Deputy City Manager

FROM: Michael Wolski   
Utility Financial Officer

SUBJECT: **2004 WATER RATE STUDY- TASK #4- BACKGROUND INFORMATION**

The following are the Water System's operating expenses for the test period, as reported in the City's adjusted expenditure ledger as of June 30, 2004.

## NON-INTEGRATED

|                         |             |
|-------------------------|-------------|
| 4311- Administration    | \$2,707,201 |
| 4312- Customer Services | 4,985,579   |
| 4315- Engineering       | 945,677     |
| 4331- Field Operations  | 5,646,966   |

## INTEGRATED

|                           |           |
|---------------------------|-----------|
| 4342- Lake Mi. Filtration | 5,912,334 |
|---------------------------|-----------|

## INTEGRATED & NON-INTEGRATED

|                              |           |
|------------------------------|-----------|
| 4320- Coldbrook Control      | 1,204,857 |
| 4322- Coldbrook Distribution | 2,598,294 |

Attached is the calculation of integrated and non-integrated adjusted expenses for Coldbrook Distribution (4322) for 2004.

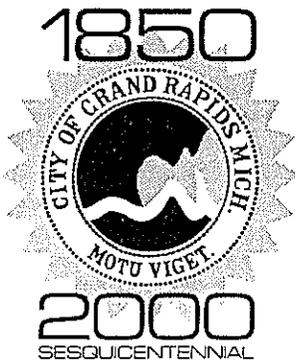
MW

Attachment

wrs\wtask4 2004

ALLOCATION OF COLDBROOK PUMPING TO WATER PUMPING FACILITIES

| STATION     | ENERGY COST       | PERCENT        | EXPENDITURE ALLOCATION |                     |
|-------------|-------------------|----------------|------------------------|---------------------|
|             |                   |                | ACTUAL                 | ADJUSTED            |
| ALGER       | \$ 48,794         | 5.30%          | \$ 137,770             | \$ 121,102          |
| BOOSTER A   | 7,808             | 0.85%          | 22,046                 | 19,379              |
| BOOSTER D   | 25,514            | 2.77%          | 72,039                 | 63,323              |
| BRISTOL     | 15,954            | 1.73%          | 45,046                 | 39,596              |
| COLDBROOK   | 181,826           | 19.76%         | 513,387                | 451,274             |
| COVELL      | 36,211            | 3.93%          | 102,242                | 89,872              |
| EAST PARIS  | 85,548            | 9.30%          | 241,546                | 212,322             |
| FRANKLIN    | 242,378           | 26.34%         | 684,356                | 601,559             |
| LEFFINGWELL | 28,973            | 3.15%          | 81,806                 | 71,908              |
| LIVINGSTON  | 116,365           | 12.65%         | 328,558                | 288,807             |
| WILSON      | 79,800            | 8.67%          | 225,316                | 198,056             |
| BURTON      | 29,914            | 3.25%          | 84,462                 | 74,244              |
| DEAN LAKE   | 21,151            | 2.30%          | 59,720                 | 52,495              |
| TOTAL       | <u>\$ 920,236</u> | <u>100.00%</u> | <u>\$ 2,598,294</u>    | <u>\$ 2,283,937</u> |



DATE: October 15, 2004

TO: Mike Wolski  
Financial Analyst

FROM: Gary Mortensen *GM*  
Budget Analyst

SUBJECT: 2004 WATER RATE STUDY ANNUAL EXPENSE  
ADJUSTMENTS - TASK #5

Attached are adjustments to test period actual operating expenses to be included in Task #5 of the Water Rate Study.

GM:gw

Attachment

Mydoc\wsstudy\waterrate04

MEMORANDUM

RECEIVED

OCT 21 2004

*CITY OF GRAND RAPIDS  
WATER SUPPLY SYSTEM FUND  
RATE STUDY TASK NO. 5  
NOTES TO ADJUSTED CURRENT ANNUAL EXPENSES  
FOR THE YEAR ENDED JUNE 30, 2004*

*Sub-Object - 704, 705, 706, 707, 709, 710, 713, 714, 718, 723, 724*

The wage increase factor to translate F.Y. 2004 actual costs to estimated calendar 2005 wages will be 3.0%. This wage increase estimate is based on ratified contracts that begin on 1/1/2005 and 1/1/2006.

*Sub-Object - 715*

Increase F.Y. 2004 actual FICA expense by 3.0% to account for the affect of the wage increases.

*Sub-Object - 719*

Increase health insurance actual F.Y. 2004 costs by 8.66% to reflect changes effective in F.Y. 2005.

*Sub-Object - 722*

Increase F.Y. 2004 actual expense by 37.88% to reflect the effect of a general pension contribution rate change from 12.55% to 16.8% and an estimated wage increase of 3.0%.

*Sub-Object - 965*

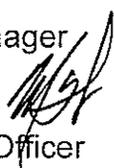
Administration - Adjust F.Y. 2004 actual cost to reflect adjustments in charges for central services rendered by the Insurance Payment Fund and the General Operating Fund.

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 21, 2004

TO: Eric DeLong  
Deputy City Manager

FROM: Michael Wolski   
Utility Financial Officer

**SUBJECT: 2004 WATER RATE STUDY- TASK #5**

Known cost increases by which to adjust FY04 operating costs include fund carry-forwards and FY05 BA#11, which re-appropriated lapsed FY04 funds, if any, for projects that were not completed prior to June 30, 2004. They are as follows:

| <u>ACCOUNT</u> | <u>DESCRIPTION</u>       | <u>AMOUNT</u> |
|----------------|--------------------------|---------------|
| 4311-982       | Custer Office Envir, Inc | \$14,816      |
| 0430-835       | Depository Services      | 9,237         |

MW

wrs\wtask5 2004

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# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 11, 2004

TO: Eric DeLong  
Deputy City Manager

FROM: Michael Wolski   
Utility Financial Officer

**SUBJECT: 2004 WATER RATE STUDY- TASK #6**

Attached are the Water Supply System Fund's revenues and volumes by governmental unit for the year ended June 30, 2004, and volume comparisons for the past five (5) years by governmental unit and for the total system.

MW

Attachment

*wrs\wtask6 2004*

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
TASK NO. 6**

DETERMINE WATER VOLUME AND REVENUE BY GOVERNMENTAL ENTITY FOR THE YEAR ENDED JUNE 30, 2004:

| RETAIL:                  | SALES REVENUE           |                      |                     | VOLUME BILLED         |
|--------------------------|-------------------------|----------------------|---------------------|-----------------------|
|                          | A                       | B                    | C                   | (GALLONS)             |
| CITY OF GRAND RAPIDS (1) | \$ 21,118,877.37        |                      | \$ 29,047.38        | 7,758,544,728         |
| CITY OF WALKER           | 2,519,777.71            | 37,470.00            |                     | 985,279,064           |
| CITY OF KENTWOOD         | 3,403,331.54            |                      |                     | 1,234,018,984         |
| CASCADE TOWNSHIP         | 2,344,378.89            | 33,720.00            |                     | 615,679,548           |
| GRAND RAPIDS TOWNSHIP    | 1,455,348.91            | 19,980.00            |                     | 457,949,536           |
| TALLMADGE TOWNSHIP       | 57,040.95               | 8,256.00             |                     | 12,211,848            |
| SUB-TOTAL RETAIL (2)     | <u>\$ 30,898,755.37</u> | <u>\$ 99,426.00</u>  | <u>\$ 29,047.38</u> | <u>11,063,683,708</u> |
| WHOLESALE:               |                         |                      |                     |                       |
| CITY OF E. GRAND RAPIDS  | \$ 778,957.32           |                      |                     | 447,559,068           |
| OTTAWA CO.               | 871,974.45              | 1,728.00             |                     | 576,716,228           |
| ADA TOWNSHIP             | 961,315.84              |                      |                     | 435,365,172           |
| SUB-TOTAL WHOLESALE      | <u>\$ 2,612,247.61</u>  | <u>\$ 1,728.00</u>   | <u>\$ -</u>         | <u>1,459,640,468</u>  |
| TOTAL                    | <u>\$ 33,511,002.98</u> | <u>\$ 101,154.00</u> | <u>\$ 29,047.38</u> | <u>12,523,324,176</u> |

REVENUE CLASSIFICATION:

|  |                         |
|--|-------------------------|
| A) 4311 - 642008 OTTAWA COUNTY WATER SALES | \$ 871,974.45           |
| 4311 - 642011 RETAIL METERED WATER SALES   | 30,886,873.34           |
| 4311 - 642012 E. GRAND RAPIDS WATER SALES  | 778,957.32              |
| 4311 - 642013 WYOMING WATER SALES          | 11,882.03               |
| 4311 - 642021 ADA WATER SALES              | 961,315.84              |
|  | <u>SUB-TOTAL</u>        |
|  | <u>\$ 33,511,002.98</u> |
| B) 4311 - 607048 FIRE HYDRANT BILLINGS     | \$ 101,154.00           |
| C) 4311 - 642024 UNMETERED WATER SALES     | \$ 29,047.38            |
|  | <u>TOTAL</u>            |
|  | <u>\$ 33,641,204.36</u> |

(1) THE VOLUME & DOLLAR AMOUNT FOR THE CITY OF WYOMING ARE INCLUDED IN THE GRAND RAPIDS TOTALS.

(2) A REVENUE ACCRUAL OF (\$214,543), (76,819,789) GALLONS, HAS BEEN PRORATED TO ALL RETAIL CUSTOMER COMMUNITIES TO ACCRUE BILLINGS FROM THE LAST READING DATE THROUGH JUNE 30, 2004.

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
2004 RATE STUDY TASK NO. 6**

VOLUME COMPARISONS FOR THE PAST FIVE (5) YEARS BY GOVERNMENTAL UNIT  
VOLUME = 1,000 GALLONS

| MUNICIPALITY  | FY00                |                | FY01                |                | FY02                |                | FY03                |                | FY04              |               | FY00 - FY04<br>% CHANGE |
|---|---------------------|----------------|---------------------|----------------|---------------------|----------------|---------------------|----------------|-------------------|---------------|-------------------------|
|   | VOL BILLED          | % CHANGE       | VOL BILLED        | % CHANGE      |                         |
| GRAND RAPIDS  | 8,891,642           | -6.27%         | 8,334,033           | -2.04%         | 8,164,301           | 1.49%          | 8,286,321           | 1.49%          | 7,758,545         | -6.37%        | -12.74%                 |
| WALKER  | 909,338             | -3.83%         | 874,465             | 5.18%          | 919,799             | 9.69%          | 1,008,905           | 9.69%          | 985,279           | -2.34%        | 8.35%                   |
| KENTWOOD  | 1,308,459           | -6.72%         | 1,220,592           | -0.81%         | 1,210,691           | 7.57%          | 1,302,317           | 7.57%          | 1,234,019         | -5.24%        | -5.69%                  |
| CASCADE TWP   | 670,062             | -11.97%        | 589,876             | 1.33%          | 597,721             | 14.10%         | 682,002             | 14.10%         | 615,680           | -9.72%        | -8.12%                  |
| GRAND RAPIDS TWP  | 440,013             | -9.87%         | 396,573             | 2.44%          | 406,251             | 20.04%         | 487,681             | 20.04%         | 457,949           | -6.10%        | 4.08%                   |
| TALLMADGE TWP   | 9,678               | 27.78%         | 12,367              | 11.55%         | 13,795              | 10.76%         | 15,280              | 10.76%         | 12,212            | -20.08%       | 26.18%                  |
| EAST GRAND RAPIDS                                       | 512,734             | -9.08%         | 466,186             | -7.44%         | 431,522             | 36.31%         | 588,220             | 36.31%         | 447,559           | -23.91%       | -12.71%                 |
| OTTAWA COUNTY   | 515,871             | 7.37%          | 553,895             | 1.17%          | 560,402             | 11.84%         | 626,739             | 11.84%         | 576,716           | -7.98%        | 11.79%                  |
| ADA TWP   | 336,091             | -0.54%         | 334,281             | 12.15%         | 374,898             | 12.56%         | 421,983             | 12.56%         | 435,365           | 3.17%         | 29.54%                  |
| <b>TOTAL</b>  | <b>13,593,888</b>   | <b>-5.97%</b>  | <b>12,782,268</b>   | <b>-0.80%</b>  | <b>12,679,380</b>   | <b>5.84%</b>   | <b>13,419,448</b>   | <b>5.84%</b>   | <b>12,523,324</b> | <b>-6.68%</b> | <b>-7.88%</b>           |
| VOLUME PUMPED<br>% BILLED TO PUMPED                     | 14,641,400<br>87.3% |                | 14,492,000<br>87.5% |                | 15,164,000<br>88.5% |                | 14,065,000<br>89.0% |                |                   |               |                         |
| GRAND RAPIDS VOLUME COMPARED TO<br>CUSTOMER COMMUNITIES |                     |                |                     |                |                     |                |                     |                |                   |               |                         |
| VOLUME = 1,000 GALLONS                                  |                     |                |                     |                |                     |                |                     |                |                   |               |                         |
| GRAND RAPIDS  | 8,334,033           | 65.20%         | 8,164,301           | 64.39%         | 8,286,321           | 61.75%         | 8,286,321           | 61.75%         | 7,758,545         | 61.95%        |                         |
| CUSTOMER COMMUNITIES                                    | 4,448,235           | 34.80%         | 4,515,079           | 35.61%         | 5,133,127           | 38.25%         | 4,764,779           | 38.05%         |                   |               |                         |
| <b>TOTAL</b>  | <b>12,782,268</b>   | <b>100.00%</b> | <b>12,679,380</b>   | <b>100.00%</b> | <b>13,419,448</b>   | <b>100.00%</b> | <b>12,523,324</b>   | <b>100.00%</b> |                   |               |                         |

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER RATE STUDY  
 WATER SUPPLY SYSTEM FUND  
 TASK NO. 7**

OPERATING REVENUES OTHER THAN FROM SALES OF WATER:

|             |                                  |                        |
|-------------|----------------------------------|------------------------|
| 4311-451006 | CONTRACTOR UNDERGROUND LICENSE   | \$ 10,080.00           |
| 4311-476010 | PAVING PERMITS                   | 270.00                 |
| 4311-476012 | TAPPING PERMITS                  | 10,720.00              |
| 4311-607001 | MISCELLANEOUS SERVICE FEES       | 16,713.25              |
| 4311-607027 | INSPECTION FEES - UTILITIES      | 48,655.00              |
| 4311-607034 | MONTHLY STATEMENT SERVICE FEES   | 175,857.72             |
| 4311-607043 | PRELIM/DESIGN/CONSTR ENGINEERING | 121,171.27             |
| 4311-607049 | SERVICES FOR CONTRACTORS         | 69,528.10              |
| 4311-607052 | METER SETTING FEES               | 28,330.00              |
| 4311-659002 | PENALTIES                        | 801,689.19             |
|             |                                  | <u>\$ 1,283,014.53</u> |

OTHER OPERATING REVENUES NOT INCLUDED:

CAPITAL CONTRIBUTION & LAKELINE CREDIT

|             |                             |                        |
|-------------|-----------------------------|------------------------|
| 4311-607051 | WATER FRONT FOOTAGE         | \$ 207,058.47          |
| 4311-607053 | INTEGRATED WATER CONNECTION | 1,992,022.00           |
|             |                             | <u>\$ 2,199,080.47</u> |

OFFSETTING CREDIT TO CUSTOMER ACCOUNTING ACTIVITY EXPENSES:

|             |   |                        |
|-------------|---|------------------------|
| 4311-699001 | BILLABLE EXPENSE - SEWAGE DISPOSAL SYSTEM | <u>\$ 1,930,765.15</u> |
|-------------|---|------------------------|

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 28, 2004

TO: Michael Wolski  
Utility Financial Officer

FROM: Donald Spencer   
Water System Manager

**SUBJECT: 2004 WATER RATE STUDY- TASK #8**

No significant changes in operating levels are anticipated to take effect by January 1, 2005, which would require adjustments to operating costs for the test period.

DS\MW

Attachment

*wrs\wtask8 2004*

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 28, 2004

TO: Michael Wolski  
Utility Financial Officer

FROM: Donald Spencer   
Water System Manager

**SUBJECT: 2004 WATER RATE STUDY- TASK #9**

No significant changes in water revenues are anticipated to take effect by January 1, 2005, which would require an adjustment to operating revenue estimates as a whole, however, the City of Walker has elected to not fund annual hydrant charges directly. Please make the appropriate revision(s) when determining proposed rate adjustments for Walker for calendar year 2005.

If you have any questions, please contact me.

DS\MW

Attachment

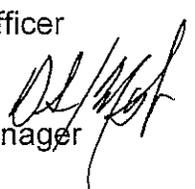
*wrs\wtask9 2004*

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 28, 2004

TO: Michael Wolski  
Utility Financial Officer

FROM: Donald Spencer   
Water System Manager

SUBJECT: 2004 WATER RATE STUDY- TASK #10

The following are major water system projects that for rate study purposes should be considered operative as of January 1, 2005.

| <u>Description</u>                            | <u>Location</u> | <u>Amount</u> |
|---|-----------------|---------------|
| Ball Ave. WM                                  | Grand Rapids    | \$156,957     |
| Fuller- 36 <sup>th</sup> / VanAuken           | Grand Rapids    | 253,690       |
| Stilesgate- Kalamazoo / Chamberlain           | Grand Rapids    | 446,801       |
| Cherry St, Diamond Ave, & Lake Dr             | Grand Rapids    | 217,994       |
| Alpine- Stocking to 6 <sup>th</sup> St        | Grand Rapids    | 55,999        |
| Clyde Park Ave- Burton St to Chicago Dr       | Grand Rapids    | 253,624       |
| Commerce- Cherry / Fulton & Oakes             | Grand Rapids    | 544,161       |
| Richmond- Bristol Ave. / Preston Ave.         | Grand Rapids    | 209,268       |
| Chatham St- Gold / Lexington & Lexington Ave. | Grand Rapids    | 87,697        |
| Carrier St- (W-29)                            | Grand Rapids    | 211,090       |
| Shaffer- 44 <sup>th</sup> / 3300' north       | Kentwood        | 217,310       |
| Thornapple River Crossing                     | Cascade         | 1,592,261     |
| Vac Truck                                     | Grand Rapids    | 131,080       |

DS/MW

wrs\wtask10 2004

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
TASK NO. 11**

"COMPUTE ACCUMULATED COST, DEPRECIATION AND DEPRECIATION EXPENSE AS OF JUNE 30, 2004"

**INTEGRATED SYSTEM**

|                              | ORIGINAL<br>COST      | ACCUMULATED<br>DEPRECIATION | DEPRECIATION<br>EXPENSE |
|------------------------------|-----------------------|-----------------------------|-------------------------|
| LAND                         | \$ 2,507,974          | \$ -                        | \$ -                    |
| LAND IMPROVEMENTS            | 1,021,642             | 671,239                     | 44,071                  |
| BUILDINGS & STRUCTURES       | 43,341,111            | 13,809,029                  | 849,723                 |
| STORAGE                      | 7,584,993             | 3,447,821                   | 222,388                 |
| PROCESS EQUIPMENT            | 40,209,899            | 18,404,284                  | 1,181,560               |
| AUXILIARY EQUIPMENT          | 11,027,007            | 9,061,225                   | 536,968                 |
| METERS                       | 7,375,481             | 6,814,112                   | 169,096                 |
| MACHINERY & EQUIPMENT        | 1,980,281             | 1,810,660                   | 43,581                  |
| OFFICE EQUIPMENT & FURNITURE | 622,184               | 559,619                     | 31,884                  |
| WATERMAINS                   | 55,592,968            | 10,626,537                  | 741,240                 |
|                              | <u>\$ 171,263,540</u> | <u>\$ 65,204,526</u>        | <u>\$ 3,820,511</u>     |

**NON-INTEGRATED SYSTEM**

|                               | ORIGINAL<br>COST      | ACCUMULATED<br>DEPRECIATION | DEPRECIATION<br>EXPENSE |
|-------------------------------|-----------------------|-----------------------------|-------------------------|
| LAND                          | \$ 980,810            | \$ -                        | \$ -                    |
| LAND IMPROVEMENTS             | 1,192,503             | 409,077                     | 37,910                  |
| BUILDINGS & STRUCTURES        | 10,259,074            | 1,176,397                   | 150,388                 |
| STORAGE                       | 5,959,967             | 3,266,757                   | 95,453                  |
| PROCESS EQUIPMENT             | 4,476,690             | 1,454,510                   | 140,378                 |
| AUXILIARY EQUIPMENT           | 1,735,680             | 1,574,443                   | 17,163                  |
| MACHINERY & EQUIPMENT         | 1,881,483             | 1,500,325                   | 87,678                  |
| OFFICE EQUIPMENT & FURNITURE  | 383,207               | 195,045                     | 23,264                  |
| WATERMAINS - GRAND RAPIDS     | 75,239,780            | 16,770,432                  | 957,316                 |
| WATERMAINS - WALKER           | 17,539,352            | 3,992,905                   | 231,541                 |
| WATERMAINS - KENTWOOD         | 21,200,126            | 4,136,959                   | 282,800                 |
| WATERMAINS - CASCADE TWP      | 16,047,408            | 2,749,203                   | 213,190                 |
| WATERMAINS - GRAND RAPIDS TWP | 11,482,222            | 1,962,144                   | 149,931                 |
| WATERMAINS - TALLMADGE TWP    | 1,278,828             | 88,694                      | 17,056                  |
|                               | <u>\$ 169,657,130</u> | <u>\$ 39,276,891</u>        | <u>\$ 2,404,068</u>     |
| TOTAL                         | <u>\$ 340,920,670</u> | <u>\$104,481,417</u>        | <u>\$ 6,224,579</u>     |

SOURCE: FINAL GENERAL LEDGER, AS ADJUSTED, FOR JUNE 30, 2004.

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
TASK NO. 12**

TASK 12A DETERMINE WORKING CAPITAL NEEDS FOR MATERIALS AND SUPPLIES ON HAND.

MATERIALS AND SUPPLIES INVENTORY AS OF JUNE 30, 2004: \$ 1,860,185

TASK 12B DETERMINE WORKING CAPITAL NEEDS FOR PREPAYMENT OF OPERATING COSTS.

NO REQUIREMENT FOR PREPAYMENT OF OPERATING COSTS IS CALLED FOR IN THE ORDINARY CYCLE OF BUSINESS.

TASK 12C DETERMINE CASH WORKING CAPITAL NEEDS & DETERMINE TOTAL WORKING CAPITAL NEEDS.

MINIMUM CASH WORKING CAPITAL IS DEFINED AS THE SUM OF 90 DAYS ADJUSTED OPERATING EXPENSES.

ADJUSTED CURRENT ANNUAL EXPENSES = \$22,385,414 @ 90/365 = \$5,519,691

TOTAL WORKING CAPITAL NEEDS CONSIST OF THE FOLLOWING:

|                                      |                    |
|--------------------------------------|--------------------|
| 12A INVESTMENT IN INVENTORY          | \$ 1,860,185       |
| 12B PREPAYMENT OF OPERATING EXPENSES | -                  |
| 12C 90 DAY OPERATING EXPENSES        | <u>5,519,691</u>   |
|                                      | <u>\$7,379,876</u> |

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
ZONEGATED FACILITIES  
TASK #13  
October 14, 2004**

Lengths and cost of all primary and intermediate transmission mains that are jointly used were prorated based on billed flow. Jointly used storage tanks and pumping stations were also prorated based on billed flow. All zonedating work papers are on file at the Coldbrook Complex and a revised map is on file at Oak Industrial Drive.

MW

*wrs\wtask13 2004*

# MEMORANDUM

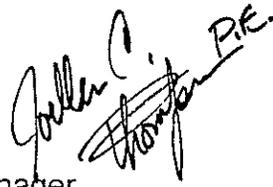
CITY OF GRAND RAPIDS

DATE: October 26, 2004

TO: Michael Wolski  
Financial Analyst

FROM: Joellen C. Thompson, P.E.  
Assistant Water System Manager

SUBJECT: **2004 Water Rate Study Task #14**



Base maps and zone gating maps for the water rate study, adjusted and revised to reflect minor changes are presently being updated to reflect the 2004 zone gating information.

In this regard, the water maps will be completely updated by the end of the calendar year 2004 for the fiscal year 2004.

JCT/df

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER RATE STUDY  
 WATER SUPPLY SYSTEM FUND  
 TASK NO. 15**

COMPUTE CONSTRUCTION COST RATE BASE (DEPRECIATED PLANT, PLUS WORKING CAPITAL, LESS CONTRIBUTIONS BY OTHERS).

|                                |            |                |                |
|--------------------------------|------------|----------------|----------------|
| ORIGINAL CONSTRUCTION COST     | - TASK #10 | \$ 4,377,932   |                |
|                                | - TASK #11 | 340,920,670    |                |
|                                |            | <hr/>          | \$ 345,298,602 |
| LESS: ACCUMULATED DEPRECIATION | - TASK #11 | \$ 104,481,417 |                |
|                                |            | <hr/>          | (104,481,417)  |
|                                |            |                | <hr/>          |
|                                |            |                | 240,817,185    |
| WORKING CAPITAL REQUIREMENT    | - TASK #12 | \$ 7,379,876   |                |
|                                |            | <hr/>          | 7,379,876      |
|                                |            |                | <hr/>          |
|                                |            |                | 248,197,061    |
| CONTRIBUTIONS BY OTHERS        | - TASK #21 | \$ 75,388,461  |                |
| LESS: AMORTIZATION             |            | (15,894,893)   |                |
|                                |            | <hr/>          | (59,493,568)   |
| CONSTRUCTION COST RATE BASE    |            |                | <hr/>          |
|                                |            |                | <hr/>          |
|                                |            |                | \$ 188,703,493 |

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 28, 2004

TO: Michael E. Wolski  
Financial Analyst

FROM: Linda Wagenmaker *LW*  
Accountant I

**SUBJECT: 2004 WATER RATE STUDY TASK #15A  
INTEGRATED WATER CONNECTION FEES**

Attached is the Integrated Water Connection Fee Schedule as currently provided for in Chapter 26 of the City Code, with the addition of rates to be effective on January 1, 2005. The City Commission on June 27, 2000 established fees through calendar year 2004. Beginning January 1, 2005, the integrated water connection fees are to be calculated on a yearly basis as part of the annual Water/Sewer Rate Study. The Consumer Price Index used to determine rates effective January 1, 2005 is as follows:

|                     |       |
|---------------------|-------|
| August, 2003 Index  | 184.6 |
| August, 2004 Index  | 189.5 |
| Increase            | 4.9   |
| Percentage increase | 2.7%  |

An ordinance to amend Chapter 26 of the City Code was adopted on October 1, 2002 (proceeding #70421). The City Code now incorporates the changes made in the second amendment to the uniform service agreement between the City and wholesale and retail customer communities. Integrated connection fees were specifically affected by the agreement's provision concerning parcel area downsizing for wetlands, lakes, streams and other unusual characteristics of the parcel in accordance with policies approved from time to time by the Utility Advisory Board.

LW

Word\Ratestdy\WRStask15a04

### Section 2.35 Integrated Water Connection Fee Schedule

When a property owner or user is requested or required to connect to the System and has not previously paid or been assessed a connection fee, the following connection fee schedule shall apply:

#### Integrated Connection Base Fee Schedule

| Water Meter Size<br>(inches) | <u>1/01/02</u> | <u>1/01/03</u> | <u>1/01/04</u> | <u>1/01/05</u> |
|------------------------------|----------------|----------------|----------------|----------------|
| 3/4 or less                  | \$ 2,000       | \$ 2,100       | \$ 2,200       | \$ 2,250       |
| 1                            | 3,350          | 3,500          | 3,650          | 3,750          |
| 1 ½                          | 6,650          | 7,000          | 7,350          | 7,500          |
| 2                            | 10,650         | 11,200         | 11,750         | 12,000         |
| 3                            | 23,350         | 24,500         | 25,650         | 26,250         |
| 4                            | 42,000         | 44,100         | 46,200         | 47,250         |
| 6 and over                   | 93,350         | 98,000         | 102,650        | 105,000        |

Except as otherwise provided in the immediately succeeding paragraph, the foregoing integrated water connection base fee schedule for single-family and multi-family residential dwelling units shall be adjusted upward and downward as follows: A single-family residential dwelling unit located on a parcel containing 26,000 square feet in calendar year 2002, 24,000 square feet in calendar year 2003, 22,000 square feet in calendar year 2004, and 20,000 square feet in calendar year 2005 and each year thereafter shall pay the applicable integrated connection fee in accordance with the foregoing schedule. When determining the square footage of a residential parcel for the purposes of determining the appropriate integrated connection fee, parcel size may be adjusted downward to take into consideration such things as wetlands, lakes, streams and other unusual characteristics of the parcel in accordance with policies approved from time to time by the Utility Advisory Board. To the extent the size of a parcel, as adjusted, is greater than or less than the applicable square footage, one-half the applicable integrated connection fee will increase or decrease by the same percentage increase or decrease in the parcel above or below the applicable square footage. In the case of multi-family residential dwellings, in order to determine the size of the parcel assigned to each dwelling unit for purposes of calculating the integrated connection fee to be paid by each multi-family residential dwelling unit, the total square footage of the parcel, as adjusted, on which the multi-family residential dwelling is located shall be divided by the total number of residential units. Notwithstanding any other provision in this subsection, the integrated connection fee for a single-family residential dwelling unit or multi-family residential dwelling unit shall not exceed four and one-half times the applicable base integrated connection fee set forth in foregoing schedule.

There shall be no upward adjustment in the integrated water service connection fee payable for a single-family residential dwelling unit connecting to the Water System if (a) each of the following conditions are met (1) a building permit shall have been obtained, (2) the dwelling unit shall have been constructed, and (3) a certificate of occupancy shall have been issued prior to January 1, 2000 or (b) local building permit fees have been paid to the local

governmental unit prior to January 1, 2000 for a single-family residential dwelling unit to be constructed on or after January 1, 2000. When connecting to the Water System, Users living in or owning such single-family residential dwelling units shall pay the applicable base integrated connection fee set forth in the Integrated Connection Base Fee Schedule adjusted downward, if applicable, in accordance with the immediate preceding paragraph.

Effective January 1, 2005 and January 1<sup>st</sup> of every year thereafter, the Integrated Water Connection Base Fees shall be adjusted by a percentage, which is determined by the annual change in the Consumer Price Index (the "index") calculated as follows:

- (1) The Consumer Price Index shall be that Index referred to as the Consumer Price Index, US City Average, All Urban Consumers, published by the U.S. Department of Labor-Bureau of Statistics ((1982-84)=100). In the event the method of determining the Index is substantially altered, the basis for determining the annual change thereafter shall be the Index which is most comparable to the Index described above.
- (2) For the purpose of computing the percentage change each calendar year, the Index for the month of August for the prior calendar year shall be subtracted from the Index for the immediately-preceding August. The result so obtained (if positive) shall be divided by the Index for the month of August for the prior calendar year to obtain the percentage increase which shall be applied to the then current Integrated Water Connection Base Fee Schedule to determine the new calendar year schedule.

The foregoing Integrated Connection fee is due and payable at the time a User receives a permit to connect to the Water System. A permit issued by the City to connect to the Water System shall expire one hundred eighty (180) days from the date the permit was issued.

The user receiving services who applies for a larger water meter than the one presently in service shall pay an Integrated Connection Fee which is the difference in cost between the meter size in service and the one applied for in accordance with the Integrated Connection Fee in effect at the time of application. No credit or rebate shall be made in the case of application for a smaller meter size.

Existing commercial and industrial customers may request the installation of an additional meter to measure water used solely for irrigation purposes. There shall be no Integrated Connection Fee for the additional meter provided combined maximum capacity as defined by the American Water Works Association Standards C700-90 and C702-92, as amended, does not exceed the maximum capacity of the original meter. If the original maximum capacity is exceeded, the customer shall pay as an Integrated Connection Fee the difference between the fee for the original meter and what the fee would be if the maximum capacities of all meters were totaled. The additional Integrated Connection Fee shall be based upon the fees in effect at the time of installation of the additional meter.

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
TASK NO. 16**

INCLUDE PROJECT COST FOR UPCOMING SYSTEM IMPROVEMENTS (NON-INTEGRATED)

THE ESTIMATED TOTAL PROJECT COST FOR RECOMMENDED WATER SYSTEM IMPROVEMENTS ARE SUMMARIZED IN THE FOLLOWING TABLE.

| ITEM<br>NO. | DESCRIPTION                                | ESTIMATED<br>COST    |
|-------------|--|----------------------|
| 1           | FRANKLIN TRANSMISSION MAIN (SECOND SUPPLY) | \$ 5,650,000         |
| 2           | SE ELEVATED STORAGE TANK AND WATER MAIN    | 2,979,000            |
| 3           | DEAN LAKE WATER MAIN                       | <u>\$ 2,785,000</u>  |
|             |  | <u>\$ 11,414,000</u> |

*NOTE: NONE OF THE PROJECTS ABOVE ARE INCLUDED IN RECOMMENDED REVENUE REQUIREMENTS*

*SOURCE: COMPREHENSIVE MASTER PLAN FOR WATER AND SEWER SERVICES, MARCH 2004 (BLACK & VEATCH, FTC&H, MOORE & BRUGGINK)*

JT

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER RATE STUDY  
 WATER SUPPLY SYSTEM FUND  
 TASK NO. 17**

**BONDS - PRINCIPAL & INTEREST PAYMENTS**

| FISCAL<br>YEAR<br>ENDING<br>JUNE 30, | CASH BASIS   |              |               |
|--------------------------------------|--------------|--------------|---------------|
|                                      | PRINCIPAL    | INTEREST     | PRIN & INT    |
| 2005                                 | \$ 5,505,000 | \$ 6,257,318 | \$ 11,762,318 |
| 2006                                 | 5,800,000    | 5,978,796    | 11,778,796    |
| 2007                                 | 6,085,000    | 5,685,306    | 11,770,306    |
| 2008                                 | 6,370,000    | 5,421,197    | 11,791,197    |
| 2009                                 | 6,700,000    | 5,098,771    | 11,798,771    |
| 2010                                 | 7,125,000    | 4,759,626    | 11,884,626    |
| 2011                                 | 7,485,000    | 4,398,795    | 11,883,795    |
| 2012                                 | 7,890,000    | 3,980,108    | 11,870,108    |
| 2013                                 | 8,410,000    | 3,538,666    | 11,948,666    |
| 2014                                 | 8,835,000    | 3,068,387    | 11,903,387    |
| 2015                                 | 9,385,000    | 2,574,203    | 11,959,203    |
| 2016                                 | 9,855,000    | 2,049,457    | 11,904,457    |
| 2017                                 | 10,425,000   | 1,498,218    | 11,923,218    |
| 2018                                 | 10,995,000   | 951,893      | 11,946,893    |
| 2019                                 | 3,500,000    | 375,707      | 3,875,707     |
| 2020                                 | 3,700,000    | 193,071      | 3,893,071     |

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
TASK NO. 18**

DETERMINE WATER SYSTEM EQUITY IN THE CONSTRUCTION COST RATE BASE BY  
SUBTRACTING DEBT OUTSTANDING FROM THE TOTAL RATE BASE.

|   |                      |
|---|----------------------|
| CONSTRUCTION COST RATE BASE - TASK NO. 15 | \$ 188,703,493       |
| LESS: BONDED INDEBTEDNESS - TASK NO. 17   | (118,065,000)        |
| NET WATER SYSTEM EQUITY                   | <u>\$ 70,638,493</u> |

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER RATE STUDY  
 WATER SUPPLY SYSTEM FUND  
 RATE OF RETURN ON EQUITY - TASK NO. 19**

AT THE APRIL 5, 1977, COMMITTEE OF THE WHOLE MEETING, THE CITY COMMISSION DECIDED THE LEVEL OF RETURN ON WATER SYSTEM EQUITY. THE LEVEL DECIDED UPON WAS ONE PERCENT MORE THAN THE AVERAGE BOND BUYER'S INDEX OF MUNICIPAL BONDS FOR THE PREVIOUS TWELVE MONTH PERIOD.

BOND BUYER'S INDEX OF 20 MUNICIPAL BONDS

| <u>DATE</u> | <u>RATE</u> | <u>DATE</u>     | <u>RATE</u>   |
|-------------|-------------|-----------------|---------------|
| 16-Oct-03   | 5.000%      | 15-Apr-04       | 4.890%        |
| 23-Oct-03   | 4.880%      | 22-Apr-04       | 4.890%        |
| 30-Oct-03   | 4.880%      | 29-Apr-04       | 4.950%        |
| 06-Nov-03   | 4.830%      | 06-May-04       | 5.010%        |
| 13-Nov-03   | 4.770%      | 13-May-04       | 5.140%        |
| 20-Nov-03   | 4.660%      | 20-May-04       | 5.130%        |
| 25-Nov-03   | 4.660%      | 27-May-04       | 5.010%        |
| 04-Dec-03   | 4.730%      | 03-Jun-04       | 5.030%        |
| 11-Dec-03   | 4.700%      | 10-Jun-04       | 5.100%        |
| 18-Dec-03   | 4.570%      | 17-Jun-04       | 5.050%        |
| 23-Dec-03   | 4.580%      | 24-Jun-04       | 5.010%        |
| 31-Dec-03   | 4.600%      | 01-Jul-04       | 4.980%        |
| 08-Jan-04   | 4.640%      | 08-Jul-04       | 4.810%        |
| 15-Jan-04   | 4.520%      | 15-Jul-04       | 4.850%        |
| 22-Jan-04   | 4.570%      | 22-Jul-04       | 4.840%        |
| 29-Jan-04   | 4.710%      | 29-Jul-04       | 4.880%        |
| 05-Feb-04   | 4.680%      | 05-Aug-04       | 4.780%        |
| 12-Feb-04   | 4.520%      | 12-Aug-04       | 4.700%        |
| 19-Feb-04   | 4.500%      | 19-Aug-04       | 4.670%        |
| 26-Feb-04   | 4.490%      | 26-Aug-04       | 4.660%        |
| 04-Mar-04   | 4.540%      | 02-Sep-04       | 4.630%        |
| 11-Mar-04   | 4.350%      | 09-Sep-04       | 4.610%        |
| 18-Mar-04   | 4.350%      | 16-Sep-04       | 4.540%        |
| 25-Mar-04   | 4.410%      | 23-Sep-04       | 4.460%        |
| 01-Apr-04   | 4.590%      | 30-Sep-04       | 4.540%        |
| 07-Apr-04   | 4.760%      | 07-Oct-04       | 4.610%        |
|             |             | <u>52 WEEKS</u> | <u>4.736%</u> |

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER RATE STUDY  
 WATER SUPPLY SYSTEM FUND  
 TASK NO. 20**

DETERMINE COMPOSITE RATE OF RETURN AND DOLLARS OF RETURN ON A CONSTRUCTION COST RATE BASE.

|   | RATE<br>BASE   |   | RATE OF<br>RETURN |   | RETURN ON<br>INVESTMENT |
|---|----------------|---|-------------------|---|-------------------------|
| WATER SYSTEM EQUITY IN THE CONSTRUCTION COST RATE (CCR) BASE                          | \$ 70,638,493  | @ | 5.736%            | = | \$ 4,051,824            |
| WATER SYSTEM INDEBTEDNESS IN THE CCR BASE -1993 Bonds                                 | 39,500,000     | @ | 5.330%            | = | 2,105,350               |
| -2000 Bonds   | 78,565,000     | @ | 5.285%            | = | 4,152,160               |
| LESS: INTEREST EARNED DURING THE TEST PERIOD ON BOND RESERVE AND REPLACEMENT ACCOUNTS |                |   |                   |   | (30,021)                |
|   | \$ 188,703,493 |   |                   |   | \$ 10,279,313           |
| COMPOSITE RATE OF RETURN ON INVESTMENT  |                |   | \$ 10,279,313     | = | 5.447%                  |
|   |                |   | 188,703,493       |   |                         |

CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 CONSTRUCTION COST RATE BASE & RETURN ON INVESTMENT- TASK NO. 21- PART 1  
 FISCAL YEAR ENDED JUNE 30, 2004

PHYSICAL LOCATION

| DESCRIPTION                    | RETAIL            |                 |                 |                  |                  |                |                    |                 |                  |              | WHOLESALE |      |                 | TOTAL |
|--------------------------------|-------------------|-----------------|-----------------|------------------|------------------|----------------|--------------------|-----------------|------------------|--------------|-----------|------|-----------------|-------|
|                                | INTEGRATED SYSTEM | CITY OF GR      | CITY OF WALKER  | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP    | TALLMADGE TOWNSHIP | CITY OF EAST GR | COUNTY OF OTTAWA | ADA TOWNSHIP |           |      |                 |       |
| COST                           | \$ 171,263,540    | \$ 94,319,980   | \$ 17,948,281   | \$ 19,827,379    | \$ 17,634,707    | \$ 10,931,562  | \$ 1,278,828       | \$ -            | \$ -             | \$ -         | \$ -      | \$ - | \$ 333,204,277  |       |
| LESS: ACCUMULATED DEPRECIATION | 65,204,526        | 23,319,966      | 4,028,510       | 4,805,109        | 2,748,476        | 1,739,412      | 88,694             | -               | -                | -            | -         | -    | 101,934,693     |       |
| NET BOOK VALUE                 | \$ 106,059,014    | \$ 71,000,014   | \$ 13,919,771   | \$ 15,022,270    | \$ 14,886,231    | \$ 9,192,150   | \$ 1,190,134       | \$ -            | \$ -             | \$ -         | \$ -      | \$ - | \$ 231,269,584  |       |
| WORKING CAPITAL REQUIREMENT    | 3,157,630         | 2,873,871       | 363,606         | 403,605          | 294,678          | 222,060        | 11,660             | 22,656          | 30,110           | 30,110       | -         | -    | 7,379,876       |       |
| CONTRIBUTIONS                  | \$ 109,216,644    | \$ 73,873,885   | \$ 14,283,377   | \$ 15,425,875    | \$ 15,180,909    | \$ 9,414,210   | \$ 1,201,794       | \$ 22,656       | \$ 30,110        | \$ 30,110    | \$ -      | \$ - | \$ 238,649,460  |       |
| LESS AMORTIZATION              | -                 | 22,225,489      | 14,933,405      | 13,461,435       | 13,584,287       | 9,905,017      | 1,278,828          | -               | -                | -            | -         | -    | 75,388,461      |       |
|                                | -                 | (6,215,874)     | (3,094,109)     | (2,534,198)      | (2,503,095)      | (1,544,372)    | (93,245)           | -               | -                | -            | -         | -    | (15,894,893)    |       |
| CONSTRUCTION COST RATE BASE    | \$ 109,216,644    | \$ (16,009,615) | \$ (11,929,286) | \$ (10,927,237)  | \$ (11,081,192)  | \$ (8,360,645) | \$ (1,185,583)     | \$ -            | \$ -             | \$ -         | \$ -      | \$ - | \$ (59,483,588) |       |
| RETURN ON INVESTMENT- TASK 20  | \$ 5,949,031      | \$ 3,151,867    | \$ 128,227      | \$ 245,041       | \$ 223,312       | \$ 57,388      | \$ 883             | \$ 1,234        | \$ 1,640         | \$ 1,640     | \$ -      | \$ - | \$ 9,758,623    |       |
|                                | 5.447%            |                 |                 |                  |                  |                |                    |                 |                  |              |           |      |                 |       |

ZONEGATED

|                                  |              |                |            |              |              |              |            |            |        |              |      |      |               |
|----------------------------------|--------------|----------------|------------|--------------|--------------|--------------|------------|------------|--------|--------------|------|------|---------------|
| COST                             | \$ -         | \$ (3,941,629) | \$ 596,085 | \$ 3,968,090 | \$ 5,908,676 | \$ 2,232,713 | \$ 130,571 | \$ 635,871 | \$ -   | \$ 2,543,948 | \$ - | \$ - | \$ 12,094,325 |
| LESS: ACCUMULATED DEPRECIATION   | -            | (1,228,703)    | 387,850    | 568,193      | 1,479,789    | 604,272      | 43,411     | 145,794    | -      | 546,118      | -    | -    | 2,546,724     |
| NET BOOK VALUE                   | \$ -         | \$ (2,712,926) | \$ 208,235 | \$ 3,419,897 | \$ 4,428,887 | \$ 1,628,441 | \$ 87,160  | \$ 490,077 | \$ -   | \$ 1,997,830 | \$ - | \$ - | \$ 9,547,601  |
| WORKING CAPITAL REQUIREMENT      | -            | -              | -          | -            | -            | -            | -          | -          | -      | -            | -    | -    | -             |
| CONTRIBUTIONS                    | \$ -         | \$ (2,712,926) | \$ 208,235 | \$ 3,419,897 | \$ 4,428,887 | \$ 1,628,441 | \$ 87,160  | \$ 490,077 | \$ -   | \$ 1,997,830 | \$ - | \$ - | \$ 9,547,601  |
| LESS AMORTIZATION                | -            | -              | -          | 12,934       | 3,226        | 19,213       | -          | -          | -      | 9,123        | -    | -    | 44,496        |
|                                  | -            | -              | -          | (11,678)     | (2,913)      | (17,347)     | -          | -          | -      | (8,237)      | -    | -    | (40,175)      |
| CONSTRUCTION COST RATE BASE      | \$ -         | \$ (2,712,926) | \$ 208,235 | \$ 3,418,641 | \$ 4,428,574 | \$ 1,626,575 | \$ 87,160  | \$ 490,077 | \$ -   | \$ 1,996,944 | \$ - | \$ - | \$ 9,543,280  |
| RETURN ON INVESTMENT- TASK 19/20 | \$ -         | \$ (291,260)   | \$ 22,356  | \$ 367,025   | \$ 475,452   | \$ 174,629   | \$ 9,357   | \$ 52,615  | \$ -   | \$ 214,392   | \$ - | \$ - | \$ 1,024,566  |
|                                  | 10.736%      | 10.736%        | 10.736%    | 10.736%      | 10.736%      | 10.736%      | 10.736%    | 10.736%    | 5.447% | 10.736%      | -    | -    | 10.736%       |
| RETURN ON INVESTMENT- TASK 19/20 | \$ 5,949,031 | \$ 2,860,607   | \$ 150,583 | \$ 612,066   | \$ 698,764   | \$ 232,017   | \$ 10,240  | \$ 53,849  | \$ -   | \$ 216,032   | \$ - | \$ - | \$ 10,783,189 |
| TOTAL RETURN ON INVESTMENT       |              |                |            |              |              |              |            |            |        |              |      |      |               |

CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 CONSTRUCTION COST & ACCUMULATED DEPRECIATION- TASK NO. 21- PART 2  
 FISCAL YEAR ENDED JUNE 30, 2004

CONSTRUCTION COST

| COST CENTER<br>BY PHYSICAL LOCATION- TASK 11<br>IN SERVICE- TASK 10 | AMOUNT       | RETAIL            |                |                |                 |                  |               | WHOLESALE          |                 |                  |              | TOTAL        |                |
|---|--------------|-------------------|----------------|----------------|-----------------|------------------|---------------|--------------------|-----------------|------------------|--------------|--------------|----------------|
|   |              | INTEGRATED SYSTEM | CITY OF GR     | CITY OF WALKER | CITY OF KENWOOD | CASCADE TOWNSHIP | GR TOWNSHIP   | TALLMADGE TOWNSHIP | CITY OF EAST GR | COUNTY OF OTTAWA | ADA TOWNSHIP |              |                |
| PUMPING STATIONS:   |              | \$ 171,263,540    | \$ 99,785,692  | \$ 18,152,052  | \$ 22,910,928   | \$ 16,047,408    | \$ 11,482,222 | \$ 1,278,828       | \$ -            | \$ -             | \$ -         | \$ -         | \$ 340,920,670 |
| KNAPP SERVICE CENTER  | \$ 2,416,066 |                   | (932,367)      | -              | 271,012         | 67,602           | 402,592       | -                  | -               | -                | -            | 191,161      | -              |
| LIVINGSTON  | 606,029      |                   | (85,105)       | -              | 24,758          | 6,145            | 36,750        | -                  | -               | -                | -            | 17,442       | -              |
| FRANKLIN  | 5,633,336    |                   | (2,852,947)    | -              | 1,158,327       | 618,878          | 245,332       | -                  | 480,073         | -                | -            | 350,337      | -              |
| LEFFINGWELL   | 141,009      |                   | (54,415)       | -              | 15,817          | 3,945            | 23,466        | -                  | -               | -                | -            | 11,157       | -              |
| BRISTOL   | 612,700      |                   | -              | -              | -               | -                | -             | -                  | -               | -                | -            | -            | -              |
| EAST PARIS  | 1,710,802    |                   | -              | -              | (824,846)       | 824,846          | -             | -                  | -               | -                | -            | -            | -              |
| STORAGE TANKS:  |              |                   |                |                |                 |                  |               |                    |                 |                  |              |              |                |
| ELKS  | 236,335      |                   | (175,377)      | 172,097        | -               | -                | -             | 3,280              | -               | -                | -            | -            | -              |
| KNAPP   | 118,570      |                   | (16,650)       | -              | 4,846           | 1,202            | 7,190         | -                  | -               | -                | -            | 3,412        | -              |
| CAMBRIDGE   | 116,070      |                   | (84,818)       | -              | 69,259          | 5,762            | -             | -                  | 9,797           | -                | -            | -            | -              |
| WATERMAINS  |              |                   | (7,774,023)    | 220,217        | (31,952)        | 4,375,334        | 986,693       | 127,291            | 146,001         | -                | -            | 1,970,439    | -              |
| ADJUSTED BY ZONEGATING  |              | \$ 171,263,540    | \$ 90,378,351  | \$ 18,544,366  | \$ 23,815,469   | \$ 23,543,383    | \$ 13,164,275 | \$ 1,409,399       | \$ 635,871      | \$ -             | \$ -         | \$ 2,543,948 | \$ 345,298,602 |
| LESS: ZONEGATING ADJUSTMENT   |              | \$ -              | \$ (3,941,829) | \$ 596,085     | \$ 3,988,090    | \$ 5,908,676     | \$ 2,232,713  | \$ 130,571         | \$ 635,871      | \$ -             | \$ -         | \$ 2,543,948 | \$ 12,094,325  |
| PHYSICAL LOCATION   |              | \$ 171,263,540    | \$ 94,319,980  | \$ 17,948,281  | \$ 19,827,379   | \$ 17,634,707    | \$ 10,931,562 | \$ 1,278,828       | \$ -            | \$ -             | \$ -         | \$ -         | \$ 333,204,277 |

ACCUMULATED DEPRECIATION

|  |              |               |                |              |              |              |              |            |            |      |      |            |                |
|--|--------------|---------------|----------------|--------------|--------------|--------------|--------------|------------|------------|------|------|------------|----------------|
| BY PHYSICAL LOCATION- TASK 11<br>IN SERVICE- TASK 10 |              | \$ 65,204,526 | \$ 24,983,319  | \$ 4,103,991 | \$ 5,389,540 | \$ 2,749,203 | \$ 1,962,144 | \$ 88,694  | \$ -       | \$ - | \$ - | \$ -       | \$ 104,481,417 |
| PUMPING STATIONS:                                    |              |               |                |              |              |              |              |            |            |      |      |            |                |
| KNAPP SERVICE CENTER                                 | \$ 1,373,382 |               | (529,992)      | -            | 154,053      | 38,428       | 228,848      | -          | -          | -    | -    | 108,663    | -              |
| LIVINGSTON   | 479,881      |               | (67,390)       | -            | 19,613       | 4,866        | 29,100       | -          | -          | -    | -    | 13,811     | -              |
| FRANKLIN   | 823,164      |               | (416,884)      | -            | 169,259      | 90,433       | 35,849       | -          | 70,150     | -    | -    | 51,193     | -              |
| LEFFINGWELL  | 127,387      |               | (49,158)       | -            | 14,289       | 3,564        | 21,226       | -          | -          | -    | -    | 10,079     | -              |
| BRISTOL  | 111,086      |               | -              | -            | -            | -            | -            | -          | -          | -    | -    | -          | -              |
| EAST PARIS   | 1,252,581    |               | -              | -            | (603,919)    | 603,919      | -            | -          | -          | -    | -    | -          | -              |
| STORAGE TANKS:                                       |              |               |                |              |              |              |              |            |            |      |      |            |                |
| ELKS   | 236,335      |               | (175,377)      | 172,097      | -            | -            | -            | 3,280      | -          | -    | -    | -          | -              |
| KNAPP  | 116,070      |               | (16,299)       | -            | 4,744        | 1,177        | 7,038        | -          | -          | -    | -    | 3,340      | -              |
| CAMBRIDGE  | 116,070      |               | (84,818)       | -            | 69,259       | 5,762        | -            | -          | 9,797      | -    | -    | -          | -              |
| WATERMAINS   |              |               | (1,552,138)    | 140,272      | 156,464      | 730,913      | 59,479       | 40,131     | 65,847     | -    | -    | 359,032    | -              |
| ADJUSTED BY ZONEGATING                               |              | \$ 65,204,526 | \$ 22,091,263  | \$ 4,416,360 | \$ 5,373,302 | \$ 4,228,265 | \$ 2,343,684 | \$ 132,105 | \$ 145,794 | \$ - | \$ - | \$ 546,118 | \$ 104,481,417 |
| LESS: ZONEGATING ADJUSTMENT                          |              | \$ -          | \$ (1,228,703) | \$ 387,850   | \$ 568,193   | \$ 1,479,789 | \$ 604,272   | \$ 43,411  | \$ 145,794 | \$ - | \$ - | \$ 546,118 | \$ 2,546,724   |
| PHYSICAL LOCATION                                    |              | \$ 65,204,526 | \$ 23,319,966  | \$ 4,028,510 | \$ 4,805,109 | \$ 2,748,476 | \$ 1,739,412 | \$ 88,694  | \$ -       | \$ - | \$ - | \$ -       | \$ 101,934,693 |

CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 CONTRIBUTIONS & AMORTIZED CONTRIBUTIONS- TASK NO. 21- PART 3  
 FISCAL YEAR ENDED JUNE 30, 2004

CONTRIBUTIONS BY OTHERS

| COST CENTER                          | AMOUNT     | INTEGRATED SYSTEM | RETAIL        |                |                  |                  |              |                    | WHOLESALE       |                  |              | TOTAL         |
|--------------------------------------|------------|-------------------|---------------|----------------|------------------|------------------|--------------|--------------------|-----------------|------------------|--------------|---------------|
|                                      |            |                   | CITY OF GR    | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP  | TALLMADGE TOWNSHIP | CITY OF EAST GR | COUNTY OF OTTAWA | ADA TOWNSHIP |               |
| 2003 RATE STUDY- LOCATION ADDITIONS: |            |                   | \$ 17,382,665 | \$ 14,503,231  | \$ 13,240,673    | \$ 13,360,895    | \$ 8,211,826 | \$ 1,278,828       | \$ -            | \$ -             | \$ -         | \$ 67,998,138 |
| FRONT FOOT FEES                      |            |                   | 43,233        | 34,104         | 51,053           | 41,803           | 36,855       | -                  | -               | -                | -            | 207,058       |
| FIXED ASSET CONTRIBUTIONS            |            |                   | 4,799,571     | 395,070        | 169,699          | 161,589          | 1,656,336    | -                  | -               | -                | -            | 7,183,265     |
| PUMPING STATIONS:<br>LEFFINGWELL     | \$ 115,303 |                   | 22,225,489    | 14,933,405     | 13,461,435       | 13,584,287       | 9,905,017    | 1,278,828          | -               | -                | -            | 75,388,461    |
| ADJUSTED BY ZONEGATING               |            |                   | 22,225,489    | 14,933,405     | 13,474,359       | 13,587,513       | 9,924,230    | 1,278,828          | -               | 9,123            | 9,123        | 75,388,461    |
| LESS: ZONEGATING ADJUSTMENT          |            |                   | -             | -              | 12,834           | 3,226            | 19,213       | -                  | -               | 9,123            | -            | -             |
| PHYSICAL LOCATION                    |            |                   | 22,225,489    | 14,933,405     | 13,461,435       | 13,584,287       | 9,905,017    | 1,278,828          | -               | -                | -            | 75,388,461    |

AMORTIZED CONTRIBUTIONS

|  |         |  |              |              |              |              |              |           |      |       |       |               |
|--|---------|--|--------------|--------------|--------------|--------------|--------------|-----------|------|-------|-------|---------------|
| 2003 RATE STUDY- LOCATION CURRENT YEAR ADJUSTMENTS |         |  | \$ 5,934,612 | \$ 2,803,770 | \$ 2,353,361 | \$ 2,321,764 | \$ 1,410,664 | \$ 76,194 | \$ - | \$ -  | \$ -  | \$ 14,900,365 |
| PUMPING STATIONS:<br>LEFFINGWELL                   | 104,106 |  | 281,262      | 200,339      | 180,837      | 181,331      | 133,708      | 17,051    | -    | -     | -     | 994,528       |
| ADJUSTED BY ZONEGATING                             |         |  | 6,215,874    | 3,004,109    | 2,534,198    | 2,503,095    | 1,544,372    | 93,245    | -    | -     | -     | 15,894,893    |
| LESS: ZONEGATING ADJUSTMENT                        |         |  | -            | -            | 11,678       | 2,913        | 17,347       | -         | -    | 8,237 | 8,237 | -             |
| PHYSICAL LOCATION                                  |         |  | 6,215,874    | 3,004,109    | 2,545,876    | 2,506,008    | 1,561,719    | 93,245    | -    | -     | -     | 15,894,893    |
|  |         |  | 6,215,874    | 3,004,109    | 11,678       | 2,913        | 17,347       | -         | -    | 8,237 | 8,237 | -             |
|  |         |  | 6,215,874    | 3,004,109    | 2,534,198    | 2,503,095    | 1,544,372    | 93,245    | -    | -     | -     | 15,894,893    |

CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 RECONCILIATION OF CONSTRUCTION COST & ACCUMULATED DEPRECIATION- PHYSICAL LOCATION & ZONEGATING  
 FISCAL YEAR ENDED JUNE 30, 2004

CONSTRUCTION COST-BY PHYSICAL LOCATION

| COST CENTER                          | AMOUNT         | RETAIL         |                |                  |                  |               | WHOLESALE          |                 |                  | TOTAL          |
|--------------------------------------|----------------|----------------|----------------|------------------|------------------|---------------|--------------------|-----------------|------------------|----------------|
|                                      |                | CITY OF GR     | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP   | TALLMADGE TOWNSHIP | CITY OF EAST GR | COUNTY OF OTTAWA |                |
| COST BY PHYSICAL LOCATION- TASK 11   | \$ 171,263,540 | \$102,109,194  | \$ 17,539,352  | \$ 21,200,126    | \$ 16,047,408    | \$ 11,482,222 | \$ 1,278,828       | \$ -            | \$ -             | \$ 340,920,670 |
| IN SERVICE- TASK 10                  | -              | 2,568,361      | -              | 217,310          | 1,592,261        | -             | -                  | -               | -                | 4,377,932      |
| BRISTOL                              | -              | (612,700)      | -              | -                | -                | -             | -                  | -               | -                | -              |
| EAST PARIS                           | -              | (1,710,802)    | 612,700        | 1,710,802        | -                | -             | -                  | -               | -                | -              |
| WATERMANS                            | -              | (11,025,025)   | (725,425)      | (6,451,824)      | (6,200)          | (654,852)     | -                  | -               | -                | (19,063,326)   |
| LESS: WATERMANS-TOTAL SUBS-HOME COMM | -              | 2,990,951      | 521,654        | 3,150,965        | 1,238            | 304,192       | -                  | -               | -                | 6,989,000      |
| ADD: WATERMANS-TOTAL ADDS-HOME COMM  | -              | \$ 94,319,979  | \$ 17,948,281  | \$ 19,827,379    | \$ 17,634,707    | \$ 10,931,562 | \$ 1,278,828       | \$ -            | \$ -             | \$ 333,204,276 |
| TOTAL-PHYSICAL LOCATION COST         | \$ 171,263,540 | \$ 171,263,540 | \$ 17,948,281  | \$ 19,827,379    | \$ 17,634,707    | \$ 10,931,562 | \$ 1,278,828       | \$ -            | \$ -             | \$ 333,204,276 |

CONSTRUCTION COST- ZONEGATING

| PUMPING STATIONS:         | AMOUNT         | CITY OF GR     | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP   | TALLMADGE TOWNSHIP | CITY OF EAST GR | COUNTY OF OTTAWA | ADA TOWNSHIP | TOTAL          |
|---------------------------|----------------|----------------|----------------|------------------|------------------|---------------|--------------------|-----------------|------------------|--------------|----------------|
| KNAPP SERVICE CENTER      | \$ 2,416,086   | \$ (932,367)   | \$ -           | \$ 271,012       | \$ 67,602        | \$ 402,592    | \$ -               | \$ -            | \$ -             | \$ 191,161   | \$ -           |
| LIVINGSTON                | 605,029        | (65,105)       | -              | 24,768           | 6,145            | 36,750        | -                  | -               | -                | 17,442       | -              |
| FRANKLIN                  | 5,633,336      | (2,852,947)    | -              | 1,158,327        | 618,878          | 245,332       | -                  | 480,073         | -                | 350,337      | -              |
| LEFFINGWELL               | 141,009        | (94,415)       | -              | 15,817           | 3,945            | 23,496        | -                  | -               | -                | 11,157       | -              |
| BRISTOL                   | 612,700        | -              | -              | -                | -                | -             | -                  | -               | -                | -            | -              |
| EAST PARIS                | 1,710,802      | -              | -              | (824,846)        | 824,846          | -             | -                  | -               | -                | -            | -              |
| STORAGE TANKS:            |                |                |                |                  |                  |               |                    |                 |                  |              |                |
| ELKS                      | 236,335        | (175,377)      | 172,097        | -                | -                | -             | 3,280              | -               | -                | -            | -              |
| KNAPP                     | 118,570        | (16,650)       | -              | 4,846            | 1,202            | 7,190         | -                  | -               | -                | -            | -              |
| CAMBRIDGE                 | 116,070        | (84,818)       | -              | 69,259           | 5,762            | -             | -                  | 9,797           | -                | 3,412        | -              |
| WATERMANS- ZONEGATED COST | -              | 260,050        | 423,988        | 3,268,907        | 4,380,296        | 1,517,353     | 127,291            | 146,001         | -                | 1,970,439    | 12,094,325     |
| TOTAL- ZONEGATED COST     | \$ -           | \$ (3,941,629) | \$ 596,085     | \$ 3,988,090     | \$ 5,908,676     | \$ 2,232,713  | \$ 130,571         | \$ 635,871      | \$ -             | \$ 2,543,948 | \$ 12,094,325  |
| GRAND TOTAL- COST         | \$ 171,263,540 | \$ 90,378,350  | \$ 18,544,366  | \$ 23,815,469    | \$ 23,543,383    | \$ 13,164,275 | \$ 1,409,399       | \$ 635,871      | \$ -             | \$ 2,543,948 | \$ 345,298,601 |

ACCUMULATED DEPRECIATION-BY PHYSICAL LOCATION

| ACC DEPREC BY PHYSICAL LOCATION- TASK 11 | AMOUNT        | CITY OF GR    | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP  | TALLMADGE TOWNSHIP | CITY OF EAST GR | COUNTY OF OTTAWA | ADA TOWNSHIP | TOTAL          |
|--|---------------|---------------|----------------|------------------|------------------|--------------|--------------------|-----------------|------------------|--------------|----------------|
| BRISTOL                                  | \$ 65,204,526 | \$ 26,346,986 | \$ 3,992,905   | \$ 4,136,959     | \$ 2,749,203     | \$ 1,962,144 | \$ 88,694          | \$ -            | \$ -             | \$ -         | \$ 104,481,417 |
| EAST PARIS                               | -             | (111,086)     | 111,086        | -                | -                | -            | -                  | -               | -                | -            | -              |
| WATERMANS                                | -             | (1,252,581)   | -              | 1,252,581        | -                | -            | -                  | -               | -                | -            | -              |
| LESS: WATERMANS-TOTAL SUBS-HOME COMM     | -             | (2,854,630)   | (269,752)      | (1,177,229)      | (909)            | (341,502)    | -                  | -               | -                | -            | (4,664,022)    |
| ADD: WATERMANS-TOTAL ADDS-HOME COMM      | -             | 1,191,277     | 214,271        | 592,799          | 182              | 118,769      | -                  | -               | -                | -            | 2,117,298      |
| TOTAL-PHYSICAL LOCATION ACC DEP          | \$ 65,204,526 | \$ 23,319,966 | \$ 4,028,510   | \$ 4,805,110     | \$ 2,748,476     | \$ 1,739,411 | \$ 88,694          | \$ -            | \$ -             | \$ -         | \$ 101,934,693 |

ACCUMULATED DEPRECIATION-ZONEGATING

| PUMPING STATIONS:            | AMOUNT        | CITY OF GR     | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP  | TALLMADGE TOWNSHIP | CITY OF EAST GR | COUNTY OF OTTAWA | ADA TOWNSHIP | TOTAL          |
|------------------------------|---------------|----------------|----------------|------------------|------------------|--------------|--------------------|-----------------|------------------|--------------|----------------|
| KNAPP SERVICE CENTER         | \$ 1,373,392  | \$ (529,992)   | \$ -           | \$ 154,053       | \$ 38,428        | \$ 228,848   | \$ -               | \$ -            | \$ -             | \$ 108,663   | \$ -           |
| LIVINGSTON                   | 479,881       | (67,390)       | -              | 19,613           | 4,866            | 29,100       | -                  | -               | -                | 13,811       | -              |
| FRANKLIN                     | 823,164       | (416,864)      | -              | 169,259          | 90,433           | 35,849       | -                  | 70,150          | -                | 51,193       | -              |
| LEFFINGWELL                  | 127,387       | (49,158)       | -              | 14,289           | 3,564            | 21,226       | -                  | -               | -                | 10,079       | -              |
| BRISTOL                      | 111,086       | -              | -              | -                | -                | -            | -                  | -               | -                | -            | -              |
| EAST PARIS                   | 1,252,581     | -              | -              | (603,919)        | 603,919          | -            | -                  | -               | -                | -            | -              |
| STORAGE TANKS:               |               |                |                |                  |                  |              |                    |                 |                  |              |                |
| ELKS                         | 236,335       | (175,377)      | 172,097        | -                | -                | -            | 3,280              | -               | -                | -            | -              |
| KNAPP                        | 116,070       | (16,299)       | -              | 4,744            | 1,177            | 7,038        | -                  | -               | -                | 3,340        | -              |
| CAMBRIDGE                    | 116,070       | (84,818)       | -              | 69,259           | 5,762            | -            | -                  | 9,797           | -                | -            | -              |
| WATERMANS- ZONEGATED ACC DEP | -             | 111,215        | 215,753        | 740,895          | 731,640          | 282,211      | 40,131             | 65,947          | -                | 359,032      | 2,546,724      |
| TOTAL- ZONEGATED ACC DEP     | \$ -          | \$ (1,228,703) | \$ 387,850     | \$ 568,193       | \$ 1,479,769     | \$ 604,272   | \$ 43,411          | \$ 145,794      | \$ -             | \$ 546,118   | \$ 2,546,724   |
| GRAND TOTAL- ACC DEP         | \$ 65,204,526 | \$ 22,091,263  | \$ 4,416,360   | \$ 5,373,303     | \$ 4,228,265     | \$ 2,343,683 | \$ 132,105         | \$ 145,794      | \$ -             | \$ 546,118   | \$ 104,481,417 |

CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 ADJUSTED OPERATING EXPENSE ZONEGATED BY GOVERNMENTAL UNIT - TASK #22  
 FISCAL YEAR ENDED JUNE 30, 2004

| COST CENTER                | ADJUSTED EXPENSE BY COST CENTER | INTEGRATED SYSTEM | RETAIL       |                |                  |                  |             |                    | WHOLESALE       |                  |              |  |  |           |
|----------------------------|---------------------------------|-------------------|--------------|----------------|------------------|------------------|-------------|--------------------|-----------------|------------------|--------------|--|--|-----------|
|                            |                                 |                   | CITY OF GR   | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP | TALLMADGE TOWNSHIP | CITY OF EAST GR | COUNTY OF OTTAWA | ADA TOWNSHIP |  |  |           |
| FILTRATION PLANT           | \$ 5,932,350                    | \$ 5,932,350      |              |                |                  |                  |             |                    |                 |                  |              |  |  |           |
| PUMPING STATIONS:          |                                 |                   |              |                |                  |                  |             |                    |                 |                  |              |  |  |           |
| A. PRIMARY TRANSPORT       | 2,002,817                       | 2,002,817         |              |                |                  |                  |             |                    |                 |                  |              |  |  |           |
| B. INTERMEDIATE TRANSPORT  | 1,580,362                       |                   | 920,877      | 33,945         | 259,404          | 174,866          | 64,440      |                    |                 |                  | 51,265       |  |  | 55,565    |
| WATERMAINS:                |                                 |                   |              |                |                  |                  |             |                    |                 |                  |              |  |  |           |
| A. PRIMARY TRANSPORT       | 281,761                         |                   | 152,631      | 29,503         | 48,091           | 30,024           | 7,833       | 417                |                 |                  | 5,587        |  |  | 7,675     |
| B. INTERMEDIATE TRANSPORT  | 1,461,117                       |                   | 553,266      | 299,427        | 258,282          | 204,805          | 114,259     | 18,542             |                 |                  | 102          |  |  | 12,434    |
| C. LOCAL DISTRIBUTION      | 4,114,945                       |                   | 3,120,899    | 307,098        | 250,888          | 204,965          | 225,910     | 5,185              |                 |                  | -            |  |  | -         |
| RETAIL CUSTOMER METERING   | 3,192,404                       |                   | 2,474,367    | 243,804        | 197,578          | 125,845          | 145,606     | 5,204              |                 |                  |              |  |  |           |
| SUBTOTAL OPERATING EXPENSE | 18,545,756                      | 7,935,167         | 7,222,040    | 913,777        | 1,014,243        | 740,505          | 558,048     | 29,348             |                 |                  | 56,954       |  |  | 75,674    |
| ENGINEERING SERVICES       | 980,164                         | 419,383           | 381,695      | 48,293         | 53,605           | 39,138           | 29,493      | 1,549              |                 |                  | 3,009        |  |  | 3,999     |
| ADMINISTRATIVE EXPENSE     | 2,859,494                       | 1,119,593         | 1,181,484    | 154,862        | 165,710          | 120,862          | 93,254      | 5,020              |                 |                  | 8,033        |  |  | 10,676    |
| TOTAL                      | \$ 22,385,414                   | \$ 9,474,143      | \$ 8,785,219 | \$ 1,116,932   | \$ 1,233,558     | \$ 900,505       | \$ 680,795  | \$ 35,917          |                 |                  | \$ 67,986    |  |  | \$ 90,349 |

**METHOD OF DISTRIBUTION**

|                              |           |         |           |          |          |          |          |        |  |  |        |  |  |        |
|------------------------------|-----------|---------|-----------|----------|----------|----------|----------|--------|--|--|--------|--|--|--------|
| FILTRATION PLANTS            | 100.00%   | 100.00% |           |          |          |          |          |        |  |  |        |  |  |        |
| PUMPING STATIONS             |           |         |           |          |          |          |          |        |  |  |        |  |  |        |
| A. PRIMARY TRANSPORT         | 100.00%   | 100.00% |           |          |          |          |          |        |  |  |        |  |  |        |
| B. INTERMEDIATE TRANSPORT    | 100.00%   | 100.00% | 59.017%   | 2.175%   | 16.625%  | 11.207%  | 4.130%   |        |  |  | 3.285% |  |  | 3.561% |
| MEMO                         |           |         |           |          |          |          |          |        |  |  |        |  |  |        |
| WATERMAINS                   |           |         |           |          |          |          |          |        |  |  |        |  |  |        |
| TOTAL MILES:                 | 1,121.75  |         |           |          |          |          |          |        |  |  |        |  |  |        |
| A. PRIMARY TRANSPORT         | 53.96     |         | 54.170%   | 10.471%  | 17.068%  | 10.656%  | 2.780%   | 0.148% |  |  | 1.983% |  |  | 2.724% |
| MILES                        |           |         | 29.23     | 5.65     | 9.21     | 5.75     | 1.50     | 0.08   |  |  | 1.07   |  |  | 1.47   |
| B. INTERMEDIATE TRANSPORT    | 279.80    |         | 37.866%   | 20.493%  | 17.677%  | 14.017%  | 7.820%   | 1.269% |  |  | 0.007% |  |  | 0.851% |
| MILES                        |           |         | 105.95    | 57.34    | 49.46    | 39.22    | 21.88    | 3.55   |  |  | 0.02   |  |  | 2.38   |
| C. LOCAL DISTRIBUTION        | 787.99    |         | 75.843%   | 7.463%   | 6.097%   | 4.981%   | 5.490%   | 0.126% |  |  | -      |  |  | -      |
| MILES                        |           |         | 597.64    | 58.81    | 48.04    | 39.25    | 43.26    | 0.99   |  |  | -      |  |  | -      |
| RETAIL CUSTOMER METERING (1) | 77,771.00 |         | 77.508%   | 7.637%   | 6.189%   | 3.942%   | 4.561%   | 0.163% |  |  | -      |  |  | -      |
| NUMBER OF METERS             |           |         | 60,279.00 | 5,939.00 | 4,813.00 | 3,066.00 | 3,547.00 | 127.00 |  |  | 0.307% |  |  | 0.408% |
| ENGINEERING SERVICES (2)     |           |         | 38,942%   | 4.927%   | 5.469%   | 3.993%   | 3.009%   | 0.158% |  |  | 0.307% |  |  | 0.408% |
| ADMINISTRATIVE EXPENSE (3)   |           |         | 41.318%   | 5.416%   | 5.795%   | 4.227%   | 3.261%   | 0.176% |  |  | 0.281% |  |  | 0.373% |

NOTES:  
 (1) ALLOCATION BASED ON NUMBER OF METERS.  
 (2) ALLOCATION BASED ON DIRECT OPERATING EXPENSE.  
 (3) ALLOCATION BASED ON DIRECT OPERATING EXPENSE, ADJUSTED FOR ANY COST ASSIGNABLE EXCLUSIVELY TO GR OR RETAIL COMMUNITIES, IF APPLICABLE.

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER RATE STUDY  
 WATER SUPPLY SYSTEM FUND  
 TASK NO. 23**

ASSIGN OTHER OPERATING REVENUES TO EACH GOVERNMENTAL ENTITY.

BASIS OF ALLOCATION: RETAIL BILLINGS BY GOVERNMENTAL ENTITY - TASK NO. 6 & 7

|                       | <u>RETAIL<br/>BILLINGS</u> | <u>PERCENTAGE<br/>OF TOTAL</u> | <u>ALLOCATION</u>   |
|-----------------------|----------------------------|--------------------------------|---------------------|
| CITY OF GRAND RAPIDS  | \$ 21,118,877              | 68.3486%                       | \$ 876,923          |
| CITY OF WALKER        | 2,519,778                  | 8.1549%                        | 104,629             |
| CITY OF KENTWOOD      | 3,403,332                  | 11.0145%                       | 141,318             |
| CASCADE TOWNSHIP      | 2,344,379                  | 7.5873%                        | 97,346              |
| GRAND RAPIDS TOWNSHIP | 1,455,349                  | 4.7101%                        | 60,431              |
| TALLMADGE TOWNSHIP    | 57,041                     | 0.1846%                        | 2,368               |
|                       | <u>\$ 30,898,756</u>       | <u>100.0000%</u>               | <u>\$ 1,283,015</u> |

CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 ASSIGN DEPRECIATION EXPENSE TO CUSTOMER COMMUNITIES- TASK NO. 24  
 FISCAL YEAR ENDED JUNE 30, 2004

| COST CENTER                   | DEPRECIATION EXPENSE | RETAIL            |            |                |                  |                  |             | WHOLESALE          |                 |                  | TOTAL        |
|-------------------------------|----------------------|-------------------|------------|----------------|------------------|------------------|-------------|--------------------|-----------------|------------------|--------------|
|                               |                      | INTEGRATED SYSTEM | CITY OF GR | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP | TALLMADGE TOWNSHIP | CITY OF EAST GR | COUNTY OF OTTAWA |              |
| BY PHYSICAL LOCATION- TASK 11 | \$ 3,820,511         | \$ 1,459,807      | \$ 247,411 | \$ 316,673     | \$ 213,190       | \$ 149,931       | \$ 17,056   | \$ -               | \$ -            | \$ -             | \$ 6,224,579 |
| IN SERVICE- TASK 10           | -                    | 45,606            | -          | 2,897          | 21,230           | -                | -           | -                  | -               | -                | 69,733       |
| PUMPING STATIONS:             |                      |                   |            |                |                  |                  |             |                    |                 |                  |              |
| KNAPP SERVICE CENTER          | \$ 60,233            | (23,244)          | -          | 6,756          | 1,685            | 10,037           | -           | -                  | -               | 4,766            | -            |
| LIVINGSTON                    | 4,153                | (584)             | -          | 170            | 42               | 252              | -           | -                  | -               | 120              | -            |
| FRANKLIN                      | 164,633              | (83,378)          | -          | 33,852         | 18,087           | 7,170            | -           | 14,030             | -               | 10,239           | -            |
| LEFFINGWELL                   | 908                  | (350)             | -          | 102            | 25               | 151              | -           | -                  | -               | 72               | -            |
| BRISTOL                       | 15,870               | -                 | -          | -              | -                | -                | -           | -                  | -               | -                | -            |
| EAST PARIS                    | 33,873               | -                 | -          | (16,332)       | 16,332           | -                | -           | -                  | -               | -                | -            |
| STORAGE TANKS:                |                      |                   |            |                |                  |                  |             |                    |                 |                  |              |
| ELKS                          | -                    | -                 | -          | -              | -                | -                | -           | -                  | -               | -                | -            |
| KNAPP                         | -                    | -                 | -          | -              | -                | -                | -           | -                  | -               | -                | -            |
| CAMBRIDGE                     | -                    | -                 | -          | -              | -                | -                | -           | -                  | -               | -                | -            |
| WATERMANS                     | -                    | (103,269)         | 2,936      | (607)          | 58,323           | 12,889           | 1,697       | 1,758              | -               | 26,273           | -            |
| ADJUSTED BY ZONEGATING        | 3,820,511            | 1,294,588         | 250,347    | 343,511        | 328,914          | 180,430          | 18,753      | 15,788             | -               | 41,470           | 6,294,312    |
| LESS CONTRIBUTIONS AMORTIZED  | -                    | (281,262)         | (200,339)  | (180,837)      | (181,331)        | (133,708)        | (17,051)    | -                  | -               | -                | (994,528)    |
| TASK NO. 21                   | \$ 3,820,511         | \$ 1,013,326      | \$ 50,008  | \$ 162,674     | \$ 147,583       | \$ 46,722        | \$ 1,702    | \$ 15,788          | \$ -            | \$ 41,470        | \$ 5,299,784 |
| TOTAL                         |                      |                   |            |                |                  |                  |             |                    |                 |                  |              |

CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 ACCUMULATE REVENUE REQUIREMENTS BY CUSTOMER COMMUNITIES- TASK NO. 25  
 FISCAL YEAR ENDED JUNE 30, 2004

| COST CENTER                  | INTEGRATED SYSTEM | RETAIL        |                |                  |                  |              |                    | WHOLESALE       |                  |              | TOTAL         |  |  |
|------------------------------|-------------------|---------------|----------------|------------------|------------------|--------------|--------------------|-----------------|------------------|--------------|---------------|--|--|
|                              |                   | CITY OF GR    | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP  | TALLMADGE TOWNSHIP | CITY OF EAST GR | COUNTY OF OTTAWA | ADA TOWNSHIP |               |  |  |
| OPERATION & MAINTENANCE      |                   |               |                |                  |                  |              |                    |                 |                  |              |               |  |  |
| EXPENSE- TASK NO. 22         | \$ 9,474,143      | \$ 8,785,219  | \$ 1,116,932   | \$ 1,233,556     | \$ 900,505       | \$ 680,795   | \$ 35,917          | \$ 67,996       | \$ -             | \$ 90,349    | \$ 22,385,414 |  |  |
| DEPRECIATION EXPENSE         |                   |               |                |                  |                  |              |                    |                 |                  |              |               |  |  |
| TASK NO. 24                  | 3,820,511         | 1,013,326     | 50,008         | 162,674          | 147,583          | 46,722       | 1,702              | 15,788          | -                | 41,470       | 5,299,784     |  |  |
| RETURN ON SYSTEM INVESTMENT  |                   |               |                |                  |                  |              |                    |                 |                  |              |               |  |  |
| TASK NO. 21                  | 5,949,031         | 2,860,607     | 150,583        | 612,066          | 698,764          | 232,017      | 10,240             | 53,849          | -                | 216,032      | 10,783,189    |  |  |
| REVENUE CREDITS- TASK NO. 23 |                   |               |                |                  |                  |              |                    |                 |                  |              |               |  |  |
| ALLOCATE:                    |                   |               |                |                  |                  |              |                    |                 |                  |              |               |  |  |
| INTEG CONN. FEE CREDIT *     |                   | (1,243,335)   | (180,916)      | (205,689)        | (122,007)        | (87,130)     | (5,195)            | (72,597)        | -                | (75,153)     | (1,992,022)   |  |  |
| INTEGRATED SYSTEM *          |                   | 11,475,635    | 1,669,810      | 1,898,456        | 1,126,094        | 804,189      | 47,951             | 670,054         | 857,850          | 693,646      | -             |  |  |
|                              | \$ -              | \$ 22,014,529 | \$ 2,701,788   | \$ 3,559,747     | \$ 2,653,593     | \$ 1,616,162 | \$ 88,247          | \$ 735,090      | \$ 857,850       | \$ 966,344   | \$ 35,193,350 |  |  |

\* ALLOCATED ON THE BASIS OF RELATIVE BILLED VOLUME & LAND AREA. ADJUSTED TO EXCLUDE ANY COST OF COLDBROOK PUMPING TO OTTAWA CO.

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
TASK NO. 25a**

REVIEW THE REVENUE REQUIREMENTS TO ASSURE COMPLIANCE WITH THE APPLICABLE BOND ORDINANCE PROVISIONS.

|                                     | YEAR ENDED<br>6/30/2004 | PRO FORMA *<br>YEAR ENDED<br>6/30/2004 |
|-------------------------------------|-------------------------|--|
| <b>REVENUES:</b>                    |                         |  |
| RETAIL/WHOLESALE WATER SERVICE      | \$ 34,312,692           | \$ 35,358,666                          |
| CONNECTION FEES/FRONT FOOT/ENG FEES | 2,320,252               | 2,320,252                              |
| BILLABLE TO SDS FUND                | 1,930,765               | 1,930,765                              |
| OTHER OPERATING REVENUES            | 527,789                 | 527,789                                |
| INTEREST ON INVESTMENTS             | 635,266                 | 635,266                                |
| MISCELLANEOUS                       | 653,426                 | 653,426                                |
| TOTAL REVENUES                      | <u>40,380,190</u>       | <u>41,426,164</u>                      |
| <b>OPERATING EXPENSES:</b>          |                         |  |
| OPERATIONS & MAINTENANCE            | \$ 24,000,908           | \$ 24,000,908                          |
| DEPRECIATION                        | 6,224,657               | 6,224,657                              |
| TOTAL EXPENSES                      | \$ 30,225,565           | \$ 30,225,565                          |
| ADDITIONS: DEPRECIATION             | <u>6,224,657</u>        | <u>6,224,657</u>                       |
| NET EARNINGS OF THE SYSTEM          | <u>\$ 16,379,282</u>    | <u>\$ 17,425,256</u>                   |
| <b>DEBT SERVICE</b>                 |                         |  |
| SERIES 1993 BONDS, FY 2004          | \$ 3,594,986            | \$ 3,594,986                           |
| SERIES 2000 BONDS, FY 2004          | 8,201,900               | 8,201,900                              |
|                                     | <u>\$ 11,796,886</u>    | <u>\$ 11,796,886</u>                   |
| COVERAGE RATIO                      | <u>1.39</u>             | <u>1.48</u>                            |

\* WATER SERVICES ADJUSTED FOR RATE REVISIONS OF -2.18% AND 4.41% EFFECTIVE 1/1/04 AND 1/1/05, RESPECTIVELY.

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**SUMMARY**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \$ 35,193,350

CURRENT REVENUES

|  |              |                     |
|--|--------------|---------------------|
| MONTHLY METER CHARGE                               | \$ 8,619,205 |                     |
| MONTHLY BILLING CHARGE                             | 3,040,360    |                     |
| COMMODITY CHARGE                                   | 21,588,017   |                     |
| MONTHLY FIRE PROTECTION                            | 398,592      |                     |
| ANNUAL HYDRANT CHARGE                              | 61,956       | <u>(33,708,130)</u> |
| REQUIRED REVENUE INCREASE (DECREASE)               |              | <u>\$ 1,485,220</u> |
| <br>   |              |                     |
| PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES |              | <u>4.41%</u>        |

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
TASK NO. 26**

| METER SIZE     | EQUIV. FACTOR | CITY OF GR    |               | CITY OF WALKER |              | CITY OF KENTWOOD |              | CASCADE TWP  |              | GR TWP       |              | TALLMADGE TWP |            |
|----------------|---------------|---------------|---------------|----------------|--------------|------------------|--------------|--------------|--------------|--------------|--------------|---------------|------------|
|                |               | METERS        | EQUIV.        | METERS         | EQUIV.       | METERS           | EQUIV.       | METERS       | EQUIV.       | METERS       | EQUIV.       | METERS        | EQUIV.     |
| A 3/4" or less | 1.0000        | 54,282        | 54,282        | 4,895          | 4,895        | 3,061            | 3,061        | 2,170        | 2,170        | 3,026        | 3,026        | 87            | 87         |
| B 1"           | 1.7778        | 2,514         | 4,469         | 402            | 715          | 592              | 1,052        | 289          | 514          | 276          | 491          | 15            | 27         |
| C 1 1/4"       | 2.7778        | -             | -             | -              | -            | -                | -            | -            | -            | -            | -            | -             | -          |
| D 1 1/2"       | 4.0000        | 1,066         | 4,264         | 190            | 760          | 354              | 1,416        | 207          | 828          | 90           | 360          | 1             | 4          |
| E 2"           | 7.1111        | 982           | 6,983         | 104            | 740          | 193              | 1,372        | 101          | 718          | 44           | 313          | 1             | 7          |
| F 3"           | 16.0000       | 63            | 1,008         | 10             | 160          | 21               | 336          | 5            | 80           | 7            | 112          | -             | -          |
| G 4"           | 28.4444       | 83            | 2,361         | 6              | 171          | 12               | 341          | 3            | 85           | 3            | 85           | -             | -          |
| H 6" and over  | 64.0000       | 22            | 1,408         | 2              | 128          | 3                | 192          | -            | -            | -            | -            | -             | -          |
|                |               | <u>59,012</u> | <u>74,775</u> | <u>5,609</u>   | <u>7,569</u> | <u>4,236</u>     | <u>7,770</u> | <u>2,775</u> | <u>4,395</u> | <u>3,446</u> | <u>4,387</u> | <u>104</u>    | <u>125</u> |

**FIRE PROTECTION SERVICE**

|       |               |              |              |              |              |               |
|-------|---------------|--------------|--------------|--------------|--------------|---------------|
| H 6"  | 950           | 220          | 292          | 144          | 82           | 18            |
| I 8"  | 284           | 86           | 252          | 120          | 19           | 2             |
| J 10" | 15            | 5            | 9            | 2            | -            | -             |
| K 12" | 18            | 19           | 24           | 25           | -            | 3             |
|       | <u>1,267</u>  | <u>330</u>   | <u>577</u>   | <u>291</u>   | <u>101</u>   | <u>23</u>     |
| TOTAL | <u>60,279</u> | <u>5,939</u> | <u>4,813</u> | <u>3,066</u> | <u>3,547</u> | <u>127</u>    |
| TOTAL |               |              |              |              |              | <u>77,771</u> |

Source: Water/Sewage Meter/User Quantity Report, dated November 1, 2004.

CITY OF GRAND RAPIDS, MICHIGAN

WATER RATE STUDY  
 WATER SUPPLY SYSTEM FUND  
 RATE ANALYSIS - TASK NO. 26

SYSTEM REVENUE REQUIREMENTS \$ 22,014,529

CURRENT REVENUES

MONTHLY METER CHARGE

74,775 meter equivalents x \$ 5.95 x 12 = \$ 5,338,935

MONTHLY BILLING CHARGE

59,012 meters x \$ 3.37 x 12 = 2,386,445

COMMODITY CHARGE

10,372,386 units (100 CF) x \$ 1.27 = 13,172,930

MONTHLY FIRE PROTECTION

180,624

ANNUAL HYDRANT CHARGE

- (21,078,934)

REQUIRED REVENUE INCREASE (DECREASE)

\$ 935,595

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES

4.44%

CITY OF GRAND RAPIDS, MICHIGAN

WATER RATE STUDY  
 WATER SUPPLY SYSTEM FUND  
 RATE ANALYSIS - TASK NO. 27

COMMODITY CHARGE:

$$\frac{\text{COMMODITY CHARGE @ 64\%}}{\text{BILLED UNITS}} = \frac{\$14,089,299}{10,372,386} = \underline{\underline{\$ 1.36 /100 CF *}}$$

MONTHLY SERVICE CHARGE:

|                                |                     |
|--------------------------------|---------------------|
| SYSTEM REVENUE REQUIREMENTS    | \$ 22,014,529       |
| NEW COMMODITY CHARGE           |                     |
| 10,372,386 x \$ 1.36           | \$ 14,106,445       |
| NEW MONTHLY BILLING CHARGE     |                     |
| 59,012 x \$ 3.54 x 12          | 2,506,830           |
| MONTHLY FIRE PROTECTION CHARGE | 180,624             |
| ANNUAL HYDRANT CHARGE          | -                   |
|                                | <u>(16,793,899)</u> |
|                                | <u>\$ 5,220,630</u> |

$$\text{MONTHLY METER CHARGE} = \frac{\$5,220,630}{74,775 \times 12} = \underline{\underline{\$ 5.82 \text{ MONTHLY}}}$$

| <u>METER SIZE</u> | <u>EQUIVALENT</u> | <u>MONTHLY SERVICE CHARGE</u> |                |              | <u>PRESENT</u> |
|-------------------|-------------------|-------------------------------|----------------|--------------|----------------|
|                   |                   | <u>METER</u>                  | <u>BILLING</u> | <u>TOTAL</u> |                |
| 3/4" or less      | 1.0000            | \$ 5.82                       | \$ 3.54        | \$ 9.36      | \$ 9.32        |
| 1"                | 1.7778            | 10.35                         | 3.54           | 13.89        | 13.95          |
| 1 1/4"            | 2.7778            | 16.17                         | 3.54           | 19.71        | 19.90          |
| 1 1/2"            | 4.0000            | 23.28                         | 3.54           | 26.82        | 27.17          |
| 2"                | 7.1111            | 41.39                         | 3.54           | 44.93        | 45.68          |
| 3"                | 16.0000           | 93.12                         | 3.54           | 96.66        | 98.57          |
| 4"                | 28.4444           | 165.55                        | 3.54           | 169.09       | 172.61         |
| 6" and over       | 64.0000           | 372.48                        | 3.54           | 376.02       | 384.17         |

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2005

**CITY OF WALKER, MICHIGAN**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \$ 2,701,788

CURRENT REVENUES

MONTHLY METER CHARGE

7,569 meter equivalents x \$ 6.59 x 12 = \$ 598,557

MONTHLY BILLING CHARGE

5,609 meters x \$ 3.37 x 12 = 226,828

COMMODITY CHARGE

1,317,218 units (100 CF) x \$ 1.27 = 1,672,867

MONTHLY FIRE PROTECTION

52,560

ANNUAL HYDRANT CHARGE

- (2,550,812)

REQUIRED REVENUE INCREASE (DECREASE)

\$ 150,976

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES

5.92%



**CITY OF KENTWOOD, MICHIGAN**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \$ 3,559,747

CURRENT REVENUES

MONTHLY METER CHARGE

7,770 meter equivalents x \$ 10.20 x 12 = \$ 951,048

MONTHLY BILLING CHARGE

4,236 meters x \$ 3.37 x 12 = 171,304

COMMODITY CHARGE

1,649,758 units (100 CF) x \$ 1.36 = 2,243,671

MONTHLY FIRE PROTECTION

96,384

ANNUAL HYDRANT CHARGE

- (3,462,407)

REQUIRED REVENUE INCREASE (DECREASE)

\$ 97,340

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES

2.81%



**CASCADE TOWNSHIP**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \$ 2,653,593

CURRENT REVENUES

MONTHLY METER CHARGE

4,395 meter equivalents x \$ 14.02 x 12 = \$ 739,415

MONTHLY BILLING CHARGE

2,775 meters x \$ 3.37 x 12 = 112,221

COMMODITY CHARGE

823,101 units (100 CF) x \$ 1.84 = 1,514,506

MONTHLY FIRE PROTECTION

51,696

ANNUAL HYDRANT CHARGE

33,720

(2,451,558)

REQUIRED REVENUE INCREASE (DECREASE)

\$ 202,035

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES

8.24%



**GRAND RAPIDS TOWNSHIP**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \$ 1,616,162

CURRENT REVENUES

|  |   |         |                    |
|--|---|---------|--------------------|
| MONTHLY METER CHARGE                               |   |         |                    |
| 4,387 meter equivalents                            | x | \$ 9.10 | x 12 = \$ 479,060  |
| MONTHLY BILLING CHARGE                             |   |         |                    |
| 3,446 meters                                       | x | \$ 3.37 | x 12 = 139,356     |
| COMMODITY CHARGE                                   |   |         |                    |
| 612,232 units (100 CF)                             | x | \$ 1.45 | = 887,736          |
| MONTHLY FIRE PROTECTION                            |   |         | 13,488             |
| ANNUAL HYDRANT CHARGE                              |   |         | <u>19,980</u>      |
|  |   |         | <u>(1,539,620)</u> |
| REQUIRED REVENUE INCREASE (DECREASE)               |   |         | <u>\$ 76,542</u>   |
| PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES |   |         | <u>4.97%</u>       |



**TALLMADGE TOWNSHIP**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

|                             |    |               |
|-----------------------------|----|---------------|
| SYSTEM REVENUE REQUIREMENTS | \$ | 88,247        |
| LESS: CASH CONTRIBUTION     |    | (12,040)      |
| SYSTEM REVENUE REQUIREMENTS | \$ | <u>76,207</u> |

CURRENT REVENUES

|                                      |           |                        |
|--------------------------------------|-----------|------------------------|
| MONTHLY METER CHARGE                 |           |                        |
| 125 meter equivalents                | x \$ 2.58 | x 12 = \$ 3,870        |
| MONTHLY BILLING CHARGE               |           |                        |
| 104 meters                           | x \$ 3.37 | x 12 = 4,206           |
| COMMODITY CHARGE                     |           |                        |
| 16,326 units (100 CF)                | x \$ 3.21 | = 52,406               |
| MONTHLY FIRE PROTECTION              |           | 3,840                  |
| ANNUAL HYDRANT CHARGE                |           | <u>8,256</u>           |
| REQUIRED REVENUE INCREASE (DECREASE) |           | <u><u>\$ 3,629</u></u> |

|  |  |                     |
|--|--|---------------------|
| PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES |  | <u><u>5.00%</u></u> |
|--|--|---------------------|

**TALLMADGE TOWNSHIP**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 3.37 /100 CF \*  
 \$ 3.21 x 105.00%

MONTHLY SERVICE CHARGE:

|                                  |                 |
|----------------------------------|-----------------|
| SYSTEM REVENUE REQUIREMENTS      | \$ 76,207       |
| NET OF CONTRIBUTION OF \$ 12,040 |                 |
| NEW COMMODITY CHARGE             |                 |
| 16,326 x \$ 3.37                 | \$ 55,019       |
| NEW MONTHLY BILLING CHARGE       |                 |
| 104 x \$ 3.54 x 12               | 4,418           |
| MONTHLY FIRE PROTECTION CHARGE   | 3,840           |
| ANNUAL HYDRANT CHARGE            | <u>8,256</u>    |
|                                  | <u>(71,533)</u> |
|                                  | <u>\$ 4,674</u> |

MONTHLY METER CHARGE =  $\frac{\$4,674}{125 \times 12} = \underline{\underline{\$ 3.12 \text{ MONTHLY}}}$

| <u>METER SIZE</u> | <u>EQUIVALENT</u> | <u>MONTHLY SERVICE CHARGE</u> |                |              | <u>PRESENT</u> |
|-------------------|-------------------|-------------------------------|----------------|--------------|----------------|
|                   |                   | <u>METER</u>                  | <u>BILLING</u> | <u>TOTAL</u> |                |
| 3/4" or less      | 1.0000            | \$ 3.12                       | \$ 3.54        | \$ 6.66      | \$ 5.95        |
| 1"                | 1.7778            | 5.55                          | 3.54           | 9.09         | 7.96           |
| 1 1/4"            | 2.7778            | 8.67                          | 3.54           | 12.21        | 10.54          |
| 1 1/2"            | 4.0000            | 12.48                         | 3.54           | 16.02        | 13.69          |
| 2"                | 7.1111            | 22.19                         | 3.54           | 25.73        | 21.72          |
| 3"                | 16.0000           | 49.92                         | 3.54           | 53.46        | 44.65          |
| 4"                | 28.4444           | 88.75                         | 3.54           | 92.29        | 76.76          |
| 6" and over       | 64.0000           | 199.68                        | 3.54           | 203.22       | 168.49         |

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2005

**CITY OF EAST GRAND RAPIDS, MICHIGAN**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26**

|  |    |                 |
|--|----|-----------------|
| INTEGRATED SYSTEM REVENUE REQUIREMENTS *           | \$ | 597,457         |
| COMMODITY CHARGE                                   |    |                 |
| (100CF) 598,341 units x \$ 0.99                    |    | 592,358         |
|  |    | <hr/>           |
| REQUIRED COMMODITY REVENUE INCREASE (DECREASE)     | \$ | <u>5,099</u>    |
| <br>   |    |                 |
| NON-INTEGRATED SYSTEM REVENUE REQUIREMENTS         | \$ | 137,633         |
| MONTHLY SERVICE CHARGE                             |    |                 |
| \$14,828 x 12 MONTHS                               |    | 177,936         |
|  |    | <hr/>           |
| REQUIRED SERVICE REVENUE INCREASE (DECREASE)       | \$ | <u>(40,303)</u> |
| <br>   |    |                 |
| PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES |    | <u>-4.57%</u>   |

\* NET OF INTEGRATED CONNECTION FEE CREDIT.

*CITY OF EAST GRAND RAPIDS, MICHIGAN*

*WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27*

SYSTEM REVENUE REQUIREMENTS \$ 735,090

NEW COMMODITY CHARGE  
598,341 x \$1.00 = (598,341)

---

\$ 136,749

MONTHLY SERVICE CHARGE = \$136,749 / 12 = \$11,396

ADA TOWNSHIP

WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26

|  |    |               |
|--|----|---------------|
| INTEGRATED SYSTEM REVENUE REQUIREMENTS *           | \$ | 618,493       |
| COMMODITY CHARGE                                   |    |               |
| (100CF) 582,039 units x \$ 1.05                    |    | 611,141       |
|  |    | <hr/>         |
| REQUIRED COMMODITY REVENUE INCREASE (DECREASE)     | \$ | <u>7,352</u>  |
| <br>   |    |               |
| NON-INTEGRATED SYSTEM REVENUE REQUIREMENTS         | \$ | 347,851       |
| MONTHLY SERVICE CHARGE                             |    |               |
| \$27,452 x 12 MONTHS                               |    | 329,424       |
|  |    | <hr/>         |
| REQUIRED SERVICE REVENUE INCREASE (DECREASE)       | \$ | <u>18,427</u> |
| <br>   |    |               |
| PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES |    | <u>2.74%</u>  |

\* NET OF INTEGRATED CONNECTION FEE CREDIT.

**ADA TOWNSHIP**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

SYSTEM REVENUE REQUIREMENTS \$ 966,344

NEW COMMODITY CHARGE

582,039 x \$1.06 =

(616,961)

---

\$ 349,383

MONTHLY SERVICE CHARGE = \$349,383 / 12 = \$29,115

**OTTAWA COUNTY**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

|  |    |         |
|--|----|---------|
| INTEGRATED SYSTEM REVENUE REQUIREMENTS             | \$ | 857,850 |
| COMMODITY CHARGE                                   |    |         |
| (100CF)    771,011 units    x    \$ 1.09           |    | 840,402 |
|  |    | 840,402 |
| REQUIRED COMMODITY REVENUE INCREASE (DECREASE)     | \$ | 17,448  |
|  |    |         |
| NON-INTEGRATED SYSTEM REVENUE REQUIREMENTS         | \$ | -       |
| MONTHLY SERVICE CHARGE                             |    |         |
| \$80                            x        12 MONTHS |    | 960     |
|  |    | 960     |
| REQUIRED SERVICE REVENUE INCREASE (DECREASE)       | \$ | (960)   |
|  |    |         |
| PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES |    | 1.96%   |

**OTTAWA COUNTY**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

|                             |   |          |      |   |                 |
|-----------------------------|---|----------|------|---|-----------------|
| SYSTEM REVENUE REQUIREMENTS |   |          |      |   | \$ 857,850      |
| NEW COMMODITY CHARGE        |   |          |      |   |                 |
| 771,011                     | x | \$1.11   | =    |   | (855,822)       |
|                             |   |          |      |   | <hr/>           |
|                             |   |          |      |   | <u>\$ 2,028</u> |
| MONTHLY SERVICE CHARGE      | = | \$ 2,028 | / 12 | = | \$169           |

# MEMORANDUM

CITY OF GRAND RAPIDS

**RECEIVED**

NOV 3 2004

DATE: October 29, 2004

TO: Mike Wolski  
Financial Analyst

FROM:  Rick DeVries, P.E.  
Assistant City Engineer

SUBJECT: **WATER RATE STUDY - TASK NO. 28 AND 29**

Enclosed are the Front Foot Rates for Watermain (Task 28) and the costs for the Water Service Pipes (Task 29), for the Fiscal Year 2004.

RDV/grt

Enclosures

cc: Jack Stegehuis  
Mark Garvey  
Paul Pratt

**CITY OF GRAND RAPIDS, MICHIGAN  
WATER SUPPLY SYSTEM FUND  
RE-EVALUATE FRONT FOOT CHARGES  
TASK NO. 28**

The City Engineer's Office has reviewed current construction costs for water facilities and recommends the following front foot assessment rates:

|   | <u>2004</u> | <u>2005</u> |
|---|-------------|-------------|
| Domestic Water User   | \$ 42.00    | \$ 45.00    |
| Commercial-Industrial User<br>(Watermain over 8 in. diameter) | \$ 55.00    | \$ 57.00    |

The rates are based on an average of prices quoted in bid proposals which have been received by the City Engineer's Office during the period July, 2003 through June, 2004. Calculations of the rates are on file in the City Engineer's Office.

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER SUPPLY SYSTEM FUND  
 EVALUATE WATER SERVICE CHARGES  
 TASK NO. 29**

The City Engineer's Office has evaluated the cost for water services and recommends the following water service charges:

|                                  |      | <u>50 Ft.<br/>R.O.W.</u> | <u>60 Ft.<br/>R.O.W.</u> | <u>66 Ft.<br/>R.O.W.</u> | <u>80 Ft.<br/>R.O.W.</u> | <u>100 Ft.<br/>R.O.W.</u> |
|----------------------------------|------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|
| Cost for 1"<br>Water Service     | 2004 | 1,200                    | 1,350                    | 1,475                    | 1,700                    | 2,050                     |
|                                  | 2005 | 1,290                    | 1,450                    | 1,580                    | 1,850                    | 2,200                     |
| Cost for 1-1/2"<br>Water Service | 2004 | 1,675                    | 1,875                    | 2,000                    | 2,300                    | 2,700                     |
|                                  | 2005 | 1,800                    | 2,020                    | 2,150                    | 2,450                    | 2,900                     |
| Cost for 2"<br>Water Service     | 2004 | 1,650                    | 1,850                    | 1,950                    | 2,200                    | 2,600                     |
|                                  | 2005 | 1,930                    | 2,150                    | 2,300                    | 2,600                    | 3,050                     |

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# MEMORANDUM

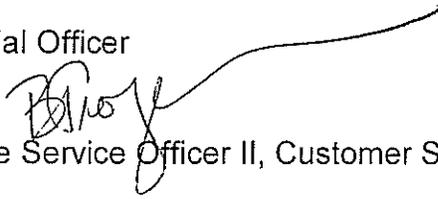
CITY OF GRAND RAPIDS

**RECEIVED**

OCT 28 2004

**DATE:** October 28, 2004

**TO:** Mike Wolski  
Utility Financial Officer

**FROM:** Beth Troyer   
Administrative Service Officer II, Customer Service

**SUBJECT:** 2004 WATER RATE STUDY- TASK #30

Miscellaneous rates and charges contained within the Water System Rules and Regulations have been reviewed with staff.

Based on that review, we recommend the fire protection charges, hydrant use permits, meter installation fees, tapping permits, meter reading, monthly payment option, security deposit, miscellaneous permits and penalties remain as they are in the Rules and Regulations.

The attached report summarizes those charges and the City's current returned check charge of \$25.00, which was verified by City Treasurer staff this date.

BT

Attachment

WRS\ wtask30 2004

# FEES AND CHARGES

## *FIRE PROTECTION CHARGES*

| <u>Pipe Size</u> | <u>Monthly</u> | <u>Quarterly</u> |
|------------------|----------------|------------------|
| 6"               | \$10.00        | \$30.00          |
| 8"               | 16.00          | 48.00            |
| 10"              | 24.00          | 72.00            |
| 12"              | 36.00          | 108.00           |

## *HYDRANT USE PERMITS*

|  | <u>Fee</u> |
|--|------------|
| Deposit (refundable).....  | \$50.00    |
| Minimum charge (one week's use).....   | 25.00      |
| Seasonal permit (daily charges after one week based on connection size)..... | 175.00     |

| <u>Connection Size</u> | <u>Fee</u> |
|------------------------|------------|
| 3/4"                   | \$1.00     |
| 1"                     | 1.50       |
| 1-1/4"                 | 2.00       |
| 1-1/2", 2"             | 3.50       |

## *METER INSTALLATION FEES*

| <u>Meter Size</u> | <u>Fee</u> |
|-------------------|------------|
| 3/4" or smaller   | \$30.00    |
| 1"                | 35.00      |
| 1-1/2"            | 45.00      |
| 2"                | 45.00      |
| 3"                | 80.00      |
| 4"                | 150.00     |
| 6" and larger     | 200.00     |

## *TAPPING PERMITS*

| <u>Connection Size</u> | <u>Fee</u> |
|------------------------|------------|
| 1"                     | \$50.00    |
| 1-1/2"                 | 100.00     |
| 2"                     | 160.00     |
| 3" and larger          | Cost       |

**METER READING**

|                     | <u>Fee</u> |
|---------------------|------------|
| Final reading ..... | \$5.00     |

**WATER AND SEWER RATES**

Chapter 26 and 27, Grand Rapids City Code

**MONTHLY PAYMENT OPTION**

|  | <u>Fee</u> |
|--|------------|
| Service fee each additional month..... | \$1.00     |

**SECURITY DEPOSIT**

|   | <u>Minimum Charge</u> |
|---|-----------------------|
| Three (3) times average quarterly bill..... | \$380.00              |

**MISCELLANEOUS PERMITS**

|   | <u>Fee</u> |
|---|------------|
| Street opening permit.....                      | \$25.00    |
| Water inspection permit (each inspection) ..... | 20.00      |
| Water inspection permit (outside the City)..... | 35.00      |
| Repair in yard permit .....                     | 20.00      |

**PENALTIES**

|   | <u>Fee</u>  |
|---|-------------|
| Late-payment penalty.....   | 10% of net  |
| Processing for non-payment shut-off.....                            | \$30.00     |
| Penalty for failure to keep appointment.....                        | 10.00       |
| Unauthorized operation of valves .....                              | 100.00      |
| (plus double the commodity rate for estimated volume)               |             |
| Unauthorized use of connection pipes for fire protection .....      | 100.00      |
| (plus double the commodity rate for estimated volume)               |             |
| Unauthorized opening of by-pass valve.....                          | 100.00      |
| (plus double the commodity rate for estimated volume)               |             |
| Returned check charge (verified with City Treasurer 10/28/04) ..... | 25.00       |
| Returned check processing fee (water) per account .....             | 5.00        |
| Back billing for service rendered.....                              | Section III |

*CITY OF GRAND RAPIDS, MICHIGAN  
WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
TASK NO. 31*

*THERE IS NO TASK 31 FOR THE WATER PORTION OF THE RATE STUDY*

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 26, 2004

TO: Bill Cole, P.E.  
City Engineer

FROM: Joellen C. Thompson, P.E.  
Assistant Water System Manager 

SUBJECT: **WATER MAIN OVERSIZING RATES  
TASK #32, WATER SEWER RATE STUDY**

Water main over sizing rates are established for this year as noted below:

|                          |                         |
|--------------------------|-------------------------|
| 8 inch to 12 inch .....  | \$10.55 per lineal foot |
| 12 inch to 16 inch ..... | \$12.88 per lineal foot |
| 8 inch to 16 inch .....  | \$22.40 per lineal foot |

These rates have been determined in accordance with the Water System Rules and Regulations, and are approved for use from January 1, 2005 through December 31, 2005. Background information and calculations to establish these rates are on file in the Water Engineering, Distribution and Collection Office.

These costs will be reviewed and adjusted again next year. If you have any questions regarding this matter, please call me at extension 4238 (456-4238).

JCT/df

Cc: Donald R. Spencer  
Jeff McCaul  
Mike Wolski  
Bill DeYoung

**CITY OF GRAND RAPIDS, MICHIGAN  
 WATER RATE STUDY  
 WATER SUPPLY SYSTEM FUND  
 TASK NO. 33**

SERVICE AREA MAPS AND SERVICE AREA LAND MASS SUMMARIES

The following summarizes Utility Services Districts (USD) land mass square miles for UAB partner communities, per maps on file as of November 8, 2004:

| UAB Partners          | Sq. Miles of<br>USD by CC | Percent  |
|-----------------------|---------------------------|----------|
| Grand Rapids          | 45.36                     | 33.328%  |
| Walker                | 25.43                     | 18.685%  |
| Kentwood              | 14.00                     | 10.287%  |
| Cascade               | 23.53                     | 17.289%  |
| Grand Rapids Township | 14.42                     | 10.595%  |
| Tallmadge Township    | 2.84                      | 2.087%   |
| East Grand Rapids     | 3.37                      | 2.476%   |
| Ada                   | 7.15                      | 5.253%   |
| Total                 | 136.10                    | 100.000% |

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# Sewer Rate Study

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
SYSTEM ADDITIONS AND IMPROVEMENTS  
FOR THE YEAR ENDED JUNE 30, 2004  
TASKS NO. 1, 2, & 3**

| COMMUNITY        | LOCAL                |                    | TRUNK             |                 | INTERCEPTOR      |                 | TOTALS               |                    |
|------------------|----------------------|--------------------|-------------------|-----------------|------------------|-----------------|----------------------|--------------------|
|                  | FEET                 | MILES              | FEET              | MILES           | FEET             | MILES           | FEET                 | MILES              |
| Grand Rapids     |                      |                    |                   |                 |                  |                 |                      |                    |
| Construction     | 10,397               | 1.97               | 1,136             | 0.22            | 13               | 0.00            | 11,546               | 2.19               |
| Abandonment      | (2,479)              | (0.47)             | (1,145)           | (0.22)          | 2                | 0.00            | (3,622)              | (0.69)             |
| CSO Construction |                      | 0.00               |                   | 0.00            |                  | 0.00            | 0                    | 0.00               |
| CSO Abandonment  |                      | 0.00               |                   | 0.00            |                  | 0.00            | 0                    | 0.00               |
|                  | <u>7,918</u>         | <u>1.50</u>        | <u>(9)</u>        | <u>0.00</u>     | <u>15</u>        | <u>0.00</u>     | <u>7,924</u>         | <u>1.50</u>        |
| Kentwood         |                      |                    |                   |                 |                  |                 |                      |                    |
| Construction     | 4,144                | 0.78               |                   | 0.00            |                  | 0.00            | 4,144                | 0.78               |
| Abandonment      |                      | 0.00               |                   | 0.00            |                  | 0.00            | 0                    | 0.00               |
|                  | <u>4,144</u>         | <u>0.78</u>        | <u>0</u>          | <u>0.00</u>     | <u>0</u>         | <u>0.00</u>     | <u>4,144</u>         | <u>0.78</u>        |
| Cascade Twp.     |                      |                    |                   |                 |                  |                 |                      |                    |
| Construction     | 4,466                | 0.85               |                   | 0.00            |                  | 0.00            | 4,466                | 0.85               |
| Abandonment      |                      | 0.00               |                   | 0.00            |                  | 0.00            | 0                    | 0.00               |
|                  | <u>4,466</u>         | <u>0.85</u>        | <u>0</u>          | <u>0.00</u>     | <u>0</u>         | <u>0.00</u>     | <u>4,466</u>         | <u>0.85</u>        |
| G.R. Twp.        |                      |                    |                   |                 |                  |                 |                      |                    |
| Construction     | 9,700                | 1.84               |                   | 0.00            |                  | 0.00            | 9,700                | 1.84               |
| Abandonment      |                      | 0.00               |                   | 0.00            |                  | 0.00            | 0                    | 0.00               |
|                  | <u>9,700</u>         | <u>1.84</u>        | <u>0</u>          | <u>0.00</u>     | <u>0</u>         | <u>0.00</u>     | <u>9,700</u>         | <u>1.84</u>        |
| Tallmadge Twp.   |                      |                    |                   |                 |                  |                 |                      |                    |
| Construction     |                      | 0.00               |                   | 0.00            |                  | 0.00            | 0                    | 0.00               |
| Abandonment      |                      | 0.00               |                   | 0.00            |                  | 0.00            | 0                    | 0.00               |
|                  | <u>0</u>             | <u>0.00</u>        | <u>0</u>          | <u>0.00</u>     | <u>0</u>         | <u>0.00</u>     | <u>0</u>             | <u>0.00</u>        |
| Walker           |                      |                    |                   |                 |                  |                 |                      |                    |
| Construction     | 7,969                | 1.51               |                   | 0.00            |                  | 0.00            | 7,969                | 1.51               |
| Abandonment      |                      | 0.00               |                   | 0.00            |                  | 0.00            | 0                    | 0.00               |
|                  | <u>7,969</u>         | <u>1.51</u>        | <u>0</u>          | <u>0.00</u>     | <u>0</u>         | <u>0.00</u>     | <u>7,969</u>         | <u>1.51</u>        |
| Wright Twp       |                      |                    |                   |                 |                  |                 |                      |                    |
| Construction     | 182                  | 0.03               |                   | 0.00            |                  | 0.00            | 182                  | 0.03               |
| Abandonment      |                      | 0.00               |                   | 0.00            |                  | 0.00            | 0                    | 0.00               |
|                  | <u>182</u>           | <u>0.03</u>        | <u>0</u>          | <u>0.00</u>     | <u>0</u>         | <u>0.00</u>     | <u>182</u>           | <u>0.03</u>        |
| <b>*TOTAL*</b>   | <u><u>34,379</u></u> | <u><u>6.51</u></u> | <u><u>(9)</u></u> | <u><u>-</u></u> | <u><u>15</u></u> | <u><u>-</u></u> | <u><u>34,385</u></u> | <u><u>6.51</u></u> |

SEWER COSTS

| COMMUNITY         | COMMUNITY COST             |
|-------------------|----------------------------|
| Grand Rapids      | \$ 494,960                 |
| Kentwood          | 229,833                    |
| Cascade Twp.      | 224,536                    |
| Grand Rapids Twp. | 620,401                    |
| Tallmadge Twp.    |                            |
| Walker            | 426,155                    |
| Wright Twp.       |                            |
| <b>*TOTAL*</b>    | <u><u>\$ 1,995,885</u></u> |



CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
OPERATING EXPENSE ALLOCATION BY GOVERNMENTAL UNIT - TASK #4, PART 2  
FISCAL YEAR ENDED JUNE 30, 2004

| COST CENTER                | EXPENSE BY COST CENTER | INTEGRATED SYSTEM | RETAIL     |                |                  |                  |             |                    | WHOLESALE       |                 |              |              |                 |               |
|----------------------------|------------------------|-------------------|------------|----------------|------------------|------------------|-------------|--------------------|-----------------|-----------------|--------------|--------------|-----------------|---------------|
|                            |                        |                   | CITY OF GR | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP | TALLMADGE TOWNSHIP | WRIGHT TOWNSHIP | CITY OF EAST GR | N. KENT AREA | ADA TOWNSHIP | GAINES TOWNSHIP | MEIJER-ALGOMA |
| WASTEWATER TREATMENT       | \$ 10,651,086          | \$ 10,651,086     |            |                |                  |                  |             |                    |                 |                 |              |              |                 |               |
| LIFT STATIONS:             |                        |                   |            |                |                  |                  |             |                    |                 |                 |              |              |                 |               |
| A. INTERCEPTOR             | 182,378                |                   |            |                |                  |                  |             |                    |                 |                 |              |              |                 |               |
| B. TRUNK                   | 66,945                 |                   | 46,178     |                |                  |                  | 23,297      |                    |                 |                 |              |              |                 |               |
| C. LOCAL COLLECTOR         | 422,898                |                   | 89,584     |                |                  |                  | 76,359      | 151,499            | 14,706          |                 | 10,157       |              | 15,381          |               |
| SEWER LINES:               |                        |                   |            |                |                  |                  |             |                    |                 |                 |              |              |                 |               |
| A. INTERCEPTOR             | 187,077                |                   | 15,524     |                | 32,465           |                  | 1,686       |                    |                 |                 |              |              |                 |               |
| B. TRUNK                   | 438,275                |                   | 123,221    |                | 108,359          |                  | 37,345      | 22,089             | 9,804           |                 | 530          |              |                 |               |
| C. LOCAL COLLECTOR         | 3,235,081              |                   | 395,068    |                | 295,848          |                  | 176,927     | 233,120            | 22,086          |                 | 19,960       |              |                 |               |
| BULK METERING STATIONS     | 18,551                 |                   |            |                | 2,464            |                  |             |                    |                 |                 |              |              |                 |               |
| CUSTOMER ACCOUNTING        | 1,930,765              |                   | 138,552    |                | 105,941          |                  | 39,349      | 82,984             | 2,549           |                 | 5,561        |              | 2,155           | 4,705         |
| INDUSTRIAL PRETREATMENT    | 518,798                |                   |            |                |                  |                  |             |                    |                 |                 |              |              |                 |               |
| SUBTOTAL OPERATING EXPENSE | 17,721,329             | 11,169,884        |            | 808,127        | 545,077          |                  | 354,953     | 489,692            | 49,155          |                 | 36,208       |              | 17,536          | 4,705         |
| ADMINISTRATIVE EXPENSE     | 1,977,216              | 1,005,974         |            | 125,326        | 92,065           |                  | 53,228      | 69,233             | 7,565           |                 | 5,279        |              | 1,581           | 424           |
| TOTAL                      | \$ 19,698,545          | \$ 12,175,858     |            | \$ 933,453     | \$ 637,142       |                  | \$ 408,191  | \$ 558,925         | \$ 56,720       |                 | \$ 41,487    |              | \$ 19,117       | \$ 5,129      |

METHOD OF DISTRIBUTION

| WASTEWATER TREATMENT         | NO. OF STATIONS (1) | (14)      | (6)      | (1)      | (11)     | (16)     | (2)    | (1)    | (1)    | (3)    | (2)    | (1)    | (1)    |
|------------------------------|---------------------|-----------|----------|----------|----------|----------|--------|--------|--------|--------|--------|--------|--------|
| A. TREATMENT PLANT           | 100.000%            |           |          |          |          |          |        |        |        |        |        |        |        |
| B. LIFT & METER STATIONS (1) | 100.000%            |           |          |          |          |          |        |        |        |        |        |        |        |
| SEWER LINES:                 |                     |           |          |          |          |          |        |        |        |        |        |        |        |
| TOTAL MILES:                 | 870.34              |           |          |          |          |          |        |        |        |        |        |        |        |
| A. INTERCEPTOR MILES         | 42.18               | 73.447%   | 8.298%   | 17.354%  | 0.901%   | 0.000%   | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% |
| B. TRUNK MILES               | 98.81               | 30.98     | 3.50     | 7.32     | 0.38     |          |        |        |        |        |        |        |        |
| C. LOCAL COLLECTOR MILES     | 729.35              | 31.242%   | 28.115%  | 24.724%  | 8.521%   | 5.040%   | 2.237% | 0.121% | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% |
| CUSTOMER ACCTG (2)           | 72,134.00           | 80.869%   | 7.176%   | 5.487%   | 2.038%   | 4.298%   | 0.132% | 0.288% | 0.000% | 0.000% | 0.000% | 0.000% | 0.000% |
| INDUSTRIAL PRETREATMENT      |                     | 58,127.00 | 5,176.00 | 3,958.00 | 1,470.00 | 3,100.00 | 95.00  | 208.00 |        |        |        |        |        |
| ADMINISTRATIVE EXPENSE (3)   |                     | 31.090%   | 6.339%   | 4.656%   | 2.692%   | 3.502%   | 0.383% | 0.267% | 0.010% | 0.032% | 0.080% | 0.002% | 0.000% |

NOTES:  
(1) DIRECT COSTS PER SCHEDULE  
(2) ALLOCATION BASED ON NUMBER OF METERS, INCLUSIVE OF USERS FOR WRIGHT TWP.  
(3) ALLOCATED ON DIRECT OPERATING EXPENSE, ADJUSTED FOR ANY COST ASSIGNABLE EXCLUSIVELY TO GR OR RETAIL COMMUNITIES, IF APPLICABLE.

CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ADJUSTED OPERATING EXPENSE ALLOCATION BY COST CENTER - TASK #5, PART 1  
FISCAL YEAR ENDED JUNE 30, 2004

| ACTIVITY CODE | ACTIVITY                           | ADJUSTED EXPENSE BY ACTIVITY | WASTEWATER TREATMENT PLANT |            |                 | WASTEWATER LIFT STATIONS |            |                 | SEWER LINES  |       |                 | BULK METERING STATIONS | CUSTOMER ACCOUNTING | INDUSTRIAL PRETREAT. | ADMIN. EXPENSE |
|---------------|------------------------------------|------------------------------|----------------------------|------------|-----------------|--------------------------|------------|-----------------|--------------|-------|-----------------|------------------------|---------------------|----------------------|----------------|
|               |                                    |                              | INTERCEPTOR                | TRUNK      | LOCAL COLLECTOR | INTERCEPTOR              | TRUNK      | LOCAL COLLECTOR | INTERCEPTOR  | TRUNK | LOCAL COLLECTOR |                        |                     |                      |                |
| 4423          | WASTEWATER TREATMENT (LESS 442305) | \$ 11,321,925                | \$ 10,567,637              | \$ 180,949 | \$ 135,350      | \$ 419,583               |            |                 |              |       |                 | \$ 18,406              |                     |                      |                |
| 4425          | SEWER MAINTENANCE                  | 4,016,565                    |                            |            |                 |                          | 194,643    | 455,001         | 3,365,921    |       |                 |                        |                     |                      |                |
| 4413          | CUSTOMER SERVICE                   | 2,010,931                    |                            |            |                 |                          |            |                 |              |       | 2,010,931       |                        |                     |                      |                |
| 442305        | INDUSTRIAL PRETREATMENT            | 551,227                      |                            |            |                 |                          |            |                 |              |       |                 | 551,227                |                     |                      |                |
|               | SUBTOTAL OPERATING EXPENSE         | 17,900,648                   | 10,567,637                 | 180,949    | 135,350         | 419,583                  | 194,643    | 455,001         | 3,365,921    |       | 2,010,931       | 18,406                 | 551,227             |                      |                |
| 4410          | ADMINISTRATION                     | 2,021,246                    |                            |            |                 |                          |            |                 |              |       |                 |                        |                     |                      | 2,021,246      |
|               | TOTAL                              | \$ 19,921,894                | \$ 10,567,637              | \$ 180,949 | \$ 135,350      | \$ 419,583               | \$ 194,643 | \$ 455,001      | \$ 3,365,921 |       | \$ 2,010,931    | \$ 18,406              | \$ 551,227          |                      | \$ 2,021,246   |

METHOD OF DISTRIBUTION

|        |                          |          |     |     |      |     |  |  |  |  |  |  |  |  |  |          |
|--------|--------------------------|----------|-----|-----|------|-----|--|--|--|--|--|--|--|--|--|----------|
| 4423   | WASTEWATER TREATMENT     | 100.000% |     |     |      |     |  |  |  |  |  |  |  |  |  |          |
|        | A. TREATMENT PLANT       | 93.338%  |     |     |      |     |  |  |  |  |  |  |  |  |  |          |
|        | B. LIFT & METER STATIONS | 6.662%   | (2) | (8) | (41) | (7) |  |  |  |  |  |  |  |  |  |          |
|        | NO. OF STATIONS (58)     |          |     |     |      |     |  |  |  |  |  |  |  |  |  |          |
| 4425   | SEWER MAINTENANCE        | 100.000% |     |     |      |     |  |  |  |  |  |  |  |  |  |          |
|        | TOTAL MILES              | 870.34   |     |     |      |     |  |  |  |  |  |  |  |  |  |          |
|        | A. INTERCEPTOR           | 4.846%   |     |     |      |     |  |  |  |  |  |  |  |  |  |          |
|        | MILES                    | 42.18    |     |     |      |     |  |  |  |  |  |  |  |  |  |          |
|        | B. TRUNK LINES           | 11.353%  |     |     |      |     |  |  |  |  |  |  |  |  |  |          |
|        | MILES                    | 98.81    |     |     |      |     |  |  |  |  |  |  |  |  |  |          |
|        | C. LOCAL COLLECTOR       | 83.801%  |     |     |      |     |  |  |  |  |  |  |  |  |  |          |
|        | MILES                    | 729.35   |     |     |      |     |  |  |  |  |  |  |  |  |  |          |
| 4413   | CUSTOMER SERVICE         | 100.000% |     |     |      |     |  |  |  |  |  |  |  |  |  |          |
| 442305 | INDUSTRIAL PRETREATMENT  | 100.000% |     |     |      |     |  |  |  |  |  |  |  |  |  |          |
| 4410   | ADMINISTRATION           | 100.000% |     |     |      |     |  |  |  |  |  |  |  |  |  |          |
|        |                          |          |     |     |      |     |  |  |  |  |  |  |  |  |  | 100.000% |

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ADJUSTED OPERATING EXPENSE ALLOCATION BY GOVERNMENTAL UNIT - TASK #5, PART 2  
FISCAL YEAR ENDED JUNE 30, 2004**

| COST CENTER                | ADJUSTED EXPENSE BY COST CENTER | INTEGRATED SYSTEM | RETAIL       |                |                  |                  |                    | WHOLESALE       |                  |              |              |                 |               |
|----------------------------|---------------------------------|-------------------|--------------|----------------|------------------|------------------|--------------------|-----------------|------------------|--------------|--------------|-----------------|---------------|
|                            |                                 |                   | CITY OF GR.  | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | TALLMADGE TOWNSHIP | WRIGHT TOWNSHIP | CITY OF EAST GR. | N. KENT AREA | ADA TOWNSHIP | GAINES TOWNSHIP | MEIJER-ALGOMA |
| WASTEWATER TREATMENT       | \$ 10,567,637                   | \$ 10,567,637     |              |                |                  |                  |                    |                 |                  |              |              |                 |               |
| LIFT STATIONS:             |                                 |                   |              |                |                  |                  |                    |                 |                  |              |              |                 |               |
| A. INTERCEPTOR             | 180,949                         |                   |              |                |                  |                  |                    |                 |                  |              |              |                 |               |
| B. TRUNK                   | 135,350                         |                   | 45,616       |                |                  |                  | 23,114             |                 |                  |              |              |                 |               |
| C. LOCAL COLLECTOR         | 419,583                         |                   | 88,882       |                |                  |                  | 75,760             | 150,312         |                  | 14,591       |              | 15,260          |               |
| SEWER LINES:               |                                 |                   |              |                |                  |                  |                    |                 |                  |              |              |                 |               |
| A. INTERCEPTOR             | 194,643                         |                   | 16,151       |                | 33,778           |                  | 1,754              |                 |                  |              |              |                 |               |
| B. TRUNK                   | 456,001                         |                   | 128,205      |                | 112,742          |                  | 38,856             | 22,982          | 10,201           | 562          |              |                 |               |
| C. LOCAL COLLECTOR         | 3,365,921                       |                   | 411,046      |                | 307,813          |                  | 184,082            | 242,548         | 22,989           | 20,768       |              |                 |               |
| BULK METAL STATIONS        | 18,406                          |                   |              |                | 2,445            |                  |                    |                 |                  |              | 2,182        |                 |               |
| CUSTOMER ACCOUNTING        | 2,010,931                       |                   | 144,304      |                | 110,340          |                  | 40,983             | 86,430          | 2,654            |              | 6,973        | 2,138           | 4,668         |
| INDUSTRIAL PRETREATMENT    | 551,227                         | 551,227           |              |                |                  |                  |                    |                 |                  |              |              |                 |               |
| SUBTOTAL OPERATING EXPENSE | 17,900,648                      | 11,118,864        | 834,404      | 567,118        | 354,549          | 502,272          | 50,435             | 37,188          | 2,182            | 6,973        | 17,398       | 4,668           |               |
| ADMINISTRATIVE EXPENSE     | 2,021,245                       | 1,019,683         | 635,779      | 129,994        | 94,935           | 54,660           | 71,149             | 7,759           | 200              | 639          | 1,585        | 428             |               |
| TOTAL                      | \$ 19,921,894                   | \$ 12,138,547     | \$ 5,030,376 | \$ 963,398     | \$ 682,053       | \$ 419,209       | \$ 573,421         | \$ 58,194       | \$ 2,382         | \$ 7,612     | \$ 18,983    | \$ 5,096        | \$ -          |

**METHOD OF DISTRIBUTION**

| WASTEWATER TREATMENT         | ADJUSTED EXPENSE BY COST CENTER | INTEGRATED SYSTEM | CITY OF GR. | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | TALLMADGE TOWNSHIP | WRIGHT TOWNSHIP | CITY OF EAST GR. | N. KENT AREA | ADA TOWNSHIP | GAINES TOWNSHIP | MEIJER-ALGOMA |
|------------------------------|---------------------------------|-------------------|-------------|----------------|------------------|------------------|--------------------|-----------------|------------------|--------------|--------------|-----------------|---------------|
| A. TREATMENT PLANT           | 100.000%                        | 100.000%          |             |                |                  |                  |                    |                 |                  |              |              |                 |               |
| B. LIFT & METER STATIONS (1) | 100.000%                        |                   |             |                |                  |                  |                    |                 |                  |              |              |                 |               |
| NO. OF STATIONS (58)         |                                 |                   | (14)        | (6)            | (1)              | (11)             | (16)               | (2)             | (1)              | (3)          | (2)          | (1)             |               |
| SEWER LINES:                 |                                 |                   |             |                |                  |                  |                    |                 |                  |              |              |                 |               |
| TOTAL MILES:                 | 870.34                          |                   |             |                |                  |                  |                    |                 |                  |              |              |                 |               |
| A. INTERCEPTOR               | 100.000%                        |                   | 73.447%     | 8.298%         | 17.354%          | 0.901%           | 0.000%             | 0.000%          | 0.000%           | 0.000%       | 0.000%       | 0.000%          | 0.000%        |
| MILES                        | 42.18                           |                   | 30.98       | 3.50           | 7.32             | 0.38             |                    |                 |                  |              |              |                 |               |
| B. TRUNK LINES               | 100.000%                        |                   | 31.242%     | 28.115%        | 24.724%          | 8.521%           | 5.040%             | 2.237%          | 0.000%           | 0.000%       | 0.000%       | 0.000%          | 0.000%        |
| MILES                        | 98.81                           |                   | 30.87       | 27.78          | 24.43            | 8.42             | 4.98               | 2.21            | 0.12             | 0.12         | 0.12         | 0.12            | 0.12          |
| C. LOCAL COLLECTOR           | 100.000%                        |                   | 64.668%     | 12.212%        | 9.145%           | 5.469%           | 7.206%             | 0.683%          | 0.000%           | 0.000%       | 0.000%       | 0.000%          | 0.000%        |
| MILES                        | 729.35                          |                   | 471.65      | 89.07          | 66.70            | 39.89            | 52.56              | 4.88            | 4.50             |              |              |                 |               |
| CUSTOMER ACCTG (2)           | 100.000%                        |                   | 80.581%     | 7.176%         | 5.487%           | 2.038%           | 4.298%             | 0.132%          | 0.288%           | 0.288%       | 0.288%       | 0.288%          | 0.288%        |
| NO. OF METERS                | 72,134.00                       |                   | 58,127.00   | 5,176.00       | 3,958.00         | 1,470.00         | 3,100.00           | 95.00           | 208.00           | 208.00       | 208.00       | 208.00          | 208.00        |
| INDUSTRIAL PRETREATMENT      | 100.000%                        | 100.000%          |             |                |                  |                  |                    |                 |                  |              |              |                 |               |
| ADMINISTRATIVE EXPENSE (3)   | 100.000%                        |                   | 31.455%     | 6.382%         | 4.697%           | 2.704%           | 3.520%             | 0.384%          | 0.010%           | 0.032%       | 0.079%       | 0.021%          | 0.000%        |

NOTES:  
 (1) ADJUSTED DIRECT COSTS PER SCHEDULE  
 (2) ALLOCATION BASED ON NUMBER OF METERS, INCLUSIVE OF USERS FOR WRIGHT TWP  
 (3) ALLOCATED ON DIRECT OPERATING EXPENSE, ADJUSTED FOR ANY COST ASSIGNABLE EXCLUSIVELY TO GR OR RETAIL COMMUNITIES, IF APPLICABLE.

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ADJUSTED ACTUAL EXPENSE  
YEAR ENDED JUNE 30, 2004  
RATE STUDY- TASKS NO. 4 & 5**

ORGANIZATIONAL UNIT: 4410- ADMINISTRATION

| NO. | EXPENDITURE SUB-OBJECT<br>DESCRIPTION | OPERATING<br>EXPENSES  | ADJUSTED<br>COST<br>FACTORS | ADJUSTED<br>CURRENT<br>ANNUAL<br>EXPENSES |
|-----|---------------------------------------|------------------------|-----------------------------|---|
| 706 | PERMANENT EMPLOYEES                   | \$ 95,265.13           | \$ 2,857.95                 | \$ 98,123.08                              |
| 709 | TIME & ONE-HALF                       | 92.13                  | 2.76                        | 94.89                                     |
| 715 | EMPLOYERS SOCIAL SECURITY             | 6,824.61               | 204.74                      | 7,029.35                                  |
| 717 | SPECIAL PENSION BENEFITS              | 2,530.91               | -                           | 2,530.91                                  |
| 719 | HOSPITALIZATION INSURANCE             | 15,495.18              | 1,341.88                    | 16,837.06                                 |
| 721 | LONGEVITY PAY                         | 692.52                 | -                           | 692.52                                    |
| 722 | RETIREMENT FUND CONTRIBUTION          | 9,171.91               | 3,474.32                    | 12,646.23                                 |
|     | TOTAL PERSONAL SERVICES               | <u>130,072.39</u>      | <u>7,881.65</u>             | <u>137,954.04</u>                         |
| 728 | SUPPLIES                              | 328.35                 | -                           | 328.35                                    |
| 730 | POSTAGE                               | 23.96                  | -                           | 23.96                                     |
|     | TOTAL SUPPLIES                        | <u>352.31</u>          | <u>-</u>                    | <u>352.31</u>                             |
| 814 | COMPUTER SERVICES                     | 711,251.04             | -                           | 711,251.04                                |
| 818 | CONTRACTUAL SERVICES                  | 180,658.90             | -                           | 180,658.90                                |
| 872 | PROFESSIONAL DEVELOPMENT              | 1,251.33               | -                           | 1,251.33                                  |
| 873 | OTHER TRAVEL AND TRAINING             | 627.91                 | -                           | 627.91                                    |
| 874 | LOCAL BUSINESS EXPENSE                | 1,302.19               | -                           | 1,302.19                                  |
| 875 | MEMBERSHIPS                           | 1,853.39               | -                           | 1,853.39                                  |
| 876 | PUBLICATIONS AND SUBSCRIPTIONS        | 1,281.75               | -                           | 1,281.75                                  |
| 880 | COMMUNITY PROMOTION                   | 55.00                  | -                           | 55.00                                     |
| 919 | INSURANCE PREMIUMS                    | 100,580.00             | -                           | 100,580.00                                |
| 928 | TELEPHONE                             | 844.09                 | -                           | 844.09                                    |
| 942 | BUILDINGS RENTALS OR LEASE            | 12,871.55              | -                           | 12,871.55                                 |
| 947 | VEHICLE RENTAL/CAR MILEAGE            | 3,228.50               | -                           | 3,228.50                                  |
|     | TOTAL OTHER SERVICES & CHARGES        | <u>1,015,805.65</u>    | <u>-</u>                    | <u>1,015,805.65</u>                       |
| 982 | EQUIPMENT                             | 1,233.01               | -                           | 1,233.01                                  |
|     | TOTAL CAPITAL                         | <u>1,233.01</u>        | <u>-</u>                    | <u>1,233.01</u>                           |
| 999 | OPERATING TRANSFERS OUT               | 829,753.00             | 36,148.00                   | 865,901.00                                |
|     | TOTAL TRANSFERS/FEES                  | <u>829,753.00</u>      | <u>36,148.00</u>            | <u>865,901.00</u>                         |
|     | ORGANIZATIONAL UNIT TOTAL             | <u>\$ 1,977,216.36</u> | <u>\$ 44,029.65</u>         | <u>\$ 2,021,246.01</u>                    |

**CITY OF GRAND RAPIDS, MICHIGAN  
 SEWAGE DISPOSAL SYSTEM FUND  
 ADJUSTED ACTUAL EXPENSE  
 YEAR ENDED JUNE 30, 2004  
 RATE STUDY- TASKS NO. 4 & 5**

ORGANIZATIONAL UNIT: 4413- SDSF- CUST.SERV'S

| NO. | EXPENDITURE SUB-OBJECT<br>DESCRIPTION | OPERATING<br>EXPENSES  | ADJUSTED<br>COST<br>FACTORS | ADJUSTED<br>CURRENT<br>ANNUAL<br>EXPENSES |
|-----|---------------------------------------|------------------------|-----------------------------|---|
| 999 | OPERATING TRANSFERS OUT               | \$ 1,930,765.15        | \$ 80,166.19                | \$ 2,010,931.34                           |
|     | TOTAL TRANSFERS/FEES                  | <u>1,930,765.15</u>    | <u>80,166.19</u>            | <u>2,010,931.34</u>                       |
|     | ORGANIZATIONAL UNIT TOTAL             | <u>\$ 1,930,765.15</u> | <u>\$ 80,166.19</u>         | <u>\$ 2,010,931.34</u>                    |

**CITY OF GRAND RAPIDS, MICHIGAN**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**ADJUSTED ACTUAL EXPENSE**  
**YEAR ENDED JUNE 30, 2004**  
**RATE STUDY- TASKS NO. 4 & 5**

ORGANIZATIONAL UNIT: 4423- WASTEWATER

| NO. | EXPENDITURE SUB-OBJECT<br>DESCRIPTION | OPERATING<br>EXPENSES   | ADJUSTED<br>COST<br>FACTORS | ADJUSTED<br>CURRENT<br>ANNUAL<br>EXPENSES |
|-----|---------------------------------------|-------------------------|-----------------------------|---|
| 706 | PERMANENT EMPLOYEES                   | \$ 3,126,263.97         | \$ 93,787.92                | \$ 3,220,051.89                           |
| 707 | TEMPORARY EMPLOYEES                   | 12,688.75               | 380.66                      | 13,069.41                                 |
| 708 | SHIFT DIFFERENTIAL                    | 9,431.64                | -                           | 9,431.64                                  |
| 709 | TIME & ONE-HALF                       | 59,828.33               | 1,794.85                    | 61,623.18                                 |
| 710 | ACT.ASSIGNMENT                        | 8,373.35                | 251.20                      | 8,624.55                                  |
| 712 | UNEMPLOYMENT COMPENSATION             | 4,844.00                | -                           | 4,844.00                                  |
| 715 | EMPLOYERS SOCIAL SECURITY             | 247,032.73              | 7,410.98                    | 254,443.71                                |
| 719 | HOSPITALIZATION INSURANCE             | 852,398.46              | 73,817.71                   | 926,216.17                                |
| 721 | LONGEVITY PAY                         | 34,182.19               | -                           | 34,182.19                                 |
| 722 | RETIREMENT FUND CONTRIBUTION          | 383,105.19              | 145,120.25                  | 528,225.44                                |
|     | TOTAL PERSONAL SERVICES               | <u>4,738,148.61</u>     | <u>322,563.57</u>           | <u>5,060,712.18</u>                       |
| 728 | SUPPLIES                              | 1,288,468.03            | -                           | 1,288,468.03                              |
| 768 | CLOTHING/CLEANING ALLOWANCE           | 11,210.43               | -                           | 11,210.43                                 |
|     | TOTAL SUPPLIES                        | <u>1,299,678.46</u>     | <u>-</u>                    | <u>1,299,678.46</u>                       |
| 814 | COMPUTER SERVICES                     | 8,384.52                | -                           | 8,384.52                                  |
| 818 | CONTRACTUAL SERVICES                  | 2,984,659.09            | (411,972.00)                | 2,572,687.09                              |
| 835 | FEES                                  | 31,098.56               | -                           | 31,098.56                                 |
| 872 | PROFESSIONAL DEVELOPMENT              | 825.00                  | -                           | 825.00                                    |
| 873 | OTHER TRAVEL AND TRAINING             | 7,279.18                | -                           | 7,279.18                                  |
| 874 | LOCAL BUSINESS EXPENSE                | 210.74                  | -                           | 210.74                                    |
| 875 | MEMBERSHIPS                           | 5,279.36                | -                           | 5,279.36                                  |
| 876 | PUBLICATIONS AND SUBSCRIPTIONS        | 2,834.84                | -                           | 2,834.84                                  |
| 900 | PRINTING & PUBLISHING                 | 676.78                  | -                           | 676.78                                    |
| 921 | ELECTRICITY                           | 1,345,803.73            | -                           | 1,345,803.73                              |
| 922 | WATER                                 | 48,751.75               | -                           | 48,751.75                                 |
| 923 | GAS                                   | 203,445.95              | -                           | 203,445.95                                |
| 928 | TELEPHONE                             | 120,515.56              | -                           | 120,515.56                                |
| 930 | MAINTENANCE REPAIR                    | 330,333.09              | -                           | 330,333.09                                |
| 943 | EQUIPMENT RENTALS OR LEASE            | 122,614.98              | -                           | 122,614.98                                |
| 947 | VEHICLE RENTAL/CAR MILEAGE            | 4,284.30                | -                           | 4,284.30                                  |
| 959 | REFUSE COLLECTION CHARGES             | 14,603.84               | -                           | 14,603.84                                 |
|     | TOTAL OTHER SERVICES & CHARGES        | <u>5,231,601.27</u>     | <u>(411,972.00)</u>         | <u>4,819,629.27</u>                       |
| 981 | FURNITURE                             | 1,114.00                | -                           | 1,114.00                                  |
| 982 | EQUIPMENT                             | 140,756.71              | -                           | 140,756.71                                |
| 986 | CONSTRUCTION IN PROGRESS              | 34.32                   | -                           | 34.32                                     |
|     | TOTAL CAPITAL                         | <u>141,905.03</u>       | <u>-</u>                    | <u>141,905.03</u>                         |
|     | ORGANIZATIONAL UNIT TOTAL             | <u>\$ 11,411,333.37</u> | <u>\$ (89,408.43)</u>       | <u>\$ 11,321,924.94</u>                   |

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ADJUSTED ACTUAL EXPENSE  
YEAR ENDED JUNE 30, 2004  
RATE STUDY- TASKS NO. 4 & 5**

ORGANIZATIONAL UNIT: 442305- IND. PRETREATMENT

| EXPENDITURE SUB-OBJECT |                                | OPERATING            | ADJUSTED            | ADJUSTED             |
|------------------------|--------------------------------|----------------------|---------------------|----------------------|
| NO.                    | DESCRIPTION                    | EXPENSES             | COST                | CURRENT              |
|                        |                                |                      | FACTORS             | ANNUAL               |
|                        |                                |                      |                     | EXPENSES             |
| 706                    | PERMANENT EMPLOYEES            | \$ 334,266.46        | \$ 10,027.99        | \$ 344,294.45        |
| 708                    | SHIFT DIFFERENTIAL             | 7.93                 | -                   | 7.93                 |
| 709                    | TIME & ONE-HALF                | 2,767.68             | 83.03               | 2,850.71             |
| 710                    | ACT.ASSIGNMENT                 | 100.41               | 3.01                | 103.42               |
| 715                    | EMPLOYERS SOCIAL SECURITY      | 26,317.87            | 789.54              | 27,107.41            |
| 719                    | HOSPITALIZATION INSURANCE      | 69,152.43            | 5,988.60            | 75,141.03            |
| 721                    | LONGEVITY PAY                  | 4,236.66             | -                   | 4,236.66             |
| 722                    | RETIREMENT FUND CONTRIBUTION   | 41,015.67            | 15,536.74           | 56,552.41            |
|                        | TOTAL PERSONAL SERVICES        | <u>477,865.11</u>    | <u>32,428.91</u>    | <u>510,294.02</u>    |
| 728                    | SUPPLIES                       | 6,637.46             | -                   | 6,637.46             |
| 730                    | POSTAGE                        | 2,306.52             | -                   | 2,306.52             |
| 768                    | CLOTHING/CLEANING ALLOWANCE    | 39.95                | -                   | 39.95                |
|                        | TOTAL SUPPLIES                 | <u>8,983.93</u>      | <u>-</u>            | <u>8,983.93</u>      |
| 810                    | BAD DEBT WRITE-OFFS            | 1,018.04             | -                   | 1,018.04             |
| 818                    | CONTRACTUAL SERVICES           | 16,831.15            | -                   | 16,831.15            |
| 873                    | OTHER TRAVEL AND TRAINING      | 898.00               | -                   | 898.00               |
| 874                    | LOCAL BUSINESS EXPENSE         | 271.80               | -                   | 271.80               |
| 875                    | MEMBERSHIPS                    | 1,152.00             | -                   | 1,152.00             |
| 900                    | PRINTING & PUBLISHING          | 658.80               | -                   | 658.80               |
| 928                    | TELEPHONE                      | 1,760.78             | -                   | 1,760.78             |
| 930                    | MAINTENANCE REPAIR             | 35.00                | -                   | 35.00                |
| 943                    | EQUIPMENT RENTALS OR LEASE     | 9,152.18             | -                   | 9,152.18             |
| 947                    | VEHICLE RENTAL/CAR MILEAGE     | 170.85               | -                   | 170.85               |
|                        | TOTAL OTHER SERVICES & CHARGES | <u>31,948.60</u>     | <u>-</u>            | <u>31,948.60</u>     |
|                        | ORGANIZATIONAL UNIT TOTAL      | <u>\$ 518,797.64</u> | <u>\$ 32,428.91</u> | <u>\$ 551,226.55</u> |

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ADJUSTED ACTUAL EXPENSE  
YEAR ENDED JUNE 30, 2004  
RATE STUDY- TASKS NO. 4 & 5**

ORGANIZATIONAL UNIT: 4425- REPAIR & MAINTENANCE

| NO. | EXPENDITURE SUB-OBJECT<br>DESCRIPTION | OPERATING<br>EXPENSES  | ADJUSTED<br>COST<br>FACTORS | ADJUSTED<br>CURRENT<br>ANNUAL<br>EXPENSES |
|-----|---------------------------------------|------------------------|-----------------------------|---|
| 706 | PERMANENT EMPLOYEES                   | \$ 997,055.52          | \$ 29,911.67                | \$ 1,026,967.19                           |
| 708 | SHIFT DIFFERENTIAL                    | 34.15                  | -                           | 34.15                                     |
| 709 | TIME & ONE-HALF                       | 69,427.88              | 2,082.84                    | 71,510.72                                 |
| 710 | ACT.ASSIGNMENT                        | 2,219.13               | 66.57                       | 2,285.70                                  |
| 714 | REGULAR HOURLY RATE                   | 2,247.99               | 67.44                       | 2,315.43                                  |
| 715 | EMPLOYERS SOCIAL SECURITY             | 75,294.65              | 2,258.84                    | 77,553.49                                 |
| 719 | HOSPITALIZATION INSURANCE             | 360,704.71             | 31,237.03                   | 391,941.74                                |
| 721 | LONGEVITY PAY                         | 9,684.88               | -                           | 9,684.88                                  |
| 722 | RETIREMENT FUND CONTRIBUTION          | 103,812.81             | 39,324.29                   | 143,137.10                                |
|     | TOTAL PERSONAL SERVICES               | <u>1,620,481.72</u>    | <u>104,948.68</u>           | <u>1,725,430.40</u>                       |
| 728 | SUPPLIES                              | 133,553.81             | -                           | 133,553.81                                |
| 768 | CLOTHING/CLEANING ALLOWANCE           | 4,974.11               | -                           | 4,974.11                                  |
|     | TOTAL SUPPLIES                        | <u>138,527.92</u>      | <u>-</u>                    | <u>138,527.92</u>                         |
| 818 | CONTRACTUAL SERVICES                  | 1,312,430.62           | 51,183.00                   | 1,363,613.62                              |
| 873 | OTHER TRAVEL AND TRAINING             | 836.00                 | -                           | 836.00                                    |
| 900 | PRINTING & PUBLISHING                 | 14.63                  | -                           | 14.63                                     |
| 912 | CLAIMS                                | 220,439.22             | -                           | 220,439.22                                |
| 921 | ELECTRICITY                           | 4,495.15               | -                           | 4,495.15                                  |
| 922 | WATER                                 | 1,711.34               | -                           | 1,711.34                                  |
| 923 | GAS                                   | 9,832.66               | -                           | 9,832.66                                  |
| 928 | TELEPHONE                             | 7,940.27               | -                           | 7,940.27                                  |
| 930 | MAINTENANCE REPAIR                    | 13,770.30              | -                           | 13,770.30                                 |
| 943 | EQUIPMENT RENTALS OR LEASE            | 458,019.48             | -                           | 458,019.48                                |
| 945 | LAND RENTAL OR LEASE                  | 2,330.27               | -                           | 2,330.27                                  |
| 947 | VEHICLE RENTAL/CAR MILEAGE            | 1,043.00               | -                           | 1,043.00                                  |
| 959 | REFUSE COLLECTION CHARGES             | 29,641.84              | -                           | 29,641.84                                 |
|     | TOTAL OTHER SERVICES & CHARGES        | <u>2,062,504.78</u>    | <u>51,183.00</u>            | <u>2,113,687.78</u>                       |
| 981 | FURNITURE                             | 549.00                 | -                           | 549.00                                    |
| 982 | EQUIPMENT                             | 38,369.74              | -                           | 38,369.74                                 |
|     | TOTAL CAPITAL                         | <u>38,918.74</u>       | <u>-</u>                    | <u>38,918.74</u>                          |
|     | ORGANIZATIONAL UNIT TOTAL             | <u>\$ 3,860,433.16</u> | <u>\$ 156,131.68</u>        | <u>\$ 4,016,564.84</u>                    |

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# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 20, 2004

TO: Eric R. DeLong  
Deputy City Manager

FROM: Michael Wolski   
Utility Financial Officer

**SUBJECT: FY 2004 OPERATING EXPENSES- SEWAGE PUMPING STATIONS**

The attached schedule allocates the direct cost for operating and maintaining system pumping and metering stations. The operating expense consists of direct labor, utilities, operating and maintenance supplies, repairs and maintenance and vehicle rental.

The overflow regulators are components of the integrated system and subsequently not included herein.

MW

Attachment

*srs\stask4 2004*

CITY OF GRAND RAPIDS, MICHIGAN  
INVENTORY OF SEWAGE PUMPING STATIONS  
FOR THE YEAR ENDED JUNE 30, 2004

| <u>Station</u>           | <u>Physical Location</u> | <u>Type</u> | <u>FY'04 Expenses</u> |
|--------------------------|--------------------------|-------------|-----------------------|
| Market Avenue            | Grand Rapids             | Interceptor | \$ 176,841            |
| Millbank                 | Grand Rapids             | Local       | 4,655                 |
| Eastlake                 | Grand Rapids             | Local       | 9,574                 |
| Eastern                  | Grand Rapids             | Trunk       | 22,029                |
| Middleboro               | Grand Rapids             | Trunk       | 10,366                |
| Oak Hollow               | Grand Rapids Twnsp       | Local       | 10,823                |
| Kingsbury                | Walker                   | Trunk       | 14,294                |
| Bona Vista               | Grand Rapids             | Trunk       | 15,143                |
| Aberdeen                 | Grand Rapids             | Local       | 19,380                |
| O'Brien                  | Walker                   | Trunk       | 22,483                |
| Leonard Heights          | Walker                   | Trunk       | 9,401                 |
| Guild                    | Grand Rapids             | Local       | 8,753                 |
| Orchard Vista            | Cascade Twnsp            | Local       | 4,479                 |
| Brookview                | Grand Rapids             | Trunk       | 19,407                |
| Remembrance Road         | Walker                   | Local       | 71,439                |
| Kraft Avenue             | Cascade Twnsp            | Local       | 6,201                 |
| Thornapple               | Cascade Twnsp            | Trunk       | 23,297                |
| Thornhills               | Cascade Twnsp            | Local       | 8,653                 |
| Greenbrier               | Grand Rapids Twnsp       | Local       | 10,990                |
| Shore Haven              | Grand Rapids Twnsp       | Local       | 9,936                 |
| Ada                      | Ada                      | Local       | 15,381                |
| Robinhood                | Grand Rapids Twnsp       | Local       | 13,681                |
| Lincoln School           | Grand Rapids Twnsp       | Local       | 3,573                 |
| Reeds Lake Blvd.         | Grand Rapids Twnsp       | Local       | 9,908                 |
| 6000 28th Street         | Cascade Twnsp            | Local       | 8,249                 |
| Ada                      | Ada                      | Meter       | 2,155                 |
| East Grand Rapids        | East Grand Rapids        | Meter       | 2,199                 |
| Brandau                  | North Kent               | Meter       | 1,943                 |
| Briggs                   | North Kent               | Meter       | 1,739                 |
| Gaines Township          | Gaines Township          | Meter       | 4,705                 |
| Kentwood                 | Kentwood                 | Meter       | 2,464                 |
| Alpine Township Meter    | Alpine Township          | Meter       | 3,346                 |
| Rickman Avenue           | Grand Rapids             | Local       | 7,345                 |
| Michigan Street          | Grand Rapids             | Local       | 6,817                 |
| Eagle Crest              | Grand Rapids Twnsp       | Local       | 11,750                |
| East Paris               | Grand Rapids Twnsp       | Local       | 16,646                |
| Alpine Estates           | Walker                   | Local       | 11,976                |
| Elmdale                  | Grand Rapids             | Local       | 3,637                 |
| Collindale               | Walker                   | Local       | 6,169                 |
| Saddleback               | Grand Rapids Twnsp       | Local       | 8,711                 |
| Arbor Hills Lift Station | Grand Rapids Twnsp       | Local       | 5,924                 |
| Bird Avenue              | Grand Rapids Twnsp       | Local       | 9,600                 |
| Valentine                | Grand Rapids Twnsp       | Local       | 4,410                 |
| Cascade Springs          | Cascade Twnsp            | Local       | 10,739                |
| Churchill Downs          | Grand Rapids             | Local       | 5,051                 |
| Woodsboro Court          | Grand Rapids Twnsp       | Local       | 5,074                 |
| Meadowood Trails         | Cascade Twnsp            | Local       | 9,306                 |
| Stonebridge              | Grand Rapids Twnsp       | Local       | 4,690                 |
| Burton/Spaulding         | Cascade Twnsp            | Local       | 1,322                 |
| Burton/Cacade            | Cascade Twnsp            | Local       | 15,593                |
| Crahen                   | Grand Rapids Twnsp       | Local       | 17,587                |
| Jonathan Woods           | Cascade Twnsp            | Local       | 5,488                 |
| Watermark                | Cascade Twnsp            | Local       | 6,329                 |
| Mountain Ash             | Tallmadge Twnsp          | Local       | 8,063                 |
| Reeds Hollow             | Grand Rapids Twnsp       | Local       | 8,196                 |
| Front & Wealthy          | Grand Rapids             | Interceptor | 5,537                 |
| 16th Avenue Lift Station | Marne                    | Local       | 10,157                |
| Hayes West Lift Station  | Tallmadge                | Local       | 6,643                 |
|                          |                          |             | \$760,247             |



DATE: October 15, 2004

TO: Mike Wolski  
Financial Analyst

FROM: Gary Mortensen *gm*  
Budget Analyst

SUBJECT: 2004 SEWER RATE STUDY ANNUAL EXPENSE ADJUSTMENTS  
- TASK #5

Attached are adjustments to test period actual operating expenses to be included in Task #5 of the Sewer Rate Study.

GM:gw

Attachment

Mydoc\wsstudy\sewerrate04

MEMORANDUM

*CITY OF GRAND RAPIDS  
SEWER DISPOSAL SYSTEM FUND  
RATE STUDY TASK NO. 5  
NOTES TO ADJUSTED CURRENT ANNUAL EXPENSES  
FOR THE YEAR ENDED JUNE 30, 2004*

*Sub-Object - 704, 705, 706, 707, 709, 710, 713, 714, 718, 723, 724*

The wage increase factor to translate F.Y. 2004 actual costs to estimated calendar 2005 wages will be 3.0%. This wage increase estimate is based on ratified contracts that begin on 1/1/2005 and 1/1/2006.

*Sub-Object - 715*

Increase F.Y. 2004 actual FICA expense by 3.0% to account for the affect of the wage increases.

*Sub-Object - 719*

Increase health insurance actual F.Y. 2004 costs by 8.66% to reflect changes effective in F.Y. 2005.

*Sub-Object - 722*

Increase F.Y. 2004 actual expense by 37.88% to reflect the effect of a general pension contribution rate change from 12.55% to 16.8% and an estimated wage increase of 3.0%.

*Sub-Object - 965*

Administration - Adjust F.Y. 2004 actual cost to reflect adjustments in charges for central services rendered by the Insurance Payment Fund and the General Operating Fund.

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 26, 2004

TO: Eric R. DeLong  
Deputy City Manager

FROM: Michael Wolski   
Utility Financial Officer

SUBJECT: 2004 SEWER RATE STUDY- TASK #5

Known cost increases by which to adjust FY04 operating costs include fund carry-forwards and FY05 BA#11, which re-appropriated lapsed FY04 funds, if any, for projects that were not completed prior to June 30, 2004. They are as follows:

| <u>ACCOUNT</u> | <u>DESCRIPTION</u> | <u>AMOUNT</u> |
|----------------|--------------------|---------------|
| 4423-818       | Earth Tech         | \$9,492       |
| 4425-818       | Black & Veatch     | 108,900       |
| 4425-818       | Earth Tech         | 2,568         |

MW

*srs\stask5 2004*

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# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 27, 2004

TO: Eric R. DeLong  
Deputy City Manager

FROM: Michael Wolski   
Utility Financial Officer

SUBJECT: 2004 SEWER RATE STUDY- TASK #6

The Sewage Disposal System Fund's revenues and volumes by governmental unit for the year ended June 30, 2004, including estimated volume for the Meijer-Algoma Service Area, are disclosed on the following page. In addition, actual volume comparisons for the past five (5) years by governmental unit are included herein.

MW

Attachment

*srs\stask6 2004*

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 6**

DETERMINE SEWAGE VOLUME AND REVENUE BY GOVERNMENTAL ENTITY FOR THE YEAR ENDED JUNE 30, 2004:

| RETAIL:                  | SALES REVENUE           |                      | VOLUME BILLED         |
|--------------------------|-------------------------|----------------------|-----------------------|
|                          | METERED SALES           | SURCHARGES           | (GALLONS)             |
| CITY OF GRAND RAPIDS (1) | \$ 20,984,674.44        | \$ 218,330.62        | 6,254,185,080         |
| CITY OF WALKER           | 2,096,793.62            | 35,268.61            | 719,570,016           |
| CITY OF KENTWOOD         | 2,006,095.87            | 111,967.87           | 1,019,951,856         |
| CASCADE TOWNSHIP         | 1,035,268.79            | 14,316.66            | 329,210,508           |
| GRAND RAPIDS TOWNSHIP    | 1,168,332.70            |                      | 292,933,256           |
| TALLMADGE TOWNSHIP       | 62,502.59               |                      | 9,403,856             |
| WRIGHT TOWNSHIP (2)      | 84,155.38               | 7,708.26             | 16,810,617            |
| SUB-TOTAL RETAIL (3)     | <u>\$ 27,437,823.39</u> | <u>\$ 387,592.02</u> | <u>8,642,065,189</u>  |
| WHOLESALE:               |                         |                      |                       |
| CITY OF E. GRAND RAPIDS  | \$ 467,309.57           |                      | 462,731,900           |
| NORTH KENT AREA          | 1,686,283.14            |                      | 1,461,954,000         |
| ADA TOWNSHIP             | 375,995.02              | 173,544.83           | 305,816,352           |
| GAINES TOWNSHIP          | 113,434.55              |                      | 104,762,100           |
| MEIJER - ALGOMA (4)      | -                       |                      | 5,040,650             |
| SUB-TOTAL WHOLESALE      | <u>\$ 2,643,022.28</u>  | <u>\$ 173,544.83</u> | <u>2,340,305,002</u>  |
| TOTAL                    | <u>\$ 30,080,845.67</u> | <u>\$ 561,136.85</u> | <u>10,982,370,191</u> |

REVENUE CLASSIFICATION:

|   |                         |
|---|-------------------------|
| 4410 - 607054 ADA SEWAGE SERVICE CHARGE             | \$ 375,995.02           |
| 4410 - 607055 RETAIL SEWAGE SERVICE CHARGE          | 27,352,769.73           |
| 4410 - 607056 WYOMING SEWAGE SERVICE CHARGE         | 85,053.66               |
| 4410 - 607058 NORTH KENT SEWAGE SERVICE CHARGE      | 1,686,283.14            |
| 4410 - 607060 E. GRAND RAPIDS SEWAGE SERVICE CHARGE | 467,309.57              |
| 4410 - 607062 GAINES TWP SEWAGE SERVICE CHARGE      | 113,434.55              |
| 4423 - 607074 SEWAGE SURCHARGE                      | 561,136.85              |
|   | <u>\$ 30,641,982.52</u> |

- (1) THE VOLUME & DOLLAR AMOUNT FOR THE CITY OF WYOMING ARE INCLUDED IN THE GRAND RAPIDS TOTALS.
- (2) CHARGES TO USERS IN WRIGHT TOWNSHIP ARE BASED ON A REU (RESIDENTIAL EQUIVALENT UNIT) CHARGE, IN LIEU OF COMMODITY & MONTHLY SERVICE CHARGES. CONSEQUENTLY, THERE IS NO ACTUAL BILLED VOLUME. THE VOLUME REPORTED HERE IS THE "BEST ESTIMATE" GIVEN THE ACTUAL AVERAGE HAYES WEST LS PUMPING CHARACTERISTICS & CONTRACT PROVISIONS REGARDING PLANT FLOW FOR RETAIL SERVICE AREAS.
- (3) A REVENUE ACCRUAL OF (\$276,410), (87,020,649) GALLONS, HAS BEEN PRORATED TO ALL RETAIL CUSTOMER COMMUNITIES HAVING COMMODITY RATES TO ACCRUE BILLINGS FROM THE LAST READING DATE THROUGH JUNE 30, 2004.
- (4) ESTIMATED FLOW.

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
2004 RATE STUDY TASK NO. 6**

VOLUME COMPARISONS FOR THE PAST FIVE (5) YEARS BY GOVERNMENTAL UNIT  
VOLUME = 1,000 GALLONS

| MUNICIPALITY        | FY00       |          | FY01       |          | FY02       |          | FY03       |          | FY04       |          | FY00-FY04<br>% CHANGE |
|---------------------|------------|----------|------------|----------|------------|----------|------------|----------|------------|----------|-----------------------|
|                     | VOL BILLED | % CHANGE |                       |
| GRAND RAPIDS        | 7,231,249  | -3.73%   | 6,961,798  | -4.05%   | 6,680,002  | -0.10%   | 6,673,066  | -0.10%   | 6,254,185  | -6.28%   | -13.51%               |
| WALKER              | 713,848    | -2.30%   | 697,449    | 1.53%    | 708,130    | 2.54%    | 726,101    | 2.54%    | 719,570    | -0.90%   | 0.80%                 |
| KENTWOOD            | 1,138,460  | -4.41%   | 1,088,280  | -4.64%   | 1,037,751  | 2.87%    | 1,067,563  | 2.87%    | 1,019,952  | -4.46%   | -10.41%               |
| CASCADE             | 383,072    | -9.58%   | 346,386    | -3.14%   | 335,493    | 3.57%    | 347,477    | 3.57%    | 329,210    | -5.26%   | -14.06%               |
| GRAND RAPIDS TWP    | 289,216    | -1.34%   | 285,329    | -4.16%   | 273,470    | 9.78%    | 300,216    | 9.78%    | 292,933    | -2.43%   | 1.29%                 |
| TALLMADGE           | 6,475      | 32.68%   | 8,591      | 11.52%   | 9,581      | 12.90%   | 10,817     | 12.90%   | 9,404      | -13.06%  | 45.24%                |
| WRIGHT TWP *        |            |          |            |          |            |          | 17,666     | N/A      | 16,811     | -4.84%   | N/A                   |
| EAST GRAND RAPIDS** | 512,000    | -9.35%   | 464,152    | 4.72%    | 486,080    | -10.18%  | 436,600    | -10.18%  | 462,732    | 5.99%    | -9.62%                |
| NORTH KENT AREA     | 1,776,686  | -10.51%  | 1,589,927  | 10.06%   | 1,749,824  | -15.26%  | 1,482,714  | -15.26%  | 1,461,954  | -1.40%   | -17.71%               |
| ADA TWP             | 273,284    | 1.04%    | 276,120    | 0.45%    | 277,370    | -4.40%   | 265,176    | -4.40%   | 305,816    | 15.33%   | 11.90%                |
| GAINES TWP          | 80,670     | 9.55%    | 88,375     | -4.51%   | 84,389     | 19.56%   | 100,896    | 19.56%   | 104,762    | 3.83%    | 29.86%                |
| MEIJER - ALGOMA *   |            |          |            |          |            |          |            |          | 5,041      | N/A      | N/A                   |
| TOTAL               | 12,404,960 | -4.83%   | 11,806,407 | -1.39%   | 11,642,090 | -1.84%   | 11,428,292 | -1.84%   | 10,982,370 | -3.90%   | -11.47%               |

\* ESTIMATED FLOW.

\*\* FY02 BILLED VOLUME REFLECTS CREDIT REFERENCED IN TASK 9 OF 2002 RATE STUDY.

GRAND RAPIDS VOLUME COMPARED TO  
CUSTOMER COMMUNITIES

| VOLUME = 1,000 GALLONS | FY01       |            | FY02       |            | FY03       |            | FY04       |            |
|------------------------|------------|------------|------------|------------|------------|------------|------------|------------|
|                        | VOL BILLED | % OF TOTAL |
| GRAND RAPIDS           | 6,961,798  | 58.97%     | 6,680,002  | 57.38%     | 6,673,066  | 58.39%     | 6,254,185  | 56.95%     |
| CUSTOMER COMMUNITIES   | 4,844,609  | 41.03%     | 4,962,088  | 42.62%     | 4,755,226  | 41.61%     | 4,728,185  | 43.05%     |
| TOTAL                  | 11,806,407 | 100.00%    | 11,642,090 | 100.00%    | 11,428,292 | 100.00%    | 10,982,370 | 100.00%    |

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 7**

OPERATING REVENUES OTHER THAN WASTEWATER RECEIPTS:

|             |                                    |                      |
|-------------|------------------------------------|----------------------|
| 4410-476009 | INDUSTRIAL PRETREATMENT PERMITS    | \$ 88,412.55         |
| 4410-607001 | MISCELLANEOUS SERVICE FEES         | 10,282.60            |
| 4410-607057 | INDUSTRIAL DISCHARGE AUTHORIZATION | 122,471.08           |
| 4410-607043 | PRELIM/DESIGN/CONSTR ENGINEERING   | 121,171.27           |
| 4410-658002 | PAYMENT IN LIEU OF FINES           | -                    |
|             |                                    | <u>\$ 342,337.50</u> |

OTHER OPERATING REVENUES NOT INCLUDED:

CAPITAL CONTRIBUTION

|             |                             |                        |
|-------------|-----------------------------|------------------------|
| 4410-607061 | SEWAGE FRONT FOOTAGE        | \$ 165,189.79          |
|             | AUDITOR'S ADJUSTMENT        | -                      |
|             |                             | <u>\$ 165,189.79</u>   |
| 4410-607059 | INTEGRATED SEWER CONNECTION | <u>\$ 1,554,485.00</u> |

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 28, 2004

TO: Michael Wolski  
Utility Financial Officer

FROM: Corky Overmyer *CO*  
Environmental Protection Services Director

**SUBJECT: 2004 SEWER RATE STUDY- TASK #8**

No significant changes in operating levels are anticipated to take effect by January 1, 2005, which would require adjustments to operating costs for the test period.

COMW

Attachment

*srs\stask8 2004*

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 28, 2004

TO: Michael Wolski  
Utility Financial Officer

FROM: Corky Overmyer   
Environmental Protection Services Director

SUBJECT: 2004 SEWER RATE STUDY- TASK #9

No significant changes in sewer revenues are anticipated to take effect by January 1, 2005, which would require an adjustment to operating revenue.

COMW

Attachment

*srs\stask9 2004*

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 28, 2004

TO: Michael Wolski  
Utility Financial Officer

FROM: Corky Overmyer *Wo*  
Environmental Protection Services Director

**SUBJECT: 2004 SEWER RATE STUDY- TASK #10**

The following are major sewage system projects that for rate study purposes should be considered operative as of January 1, 2005.

| <u>Description</u>                           | <u>Location</u>       | <u>Amount</u> |
|--|-----------------------|---------------|
| Leffingwell Ave- Knapp St / Leonard St       | Grand Rapids          | \$ 49,000     |
| Grit / Adm Bldg- Switchgear                  | Integrated            | 120,150       |
| Marne Connector (excludes Hayes East LS)     | Tallmadge/Wright      | 850,000       |
| Influent Bar Screens                         | Integrated            | 1,486,555     |
| Cherry St, Diamond Ave & Lake Dr             | Grand Rapids          | 255,840       |
| Alpine- Stocking / 6 <sup>th</sup> St        | Grand Rapids          | 38,981        |
| Commerce Ave- Cherry / Fulton & Oakes        | Grand Rapids          | 409,061       |
| Bird Ave & Alpine Est.'s- Standby Generator  | Grand Rapids Township | 95,556        |
| WWTP Pumping Improvements                    | Integrated            | 141,020       |
| Chatham St- Gold / Lexington & Lexington Ave | Grand Rapids          | 58,579        |
| Lake Mi Dr- Oakleigh / Covell                | Grand Rapids          | 163,454       |
| Shaffer- 44 <sup>th</sup> /3300' north       | Kentwood              | 454,064       |
| Bristol / Three Mi                           | Walker                | 320,698       |
| East Paris LS Improvements                   | Grand Rapids Township | 296,520       |
| GC / Mass Spectrometer                       | Integrated            | 94,325        |
| SCADA Upgrades                               | Integrated            | 88,448        |

COMMW

srs\stask10 2004

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 11**

"COMPUTE ACCUMULATED COST, DEPRECIATION AND DEPRECIATION EXPENSE AS OF JUNE 30, 2004"

**INTEGRATED SYSTEM**

|                              | ORIGINAL<br>COST      | ACCUMULATED<br>DEPRECIATION | DEPRECIATION<br>EXPENSE |
|------------------------------|-----------------------|-----------------------------|-------------------------|
| LAND                         | \$ 1,041,867          | \$ -                        | \$ -                    |
| LAND IMPROVEMENTS            | 12,093,644            | 7,681,916                   | 599,392                 |
| BUILDINGS & STRUCTURES       | 47,377,402            | 20,672,985                  | 891,323                 |
| PROCESS EQUIPMENT            | 31,435,043            | 19,536,177                  | 835,753                 |
| AUXILIARY EQUIPMENT          | 22,125,849            | 21,254,059                  | 164,042                 |
| MACHINERY & EQUIPMENT        | 3,951,703             | 3,526,750                   | 113,072                 |
| OFFICE EQUIPMENT & FURNITURE | 628,067               | 524,035                     | 23,765                  |
|                              | <u>\$ 118,653,575</u> | <u>\$ 73,195,922</u>        | <u>\$ 2,627,347</u>     |

**NON-INTEGRATED SYSTEM**

|                                 | ORIGINAL<br>COST      | ACCUMULATED<br>DEPRECIATION | DEPRECIATION<br>EXPENSE |
|---------------------------------|-----------------------|-----------------------------|-------------------------|
| LAND                            | \$ 1,302,687          |                             |                         |
| LAND IMPROVEMENTS               | 215,755               | 28,991                      | 12,185                  |
| BUILDINGS & STRUCTURES          | 6,606,266             | 983,274                     | 129,112                 |
| PROCESS EQUIPMENT               | 6,127,744             | 2,115,065                   | 171,572                 |
| AUXILIARY EQUIPMENT             | 2,058,363             | 894,120                     | 74,913                  |
| MACHINERY & EQUIPMENT           | 241,686               | 33,900                      | 10,619                  |
| OFFICE EQUIPMENT & FURNITURE    | 68,632                | 41,179                      | 4,575                   |
| SERVICEMAINS - GRAND RAPIDS     | 175,479,932           | 45,109,435                  | 3,202,648               |
| SERVICEMAINS - WALKER           | 22,834,298            | 7,874,261                   | 448,345                 |
| SERVICEMAINS - KENTWOOD         | 21,951,122            | 7,946,337                   | 436,838                 |
| SERVICEMAINS - CASCADE TWP      | 14,708,682            | 4,039,016                   | 291,930                 |
| SERVICEMAINS - GRAND RAPIDS TWP | 12,913,854            | 3,459,060                   | 249,895                 |
| SERVICEMAINS - TALLMADGE TWP    | 1,708,652             | 225,928                     | 34,162                  |
| SERVICEMAINS - WRIGHT TWP       | -                     | -                           | -                       |
|                                 | <u>\$ 266,217,673</u> | <u>\$ 72,750,566</u>        | <u>\$ 5,066,794</u>     |
| TOTAL                           | <u>\$ 384,871,248</u> | <u>\$145,946,488</u>        | <u>\$ 7,694,141</u>     |

SOURCE: FINAL GENERAL LEDGER, AS ADJUSTED, FOR JUNE 30, 2004.

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 12**

TASK 12A DETERMINE WORKING CAPITAL NEEDS FOR MATERIALS AND SUPPLIES ON HAND.

MATERIALS AND SUPPLIES INVENTORY AS OF JUNE 30, 2004: \$ 1,315,631

TASK 12B DETERMINE WORKING CAPITAL NEEDS FOR PREPAYMENT OF OPERATING COSTS.

NO REQUIREMENT FOR PREPAYMENT OF OPERATING COSTS IS CALLED FOR IN THE ORDINARY CYCLE OF BUSINESS.

TASK 12C DETERMINE CASH WORKING CAPITAL NEEDS & DETERMINE TOTAL WORKING CAPITAL NEEDS.

MINIMUM CASH WORKING CAPITAL IS DEFINED AS THE SUM OF 90 DAYS ADJUSTED OPERATING EXPENSES.

ADJUSTED CURRENT ANNUAL EXPENSES = \$ 19,921,894 @ 90/365 = \$ 4,912,248

TOTAL WORKING CAPITAL NEEDS CONSIST OF THE FOLLOWING:

|                                      |              |
|--------------------------------------|--------------|
| 12A INVESTMENT IN INVENTORY          | \$ 1,315,631 |
| 12B PREPAYMENT OF OPERATING EXPENSES | -            |
| 12C 90 DAY OPERATING EXPENSES        | 4,912,248    |
|                                      | \$ 6,227,879 |

**SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
ZONEGATED FACILITIES  
TASK #13  
October 19, 2004**

Lengths and cost of all interceptor and trunk sewer mains that are jointly used were allocated according to the percentage of flow from contributing communities per the "Report on Sewage Flow Allocation and Zoning of the Sewage System for Fiscal Year 2002" (B&V zoning report), as adjusted for FY04 characteristics. Jointly used pumping stations were also prorated based on B&V zoning report. All zoning work papers are on file at the Coldbrook Complex. Maps are on file in the City Engineer's Office.

MW

*srs\stask13 2004*

CITY OF GRAND RAPIDS, MICHIGAN  
 SEWER RATE STUDY  
 SEWAGE DISPOSAL SYSTEM FUND  
 METHODOLOGY FOR I/I & OTHER FLOW APPORTIONMENT - TASK NO. 13

|  | MILLION<br>GALLONS |
|--|--------------------|
| 1.) ANNUAL WASTEWATER TREATMENT PLANT FLOW   | 18,562.89          |
| LESS: WHOLESALE BILLED FLOW  | (2,340.30)         |
| LESS: RETAIL BILLED FLOW   | (8,642.06)         |
| TOTAL RETAIL I/I & OTHER FLOW  | <u>7,580.53</u>    |
| 2.) RETAIL INFLOW FROM SEPARATED AREAS (A)   | 329.27             |
| RETAIL INFLOW FROM COMBINED AREAS - AMOUNT ESTIMATED (A)   | 1,164.01           |
| LESS: ANNUAL BYPASS FROM (3) PUMPING STATIONS  | -                  |
| LESS: IN-SYSTEM BYPASS & RETENTION BASIN OVERFLOW  | (420.17)           |
| TOTAL RETAIL INFLOW  | <u>1,073.11</u>    |
| 3.) RETAIL INFILTRATION:   |                    |
| TOTAL RETAIL I/I & OTHER FLOW  | 7,580.53           |
| LESS: TOTAL RETAIL INFLOW (#2)   | (1,073.11)         |
| LESS: MARKET AVE RETENTION BASIN (MARB) CAPTURE  | 6,507.42           |
| TOTAL RETAIL INFILTRATION & OTHER FLOW   | <u>(291.45)</u>    |
| 4.) ALLOCATION OF RETAIL INFILTRATION & OTHER FLOW -<br>APPORTIONED ON THE BASIS OF B&V SUMMARY OF<br>1997 MONITORED FLOW DATA (B) |                    |
|  | 6,215.97           |
|  | <u>6,215.97</u>    |
|  | <u>6,215.97</u>    |

PRORATA SHARE OF  
 RETAIL INFILTRATION & OTHER FLOW

|                      |                 |
|----------------------|-----------------|
| GOVERNMENTAL UNIT(S) | MILLION GALLONS |
| UTILITY PARTNERS     | 6,215.97        |
| TOTAL                | <u>6,215.97</u> |

(A) BASED ON RECORDED RAINFALL @ WWTP & APPORTIONED PER BLACK & VEATCH'S SUMMARY OF 1997 MONITORED FLOW DATA.  
 (B) BASED ON INFILTRATION & OTHER FLOW APPORTIONED IN PREVIOUS YEAR & ADJUSTED FOR SYSTEM ADDITIONS & IMPROVEMENTS IN EACH CUSTOMER COMMUNITY.

CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
METHODOLOGY FOR I/I & OTHER FLOW APPORTIONMENT - TASK NO. 13 (CONTINUED)

5.) SUMMARY: (IN MILLION GALLONS)

| <u>GOVERNMENTAL UNIT(S)</u> | <u>BILLED FLOW</u><br><u>(TASK #6)</u> | <u>INFLOW</u><br><u>(#2 ABOVE)</u> | <u>INFILTRATION</u><br><u>&amp; OTHER FLOW</u><br><u>(#4 ABOVE)</u> | <u>MARB (A)</u><br><u>(#3 ABOVE)</u> | <u>TOTAL</u><br><u>PLANT FLOW</u> | <u>PERCENT</u><br><u>OF TOTAL</u> | <u>TOTAL PLANT</u><br><u>FLOW (MGD)</u> |
|-----------------------------|--|------------------------------------|---|--------------------------------------|-----------------------------------|-----------------------------------|---|
| UTILITY PARTNERS            | 9,415.65                               | 1,073.11                           | 6,215.97  | 249.87                               | 16,954.60                         | 91.3360%                          | 46.4510                                 |
| NORTH KENT                  | 1,461.95                               | -                                  | -   | 38.80                                | 1,500.75                          | 8.0847%                           | 4.1116                                  |
| GAINES TWP                  | 104.76                                 | -                                  | -   | 2.78                                 | 107.54                            | 0.5793%                           | 0.2946                                  |
| TOTAL                       | <u>10,982.36</u>                       | <u>1,073.11</u>                    | <u>6,215.97</u>   | <u>291.45</u>                        | <u>18,562.89</u>                  | <u>100.0000%</u>                  | <u>50.8572</u>                          |

| <u>RECONCILIATION OF PLANT FLOW</u> |                  |
|-------------------------------------|------------------|
| TOTAL PLANT FLOW (ABOVE)            | 18,562.89        |
| LESS: ESTIMATED BILLED VOLUME       |                  |
| MEIJER-ALGOMA SERVICE AREA          | (5.04)           |
| TOTAL PLANT FLOW (WWTP MEMO)        | <u>18,557.85</u> |

(A) BASED ON BILLED FLOW (TASK #6).

# MEMORANDUM

CITY OF GRAND RAPIDS

**RECEIVED**

NOV 29 2004

**Date:** August 17, 2004

**To:** Mr. Cortland Overmyer, Director  
EPSD *alo*

**From:** Randall Fisher, Assistant Director  
EPSD

**Subject:** FY04 Wastewater Plant Flow Data

Listed below is the flow data for the last completed fiscal year. Compared to last years report the plant flow increased by 8.79% from 16.926 billion gallons treated in FY03 to 18.558 billion gallons treated in FY04. Of note is the large in system overflows reported in the table below. Of the 216.25 million gallons of overflow reported in FY04 just over 94% of the total came from MARB overflows.

**Monthly data (total plant influent flow, MG)**

| Month        | Total MG        |
|--------------|-----------------|
| July         | 1357.04         |
| August       | 1375.07         |
| September    | 1251.28         |
| October      | 1264.57         |
| November     | 1785.28         |
| December     | 1466.07         |
| January      | 1270.86         |
| February     | 1349.46         |
| March        | 2121.28         |
| April        | 1468.00         |
| May          | 2045.46         |
| June         | 1803.48         |
| <b>Total</b> | <b>18557.85</b> |

**Fiscal year data**

|  |        |
|--|--------|
| Wastewater Treatment Plant (WWTP) avg. daily flow (mg) | 50.70  |
| Rainfall recorded at WWTP (inches)                     | 33.97  |
| Market Avenue Retention Basin (MARB) inflow (mg)       | 495.37 |
| Market Avenue Retention Basin (MARB) overflow (mg)     | 203.92 |
| In-System overflows + MARB (mg) (report attached)      | 216.25 |

Attachment

Copy

Bill Cole, City Engineer  
Mike Wolski, Utilities Financial Analyst

0859.DOC

CITY OF GRAND RAPIDS, MICHIGAN  
LONG TERM OVERFLOW MONITORING REPORT  
OVERFLOW VOLUME SUMMARY  
FISCAL YEAR 2004

| Overflow Date | Rainfall Inches(1) | Pumping Station Overflows |           |            |          | West Side Ditch MG | In-System Overflows |            | Total Overflow Volume MG |         |
|---------------|--------------------|---------------------------|-----------|------------|----------|--------------------|---------------------|------------|--------------------------|---------|
|               |                    | MAPS(2) MG(5)             | F/W(3) MG | MARB(4) MG | Total MG |                    | Monitored MG        | Modeled MG |                          |         |
| 7/6/2003      | 0.6                | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 1.605               | 0.000      | 1.605                    |         |
| 7/10/2003     | 0.59               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.195               | 0.000      | 0.195                    |         |
| 7/21/2003     | 0.16               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.069               | 0.000      | 0.069                    |         |
| 7/21/2003     | 0.68               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.349               | 0.000      | 0.349                    |         |
| 8/1/2003      | 0.06               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.002               | 0.000      | 0.002                    |         |
| 8/3/2003      | 0.43               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.003               | 0.000      | 0.003                    |         |
| 8/4/2003      | 0.12               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.078               | 0.000      | 0.078                    |         |
| 8/7/2003      | 0.58               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.071               | 0.000      | 0.071                    |         |
| 8/16/2003     | 0.33               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.098               | 0.000      | 0.098                    |         |
| 8/29/2003     | 0.27               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.006               | 0.000      | 0.006                    |         |
| 11/2/2003     | 3.22               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 1.088               | 0.000      | 1.088                    |         |
| 11/4/2003     | 0.8                | 0.000                     | 0.000     | 4.372      | 4.372    | 0.000              | 0.724               | 0.000      | 5.096                    |         |
| 11/23/2003    | 0.97               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.085               | 0.000      | 0.085                    |         |
| 3/1/2004      | 0.36               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.114               | 0.000      | 0.114                    |         |
| 3/4/2004      | 1.19               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.032               | 0.000      | 0.032                    |         |
| 3/5/2004      | 1.19               | 0.000                     | 0.000     | 23.473     | 23.473   | 0.000              | 0.122               | 0.000      | 23.595                   |         |
| 3/24/2004     | 0.26               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.116               | 0.000      | 0.116                    |         |
| 3/26/2004     | 0.56               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.034               | 0.000      | 0.034                    |         |
| 5/1/2004      | 0.077              | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.077               | 0.000      | 0.077                    |         |
| 5/9/2004      | 0.38               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.183               | 0.000      | 0.183                    |         |
| 5/11/2004     | 0.09               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.023               | 0.000      | 0.023                    |         |
| 5/12/2004     | 0.6                | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.100               | 0.000      | 0.100                    |         |
| 5/14/2004     | 0.6                | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.561               | 0.000      | 0.561                    |         |
| 5/18/2004     | 0.56               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.185               | 0.000      | 0.185                    |         |
| 5/20/2004     | 0.54               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.037               | 0.000      | 0.037                    |         |
| 5/21/2004     | 2.31               | 0.000                     | 0.000     | 84.942     | 84.942   | 0.000              | 5.630               | 0.000      | 90.572                   |         |
| 5/23/2004     | 0.5                | 0.000                     | 0.000     | 40.867     | 40.867   | 0.000              | 0.002               | 0.000      | 40.869                   |         |
| 5/24/2004     | 0.02               | 0.000                     | 0.000     | 31.324     | 31.324   | 0.000              | 0.000               | 0.000      | 31.324                   |         |
| 5/25/2004     | 0                  | 0.000                     | 0.000     | 10.015     | 10.015   | 0.000              | 0.000               | 0.000      | 10.015                   |         |
| 5/26/2004     | 0                  | 0.000                     | 0.000     | 4.352      | 4.352    | 0.000              | 0.000               | 0.000      | 4.352                    |         |
| 5/27/2004     | 0                  | 0.000                     | 0.000     | 4.579      | 4.579    | 0.000              | 0.000               | 0.000      | 4.579                    |         |
| 5/30/2004     | 1.05               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.264               | 0.000      | 0.264                    |         |
| 6/21/2004     | 0.99               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.438               | 0.000      | 0.438                    |         |
| 6/24/2004     | 0.35               | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.033               | 0.000      | 0.033                    |         |
|               |                    | 0.000                     | 0.000     | 0.000      | 0.000    | 0.000              | 0.000               | 0.000      | 0.000                    |         |
|               |                    |                           |           |            |          |                    |                     | Total      |                          | 216.248 |

- (1) Rain gauge at WWTP
- (2) Market Avenue Pumping Station
- (3) Front/Wealthy Pumping Station
- (4) Market Avenue Retention Basin
- (5) MG = Million Gallons

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 29, 2004

TO: Michael Wolski  
Financial Analyst

FROM: Charles Schroeder, PE   
Hydraulic Engineer

SUBJECT: **2004 Sewer Rate Study - Task #14**

Zonegating maps for the sewage system are included in the "Report on Sewage Flow Allocation and Zonegating of the Sewage System" from Black & Veatch, Ltd dated September 2003. The report also contains comprehensive information with respect to the basis for zonegating service mains and other system components, such as lift stations, that service more than one community.

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 15**

COMPUTE CONSTRUCTION COST RATE BASE (DEPRECIATED PLANT, PLUS WORKING CAPITAL, LESS CSO REVENUE REQUIREMENTS FOR CSO FIXED ASSETS INCLUDED IN TASK #11/21, LESS CONTRIBUTIONS BY OTHERS).

|                                |               |                      |                      |
|--------------------------------|---------------|----------------------|----------------------|
| ORIGINAL CONSTRUCTION COST     | - TASK #10    | \$ 4,922,251         |                      |
|                                | - TASK #11    | 384,871,248          |                      |
|                                | - TASK #16/21 | <u>(114,002,028)</u> | \$ 275,791,471       |
| LESS: ACCUMULATED DEPRECIATION | - TASK #10    | \$ -                 |                      |
|                                | TASK #11      | 145,946,488          |                      |
|                                | TASK #16/21   | <u>(17,483,517)</u>  | <u>(128,462,971)</u> |
|                                |               |                      | 147,328,500          |
| WORKING CAPITAL REQUIREMENT    | - TASK #12    | \$ 6,227,879         |                      |
|                                |               |                      | <u>6,227,879</u>     |
|                                |               |                      | 153,556,379          |
| CONTRIBUTIONS BY OTHERS        | - TASK #21    | \$ 167,861,652       |                      |
| LESS: AMORTIZATION             |               | (86,863,743)         |                      |
|                                |               |                      | <u>(80,997,909)</u>  |
| CONSTRUCTION COST RATE BASE    |               |                      | <u>\$ 72,558,470</u> |

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 26, 2004

TO: Michael E. Wolski  
Financial Analyst

FROM: Linda Wagenmaker *LW*  
Accountant I

**SUBJECT: 2004 SEWER RATE STUDY TASK#15A  
INTEGRATED SEWER CONNECTION FEES**

Attached is the Integrated Sewer Connection Fee Schedule as currently provided for in Chapter 27 of the City Code, with the addition of rates to be effective on January 1, 2005. The City Commission on June 27, 2000 established fees through calendar year 2004. Beginning January 1, 2005, the integrated sewer connection fees are to be calculated on a yearly basis as part of the annual Water/Sewer Rate Study. The Consumer Price Index used to determine rates effective January 1, 2005 is as follows:

|                     |       |
|---------------------|-------|
| August, 2003 Index  | 184.6 |
| August, 2004 Index  | 189.5 |
| Increase            | 4.9   |
| Percentage increase | 2.7%  |

An ordinance to amend Chapter 27 of the City Code was adopted on October 1, 2002 (proceeding #70422). The City Code now incorporates the changes made in the second amendment to the uniform service agreement between the City and wholesale and retail customer communities. Integrated connection fees were specifically affected by the agreement's provision concerning parcel area downsizing for wetlands, lakes, streams and other unusual characteristics of the parcel in accordance with policies approved from time to time by the Utility Advisory Board.

LW

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## Section 2.96 Integrated Sewer Connection Fee Schedule

When a property owner or user is requested or required to connect to the System and has not previously paid or been assessed a connection fee, the following connection fee schedule shall apply:

### Integrated Connection Base Fee Schedule

| Water Meter Size<br>(inches) | <u>1/01/02</u> | <u>1/01/03</u> | <u>1/01/04</u> | <u>1/01/05</u> |
|------------------------------|----------------|----------------|----------------|----------------|
| 3/4 or less                  | \$ 1,300       | \$ 1,700       | \$ 2,200       | \$ 2,250       |
| 1                            | 2,150          | 2,800          | 3,650          | 3,750          |
| 1 ½                          | 4,350          | 5,650          | 7,350          | 7,500          |
| 2                            | 6,950          | 9,050          | 11,750         | 12,000         |
| 3                            | 15,150         | 19,850         | 25,650         | 26,250         |
| 4                            | 27,300         | 35,700         | 46,200         | 47,250         |
| 6 and over                   | 60,650         | 79,350         | 102,650        | 105,000        |

Except as otherwise provided in the immediately succeeding paragraph, the foregoing integrated sewer connection base fee schedule for single-family and multi-family residential dwelling units shall be adjusted upward and downward as follows: A single-family residential dwelling unit located on a parcel containing 26,000 square feet in calendar year 2002, 24,000 square feet in calendar year 2003, 22,000 square feet in calendar year 2004, and 20,000 square feet in calendar year 2005 and each year thereafter shall pay the applicable integrated connection fee in accordance with the foregoing schedule. When determining the square footage of a residential parcel for the purposes of determining the appropriate integrated connection fee, parcel size may be adjusted downward to take into consideration such things as wetlands, lakes, streams and other unusual characteristics of the parcel in accordance with policies approved from time to time by the Utility Advisory Board. To the extent the size of a parcel, as adjusted, is greater than or less than the applicable square footage, one-half the applicable integrated connection fee will increase or decrease by the same percentage increase or decrease in the parcel above or below the applicable square footage. In the case of multi-family residential dwellings, in order to determine the size of the parcel assigned to each dwelling unit for purposes of calculating the integrated connection fee to be paid by each multi-family residential dwelling unit, the total square footage of the parcel, as adjusted, on which the multi-family residential dwelling is located shall be divided by the total number of residential units. Notwithstanding any other provision in this subsection, the integrated connection fee for a single-family residential dwelling unit or multi-family residential dwelling unit shall not exceed four and one-half times the applicable base integrated connection fee set forth in foregoing schedule.

There shall be no upward adjustment in the integrated sewer service connection fee payable for a single-family residential dwelling unit connecting to the Sewer System if (a) each of the following conditions are met (1) a building permit shall have been obtained, (2) the dwelling unit shall have been constructed, and (3) a certificate of occupancy shall have been

issued prior to January 1, 2000 or (b) local building permit fees have been paid to the local governmental unit prior to January 1, 2000 for a single-family residential dwelling unit to be constructed on or after January 1, 2000. When connecting to the Sewer System, Users living in or owning such single-family residential dwelling units shall pay the applicable base integrated connection fee set forth in the Integrated Connection Base Fee Schedule adjusted downward, if applicable, in accordance with the immediate preceding paragraph.

Effective January 1, 2005 and January 1<sup>st</sup> of every year thereafter, the Integrated Sewer Connection Base Fees shall be adjusted by a percentage, which is determined by the annual change in the Consumer Price Index (the "index") calculated as follows:

- (1) The Consumer Price Index shall be that Index referred to as the Consumer Price Index, US City Average, All Urban Consumers, published by the U.S. Department of Labor-Bureau of Statistics ((1982-84)=100). In the event the method of determining the Index is substantially altered, the basis for determining the annual change thereafter shall be the Index which is most comparable to the Index described above.
- (2) For the purpose of computing the percentage change each calendar year, the Index for the month of August for the prior calendar year shall be subtracted from the Index for the immediately-preceding August. The result so obtained (if positive) shall be divided by the Index for the month of August for the prior calendar year to obtain the percentage increase which shall be applied to the then current Integrated Sewer Connection Base Fee Schedule to determine the new calendar year schedule.

The foregoing Integrated Connection fee is due and payable at the time a User receives a permit to connect to the Sewer System. A permit issued by the City to connect to the Sewer System shall expire one hundred eighty (180) days from the date the permit was issued.

The user receiving services who applies for a larger water meter than the one presently in service shall pay an Integrated Connection Fee which is the difference in cost between the meter size in service and the one applied for in accordance with the Integrated Connection Fee in effect at the time of application. No credit or rebate shall be made in the case of application for a smaller meter size.

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CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY

SEWAGE DISPOSAL SYSTEM FUND

CSO REVENUE REQUIREMENTS - TASK 16

PRINCIPAL & INTEREST ON REVENUE BONDS & SRF

DEBT FOR CALENDAR YEAR 2005 - ACCRUAL BASIS

| DATE     | SRF/REVENUE REFERENCE | 5073- SERIES | REVENUE BONDS |              |          | STATE REVOLVING FUNDS |            |           | TOTAL          |                      |                |
|----------|-----------------------|--------------|---------------|--------------|----------|-----------------------|------------|-----------|----------------|----------------------|----------------|
|          |                       |              | PRINCIPAL     | INTEREST     | TRUSTEE  | PRINCIPAL             | INTEREST   | PRINCIPAL | INTEREST       | PRINCIPAL & INTEREST |                |
| 07/01/05 | N/A                   | 1998         | (1)           | 794,955.93   | 1,250.00 |                       |            |           | 0.00           | 796,205.93           | 796,205.93     |
| 01/01/06 | N/A                   | 1998         | (1)           | 1,110,780.00 | 1,250.00 |                       |            |           | 1,110,780.00   | 796,205.93           | 1,906,985.93   |
| 07/01/05 | N/A                   | 2004         | (3)           | 704,250.00   | 600.00   |                       |            |           | 0.00           | 704,850.00           | 704,850.00     |
| 01/01/06 | N/A                   | 2004         | (3)           | 704,250.00   | 600.00   |                       |            |           | 0.00           | 704,850.00           | 704,850.00     |
| 04/01/05 | 01                    | 1991         |               |              |          |                       | 65,000.00  | 3,050.00  | 0.00           | 3,050.00             | 3,050.00       |
| 10/01/05 |                       |              |               |              |          |                       |            | 6,100.00  | 65,000.00      | 6,100.00             | 71,100.00      |
| 04/01/06 |                       |              |               |              |          |                       |            | 2,725.00  | 0.00           | 2,725.00             | 2,725.00       |
| 04/01/05 | 02/03                 | 1992A        |               |              |          |                       | 730,000.00 | 35,625.00 | 0.00           | 35,625.00            | 35,625.00      |
| 10/01/05 |                       |              |               |              |          |                       |            | 71,250.00 | 730,000.00     | 71,250.00            | 801,250.00     |
| 04/01/06 |                       |              |               |              |          |                       |            | 31,975.00 | 0.00           | 31,975.00            | 31,975.00      |
| 04/01/05 | 04                    | 1992B        |               |              |          |                       | 85,000.00  | 4,250.00  | 0.00           | 4,250.00             | 4,250.00       |
| 10/01/05 |                       |              |               |              |          |                       |            | 8,500.00  | 85,000.00      | 8,500.00             | 93,500.00      |
| 04/01/06 |                       |              |               |              |          |                       |            | 3,825.00  | 0.00           | 3,825.00             | 3,825.00       |
| 04/01/05 | 05                    | 1993A        |               |              |          |                       | 535,000.00 | 26,025.00 | 0.00           | 26,025.00            | 26,025.00      |
| 10/01/05 |                       |              |               |              |          |                       |            | 52,050.00 | 535,000.00     | 52,050.00            | 587,050.00     |
| 04/01/06 |                       |              |               |              |          |                       |            | 23,350.00 | 0.00           | 23,350.00            | 23,350.00      |
| 04/01/05 | 07                    | 1993B        |               |              |          |                       | 470,000.00 | 24,400.00 | 0.00           | 24,400.00            | 24,400.00      |
| 10/01/05 |                       |              |               |              |          |                       |            | 48,800.00 | 470,000.00     | 48,800.00            | 518,800.00     |
| 04/01/06 |                       |              |               |              |          |                       |            | 22,050.00 | 0.00           | 22,050.00            | 22,050.00      |
| 04/01/05 | 09                    | 1994A        |               |              |          |                       | 660,000.00 | 30,975.00 | 0.00           | 30,975.00            | 30,975.00      |
| 10/01/05 |                       |              |               |              |          |                       |            | 61,950.00 | 660,000.00     | 61,950.00            | 721,950.00     |
| 04/01/06 |                       |              |               |              |          |                       |            | 27,675.00 | 0.00           | 27,675.00            | 27,675.00      |
| 04/01/05 | 10                    | 1994B        |               |              |          |                       | 200,000.00 | 21,075.00 | 0.00           | 21,075.00            | 21,075.00      |
| 10/01/05 |                       |              |               |              |          |                       |            | 38,150.00 | 200,000.00     | 38,150.00            | 381,500.00     |
| 04/01/06 |                       |              |               |              |          |                       |            | 19,075.00 | 0.00           | 19,075.00            | 19,075.00      |
| 04/01/05 | 11                    | 1995A        |               |              |          |                       | 103,406.09 | 14,447.84 | 0.00           | 14,447.84            | 117,853.93     |
| 10/01/05 |                       |              |               |              |          |                       |            | 26,569.04 | 103,406.09     | 26,569.04            | 26,569.04      |
| 04/01/06 |                       |              |               |              |          |                       |            | 13,284.52 | 0.00           | 13,284.52            | 119,152.66     |
| 04/01/05 | 12                    | 1995B        |               |              |          |                       | 165,000.00 | 12,656.25 | 0.00           | 12,656.25            | 12,656.25      |
| 10/01/05 |                       |              |               |              |          |                       |            | 25,312.50 | 165,000.00     | 25,312.50            | 190,312.50     |
| 04/01/06 |                       |              |               |              |          |                       |            | 11,728.13 | 0.00           | 11,728.13            | 11,728.13      |
|          |                       |              |               |              |          |                       |            |           | \$4,432,554.23 | \$3,668,985.14       | \$8,101,539.37 |

(1) PRORATED AMOUNT OF 1998 ISSUE RELATED TO CSO DEBT

(2) PRORATED FOR APPLICABLE THREE (3) MONTH PERIOD IN CALENDAR YEAR 2005

(3) DS ON ES CSO PORTION OF 2004 ISSUE. (\$28.17M)

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 17**

**BONDS - PRINCIPAL & INTEREST PAYMENTS**

| FISCAL<br>YEAR<br>ENDING<br>JUNE 30, | CASH BASIS   |              |              | ACCRUAL BASIS |              |              |
|--------------------------------------|--------------|--------------|--------------|---------------|--------------|--------------|
|                                      | PRINCIPAL    | INTEREST     | PRIN & INT   | PRINCIPAL     | INTEREST     | PRIN & INT   |
| 2005                                 | 660,502.50   | 1,014,584.48 | 1,675,086.98 | 660,502.50    | 1,000,548.81 | 1,661,051.31 |
| 2006                                 | 689,220.00   | 986,513.14   | 1,675,733.14 | 689,220.00    | 971,436.45   | 1,660,656.45 |
| 2007                                 | 721,766.50   | 956,359.76   | 1,678,126.26 | 721,766.50    | 938,315.60   | 1,660,082.10 |
| 2008                                 | 758,142.00   | 920,271.44   | 1,678,413.44 | 758,142.00    | 899,896.37   | 1,658,038.37 |
| 2009                                 | 798,346.50   | 879,521.30   | 1,677,867.80 | 798,346.50    | 858,065.74   | 1,656,412.24 |
| 2010                                 | 842,380.00   | 836,610.18   | 1,678,990.18 | 842,380.00    | 813,971.22   | 1,656,351.22 |
| 2011                                 | 890,242.50   | 791,332.26   | 1,681,574.76 | 890,242.50    | 767,406.99   | 1,657,649.49 |
| 2012                                 | 938,105.00   | 743,481.72   | 1,681,586.72 | 938,105.00    | 718,270.15   | 1,656,375.15 |
| 2013                                 | 991,711.00   | 693,058.58   | 1,684,769.58 | 991,711.00    | 666,406.34   | 1,658,117.34 |
| 2014                                 | 1,047,231.50 | 639,754.10   | 1,686,985.60 | 1,047,231.50  | 611,609.76   | 1,658,841.26 |
| 2015                                 | 1,102,752.00 | 583,465.42   | 1,686,217.42 | 1,102,752.00  | 553,828.96   | 1,656,580.96 |
| 2016                                 | 1,162,101.50 | 524,192.50   | 1,686,294.00 | 1,162,101.50  | 492,961.02   | 1,655,062.52 |
| 2017                                 | 1,223,365.50 | 461,729.54   | 1,685,095.04 | 1,223,365.50  | 428,086.99   | 1,651,452.49 |
| 2018                                 | 1,292,287.50 | 394,444.44   | 1,686,731.94 | 1,292,287.50  | 358,906.53   | 1,651,194.03 |
| 2019                                 | 1,365,038.50 | 323,368.62   | 1,688,407.12 | 1,365,038.50  | 285,830.06   | 1,650,868.56 |
| 2020                                 | 1,439,704.00 | 248,291.50   | 1,687,995.50 | 1,439,704.00  | 208,699.64   | 1,648,403.64 |
| 2021                                 | 1,497,139.00 | 169,107.78   | 1,666,246.78 | 1,497,139.00  | 127,936.46   | 1,625,075.46 |
| 2022                                 | 1,577,548.00 | 86,765.14    | 1,664,313.14 | 1,577,548.00  | 43,382.57    | 1,620,930.57 |

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 18**

DETERMINE SEWER SYSTEM EQUITY IN THE CONSTRUCTION COST RATE BASE BY  
SUBTRACTING DEBT OUTSTANDING FROM THE TOTAL RATE BASE.

|  |                |
|--|----------------|
| CONSTRUCTION COST RATE BASE - TASK NO. 15              | \$ 72,558,470  |
| LESS: BONDED INDEBTEDNESS (ACCRUAL) - TASK NO. 17 / 20 | (36,374,202) * |
| NET SEWER SYSTEM EQUITY                                | \$ 36,184,268  |

\* INCLUDES 1998 BOND PROCEEDS FOR FOLLOWING:

|                             |               |
|-----------------------------|---------------|
| BRIGGS BLD/MONROE           | \$ 1,535,859  |
| WWTP- MAINT/GEN STORAGE     | 1,754,062     |
| CSO- W5- #54                | 486,773       |
| CSO- W5- #53                | 2,383,405     |
| WWTP- AERATION IMPROVEMENTS | 3,636,635     |
| SEWER MAINT. BLD            | 1,283,535     |
| MONROE AVE                  | 1,838,323     |
| IONIA- BARTLETT/CHERRY      | 133,922       |
| CELEBRATION VILLAGE/CINEMA  | 999,935       |
| FULTON- UNION/BENJAMIN      | 561,301       |
| N PARK- MONROE/COIT         | 216,677       |
| MONROE- TROWBRIDGE/Newberry | 266,804       |
| WEALTH ST EXT JUNC. CHAMBER | 458,953       |
| WEALTH ST- EASTERN / FULLER | 884,318       |
| EAST PARIS LS IMPROVEMENTS  | 296,520       |
| GRIT UNLOADING STATION      | 639,596       |
|                             | \$ 17,376,618 |

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
RATE OF RETURN ON EQUITY - TASK NO. 19**

AT THE APRIL 5, 1977, COMMITTEE OF THE WHOLE MEETING, THE CITY COMMISSION DECIDED THE LEVEL OF RETURN ON SEWER SYSTEM EQUITY. THE LEVEL DECIDED UPON WAS ONE PERCENT MORE THAN THE AVERAGE BOND BUYER'S INDEX OF MUNICIPAL BONDS FOR THE PREVIOUS TWELVE MONTH PERIOD.

BOND BUYER'S INDEX OF 20 MUNICIPAL BONDS

| <u>DATE</u> | <u>RATE</u> | <u>DATE</u>     | <u>RATE</u>   |
|-------------|-------------|-----------------|---------------|
| 16-Oct-03   | 5.000%      | 15-Apr-04       | 4.890%        |
| 23-Oct-03   | 4.880%      | 22-Apr-04       | 4.890%        |
| 30-Oct-03   | 4.880%      | 29-Apr-04       | 4.950%        |
| 06-Nov-03   | 4.830%      | 06-May-04       | 5.010%        |
| 13-Nov-03   | 4.770%      | 13-May-04       | 5.140%        |
| 20-Nov-03   | 4.660%      | 20-May-04       | 5.130%        |
| 25-Nov-03   | 4.660%      | 27-May-04       | 5.010%        |
| 04-Dec-03   | 4.730%      | 03-Jun-04       | 5.030%        |
| 11-Dec-03   | 4.700%      | 10-Jun-04       | 5.100%        |
| 18-Dec-03   | 4.570%      | 17-Jun-04       | 5.050%        |
| 23-Dec-03   | 4.580%      | 24-Jun-04       | 5.010%        |
| 31-Dec-03   | 4.600%      | 01-Jul-04       | 4.980%        |
| 08-Jan-04   | 4.640%      | 08-Jul-04       | 4.810%        |
| 15-Jan-04   | 4.520%      | 15-Jul-04       | 4.850%        |
| 22-Jan-04   | 4.570%      | 22-Jul-04       | 4.840%        |
| 29-Jan-04   | 4.710%      | 29-Jul-04       | 4.880%        |
| 05-Feb-04   | 4.680%      | 05-Aug-04       | 4.780%        |
| 12-Feb-04   | 4.520%      | 12-Aug-04       | 4.700%        |
| 19-Feb-04   | 4.500%      | 19-Aug-04       | 4.670%        |
| 26-Feb-04   | 4.490%      | 26-Aug-04       | 4.660%        |
| 04-Mar-04   | 4.540%      | 02-Sep-04       | 4.630%        |
| 11-Mar-04   | 4.350%      | 09-Sep-04       | 4.610%        |
| 18-Mar-04   | 4.350%      | 16-Sep-04       | 4.540%        |
| 25-Mar-04   | 4.410%      | 23-Sep-04       | 4.460%        |
| 01-Apr-04   | 4.590%      | 30-Sep-04       | 4.540%        |
| 07-Apr-04   | 4.760%      | 07-Oct-04       | 4.610%        |
|             |             | <u>52 WEEKS</u> | <u>4.736%</u> |

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 20**

DETERMINE COMPOSITE RATE OF RETURN AND DOLLARS OF RETURN ON A CONSTRUCTION COST RATE BASE.

|   | RATE<br>BASE  |   | RATE OF<br>RETURN |   | RETURN ON<br>INVESTMENT |
|---|---------------|---|-------------------|---|-------------------------|
| SEWER SYSTEM EQUITY IN THE CONSTRUCTION<br>COST RATE (CCR) BASE | \$ 36,184,268 | @ | 5.736%            | = | \$ 2,075,530            |
| SEWER SYSTEM INDEBTEDNESS IN THE<br>CONSTRUCTION COST RATE BASE |               |   |                   |   |                         |
| 1998 ISSUE (REFIN. AMT. OF 1990 ISSUE)                          | 18,997,584    | @ | 5.060%            | = | 961,278                 |
| 1998 ISSUE  | 17,376,618    | @ | 5.060%            | = | 879,257                 |
| LESS INTEREST ON BOND RESERVE AND<br>REPLACEMENT ACCOUNTS       |               |   |                   |   | (17,728)                |
|   | \$ 72,558,470 |   |                   |   | \$ 3,898,337            |
| COMPOSITE RATE OF RETURN ON INVESTMENT                          |               |   | \$ 3,898,337      | = | 5.373%                  |
|   |               |   | 72,558,470        |   |                         |

CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
CONSTRUCTION COST RATE BASE & RETURN ON SYSTEM INVESTMENT- TASK NO. 21- PART 1  
FISCAL YEAR ENDED JUNE 30, 2004

PHYSICAL LOCATION

| DESCRIPTION                    | RETAIL            |                 |                 |                  |                  |                |                    |                 |                |              | WHOLESALE    |                |               | TOTAL |
|--------------------------------|-------------------|-----------------|-----------------|------------------|------------------|----------------|--------------------|-----------------|----------------|--------------|--------------|----------------|---------------|-------|
|                                | INTEGRATED SYSTEM | CITY OF GR      | CITY OF WALKER  | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP    | TALLMADGE TOWNSHIP | WRIGHT TOWNSHIP | CITY OF EASTGR | N. KENT AREA | ADA TOWNSHIP | GAMES TOWNSHIP | MELIER-ALGOMA |       |
| COST                           | \$ 120,384,073    | \$ 71,124,317   | \$ 23,406,679   | \$ 20,015,470    | \$ 14,884,152    | \$ 13,165,635  | \$ 1,845,134       | \$ 115,644      | \$ -           | \$ -         | \$ -         | \$ -           | \$ -          |       |
| LESS: ACCUMULATED DEPRECIATION | 73,195,922        | 28,305,011      | 7,844,754       | 6,814,235        | 4,067,927        | 3,396,465      | 232,749            | 5,399           | \$ -           | \$ -         | \$ -         | \$ -           | \$ -          |       |
| NET BOOK VALUE                 | \$ 47,188,151     | \$ 42,819,306   | \$ 15,561,925   | \$ 13,201,235    | \$ 10,816,225    | \$ 9,769,169   | \$ 1,612,385       | \$ 110,245      | \$ -           | \$ -         | \$ -         | \$ -           | \$ -          |       |
| WORKING CAPITAL REQUIREMENT    | 3,868,385         | 1,462,991       | 297,505         | 190,199          | 137,885          | 190,199        | 12,590             | 22,047          | \$ -           | \$ -         | \$ -         | \$ -           | \$ -          |       |
| CONTRIBUTIONS                  | 47,595,435        | 44,281,297      | 15,859,431      | 13,391,434       | 10,934,110       | 9,990,368      | 1,624,955          | 132,292         | \$ -           | \$ -         | \$ -         | \$ -           | \$ -          |       |
| LESS AMORTIZATION              | (32,710,559)      | 51,071,702      | 20,720,025      | 19,939,157       | 14,734,879       | 12,085,772     | 1,713,652          | -               | \$ -           | \$ -         | \$ -         | \$ -           | \$ -          |       |
| CONSTRUCTION COST RATE BASE    | \$ (14,825,816)   | \$ (17,824,088) | \$ (14,475,203) | \$ (6,852,248)   | \$ (4,003,136)   | \$ (2,095,892) | \$ (239,461)       | \$ -            | \$ -           | \$ -         | \$ -         | \$ -           | \$ -          |       |
| RETURN ON INVESTMENT- TASK 20  | \$ 36,430,661     | \$ 28,757,229   | \$ 1,384,228    | \$ 304,526       | \$ 202,367       | \$ 1,108,478   | \$ 150,744         | \$ 132,292      | \$ 3,737       | \$ 25,721    | \$ 12,144    | \$ 4,422       | \$ 62         |       |
| RETURN ON INVESTMENT- TASK 20  | 5.373%            | \$ 1,437,666    | \$ 74,375       | \$ 16,362        | \$ 10,873        | \$ 59,612      | \$ 8,099           | \$ 7,108        | \$ 201         | \$ 1,382     | \$ 652       | \$ 238         | \$ 3          |       |

ZONEGATED

|                                  |         |              |              |              |              |              |             |            |            |              |              |              |           |
|----------------------------------|---------|--------------|--------------|--------------|--------------|--------------|-------------|------------|------------|--------------|--------------|--------------|-----------|
| COST                             | \$ -    | \$ (835,103) | \$ 1,311,787 | \$ 1,610,910 | \$ 1,404,873 | \$ 1,244,356 | \$ (11,292) | \$ 765,485 | \$ 250,707 | \$ 3,408,186 | \$ 676,902   | \$ 933,813   | \$ 10,743 |
| LESS: ACCUMULATED DEPRECIATION   | -       | (430,360)    | 1,104,814    | 801,942      | 732,594      | 554,131      | 42,115      | 42,666     | 205,377    | 903,396      | 390,557      | 303,807      | 2,667     |
| NET BOOK VALUE                   | \$ -    | \$ (504,723) | \$ 206,973   | \$ 808,968   | \$ 672,279   | \$ 690,225   | \$ (53,407) | \$ 722,819 | \$ 45,330  | \$ 2,504,790 | \$ 286,345   | \$ 630,006   | \$ 8,076  |
| WORKING CAPITAL REQUIREMENT      | -       | -            | 206,973      | 808,968      | 672,279      | 690,225      | (53,407)    | 722,819    | 45,330     | 2,504,790    | 286,345      | 630,006      | 8,076     |
| CONTRIBUTIONS                    | -       | -            | 8,425        | 1,328,681    | 337,389      | 104,489      | 79          | 141        | -          | 11,066       | 198,614      | 838,945      | 38        |
| LESS AMORTIZATION                | -       | -            | (8,425)      | (504,859)    | (128,208)    | (40,622)     | (79)        | (141)      | -          | (11,066)     | (75,853)     | (241,184)    | (38)      |
| CONSTRUCTION COST RATE BASE      | \$ -    | \$ (504,723) | \$ 206,973   | \$ (823,742) | \$ (208,181) | \$ (63,877)  | \$ -        | \$ -       | \$ -       | \$ -         | \$ (123,761) | \$ (595,761) | \$ -      |
| RETURN ON INVESTMENT- TASK 19/21 | \$ -    | \$ (54,187)  | \$ 22,221    | \$ (1,560)   | \$ 49,718    | \$ 67,245    | \$ (5,734)  | \$ 77,602  | \$ 4,867   | \$ 134,582   | \$ 17,348    | \$ 1,840     | \$ 867    |
| RETURN ON INVESTMENT- TASK 19/21 | 10.736% | \$ 1,383,479 | \$ 96,596    | \$ 14,772    | \$ 60,591    | \$ 128,857   | \$ 2,365    | \$ 84,710  | \$ 5,068   | \$ 135,964   | \$ 16,000    | \$ 2,078     | \$ 870    |
| TOTAL RETURN ON INVESTMENT       | 10.736% | \$ 1,557,419 | \$ 1,383,479 | \$ 96,596    | \$ 14,772    | \$ 60,591    | \$ 2,365    | \$ 84,710  | \$ 5,068   | \$ 135,964   | \$ 16,000    | \$ 2,078     | \$ 870    |



CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
CONTRIBUTIONS & AMORTIZED CONTRIBUTIONS - TASK NO. 21- PART3  
FISCAL YEAR ENDED JUNE 30, 2004

CONTRIBUTIONS BY OTHERS

| COST CENTER<br>(LOCATION)    | AMOUNT        | RETAIL            |               |                |                  |                  |              |                    |                 |                 |              | WHOLESALE    |                 |               |      | TOTAL |                |
|------------------------------|---------------|-------------------|---------------|----------------|------------------|------------------|--------------|--------------------|-----------------|-----------------|--------------|--------------|-----------------|---------------|------|-------|----------------|
|                              |               | INTEGRATED SYSTEM | CITY OF GR    | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP  | TALLMADGE TOWNSHIP | WRIGHT TOWNSHIP | CITY OF EAST GR | N. KENT AREA | ADA TOWNSHIP | GAINES TOWNSHIP | MELIER-ALGONA |      |       |                |
| 2003 RATE STUDY (LOCATION)   | \$ 47,596,435 | \$ 41,467,703     | \$ 20,271,119 | \$ 19,852,137  | \$ 14,493,578    | \$ 11,453,912    | \$ 1,713,682 | \$ -               | \$ -            | \$ -            | \$ -         | \$ -         | \$ -            | \$ -          | \$ - | \$ -  | \$ 166,648,566 |
| ADDITIONS:                   |               |                   |               |                |                  |                  |              |                    |                 |                 |              |              |                 |               |      |       |                |
| CONNECTION & FRONT FOOT FEES |               |                   | 57,028        | 16,765         | 11,459           |                  |              |                    |                 |                 |              |              |                 |               |      |       | 165,190        |
| FIXED ASSET CONTRIBUTIONS    |               | 9,546,971         | 426,155       | 229,833        | 224,536          | 620,401          |              |                    |                 |                 |              |              |                 |               |      |       | 11,047,896     |
| PLASTER CREEK INTERCEPTOR    |               | \$ 51,071,702     | \$ 20,720,025 | \$ 19,939,157  | \$ 14,734,879    | \$ 12,085,772    | \$ 1,713,682 | \$ -               | \$ -            | \$ -            | \$ -         | \$ -         | \$ -            | \$ -          | \$ - | \$ -  | \$ 167,861,652 |
| GRANT                        | \$ 2,244,621  |                   |               |                |                  |                  |              |                    |                 |                 | 199,614      | 68,394       |                 |               |      |       |                |
| INTERCEPTOR                  | 1,314,819     |                   |               |                |                  |                  |              |                    |                 |                 |              | 768,551      |                 |               |      |       |                |
| LIFT STATION                 | 70,753        |                   | 8,425         |                |                  | 1,471            | 79           |                    |                 | 11,066          |              |              |                 |               |      |       |                |
| ADJUSTED BY ZONEGATING       |               | \$ 47,596,435     | \$ 21,267,838 | \$ 15,072,268  | \$ 12,190,271    | \$ 10,459        | \$ 1,713,761 | \$ 141             | \$ -            | \$ 11,066       | \$ 199,614   | \$ 836,945   | \$ 38           | \$ -          | \$ - | \$ -  | \$ 167,861,652 |
| ZONEGATING ADJUSTMENT        |               |                   | \$ 8,425      | \$ 337,389     | \$ 104,459       | \$ 79            | \$ 79        | \$ 141             | \$ -            | \$ 11,066       | \$ 199,614   | \$ 836,945   | \$ 38           | \$ -          | \$ - | \$ -  | \$ -           |
| PHYSICAL LOCATION            |               | \$ 51,071,702     | \$ 20,720,025 | \$ 19,939,157  | \$ 14,734,879    | \$ 12,085,772    | \$ 1,713,682 | \$ -               | \$ -            | \$ -            | \$ -         | \$ -         | \$ -            | \$ -          | \$ - | \$ -  | \$ 167,861,652 |

AMORTIZED CONTRIBUTIONS

|                            |               |               |              |              |              |            |        |        |           |           |            |         |      |      |      |      |               |
|----------------------------|---------------|---------------|--------------|--------------|--------------|------------|--------|--------|-----------|-----------|------------|---------|------|------|------|------|---------------|
| 2003 RATE STUDY (LOCATION) | \$ 31,716,774 | \$ 32,621,670 | \$ 6,867,715 | \$ 3,710,683 | \$ 2,973,836 | \$ 205,142 | \$ -   | \$ -   | \$ -      | \$ -      | \$ -       | \$ -    | \$ - | \$ - | \$ - | \$ - | \$ 83,553,680 |
| CURRENT YEAR ADJUSTMENT    | 1,053,785     | 925,954       | 377,107      | 394,389      | 292,653      | 232,046    | 34,319 |        |           |           |            |         |      |      |      |      | 3,310,063     |
| PLASTER CREEK INTERCEPTOR  | \$ 32,770,559 | \$ 33,547,624 | \$ 6,244,822 | \$ 4,003,136 | \$ 3,205,882 | \$ 239,461 | \$ -   | \$ -   | \$ -      | \$ -      | \$ -       | \$ -    | \$ - | \$ - | \$ - | \$ - | \$ 86,863,743 |
| GRANT                      |               |               |              | 504,899      | 128,206      | 39,151     |        |        |           |           | 75,853     | 25,990  |      |      |      |      |               |
| INTERCEPTOR                |               |               |              |              |              |            |        |        |           |           |            | 215,194 |      |      |      |      |               |
| LIFT STATION               |               |               | 8,425        |              |              | 1,471      | 79     |        | 11,066    |           |            |         |      |      |      |      |               |
| ADJUSTED BY ZONEGATING     | \$ 32,770,559 | \$ 33,547,624 | \$ 6,253,247 | \$ 4,131,344 | \$ 3,246,904 | \$ 239,540 | \$ 141 | \$ -   | \$ 11,066 | \$ 75,853 | \$ 241,184 | \$ 38   | \$ - | \$ - | \$ - | \$ - | \$ 86,863,743 |
| ZONEGATING ADJUSTMENT      |               |               | \$ 8,425     | \$ 504,899   | \$ 128,206   | \$ 40,622  | \$ 79  | \$ 141 | \$ 11,066 | \$ 75,853 | \$ 241,184 | \$ 38   | \$ - | \$ - | \$ - | \$ - | \$ -          |
| PHYSICAL LOCATION          | \$ 32,770,559 | \$ 33,547,624 | \$ 6,244,822 | \$ 4,003,136 | \$ 3,205,882 | \$ 239,461 | \$ -   | \$ -   | \$ -      | \$ -      | \$ -       | \$ -    | \$ - | \$ - | \$ - | \$ - | \$ 86,863,743 |

CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
RECONCILIATION OF CONSTRUCTION COST & ACCUMULATED DEPRECIATION- PHYSICAL LOCATION & ZONEGATING  
FISCAL YEAR ENDED JUNE 30, 2004

| COST CENTER                                     | AMOUNT         | RETAIL         |                |                  |                  |               | WHOLESALE         |                 |                 |              |              | TOTAL |                 |                |
|---|----------------|----------------|----------------|------------------|------------------|---------------|-------------------|-----------------|-----------------|--------------|--------------|-------|-----------------|----------------|
|   |                | CITY OF GR     | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP   | TALLMADE TOWNSHIP | WRIGHT TOWNSHIP | CITY OF EAST GR | N. KENT AREA | ADA TOWNSHIP |       | GAINES TOWNSHIP | MEHER-ALGOMA   |
| <b>CONSTRUCTION COST- BY PHYSICAL LOCATION:</b> |                |                |                |                  |                  |               |                   |                 |                 |              |              |       |                 |                |
| BY PHYSICAL LOCATION- TASK 11                   |                |                |                |                  |                  |               |                   |                 |                 |              |              |       |                 |                |
| IN SERVICE- TASK 10                             | \$ 118,653,575 | \$ 192,101,055 | \$ 22,834,288  | \$ 21,951,122    | \$ 14,706,682    | \$ 12,913,854 | \$ 1,708,652      |                 |                 |              |              |       |                 | \$ 384,871,248 |
| TASK 11/16/21- CSO COST                         | 1,930,498      | 1,573,208      | 320,698        | 454,064          |                  |               | 597,874           |                 |                 |              |              |       |                 | 4,922,251      |
| O'BRIEN   | (114,002,028)  | (546,532)      | 44,816         |                  |                  |               |                   |                 |                 |              |              |       |                 | (114,002,028)  |
| VANPORTLIET                                     |                | (44,816)       |                |                  |                  |               |                   |                 |                 |              |              |       |                 |                |
| REMEMBRANCE / 3 MILE                            |                | (69,735)       |                |                  |                  |               |                   |                 |                 |              |              |       |                 |                |
| 16th AVENUE                                     |                | (136,482)      |                |                  |                  |               | 136,482           |                 |                 |              |              |       |                 |                |
| HAYES- WEST                                     |                |                |                |                  |                  |               |                   |                 |                 |              |              |       |                 |                |
| HAYES- EAST                                     |                | (89,992)       |                |                  |                  |               |                   |                 |                 |              |              |       |                 |                |
| THORNAPPLE                                      |                | (65,478)       |                |                  |                  |               |                   |                 |                 |              |              |       |                 |                |
| CASCADE SPRINGS                                 |                | (95,556)       |                |                  |                  |               |                   |                 |                 |              |              |       |                 |                |
| BIRD AVE-ALPINE ESTATES                         |                | (296,520)      |                |                  |                  |               |                   |                 |                 |              |              |       |                 |                |
| EAST PARIS                                      |                |                |                |                  |                  |               |                   |                 |                 |              |              |       |                 |                |
| SERVICE MAINS                                   |                |                |                |                  |                  |               |                   |                 |                 |              |              |       |                 |                |
| LESS: SERVICE MAINS- TOTAL SUBS- PHY. LOC.      |                | (12,508,162)   | (2,505,143)    | (4,323,453)      | (92,355)         | (140,457)     | (597,874)         |                 |                 |              |              |       |                 | (20,267,444)   |
| ADD: SERVICE MAINS- TOTAL ADDS- PHY. LOC.       |                | 5,405,345      | 2,165,478      | 1,933,737        | 92,355           | 162           |                   |                 |                 |              |              |       |                 | 9,597,077      |
| TOTAL- PHYSICAL LOCATION COST                   | \$ 120,584,073 | \$ 71,124,317  | \$ 23,405,679  | \$ 20,015,470    | \$ 14,864,152    | \$ 13,165,635 | \$ 1,845,134      | \$ 115,644      | \$ -            | \$ -         | \$ -         | \$ -  | \$ -            | \$ 265,121,104 |

| COST CENTER                           | AMOUNT         | RETAIL        |                |                  |                  |               | WHOLESALE         |                 |                 |              |              | TOTAL      |                 |                |
|---------------------------------------|----------------|---------------|----------------|------------------|------------------|---------------|-------------------|-----------------|-----------------|--------------|--------------|------------|-----------------|----------------|
|                                       |                | CITY OF GR    | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP   | TALLMADE TOWNSHIP | WRIGHT TOWNSHIP | CITY OF EAST GR | N. KENT AREA | ADA TOWNSHIP |            | GAINES TOWNSHIP | MEHER-ALGOMA   |
| <b>CONSTRUCTION COST- ZONEGATING:</b> |                |               |                |                  |                  |               |                   |                 |                 |              |              |            |                 |                |
| LIFT STATIONS / CHAMBERS:             |                |               |                |                  |                  |               |                   |                 |                 |              |              |            |                 |                |
| FULLER-BROOKVIEW                      | \$ 1,252,893   | (625,770)     |                |                  |                  |               |                   |                 |                 |              |              |            |                 |                |
| FULTON- MIDDLEBORROW                  | 37,983         | (37,393)      |                |                  |                  |               |                   |                 | 246,369         |              |              |            |                 |                |
| WEALTHY ST EXT. CHAMBER               | 458,953        | (87,747)      | 83,846         |                  |                  |               | 3,901             |                 |                 |              |              |            |                 |                |
| WEALTHY MARKET                        | 20,444         | (12,315)      | 11,641         |                  |                  |               |                   | 243             |                 |              |              |            |                 |                |
| MARKET                                | 1,477,180      | (443,008)     | 175,888        |                  |                  |               | 1,640             | 2,940           |                 |              |              |            |                 | 798            |
| VANPORTLIET                           | 44,816         | 6,664         | (6,664)        |                  |                  |               |                   |                 |                 |              |              |            |                 |                |
| REMEMBRANCE / 3 MILE                  |                |               |                |                  |                  |               |                   |                 |                 |              |              |            |                 |                |
| 16th AVENUE                           | 69,735         |               |                |                  |                  |               |                   |                 |                 |              |              |            |                 |                |
| HAYES- WEST                           | 136,482        |               |                |                  |                  |               |                   |                 |                 |              |              |            |                 |                |
| HAYES- EAST                           |                |               |                |                  |                  |               |                   |                 |                 |              |              |            |                 |                |
| O'BRIEN                               | 546,532        | 21,577        | (45,072)       |                  |                  |               |                   |                 |                 |              |              |            |                 |                |
| THORNAPPLE                            | 89,992         |               |                |                  |                  |               |                   |                 |                 |              |              |            |                 |                |
| CASCADE SPRINGS                       | 65,478         |               |                |                  |                  |               |                   |                 |                 |              |              |            |                 |                |
| BIRD AVE-ALPINE ESTATES               | 95,556         |               |                |                  |                  |               |                   |                 |                 |              |              |            |                 |                |
| EAST PARIS                            | 286,520        |               |                |                  |                  |               |                   |                 |                 |              |              |            |                 |                |
| SERVICE MAINS- ZONEGATED COST         |                |               |                |                  |                  |               |                   |                 |                 |              |              |            |                 |                |
| TOTAL- ZONEGATED COST                 | \$ -           | \$ 242,889    | \$ 1,092,148   | \$ 1,610,910     | \$ 1,404,873     | \$ 796,851    | \$ 96,154         | \$ 625,820      | \$ 250,707      | \$ 2,930,355 | \$ 675,902   | \$ 933,813 | \$ 9,845        | \$ 10,670,367  |
| GRAND TOTAL- COST                     | \$ 120,584,073 | \$ 70,163,214 | \$ 24,718,466  | \$ 21,626,380    | \$ 16,269,025    | \$ 14,409,991 | \$ 1,833,842      | \$ 881,129      | \$ 250,707      | \$ 3,408,186 | \$ 675,902   | \$ 933,813 | \$ 10,743       | \$ 275,791,471 |

CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
RECONCILIATION OF CONSTRUCTION COST & ACCUMULATED DEPRECIATION- PHYSICAL LOCATION & ZONEGATING  
FISCAL YEAR ENDED JUNE 30, 2004

| COST CENTER                                | AMOUNT        | PHYSICAL LOCATION |              |                |                  |                         |             |                   |                 |                 |              | TOTAL |                        |                 |                |
|--|---------------|-------------------|--------------|----------------|------------------|-------------------------|-------------|-------------------|-----------------|-----------------|--------------|-------|------------------------|-----------------|----------------|
|  |               | INTEGRATED SYSTEM | CITY OF GR   | CITY OF WALKER | CITY OF KENTWOOD | RETAIL CASCADE TOWNSHIP | GR TOWNSHIP | TALLADGE TOWNSHIP | WRIGHT TOWNSHIP | CITY OF EAST GR | N. KENT AREA |       | WHOLESALE ADA TOWNSHIP | GAINES TOWNSHIP | MEIJER-ALGOMA  |
| BY PHYSICAL LOCATION-TASK 11               | \$ 73,195,922 | \$ 49,205,964     | \$ 7,874,261 | \$ 7,946,337   | \$ 4,039,016     | \$ 3,459,060            | \$ 225,928  | \$ -              | \$ -            | \$ -            | \$ -         | \$ -  | \$ -                   | \$ -            | \$ 145,946,488 |
| IN SERVICE-TASK 10                         | -             | 11,302            | -            | -              | -                | -                       | 11,958      | 918               | -               | -               | -            | -     | -                      | -               | 24,178         |
| TASK 11/16/21- CSD ACC. DEPRECIATION       | -             | (17,483,517)      | -            | -              | -                | -                       | -           | -                 | -               | -               | -            | -     | -                      | -               | (17,483,517)   |
| O'BRIEN                                    | -             | 94,003            | 94,003       | -              | -                | -                       | -           | -                 | -               | -               | -            | -     | -                      | -               | -              |
| VANPORTFOLIET                              | -             | (44,816)          | 44,816       | -              | -                | -                       | -           | -                 | -               | -               | -            | -     | -                      | -               | -              |
| REMEMBRANCE /3 MILE                        | -             | (4,481)           | -            | -              | -                | -                       | -           | -                 | 4,481           | -               | -            | -     | -                      | -               | -              |
| 16th AVENUE                                | -             | (6,821)           | -            | -              | -                | -                       | 6,821       | -                 | -               | -               | -            | -     | -                      | -               | -              |
| HAYES- WEST                                | -             | -                 | -            | -              | -                | -                       | -           | -                 | -               | -               | -            | -     | -                      | -               | -              |
| HAYES- EAST                                | -             | -                 | -            | -              | -                | -                       | -           | -                 | -               | -               | -            | -     | -                      | -               | -              |
| THORNAPPLE                                 | -             | (17,998)          | -            | -              | 17,998           | -                       | -           | -                 | -               | -               | -            | -     | -                      | -               | -              |
| CASCADE SPRINGS                            | -             | (10,913)          | -            | -              | 10,913           | -                       | -           | -                 | -               | -               | -            | -     | -                      | -               | -              |
| BIRD AVE-ALPINE ESTATES                    | -             | -                 | -            | -              | -                | -                       | -           | -                 | -               | -               | -            | -     | -                      | -               | -              |
| EAST PARIS                                 | -             | -                 | -            | -              | -                | -                       | -           | -                 | -               | -               | -            | -     | -                      | -               | -              |
| SERVICE MAINS                              | -             | -                 | -            | -              | -                | -                       | -           | -                 | -               | -               | -            | -     | -                      | -               | -              |
| LESS: SERVICE MAINS- TOTAL SUBS- PHY. LOC. | -             | (6,560,684)       | (1,060,691)  | (2,072,426)    | (59,107)         | (92,702)                | (11,957)    | -                 | -               | -               | -            | -     | -                      | -               | (9,867,567)    |
| ADD: SERVICE MAINS- TOTAL ADDS- PHY. LOC.  | -             | 3,311,960         | 892,366      | 940,323        | 59,107           | 107                     | -           | -                 | -               | -               | -            | -     | -                      | -               | 5,203,863      |
|  | \$ 73,195,922 | \$ 28,306,013     | \$ 7,844,755 | \$ 6,814,234   | \$ 4,067,927     | \$ 3,366,465            | \$ 232,750  | \$ 5,399          | \$ -            | \$ -            | \$ -         | \$ -  | \$ -                   | \$ -            | \$ 123,633,465 |

ACCUMULATED DEPRECIATION- ZONEGATED

| LIFT STATIONS / CHAMBERS:                 | AMOUNT        | CITY OF GR    | CITY OF WALKER | CITY OF KENTWOOD | RETAIL CASCADE TOWNSHIP | GR TOWNSHIP  | TALLADGE TOWNSHIP | WRIGHT TOWNSHIP | CITY OF EAST GR | N. KENT AREA | WHOLESALE ADA TOWNSHIP | GAINES TOWNSHIP | MEIJER-ALGOMA | TOTAL          |
|---|---------------|---------------|----------------|------------------|-------------------------|--------------|-------------------|-----------------|-----------------|--------------|------------------------|-----------------|---------------|----------------|
| FULLER-BROOKVIEW                          | \$ 166,595    | (83,197)      | -              | -                | -                       | 56,505       | -                 | -               | -               | 36,692       | -                      | -               | -             | -              |
| FULTON-MIDDLEBORROW                       | 35,610        | (35,057)      | -              | -                | -                       | 35,057       | -                 | -               | -               | -            | -                      | -               | -             | -              |
| WEALTHY ST EXT. CHAMBER                   | 22,641        | (4,328)       | 4,136          | -                | -                       | -            | 192               | -               | -               | -            | -                      | -               | -             | -              |
| WEALTHY MARKET                            | 20,410        | (12,294)      | 11,821         | -                | -                       | -            | -                 | 243             | -               | 430          | -                      | -               | -             | -              |
| MARKET                                    | 1,442,513     | (432,610)     | 171,760        | -                | -                       | 29,990       | 1,601             | 2,871           | -               | 225,609      | -                      | -               | 779           | -              |
| VANPORTFOLIET                             | 44,816        | 6,664         | (6,664)        | -                | -                       | -            | -                 | -               | -               | -            | -                      | -               | -             | -              |
| REMEMBRANCE /3 MILE                       | -             | -             | -              | -                | -                       | -            | -                 | -               | -               | -            | -                      | -               | -             | -              |
| 16th AVENUE                               | 4,481         | -             | -              | -                | -                       | -            | -                 | -               | -               | -            | -                      | -               | -             | -              |
| HAYES- WEST                               | 6,821         | -             | -              | -                | -                       | -            | (6,821)           | -               | -               | -            | -                      | -               | -             | -              |
| HAYES- EAST                               | -             | -             | -              | -                | -                       | -            | -                 | 6,821           | -               | -            | -                      | -               | -             | -              |
| O'BRIEN                                   | 94,003        | -             | (7,752)        | -                | -                       | -            | -                 | -               | -               | -            | -                      | -               | -             | -              |
| THORNAPPLE                                | 17,998        | 3,711         | -              | -                | -                       | -            | 4,041             | -               | -               | -            | -                      | -               | -             | -              |
| CASCADE SPRINGS                           | 10,913        | -             | -              | -                | -                       | -            | -                 | -               | -               | -            | -                      | -               | -             | -              |
| BIRD AVE-ALPINE ESTATES                   | -             | -             | -              | -                | -                       | -            | -                 | -               | -               | -            | -                      | -               | -             | -              |
| EAST PARIS                                | -             | -             | -              | -                | -                       | -            | -                 | -               | -               | -            | -                      | -               | -             | -              |
| SERVICE MAINS-ZONEGATED ACC. DEPRECIATION | -             | 136,731       | 931,713        | 801,942          | 732,594                 | 432,579      | 43,102            | 32,731          | 205,377         | 640,665      | 390,557                | 303,807         | 1,888         | 4,653,686      |
| TOTAL- ZONEGATED ACC. DEPRECIATION        | \$ -          | \$ (430,380)  | \$ 1,104,814   | \$ 801,942       | \$ 732,594              | \$ 554,131   | \$ 42,115         | \$ 42,666       | \$ 205,377      | \$ 903,396   | \$ 390,557             | \$ 303,807      | \$ 2,667      | \$ 4,653,686   |
| GRAND TOTAL- ACC. DEPRECIATION            | \$ 73,195,922 | \$ 27,875,633 | \$ 8,949,569   | \$ 7,616,176     | \$ 4,800,521            | \$ 3,920,596 | \$ 274,865        | \$ 48,065       | \$ 205,377      | \$ 903,396   | \$ 390,557             | \$ 303,807      | \$ 2,667      | \$ 128,487,151 |

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**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ADJUSTED OPERATING EXPENSE ZONEGATING ALLOCATION BY GOVERNMENTAL UNIT - TASK #22  
FISCAL YEAR ENDED JUNE 30, 2004**

| COST CENTER                | ADJUSTED EXPENSE BY COST CENTER | INTEGRATED SYSTEM | RETAIL       |                |                  |                  |             |                    |                 |                 |              |              | WHOLESALE       |               |   |   |   |   |    |  |
|----------------------------|---------------------------------|-------------------|--------------|----------------|------------------|------------------|-------------|--------------------|-----------------|-----------------|--------------|--------------|-----------------|---------------|---|---|---|---|----|--|
|                            |                                 |                   | CITY OF GR   | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP | TALLMADGE TOWNSHIP | WRIGHT TOWNSHIP | CITY OF EAST GR | N. KENT AREA | ADA TOWNSHIP | GAINES TOWNSHIP | MEIJER-ALCOMA |   |   |   |   |    |  |
| WASTEWATER TREATMENT       | \$ 10,567,637                   | \$ 10,567,637     |              |                |                  |                  |             |                    |                 |                 |              |              |                 |               |   |   |   |   |    |  |
| LIFT STATIONS:             |                                 |                   |              |                |                  |                  |             |                    |                 |                 |              |              |                 |               |   |   |   |   |    |  |
| A. INTERCEPTOR             | 180,949                         |                   | 125,021      | 24,019         | -                | -                | 3,648       | 195                | 414             | -               | 27,557       | -            | -               | -             | - | - | - | - | 95 |  |
| B. TRUNK                   | 135,350                         |                   | 48,946       | 42,589         | -                | 23,114           | 15,956      | 959                | -               | -               | 3,786        | -            | -               | -             | - | - | - | - | -  |  |
| C. LOCAL COLLECTOR         | 419,583                         |                   | 64,701       | 71,278         | -                | 75,760           | 150,312     | 8,000              | 23,014          | -               | 11,258       | 15,260       | -               | -             | - | - | - | - | -  |  |
| SEWER LINES:               |                                 |                   |              |                |                  |                  |             |                    |                 |                 |              |              |                 |               |   |   |   |   |    |  |
| A. INTERCEPTOR             | 194,643                         |                   | 142,960      | 16,151         | 33,778           | 1,754            | -           | -                  | -               | -               | -            | -            | -               | -             | - | - | - | - | -  |  |
| B. TRUNK                   | 455,001                         |                   | 112,742      | 128,205        | 38,856           | 112,742          | 22,982      | 10,201             | 552             | -               | -            | -            | -               | -             | - | - | - | - | -  |  |
| C. LOCAL COLLECTOR         | 3,365,921                       |                   | 2,176,675    | 411,046        | 307,813          | 184,082          | 242,548     | 22,989             | 20,768          | -               | -            | -            | -               | -             | - | - | - | - | -  |  |
| D. ZONEGATING              |                                 |                   | (116,159)    | 17,593         | (20,352)         | 31,705           | 24,736      | (8,961)            | 12,830          | 8,538           | 24,413       | 17,491       | 8,030           | 46            | - | - | - | - | -  |  |
| BULK METERING STATIONS     | 18,406                          |                   | -            | -              | 2,445            | -                | -           | -                  | -               | 2,182           | 6,973        | 2,138        | 4,668           | -             | - | - | - | - | -  |  |
| CUSTOMER ACCOUNTING        | 2,010,931                       |                   | 1,620,429    | 144,304        | 110,340          | 40,983           | 86,430      | 2,654              | 5,791           | -               | -            | -            | -               | -             | - | - | - | - | -  |  |
| INDUSTRIAL PRETREATMENT    | 551,227                         |                   |              |                |                  |                  |             |                    |                 |                 |              |              |                 |               |   |   |   |   |    |  |
| SUBTOTAL OPERATING EXPENSE | 17,900,648                      | 11,118,864        | 4,205,036    | 855,175        | 546,766          | 396,254          | 546,612     | 36,137             | 63,369          | 10,720          | 73,987       | 34,889       | 12,698          | 141           | - | - | - | - | -  |  |
| ADMINISTRATIVE EXPENSE     | 2,021,246                       | 1,019,682         | 618,395      | 130,859        | 93,068           | 57,557           | 75,215      | 6,448              | 7,826           | 983             | 6,785        | 3,200        | 1,165           | 13            | - | - | - | - | -  |  |
| TOTAL                      | \$ 19,921,894                   | \$ 12,138,546     | \$ 4,823,431 | \$ 986,074     | \$ 639,834       | \$ 453,821       | \$ 621,827  | \$ 42,585          | \$ 71,195       | \$ 11,703       | \$ 80,772    | \$ 38,089    | \$ 13,863       | \$ 154        | - | - | - | - | -  |  |

**METHOD OF DISTRIBUTION**

| WASTEWATER TREATMENT       | 100.000%  | 100.000% |
|----------------------------|-----------|----------|
| LIFT STATIONS:             |           |          |
| A. INTERCEPTORS (51)       |           |          |
| B. TRUNK (2)               |           |          |
| C. LOCAL (8)               |           |          |
| SEWER LINES:               |           |          |
| TOTAL MILES: 870.34        |           |          |
| A. INTERCEPTOR             | 100.000%  | 100.000% |
| MILES                      | 73.447%   | 17.354%  |
| B. TRUNK LINES             | 30.98     | 0.38     |
| MILES                      | 31.242%   | 8.521%   |
| C. LOCAL COLLECTOR         | 30.87     | 8.42     |
| MILES                      | 64.668%   | 7.206%   |
| D. ZONEGATING              | 471.65    | 39.89    |
| MILES                      | (25.17)   | (1.92)   |
| BULK METERING STATIONS (7) |           |          |
| CUSTOMER ACCTG (1)         |           |          |
| NO. OF METERS              | 80.561%   | 5.487%   |
| INDUSTRIAL PRETREATMENT    | 58,127.00 | 3,958.00 |
| ADMINISTRATIVE EXPENSE (2) | 100.000%  | 100.000% |
|                            | 30.595%   | 4.604%   |

**NOTES:**

(1) MAINTENANCE & COLLECTION COSTS ARE ALLOCATED ON THE NUMBER OF METERS, INCLUSIVE OF USERS FOR WRIGHT TWP.  
 (2) ALLOCATED ON DIRECT OPERATING EXPENSE, ADJUSTED FOR ANY COST ASSIGNABLE EXCLUSIVELY TO GR OR RETAIL COMMUNITIES, IF APPLICABLE.

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 23**

ASSIGN OTHER OPERATING REVENUES TO EACH GOVERNMENTAL ENTITY.

BASIS OF ALLOCATION: RETAIL BILLINGS BY GOVERNMENTAL ENTITY - TASK NO. 6 & 7

|                       | <u>RETAIL<br/>BILLINGS</u> | <u>PERCENTAGE<br/>OF TOTAL</u> | <u>ALLOCATION</u> |
|-----------------------|----------------------------|--------------------------------|-------------------|
| CITY OF GRAND RAPIDS  | \$ 20,984,674              | 76.4809%                       | \$ 261,823        |
| CITY OF WALKER        | 2,096,794                  | 7.6420%                        | 26,161            |
| CITY OF KENTWOOD      | 2,006,096                  | 7.3114%                        | 25,030            |
| CASCADE TOWNSHIP      | 1,035,269                  | 3.7731%                        | 12,917            |
| GRAND RAPIDS TOWNSHIP | 1,168,333                  | 4.2581%                        | 14,577            |
| TALLMADGE TOWNSHIP    | 62,503                     | 0.2278%                        | 780               |
| WRIGHT TOWNSHIP       | 84,155                     | 0.3067%                        | 1,050             |
|                       | <u>\$ 27,437,824</u>       | <u>100.0000%</u>               | <u>\$ 342,338</u> |

CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ASSIGN DEPRECIATION EXPENSE TO CUSTOMER COMMUNITIES- TASK NO. 24  
FISCAL YEAR ENDED JUNE 30, 2004

| COST CENTER<br>BY PHYSICAL LOCATION- TASK 11<br>IN SERVICE- TASK 10<br>TASK 11/16/21- CSO DEP. EXP. | DEPRECIATION<br>EXPENSE | INTEGRATED<br>SYSTEM | RETAIL        |                   |                     |                     |                | WHOLESALE             |                    |                    |                 |                 | TOTAL  |                    |
|---|-------------------------|----------------------|---------------|-------------------|---------------------|---------------------|----------------|-----------------------|--------------------|--------------------|-----------------|-----------------|--------|--------------------|
|   |                         |                      | CITY OF<br>GR | CITY OF<br>WALKER | CITY OF<br>KENTWOOD | CASCADE<br>TOWNSHIP | GR<br>TOWNSHIP | TALLMADGE<br>TOWNSHIP | WRIGHT<br>TOWNSHIP | CITY OF<br>EAST GR | N. KENT<br>AREA | ADA<br>TOWNSHIP |        | GAINES<br>TOWNSHIP |
| LIFT STATIONS / CHAMBERS:   |                         |                      |               |                   |                     |                     |                |                       |                    |                    |                 |                 |        |                    |
| FULLER-BROOKVIEW  | \$ 46,649               | \$ 2,627,347         | \$ 3,594,774  | \$ 464,012        | \$ 436,838          | \$ 297,113          | \$ 249,895     | \$ 34,162             | \$ 11,958          |                    |                 |                 |        |                    |
| FULTON- MIDDLEBORROW  | 183                     | 76,536               | 46,200        | 6,414             | 9,081               |                     |                |                       |                    |                    |                 |                 |        |                    |
| WEALTHY ST EXT. CHAMBER   | 11,321                  |                      | (23,298)      |                   |                     |                     | 14,126         |                       |                    |                    |                 |                 |        |                    |
| WEALTHY   | 17                      |                      | (180)         |                   |                     |                     | 180            |                       |                    | 9,173              |                 |                 |        |                    |
| MARKET  | 34,667                  |                      | (2,164)       | 2,068             |                     |                     | 96             |                       |                    |                    |                 |                 |        |                    |
| VANPORTFLEET  |                         |                      | (10)          | 10                |                     |                     |                |                       |                    |                    |                 |                 |        |                    |
| REMEMBRANCE / 3 MILE  |                         |                      | (10,397)      | 4,128             |                     |                     | 721            | 38                    |                    | 5,422              |                 |                 | 19     |                    |
| O'BRIEN   | 15,667                  |                      |               |                   |                     |                     |                |                       |                    |                    |                 |                 |        |                    |
| THORNAPPLE  | 3,000                   |                      | 619           | (1,293)           |                     |                     |                | 674                   |                    |                    |                 |                 |        |                    |
| CASCADE SPRINGS   | 2,183                   |                      |               |                   |                     |                     |                |                       |                    |                    |                 |                 |        |                    |
| 16TH AVE  | 4,481                   |                      |               |                   |                     |                     |                |                       |                    |                    |                 |                 |        |                    |
| HAYES- WEST   | 6,821                   |                      |               |                   |                     |                     |                |                       |                    |                    |                 |                 |        |                    |
| HAYES- EAST   |                         |                      |               |                   |                     |                     |                |                       |                    |                    |                 |                 |        |                    |
| BIRD AVE-ALPINE ESTATES   | 3,185                   |                      |               |                   |                     |                     |                |                       |                    |                    |                 |                 |        |                    |
| EAST PARIS  | 12,214                  |                      |               |                   |                     |                     |                |                       |                    |                    |                 |                 |        |                    |
| SERVICEMAINS  |                         | 2,703,883            | (121,014)     | 4,594             | (17,644)            | 27,571              | 11,967         | (10,044)              |                    | 12,333             | 13,207          | 18,570          | 192    |                    |
| ADJUSTED BY ZONEGATING  |                         |                      | 1,109,848     | 479,833           | 428,275             | 324,684             | 292,288        | 36,884                |                    | 24,622             | 13,207          | 18,570          | 211    |                    |
| LESS CONTRIBUTIONS AMORTIZED  |                         | (1,053,785)          | (925,964)     | (377,107)         | (379,018)           | (292,453)           | (232,046)      | (34,319)              |                    |                    |                 | (15,371)        |        |                    |
| TASK NO. 21   |                         | \$ 1,650,098         | \$ 183,884    | \$ 102,826        | \$ 49,257           | \$ 32,231           | \$ 60,242      | \$ 2,585              |                    | \$ 24,622          | \$ 13,207       | \$ 3,199        | \$ 211 | \$ 2,197,205       |
| TOTAL   |                         |                      |               |                   |                     |                     |                |                       |                    |                    |                 |                 |        |                    |

CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
ACCUMULATE REVENUE REQUIREMENTS BY CUSTOMER COMMUNITIES- TASK NO. 25  
FISCAL YEAR ENDED JUNE 30, 2004

|  | RETAIL        |                |                  |                  |              |                    |                 |                 |              |              | WHOLESALE       |               |               | TOTAL |
|--|---------------|----------------|------------------|------------------|--------------|--------------------|-----------------|-----------------|--------------|--------------|-----------------|---------------|---------------|-------|
|  | CITY OF GR    | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP  | TALLMADGE TOWNSHIP | WRIGHT TOWNSHIP | CITY OF EAST GR | N. KENT AREA | ADA TOWNSHIP | GAINES TOWNSHIP | MELIER-ALGOMA |               |       |
| OPERATION & MAINTENANCE EXPENSE- TASK NO. 22 | \$ 12,138,546 | \$ 4,823,431   | \$ 639,834       | \$ 453,821       | \$ 621,827   | \$ 42,565          | \$ 71,195       | \$ 11,703       | \$ 80,772    | \$ 38,089    | \$ 13,863       | \$ 154        | \$ 19,921,894 |       |
| DEPRECIATION EXPENSE                         | 1,650,098     | 183,884        | 49,257           | 32,231           | 60,242       | 2,565              | 24,622          | 3,929           | 70,934       | 13,207       | 3,199           | 211           | 2,197,205     |       |
| TASK NO. 24                                  |               |                |                  |                  |              |                    |                 |                 |              |              |                 |               |               |       |
| RETURN ON SYSTEM INVESTMENT                  | 1,957,419     | 1,383,479      | 14,772           | 60,591           | 126,857      | 2,365              | 84,710          | 5,068           | 135,964      | 18,000       | 2,078           | 870           | 3,888,769     |       |
| TASK NO. 21                                  |               |                |                  |                  |              |                    |                 |                 |              |              |                 |               |               |       |
| REVENUE CREDITS- TASK NO. 23                 |               | (261,823)      | (25,030)         | (12,917)         | (14,577)     | (780)              | (1,050)         |                 |              |              |                 |               | (342,338)     |       |
| CSO DEBT SERVICE REQUIREMENTS                | 8,101,539     |                |                  |                  |              |                    |                 |                 |              |              |                 |               | 8,101,539     |       |
| ALLOCATE:                                    |               |                |                  |                  |              |                    |                 |                 |              |              |                 |               |               |       |
| INTEGRATED CONN. FEE CREDIT                  | (1,017,417)   | (131,396)      | (172,256)        | (73,831)         | (57,268)     | (4,187)            | (3,470)         | (53,693)        |              | (40,206)     |                 | (741)         | (1,554,485)   |       |
| INTEGRATED SYSTEM*                           | 9,412,965     | 1,215,653      | 1,593,679        | 683,069          | 530,017      | 38,746             | 32,106          | 496,755         | 1,273,022    | 371,981      | 91,217          | 6,853         | 14,364,239    |       |
|  | \$ 22,626,058 | \$ 2,243,592   | \$ 2,100,256     | \$ 1,142,964     | \$ 1,267,078 | \$ 81,294          | \$ 208,113      | \$ 463,762      | \$ 1,560,692 | \$ 401,071   | \$ 110,357      | \$ 7,347      | \$ 32,212,564 |       |

\* ALLOCATED TO CUSTOMER COMMUNITIES UNDER OLD CONTRACT BASED ON PLANT FLOW. REMAINING ALLOCATION TO COMMUNITIES UNDER UNIFORM CONTRACT BASED ON PLANT FLOW & LAND, AS FOLLOWS:

|                               | RETAIL       |                |                  |                  |             |                    |                 |                 |              |              | WHOLESALE       |               |               | TOTAL |
|-------------------------------|--------------|----------------|------------------|------------------|-------------|--------------------|-----------------|-----------------|--------------|--------------|-----------------|---------------|---------------|-------|
|                               | CITY OF GR   | CITY OF WALKER | CITY OF KENTWOOD | CASCADE TOWNSHIP | GR TOWNSHIP | TALLMADGE TOWNSHIP | WRIGHT TOWNSHIP | CITY OF EAST GR | N. KENT AREA | ADA TOWNSHIP | GAINES TOWNSHIP | MELIER-ALGOMA |               |       |
| OLD METHOD- PLANT FLOW        | \$ 9,412,965 | 1,215,653      | 1,593,679        | 683,069          | 530,017     | 38,746             | 32,106          | 496,755         | 1,273,022    | 371,981      | 91,217          | 6,853         | 14,364,239    |       |
| NEW METHOD- PLANT FLOW / LAND |              |                |                  |                  |             |                    |                 |                 |              |              |                 |               |               |       |
|                               | \$ 9,412,965 | \$ 1,215,653   | \$ 1,593,679     | \$ 683,069       | \$ 530,017  | \$ 38,746          | \$ 32,106       | \$ 496,755      | \$ 1,273,022 | \$ 371,981   | \$ 91,217       | \$ 6,853      | \$ 15,746,063 |       |

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWER SUPPLY SYSTEM FUND  
TASK NO. 25a**

REVIEW THE REVENUE REQUIREMENTS TO ASSURE COMPLIANCE WITH THE APPLICABLE BOND ORDINANCE PROVISIONS.

|  | <u>YEAR ENDED<br/>6/30/04</u> | <u>PRO FORMA *<br/>YEAR ENDED<br/>6/30/04</u> |
|--|-------------------------------|---|
| <b>REVENUES:</b>                         |                               |   |
| RETAIL/WHOLESALE SEWAGE SERVICE          | \$ 30,080,846                 | \$ 32,110,234                                 |
| CONNECTION FEES/FRONT FOOT FEES/ENG FEES | 1,840,846                     | 1,840,846                                     |
| SEWAGE SURCHARGES                        | 561,137                       | 561,137                                       |
| OTHER OPERATING REVENUES                 | 223,491                       | 223,491                                       |
| INTEREST ON INVESTMENTS                  | 847,390                       | 847,390                                       |
| MISCELLANEOUS                            | 289,391                       | 289,391                                       |
| TOTAL REVENUES                           | <u>33,843,101</u>             | <u>35,872,489</u>                             |
| <b>OPERATING EXPENSES:</b>               |                               |   |
| OPERATIONS & MAINTENANCE                 | \$ 19,698,545                 | \$ 19,698,545                                 |
| DEPRECIATION                             | <u>7,704,306</u>              | <u>7,704,306</u>                              |
| TOTAL EXPENSES                           | \$ 27,402,851                 | \$ 27,402,851                                 |
| ADDITIONS: DEPRECIATION                  | <u>7,704,306</u>              | <u>7,704,306</u>                              |
| NET EARNINGS OF THE SYSTEM               | <u>\$ 14,144,556</u>          | <u>\$ 16,173,944</u>                          |
| <b>DEBT SERVICE</b>                      |                               |   |
| SERIES 1992 BONDS, FY 2004               | \$ 1,003,200                  | \$ 1,003,200                                  |
| SERIES 1998 BONDS, FY 2004               | 4,893,088                     | 4,893,088                                     |
| SRF DEBT (Subordinated Debt)             | <u>3,978,947</u>              | <u>3,978,947</u>                              |
|  | <u>\$ 9,875,235</u>           | <u>\$ 9,875,235</u>                           |
| COVERAGE RATIO                           | <u>1.43</u>                   | <u>1.64</u>                                   |

\* SEWAGE SERVICES ADJUSTED FOR RATE REVISIONS OF -4.03% AND 9.03% EFFECTIVE 1/1/04 AND 1/1/05, RESPECTIVELY.

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**SUMMARY**

**SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26**

|  |                   |                     |
|--|-------------------|---------------------|
| SYSTEM REVENUE REQUIREMENTS                        |                   | \$ 32,212,584       |
| CURRENT REVENUES                                   |                   |                     |
| REU CHARGE   | \$ 194,575        |                     |
| MONTHLY METER CHARGE                               | 5,471,161         |                     |
| MONTHLY BILLING CHARGE                             | 2,303,294         |                     |
| COMMODITY CHARGE                                   | <u>21,575,715</u> | <u>(29,544,745)</u> |
| REQUIRED REVENUE INCREASE (DECREASE)               |                   | <u>\$ 2,667,839</u> |
| PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES |                   | <u>9.03%</u>        |

**SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 26**

| METER SIZE        | EQUIV. FACTOR | CITY OF GR<br>METERS *<br>EQUIV. | CITY OF WALKER<br>METERS *<br>EQUIV. | CITY OF KENTWOOD<br>METERS *<br>EQUIV. | CASCADE TWP<br>METERS *<br>EQUIV. | GR TWP<br>METERS *<br>EQUIV. | TALLMADGE TWP<br>METERS *<br>EQUIV. | WRIGHT TWP<br>USERS*<br>REU |
|-------------------|---------------|----------------------------------|--------------------------------------|--|-----------------------------------|------------------------------|-------------------------------------|-----------------------------|
| A 3/4" or less    | 1.0000        | 54,070                           | 4,631                                | 3,027                                  | 1,076                             | 2,789                        | 83                                  | -                           |
| B 1"              | 1.7778        | 2,268                            | 317                                  | 440                                    | 203                               | 213                          | 10                                  | -                           |
| C 1 1/4"          | 2.7778        | -                                | -                                    | -                                      | -                                 | -                            | -                                   | -                           |
| D 1 1/2"          | 4.0000        | 866                              | 126                                  | 282                                    | 125                               | 59                           | 1                                   | -                           |
| E 2"              | 7.1111        | 765                              | 87                                   | 175                                    | 59                                | 30                           | 1                                   | -                           |
| F 3"              | 16.0000       | 62                               | 8                                    | 19                                     | 4                                 | 6                            | -                                   | -                           |
| G 4"              | 28.4444       | 78                               | 5                                    | 12                                     | 3                                 | 3                            | -                                   | -                           |
| H 6" and over     | 64.0000       | 18                               | 2                                    | 3                                      | -                                 | -                            | -                                   | -                           |
| Other- Wright Twp |               | N/A                              | N/A                                  | N/A                                    | N/A                               | N/A                          | N/A                                 | 208                         |
| <b>TOTAL</b>      |               | <b>58,127</b>                    | <b>5,176</b>                         | <b>3,958</b>                           | <b>1,470</b>                      | <b>3,100</b>                 | <b>95</b>                           | <b>208</b>                  |
|                   |               |                                  |                                      |  |                                   |                              |                                     | <b>342,296</b>              |

\* Source: Grand Rapids Water/Sewage Meter/User Quantity Report, November 1, 2004.

*CITY OF GRAND RAPIDS, MICHIGAN*

*SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26*

SYSTEM REVENUE REQUIREMENTS \$ 22,626,058

CURRENT REVENUES

MONTHLY METER CHARGE

71,369 meter equivalents x \$ 4.16 x 12 = \$ 3,562,740

MONTHLY BILLING CHARGE

58,127 meters x \$ 2.12 x 12 = 1,478,751

COMMODITY CHARGE

8,361,210 units (100 CF) x \$ 1.88 = 15,719,075 (20,760,566)

REQUIRED REVENUE INCREASE (DECREASE) \$ 1,865,492

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES 8.99%

**CITY OF GRAND RAPIDS, MICHIGAN**

**SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

$$\frac{\text{INTEGRATED SYSTEM COST}}{\text{BILLED UNITS}} = \frac{\$16,497,087}{8,361,210} = \underline{\underline{\$ 1.97 /100 CF *}}$$

MONTHLY SERVICE CHARGE:

|                             |                  |                            |
|-----------------------------|------------------|----------------------------|
| SYSTEM REVENUE REQUIREMENTS |                  | \$ 22,626,058              |
| NEW COMMODITY CHARGE        |                  |                            |
| 8,361,210 x \$ 1.97         |                  | \$ 16,471,584              |
| NEW MONTHLY BILLING CHARGE  |                  |                            |
| 58,127 x \$ 2.32 x 12       | <u>1,618,256</u> | <u>(18,089,840)</u>        |
|                             |                  | <u><u>\$ 4,536,218</u></u> |

$$\text{MONTHLY METER CHARGE} = \frac{\$4,536,218}{71,369 \times 12} = \underline{\underline{\$ 5.30 \text{ MONTHLY}}}$$

| METER SIZE   | EQUIVALENT | MONTHLY SERVICE CHARGE |         |         | PRESENT |
|--------------|------------|------------------------|---------|---------|---------|
|              |            | METER                  | BILLING | TOTAL   |         |
| 3/4" or less | 1.0000     | \$ 5.30                | \$ 2.32 | \$ 7.62 | \$ 6.28 |
| 1"           | 1.7778     | 9.42                   | 2.32    | 11.74   | 9.52    |
| 1 1/4"       | 2.7778     | 14.72                  | 2.32    | 17.04   | 13.68   |
| 1 1/2"       | 4.0000     | 21.20                  | 2.32    | 23.52   | 18.76   |
| 2"           | 7.1111     | 37.69                  | 2.32    | 40.01   | 31.70   |
| 3"           | 16.0000    | 84.80                  | 2.32    | 87.12   | 68.68   |
| 4"           | 28.4444    | 150.76                 | 2.32    | 153.08  | 120.45  |
| 6" and over  | 64.0000    | 339.20                 | 2.32    | 341.52  | 268.36  |

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2005

**CITY OF WALKER, MICHIGAN**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \$ 2,243,592

CURRENT REVENUES

MONTHLY METER CHARGE

6,716 meter equivalents x \$ 9.92 x 12 = \$ 799,473

MONTHLY BILLING CHARGE

5,176 meters x \$ 2.12 x 12 = 131,677

COMMODITY CHARGE

961,992 units (100 CF) x \$ 1.06 = 1,019,712 (1,950,862)

REQUIRED REVENUE INCREASE (DECREASE) \$ 292,730

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES 15.01%



**CITY OF KENTWOOD, MICHIGAN**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \$ 2,100,256

CURRENT REVENUES

MONTHLY METER CHARGE

7,018 meter equivalents x \$ 1.41 x 12 = \$ 118,745

MONTHLY BILLING CHARGE

3,958 meters x \$ 2.12 x 12 = 100,692

COMMODITY CHARGE

1,363,572 units (100 CF) x \$ 1.17 = 1,595,379 (1,814,816)

REQUIRED REVENUE INCREASE (DECREASE) \$ 285,440

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES 15.73%



**CASCADE TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \$ 1,142,964

CURRENT REVENUES

MONTHLY METER CHARGE

2,506 meter equivalents x \$ 13.21 x 12 = \$ 397,251

MONTHLY BILLING CHARGE

1,470 meters x \$ 2.12 x 12 = 37,397

COMMODITY CHARGE

440,121 units (100 CF) x \$ 1.25 = 550,151 (984,799)

REQUIRED REVENUE INCREASE (DECREASE) \$ 158,165

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES 16.06%

**CASCADE TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 1.45 /100 CF \*  
 \$ 1.25 x 116.06%

MONTHLY SERVICE CHARGE:

|                             |               |                   |
|-----------------------------|---------------|-------------------|
| SYSTEM REVENUE REQUIREMENTS |               | \$ 1,142,964      |
| NEW COMMODITY CHARGE        |               |                   |
| 440,121 x \$ 1.45           | \$            | 638,175           |
| NEW MONTHLY BILLING CHARGE  |               |                   |
| 1,470 x \$ 2.32 x 12        | <u>40,925</u> | <u>(679,100)</u>  |
|                             |               | <u>\$ 463,864</u> |

MONTHLY METER CHARGE =  $\frac{\$463,864}{2,506 \times 12} = \underline{\underline{\$ 15.43 \text{ MONTHLY}}}$

| METER SIZE   | EQUIVALENT | MONTHLY SERVICE CHARGE |         |          | PRESENT  |
|--------------|------------|------------------------|---------|----------|----------|
|              |            | METER                  | BILLING | TOTAL    |          |
| 3/4" or less | 1.0000     | \$ 15.43               | \$ 2.32 | \$ 17.75 | \$ 15.33 |
| 1"           | 1.7778     | 27.43                  | 2.32    | 29.75    | 25.60    |
| 1 1/4"       | 2.7778     | 42.86                  | 2.32    | 45.18    | 38.81    |
| 1 1/2"       | 4.0000     | 61.72                  | 2.32    | 64.04    | 54.96    |
| 2"           | 7.1111     | 109.72                 | 2.32    | 112.04   | 96.06    |
| 3"           | 16.0000    | 246.88                 | 2.32    | 249.20   | 213.48   |
| 4"           | 28.4444    | 438.90                 | 2.32    | 441.22   | 377.87   |
| 6" and over  | 64.0000    | 987.52                 | 2.32    | 989.84   | 847.56   |

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2005

**GRAND RAPIDS TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

SYSTEM REVENUE REQUIREMENTS \$ 1,267,078

CURRENT REVENUES

MONTHLY METER CHARGE

3,798 meter equivalents x \$ 12.72 x 12 = \$ 579,727

MONTHLY BILLING CHARGE

3,100 meters x \$ 2.12 x 12 = 78,864

COMMODITY CHARGE

391,622 units (100 CF) x \$ 1.27 = 497,360 (1,155,951)

REQUIRED REVENUE INCREASE (DECREASE) \$ 111,127

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES 9.61%



**TALLMADGE TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

|                             |           |               |
|-----------------------------|-----------|---------------|
| SYSTEM REVENUE REQUIREMENTS | \$        | 81,294        |
| LESS: CASH CONTRIBUTION     |           | (16,820)      |
| SYSTEM REVENUE REQUIREMENTS | <u>\$</u> | <u>64,474</u> |

CURRENT REVENUES

|  |           |  |
|--|-----------|--|
| MONTHLY METER CHARGE                               |           |  |
| 112 meter equivalents                              | x \$ 9.84 | x 12 = \$ 13,225   |
| MONTHLY BILLING CHARGE                             |           |  |
| 95 meters  | x \$ 2.12 | x 12 = 2,417   |
| COMMODITY CHARGE                                   |           |  |
| 12,572 units (100 CF)                              | x \$ 3.64 | = <u>45,762</u> <span style="float: right;"><u>(61,404)</u></span> |
| REQUIRED REVENUE INCREASE (DECREASE)               |           | <u>\$ 3,070</u>  |
|  |           |  |
| PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES |           | <u>5.00%</u>   |



**WRIGHT TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

|                             |    |                |
|-----------------------------|----|----------------|
| SYSTEM REVENUE REQUIREMENTS | \$ | 208,113        |
| LESS: CASH CONTRIBUTION     |    | <u>(7,768)</u> |
| SYSTEM REVENUE REQUIREMENTS | \$ | <u>200,345</u> |

CURRENT REVENUES

REU CHARGE

342.296 meter equivalents x \$ 47.37 x 12 = \$ 194,575

MONTHLY METER CHARGE

342.296 meter equivalents x \$ - x 12 = -

MONTHLY BILLING CHARGE

208 meters x \$ - x 12 = -

COMMODITY CHARGE

22,474 units (100 CF) x \$ - = - (194,575)

REQUIRED REVENUE INCREASE (DECREASE) \$ 5,770

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES 2.97%

**WRIGHT TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

**MONTHLY REU CHARGE:**

$$\frac{\text{TOTAL REVENUE REQUIREMENTS}}{\text{TOTAL REU'S * 12 MONTHS}} = \frac{\$200,345}{342.296 \times 12} = \$ \underline{\underline{48.77}} \quad \text{MONTHLY REU CHARGE *}$$

**EXAMPLES OF APPROXIMATE MONTHLY CHARGE BY NUMBER OF REU:**

| <u>NUMBER OF REU</u> | <u>AMOUNT</u> | <u>NUMBER OF REU</u> | <u>AMOUNT</u> | <u>NUMBER OF REU</u> | <u>AMOUNT</u> |
|----------------------|---------------|----------------------|---------------|----------------------|---------------|
| 1.0000               | \$ 48.77      | 7.5000               | \$ 365.78     | 19.0000              | \$ 926.63     |
| 1.5000               | 73.16         | 8.0000               | 390.16        | 20.0000              | 975.40        |
| 2.0000               | 97.54         | 8.5000               | 414.55        | 25.0000              | 1,219.25      |
| 2.5000               | 121.93        | 9.0000               | 438.93        | 30.0000              | 1,463.10      |
| 3.0000               | 146.31        | 9.5000               | 463.32        | 35.0000              | 1,706.95      |
| 3.5000               | 170.70        | 10.0000              | 487.70        | 40.0000              | 1,950.80      |
| 4.0000               | 195.08        | 11.0000              | 536.47        | 50.0000              | 2,438.50      |
| 4.4000               | 214.59        | 12.0000              | 585.24        | 60.0000              | 2,926.20      |
| 4.5000               | 219.47        | 13.0000              | 634.01        | 70.0000              | 3,413.90      |
| 5.0000               | 243.85        | 14.0000              | 682.78        | 80.0000              | 3,901.60      |
| 5.5000               | 268.24        | 15.0000              | 731.55        | 90.0000              | 4,389.30      |
| 6.0000               | 292.62        | 16.0000              | 780.32        | 100.0000             | 4,877.00      |
| 6.5000               | 317.01        | 17.0000              | 829.09        | 150.0000             | 7,315.50      |
| 7.0000               | 341.39        | 18.0000              | 877.86        | 200.0000             | 9,754.00      |

\* NEW RATES EFFECTIVE ON JANUARY 1, 2005

**CITY OF EAST GRAND RAPIDS, MICHIGAN**

**SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
RATE ANALYSIS - TASK NO. 26**

|  |               |    |                 |
|--|---------------|----|-----------------|
| INTEGRATED SYSTEM REVENUE REQUIREMENTS             |               | \$ | 443,062         |
| COMMODITY CHARGE                                   |               |    |                 |
|  | 462.732 units | x  | \$ 896.00       |
|  |               |    | 414,608         |
|  |               |    | <hr/>           |
| REQUIRED COMMODITY REVENUE INCREASE (DECREASE)     |               | \$ | <u>28,454</u>   |
| <br>   |               |    |                 |
| NON-INTEGRATED SYSTEM REVENUE REQUIREMENTS         |               | \$ | 20,700          |
| MONTHLY SERVICE CHARGE                             |               |    |                 |
|  | \$2,727       | x  | 12 MONTHS       |
|  |               |    | 32,724          |
|  |               |    | <hr/>           |
| REQUIRED SERVICE REVENUE INCREASE (DECREASE)       |               | \$ | <u>(12,024)</u> |
| <br>   |               |    |                 |
| PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES |               |    | <u>3.67%</u>    |

*CITY OF EAST GRAND RAPIDS, MICHIGAN*

*SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27*

|                             |                  |
|-----------------------------|------------------|
| SYSTEM REVENUE REQUIREMENTS | \$ 463,762       |
| NEW COMMODITY CHARGE        |                  |
| 462.732 x \$ 957.00 =       | (442,835)        |
|                             | <hr/>            |
|                             | <u>\$ 20,927</u> |

MONTHLY SERVICE CHARGE = \$ 20,927 / 12 = \$1,744

**NORTH KENT**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

|  |   |              |
|--|---|--------------|
| INTEGRATED SYSTEM REVENUE REQUIREMENTS             |   | \$ 1,273,022 |
| COMMODITY CHARGE                                   |   |              |
| 1,461.954 units                                    | x | \$ 910.00    |
|  |   | 1,330,378    |
|  |   | \$ (57,356)  |
|  |   |              |
| NON-INTEGRATED SYSTEM REVENUE REQUIREMENTS         |   | \$ 287,670   |
| MONTHLY SERVICE CHARGE                             |   |              |
| \$30,365   | x | 12 MONTHS    |
|  |   | 364,380      |
|  |   | \$ (76,710)  |
|  |   |              |
| PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES |   | -7.91%       |

*NORTH KENT*  
*SEWER RATE STUDY*  
*SEWAGE DISPOSAL SYSTEM FUND*  
*RATE ANALYSIS - TASK NO. 27*

|   |                   |
|---|-------------------|
| SYSTEM REVENUE REQUIREMENTS               | \$ 1,560,692      |
| NEW COMMODITY CHARGE                      |                   |
| 1,461.954 x \$ 871.00 =                   | (1,273,362)       |
|   | <hr/>             |
|   | <u>\$ 287,330</u> |
| MONTHLY SERVICE CHARGE = \$287,330 / 12 = | \$23,944          |

**ADA TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

|  |                  |
|--|------------------|
| INTEGRATED SYSTEM REVENUE REQUIREMENTS             | \$ 331,775       |
| COMMODITY CHARGE                                   |                  |
| 305.816 units      x      \$ 1,007.00              | 307,957          |
|  | <hr/>            |
| REQUIRED COMMODITY REVENUE INCREASE (DECREASE)     | <u>\$ 23,818</u> |
| <br>   |                  |
| NON-INTEGRATED SYSTEM REVENUE REQUIREMENTS         | \$ 69,296        |
| MONTHLY SERVICE CHARGE                             |                  |
| \$4,992              x      12 MONTHS              | 59,904           |
|  | <hr/>            |
| REQUIRED SERVICE REVENUE INCREASE (DECREASE)       | <u>\$ 9,392</u>  |
| <br>   |                  |
| PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES | <u>9.03%</u>     |

*ADA TOWNSHIP*  
*SEWER RATE STUDY*  
*SEWAGE DISPOSAL SYSTEM FUND*  
*RATE ANALYSIS - TASK NO. 27*

|                             |                  |
|-----------------------------|------------------|
| SYSTEM REVENUE REQUIREMENTS | \$ 401,071       |
| NEW COMMODITY CHARGE        |                  |
| 305.816 x \$ 1,085.00 =     | (331,810)        |
|                             | <hr/>            |
|                             | <u>\$ 69,261</u> |

MONTHLY SERVICE CHARGE = \$ 69,261 / 12 = \$5,772

**GAINES TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

|  |    |         |
|--|----|---------|
| INTEGRATED SYSTEM REVENUE REQUIREMENTS             | \$ | 91,217  |
| COMMODITY CHARGE                                   |    |         |
| 104.762 units     x     \$ 910.00                  |    | 95,333  |
|  |    | 95,333  |
| REQUIRED COMMODITY REVENUE INCREASE (DECREASE)     | \$ | (4,116) |
|  |    |         |
| NON-INTEGRATED SYSTEM REVENUE REQUIREMENTS         | \$ | 19,140  |
| MONTHLY SERVICE CHARGE                             |    |         |
| \$1,374             x     12 MONTHS                |    | 16,488  |
|  |    | 16,488  |
| REQUIRED SERVICE REVENUE INCREASE (DECREASE)       | \$ | 2,652   |
|  |    |         |
| PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES |    | -1.31%  |

*GAINES TOWNSHIP*  
*SEWER RATE STUDY*  
*SEWAGE DISPOSAL SYSTEM FUND*  
*RATE ANALYSIS - TASK NO. 27*

|                             |                  |
|-----------------------------|------------------|
| SYSTEM REVENUE REQUIREMENTS | \$ 110,357       |
| NEW COMMODITY CHARGE        |                  |
| 104.762 x \$ 871.00 =       | (91,248)         |
|                             | <hr/>            |
|                             | <u>\$ 19,109</u> |

MONTHLY SERVICE CHARGE = \$ 19,109 / 12 = \$1,592

**MEIJER - ALGOMA**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

|  |    |       |
|--|----|-------|
| INTEGRATED SYSTEM REVENUE REQUIREMENTS             | \$ | 6,112 |
| COMMODITY CHARGE                                   |    |       |
| 5.041 units    x    \$    -                        |    | -     |
|  |    | -     |
| REQUIRED COMMODITY REVENUE INCREASE (DECREASE)     | \$ | 6,112 |
|  |    |       |
| NON-INTEGRATED SYSTEM REVENUE REQUIREMENTS         | \$ | 1,235 |
| MONTHLY SERVICE CHARGE                             |    |       |
| \$0            x    12 MONTHS                      |    | -     |
|  |    | -     |
| REQUIRED SERVICE REVENUE INCREASE (DECREASE)       | \$ | 1,235 |
|  |    |       |
| PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES |    | NA    |

**MEIJER - ALGOMA**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

|  |                 |
|--|-----------------|
| SYSTEM REVENUE REQUIREMENTS                  | \$ 7,347        |
| COMMODITY CHARGE                             |                 |
| 5.041 x \$ 1,212.00 =                        | (6,110)         |
|  | <hr/>           |
|  | <u>\$ 1,237</u> |
| <br>MONTHLY SERVICE CHARGE = \$ 1,237 / 12 = | <br>\$103       |

**CALCULATION OF INCREMENTAL COMMODITY CHARGE TO MEIJER-ALGOMA FROM CITY**

|                                       |                     |
|---------------------------------------|---------------------|
| COMMODITY CHARGE- ABOVE               | \$ 1,212            |
| LESS: COMMODITY CHARGE- NORTH KENT    | (871)               |
| INCREMENTAL COMMODITY CHARGE (CREDIT) | <hr/> <u>\$ 341</u> |

# MEMORANDUM

CITY OF GRAND RAPIDS

**RECEIVED**

NOV 3 2004

DATE: October 29, 2004

TO: Mike Wolski  
Financial Analyst

FROM:  Rick DeVries, P.E.  
Assistant City Engineer

SUBJECT: SEWER RATE STUDY - TASK NO. 28 AND 29

Enclosed are the Front Foot Rates for Sanitary Sewer (Task 28) and the costs for Sanitary Sewer Laterals (Task 29), for the Fiscal Year 2004.

RDV/grt

Enclosures

cc: Jack Stegehuis  
Mark Garvey  
Paul Pratt

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
RE-EVALUATE FRONT FOOT CHARGES  
TASK NO. 28**

The City Engineer's Office has reviewed current construction costs for sewer facilities and recommends the following front foot assessment rates:

|   | <u>2004</u> | <u>2005</u> |
|---|-------------|-------------|
| Domestic Sewer User                                       | \$ 49.00    | \$ 55.00    |
| Commercial-Industrial User<br>(Sewer over 8 in. diameter) | \$ 77.00    | \$ 76.00    |

The rates are based on an average of prices quoted in bid proposals which have been received by the City Engineer's Office during the period July, 2003 through June, 2004. Calculations of the rates are on file in the City Engineer's Office.

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWAGE DISPOSAL SYSTEM FUND  
EVALUATE SEWER LATERAL CHARGES  
TASK NO. 29**

The City Engineer's Office has evaluated the cost for a six inch (6") sanitary sewer lateral and recommends that sewer lateral costs should be as follows:

| <u>R.O.W. WIDTH</u> | <u>COST FOR 6-INCH LATERAL</u> |             |
|---------------------|--------------------------------|-------------|
|                     | <u>2004</u>                    | <u>2005</u> |
| 50 ft.              | \$ 1,425                       | \$ 1,450    |
| 60 ft.              | \$ 1,650                       | \$ 1,700    |
| 66 ft.              | \$ 1,800                       | \$ 1,850    |
| 80 ft.              | \$ 2,150                       | \$ 2,200    |
| 100 ft.             | \$ 2,650                       | \$ 2,700    |

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: October 28, 2004

TO: Michael Wolski  
Utility Financial Officer

FROM: Cortland V. Overmyer, Director   
Environmental Protection Services Department

**SUBJECT: Sewer Rate Study - Task #30 – Surcharges**

The Wastewater Treatment plant has a limited amount of remaining capacity which is typically allocated to industries having discharges exceeding ordinance limits. These industries are charged for utilizing this remaining plant capacity in four categories of conventional pollutants. These pollutants are: 1) Biochemical Oxygen Demand (BOD); 2) Total Suspended Solids (TSS); 3) Total Phosphorus (Phos); 4) and Ammonia Nitrogen (NH<sub>3</sub>). This benefits the industries in that it reduces their pretreatment requirements and benefits the system by extending remaining capacity life.

The surcharge rates as noted on the following page (Task #30-Part 1) were developed last year as part of surcharge rate analysis project. As shown on the attached sheets, the methodology includes evaluating various cost centers at the Wastewater Treatment plant and allocating costs based on unit processes. Consequently, accumulated costs could then be assigned to the four pollutant categories to determine appropriate surcharge rates.

In certain instances, the proposed surcharge rates increased significantly and staff recognized the need to work with industry in phasing in these new rates. Informational meetings were held with industry, resulting in a plan to phase in the rates over a three year period beginning 1/1/2004. The proposed rates for 2005 (second year of phase in) are disclosed on the following sheets.

COMMW

*Srs\stask30 2004*

City of Grand Rapids Michigan  
 Sewage Disposal System Fund  
 Evaluation of Wastewater Surcharges for Industrial Customers- BOD, TSS, Phos & NH3  
 TASK NO. 30- Part 1

| Description                              | Rate Study Year      |                     | Wastewater Surcharges |                     |                     |                   |                   | Industrial           | Other |
|--|----------------------|---------------------|-----------------------|---------------------|---------------------|-------------------|-------------------|----------------------|-------|
|  | 2004                 | Volume              | BOD                   | TSS                 | Phos                | NH3               |                   |                      |       |
| Operation & Maintenance (See Part 2)     | \$ 19,921,894        | \$ 3,264,294        | \$ 3,430,870          | \$ 2,724,023        | \$ 783,742          | \$ 364,708        | \$ 551,227        | \$ 8,803,030         |       |
| Depreciation (See Part 3)                | 2,197,205            | 509,715             | 535,721               | 425,346             | 122,371             | 56,945            | -                 | 547,107              |       |
| Return on System Investment (See Part 3) | 3,888,769            | 604,646             | 635,496               | 504,564             | 145,162             | 67,551            | -                 | 1,931,350            |       |
| <b>Total</b>                             | <b>\$ 26,007,868</b> | <b>\$ 4,378,655</b> | <b>\$ 4,602,087</b>   | <b>\$ 3,653,933</b> | <b>\$ 1,051,275</b> | <b>\$ 489,204</b> | <b>\$ 551,227</b> | <b>\$ 11,281,487</b> |       |

**Proposed Surcharge Rate (\$) - Fully Implemented**

Surcharge Rate - Base Year (Calendar 2003)

Change from Base Year- Amount- Full Implementation

Change from Base Year- Percent- Full Implementation

0  
1  
4

| Phase-in Wastewater Surcharge Revisions |                 |                 |
|---|-----------------|-----------------|
| BOD                                     | TSS             | NH3             |
| \$ 0.140                                | \$ 0.140        | \$ 0.510        |
| 0.024                                   | 0.019           | 0.554           |
| <b>\$ 0.164</b>                         | <b>\$ 0.159</b> | <b>\$ 1.064</b> |
| \$ 0.154                                | \$ 0.148        | \$ 0.678        |
| \$ 0.010                                | \$ 0.011        | \$ 0.386        |
| 6.49%                                   | 7.43%           | 56.93%          |
|   |                 | <b>45.22%</b>   |

**Recommended Surcharge Rate - 2005**

Actual Surcharge Rate - 2004

Change in Surcharge Rate - Amount- 2004 to 2005

Change in Surcharge Rate - Percent- 2004 to 2005

Task No. 30 - Part 2

City of Grand Rapids Michigan  
 Sewage Disposal System Fund  
 Evaluation of High Strength Surcharges- BOD, TSS, Phos & NH3  
 Allocation of Operation & Maintenance Expense & Determination of WWTP Allocation Factors

|                                | Primary Allocation |                 | Component Allocation (3) |               |                |                       |                |               |               |               |               |           |
|--------------------------------|--------------------|-----------------|--------------------------|---------------|----------------|-----------------------|----------------|---------------|---------------|---------------|---------------|-----------|
|                                | Base Year-         | Calendar Year-  | Allocation Basis         | Line No. Ref. | Volume         | Wastewater Surcharges |                |               |               | Industrial    | Other         |           |
|                                | 2004               | 2005            |                          |               |                | BOD                   | TSS            | Phos          | NH3           |               |               |           |
| Wastewater Treatment Plant     |                    |                 |                          |               |                |                       |                |               |               |               |               |           |
| Pre-Treatment                  | \$ 896,711         | \$ 877,461      | WWTP                     | (1)           | \$ 877,461     | \$ -                  | \$ -           | \$ -          | \$ -          | \$ -          | \$ -          | \$ -      |
| Primary Treatment              | 872,955            | 854,215         | WWTP                     | (2)           | -              | 256,264               | 512,529        | -             | 85,422        | -             | -             | -         |
| Secondary Treatment            | 4,667,920          | 4,567,710       | WWTP                     | (3)           | 1,141,927      | 2,283,855             | 913,542        | -             | 228,386       | -             | -             | -         |
| Disinfection/Dechlorination    | 762,494            | 746,125         | WWTP                     | (4)           | 746,125        | -                     | -              | -             | -             | -             | -             | -         |
| Phosphorus Removal             | 998,560            | 977,123         | WWTP                     | (5)           | 244,281        | -                     | -              | 732,842       | -             | -             | -             | -         |
| Residue Handling/Disposal      | 2,600,837          | 2,545,003       | WWTP                     | (6)           | 254,500        | 890,751               | 1,297,952      | 50,900        | 50,900        | -             | -             | -         |
|                                | \$ 10,799,477      | \$ 10,567,637   |                          |               | \$ 3,264,294   | \$ 3,430,870          | \$ 2,724,023   | \$ 783,742    | \$ 364,708    | \$ -          | \$ -          | \$ -      |
| Lift Stations                  |                    |                 |                          |               |                |                       |                |               |               |               |               |           |
| Interceptor                    |                    | 180,949         | Collection               | (11)          | -              | -                     | -              | -             | -             | -             | -             | 180,949   |
| Trunk                          |                    | 135,350         | Collection               | (11)          | -              | -                     | -              | -             | -             | -             | -             | 135,350   |
| Local Collector                |                    | 419,583         | Collection               | (11)          | -              | -                     | -              | -             | -             | -             | -             | 419,583   |
| Sewer Lines                    |                    |                 |                          |               |                |                       |                |               |               |               |               |           |
| Interceptor                    |                    | 194,643         | Collection               | (11)          | -              | -                     | -              | -             | -             | -             | -             | 194,643   |
| Trunk                          |                    | 456,001         | Collection               | (11)          | -              | -                     | -              | -             | -             | -             | -             | 456,001   |
| Local Collector                |                    | 3,365,921       | Collection               | (11)          | -              | -                     | -              | -             | -             | -             | -             | 3,365,921 |
| Bulk Meter Stations            |                    | 18,406          | Collection               | (7)           | -              | -                     | -              | -             | -             | -             | -             | 18,406    |
| Customer Accounting            |                    | 2,010,931       | Admin                    | (8)           | -              | -                     | -              | -             | -             | -             | -             | 2,010,931 |
| Industrial Pretreatment        |                    | 551,227         | Industry                 | (9)           | -              | -                     | -              | -             | -             | 551,227       | -             | -         |
| Subtotal                       |                    | \$ 17,900,648   |                          |               | \$ 3,264,294   | \$ 3,430,870          | \$ 2,724,023   | \$ 783,742    | \$ 364,708    | \$ 551,227    | \$ 6,781,784  |           |
| Admin                          |                    | 2,021,246       | Admin                    | (10)          | -              | -                     | -              | -             | -             | -             | -             | 2,021,246 |
| Total                          |                    | \$ 19,921,894   |                          |               | \$ 3,264,294   | \$ 3,430,870          | \$ 2,724,023   | \$ 783,742    | \$ 364,708    | \$ 551,227    | \$ 8,803,030  |           |
| <b>WWTP Allocation Factors</b> |                    | <b>100.000%</b> |                          |               | <b>30.890%</b> | <b>32.466%</b>        | <b>25.777%</b> | <b>7.416%</b> | <b>3.451%</b> | <b>0.000%</b> | <b>0.000%</b> |           |

(1) Based on October 28, 2004 update from Randall Fisher regarding 2004 WWTP Surcharge Rate Evaluation.

(2) Primary Allocation of Current Year for Calendar 2005, based on 2004 Base Year.

(3) Refer to Task 30- Part 4 as noted.

Task No. 30 - Part 3

City of Grand Rapids Michigan  
 Sewage Disposal System Fund  
 Evaluation of High Strength Surcharges- BOD, TSS, Phos & NH3  
 Allocation of Depreciation Expense & Return on System Investment

Depreciation Expense- Task 24

| Description           | Amount              | Volume            | Wastewater Surcharges |                   |                   |             | Industrial        | Other |
|-----------------------|---------------------|-------------------|-----------------------|-------------------|-------------------|-------------|-------------------|-------|
|                       |                     |                   | BOD                   | TSS               | Phos              | NH3         |                   |       |
| Integrated System (1) | \$ 1,650,098        | \$ 509,715        | \$ 535,721            | \$ 425,346        | \$ 122,371        | \$ -        | \$ -              |       |
| Other                 | 547,107             | -                 | -                     | -                 | -                 | -           | 547,107           |       |
| <b>Total</b>          | <b>\$ 2,197,205</b> | <b>\$ 509,715</b> | <b>\$ 535,721</b>     | <b>\$ 425,346</b> | <b>\$ 122,371</b> | <b>\$ -</b> | <b>\$ 547,107</b> |       |

Return on System Investment- Task 21

| Description           | Amount              | Volume            | Wastewater Surcharges |                   |                   |             | Industrial          | Other |
|-----------------------|---------------------|-------------------|-----------------------|-------------------|-------------------|-------------|---------------------|-------|
|                       |                     |                   | BOD                   | TSS               | Phos              | NH3         |                     |       |
| Integrated System (1) | \$ 1,957,419        | \$ 604,646        | \$ 635,496            | \$ 504,564        | \$ 145,162        | \$ -        | \$ -                |       |
| Other                 | 1,931,350           | -                 | -                     | -                 | -                 | -           | 1,931,350           |       |
| <b>Total</b>          | <b>\$ 3,888,769</b> | <b>\$ 604,646</b> | <b>\$ 635,496</b>     | <b>\$ 504,564</b> | <b>\$ 145,162</b> | <b>\$ -</b> | <b>\$ 1,931,350</b> |       |

(1) Allocated on WWTP Allocation Factors \*

|          |          |          |         |         |
|----------|----------|----------|---------|---------|
| 30.8900% | 32.4660% | 25.7770% | 7.4160% | 3.4510% |
|----------|----------|----------|---------|---------|

\* Refer to Task No. 30 - Part 2

Task No. 30 - Part 4

City of Grand Rapids Michigan  
 Sewage Disposal System Fund  
 Evaluation of High Strength Surcharges- BOD, TSS, Phos & NH3  
 Functional Cost Allocation Factors

| Line No. Ref. | Cost Function               | 2002 %   | Allocation Basis | Volume % | Wastewater Surcharges |         |         |         |          | Industrial % | Other %  |
|---------------|-----------------------------|----------|------------------|----------|-----------------------|---------|---------|---------|----------|--------------|----------|
|               |                             |          |                  |          | BOD %                 | TSS %   | Phos %  | NH3 %   |          |              |          |
| (1)           | Pre-Treatment               | 100.000% | WWTP             | 100.000% | 0.000%                | 0.000%  | 0.000%  | 0.000%  | 0.000%   | 0.000%       | 0.000%   |
| (2)           | Primary Treatment           | 100.000% | WWTP             | 0.000%   | 30.000%               | 60.000% | 0.000%  | 10.000% | 0.000%   | 0.000%       | 0.000%   |
| (3)           | Secondary Treatment         | 100.000% | WWTP             | 25.000%  | 50.000%               | 20.000% | 0.000%  | 5.000%  | 0.000%   | 0.000%       | 0.000%   |
| (4)           | Disinfection/Dechlorination | 100.000% | WWTP             | 100.000% | 0.000%                | 0.000%  | 0.000%  | 0.000%  | 0.000%   | 0.000%       | 0.000%   |
| (5)           | Phosphorus Removal          | 100.000% | WWTP             | 25.000%  | 0.000%                | 0.000%  | 75.000% | 0.000%  | 0.000%   | 0.000%       | 0.000%   |
| (6)           | Residue Handling/Disposal   | 100.000% | WWTP             | 10.000%  | 35.000%               | 51.000% | 2.000%  | 2.000%  | 0.000%   | 0.000%       | 0.000%   |
| (7)           | Bulk Metering Stations      | 100.000% | Collection       | 0.000%   | 0.000%                | 0.000%  | 0.000%  | 0.000%  | 0.000%   | 100.000%     | 0.000%   |
| (8)           | Customer Accounting         | 100.000% | Admin            | 0.000%   | 0.000%                | 0.000%  | 0.000%  | 0.000%  | 0.000%   | 100.000%     | 0.000%   |
| (9)           | Industrial Pretreatment     | 100.000% | Industry         | 0.000%   | 0.000%                | 0.000%  | 0.000%  | 0.000%  | 100.000% | 0.000%       | 0.000%   |
| (10)          | Admin                       | 100.000% | Admin            | 0.000%   | 0.000%                | 0.000%  | 0.000%  | 0.000%  | 0.000%   | 100.000%     | 0.000%   |
| (11)          | Collection System           | 100.000% | Collection       | 0.000%   | 0.000%                | 0.000%  | 0.000%  | 0.000%  | 0.000%   | 0.000%       | 100.000% |

(a) Based on "Final Allocation Table" in August 1, 2003 memo from Randall Fisher & Mike Lunn to Eric DeLong regarding 2001 Surcharge Rate Evaluation. Evaluation by WWTP staff for 2004 RS Review concluded percentages should remain in effect to recommend 2005 rate adjustments.

***CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
IPP PERMIT FEE STRUCTURE – TASK NO. 31***

The City of Grand Rapids IPP Permit fee structure is based on the actual cost of administration and implementation. Administration includes all the costs associated with document generation and handling as well as one annual site visit. The implementation costs include all sampling and associated laboratory analyses required by the permit. These two fees are identified on permit documents as a permit Fee and an Analytical Fee.

**Permit Fee:** This fee is based on the actual costs associated with administering the permit program, including time spent on permit required inspections, clerical requirements, data handling requirements and all trunkline monitoring. This fee will be specific to the costs associated with the permit category.

**Analytical Fee:** This fee is based on actual costs associated with each permit. The costs, and an explanation of how they are determined, are outlined in an accompanying attachment. Labor time, including sampling and sample delivery to our laboratory, was derived from experience:

|                    |                |
|--------------------|----------------|
| Composite samples: | 1.5 hours each |
| Grab samples:      | 1.0 hours each |

Four examples of analytical fees are attached herewith.

City of Grand Rapids  
 Industrial Pretreatment Program  
**Service Costs**  
**October 2004**

| Category      | Cost                     |          |
|---------------|--------------------------|----------|
| Labor:        | \$49.64/hr               |          |
| Vehicle:      | \$5.00/hr                |          |
| Sampler:      | \$30.00/day              |          |
| Lab analysis: | Parameter                | Cost     |
|               | metal (each)             | \$10.00  |
|               | Total suspended solid    | \$6.00   |
|               | BOD                      | \$12.00  |
|               | Total phosphate (as P)   | \$11.00  |
|               | pH                       | \$10.00  |
|               | EPA 624 (volatiles)      | \$52.00  |
|               | EPA 625 (semi-volatiles) | \$115.00 |
|               | BTEX/MTBE                | \$36.00  |
|               | Sulfide                  | \$15.00  |
|               | Oil & grease             | \$20.00  |
|               | Total cyanide            | \$19.00  |
|               | Chromium-hexavalent      | \$16.00  |
|               | Fecal coliform           | \$35.00  |

**Explanation of Costs**

**Labor:** Labor is the hourly pay rate of a Water Pollution Control Inspector (classification 21A @ "F" step) per the Jan 1, 2002 to Dec 31, 2002 agreement between the City of Grand Rapids and the Grand Rapids Employees Independent Union plus 100% as specified in section 2.81(1) of the City of Grand Rapids Sewage Disposal System Ordinance. If personnel in a different classification are required, time will be billed based on that classification's pay scale plus 100%.

**Vehicle:** Hourly rate is the actual cost charged to City departments for vehicle use plus 25% for overhead. Figure is rounded to the nearest dollar.

**Sampler:** Sampler costs are derived from an average of the lowest quoted prices obtained from private suppliers in the greater Grand Rapids area.

**Lab Analysis:** Laboratory costs are based on the most recently approved competitive bid obtained for contract work provided to the Grand Rapids Wastewater Treatment Plant's Laboratory.

**City of Grand Rapids**  
***Cost of Services Provided by IPP***

Last Update:     Oct-04

Permit Fee:     \$ 300.00

IPP Costs:

Labor:     \$ 49.64 per hour  
Vehicle:   \$ 5.00 per hour  
Sampler:   \$ 30.00 per day

IPP Accounting:

Composite Labor:             1.5 hours per sample  
Grab Sample Labor:         1.0 hours per sample

Laboratory Costs:

|                 |           |     |
|-----------------|-----------|-----|
| metals          | \$ 10.00  | ea. |
| TSS             | \$ 6.00   | ea. |
| BOD             | \$ 12.00  | ea. |
| total phosphate | \$ 11.00  | ea. |
| pH              | \$ 10.00  | ea. |
| EPA 624         | \$ 52.00  | ea. |
| EPA 625         | \$ 115.00 | ea. |
| BTEX/MTBE       | \$ 36.00  | ea. |
| sulfide         | \$ 15.00  | ea. |
| oil & grease    | \$ 20.00  | ea. |
| total cyanide   | \$ 19.00  | ea. |
| hex chrome      | \$ 16.00  | ea. |
| fecal coliform  | \$ 35.00  | ea. |

Permit No: Example 1

Company: Typical Metal Finisher  
Facility Address:  
City, State, Zip

Permit Fee: \$ 300.00  
Analytical Fee: \$ 804.00  
Amount Due: \$ 1,104.00

Composite Samples: 4

*IPP Requirements:* man hours = 6.0 x \$ 49.64 = \$ 298.00  
sampler days = 4.0 x \$ 30.00 = \$ 120.00  
vehicle hours = 6.0 x \$ 5.00 = \$ 30.00

Total IPP Composite Costs: \$ 448.00

*Laboratory Analysis:* metals 6 x \$ 10.00 = \$ 60.00  
(each composite) TSS x \$ 6.00 = \$ -  
BOD x \$ 12.00 = \$ -  
total phosphate x \$ 11.00 = \$ -  
pH x \$ 10.00 = \$ -  
EPA 625 x \$ 115.00 = \$ -  
sulfide x \$ 15.00 = \$ -  
oil & grease x \$ 20.00 = \$ -  
hex chrome x \$ 16.00 = \$ -  
fecal coliform x \$ 35.00 = \$ -  
other x = \$ -

total per composite: \$ 60.00

Total Laboratory Composite Costs: \$ 240.00

Total Composite Sample Costs: \$ 688.00

Grab Samples: 4

*IPP Requirements:* man hours = 0.0 x \$ 49.64 = \$ -  
vehicle hours = 0.0 x \$ 5.00 = \$ -

Total IPP Grab Costs: \$ -

*Laboratory Analysis:* metals x \$ 10.00 = \$ -  
(each grab) TSS x \$ 6.00 = \$ -  
BOD x \$ 12.00 = \$ -  
total phosphate x \$ 11.00 = \$ -  
pH 1 x \$ 10.00 = \$ 10.00  
EPA 624 x \$ 52.00 = \$ -  
EPA 625 x \$ 115.00 = \$ -  
BTEX/MTBE x \$ 36.00 = \$ -  
sulfide x \$ 15.00 = \$ -  
oil & grease x \$ 20.00 = \$ -  
total cyanide 1 x \$ 19.00 = \$ 19.00  
hex chrome x \$ 16.00 = \$ -  
fecal coliform x \$ 35.00 = \$ -  
other x = \$ -

total per grab: \$ 29.00

Total Laboratory Grab Costs: \$ 116.00

Total Grab Sample Costs: \$ 116.00

Total Analytical Permit Costs: \$ 804.00

Permit No: Example 2

Company: Litho process  
Facility Address:  
City, State, Zip

Permit Fee: \$ 300.00  
Analytical Fee: \$ 65.00  
Amount Due: \$ 365.00

Composite Samples:

IPP Requirements: man hours = 0.0 x \$ 49.64 = \$ -  
sampler days = 0.0 x \$ 30.00 = \$ -  
vehicle hours = 0.0 x \$ 5.00 = \$ -

Total IPP Composite Costs: \$ -

Laboratory Analysis: (each composite) metals x \$ 10.00 = \$ -  
TSS x \$ 6.00 = \$ -  
BOD x \$ 12.00 = \$ -  
total phosphate x \$ 11.00 = \$ -  
pH x \$ 10.00 = \$ -  
EPA 625 x \$ 115.00 = \$ -  
sulfide x \$ 15.00 = \$ -  
oil & grease x \$ 20.00 = \$ -  
hex chrome x \$ 16.00 = \$ -  
fecal coliform x \$ 35.00 = \$ -  
other x = \$ -  
total per composite: \$ -

Total Laboratory Composite Costs: \$ -

Total Composite Sample Costs: \$ -

Grab Samples: 1

IPP Requirements: man hours = 1.0 x \$ 49.64 = \$ 50.00  
vehicle hours = 1.0 x \$ 5.00 = \$ 5.00

Total IPP Grab Costs: \$ 55.00

Laboratory Analysis: (each grab) metals x \$ 10.00 = \$ -  
TSS x \$ 6.00 = \$ -  
BOD x \$ 12.00 = \$ -  
total phosphate x \$ 11.00 = \$ -  
pH 1 x \$ 10.00 = \$ 10.00  
EPA 624 x \$ 52.00 = \$ -  
EPA 625 x \$ 115.00 = \$ -  
BTEX/MTBE x \$ 36.00 = \$ -  
sulfide x \$ 15.00 = \$ -  
oil & grease x \$ 20.00 = \$ -  
total cyanide x \$ 19.00 = \$ -  
hex chrome x \$ 16.00 = \$ -  
fecal coliform x \$ 35.00 = \$ -  
other x = \$ -  
total per grab: \$ 10.00

Total Laboratory Grab Costs: \$ 10.00

Total Grab Sample Costs: \$ 65.00

Total Analytical Permit Costs: \$ 65.00

Permit No: Example 3

Company: Stripping process  
Facility Address:  
City, State, Zip

Permit Fee: \$ 300.00  
Analytical Fee: \$ 115.00  
Amount Due: \$ 415.00

Composite Samples:

*IPP Requirements:* man hours = 0.0 x \$ 49.64 = \$ -  
sampler days = 0.0 x \$ 30.00 = \$ -  
vehicle hours = 0.0 x \$ 5.00 = \$ -

Total IPP Composite Costs: \$ -

*Laboratory Analysis:* metals x \$ 10.00 = \$ -  
(each composite) TSS x \$ 6.00 = \$ -  
BOD x \$ 12.00 = \$ -  
total phosphate x \$ 11.00 = \$ -  
pH x \$ 10.00 = \$ -  
EPA 625 x \$ 115.00 = \$ -  
sulfide x \$ 15.00 = \$ -  
oil & grease x \$ 20.00 = \$ -  
hex chrome x \$ 16.00 = \$ -  
fecal coliform x \$ 35.00 = \$ -  
other x = \$ -

total per composite: \$ -

Total Laboratory Composite Costs: \$ -

Total Composite Sample Costs: \$ -

Grab Samples: 1

*IPP Requirements:* man hours = 1.0 x \$ 49.64 = \$ 50.00  
vehicle hours = 1.0 x \$ 5.00 = \$ 5.00

Total IPP Grab Costs: \$ 55.00

*Laboratory Analysis:* metals 5 x \$ 10.00 = \$ 50.00  
(each grab) TSS x \$ 6.00 = \$ -  
BOD x \$ 12.00 = \$ -  
total phosphate x \$ 11.00 = \$ -  
pH 1 x \$ 10.00 = \$ 10.00  
EPA 624 x \$ 52.00 = \$ -  
EPA 625 x \$ 115.00 = \$ -  
BTEX/MTBE x \$ 36.00 = \$ -  
sulfide x \$ 15.00 = \$ -  
oil & grease x \$ 20.00 = \$ -  
total cyanide x \$ 19.00 = \$ -  
hex chrome x \$ 16.00 = \$ -  
fecal coliform x \$ 35.00 = \$ -  
other x = \$ -

total per grab: \$ 60.00

Total Laboratory Grab Costs: \$ 60.00

Total Grab Sample Costs: \$ 115.00

Total Analytical Permit Costs: \$ 115.00

Permit No: Example 4

Company: Silver User - photoprocessor  
Facility Address:  
City, State, Zip

Permit Fee: \$ 300.00  
Analytical Fee: \$ 65.00  
Amount Due: \$ 365.00

Composite Samples:

*IPP Requirements:* man hours = 0.0 x \$ 49.64 = \$ -  
sampler days = 0.0 x \$ 30.00 = \$ -  
vehicle hours = 0.0 x \$ 5.00 = \$ -

Total IPP Composite Costs: \$ -

*Laboratory Analysis:* metals x \$ 10.00 = \$ -  
(each composite) TSS x \$ 6.00 = \$ -  
BOD x \$ 12.00 = \$ -  
total phosphate x \$ 11.00 = \$ -  
pH x \$ 10.00 = \$ -  
EPA 625 x \$ 115.00 = \$ -  
sulfide x \$ 15.00 = \$ -  
oil & grease x \$ 20.00 = \$ -  
hex chrome x \$ 16.00 = \$ -  
fecal coliform x \$ 35.00 = \$ -  
other x = \$ -

total per composite: \$ -

Total Laboratory Composite Costs: \$ -

Total Composite Sample Costs: \$ -

Grab Samples: 1

*IPP Requirements:* man hours = 1.0 x \$ 49.64 = \$ 50.00  
vehicle hours = 1.0 x \$ 5.00 = \$ 5.00

Total IPP Grab Costs: \$ 55.00

*Laboratory Analysis:* metals 1 x \$ 10.00 = \$ 10.00  
(each grab) TSS x \$ 6.00 = \$ -  
BOD x \$ 12.00 = \$ -  
total phosphate x \$ 11.00 = \$ -  
pH x \$ 10.00 = \$ -  
EPA 624 x \$ 52.00 = \$ -  
EPA 625 x \$ 115.00 = \$ -  
BTEX/MTBE x \$ 36.00 = \$ -  
sulfide x \$ 15.00 = \$ -  
oil & grease x \$ 20.00 = \$ -  
total cyanide x \$ 19.00 = \$ -  
hex chrome x \$ 16.00 = \$ -  
fecal coliform x \$ 35.00 = \$ -  
other x = \$ -

total per grab: \$ 10.00

Total Laboratory Grab Costs: \$ 10.00

Total Grab Sample Costs: \$ 65.00

Total Analytical Permit Costs: \$ 65.00

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# CITY OF GRAND RAPIDS

DATE: October 31, 2004

TO: Mr. Michael E. Wolski  
Financial Analyst

FROM: Charles R. Schroeder, PE  
Hydraulic Engineer *CRS*

**SUBJECT: Sanitary Sewer Oversizing Rates (Task #32, Water/Sewer Rate Study)**

Sanitary Sewer Oversizing rates are established for this year as noted below:

8" to 10"..... \$ 3.56 per lineal foot  
8" to 12".....\$ 7.99 per lineal foot  
8" to 15".....\$ 16.86 per lineal foot  
10" to 12".....\$ 4.43 per lineal foot  
10" to 15".....\$ 13.30 per lineal foot  
12" to 15".....\$ 8.87 per lineal foot

These rates have been determined in accordance with the Sewage Disposal System Rules and Regulations and are approved for use from January 1, 2005 through December 31, 2005. Background information and calculations to establish these rates are on file in the Utility Engineering, Distribution, Collection Department Office located at 1900 Oak Industrial Drv, NE. If you have any questions regarding this matter, please call me at extension 3690 (456-3690)

Cc: Corky Overmyer  
Bill Cole, PE  
Bill DeYoung, PE

MEMORANDUM

**CITY OF GRAND RAPIDS, MICHIGAN  
SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
TASK NO. 33**

SERVICE AREA MAPS AND SERVICE AREA LAND MASS SUMMARIES

The following summarizes Utility Service Districts (USD) land mass square miles for UAB partner communities, per maps on file as of November 8, 2004:

| UAB Partners          | Sq. Miles of<br>USD by CC | Percent  |
|-----------------------|---------------------------|----------|
| Grand Rapids          | 45.36                     | 34.977%  |
| Walker                | 20.17                     | 15.554%  |
| Kentwood              | 14.00                     | 10.796%  |
| Cascade               | 23.53                     | 18.145%  |
| Grand Rapids Township | 12.17                     | 9.385%   |
| Tallmadge Township    | 2.84                      | 2.190%   |
| Wright Township       | 0.89                      | 0.686%   |
| East Grand Rapids     | 3.37                      | 2.599%   |
| Ada                   | 7.15                      | 5.514%   |
| Meijer - Algoma *     | 0.20                      | 0.154%   |
| Total                 | 129.68                    | 100.000% |

*\* Moore & Bruggink, on 11/1/2004, estimated the Meijer-Algoma service area @ .20 square miles.*

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# Final Considerations

INTRODUCTION OF RATE ORDINANCES

# MEMORANDUM

CITY OF GRAND RAPIDS

DATE: November 15, 2004

TO: Eric R. DeLong  
Deputy City Manager

FROM: Michael E. Wolski   
Utility Financial Officer

SUBJECT: 2004 WATER/SEWER RATE REVIEW- PRELIMINARY REPORT

The preliminary report, recommending water and sewer rates as of January 1, 2005 for Grand Rapids and all customer communities, is submitted for consideration. The report continues to be two-tiered in nature, calculating recommended rates for customer communities based upon: (a) adherence to the rate-making methodology established in 1976-1977 for customer communities not party to the uniform water and sewer service agreements; (b) rate methodology changes, based upon the uniform service agreements with our UAB partners.

Proposed 2005 water rates reflect increases to compensate for a decline in billed volume. Proposed 2005 sewer rates reflect increases for declined billed volume and increases for personal service costs, supplies and contractual repairs of service mains, and are partially offset by increased connection fees.

Summaries of proposed overall revisions for the systems are as follows:

1. Water Supply System revenue requirements will increase \$1,485,220 or 4.41% more than revenues generated by existing rates and charges.
2. Sewage Disposal System revenue requirements will increase \$2,667,839 or 9.03% more than revenues generated by existing rates and charges.

Attached is a schedule of comparative 2003/2004/2005 water/sewer quarterly billings based on consumption averages for a typical domestic user in Grand Rapids and retail customer communities. Also included is a comparison of the 2004/2005 monthly charge for Wright Township's REU (Residential Equivalent Unit) rate structure. Three year comparative rate adjustments are also noted for our wholesale customer communities.

Announcement of the proposed 2005 water and sewer rates to our UAB partners and other customer communities is scheduled for Thursday, November 18, 2004. All customer communities have a thirty-day comment period following notification of the rates as provided in our water/sewer service agreements. Concurrence of customer community rates by the City Commission is scheduled for Tuesday, December 21, 2004.

Resolutions are being prepared providing for publication of proposed ordinances amending the Water and Sewer Rates and Charges and establish December 14, 2004, as the date for public hearing and December 21, 2004, to consider adoption of the proposed ordinances.

MW

Attachment

CITY OF GRAND RAPIDS, MICHIGAN  
 2004 PRELIMINARY WATER/SEWER RATE STUDY  
 HISTORICAL IMPACT OF RATE ADJUSTMENTS ON DOMESTIC USERS  
 BY RETAIL CUSTOMER COMMUNITY\*

|  | QUARTERLY BILL |           | 2003-2004 CHANGE |         | 2004-2005 CHANGE |         | 2003-2005 CHANGE |         | 2 YR AVERAGE CHANGE |         |
|--|----------------|-----------|------------------|---------|------------------|---------|------------------|---------|---------------------|---------|
|  | 2003           | 2004      | DOLLARS          | PERCENT | DOLLARS          | PERCENT | DOLLARS          | PERCENT | DOLLARS             | PERCENT |
|  |                |           |                  |         |                  |         |                  |         |                     |         |
| <b>GRAND RAPIDS</b>  |                |           |                  |         |                  |         |                  |         |                     |         |
| WATER  | \$ 63.39       | \$ 62.25  | \$ (1.14)        | -1.80%  | \$ 2.55          | 4.10%   | \$ 1.41          | 2.22%   | \$ 0.70             | 1.10%   |
| SEWER  | \$ 58.92       | \$ 56.44  | \$ (2.48)        | -4.21%  | \$ 5.82          | 10.31%  | \$ 3.34          | 5.67%   | \$ 1.67             | 2.83%   |
| BASE RATIO   | \$ 122.31      | \$ 118.69 | \$ (3.62)        | -2.96%  | \$ 8.37          | 7.05%   | \$ 4.75          | 3.88%   | \$ 2.37             | 1.94%   |
|  | 1.00           | 1.00      |                  |         |                  |         |                  |         |                     |         |
| <b>WALKER</b>  |                |           |                  |         |                  |         |                  |         |                     |         |
| WATER  | \$ 65.76       | \$ 64.17  | \$ (1.59)        | -2.42%  | \$ 3.81          | 5.94%   | \$ 2.22          | 3.38%   | \$ 1.11             | 1.69%   |
| SEWER  | \$ 66.12       | \$ 57.32  | \$ (8.80)        | -13.31% | \$ 8.51          | 14.85%  | \$ (0.29)        | -0.44%  | \$ (0.15)           | -0.23%  |
| RATIO TO GR  | \$ 131.88      | \$ 121.49 | \$ (10.39)       | -7.88%  | \$ 12.32         | 10.14%  | \$ 1.93          | 1.46%   | \$ 0.96             | 0.73%   |
|  | 1.08           | 1.02      |                  |         |                  |         |                  |         |                     |         |
| <b>KENTWOOD</b>  |                |           |                  |         |                  |         |                  |         |                     |         |
| WATER  | \$ 80.67       | \$ 77.43  | \$ (3.24)        | -4.02%  | \$ 2.31          | 2.98%   | \$ (0.93)        | -1.15%  | \$ (0.47)           | -0.58%  |
| SEWER  | \$ 39.37       | \$ 33.99  | \$ (5.38)        | -13.67% | \$ 5.28          | 15.53%  | \$ (0.10)        | -0.25%  | \$ (0.05)           | -0.13%  |
| RATIO TO GR  | \$ 120.04      | \$ 111.42 | \$ (8.62)        | -7.18%  | \$ 7.59          | 6.81%   | \$ (1.03)        | -0.86%  | \$ (0.52)           | -0.43%  |
|  | 0.98           | 0.94      |                  |         |                  |         |                  |         |                     |         |
| <b>CASCADE TWP</b>   |                |           |                  |         |                  |         |                  |         |                     |         |
| WATER  | \$ 104.64      | \$ 101.85 | \$ (2.79)        | -2.67%  | \$ 8.70          | 8.54%   | \$ 5.91          | 5.65%   | \$ 2.96             | 2.83%   |
| SEWER  | \$ 79.44       | \$ 70.99  | \$ (8.45)        | -10.64% | \$ 11.26         | 15.86%  | \$ 2.81          | 3.54%   | \$ 1.41             | 1.77%   |
| RATIO TO GR  | \$ 184.08      | \$ 172.84 | \$ (11.24)       | -6.11%  | \$ 19.96         | 11.55%  | \$ 8.72          | 4.74%   | \$ 4.37             | 2.37%   |
|  | 1.51           | 1.46      |                  |         |                  |         |                  |         |                     |         |
| <b>GRAND RAPIDS TWP</b>                                    |                |           |                  |         |                  |         |                  |         |                     |         |
| WATER  | \$ 76.83       | \$ 76.56  | \$ (0.27)        | -0.35%  | \$ 3.93          | 5.13%   | \$ 3.66          | 4.76%   | \$ 1.83             | 2.38%   |
| SEWER  | \$ 75.52       | \$ 69.92  | \$ (5.60)        | -7.42%  | \$ 6.72          | 9.61%   | \$ 1.12          | 1.48%   | \$ 0.56             | 0.74%   |
| RATIO TO GR  | \$ 152.35      | \$ 146.48 | \$ (5.87)        | -3.85%  | \$ 10.65         | 7.27%   | \$ 4.78          | 3.14%   | \$ 2.39             | 1.57%   |
|  | 1.25           | 1.23      |                  |         |                  |         |                  |         |                     |         |
| <b>TALLMADGE TWP- Contributions: \$15.9K / \$0K / \$0K</b> |                |           |                  |         |                  |         |                  |         |                     |         |
| WATER  | \$ 91.08       | \$ 104.52 | \$ 13.44         | 14.76%  | \$ 27.51         | 26.32%  | \$ 40.95         | 44.96%  | \$ 20.48            | 22.49%  |
| SEWER  | \$ 115.80      | \$ 108.68 | \$ (7.12)        | -6.15%  | \$ 34.97         | 32.18%  | \$ 26.85         | 22.99%  | \$ 13.43            | 11.50%  |
| RATIO TO GR  | \$ 207.88      | \$ 213.20 | \$ 5.32          | 2.56%   | \$ 62.48         | 29.31%  | \$ 67.80         | 32.61%  | \$ 33.91            | 16.31%  |
|  | 1.70           | 1.80      |                  |         |                  |         |                  |         |                     |         |

\* TYPICAL DOMESTIC CUSTOMER

QUARTERLY CONSUMPTION: WATER- 27.00 UNITS OR 20,196 GALLONS  
 SEWER- 20.00 UNITS OR 14,960 GALLONS  
 NO. OF MONTHS: 3

REU (RESIDENTIAL EQUIVALENT UNIT) CUSTOMER COMMUNITY- APPROXIMATE MONTHLY BILL

WRIGHT TWP- Contributions: NA / \$0K / \$7,768.  
 SEWER (No. of REU 1.00) N/A \$ 47.37 \$ 48.77 2.96%

CITY OF GRAND RAPIDS, MICHIGAN  
2004 PRELIMINARY WATER/SEWER RATE STUDY  
IMPACT OF RATE ADJUSTMENTS ON WHOLESALE USERS

|                          |                      | 2003         |              | 2004         |  | 2005     |  | 2003-2004 |         | 2004-2005 |  | 2003-2005 |         | 2 YR AVG |  |  |
|--------------------------|----------------------|--------------|--------------|--------------|--|----------|--|-----------|---------|-----------|--|-----------|---------|----------|--|--|
|                          |                      | % CHANGE     |              | % CHANGE     |  | % CHANGE |  | % CHANGE  |         | % CHANGE  |  | % CHANGE  |         | % CHANGE |  |  |
| <b>EAST GRAND RAPIDS</b> |                      |              |              |              |  |          |  |           |         |           |  |           |         |          |  |  |
| WATER                    | - SERVICE (MONTHLY)  | \$ 11,334.00 | \$ 14,828.00 | \$ 11,396.00 |  |          |  | 30.83%    | -23.15% | 0.55%     |  |           | 0.55%   | 0.27%    |  |  |
|                          | - COMMODITY (100 CF) | 1.08         | 0.99         | 1.00         |  |          |  | -8.33%    | 1.01%   | -7.41%    |  |           | -7.41%  | -3.70%   |  |  |
| SEWER                    | - SERVICE (MONTHLY)  | 2,621.00     | 2,727.00     | 1,744.00     |  |          |  | 4.04%     | -36.05% | -33.46%   |  |           | -33.46% | -16.73%  |  |  |
|                          | - COMMODITY (MG)     | 992.00       | 896.00       | 957.00       |  |          |  | -9.68%    | 6.81%   | -3.53%    |  |           | -3.53%  | -1.76%   |  |  |
| <b>ADA TWP</b>           |                      |              |              |              |  |          |  |           |         |           |  |           |         |          |  |  |
| WATER                    | - SERVICE (MONTHLY)  | \$ 27,129.00 | \$ 27,452.00 | \$ 29,115.00 |  |          |  | 1.19%     | 6.06%   | 7.32%     |  |           | 7.32%   | 3.66%    |  |  |
|                          | - COMMODITY (100 CF) | 1.12         | 1.05         | 1.06         |  |          |  | -6.25%    | 0.95%   | -5.36%    |  |           | -5.36%  | -2.68%   |  |  |
| SEWER                    | - SERVICE (MONTHLY)  | 4,740.00     | 4,992.00     | 5,772.00     |  |          |  | 5.32%     | 15.63%  | 21.77%    |  |           | 21.77%  | 10.89%   |  |  |
|                          | - COMMODITY (MG)     | 1,073.00     | 1,007.00     | 1,085.00     |  |          |  | -6.15%    | 7.75%   | 1.12%     |  |           | 1.12%   | 0.56%    |  |  |
| <b>OTTAWA COUNTY</b>     |                      |              |              |              |  |          |  |           |         |           |  |           |         |          |  |  |
| WATER                    | - SERVICE (MONTHLY)  | \$ -         | \$ 80.00     | \$ 169.00    |  |          |  | N/A       | 111.25% | N/A       |  |           | N/A     | N/A      |  |  |
|                          | - COMMODITY (100 CF) | 1.16         | 1.09         | 1.11         |  |          |  | -6.03%    | 1.83%   | -4.31%    |  |           | -4.31%  | -2.16%   |  |  |
| <b>NORTH KENT AREA</b>   |                      |              |              |              |  |          |  |           |         |           |  |           |         |          |  |  |
| SEWER                    | - SERVICE (MONTHLY)  | \$ 33,924.00 | \$ 30,365.00 | \$ 23,944.00 |  |          |  | -10.49%   | -21.15% | -29.42%   |  |           | -29.42% | -14.71%  |  |  |
|                          | - COMMODITY (MG)     | 821.00       | 910.00       | 871.00       |  |          |  | 10.84%    | -4.29%  | 6.09%     |  |           | 6.09%   | 3.05%    |  |  |
| <b>GAINES TWP</b>        |                      |              |              |              |  |          |  |           |         |           |  |           |         |          |  |  |
| SEWER                    | - SERVICE (MONTHLY)  | \$ 2,317.00  | \$ 1,374.00  | \$ 1,592.00  |  |          |  | -40.70%   | 15.87%  | -31.29%   |  |           | -31.29% | -15.65%  |  |  |
|                          | - COMMODITY (MG)     | 821.00       | 910.00       | 871.00       |  |          |  | 10.84%    | -4.29%  | 6.09%     |  |           | 6.09%   | 3.05%    |  |  |
| <b>MEIJER - ALGOMA</b>   |                      |              |              |              |  |          |  |           |         |           |  |           |         |          |  |  |
| SEWER                    | - SERVICE (MONTHLY)  | NA           | NA           | \$ 103.00    |  |          |  | NA        | NA      | NA        |  |           | NA      | NA       |  |  |
|                          | - COMMODITY (MG)     | NA           | NA           | 1,212.00     |  |          |  | NA        | NA      | NA        |  |           | NA      | NA       |  |  |

\*73183 Com. Schmidt, supported by Com. Tormala, moved adoption of the following resolution under the Consent Agenda:

RESOLVED that the following Ordinance to amend Sections 2.34, 2.35, 2.40 and 2.45 of Chapter 26 of Title II of the City Code be published as part of the proceedings, that a public hearing on the proposed Ordinance be held on December 14, 2004, at 2:00 p.m., that the City Clerk be directed to publish notice of Public Hearing and that the proposed Ordinance be considered for adoption on December 21, 2004.

AN ORDINANCE TO AMEND CHAPTER 26 OF TITLE II OF THE CODE OF THE CITY OF GRAND RAPIDS AMENDING THE WATER RATES AND CHARGES.

ORDINANCE NO. 2004-\_\_\_

THE PEOPLE OF THE CITY OF GRAND RAPIDS DO ORDAIN:

Section 1. That Section 2.34 of Chapter 26 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.34 Local Distribution Charges.

- (1) Whenever a watermain used for local distribution is constructed either through a special assessment project or as may be ordered or required by law, the property owners for whom the line is designed shall each pay their share of the cost of installation. Similarly, any property owner requesting service who has not previously paid his or her share of the cost of constructing the watermain used for local distribution shall pay those costs before service is permitted.
- (2) The charge shall be known as the front foot rate and be determined by multiplying the rate per foot by the number of feet the property owner has fronting on the watermain used for local distribution. The front foot rate shall be as follows:
  - (a) Domestic User: \$45.00;
  - (b) Commercial or Industrial User;
    - 1. The same as a domestic user if the connection is made to a line eight (8) inches or less in diameter.
    - 2. For a line larger than eight (8) inches in diameter: \$57.00.

This charge will be annually reviewed and may change to reflect the current average cost of installation of local distribution lines.

- (3) If the City Commission shall determine that it is not advisable to collect the front foot rate at the time of construction or connection (if not previously paid at the time of construction), it may direct that the cost be borne initially by the System and subsequently be collected from the property owner in accordance with this Section.
- (4) Upon completion of construction or at the time connection is requested (if this cost has not been paid at the time of construction), the City Engineer shall certify to the City Comptroller the cost to be charged to the property owner. The Comptroller shall in turn certify the amount thereof to the City Treasurer. The City Treasurer shall bill the owner of the premises affected advising him or her that unless the amount so billed is paid within thirty (30) days from the date of mailing that the same shall be presented to the City Commission at the first meeting thereof after the expiration of thirty (30) days for assessment against said premises as a special assessment. In the event the bill for such installation and connection is not paid within thirty (30) days from the date said notice is mailed, the City Treasurer shall report the same to the City Commission which shall

examine the same and if found by it to be correct shall confirm it as a special assessment against the premises affected, at which time the City Commission shall also direct the number of installments into which the same shall be divided, and shall direct the City Assessor to extend the same upon the tax roll as a special assessment in the manner provided in Chapter 10 of this Code. All collection procedures for special assessments established in Chapter 10 of this Code shall be applicable to assessments made hereunder.

- (5) In lieu of the procedure above described, such installations and connections may be made at the expense of the System when the owner of the premises signs a written agreement agreeing to pay the expense of such installation and connections upon terms agreeable to the City Manager and that the unpaid balance shall constitute a lien upon his or her property of the same character and subject to the same methods of collection as prescribed for special assessments in Chapter 10 of this Code."

Section 2. That Section 2.35 of Chapter 26 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.35 Integrated Water Connection Fee Schedule.

When a property owner or user is requested or required to connect to the System and has not previously paid or been assessed a connection fee, the following connection fee schedule shall apply:

Integrated Water Connection Base Fee Schedule

| <u>Water Meter<br/>(or equivalent)<br/>Size (inches)</u> | <u>Base Fee</u> |
|--|-----------------|
| 3/4 or less  | \$ 2,250        |
| 1  | 3,750           |
| 1 ½  | 7,500           |
| 2  | 12,000          |
| 3  | 26,250          |
| 4  | 47,250          |
| 6 and over   | 105,000         |

Except as otherwise provided in the immediately succeeding paragraph, the foregoing integrated water connection base fee schedule for single-family and multi-family residential dwelling units shall be adjusted upward and downward as follows: A single-family residential dwelling unit located on a parcel containing twenty thousand (20,000) square feet shall pay the applicable integrated connection fee in accordance with the forgoing schedule. When determining the square footage of a residential parcel for the purposes of determining the appropriate integrated connection fee, parcel size may be adjusted downward to take into consideration such things as wetlands, lakes, streams and other unusual characteristics of the parcel in accordance with policies approved from time to time by the Utility Advisory Board. To the extent the size of a parcel, as adjusted, is greater than or less than twenty thousand (20,000) square feet, one-half the applicable integrated connection fee will increase or decrease by the same percentage increase or decrease in the parcel above or below twenty thousand (20,000) square feet. In the case of multi-family residential dwellings, in order to determine the size of the parcel assigned to each dwelling unit for purposes of calculating the integrated connection fee to be paid by each multi-family residential dwelling unit, the total square footage of the parcel, as adjusted, on which the multi-family residential dwelling is located shall be divided by the total number of residential units. Notwithstanding any other provision in this subsection, the integrated connection fee for a single-family residential dwelling unit or multi-family residential dwelling unit shall not exceed four and one-half times the applicable base integrated connection fee set forth in foregoing schedule.

There shall be no upward adjustment in the integrated water service connection fee payable for a single-family residential dwelling unit connecting to the Water System if (a) each of the following conditions are met (1) a building permit shall have been obtained, (2) the dwelling unit shall have been constructed, and (3) a certificate of occupancy shall have been issued prior to January 1, 2000 or (b) local building permit fees have been paid to the local governmental unit prior to January 1, 2000 for a single-family residential dwelling unit to be constructed on or after January 1, 2000. When connecting to the Water System, users living in or owning such single-family residential dwelling units shall pay the applicable base integrated connection fee set forth in the Integrated Water Connection Base Fee Schedule adjusted downward, if applicable, in accordance with the immediate preceding paragraph.

Effective January 1, 2005 and January 1<sup>st</sup> of every year thereafter, the Integrated Water Connection Base Fees shall be adjusted by a percentage, which is determined by the annual change in the Consumer Price Index (the "index") calculated as follows:

- (1) The Consumer Price Index shall be that Index referred to as the Consumer Price Index, US City Average, All Urban Consumers, published by the U.S. Department of Labor-Bureau of Statistics ((1982-84)=100). In the event the method of determining the Index is substantially altered, the basis for determining the annual change thereafter shall be the Index which is most comparable to the Index described above.
- (2) For the purpose of computing the percentage change each calendar year, the Index for the month of August for the prior calendar year shall be subtracted from the Index for the immediately-preceding August. The result so obtained (if positive) shall be divided by the Index for the month of August for the prior calendar year to obtain the percentage increase which shall be applied to the then current Integrated Water Connection Base Fee Schedule to determine the new calendar year schedule.

The foregoing Integrated Connection fee is due and payable at the time a User receives a permit to connect to the Water System. A permit issued by the City to connect to the Water System shall expire one hundred eighty (180) days from the date the permit was issued.

The user receiving services who applies for a larger water meter than the one presently in service shall pay an Integrated Connection Fee which is the difference in cost between the meter size in service and the one applied for in accordance with the Integrated Connection Fee in effect at the time of application. No credit or rebate shall be made in the case of application for a smaller meter size.

Existing commercial and industrial customers may request the installation of an additional meter to measure water used solely for irrigation purposes. There shall be no Integrated Connection Fee for the additional meter provided combined maximum capacity as defined by the American Water Works Association Standards C700-90 and C702-92, as amended, does not exceed the maximum capacity of the original meter. If the original maximum capacity is exceeded, the customer shall pay as an Integrated Connection Fee the difference between the fee for the original meter and what the fee would be if the maximum capacities of all meters were totaled. The additional Integrated Connection Fee shall be based upon the fees in effect at the time of installation of the additional meter."

Section 3. That Section 2.40 of Chapter 26 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.40 Rates and Charges for Retail Customers Within the City of Grand Rapids.

The following charges for water service provided retail users within the City of Grand Rapids shall be made.

|            | <u>Commodity Rate</u> |                           |
|------------|-----------------------|---------------------------|
| Domestic   |                       | \$1.36 per 100 cubic feet |
| Commercial |                       | \$1.36 per 100 cubic feet |
| Industrial |                       | \$1.36 per 100 cubic feet |

| <u>Size of Meter</u> | <u>Monthly Service Charge</u> | <u>Charge</u> |
|----------------------|-------------------------------|---------------|
| 3/4 inch or less     |                               | \$ 9.36       |
| 1 inch               |                               | 13.89         |
| 1 1/4 inch           |                               | 19.71         |
| 1 1/2 inch           |                               | 26.82         |
| 2 inches             |                               | 44.93         |
| 3 inches             |                               | 96.66         |
| 4 inches             |                               | 169.09        |
| 6 inches or larger   |                               | 376.02"       |

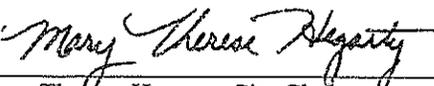
Section 4. That Section 2.45 of Chapter 26 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.45 Effective Date.

The rates, charges and fees set forth in Section 2.34, 2.35 and 2.40 shall be effective on January 1, 2005."

\* CONSENT AGENDA APPROVAL

I hereby certify that the foregoing is a true transcript of the action of the City Commission of the City of Grand Rapids, Michigan, in public session held November 23, 2004.

  
 \_\_\_\_\_  
 Mary Therese Hegarty, City Clerk

\*73184 Com. Schmidt, supported by Com. Tormala, moved adoption of the following resolution under the Consent Agenda:

RESOLVED that the following Ordinance to amend Section 2.95, 2.96, 2.101, 2.102 and 2.105 of Chapter 27 of Title II of the City Code be published as part of the proceedings, and that a public hearing on the proposed Ordinance be held on December 14, 2004, at 2:00 p.m., that the City Clerk be directed to publish notice of Public Hearing and that the proposed Ordinance be considered for adoption on December 21, 2004.

AN ORDINANCE TO AMEND CHAPTER 27 OF TITLE II OF THE CODE OF THE CITY OF GRAND RAPIDS AMENDING THE SEWER RATES AND CHARGES.

ORDINANCE NO. 2004-\_\_\_

THE PEOPLE OF THE CITY OF GRAND RAPIDS DO ORDAIN:

Section 1. That Section 2.95 of Chapter 27 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.95 Local Collector Sewer Line Installation Charges.

- (1) Whenever a local collector sewer line is constructed either through a special assessment project or as may be ordered or required by law, the property owners for whom the line is designed to serve shall each pay their share of the cost of installation. Similarly, any property owner requesting service who has not previously paid his or her share of the cost of constructing the local collector sewer shall pay those costs before service is permitted.
- (2) The charge shall be known as the front foot rate and be determined by multiplying the rate per foot by the number of feet the property owner has fronting on the local collector sewer line from which he or she will receive service. The front foot rate shall be as follows:
  - (a) Domestic User: \$55.00;
  - (b) Commercial or Industrial User;
    1. The same as a domestic user if the connection is made to a local collector sewer line eight (8) inches or less in diameter.
    2. For a line larger than eight (8) inches in diameter: \$76.00.

This charge will be annually reviewed and may change to reflect the current average cost of installation of local collector sewer lines.

- (3) If the City Commission shall determine that it is not advisable to collect the front foot rate at the time of construction or connection (if not previously paid at the time of construction), it may direct that the cost be borne initially by the System and subsequently be collected from the property owner in accordance with this Section.
- (4) Upon completion of construction or at the time connection is requested (if this cost has not been paid at the time of construction), the City Engineer shall certify to the City Comptroller the cost to be charged to the property owner. The Comptroller shall in turn certify the amount thereof to the City Treasurer. The City Treasurer shall bill the owner of the premises affected advising him or her that unless the amount so billed is paid within thirty (30) days from the date of mailing that the same shall be presented to the City Commission at the first meeting thereof after the expiration of thirty (30) days for assessment against said premises as a special assessment. In the event the bill for such installation and connection is not paid within thirty (30) days from the date said notice is mailed, the City Treasurer shall report the same to the City Commission which shall

examine the same and if found by it to be correct shall confirm it as a special assessment against the premises affected, at which time the City Commission shall also direct the number of installments into which the same shall be divided, and shall direct the City Assessor to extend the same upon the tax roll as a special assessment in the manner provided in Chapter 10 of this Code. All collection procedures for special assessments established in Chapter 10 of this Code shall be applicable to assessments made hereunder.

- (5) In lieu of the procedure above described, such costs may be made at the expense of the System when the owner of the premises signs a written agreement agreeing to pay the cost upon terms agreeable to the City Manager and that the unpaid balance shall constitute a lien upon his or her property of the same character and subject to the same methods of collection as prescribed for special assessments in Chapter 10 of this Code."

Section 2. That Section 2.96 of Chapter 27 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.96 Integrated Sewer Connection Fee Schedule.

When a property owner or user is requested or required to connect to the System and has not previously paid or been assessed a connection fee, the following connection fee schedule shall apply:

Integrated Water Connection Base Fee Schedule

| <u>Water Meter<br/>(or equivalent)<br/>Size (inches)</u> | <u>Base Fee</u> |
|--|-----------------|
| 3/4 or less  | \$ 2,250        |
| 1  | 3,750           |
| 1 ½  | 7,500           |
| 2  | 12,000          |
| 3  | 26,250          |
| 4  | 47,250          |
| 6 and over   | 105,000         |

Except as otherwise provided in the immediately succeeding paragraph, the foregoing integrated sewer connection base fee schedule for single-family and multi-family residential dwelling units shall be adjusted upward and downward as follows: A single-family residential dwelling unit located on a parcel containing twenty thousand (20,000) square feet shall pay the applicable integrated connection fee in accordance with the foregoing schedule. When determining the square footage of a residential parcel for the purposes of determining the appropriate integrated connection fee, parcel size may be adjusted downward to take into consideration such things as wetlands, lakes, streams and other unusual characteristics of the parcel in accordance with policies approved from time to time by the Utility Advisory Board. To the extent the size of a parcel, as adjusted, is greater than or less than twenty thousand (20,000) square feet, one-half the applicable integrated connection fee will increase or decrease by the same percentage increase or decrease in the parcel above or below twenty thousand (20,000) square feet. In the case of multi-family residential dwellings, in order to determine the size of the parcel assigned to each dwelling unit for purposes of calculating the integrated connection fee to be paid by each multi-family residential dwelling unit, the total square footage of the parcel, as adjusted, on which the multi-family residential dwelling is located shall be divided by the total number of residential units. Notwithstanding any other provision in this subsection, the integrated connection fee for a single-family residential dwelling unit or multi-family residential dwelling unit shall not exceed four and one-half times the applicable base integrated connection fee set forth in foregoing schedule.

There shall be no upward adjustment in the integrated sewer service connection fee payable for a single-family residential dwelling unit connecting to the Sewer System if (a) each of the following conditions are met (1) a building permit shall have been obtained, (2) the dwelling unit shall have been constructed, and (3) a certificate of occupancy shall have been issued prior to January 1, 2000 or (b) local building permit fees have been paid to the

local governmental unit prior to January 1, 2000 for a single-family residential dwelling unit to be constructed on or after January 1, 2000. When connecting to the Sewer System, users living in or owning such single-family residential dwelling units shall pay the applicable base integrated connection fee set forth in the Integrated Sewer Connection Base Fee Schedule adjusted downward, if applicable, in accordance with the immediate preceding paragraph.

Effective January 1, 2005 and January 1<sup>st</sup> of every year thereafter, the Integrated Sewer Connection Base Fees shall be adjusted by a percentage, which is determined by the annual change in the Consumer Price Index (the "index") calculated as follows:

- (1) The Consumer Price Index shall be that Index referred to as the Consumer Price Index, US City Average, All Urban Consumers, published by the U.S. Department of Labor-Bureau of Statistics ((1982-84)=100). In the event the method of determining the Index is substantially altered, the basis for determining the annual change thereafter shall be the Index which is most comparable to the Index described above.
- (2) For the purpose of computing the percentage change each calendar year, the Index for the month of August for the prior calendar year shall be subtracted from the Index for the immediately-preceding August. The result so obtained (if positive) shall be divided by the Index for the month of August for the prior calendar year to obtain the percentage increase which shall be applied to the then current Integrated Sewer Connection Base Fee Schedule to determine the new calendar year schedule.

The foregoing Integrated Connection fee is due and payable at the time a user receives a permit to connect to the Sewer System. A permit issued by the City to connect to the Sewer System shall expire one hundred eighty (180) days from the date the permit was issued.

The user receiving services who applies for a larger water meter than the one presently in service shall pay an Integrated Connection Fee which is the difference in cost between the meter size in service and the one applied for in accordance with the Integrated Connection Fee in effect at the time of application. No credit or rebate shall be made in the case of application for a smaller meter size."

Section 3. That Section 2.101 of Chapter 27 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.101 Rates and Charges for Retail Users Within the City of Grand Rapids.

The following rates and charges for sewage disposal service shall apply for users within the City of Grand Rapids:

|            | <u>Commodity Rate</u> |                           |
|------------|-----------------------|---------------------------|
| Domestic   |                       | \$1.97 per 100 cubic feet |
| Commercial |                       | \$1.97 per 100 cubic feet |
| Industrial |                       | \$1.97 per 100 cubic feet |

Monthly Service Charge

| <u>Size of Meter</u> | <u>Charge</u> |
|----------------------|---------------|
| 3/4 inch or less     | \$ 7.62       |
| 1 inch               | 11.74         |
| 1 1/4 inches         | 17.04         |
| 1 1/2 inches         | 23.52         |
| 2 inches             | 40.01         |
| 3 inches             | 87.12         |
| 4 inches             | 153.08        |
| 6 inches or larger   | 341.52"       |

Section 4. That Section 2.102 of Chapter 27 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

“2.102 Surcharges and Permit Fees.

- (1) If the City Manager determines that a discharge will not cause pass through or interference as defined in this Chapter, Industrial or Commercial users whether they are located within a retail service area or a bulk service area shall be charged a surcharge if the concentration of their discharge exceeds a five-day BOD of two hundred fifty (250) mg/l, and/or TSS of two hundred fifty (250) mg/l, or any phosphorus of fifteen (15) mg/l. That charge shall be sixteen and four-tenths cents (\$0.164) per pound of BOD and fifteen and nine-tenths cents (\$0.159) per pound of TSS and one dollar and six and four-tenths cents (\$1.064) per pound of phosphorus in excess of the above limits. In addition, all industrial or commercial users shall be charged a surcharge for ammonia concentrations exceeding thirty-eight (38) mg/l. The charge shall be sixteen and seven-tenths cents (\$0.167) per pound of ammonia in excess of the above limit. Discharge concentrations of these substances and the resulting surcharge shall be based on at least three composite samples per quarter. This sampling shall be performed by either the City or the Industrial User as determined by the City Manager.
- (2) The fee for a Significant Industrial User Discharge Permit as provided for in Section 2.70 of this Chapter whether they are located within a retail service area or a bulk service area shall be three hundred dollars (\$300.00) per year and an analytical fee based upon Section 2.102(3).
- (3) The following schedule of charges shall apply to any analysis which may be required as a part of a Significant Industrial User Discharge Permit:

|                     |         |      |
|---------------------|---------|------|
| Metals              | \$10.00 | each |
| TSS                 | 6.00    | each |
| BOD                 | 12.00   | each |
| Total Phosphate     | 11.00   | each |
| pH                  | 10.00   | each |
| EPA 624             | 52.00   | each |
| EPA 625             | 115.00  | each |
| BTEX/MTBE           | 36.00   | each |
| Sulfide             | 15.00   | each |
| Oil and Grease      | 20.00   | each |
| Total Cyanide       | 19.00   | each |
| Hexavalent Chromium | 16.00   | each |
| Fecal Coliform      | 35.00   | each |
| Labor               | 49.64   | hour |
| Sampler             | 30.00   | day  |
| Vehicle             | 5.00    | hour |

- (4) These charges will be reviewed annually and may change to reflect the current cost of providing these services.”

Section 5. That Section 2.105 of Chapter 27 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.105 Effective Date.  
The rates, charges and fees set forth in Section 2.95, 2.96, 2.101 and 2.102 shall be effective on January 1,  
2005."

\* CONSENT AGENDA APPROVAL

I hereby certify that the foregoing is a true transcript of the action of the City Commission of the City of Grand Rapids, Michigan, in public session held November 23, 2004.

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Mary Therese Hegarty, City Clerk

NOTICE OF PUBLIC HEARING

THE GRAND RAPIDS PRESS

STATE OF MICHIGAN,  
COUNTY OF KENT } SS.

The Advertising Manager of THE GRAND RAPIDS, PRESS , a newspaper published and circulated in the County of Kent, being duly sworn, deposes and says that the following advertising was inserted.

DECEMBER 4, 2004

*Sten S. Westphal*

Advertising Manager

Sworn and subscribed before me this 4th day of  
DECEMBER A.D. 2004

*Monika P. Daulton Strautman*

NOTARY PUBLIC, KENT COUNTY, MI

My commission expires:

*July 27, 2005*



**CITY OF GRAND RAPIDS**

**A PUBLIC HEARING ON PROPOSED WATER/SEWER RATES AND CHARGES FOR 2005**

A public hearing will be held at 2:00 p.m. on Tuesday, December 14, 2004, in the Grand Rapids City Commission Chambers, 9th floor of City Hall, 300 Monroe Avenue, NW, Grand Rapids, MI.

Public Works & Economic Development Services has completed the "Preliminary Water-Sewer 2004 Rate Study" report, which is the basis for recommending rates to become effective January 1, 2005 for all residential, commercial and industrial users. That report is available for public inspection in the City Clerk's Office, 2nd floor of City Hall, between 8:00 a.m. and 5:00 p.m. weekdays. We encourage water/sewer users to attend this public hearing on December 14, 2004.

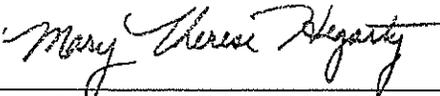
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## PUBLIC HEARINGS - GRAND RAPIDS ORDINANCES

73265 Pursuant to Commission File No. 73183, dated November 23, 2004, a public hearing was held on this date to consider a proposed ordinance to amend Chapter 26 of the City Code entitled "Water Rates and Charges".

At the conclusion of said hearing, the Mayor declared the hearing closed and referred the matter to the Committee of the Whole.

I hereby certify that the foregoing is a true transcript of the action of the City Commission of the City of Grand Rapids, Michigan, in public session held December 14, 2004.

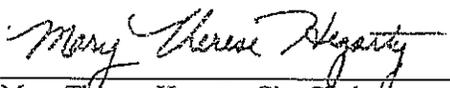


Mary Therese Hegarty, City Clerk

73266 Pursuant to Commission File No. 73184, dated November 23, 2004, a public hearing was held on this date to consider a proposed ordinance to amend Chapter 27 of the City Code entitled "Sewer Rates and Charges".

At the conclusion of said hearing, the Mayor declared the hearing closed and referred the matter to the Committee of the Whole.

I hereby certify that the foregoing is a true transcript of the action of the City Commission of the City of Grand Rapids, Michigan, in public session held December 14, 2004.

  
\_\_\_\_\_  
Mary Therese Hegarty, City Clerk

## FINAL ADOPTION OF RATE ORDINANCES

DEC 29 2004

73271 An Ordinance to amend Chapter 26 of the City Code entitled "Water Rates and Charges", was presented to the City Commission on November 23, 2004 under File No. 73813, a public hearing was held on December 14, 2004 under Proceeding No. 73265, and the Ordinance is to be considered for adoption today.

Com. Rabaut, supported by Com. Schmidt, moved adoption of the following Ordinance:

AN ORDINANCE TO AMEND CHAPTER 26 OF TITLE II OF THE CODE OF THE CITY OF GRAND RAPIDS AMENDING THE WATER RATES AND CHARGES.

ORDINANCE NO. 2004-81

THE PEOPLE OF THE CITY OF GRAND RAPIDS DO ORDAIN:

Section 1. That Section 2.34 of Chapter 26 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.34 Local Distribution Charges.

- (1) Whenever a watermain used for local distribution is constructed either through a special assessment project or as may be ordered or required by law, the property owners for whom the line is designed shall each pay their share of the cost of installation. Similarly, any property owner requesting service who has not previously paid his or her share of the cost of constructing the watermain used for local distribution shall pay those costs before service is permitted.
- (2) The charge shall be known as the front foot rate and be determined by multiplying the rate per foot by the number of feet the property owner has fronting on the watermain used for local distribution. The front foot rate shall be as follows:
  - (a) Domestic User: \$45.00;
  - (b) Commercial or Industrial User;
    1. The same as a domestic user if the connection is made to a line eight (8) inches or less in diameter.
    2. For a line larger than eight (8) inches in diameter: \$57.00.

This charge will be annually reviewed and may change to reflect the current average cost of installation of local distribution lines.

- (3) If the City Commission shall determine that it is not advisable to collect the front foot rate at the time of construction or connection (if not previously paid at the time of construction), it may direct that the cost be borne initially by the System and subsequently be collected from the property owner in accordance with this Section.
- (4) Upon completion of construction or at the time connection is requested (if this cost has not been paid at the time of construction), the City Engineer shall certify to the City Comptroller the cost to be charged to the property owner. The Comptroller shall in turn certify the amount thereof to the City Treasurer. The City Treasurer shall bill the owner of the premises affected advising him or her that unless the amount so billed is paid within thirty (30) days from the date of mailing that the same shall be presented to the City Commission at the first meeting thereof after the expiration of thirty (30) days for assessment against said premises as a special assessment. In the event the bill for such installation and connection is not paid within thirty (30) days from the date said notice is mailed, the City Treasurer shall report the same to the City Commission which shall examine the same and if found by it to be correct shall confirm it as a special assessment against the premises affected, at which time the City Commission shall also direct the

number of installments into which the same shall be divided, and shall direct the City Assessor to extend the same upon the tax roll as a special assessment in the manner provided in Chapter 10 of this Code. All collection procedures for special assessments established in Chapter 10 of this Code shall be applicable to assessments made hereunder.

- (5) In lieu of the procedure above described, such installations and connections may be made at the expense of the System when the owner of the premises signs a written agreement agreeing to pay the expense of such installation and connections upon terms agreeable to the City Manager and that the unpaid balance shall constitute a lien upon his or her property of the same character and subject to the same methods of collection as prescribed for special assessments in Chapter 10 of this Code."

Section 2. That Section 2.35 of Chapter 26 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.35 Integrated Water Connection Fee Schedule.

When a property owner or user is requested or required to connect to the System and has not previously paid or been assessed a connection fee, the following connection fee schedule shall apply:

Integrated Water Connection Base Fee Schedule

| <u>Water Meter<br/>(or equivalent)<br/>Size (inches)</u> | <u>Base Fee</u> |
|--|-----------------|
| 3/4 or less  | \$ 2,250        |
| 1  | 3,750           |
| 1 ½  | 7,500           |
| 2  | 12,000          |
| 3  | 26,250          |
| 4  | 47,250          |
| 6 and over   | 105,000         |

Except as otherwise provided in the immediately succeeding paragraph, the foregoing integrated water connection base fee schedule for single-family and multi-family residential dwelling units shall be adjusted upward and downward as follows: A single-family residential dwelling unit located on a parcel containing twenty thousand (20,000) square feet shall pay the applicable integrated connection fee in accordance with the foregoing schedule. When determining the square footage of a residential parcel for the purposes of determining the appropriate integrated connection fee, parcel size may be adjusted downward to take into consideration such things as wetlands, lakes, streams and other unusual characteristics of the parcel in accordance with policies approved from time to time by the Utility Advisory Board. To the extent the size of a parcel, as adjusted, is greater than or less than twenty thousand (20,000) square feet, one-half the applicable integrated connection fee will increase or decrease by the same percentage increase or decrease in the parcel above or below twenty thousand (20,000) square feet. In the case of multi-family residential dwellings, in order to determine the size of the parcel assigned to each dwelling unit for purposes of calculating the integrated connection fee to be paid by each multi-family residential dwelling unit, the total square footage of the parcel, as adjusted, on which the multi-family residential dwelling is located shall be divided by the total number of residential units. Notwithstanding any other provision in this subsection, the integrated connection fee for a single-family residential dwelling unit or multi-family residential dwelling unit shall not exceed four and one-half times the applicable base integrated connection fee set forth in foregoing schedule.

There shall be no upward adjustment in the integrated water service connection fee payable for a single-family residential dwelling unit connecting to the Water System if (a) each of the following conditions are met (1) a building permit shall have been obtained, (2) the dwelling unit shall have been constructed, and (3) a certificate of occupancy shall have been issued prior to January 1, 2000 or (b) local building permit fees have been paid to the local governmental unit prior to January 1, 2000 for a single-family residential dwelling unit to be constructed on or after January 1, 2000. When connecting to the Water System, users living in or owning such single-family

residential dwelling units shall pay the applicable base integrated connection fee set forth in the Integrated Water Connection Base Fee Schedule adjusted downward, if applicable, in accordance with the immediate preceding paragraph.

Effective January 1, 2005 and January 1<sup>st</sup> of every year thereafter, the Integrated Water Connection Base Fees shall be adjusted by a percentage, which is determined by the annual change in the Consumer Price Index (the "index") calculated as follows:

- (1) The Consumer Price Index shall be that Index referred to as the Consumer Price Index, US City Average, All Urban Consumers, published by the U.S. Department of Labor-Bureau of Statistics ((1982-84)=100). In the event the method of determining the Index is substantially altered, the basis for determining the annual change thereafter shall be the Index which is most comparable to the Index described above.
- (2) For the purpose of computing the percentage change each calendar year, the Index for the month of August for the prior calendar year shall be subtracted from the Index for the immediately-preceding August. The result so obtained (if positive) shall be divided by the Index for the month of August for the prior calendar year to obtain the percentage increase which shall be applied to the then current Integrated Water Connection Base Fee Schedule to determine the new calendar year schedule.

The foregoing Integrated Connection fee is due and payable at the time a user receives a permit to connect to the Water System. A permit issued by the City to connect to the Water System shall expire one hundred eighty (180) days from the date the permit was issued.

The user receiving services who applies for a larger water meter than the one presently in service shall pay an Integrated Connection Fee which is the difference in cost between the meter size in service and the one applied for in accordance with the Integrated Connection Fee in effect at the time of application. No credit or rebate shall be made in the case of application for a smaller meter size.

Existing commercial and industrial customers may request the installation of an additional meter to measure water used solely for irrigation purposes. There shall be no Integrated Connection Fee for the additional meter provided combined maximum capacity as defined by the American Water Works Association Standards C700-90 and C702-92, as amended, does not exceed the maximum capacity of the original meter. If the original maximum capacity is exceeded, the customer shall pay as an Integrated Connection Fee the difference between the fee for the original meter and what the fee would be if the maximum capacities of all meters were totaled. The additional Integrated Connection Fee shall be based upon the fees in effect at the time of installation of the additional meter."

Section 3. That Section 2.40 of Chapter 26 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.40 Rates and Charges for Retail Customers Within the City of Grand Rapids.

The following charges for water service provided retail users within the City of Grand Rapids shall be made.

|                      |  | <u>Commodity Rate</u>         |
|----------------------|--|-------------------------------|
| Domestic             |  | \$1.36 per 100 cubic feet     |
| Commercial           |  | \$1.36 per 100 cubic feet     |
| Industrial           |  | \$1.36 per 100 cubic feet     |
|                      |  | <u>Monthly Service Charge</u> |
| <u>Size of Meter</u> |  | <u>Charge</u>                 |
| 3/4 inch or less     |  | \$ 9.36                       |
| 1 inch               |  | 13.89                         |
| 1 1/4 inch           |  | 19.71                         |

|                    |         |
|--------------------|---------|
| 1 1/2 inch         | 26.82   |
| 2 inches           | 44.93   |
| 3 inches           | 96.66   |
| 4 inches           | 169.09  |
| 6 inches or larger | 376.02" |

Section 4. That Section 2.45 of Chapter 26 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.45 Effective Date.

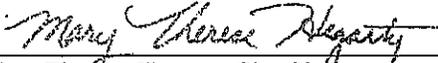
The rates, charges and fees set forth in Section 2.34, 2.35 and 2.40 shall be effective on January 1, 2005."

Carried by a roll call vote: Yeas: -6 Coms. Dean, Jendrasiak, Rabaut, Schmidt, White, Mayor Heartwell Nays: -1 Com. Tormala

Com. Schmidt, supported by Com. Rabaut, moved that the ordinance take immediate effect pursuant to Section 9 of Title V of the City Charter.

Adopted: Yeas: -6 Coms. Dean, Jendrasiak, Rabaut, Schmidt, White, Mayor Heartwell Nays: -1 Com. Tormala

I hereby certify that the foregoing is a true transcript of the action of the City Commission of the City of Grand Rapids, Michigan, in public session held December 21, 2004.

  
 \_\_\_\_\_  
 Mary Therese Hegarty, City Clerk

73272 An Ordinance to amend Chapter 27 of the City Code entitled "Sewer Rates and Charges", was presented to the City Commission on November 23, 2004 under File No. 73814, a public hearing was held on December 14, 2004 under Proceeding No. 73266, and the Ordinance is to be considered for adoption today.

Com. Dean, supported by Com. Rabaut, moved adoption of the following Ordinance:

AN ORDINANCE TO AMEND CHAPTER 27 OF TITLE II OF THE CODE OF THE CITY OF GRAND RAPIDS AMENDING THE SEWER RATES AND CHARGES.

ORDINANCE NO. 2004-82

THE PEOPLE OF THE CITY OF GRAND RAPIDS DO ORDAIN:

Section 1. That Section 2.95 of Chapter 27 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.95 Local Collector Sewer Line Installation Charges.

- (1) Whenever a local collector sewer line is constructed either through a special assessment project or as may be ordered or required by law, the property owners for whom the line is designed to serve shall each pay their share of the cost of installation. Similarly, any property owner requesting service who has not previously paid his or her share of the cost of constructing the local collector sewer shall pay those costs before service is permitted.
- (2) The charge shall be known as the front foot rate and be determined by multiplying the rate per foot by the number of feet the property owner has fronting on the local collector sewer line from which he or she will receive service. The front foot rate shall be as follows:
  - (a) Domestic User: \$55.00;
  - (b) Commercial or Industrial User;
    1. The same as a domestic user if the connection is made to a local collector sewer line eight (8) inches or less in diameter.
    2. For a line larger than eight (8) inches in diameter: \$76.00.

This charge will be annually reviewed and may change to reflect the current average cost of installation of local collector sewer lines.

- (3) If the City Commission shall determine that it is not advisable to collect the front foot rate at the time of construction or connection (if not previously paid at the time of construction), it may direct that the cost be borne initially by the System and subsequently be collected from the property owner in accordance with this Section.
- (4) Upon completion of construction or at the time connection is requested (if this cost has not been paid at the time of construction), the City Engineer shall certify to the City Comptroller the cost to be charged to the property owner. The Comptroller shall in turn certify the amount thereof to the City Treasurer. The City Treasurer shall bill the owner of the premises affected advising him or her that unless the amount so billed is paid within thirty (30) days from the date of mailing that the same shall be presented to the City Commission at the first meeting thereof after the expiration of thirty (30) days for assessment against said premises as a special assessment. In the event the bill for such installation and connection is not paid within thirty (30) days from the date said notice is mailed, the City Treasurer shall report the same to the City Commission which shall examine the same and if found by it to be correct shall confirm it as a special assessment against the premises affected, at which time the City Commission shall also direct the

number of installments into which the same shall be divided, and shall direct the City Assessor to extend the same upon the tax roll as a special assessment in the manner provided in Chapter 10 of this Code. All collection procedures for special assessments established in Chapter 10 of this Code shall be applicable to assessments made hereunder.

- (5) In lieu of the procedure above described, such costs may be made at the expense of the System when the owner of the premises signs a written agreement agreeing to pay the cost upon terms agreeable to the City Manager and that the unpaid balance shall constitute a lien upon his or her property of the same character and subject to the same methods of collection as prescribed for special assessments in Chapter 10 of this Code."

Section 2. That Section 2.96 of Chapter 27 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.96 Integrated Sewer Connection Fee Schedule.

When a property owner or user is requested or required to connect to the System and has not previously paid or been assessed a connection fee, the following connection fee schedule shall apply:

Integrated Sewer Connection Base Fee Schedule

| <u>Water Meter<br/>(or equivalent)<br/>Size (inches)</u> | <u>Base Fee</u> |
|--|-----------------|
| 3/4 or less  | \$ 2,250        |
| 1  | 3,750           |
| 1 ½  | 7,500           |
| 2  | 12,000          |
| 3  | 26,250          |
| 4  | 47,250          |
| 6 and over   | 105,000         |

Except as otherwise provided in the immediately succeeding paragraph, the foregoing integrated sewer connection base fee schedule for single-family and multi-family residential dwelling units shall be adjusted upward and downward as follows: A single-family residential dwelling unit located on a parcel containing twenty thousand (20,000) square feet shall pay the applicable integrated connection fee in accordance with the foregoing schedule. When determining the square footage of a residential parcel for the purposes of determining the appropriate integrated connection fee, parcel size may be adjusted downward to take into consideration such things as wetlands, lakes, streams and other unusual characteristics of the parcel in accordance with policies approved from time to time by the Utility Advisory Board. To the extent the size of a parcel, as adjusted, is greater than or less than twenty thousand (20,000) square feet, one-half the applicable integrated connection fee will increase or decrease by the same percentage increase or decrease in the parcel above or below twenty thousand (20,000) square feet. In the case of multi-family residential dwellings, in order to determine the size of the parcel assigned to each dwelling unit for purposes of calculating the integrated connection fee to be paid by each multi-family residential dwelling unit, the total square footage of the parcel, as adjusted, on which the multi-family residential dwelling is located shall be divided by the total number of residential units. Notwithstanding any other provision in this subsection, the integrated connection fee for a single-family residential dwelling unit or multi-family residential dwelling unit shall not exceed four and one-half times the applicable base integrated connection fee set forth in foregoing schedule.

There shall be no upward adjustment in the integrated sewer service connection fee payable for a single-family residential dwelling unit connecting to the Sewer System if (a) each of the following conditions are met (1) a building permit shall have been obtained, (2) the dwelling unit shall have been constructed, and (3) a certificate of occupancy shall have been issued prior to January 1, 2000 or (b) local building permit fees have been paid to the local governmental unit prior to January 1, 2000 for a single-family residential dwelling unit to be constructed on or after January 1, 2000. When connecting to the Sewer System, users living in or owning such single-family residential dwelling units shall pay the applicable base integrated connection fee set forth in the Integrated Sewer

Connection Base Fee Schedule adjusted downward, if applicable, in accordance with the immediate preceding paragraph.

Effective January 1, 2005 and January 1<sup>st</sup> of every year thereafter, the Integrated Sewer Connection Base Fees shall be adjusted by a percentage, which is determined by the annual change in the Consumer Price Index (the "index") calculated as follows:

- (1) The Consumer Price Index shall be that Index referred to as the Consumer Price Index, US City Average, All Urban Consumers, published by the U.S. Department of Labor-Bureau of Statistics ((1982-84)=100). In the event the method of determining the Index is substantially altered, the basis for determining the annual change thereafter shall be the Index which is most comparable to the Index described above.
- (2) For the purpose of computing the percentage change each calendar year, the Index for the month of August for the prior calendar year shall be subtracted from the Index for the immediately-preceding August. The result so obtained (if positive) shall be divided by the Index for the month of August for the prior calendar year to obtain the percentage increase which shall be applied to the then current Integrated Sewer Connection Base Fee Schedule to determine the new calendar year schedule.

The foregoing Integrated Connection fee is due and payable at the time a user receives a permit to connect to the Sewer System. A permit issued by the City to connect to the Sewer System shall expire one hundred eighty (180) days from the date the permit was issued.

The user receiving services who applies for a larger water meter than the one presently in service shall pay an Integrated Connection Fee which is the difference in cost between the meter size in service and the one applied for in accordance with the Integrated Connection Fee in effect at the time of application. No credit or rebate shall be made in the case of application for a smaller meter size."

Section 3. That Section 2.101 of Chapter 27 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.101 Rates and Charges for Retail Users Within the City of Grand Rapids.

The following rates and charges for sewage disposal service shall apply for users within the City of Grand Rapids:

|            | <u>Commodity Rate</u> |                           |
|------------|-----------------------|---------------------------|
| Domestic   |                       | \$1.97 per 100 cubic feet |
| Commercial |                       | \$1.97 per 100 cubic feet |
| Industrial |                       | \$1.97 per 100 cubic feet |

Monthly Service Charge

| <u>Size of Meter</u> | <u>Charge</u> |
|----------------------|---------------|
| 3/4 inch or less     | \$ 7.62       |
| 1 inch               | 11.74         |
| 1 1/4 inches         | 17.04         |
| 1 1/2 inches         | 23.52         |
| 2 inches             | 40.01         |
| 3 inches             | 87.12         |
| 4 inches             | 153.08        |
| 6 inches or larger   | 341.52"       |

Section 4. That Section 2.102 of Chapter 27 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.102 Surcharges and Permit Fees.

- (1) If the City Manager determines that a discharge will not cause pass through or interference as defined in this Chapter, Industrial or Commercial users whether they are located within a retail service area or a bulk service area shall be charged a surcharge if the concentration of their discharge exceeds a five-day BOD of two hundred fifty (250) mg/l, and/or TSS of two hundred fifty (250) mg/l, or any phosphorus of fifteen (15) mg/l. That charge shall be sixteen and four-tenths cents (\$0.164) per pound of BOD and fifteen and nine-tenths cents (\$0.159) per pound of TSS and one dollar and six and four-tenths cents (\$1.064) per pound of phosphorus in excess of the above limits. In addition, all industrial or commercial users shall be charged a surcharge for ammonia concentrations exceeding thirty-eight (38) mg/l. The charge shall be sixteen and seven-tenths cents (\$0.167) per pound of ammonia in excess of the above limit. Discharge concentrations of these substances and the resulting surcharge shall be based on at least three composite samples per quarter. This sampling shall be performed by either the City or the Industrial User as determined by the City Manager.
- (2) The fee for a Significant Industrial User Discharge Permit as provided for in Section 2.70 of this Chapter whether they are located within a retail service area or a bulk service area shall be three hundred dollars (\$300.00) per year and an analytical fee based upon Section 2.102(3).
- (3) The following schedule of charges shall apply to any analysis which may be required as a part of a Significant Industrial User Discharge Permit:

|                     |         |      |
|---------------------|---------|------|
| Metals              | \$10.00 | each |
| TSS                 | 6.00    | each |
| BOD                 | 12.00   | each |
| Total Phosphate     | 11.00   | each |
| pH                  | 10.00   | each |
| EPA 624             | 52.00   | each |
| EPA 625             | 115.00  | each |
| BTEX/MTBE           | 36.00   | each |
| Sulfide             | 15.00   | each |
| Oil and Grease      | 20.00   | each |
| Total Cyanide       | 19.00   | each |
| Hexavalent Chromium | 16.00   | each |
| Fecal Coliform      | 35.00   | each |
| Labor               | 49.64   | hour |
| Sampler             | 30.00   | day  |
| Vehicle             | 5.00    | hour |

- (4) These charges will be reviewed annually and may change to reflect the current cost of providing these services."

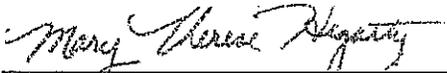
Section 5. That Section 2.105 of Chapter 27 of Title II of the Code of the City of Grand Rapids be amended to read as follows:

"2.105 Effective Date.

The rates, charges and fees set forth in Section 2.95, 2.96, 2.101 and 2.102 shall be effective on January 1, 2005."

Carried by a roll call vote: Yeas: -6 Coms. Dean, Jendrasiak, Rabaut, Schmidt, White, Mayor  
Heartwell Nays: -1 Com. Tormala  
Com. Dean, supported by Com. Rabaut, moved that the ordinance take immediate effect pursuant to  
Section 9 of Title V of the City Charter.  
Adopted: Yeas: -6 Coms. Dean, Jendrasiak, Rabaut, Schmidt, White, Mayor Heartwell  
Nays: -1 Com. Tormala

I hereby certify that the foregoing is a true transcript of the action of the City Commission of the City of  
Grand Rapids, Michigan, in public session held December 21, 2004.

  
\_\_\_\_\_  
Mary Therese Hegarty, City Clerk

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*KW*

# MEMORANDUM

CITY OF GRAND RAPIDS

**DATE:** December 15, 2004

**TO:** Eric R. DeLong  
Deputy City Manager

**FROM:** Michael E. Wolski  
Utility Financial Officer

**SUBJECT:** **2005 CUSTOMER COMMUNITY WATER-SEWER RATES**

The 2004 Preliminary Water-Sewer Rate Study recommended water and sewer rate adjustments as of January 1, 2005, for Grand Rapids and each customer community served by the water and sewage systems. City Commission approval of rate adjustments for customer communities is required.

UAB partners and other customer communities were notified of the recommended rate adjustments on November 18, 2004. The water-sewer service agreements provide customer communities a thirty-day comment period following notification of rate adjustments.

Tallmadge Township has elected to contribute \$28,860 to offset proposed water/sewer rate increases as recommended in the preliminary rate study.

The attached resolution approves the recommended water and sewer rates for the City's retail and wholesale communities for calendar year 2005. A rate schedule for each customer community is attached to the resolution.

MW

Attachments

Your COMMITTEE OF THE WHOLE recommends adoption of the following resolution approving the attached revised Water and Sewer Rates in accordance with the 2004 Water-Sewer Rate Review.

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COMMITTEE OF THE WHOLE

Com. \_\_\_\_\_, supported by Com. \_\_\_\_\_, recommends adoption of the following resolution:

WHEREAS, The Water-Sewer rate studies have been undertaken and completed for the years 1976 through 2003, and,

WHEREAS, The 2004 Water-Sewer Rate Review has been completed using the same general methodology as the 1976 through 2003 Water-Sewer Rate Studies, as adjusted where appropriate for the uniform water and sewer service agreements.

RESOLVED that the attached water and sewer rates are approved and shall be effective January 1, 2005.

RESOLVED that the City Clerk is directed to notify the contractual water and sewer service customers in writing of the water and sewer rates, and the Mayor and City Clerk are authorized to take any other action as may be required to evidence the new water and sewer rates.

*Prepared by Michael Wolski, Public Works & Economic Development Services*

*CW 2005 Customer Community Rates*

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Page has been removed from the published Rate Study.

**TALLMADGE TOWNSHIP**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

|                             |    |                 |
|-----------------------------|----|-----------------|
| SYSTEM REVENUE REQUIREMENTS | \$ | 88,247          |
| LESS: CASH CONTRIBUTION     |    | <u>(12,040)</u> |
| SYSTEM REVENUE REQUIREMENTS | \$ | <u>76,207</u>   |

CURRENT REVENUES

|                                      |           |                        |
|--------------------------------------|-----------|------------------------|
| MONTHLY METER CHARGE                 |           |                        |
| 125 meter equivalents                | x \$ 2.58 | x 12 = \$ 3,870        |
| MONTHLY BILLING CHARGE               |           |                        |
| 104 meters                           | x \$ 3.37 | x 12 = 4,206           |
| COMMODITY CHARGE                     |           |                        |
| 16,326 units (100 CF)                | x \$ 3.21 | = 52,406               |
| MONTHLY FIRE PROTECTION              |           | 3,840                  |
| ANNUAL HYDRANT CHARGE                |           | <u>8,256</u>           |
| REQUIRED REVENUE INCREASE (DECREASE) |           | <u><u>\$ 3,629</u></u> |

|  |  |                     |
|--|--|---------------------|
| PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES |  | <u><u>5.00%</u></u> |
|--|--|---------------------|



**TALLMADGE TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 26**

|                             |    |               |
|-----------------------------|----|---------------|
| SYSTEM REVENUE REQUIREMENTS | \$ | 81,294        |
| LESS: CASH CONTRIBUTION     |    | (16,820)      |
| SYSTEM REVENUE REQUIREMENTS | \$ | <u>64,474</u> |

CURRENT REVENUES

MONTHLY METER CHARGE  
 112 meter equivalents x \$ 9.84 x 12 = \$ 13,225

MONTHLY BILLING CHARGE  
 95 meters x \$ 2.12 x 12 = 2,417

COMMODITY CHARGE  
 12,572 units (100 CF) x \$ 3.64 = 45,762 (61,404)

REQUIRED REVENUE INCREASE (DECREASE) \$ 3,070

PERCENTAGE INCREASE (DECREASE) OVER EXISTING RATES 5.00%

**TALLMADGE TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 3.82 /100 CF \*  
 \$ 3.64 x 105.00%

MONTHLY SERVICE CHARGE:

|                                  |              |                  |
|----------------------------------|--------------|------------------|
| SYSTEM REVENUE REQUIREMENTS      |              | \$ 64,474        |
| NET OF CONTRIBUTION OF \$ 16,820 |              |                  |
| NEW COMMODITY CHARGE             |              |                  |
| 12,572 x \$ 3.82                 | \$ 48,025    |                  |
| NEW MONTHLY BILLING CHARGE       |              |                  |
| 95 x \$ 2.32 x 12                | <u>2,645</u> | <u>(50,670)</u>  |
|                                  |              | <u>\$ 13,804</u> |

MONTHLY METER CHARGE =  $\frac{\$13,804}{112 \times 12} = \underline{\underline{\$ 10.27 \text{ MONTHLY}}}$

| METER SIZE   | EQUIVALENT | MONTHLY SERVICE CHARGE |         |          | PRESENT  |
|--------------|------------|------------------------|---------|----------|----------|
|              |            | METER                  | BILLING | TOTAL    |          |
| 3/4" or less | 1.0000     | \$ 10.27               | \$ 2.32 | \$ 12.59 | \$ 11.96 |
| 1"           | 1.7778     | 18.26                  | 2.32    | 20.58    | 19.61    |
| 1 1/4"       | 2.7778     | 28.53                  | 2.32    | 30.85    | 29.45    |
| 1 1/2"       | 4.0000     | 41.08                  | 2.32    | 43.40    | 41.48    |
| 2"           | 7.1111     | 73.03                  | 2.32    | 75.35    | 72.09    |
| 3"           | 16.0000    | 164.32                 | 2.32    | 166.64   | 159.56   |
| 4"           | 28.4444    | 292.12                 | 2.32    | 294.44   | 282.01   |
| 6" and over  | 64.0000    | 657.28                 | 2.32    | 659.60   | 631.88   |

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2005

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## APPROVAL OF CUSTOMER COMMUNITY RATES

73301 Com. White, supported by Com. Rabaut, moved adoption of the following resolution:

WHEREAS, The Water-Sewer rate studies have been undertaken and completed for the years 1976 through 2003, and,

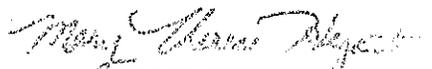
WHEREAS, The 2004 Water-Sewer Rate Review has been completed using the same general methodology as the 1976 through 2003 Water-Sewer Rate Studies, as adjusted where appropriate for the uniform water and sewer service agreements.

RESOLVED that the attached water and sewer rates are approved and shall be effective January 1, 2005.

RESOLVED that the City Clerk is directed to notify the contractual water and sewer service customers in writing of the water and sewer rates, and the Mayor and City Clerk are authorized to take any other action as may be required to evidence the new water and sewer rates.

Adopted: Yeas: -6 Coms. Dean, Jendrasiak, Rabaut, Schmidt, White, Mayor Heartwell  
Nays: -1 Com. Tormala

I hereby certify that the foregoing is a true transcript of the action of the City Commission of the City of Grand Rapids, Michigan, in public session held December 21, 2004.

  
\_\_\_\_\_  
Mary Therese Hegarty, City Clerk

CITY CLERK



CITY OF GRAND RAPIDS

December 22, 2004

**RECEIVED**

JAN 21 2005

Ms. Sandra Wisniewski, City Clerk  
City of Walker  
4243 Remembrance Road NW  
Grand Rapids, MI 49504

Dear Sandra:

The "2004 Preliminary Water-Sewer Rate Study" recommended water and sewer rate adjustments for the City of Grand Rapids and each customer community contracting with the City of Grand Rapids for water and sewer service.

Customer communities were notified of the recommended rate changes at a meeting on November 18, 2004, followed by a thirty-day comment period.

On December 21, 2004, the Grand Rapids City Commission adopted a resolution to approve the new rates with an effective date of January 1, 2005. A certified copy of the resolution and the approved rate schedules for the City of Walker are attached for your information.

If you need any further information, please call me at 456-3015.

Sincerely,

Mary Therese Hegarty  
City Clerk

MTH/slp

Enclosures

cc: Scott Buhner, Assistant to the City Manager, Fiscal Services  
Mike Wolski, Utility Financial Officer

**CITY OF WALKER, MICHIGAN**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 1.35 /100 CF \*  
 \$ 1.27 x 105.92%

MONTHLY SERVICE CHARGE:

|  |                    |
|--|--------------------|
| SYSTEM REVENUE REQUIREMENTS                        | \$ 2,701,788       |
| NEW COMMODITY CHARGE<br>1,317,218 x \$ 1.35        | \$ 1,778,244       |
| NEW MONTHLY BILLING CHARGE<br>5,609 x \$ 3.54 x 12 | 238,270            |
| MONTHLY FIRE PROTECTION CHARGE                     | 52,560             |
| ANNUAL HYDRANT CHARGE                              | <u>-</u>           |
|  | <u>(2,069,074)</u> |
|  | <u>\$ 632,714</u>  |

MONTHLY METER CHARGE =  $\frac{\$632,714}{7,569 \times 12} = \underline{\underline{\$ 6.97 \text{ MONTHLY}}}$

| <u>METER SIZE</u> | <u>EQUIVALENT</u> | <u>MONTHLY SERVICE CHARGE</u> |                |              | <u>PRESENT</u> |
|-------------------|-------------------|-------------------------------|----------------|--------------|----------------|
|                   |                   | <u>METER</u>                  | <u>BILLING</u> | <u>TOTAL</u> |                |
| 3/4" or less      | 1.0000            | \$ 6.97                       | \$ 3.54        | \$ 10.51     | \$ 9.96        |
| 1"                | 1.7778            | 12.39                         | 3.54           | 15.93        | 15.09          |
| 1 1/4"            | 2.7778            | 19.36                         | 3.54           | 22.90        | 21.68          |
| 1 1/2"            | 4.0000            | 27.88                         | 3.54           | 31.42        | 29.73          |
| 2"                | 7.1111            | 49.56                         | 3.54           | 53.10        | 50.23          |
| 3"                | 16.0000           | 111.52                        | 3.54           | 115.06       | 108.81         |
| 4"                | 28.4444           | 198.26                        | 3.54           | 201.80       | 190.82         |
| 6" and over       | 64.0000           | 446.08                        | 3.54           | 449.62       | 425.13         |

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2005

**CITY OF WALKER, MICHIGAN**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 1.22 /100 CF \*  
 \$ 1.06 x 115.01%

MONTHLY SERVICE CHARGE:

SYSTEM REVENUE REQUIREMENTS \$ 2,243,592

NEW COMMODITY CHARGE \$ 1,173,630  
 961,992 x \$ 1.22

NEW MONTHLY BILLING CHARGE 144,100 (1,317,730)  
 5,176 x \$ 2.32 x 12

\$ 925,862

MONTHLY METER CHARGE =  $\frac{\$925,862}{6,716 \times 12} = \underline{\underline{\$ 11.49 \text{ MONTHLY}}}$

| METER SIZE   | EQUIVALENT | MONTHLY SERVICE CHARGE |         |          | PRESENT  |
|--------------|------------|------------------------|---------|----------|----------|
|              |            | METER                  | BILLING | TOTAL    |          |
| 3/4" or less | 1.0000     | \$ 11.49               | \$ 2.32 | \$ 13.81 | \$ 12.04 |
| 1"           | 1.7778     | 20.43                  | 2.32    | 22.75    | 19.76    |
| 1 1/4"       | 2.7778     | 31.92                  | 2.32    | 34.24    | 29.68    |
| 1 1/2"       | 4.0000     | 45.96                  | 2.32    | 48.28    | 41.80    |
| 2"           | 7.1111     | 81.71                  | 2.32    | 84.03    | 72.66    |
| 3"           | 16.0000    | 183.84                 | 2.32    | 186.16   | 160.84   |
| 4"           | 28.4444    | 326.83                 | 2.32    | 329.15   | 284.29   |
| 6" and over  | 64.0000    | 735.36                 | 2.32    | 737.68   | 637.00   |

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2005

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December 22, 2004

Mr. Dan Kasunic, Clerk  
City of Kentwood  
4900 Breton Avenue SE  
Kentwood, MI 49518-8848

Dear Dan:

The "2004 Preliminary Water-Sewer Rate Study" recommended water and sewer rate adjustments for the City of Grand Rapids and each customer community contracting with the City of Grand Rapids for water and sewer service.

Customer communities were notified of the recommended rate changes at a meeting on November 18, 2004, followed by a thirty-day comment period.

On December 21, 2004, the Grand Rapids City Commission adopted a resolution to approve the new rates with an effective date of January 1, 2005. A certified copy of the resolution and the approved rate schedules for the City of Kentwood are attached for your information.

If you need any further information, please call me at 456-3015.

Sincerely,

Mary Therese Hegarty  
City Clerk

MTH/slp

Enclosures

cc: Scott Buhner, Assistant to the City Manager, Fiscal Services  
Mike Wolski, Utility Financial Officer

**CITY OF KENTWOOD, MICHIGAN**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT = \$ 1.40 /100 CF \*  
 \$ 1.36 x 102.81%

MONTHLY SERVICE CHARGE:

|                                |  |                    |
|--------------------------------|--|--------------------|
| SYSTEM REVENUE REQUIREMENTS    |  | \$ 3,559,747       |
| NEW COMMODITY CHARGE           |  | \$ 2,309,661       |
| 1,649,758 x \$ 1.40            |  |                    |
| NEW MONTHLY BILLING CHARGE     |  | 179,945            |
| 4,236 x \$ 3.54 x 12           |  |                    |
| MONTHLY FIRE PROTECTION CHARGE |  | 96,384             |
| ANNUAL HYDRANT CHARGE          |  | <u>(2,585,990)</u> |
|                                |  | <u>\$ 973,757</u>  |

MONTHLY METER CHARGE =  $\frac{\$973,757}{7,770 \times 12} = \underline{\underline{\$ 10.44 \text{ MONTHLY}}}$

| METER SIZE   | EQUIVALENT | MONTHLY SERVICE CHARGE |         |          | PRESENT  |
|--------------|------------|------------------------|---------|----------|----------|
|              |            | METER                  | BILLING | TOTAL    |          |
| 3/4" or less | 1.0000     | \$ 10.44               | \$ 3.54 | \$ 13.98 | \$ 13.57 |
| 1"           | 1.7778     | 18.56                  | 3.54    | 22.10    | 21.50    |
| 1 1/4"       | 2.7778     | 29.00                  | 3.54    | 32.54    | 31.70    |
| 1 1/2"       | 4.0000     | 41.76                  | 3.54    | 45.30    | 44.17    |
| 2"           | 7.1111     | 74.24                  | 3.54    | 77.78    | 75.90    |
| 3"           | 16.0000    | 167.04                 | 3.54    | 170.58   | 166.57   |
| 4"           | 28.4444    | 296.96                 | 3.54    | 300.50   | 293.50   |
| 6" and over  | 64.0000    | 668.16                 | 3.54    | 671.70   | 656.17   |

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2005

**CITY OF KENTWOOD, MICHIGAN**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 1.35 /100 CF \*  
 \$ 1.17 x 115.73%

MONTHLY SERVICE CHARGE:

|                             |  |                    |
|-----------------------------|--|--------------------|
| SYSTEM REVENUE REQUIREMENTS |  | \$ 2,100,256       |
| NEW COMMODITY CHARGE        |  | \$ 1,840,822       |
| 1,363,572 x \$ 1.35         |  |                    |
| NEW MONTHLY BILLING CHARGE  |  | <u>110,191</u>     |
| 3,958 x \$ 2.32 x 12        |  | <u>(1,951,013)</u> |
|                             |  | <u>\$ 149,243</u>  |

MONTHLY METER CHARGE =  $\frac{\$149,243}{7,018 \times 12} = \underline{\underline{\$ 1.77 \text{ MONTHLY}}}$

| METER SIZE   | EQUIVALENT | MONTHLY SERVICE CHARGE |         |         | PRESENT |
|--------------|------------|------------------------|---------|---------|---------|
|              |            | METER                  | BILLING | TOTAL   |         |
| 3/4" or less | 1.0000     | \$ 1.77                | \$ 2.32 | \$ 4.09 | \$ 3.53 |
| 1"           | 1.7778     | 3.15                   | 2.32    | 5.47    | 4.63    |
| 1 1/4"       | 2.7778     | 4.92                   | 2.32    | 7.24    | 6.04    |
| 1 1/2"       | 4.0000     | 7.08                   | 2.32    | 9.40    | 7.76    |
| 2"           | 7.1111     | 12.59                  | 2.32    | 14.91   | 12.15   |
| 3"           | 16.0000    | 28.32                  | 2.32    | 30.64   | 24.68   |
| 4"           | 28.4444    | 50.35                  | 2.32    | 52.67   | 42.23   |
| 6" and over  | 64.0000    | 113.28                 | 2.32    | 115.60  | 92.36   |

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2005

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December 22, 2004

Mr. Ronald Goodyke, Clerk  
Cascade Charter Township  
2865 Thornhills SE  
Grand Rapids, MI 49546-7192

Dear Mr. Goodyke:

The "2004 Preliminary Water-Sewer Rate Study" recommended water and sewer rate adjustments for the City of Grand Rapids and each customer community contracting with the City of Grand Rapids for water and sewer service.

Customer communities were notified of the recommended rate changes at a meeting on November 18, 2004, followed by a thirty-day comment period.

On December 21, 2004, the Grand Rapids City Commission adopted a resolution to approve the new rates with an effective date of January 1, 2005. A certified copy of the resolution and the approved rate schedules for Cascade Township are attached for your information.

If you need any further information, please call me at 456-3015.

Sincerely,

Mary Therese Hegarty  
City Clerk

MTH/slp

Enclosures

cc: Scott Buhrer, Assistant to the City Manager, Fiscal Services  
Mike Wolski, Utility Financial Officer

**CASCADE TOWNSHIP**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 1.99 /100 CF \*  
\$ 1.84 x 108.24%

MONTHLY SERVICE CHARGE:

|                                |  |                    |
|--------------------------------|--|--------------------|
| SYSTEM REVENUE REQUIREMENTS    |  | \$ 2,653,593       |
| NEW COMMODITY CHARGE           |  | \$ 1,637,971       |
| 823,101 x \$ 1.99              |  |                    |
| NEW MONTHLY BILLING CHARGE     |  | 117,882            |
| 2,775 x \$ 3.54 x 12           |  |                    |
| MONTHLY FIRE PROTECTION CHARGE |  | 51,696             |
| ANNUAL HYDRANT CHARGE          |  | <u>33,720</u>      |
|                                |  | <u>(1,841,269)</u> |
|                                |  | <u>\$ 812,324</u>  |

MONTHLY METER CHARGE =  $\frac{\$812,324}{4,395 \times 12} = \underline{\underline{\$ 15.40 \text{ MONTHLY}}}$

| METER SIZE   | EQUIVALENT | MONTHLY SERVICE CHARGE |         |          | PRESENT  |
|--------------|------------|------------------------|---------|----------|----------|
|              |            | METER                  | BILLING | TOTAL    |          |
| 3/4" or less | 1.0000     | \$ 15.40               | \$ 3.54 | \$ 18.94 | \$ 17.39 |
| 1"           | 1.7778     | 27.38                  | 3.54    | 30.92    | 28.29    |
| 1 1/4"       | 2.7778     | 42.78                  | 3.54    | 46.32    | 42.31    |
| 1 1/2"       | 4.0000     | 61.60                  | 3.54    | 65.14    | 59.45    |
| 2"           | 7.1111     | 109.51                 | 3.54    | 113.05   | 103.07   |
| 3"           | 16.0000    | 246.40                 | 3.54    | 249.94   | 227.69   |
| 4"           | 28.4444    | 438.04                 | 3.54    | 441.58   | 402.16   |
| 6" and over  | 64.0000    | 985.60                 | 3.54    | 989.14   | 900.65   |

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2005

**CASCADE TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 1.45 /100 CF \*  
 \$ 1.25 x 116.06%

MONTHLY SERVICE CHARGE:

|                             |               |                          |
|-----------------------------|---------------|--------------------------|
| SYSTEM REVENUE REQUIREMENTS |               | \$ 1,142,964             |
| NEW COMMODITY CHARGE        |               |                          |
| 440,121 x \$ 1.45           | \$            | 638,175                  |
| NEW MONTHLY BILLING CHARGE  |               |                          |
| 1,470 x \$ 2.32 x 12        | <u>40,925</u> | <u>(679,100)</u>         |
|                             |               | <u><u>\$ 463,864</u></u> |

MONTHLY METER CHARGE =  $\frac{\$463,864}{2,506 \times 12} = \underline{\underline{\$ 15.43 \text{ MONTHLY}}}$

| METER SIZE   | EQUIVALENT | MONTHLY SERVICE CHARGE |         |          | PRESENT  |
|--------------|------------|------------------------|---------|----------|----------|
|              |            | METER                  | BILLING | TOTAL    |          |
| 3/4" or less | 1.0000     | \$ 15.43               | \$ 2.32 | \$ 17.75 | \$ 15.33 |
| 1"           | 1.7778     | 27.43                  | 2.32    | 29.75    | 25.60    |
| 1 1/4"       | 2.7778     | 42.86                  | 2.32    | 45.18    | 38.81    |
| 1 1/2"       | 4.0000     | 61.72                  | 2.32    | 64.04    | 54.96    |
| 2"           | 7.1111     | 109.72                 | 2.32    | 112.04   | 96.06    |
| 3"           | 16.0000    | 246.88                 | 2.32    | 249.20   | 213.48   |
| 4"           | 28.4444    | 438.90                 | 2.32    | 441.22   | 377.87   |
| 6" and over  | 64.0000    | 987.52                 | 2.32    | 989.84   | 847.56   |

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2005

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December 22, 2004

Ms. Janice Hulbert, Clerk  
Grand Rapids Charter Township  
1836 East Beltline NE  
Grand Rapids, MI 49505

Dear Janice:

The "2004 Preliminary Water-Sewer Rate Study" recommended water and sewer rate adjustments for the City of Grand Rapids and each customer community contracting with the City of Grand Rapids for water and sewer service.

Customer communities were notified of the recommended rate changes at a meeting on November 18, 2004, followed by a thirty-day comment period.

On December 21, 2004, the Grand Rapids City Commission adopted a resolution to approve the new rates with an effective date of January 1, 2005. A certified copy of the resolution and the approved rate schedules for Grand Rapids Township are attached for your information.

If you need any further information, please call me at 456-3015.

Sincerely,

  
Mary Therese Hegarty  
City Clerk

MTH/slp

Enclosures

cc: Scott Buhrer, Assistant to the City Manager, Fiscal Services  
Mike Wolski, Utility Financial Officer

**GRAND RAPIDS TOWNSHIP**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 1.52 /100 CF \*  
 \$ 1.45 x 104.97%

MONTHLY SERVICE CHARGE:

|                                |                    |
|--------------------------------|--------------------|
| SYSTEM REVENUE REQUIREMENTS    | \$ 1,616,162       |
| NEW COMMODITY CHARGE           | \$ 930,593         |
| 612,232 x \$ 1.52              |                    |
| NEW MONTHLY BILLING CHARGE     | 146,386            |
| 3,446 x \$ 3.54 x 12           |                    |
| MONTHLY FIRE PROTECTION CHARGE | 13,488             |
| ANNUAL HYDRANT CHARGE          | <u>19,980</u>      |
|                                | <u>(1,110,447)</u> |
|                                | <u>\$ 505,715</u>  |

MONTHLY METER CHARGE =  $\frac{\$505,715}{4,387 \times 12} = \underline{\underline{\$ 9.61 \text{ MONTHLY}}}$

| METER SIZE   | EQUIVALENT | MONTHLY SERVICE CHARGE |         |          | PRESENT  |
|--------------|------------|------------------------|---------|----------|----------|
|              |            | METER                  | BILLING | TOTAL    |          |
| 3/4" or less | 1.0000     | \$ 9.61                | \$ 3.54 | \$ 13.15 | \$ 12.47 |
| 1"           | 1.7778     | 17.08                  | 3.54    | 20.62    | 19.55    |
| 1 1/4"       | 2.7778     | 26.69                  | 3.54    | 30.23    | 28.65    |
| 1 1/2"       | 4.0000     | 38.44                  | 3.54    | 41.98    | 39.77    |
| 2"           | 7.1111     | 68.34                  | 3.54    | 71.88    | 68.08    |
| 3"           | 16.0000    | 153.76                 | 3.54    | 157.30   | 148.97   |
| 4"           | 28.4444    | 273.35                 | 3.54    | 276.89   | 262.21   |
| 6" and over  | 64.0000    | 615.04                 | 3.54    | 618.58   | 585.77   |

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2005

**GRAND RAPIDS TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 1.39 /100 CF \*  
 \$ 1.27 x 109.61%

MONTHLY SERVICE CHARGE:

|                             |               |                   |
|-----------------------------|---------------|-------------------|
| SYSTEM REVENUE REQUIREMENTS |               | \$ 1,267,078      |
| NEW COMMODITY CHARGE        |               |                   |
| 391,622 x \$ 1.39           | \$            | 544,355           |
| NEW MONTHLY BILLING CHARGE  |               |                   |
| 3,100 x \$ 2.32 x 12        | <u>86,304</u> | <u>(630,659)</u>  |
|                             |               | <u>\$ 636,419</u> |

MONTHLY METER CHARGE =  $\frac{\$636,419}{3,798 \times 12} = \underline{\underline{\$ 13.96 \text{ MONTHLY}}}$

| <u>METER SIZE</u> | <u>EQUIVALENT</u> | <u>MONTHLY SERVICE CHARGE</u> |                |              | <u>PRESENT</u> |
|-------------------|-------------------|-------------------------------|----------------|--------------|----------------|
|                   |                   | <u>METER</u>                  | <u>BILLING</u> | <u>TOTAL</u> |                |
| 3/4" or less      | 1.0000            | \$ 13.96                      | \$ 2.32        | \$ 16.28     | \$ 14.84       |
| 1"                | 1.7778            | 24.82                         | 2.32           | 27.14        | 24.73          |
| 1 1/4"            | 2.7778            | 38.78                         | 2.32           | 41.10        | 37.45          |
| 1 1/2"            | 4.0000            | 55.84                         | 2.32           | 58.16        | 53.00          |
| 2"                | 7.1111            | 99.27                         | 2.32           | 101.59       | 92.57          |
| 3"                | 16.0000           | 223.36                        | 2.32           | 225.68       | 205.64         |
| 4"                | 28.4444           | 397.08                        | 2.32           | 399.40       | 363.93         |
| 6" and over       | 64.0000           | 893.44                        | 2.32           | 895.76       | 816.20         |

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2005

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December 22, 2004

Ms. Lenore Cook, Clerk  
Tallmadge Township Offices  
0-1451 Leonard Street NW  
Grand Rapids, MI 49504

Dear Ms. Cook:

The "2004 Preliminary Water-Sewer Rate Study" recommended water and sewer rate adjustments for the City of Grand Rapids and each customer community contracting with the City of Grand Rapids for water and sewer service.

Customer communities were notified of the recommended rate changes at a meeting on November 18, 2004, followed by a thirty-day comment period.

On December 21, 2004, the Grand Rapids City Commission adopted a resolution to approve the new rates with an effective date of January 1, 2005. A certified copy of the resolution and the approved rate schedules for Tallmadge Township are attached for your information.

If you need any further information, please call me at 456-3015.

Sincerely,

Mary Therese Hegarty  
City Clerk

MTH/slp

Enclosures

cc: Scott Buhrer, Assistant to the City Manager, Fiscal Services  
Mike Wolski, Utility Financial Officer

**TALLMADGE TOWNSHIP**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 3.37 /100 CF \*  
 \$ 3.21 x 105.00%

MONTHLY SERVICE CHARGE:

|                                  |              |                 |
|----------------------------------|--------------|-----------------|
| SYSTEM REVENUE REQUIREMENTS      |              | \$ 76,207       |
| NET OF CONTRIBUTION OF \$ 12,040 |              |                 |
| NEW COMMODITY CHARGE             | \$ 55,019    |                 |
| 16,326 x \$ 3.37                 |              |                 |
| NEW MONTHLY BILLING CHARGE       | 4,418        |                 |
| 104 x \$ 3.54 x 12               |              |                 |
| MONTHLY FIRE PROTECTION CHARGE   | 3,840        |                 |
| ANNUAL HYDRANT CHARGE            | <u>8,256</u> | <u>(71,533)</u> |
|                                  |              | <u>\$ 4,674</u> |

MONTHLY METER CHARGE =  $\frac{\$4,674}{125 \times 12} = \underline{\underline{\$ 3.12 \text{ MONTHLY}}}$

| METER SIZE   | EQUIVALENT | MONTHLY SERVICE CHARGE |         |         | PRESENT |
|--------------|------------|------------------------|---------|---------|---------|
|              |            | METER                  | BILLING | TOTAL   |         |
| 3/4" or less | 1.0000     | \$ 3.12                | \$ 3.54 | \$ 6.66 | \$ 5.95 |
| 1"           | 1.7778     | 5.55                   | 3.54    | 9.09    | 7.96    |
| 1 1/4"       | 2.7778     | 8.67                   | 3.54    | 12.21   | 10.54   |
| 1 1/2"       | 4.0000     | 12.48                  | 3.54    | 16.02   | 13.69   |
| 2"           | 7.1111     | 22.19                  | 3.54    | 25.73   | 21.72   |
| 3"           | 16.0000    | 49.92                  | 3.54    | 53.46   | 44.65   |
| 4"           | 28.4444    | 88.75                  | 3.54    | 92.29   | 76.76   |
| 6" and over  | 64.0000    | 199.68                 | 3.54    | 203.22  | 168.49  |

\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2005

**TALLMADGE TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

COMMODITY CHARGE:

PRESENT CHARGE x RATE ADJUSTMENT \$ 3.82 /100 CF \*  
 \$ 3.64 x 105.00%

MONTHLY SERVICE CHARGE:

|                                  |              |                  |
|----------------------------------|--------------|------------------|
| SYSTEM REVENUE REQUIREMENTS      |              | \$ 64,474        |
| NET OF CONTRIBUTION OF \$ 16,820 |              |                  |
| NEW COMMODITY CHARGE             |              |                  |
| 12,572 x \$ 3.82                 | \$ 48,025    |                  |
| NEW MONTHLY BILLING CHARGE       |              |                  |
| 95 x \$ 2.32 x 12                | <u>2,645</u> | <u>(50,670)</u>  |
|                                  |              | <u>\$ 13,804</u> |

MONTHLY METER CHARGE =  $\frac{\$13,804}{112 \times 12} = \underline{\underline{\$ 10.27 \text{ MONTHLY}}}$

| METER SIZE   | EQUIVALENT | MONTHLY SERVICE CHARGE |         |          | PRESENT  |
|--------------|------------|------------------------|---------|----------|----------|
|              |            | METER                  | BILLING | TOTAL    |          |
| 3/4" or less | 1.0000     | \$ 10.27               | \$ 2.32 | \$ 12.59 | \$ 11.96 |
| 1"           | 1.7778     | 18.26                  | 2.32    | 20.58    | 19.61    |
| 1 1/4"       | 2.7778     | 28.53                  | 2.32    | 30.85    | 29.45    |
| 1 1/2"       | 4.0000     | 41.08                  | 2.32    | 43.40    | 41.48    |
| 2"           | 7.1111     | 73.03                  | 2.32    | 75.35    | 72.09    |
| 3"           | 16.0000    | 164.32                 | 2.32    | 166.64   | 159.56   |
| 4"           | 28.4444    | 292.12                 | 2.32    | 294.44   | 282.01   |
| 6" and over  | 64.0000    | 657.28                 | 2.32    | 659.60   | 631.88   |

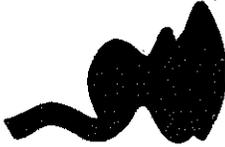
\* NEW RATES EFFECTIVE, ON A PRO-RATA BASIS, JANUARY 1, 2005

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RECEIVED

JAN 21 2005

CITY CLERK



CITY OF GRAND RAPIDS

December 22, 2004

Ms. Theresa Molyneux, Township Clerk  
Wright Township  
1565 Jackson  
P.O. Box 255  
Marne, MI 49435

Dear Ms. Molyneux:

The "2004 Preliminary Water-Sewer Rate Study" recommended water and sewer rate adjustments for the City of Grand Rapids and each customer community contracting with the City of Grand Rapids for water and sewer service.

Customer communities were notified of the recommended rate changes at a meeting on November 18, 2004, followed by a thirty-day comment period.

On December 21, 2004, the Grand Rapids City Commission adopted a resolution to approve the new rates with an effective date of January 1, 2005. A certified copy of the resolution and the approved rate schedule for Wright Township are attached for your information.

If you need any further information, please call me at 456-3015.

Sincerely,

Mary Therese Hegarty  
City Clerk

MTH/slp

Enclosures

cc: Scott Buhner, Assistant to the City Manager, Fiscal Services  
Mike Wolski, Utility Financial Officer

**WRIGHT TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

**MONTHLY REU CHARGE:**

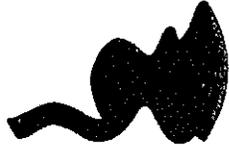
$$\frac{\text{TOTAL REVENUE REQUIREMENTS}}{\text{TOTAL REU'S * 12 MONTHS}} = \frac{\$200,345}{342.296 \times 12} = \$ \underline{\underline{48.77}} \quad \text{MONTHLY REU CHARGE *}$$

**EXAMPLES OF APPROXIMATE MONTHLY CHARGE BY NUMBER OF REU:**

| <u>NUMBER OF REU</u> | <u>AMOUNT</u> | <u>NUMBER OF REU</u> | <u>AMOUNT</u> | <u>NUMBER OF REU</u> | <u>AMOUNT</u> |
|----------------------|---------------|----------------------|---------------|----------------------|---------------|
| 1.0000               | \$ 48.77      | 7.5000               | \$ 365.78     | 19.0000              | \$ 926.63     |
| 1.5000               | 73.16         | 8.0000               | 390.16        | 20.0000              | 975.40        |
| 2.0000               | 97.54         | 8.5000               | 414.55        | 25.0000              | 1,219.25      |
| 2.5000               | 121.93        | 9.0000               | 438.93        | 30.0000              | 1,463.10      |
| 3.0000               | 146.31        | 9.5000               | 463.32        | 35.0000              | 1,706.95      |
| 3.5000               | 170.70        | 10.0000              | 487.70        | 40.0000              | 1,950.80      |
| 4.0000               | 195.08        | 11.0000              | 536.47        | 50.0000              | 2,438.50      |
| 4.4000               | 214.59        | 12.0000              | 585.24        | 60.0000              | 2,926.20      |
| 4.5000               | 219.47        | 13.0000              | 634.01        | 70.0000              | 3,413.90      |
| 5.0000               | 243.85        | 14.0000              | 682.78        | 80.0000              | 3,901.60      |
| 5.5000               | 268.24        | 15.0000              | 731.55        | 90.0000              | 4,389.30      |
| 6.0000               | 292.62        | 16.0000              | 780.32        | 100.0000             | 4,877.00      |
| 6.5000               | 317.01        | 17.0000              | 829.09        | 150.0000             | 7,315.50      |
| 7.0000               | 341.39        | 18.0000              | 877.86        | 200.0000             | 9,754.00      |

\* NEW RATES EFFECTIVE ON JANUARY 1, 2005

CITY CLERK



CITY OF GRAND RAPIDS

**RECEIVED**

FEB 02 2005

December 22, 2004

Ms. Karen Brower, Clerk  
City of East Grand Rapids  
750 Lakeside Drive SE  
East Grand Rapids, MI 49506

Dear Karen:

The "2004 Preliminary Water-Sewer Rate Study" recommended water and sewer rate adjustments for the City of Grand Rapids and each customer community contracting with the City of Grand Rapids for water and sewer service.

Customer communities were notified of the recommended rate changes at a meeting on November 18, 2004, followed by a thirty-day comment period.

On December 21, 2004, the Grand Rapids City Commission adopted a resolution to approve the new rates with an effective date of January 1, 2005. A certified copy of the resolution and the approved rate schedules for the City of East Grand Rapids are attached for your information.

If you need any further information, please call me at 456-3015.

Sincerely,

  
Mary Therese Hegarty  
City Clerk

MTH/slp

Enclosures

cc: Scott Buhner, Assistant to the City Manager, Fiscal Services  
Mike Wolski, Utility Financial Officer

**CITY OF EAST GRAND RAPIDS, MICHIGAN**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

|                             |                   |
|-----------------------------|-------------------|
| SYSTEM REVENUE REQUIREMENTS | \$ 735,090        |
| NEW COMMODITY CHARGE        |                   |
| 598,341 x \$1.00 =          | (598,341)         |
|                             | <hr/>             |
|                             | <u>\$ 136,749</u> |

MONTHLY SERVICE CHARGE = \$136,749 / 12 = \$11,396

**CITY OF EAST GRAND RAPIDS, MICHIGAN**

**SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

|                             |                  |
|-----------------------------|------------------|
| SYSTEM REVENUE REQUIREMENTS | \$ 463,762       |
| NEW COMMODITY CHARGE        |                  |
| 462.732 x \$ 957.00 =       | (442,835)        |
|                             | <hr/>            |
|                             | <u>\$ 20,927</u> |

MONTHLY SERVICE CHARGE = \$ 20,927 / 12 = \$1,744

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December 22, 2004

Ms. Deborah Ensing-Millhuff, Clerk  
Ada Township  
7330 Thornapple River Drive  
P.O. Box 370  
Ada, MI 49301

Dear Deborah:

The "2004 Preliminary Water-Sewer Rate Study" recommended water and sewer rate adjustments for the City of Grand Rapids and each customer community contracting with the City of Grand Rapids for water and sewer service.

Customer communities were notified of the recommended rate changes at a meeting on November 18, 2004, followed by a thirty-day comment period.

On December 21, 2004, the Grand Rapids City Commission adopted a resolution to approve the new rates with an effective date of January 1, 2005. A certified copy of the resolution and the approved rate schedules for Ada Township are attached for your information.

If you need any further information, please call me at 456-3015.

Sincerely,

Mary Therese Hegarty  
City Clerk

MTH/slp

Enclosures

cc: Scott Buhner, Assistant to the City Manager, Fiscal Services  
Mike Wolski, Utility Financial Officer

**ADA TOWNSHIP**

**WATER RATE STUDY  
WATER SUPPLY SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

SYSTEM REVENUE REQUIREMENTS

\$ 966,344

NEW COMMODITY CHARGE

582,039 x \$1.06 =

(616,961)

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\$ 349,383

MONTHLY SERVICE CHARGE = \$349,383 / 12 = \$29,115

**ADA TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

|                             |                  |
|-----------------------------|------------------|
| SYSTEM REVENUE REQUIREMENTS | \$ 401,071       |
| NEW COMMODITY CHARGE        | (331,810)        |
| 305.816 x \$ 1,085.00 =     |                  |
|                             | <hr/>            |
|                             | <u>\$ 69,261</u> |

MONTHLY SERVICE CHARGE = \$ 69,261 / 12 = \$5,772

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December 22, 2004

Mr. Ron Landis  
North Kent Sewage Disposal System  
Kent County Dept. of Public Works  
1500 Scribner NW  
Grand Rapids, MI 49504

Dear Mr. Landis:

The "2004 Preliminary Water-Sewer Rate Study" recommended water and sewer rate adjustments for the City of Grand Rapids and each customer community contracting with the City of Grand Rapids for water and sewer service.

Customer communities were notified of the recommended rate changes at a meeting on November 18, 2004, followed by a thirty-day comment period.

On December 21, 2004, the Grand Rapids City Commission adopted a resolution to approve the new rates with an effective date of January 1, 2005. A certified copy of the resolution and the approved sewer rate schedule for the North Kent System are attached for your information.

If you need any further information, please call me at 456-3015.

Sincerely,

A handwritten signature in cursive script that reads "Mary Therese Hegarty".

Mary Therese Hegarty  
City Clerk

MTH/slp

Enclosures

cc: Scott Buhner, Assistant to the City Manager, Fiscal Services  
Mike Wolski, Utility Financial Officer

**NORTH KENT**

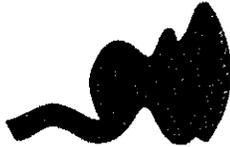
**SEWER RATE STUDY  
SEWAGE DISPOSAL SYSTEM FUND  
RATE ANALYSIS - TASK NO. 27**

SYSTEM REVENUE REQUIREMENTS \$ 1,560,692

NEW COMMODITY CHARGE (1,273,362)  
1,461.954 x \$ 871.00 =

\$ 287,330

MONTHLY SERVICE CHARGE = \$287,330 / 12 = \$23,944



December 22, 2004

Ms. Crystal Osterink, Clerk  
Gaines Charter Township  
8555 Kalamazoo Ave., S.E.  
Caledonia, MI 49316-8270

Dear Crystal:

The "2004 Preliminary Water-Sewer Rate Study" recommended water and sewer rate adjustments for the City of Grand Rapids and each customer community contracting with the City of Grand Rapids for water and sewer service.

Customer communities were notified of the recommended rate changes at a meeting on November 18, 2004, followed by a thirty-day comment period.

On December 21, 2004, the Grand Rapids City Commission adopted a resolution to approve the new rates with an effective date of January 1, 2005. A certified copy of the resolution and the approved sewer rate schedule for Gaines Township are attached for your information.

If you need any further information, please call me at 456-3015.

Sincerely,

Mary Therese Hegarty  
City Clerk

MTH/slp

Enclosures

cc: Scott Buhner, Assistant to the City Manager, Fiscal Services  
Mike Wolski, Utility Financial Officer

**GAINES TOWNSHIP**  
**SEWER RATE STUDY**  
**SEWAGE DISPOSAL SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

|                             |                  |
|-----------------------------|------------------|
| SYSTEM REVENUE REQUIREMENTS | \$ 110,357       |
| NEW COMMODITY CHARGE        |                  |
| 104.762 x \$ 871.00 =       | (91,248)         |
|                             | <hr/>            |
|                             | <u>\$ 19,109</u> |

MONTHLY SERVICE CHARGE = \$ 19,109 / 12 = \$1,592



December 22, 2004

Mr. Ken Zarzecki  
Director of Public Utilities  
County of Ottawa  
Board of County Road Commissioners  
U.S. 31 at Rosy Mound Drive, P.O. Box 739  
Grand Haven, MI 49417

Dear Mr. Zarzecki:

The "2004 Preliminary Water-Sewer Rate Study" recommended water and sewer rate adjustments for the City of Grand Rapids and each customer community contracting with the City of Grand Rapids for water and sewer service.

Customer communities were notified of the recommended rate changes at a meeting on November 18, 2004, followed by a thirty-day comment period.

On December 21, 2004, the Grand Rapids City Commission adopted a resolution to approve the new rates with an effective date of January 1, 2005. A certified copy of the resolution and the approved water rate schedule for Ottawa County are attached for your information.

If you need any further information, please call me at 456-3015.

Sincerely,

  
Mary Therese Hegarty  
City Clerk

MTH/slp

Enclosures

cc: Scott Buhner, Assistant to the City Manager, Fiscal Services  
Mike Wolski, Utility Financial Officer

**OTTAWA COUNTY**  
**WATER RATE STUDY**  
**WATER SUPPLY SYSTEM FUND**  
**RATE ANALYSIS - TASK NO. 27**

|                             |                 |
|-----------------------------|-----------------|
| SYSTEM REVENUE REQUIREMENTS | \$ 857,850      |
| NEW COMMODITY CHARGE        |                 |
| 771,011 x \$1.11 =          | (855,822)       |
|                             | <hr/>           |
|                             | <u>\$ 2,028</u> |

MONTHLY SERVICE CHARGE = \$ 2,028 / 12 = \$169

**CITY OF GRAND RAPIDS, MICHIGAN  
FINAL 2004 WATER/SEWER RATE STUDY- FINAL CONSIDERATIONS SECTION  
WATER/SEWER UTILITY SERVICE DISTRICT MAPS/AREAS FOR UAB PARTNERS  
JANUARY 31, 2005**

**FINAL 2004 WATER-SEWER RATE STUDY- USD AREA (SQ. MILES)**

Summary of Utility Services Districts (USD) square miles per maps on file as of January 31, 2005, and incorporated in the Final 2004 Water-Sewer Rate Study:

| <u>UAB Partners</u>   | <u>WATER</u>        |                 | <u>SEWER</u>        |                 |
|-----------------------|---------------------|-----------------|---------------------|-----------------|
|                       | <u>Square Miles</u> | <u>Percent</u>  | <u>Square Miles</u> | <u>Percent</u>  |
| Grand Rapids          | 45.36               | 33.328%         | 45.36               | 34.977%         |
| Walker                | 25.43               | 18.685%         | 20.17               | 15.554%         |
| Kentwood              | 14.00               | 10.287%         | 14.00               | 10.796%         |
| Cascade               | 23.53               | 17.289%         | 23.53               | 18.145%         |
| Grand Rapids Township | 14.42               | 10.595%         | 12.17               | 9.385%          |
| Tallmadge Township    | 2.84                | 2.087%          | 2.84                | 2.190%          |
| Wright Township       | -                   | 0.000%          | 0.89                | 0.686%          |
| East Grand Rapids     | 3.37                | 2.476%          | 3.37                | 2.599%          |
| Ada                   | 7.15                | 5.253%          | 7.15                | 5.514%          |
| Meijer - Algoma *     | -                   | 0.000%          | 0.20                | 0.154%          |
| <b>Total</b>          | <b>136.10</b>       | <b>100.000%</b> | <b>129.68</b>       | <b>100.000%</b> |

\* On 11/1/2004, Moore & Bruggink estimated the Meijer-Algoma service area @ .20 square miles.

**TENTATIVE PRELIMINARY 2005 WATER-SEWER RATE STUDY- USD AREA (SQ. MILES)**

[As of January 31, 2005, same as foregoing table]

**To reference copies of USD Maps :**

**Please refer to the Final Considerations section of the 2003 Final Water-Sewer Rate Study for Grand Rapids Twp Water Utility Service District map approved by the UAB on November 20, 2003. The balance of USD maps on file as of this date are contained in the Final Considerations section of the 2002 Final Water-Sewer Rate Study.**