

# CITY OF DULUTH



**Public Works & Utilities Department  
2012 Annual Report**

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Front cover photos:  
Damage from June 2012 Flood

**OFFICERS OF THE DEPARTMENT**

Mayor ..... Don Ness  
Chief Administrative Officer ..... Dave Montgomery

City Council Public Works & Utilities Committee  
Councilor Jennifer Julsrud

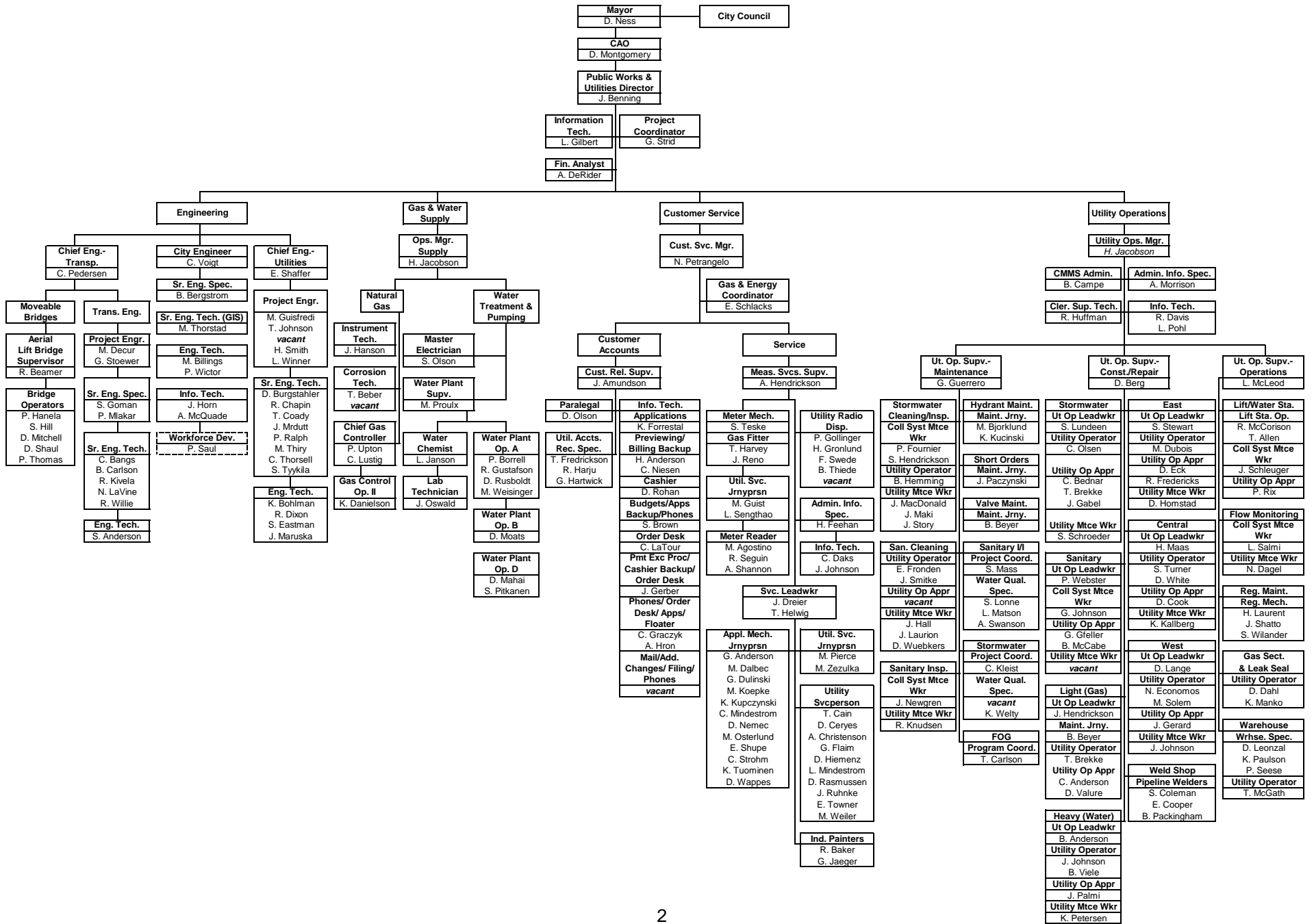
Duluth Public Utilities Commission

|                               |                            |
|-------------------------------|----------------------------|
| Patrick Huston, President     | Councilor Patrick Boyle    |
| Robert Prusak                 | Councilor Jennifer Julsrud |
| Linda Sellner, Vice President | Councilor Jim Stauber      |
| Jason Thorsell                |                            |

**DEPARTMENT OF PUBLIC WORKS & UTILITIES**

Director ..... Jim Benning  
City Engineer ..... Cindy Voigt  
Chief Engineer, Transportation ..... Cari Pedersen  
Chief Engineer, Utilities ..... Eric Shaffer  
Manager, Customer Service ..... Nick Petrangelo  
Manager, Utility Operations (Interim) ..... Howard Jacobson  
Operations Manager, Gas & Water Supply ..... Howard Jacobson  
Financial Analyst ..... Alisa DeRider,  
Ken Taylor

# CITY OF DULUTH PUBLIC WORKS & UTILITIES DEPARTMENT 2012



**W  
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**Water Utility**  
**Statement of Net Income**  
**For The Year Ended December 31, 2011 and 2012**  
**(Unaudited)**

|  | 2011          | 2012          |
|--|---------------|---------------|
| <b><u>Operating Revenue</u></b>            |               |               |
| Metered Water Sales                        | \$ 11,475,356 | \$ 13,644,510 |
| Other                                      | 268,154       | 267,107       |
| <b>Total Operating Revenue</b>             | \$ 11,743,510 | \$ 13,911,617 |
| <b><u>Operating Expense</u></b>            |               |               |
| Director's Office                          | 59,099        | 74,060        |
| Capital Related Expenses                   | 1,504,032     | 1,524,690     |
| Utility General Expense                    | 1,923,394     | 1,652,876     |
| Engineering                                | 376,999       | 409,257       |
| Utility Operations                         | 2,984,095     | 2,799,327     |
| Water Treatment and Pumping                | 2,595,583     | 2,709,544     |
| Customer Service                           | 1,366,419     | 1,215,140     |
| <b>Total Operating Expense</b>             | (10,809,621)  | (10,384,894)  |
| <b>Operating Income</b>                    | 933,889       | 3,526,723     |
| <b><u>Other Revenue</u></b>                |               |               |
| Grants Non-Capital                         | 0             | 0             |
| Contributed Capital                        | 4,131         | 20,352        |
| Gain or Loss on the Sale of Fixed Assets   | (2,363)       | 1,273         |
| Transfer from Other Funds                  |               |               |
| Street Lighting                            | 0             | 10,660        |
| Intergovernmental                          | 16,919        | 16,919        |
| Interest Income                            | 4,205         | 16,894        |
| <b>Total Other Revenue</b>                 | 22,892        | 66,098        |
| <b><u>Other Expenses and Transfers</u></b> |               |               |
| Transfer to Other Funds                    |               |               |
| Investing Activities                       | 11,513        | 7,637         |
| Non-Capital Improvements                   | 336,296       | 238,758       |
| Interest on Long Term Debt                 | 297,135       | 296,162       |
| <b>Total Other Expenses and Transfers</b>  | (644,944)     | (542,557)     |
| <b>Net Income or Loss</b>                  | \$ 311,837    | \$ 3,050,264  |

**Water Utility**  
**Statement of Net Assets**  
**For The Year Ending December 31, 2011 and 2012**  
**(Unaudited)**

|                                   | <b>Assets</b>        |                      |
|-----------------------------------|----------------------|----------------------|
|                                   | <b>2011</b>          | <b>2012</b>          |
| <b><u>Current Assets</u></b>      |                      |                      |
| Cash                              | \$ 0                 | \$ 800,187           |
| Restricted Cash and Equivalents:  |                      |                      |
| Minnesota Water Connection Fees   | 89,040               | 89,300               |
| Accounts Receivable (Net)         | 1,215,293            | 1,381,982            |
| Special Assessments               | 62,422               | 67,420               |
| Due from Other Funds              | 14,515               | 36,306               |
| Due from Other Governments        | 221,108              | 266,503              |
| Inventory                         | 840,657              | 924,050              |
| <b>Total Current Assets</b>       | <b>\$ 2,443,035</b>  | <b>\$ 3,565,748</b>  |
| <b><u>Utility Plant</u></b>       |                      |                      |
| In Service                        | 70,033,563           | 75,675,262           |
| Construction                      | 8,212,230            | 5,217,177            |
| Less Accumulated Depreciation     | (30,905,954)         | (32,375,012)         |
| <b>Total Utility Plant Assets</b> | <b>47,339,839</b>    | <b>48,517,427</b>    |
| <b><u>Other Assets</u></b>        |                      |                      |
| Special Assessments Receivable    | 153,548              | 107,491              |
| Issuance Costs                    | 55,361               | 48,143               |
| <b>Total Other Assets</b>         | <b>208,909</b>       | <b>155,634</b>       |
| <b>Total Assets</b>               | <b>\$ 49,991,783</b> | <b>\$ 52,238,809</b> |

**Water Utility**  
**Statement of Net Assets**  
**For The Year Ending December 31, 2011 and 2012**  
**(Unaudited)**

|  | <b>Liabilities &amp; Net Assets</b> |                      |
|--|-------------------------------------|----------------------|
|  | <b>2011</b>                         | <b>2012</b>          |
| <b><u>Current Liabilities</u></b>                              |                                     |                      |
| Accounts Payable   | \$ 247,542                          | \$ 200,235           |
| Contracts Payable  | 624,147                             | 249,677              |
| Notes Payable  | 689,748                             | 794,887              |
| Leases Payable   | 189,026                             | 196,258              |
| Due to Other Funds   | 175,796                             | 326,950              |
| Interfund Loan Payable   | 664,867                             | 0                    |
| Due to Other Governments                                       | 140,108                             | 191,630              |
| Accrued Interest Payable                                       | 121,380                             | 116,763              |
| Accrued Salaries Payable                                       | 150,792                             | 164,293              |
| Vacations Payable  | 240,666                             | 241,821              |
| Deferred Revenue   | 60,439                              | 59,675               |
| Customer Deposits  | 10,000                              | 10,000               |
| Bonds Payable  | 399,428                             | 427,028              |
| <b>Total Current Liabilities (Payable from Current Assets)</b> | <b>\$ 3,713,939</b>                 | <b>\$ 2,979,217</b>  |
| <b><u>Long Term Liabilities</u></b>                            |                                     |                      |
| Notes Payable  | 5,939,608                           | 6,357,429            |
| Vacations Payable  | 30,816                              | 19,388               |
| Leases Payable   | 2,769,962                           | 2,573,703            |
| Net Other Post Employment Benefits                             | 244,520                             | 394,357              |
| Bonds Payable  | 2,915,572                           | 2,488,544            |
| Less Unamortized Bond Discount or Premium                      | 9,338                               | 7,879                |
| <b>Total Long Term Liabilities</b>                             | <b>11,909,816</b>                   | <b>11,841,300</b>    |
| <b>Total Liabilities</b>                                       | <b>15,623,755</b>                   | <b>14,820,517</b>    |
| <b><u>Net Assets</u></b>                                       |                                     |                      |
| Invested in Capital Assets, Net of Related Debt                | 34,482,518                          | 35,719,842           |
| Unrestricted   | (114,490)                           | 1,698,450            |
| <b>Total Net Assets</b>  | <b>34,368,028</b>                   | <b>37,418,292</b>    |
| <b>Total Liabilities and Net Assets</b>                        | <b>\$ 49,991,783</b>                | <b>\$ 52,238,809</b> |



**City of Duluth**  
**Water Utility Bonds, Notes and Capital Leases Payable**  
**December 31, 2012**

|  | <u>Issued</u> | <u>Issue Date</u> | <u>Final Maturity</u> | <u>Principal Outstanding 12/31/2011</u> | <u>Issued</u> | <u>Draw Down</u>  | <u>Retired</u>      | <u>Principal Outstanding 12/31/2012</u> |
|--|---------------|-------------------|-----------------------|---|---------------|-------------------|---------------------|---|
| <b>Water Utility</b>                                       |               |                   |                       |   |               |                   |                     |   |
| Bonds  |               |                   |                       |   |               |                   |                     |   |
| Revenue and General Obligation                             | 1,120,000     | 12/19/2006        | 2/1/2022              | 885,000                                 | 0             | 0                 | 65,000              | 820,000                                 |
| Revenue and General Obligation Refunding                   | 950,000       | 12/13/2007        | 2/1/2016              | 630,000                                 | 0             | 0                 | 115,000             | 515,000                                 |
| Revenue and General Obligation                             | 196,000       | 2/19/2009         | 2/1/2024              | 175,000                                 | 0             | 0                 | 11,000              | 164,000                                 |
| Revenue and General Obligation Refunding                   | 1,625,000     | 11/23/2010        | 2/1/2018              | 1,625,000                               | 0             | 0                 | 208,428             | 1,416,572                               |
| Bond Total   |               |                   |                       | \$ 3,315,000                            | \$ 0          | \$ 0              | \$ 399,428          | \$ 2,915,572                            |
| Notes  |               |                   |                       |   |               |                   |                     |   |
| Public Facilities Authority                                | \$ 870,000    | 8/25/2003         | 8/20/2018             | \$ 458,320                              | \$ 0          | \$ 0              | \$ 60,093           | \$ 398,227                              |
| Public Facilities Authority                                | 1,971,532     | 7/2/2004          | 8/20/2018             | 1,027,000                               | 0             | 0                 | 136,000             | 891,000                                 |
| Public Facilities Authority                                | 1,698,450     | 10/28/2009        | 8/20/2019             | 1,344,363                               | 0             | 0                 | 165,000             | 1,179,363                               |
| Public Facilities Authority                                | 1,371,653     | 8/31/2010         | 8/20/2025             | 1,102,705                               | 0             | 2,209             | 85,000              | 1,019,914                               |
| Public Facilities Authority                                | 3,534,265     | 8/31/2010         | 8/20/2025             | 2,577,433                               | 0             | 365,797           | 228,000             | 2,715,230                               |
| Public Facilities Authority                                | 1,605,655     | 11/18/2011        | 8/20/2026             | 119,535                                 | 0             | 578,384           | 15,655              | 682,264                                 |
| Note Total   |               |                   |                       | \$ 6,629,356                            | \$ 0          | \$ 946,390        | \$ 689,748          | \$ 6,885,998                            |
| Capital Leases   |               |                   |                       |   |               |                   |                     |   |
| AMR System   | \$ 3,443,490  | 7/12/2007         | 2/1/2024              | \$ 2,958,988                            | \$ 0          | \$ 0              | \$ 189,026          | \$ 2,769,962                            |
| Capital Lease Total  |               |                   |                       | \$ 2,958,988                            | \$ 0          | \$ 0              | \$ 189,026          | \$ 2,769,962                            |
| <b>Total Water Utility Bonds, Notes and Capital Leases</b> |               |                   |                       | <b>\$ 12,903,344</b>                    | <b>\$ 0</b>   | <b>\$ 946,390</b> | <b>\$ 1,278,202</b> | <b>\$ 12,571,532</b>                    |

| <b>Future Payments:</b> |                  |                 |               |
|-------------------------|------------------|-----------------|---------------|
| <u>Year</u>             | <u>Principal</u> | <u>Interest</u> | <u>Total</u>  |
| 2013                    | \$ 1,418,173     | \$ 293,889      | \$ 1,712,062  |
| 2014                    | 1,439,320        | 272,537         | 1,711,857     |
| 2015                    | 1,477,288        | 239,899         | 1,717,187     |
| 2016                    | 1,509,021        | 206,221         | 1,715,242     |
| 2017                    | 1,403,596        | 173,138         | 1,576,734     |
| 2018                    | 1,435,493        | 140,596         | 1,576,089     |
| 2019                    | 974,846          | 110,943         | 1,085,789     |
| 2020                    | 816,251          | 90,389          | 906,640       |
| 2021                    | 837,018          | 71,046          | 908,064       |
| 2022                    | 852,156          | 51,084          | 903,240       |
| 2023                    | 773,684          | 32,591          | 806,275       |
| 2024                    | 640,915          | 15,595          | 656,510       |
| 2025                    | 483,000          | 6,995           | 489,995       |
| 2026                    | 118,000          | 1,441           | 119,441       |
|                         | \$ 14,178,761    | \$ 1,706,364    | \$ 15,885,125 |

**Water Fund**  
**Schedule of Fixed Assets**  
**Year Ending December 31, 2012**

|                          | <u>Balance Dec.</u><br><u>31, 2011</u> | <u>Additions</u>    | <u>Deductions</u>   | <u>Balance Dec.</u><br><u>31, 2012</u> | <u>Accumulated</u><br><u>Depreciation</u> | <u>Book Value</u>    |
|--------------------------|--|---------------------|---------------------|--|---|----------------------|
| Lands and Grounds        | \$ 203,700                             | \$ 0                | \$ 0                | \$ 203,700                             | \$ 0                                      | \$ 203,700           |
| Infrastructure           | 44,838,663                             | 468,494             | 0                   | 45,307,157                             | 15,678,052                                | 29,629,105           |
| Buildings and Structures | 17,204,020                             | 5,134,932           | 0                   | 22,338,952                             | 12,231,226                                | 10,107,726           |
| Equipment and Tools      | 7,787,180                              | 77,288              | 39,015              | 7,825,453                              | 4,465,734                                 | 3,359,719            |
| Work in Progress         | <u>8,212,230</u>                       | <u>2,611,300</u>    | <u>5,606,353</u>    | <u>5,217,177</u>                       | <u>0</u>                                  | <u>5,217,177</u>     |
| Total                    | <u>\$ 78,245,793</u>                   | <u>\$ 8,292,014</u> | <u>\$ 5,645,368</u> | <u>\$ 80,892,439</u>                   | <u>\$ 32,375,012</u>                      | <u>\$ 48,517,427</u> |

## COMPARATIVE STATEMENT, OPERATING EXPENSE OF ALL STATIONS, YEARS 2011 AND 2012

| Station       | Year        | Daily Average<br>Gallons Pumped,<br>Initial Supply | Gallons Pumped        | K.W.H. Consumed   | Electricity         |
|---------------|-------------|--|-----------------------|-------------------|---------------------|
| Lakewood      | 2012        | 15,391,890   | 5,618,040,000         | 8,911,350         | \$ 635,142          |
|               | 2011        | 15,160,273   | 5,533,500,000         | 8,091,300         | \$ 539,708          |
| Middle        | 2012        | 3,290,684  | 1,201,100,000         | 1,232,400         | \$ 104,881          |
|               | 2011        | 2,769,315  | 1,010,800,000         | 1,460,400         | \$ 119,030          |
| Woodland      | 2012        | 1,619,205  | 591,010,000           | 1,629,600         | \$ 137,551          |
|               | 2011        | 1,613,013  | 588,750,000           | 1,460,400         | \$ 119,028          |
| West Duluth   | 2012        | 7,017,934  | 2,561,546,000         | 551,232           | \$ 47,189           |
|               | 2011        | 6,840,657  | 2,496,840,000         | 542,016           | \$ 45,997           |
| Orphanage     | 2012        | 303,750  | 110,869,000           | 85,440            | \$ 8,618            |
|               | 2011        | 332,271  | 121,279,000           | 66,240            | \$ 7,145            |
| Highland      | 2012        | 1,273,120  | 464,689,000           | 439,488           | \$ 41,943           |
|               | 2011        | 114,649  | 406,847,000           | 268,736           | \$ 24,506           |
| Arlington     | 2012        | 1,293,909  | 472,277,000           | 685,632           | \$ 61,768           |
|               | 2011        | 1,914,498  | 698,792,000           | 713,280           | \$ 61,298           |
| Lakeside      | 2012        | 160,241  | 58,488,000            | 68,400            | \$ 10,362           |
|               | 2011        | 168,772  | 61,602,000            | 70,880            | \$ 9,965            |
| Bay View      | 2012        | 437,969  | 159,859,000           | 235,200           | \$ 25,952           |
|               | 2011        | 551,306  | 201,227,000           | 202,880           | \$ 22,600           |
| Proctor       | 2012        | 390,780  | 142,635,000           | 211,840           | \$ 24,044           |
|               | 2011        | 349,717  | 127,647,000           | 204,800           | \$ 22,417           |
| Airport       | 2012        | 0  | unmetered             | 1920              | \$ 560              |
|               | 2011        | 0  | unmetered             | 16443             | \$ 1,792            |
| <b>TOTALS</b> | <b>2012</b> | <b>31,179,482</b>                                  | <b>11,380,513,000</b> | <b>14,050,582</b> | <b>\$ 1,098,010</b> |
|               | <b>2011</b> | <b>29,814,471</b>                                  | <b>11,247,284,000</b> | <b>13,080,932</b> | <b>\$ 973,486</b>   |

## WATER PLANT STATISTICS

|                                  | 2012          | 2011          | 2010          | 2009          | 2008          | 2007          | 2006          |
|----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Water Pumped                     |               |               |               |               |               |               |               |
| Million Cubic Feet               | 751.1         | 739.8         | 773.2         | 829.1         | 826           | 846           | 832.4         |
| Water Sold                       |               |               |               |               |               |               |               |
| Million Cubic Feet               | 644.4         | 592.6         | 665.7         | 658           | 601           | 746           | 697.8         |
| General & Distribution Operating |               |               |               |               |               |               |               |
| Costs including Maintenance (*)  | \$ 8,897,762  | \$ 9,395,019  | \$ 9,275,099  | \$ 9,250,685  | \$ 9,930,687  | \$ 9,545,839  | \$ 8,399,508  |
| Cost per 100 Cubic Feet          | \$ 1.3808     | \$ 1.5854     | \$ 1.3933     | \$ 1.4059     | \$ 1.6524     | \$ 1.2796     | \$ 1.2037     |
| Interest charges                 | \$ 296,162    | \$ 297,135    | \$ 304,164    | \$ 297,249    | \$ 240,761    | \$ 305,579    | \$ 307,361    |
| Cost per 100 Cubic Feet          | \$ 0.0460     | \$ 0.0501     | \$ 0.0457     | \$ 0.0452     | \$ 0.0401     | \$ 0.0410     | \$ 0.0440     |
| Depreciation charge              | \$ 1,487,132  | \$ 1,414,602  | \$ 1,414,807  | \$ 1,252,343  | \$ 1,157,899  | \$ 1,184,485  | \$ 1,124,151  |
| Cost per 100 Cubic Feet          | \$ 0.2308     | \$ 0.2387     | \$ 0.2125     | \$ 0.1903     | \$ 0.1927     | \$ 0.1588     | \$ 0.1611     |
| Total Cost per 100 Cubic Feet    | \$ 1.6575     | \$ 1.8742     | \$ 1.6515     | \$ 1.6414     | \$ 1.8851     | \$ 1.4793     | \$ 1.4089     |
| Operating revenue                | \$ 13,911,617 | \$ 11,743,510 | \$ 12,006,506 | \$ 11,944,996 | \$ 11,353,762 | \$ 12,150,049 | \$ 10,916,443 |
| Revenue per 100 Cubic Feet Sold  | \$ 2.1588     | \$ 1.9817     | \$ 1.8036     | \$ 1.8153     | \$ 1.8891     | \$ 1.6287     | \$ 1.5644     |
| Water meters in service          | 28,050        | 29,069        | 30,317        | 27,950        | 28,016        | 28,087        | 27,948        |
| Water main miles                 | 426.7         | 427.5         | 427.3         | 425.2         | 424.4         | 424.3         | 408.3         |
| Water meters per mile of main    | 65.74         | 68.00         | 70.95         | 65.73         | 66.01         | 66.20         | 68.45         |
| Hydrants on system               | 2,594         | 2,577         | 2,535         | 2,506         | 2,500         | 2,396         | 2,373         |

(\*) Depreciation not included

## WATER PURIFICATION 2012 LAKEWOOD STATION

| <b>Month</b>         | <b>Total Number of Gallons Treated</b> | <b>Average Water Temperature at Treatment Bldg Degree F</b> | <b>Ammonia Lbs. Used</b> | <b>Chlorine Lbs. Used</b> |
|----------------------|--|---|--------------------------|---------------------------|
| January              | 423,750,000                            | 36.3  | 1,886                    | 6,456                     |
| February             | 385,630,000                            | 35.2  | 1,735                    | 5,829                     |
| March                | 417,780,000                            | 35.7  | 1,846                    | 6,328                     |
| April                | 388,070,000                            | 37.9  | 1,797                    | 5,965                     |
| May                  | 456,170,000                            | 40.2  | 2,044                    | 7,283                     |
| June                 | 485,370,000                            | 45.6  | 2,097                    | 8,853                     |
| July                 | 627,060,000                            | 47.1  | 2,605                    | 11,682                    |
| August               | 556,222,000                            | 50.0  | 2,347                    | 9,695                     |
| September            | 512,870,000                            | 45.8  | 2,185                    | 8,530                     |
| October              | 451,090,000                            | 43.7  | 1,980                    | 7,766                     |
| November             | 430,470,000                            | 42.7  | 1,912                    | 7,691                     |
| December             | 483,560,000                            | 39.5  | 2,104                    | 7,886                     |
| <b>TOTAL</b>         | 5,618,042,000                          |   | 24,538                   | 93,964                    |
| <b>Average/Month</b> | 468,170,167                            | 41.6  | 2,045                    | 7,830                     |

**2012  
LAKE SUPERIOR RAW WATER  
AND DULUTH FINISHED WATER (LABORATORY ANALYSES)**

**Milligrams per Liter, Except pH, Turbidity and Specific Conductance**

|   | <b>RAW</b> | <b>FINISHED</b> |
|---|------------|-----------------|
|   | Average    | Average         |
| Dissolved Oxygen                          | 12.24      | 12.37           |
| pH  | 7.81       | 8.99            |
| Monthly Specific Conductance Micromhos/cm | 100.1      | 124.8           |
| Alkalinity                                | 43.1       | 45.3            |
| Sulfates                                  | 2.46       | 7.3             |
| Fluorides                                 | 0.06       | 0.88            |
| Turbidity NTU                             | 0.94       | 0.017           |
| Chlorine                                  | 0.00       | 1.3             |
| Temperature                               | 37.7°F     |                 |

## WATER TREATMENT 2012

| <b>Month</b>         | <b>Alum Used<br/>Gal.</b> | <b>Fluoride Used<br/>Gal.</b> | <b>Turbidity of Effluent<br/>NTU</b> |
|----------------------|---------------------------|-------------------------------|--------------------------------------|
| January              | 8,000                     | 1,673                         | 0.017                                |
| February             | 8,000                     | 1,540                         | 0.019                                |
| March                | 8,000                     | 1,550                         | 0.018                                |
| April                | 8,000                     | 1,555                         | 0.016                                |
| May                  | 8,000                     | 1,755                         | 0.017                                |
| June                 | 12,000                    | 1,819                         | 0.019                                |
| July                 | 16,000                    | 2,435                         | 0.020                                |
| August               | 16,000                    | 2,041                         | 0.016                                |
| September            | 12,000                    | 1,661                         | 0.018                                |
| October              | 12,000                    | 1,477                         | 0.015                                |
| November             | 4,000                     | 1,593                         | 0.016                                |
| December             | 8,000                     | 1,733                         | 0.015                                |
| <b>Average/Month</b> | 10,000                    | 1,736                         | 0.017                                |

## BACTERIOLOGICAL DATA 2012

|                          | RAW WATER INTAKE |  |                     |                           | TREATED WATER  |                         | DISTRIBUTION   |                         |
|--------------------------|------------------|--|---------------------|---------------------------|----------------|-------------------------|----------------|-------------------------|
| Average for              | Number Samples   | Total Bacteria per ml 48 Hours 35 degree C | Coliform per 100 ml | Fecal Coliform per 100 ml | Number Samples | Number Samples Positive | Number Samples | Number Samples Positive |
| January                  | 37               | 0.51                                       | 0.11                | 0.07                      | 216            | 0                       | 92             | 0                       |
| February                 | 35               | 0.80                                       | 0.34                | 0.16                      | 205            | 0                       | 91             | 0                       |
| March                    | 38               | 20.58                                      | 0.84                | 0.07                      | 212            | 0                       | 91             | 0                       |
| April                    | 39               | 10.77                                      | 1.85                | 0.10                      | 218            | 0                       | 91             | 0                       |
| May                      | 39               | 5.08                                       | 1.54                | 0.49                      | 220            | 0                       | 92             | 0                       |
| June                     | 36               | 33.53                                      | 6.31                | 5.16                      | 196            | 0                       | 93             | 0                       |
| July                     | 38               | 22.79                                      | 2.55                | 1.45                      | 215            | 0                       | 92             | 0                       |
| August                   | 40               | 7.10                                       | 0.50                | 0.13                      | 228            | 0                       | 94             | 0                       |
| September                | 35               | 8.26                                       | 0.71                | 0.04                      | 203            | 0                       | 90             | 0                       |
| October                  | 40               | 2.05                                       | 0.30                | 0.04                      | 244            | 0                       | 98             | 0                       |
| November                 | 32               | 1.06                                       | 0.06                | 0.04                      | 180            | 0                       | 92             | 0                       |
| December                 | 32               | 1.06                                       | 0.13                | 0.03                      | 184            | 0                       | 91             | 0                       |
| <b>TOTAL</b>             | 441              | 113.59                                     | N/A                 | N/A                       | 2,521          | 0                       | 1,107          | 0                       |
| <b>Average for Month</b> | 36.8             | 9.47                                       | 1.27                | 0.65                      | 210            | 0                       | 92.3           | 0.00                    |



## LENGTH OF WATER MAINS IN FEET 2012

| Diameter Inches        | Cast Iron        | Ductile Iron   | Steel          | Copper       | Polyvinyl Chloride | High Density Polyethylene | Total            | Valves       | Vaults     |
|------------------------|------------------|----------------|----------------|--------------|--------------------|---------------------------|------------------|--------------|------------|
| 1                      |                  |                |                | 930          |                    |                           | 930              | 4            | 0          |
| 2                      | 33               |                |                | 2,031        |                    | 9,004                     | 11,068           | 24           | 0          |
| 3                      | 868              |                |                |              |                    | 619                       | 1,487            | 4            | 0          |
| 4                      | 11,491           | 2,400          |                |              |                    | 7                         | 13,898           | 52           | 0          |
| 6                      | 1,002,439        | 156,055        | 1,128          |              | 1,727              | 9,841                     | 1,171,190        | 2,440        | 100        |
| 8                      | 89,236           | 96,287         | 458            |              | 304                | 121,698                   | 307,983          | 566          | 37         |
| 10                     | 152,989          | 55,701         | 6,915          |              |                    | 28,688                    | 244,293          | 415          | 25         |
| 12                     | 159,515          | 42,969         | 1,884          |              |                    | 14,699                    | 219,067          | 339          | 83         |
| 14                     |                  |                |                |              |                    | 1,052                     | 1,052            | 2            | 0          |
| 16                     | 83,653           | 23,019         | 10,363         |              |                    |                           | 117,035          | 129          | 54         |
| 18                     | 1,388            | 10             |                |              |                    | 2,107                     | 3,505            | 2            | 1          |
| 20                     | 15,049           | 1,507          | 29,258         |              |                    |                           | 45,814           | 27           | 25         |
| 24                     | 8,620            | 2,091          | 55             |              |                    | 5,029                     | 15,795           | 11           | 4          |
| 30                     |                  |                | 2,670          |              |                    |                           | 2,670            | 2            | 2          |
| 36                     | 25,475           | 11,184         | 11,369         |              |                    |                           | 48,028           | 29           | 18         |
| 42                     | 181              |                | 49,208         |              |                    |                           | 49,389           | 7            | 7          |
| 48                     |                  |                |                |              |                    |                           | 0                | 0            | 0          |
| <b>TOTALS</b>          | <b>1,550,937</b> | <b>391,223</b> | <b>113,308</b> | <b>2,961</b> | <b>2,031</b>       | <b>192,744</b>            | <b>2,253,204</b> | <b>4,053</b> | <b>356</b> |
| <b>Total Miles -</b>   |                  |                |                |              |                    |                           | <b>426.7</b>     |              |            |
| <b>Added in 2012 -</b> |                  |                |                |              |                    |                           | <b>0.10</b>      | <b>0</b>     | <b>0</b>   |

Notes: Pipe and valves in hydrant branches are not included in the above table.

Air valves, valves without gates and valves inside pump stations are not included.

All Main and Hydrant information provided from Geographic Information System.

## HYDRANTS AND BRANCHES FINAL REPORT 2012

|  | Mueller<br>5" |    | Mathews |    | Michigan<br>5" | Unknown<br>5" | Waterous<br>5" | Iowa |    | Stockholm<br>2" | Total<br>Hydrants | Valves on<br>Branches | Lineal Feet<br>Main to Hydt. |
|--|---------------|----|---------|----|----------------|---------------|----------------|------|----|-----------------|-------------------|-----------------------|------------------------------|
|  | 4"            | 5" | 4 1/2"  | 5" |                |               |                | 4"   | 5" |                 |                   |                       |                              |
| <b>TOTAL IN SERVICE<br/>12/31/2011</b> | 145           | 0  | 528     | 0  | 3              | 295           | 1,607          | 0    | 2  | 0               | 2,577             | 2,450                 | 54,402                       |
| <b>TOTAL IN SERVICE<br/>12/31/2012</b> | 138           | 0  | 509     | 0  | 3              | 362           | 1,580          | 0    | 2  | 2               | 2,594             | 2,491                 | 53,339                       |

Number of Hydrants added in 2012 - 17  
 Number of Hydrant Valves added in 2012 - 24  
 Lineal feet of Hydrant branch main added in 2012 - 889

**2012  
DATA, RESERVOIRS AND TANKS**

| <b>Location</b>                 | <b>Capacity<br/>Gallons</b> | <b>Overflow<br/>Elevation</b> | <b>Greatest<br/>Depth</b> | <b>Dimension</b>        | <b>Remarks</b>  |
|---------------------------------|-----------------------------|-------------------------------|---------------------------|-------------------------|---|
| Lakeside Tank                   | 100,000                     | 500.00 Feet                   | 23.75 Feet                | Diameter 27 Feet        | Built in 1961   |
| 34th Avenue East "Reservoir "A" | 16,320,000                  | 294.00 Feet                   | 30.00 Feet                | 284 Feet x 391 Feet     | Built 1898, Rebuilt 1938  |
| Endion Reservoir                | 14,140,000                  | 290.00 Feet                   | 28.00 Feet                | 240 Feet x 320 Feet     | Built by G & W Company<br>Rebuilt 1922<br>New Roof 1966<br>Lined 1988 |
| West End Reservoirs #1-6        | 10,200,000                  | 290.00 Feet                   | 33.00 Feet                | Diameter 100 Feet       | Built 1953  |
| West Duluth Reservoir           | 10,000,000                  | 290.00 Feet                   | 21.00 Feet                | 327.3 Feet x 263.3 Feet | Built 1906<br>Remodeled 1925  |
| Middle System - Reservoir #1    | 5,171,000                   | 560.00 Feet                   | 28.00 Feet                | Diameter 187.38 Feet    | Built 1913<br>New Roof 1928<br>Lined 1988                             |
| Middle System - Reservoir #2    | 5,131,000                   | 560.00 Feet                   | 25.00 Feet                | Diameter 190 Feet       | Built in 1951   |
| Woodland Reservoir #1           | 1,021,000                   | 806.00 Feet                   | 22.00 Feet                | Diameter 91.5 Feet      | Built in 1915<br>Lined 1939<br>Refaced 2002                           |
| Woodland Reservoir #2           | 2,015,000                   | 806.00 Feet                   | 35.50 Feet                | Diameter 100 Feet       | Built in 1950<br>Lined 2000<br>Refaced 2002                           |
| Arlington Reservoir #1          | 240,490                     | 806.00 Feet                   | 27.00 Feet                | Diameter 40 Feet        | Built in 1925   |
| Arlington Reservoir #2          | 1,534,000                   | 806.00 Feet                   | 27.50 Feet                | Diameter 100 Feet       | Built in 1950   |
| Orphanage Tank #1               | 400,000                     | 916.00 Feet                   | 129.40 Feet               | Diameter 51.5 Feet      | Built 1994  |
| Highland Water Tower            | 1,000,000                   | 141.60 Feet                   | 40.00 Feet                | Diameter 74.8 1/4 Feet  | Built 2011  |
| Bay View Heights Steel Tank     | 100,000                     | 550.00 Feet                   | 26.00 Feet                | Diameter 26 Feet        | Built 1972  |
| Proctor Tank                    | 400,000                     | 825.00 Feet                   | 142.00 Feet               | Diameter 51.5 Feet      | Built 1989  |
| <b>TOTAL</b>                    | <b>67,772,490</b>           |                               |                           |                         |   |

## PUMPING STATIONS - WATER PUMPING EQUIPMENT

| Station                   | Source of Supply           | Reservoirs Discharged Into                  | No. Units and Year Installed | Make of Pump        | Type of Pump                                  | Unit No. | Pumps Driven By  | R.P.M. | Average Capacity G.P.M. Each Unit |
|---------------------------|----------------------------|---|------------------------------|---------------------|---|----------|--|--------|-----------------------------------|
| <b>Lakewood Low Lift</b>  | Lake Superior              | Lakewood                                    | 1 -- 1992                    | Patterson           | Single Stage Centrifugal                      | 2        | 1 Unit direct connected to 300 hp, 2300 volt, 60 cycle, GE Induction motor.                                      | 900    | 17400                             |
|                           |                            |   | 1 -- 1949                    | DeLaval             |   | 4        | 1 Unit direct connected to 350 hp, 2300 volt, 60 cycle, GE Induction motor                                       | 440    | 20800                             |
|                           |                            |   | 1 -- 1981                    | Worthington         | Single Stage                                  | 1        | 1 Unit direct connected to 200 hp, 2300 volt, 60 cycle, GE Induction motor                                       | 500    | 11389                             |
| <b>Lakewood High Lift</b> | Lakewood (Detention Basin) | Reservoir A Endion, West End, & West Duluth | 1 -- 1992                    | Patterson           | Single Stage Centrifugal                      | 2        | 2 Unit direct connected to 1500 hp, 2300 volt, 60 cycle GE Induction motor with VFD and fixed controller         | 1200   | 17400                             |
|                           |                            |   | 1 -- 1949                    | DeLaval             | Two Stage Centrifugal                         | 4        | 2 Unit direct connected to 2000 hp, 2300 volt, 60 cycle, GE synchronous motor, with direct exciter               | 720    | 20800                             |
|                           |                            |   | 1 -- 1981                    | Worthington         | Single Stage                                  | 1        | 1 Unit direct connected to 1000 hp, 2300 volt, 60 cycle GE capacitor induction motor                             | 1185   | 11389                             |
| <b>Middle</b>             | Reservoir A and Endion     | Middle Service                              | 1 -- 1950                    | Allis-Chalmers      | Single Stage, Two Unit, Centrifugal           | 3        | Direct connected to 400 hp, 2300 volt, 60 cycle, Allis-Chalmers synchronous motor, with direct connected exciter | 1800   | 4000                              |
|                           |                            |   | 1 -- 1969                    | Aurora              | Single Stage, One Unit, Centrifugal           | 4        | Direct connected to 250 hp, 2300 volt, 60 cycle, 3-phase Louis Allis Induction motor                             | 1750   | 2500                              |
|                           |                            |   | 1 -- 1986                    | Fairbanks-Morse     | Single Stage, One Unit, Centrifugal           | 5        | Direct connected to 250 hp, 2300 volt, 60 cycle, 3-phase Siemens-Allis motor                                     | 1785   | 2600                              |
| <b>Woodland</b>           | Reservoir A                | Woodland & Arlington Reservoir              | 1 -- 1950                    | Allis-Chalmers      | All Units Single State, Two Unit, Centrifugal | 3        | Direct connected to 500 hp, 2300 volt, 60 cycle, Allis-Chalmers synchronous motor, with direct connected exciter | 1800   | 2050                              |
|                           |                            |   | 1 -- 1986                    | Fairbanks Morse Co. |   | 4        | Direct connected to 300 hp, 2300 volt, 60 cycle, Siemens-Allis Induction motor                                   | 1775   | 1720                              |
|                           |                            |   | 1 -- 1975                    | Aurora #421         | Two Stage, Centrifugal                        | 5        | Direct connected to 240 hp, 2300 volt, 60 cycle, 3-phase Marathon Induction motor                                | 1750   | 1250                              |

## PUMPING STATIONS - WATER PUMPING EQUIPMENT

| Station            | Source of Supply           | Reservoirs Discharged Into                 | No. Units and Year Installed | Make of Pump                   | Type of Pump                             | Unit No. | Pumps Driven By   | R.P.M. | Average Capacity G.P.M. Each Unit |
|--------------------|----------------------------|--|------------------------------|--------------------------------|--|----------|---|--------|-----------------------------------|
| <b>West Duluth</b> | Reservoir A, Endion & West | West Duluth Reservoir & West Duluth System | 2 -- 2009                    | Fairbanks-Morse                | All Units Single Stage                   | 2        | 200 hp, 460 volt, 60 cycle 3-phase WEG NEMA Premium Induction motor, with VFD drive                     | 1200   | 6000                              |
| <b>Orphanage</b>   | Woodland Reservoirs        | Orphanage Tanks                            | 1 -- 1961                    | Worthington Type L-2           | Single Stage Centrifugal                 | 5        | Direct connected to 40 hp, 440 volt, 60 cycle, U.S. Induction motor                                     | 1750   | 1000                              |
|                    |                            |  | 1 -- 1961                    |                                | Single Stage Centrifugal                 | 6        | Direct connected to 40 hp, 440 volt, 60 cycle, U.S. Induction motor                                     | 1750   | 1000                              |
| <b>Highland</b>    | Arlington Reservoirs       | Highland Tanks                             | 2 -- 2012                    | Aurora                         | Single Stage, Single Suction Centrifugal | 3        | 2-Unit Direct connected to 150 hp, 460 volt, 60 HZ, 3-phase Marathon Electric XRI high efficiency motor | 1800   | 1200                              |
| <b>Arlington</b>   | Middle Reservoirs          | Arlington Reservoirs                       | 3 -- 2010                    | Aurora Type 411 BF Size 6x8x20 | Single Stage Centrifugal                 | 3        | 250 hp, 460 volt, 60 cycle 3-phase Baldor Induction motor with VFD drive                                | 1750   | 1700                              |
| <b>Lakeside</b>    | Two 10" Mains              | Lakeside Tank                              | 2 -- 1961                    | Worthington Type L-3           | Single Stage Centrifugal                 | 1<br>2   | Each unit direct connected to 100 hp, 440 volt, 60 cycle, 3-phase U.S. Induction motor                  | 1750   | 1000                              |
| <b>Bay View</b>    | West Duluth Reservoir      | Bay View Tank                              | 2 -- 1973                    | Aurora                         | Single Stage Centrifugal                 | 1        | Each unit direct connected to 125 hp, 440 volt, 60 cycle, 3-phase U.S. Induction motor                  | 3500   | 1200                              |
|                    |                            |  | 2-- 2002                     |                                | Single Stage Centrifugal                 | 2        |   |        |                                   |
| <b>Proctor</b>     | Bay View Tank              | Proctor Standpipe                          | 2 -- 1973                    | Aurora                         | Single Stage Centrifugal                 | 1        | Each unit direct connected to 125 hp, 440 volt, 60 cycle, 3-phase Louis Allis motor                     | 3500   | 1200                              |
|                    |                            |  |                              |                                | Single Stage Centrifugal                 | 2        |   |        |                                   |

## WATER UTILITY ACTIVITIES 2012

| ACTIVITY                                | WORK COMPLETED   |
|---|--|
| Repair of water services and mains      | 226  |
| Repair of valves                        | 112  |
| Repair of main breaks                   | 35   |
| Cut off services                        | 50   |
| Install services                        | 37   |
| Steam requests (hydrants/services)      | 32 hydrants, 3 frozen services   |
| Water leak checks                       | 389  |
| Miscellaneous Customer Service requests | 229  |
| Fire hydrants:                          |  |
| Replace and repair hydrants             | 304  |
| Steaming                                | 32   |
| Inspection                              | All fire hydrants in the City are inspected by the Fire Department and Utility Operations as part of a preventative maintenance program. |

## CUSTOMER SERVICE DIVISION WATER ACTIVITIES 2012

| ACTIVITY   | WORK COMPLETED                       |
|--|--------------------------------------|
| <b>Meter Truck:</b><br>Gauge water service<br>Applications (water & gas)<br>Credit (water & gas)<br>Emergency (water & gas)<br>General (water & gas) | 82<br>8,201<br>2,041<br>894<br>2,056 |
| <b>Meter Shop:</b><br>Water meters repaired<br>Water meters tested<br>Plumbing truck orders (water & gas)  | 587<br>511<br>292                    |

**G  
A  
S**



**Gas Utility**  
**Statement of Net Income**  
**For The Year Ended December 31, 2011 and 2012**  
**(Unaudited)**

|  | <b>2011</b>          |  | <b>2012</b>          |
|--|----------------------|--|----------------------|
| <b><u>Operating Revenue</u></b>            |                      |  |                      |
| Residential Sales                          | \$ 25,339,331        |  | \$ 21,498,228        |
| Commercial & Industrial - Firm             | 9,839,027            |  | 7,748,214            |
| Commercial & Industrial - Interruptible    | 4,788,958            |  | 3,165,778            |
| Servicing Appliances                       | 644,140              |  | 695,002              |
| Other                                      | 669,970              |  | 832,674              |
| <b>Total Operating Revenue</b>             | <b>\$ 41,281,426</b> |  | <b>\$ 33,939,896</b> |
| <b><u>Operating Expense</u></b>            |                      |  |                      |
| Director's Office                          | 69,198               |  | 86,317               |
| Capital Related Expenses                   | 1,442,816            |  | 1,291,452            |
| Utility General Expense                    | 2,134,586            |  | 2,114,043            |
| Engineering                                | 495,350              |  | 569,767              |
| Utility Operations                         | 1,956,837            |  | 2,159,435            |
| Natural Gas                                | 25,826,660           |  | 20,040,050           |
| Customer Service                           | 3,691,426            |  | 3,702,547            |
| <b>Total Operating Expense</b>             | <b>(35,616,873)</b>  |  | <b>(29,963,611)</b>  |
| <b>Operating Income</b>                    | <b>5,664,553</b>     |  | <b>3,976,285</b>     |
| <b><u>Other Revenue</u></b>                |                      |  |                      |
| Grants Non-Capital                         | 0                    |  | 0                    |
| Contributed Assets                         | 37,982               |  | 31,279               |
| Gain or Loss on Sale of Fixed Assets       | (7,787)              |  | 3,349                |
| Transfer from Other Funds                  |                      |  |                      |
| Street Lighting                            | 0                    |  | 15,990               |
| Intergovernmental                          | 23,365               |  | 23,365               |
| Interest Income                            | 120,868              |  | 76,892               |
| <b>Total Other Revenue</b>                 | <b>174,428</b>       |  | <b>150,875</b>       |
| <b><u>Other Expenses and Transfers</u></b> |                      |  |                      |
| Interest Expense                           | 295,311              |  | 274,210              |
| Transfers to Other Funds                   |                      |  |                      |
| Payment to City in Lieu of Taxes           | 2,778,918            |  | 2,889,700            |
| Investing Activities                       | 116,237              |  | 71,500               |
| Non-Capital Improvements                   | 70,287               |  | 10,129               |
| <b>Total Other Expenses and Transfers</b>  | <b>(3,260,753)</b>   |  | <b>(3,245,539)</b>   |
| <b>Net Income or Loss</b>                  | <b>\$ 2,578,228</b>  |  | <b>\$ 881,621</b>    |

**Gas Utility**  
**Statement of Net Assets**  
**For The Year Ending December 31, 2011 and 2012**  
**(Unaudited)**

|                                   | <b>Assets</b>        |                      |
|-----------------------------------|----------------------|----------------------|
|                                   | <b>2011</b>          | <b>2012</b>          |
| <b><u>Current Assets</u></b>      |                      |                      |
| Cash                              | \$ 915,488           | \$ 2,888,656         |
| Restricted Cash and Equivalents:  |                      |                      |
| Customer Deposit                  | 2,155,173            | 2,352,074            |
| Accounts Receivable (Net)         | 5,379,440            | 5,234,385            |
| Special Assessments               | 13,125               | 17,421               |
| Due from Other Funds              | 20,286               | 78,991               |
| Interfund Loan Receivable         | 664,867              | 0                    |
| Due from Other Governments        | 66                   | 263,279              |
| Inventory                         | 922,456              | 876,748              |
| Prepaid gas                       | 3,024,496            | 1,317,018            |
| <b>Total Current Assets</b>       | <b>\$ 13,095,397</b> | <b>\$ 13,028,572</b> |
| <b><u>Utility Plant</u></b>       |                      |                      |
| In Service                        | 60,967,771           | 62,148,325           |
| Construction                      | 2,621,732            | 3,407,456            |
| Less Accumulated Depreciation     | (20,047,999)         | (21,243,385)         |
| <b>Total Utility Plant Assets</b> | <b>43,541,504</b>    | <b>44,312,396</b>    |
| <b><u>Other Assets</u></b>        |                      |                      |
| Special Assessments Receivable    | 30,877               | 16,867               |
| Bond Issuance Charges             | 89,645               | 75,956               |
| Advance to Other Funds            | 1,650,000            | 1,500,000            |
| <b>Total Other Assets</b>         | <b>1,770,522</b>     | <b>1,592,823</b>     |
| <b>Total Assets</b>               | <b>\$ 58,407,423</b> | <b>\$ 58,933,791</b> |

**Gas Utility**  
**Statement of Net Assets**  
**For The Year Ending December 31, 2011 and 2012**  
**(Unaudited)**

|  | <b>Liabilities &amp; Net Assets</b> |                      |
|--|-------------------------------------|----------------------|
|  | <b>2011</b>                         | <b>2012</b>          |
| <b><u>Current Liabilities</u></b>                              |                                     |                      |
| Accounts Payable   | \$ 2,343,009                        | \$ 2,554,068         |
| Contracts Payable  | 379,194                             | 209,943              |
| Leases Payable   | 173,274                             | 179,903              |
| Due to Other Funds   | 61,499                              | 111,667              |
| Due to Other Governments                                       | 87,497                              | 72,523               |
| Accrued Interest Payable                                       | 92,707                              | 120,979              |
| Accrued Salaries Payable                                       | 190,828                             | 216,384              |
| Accrued Vacations Payable                                      | 325,872                             | 338,068              |
| Deferred Revenue   | 720,383                             | 764,497              |
| Customer Deposits  | 1,389,661                           | 1,484,593            |
| Bonds Payable  | 460,957                             | 857,980              |
| <b>Total Current Liabilities (Payable from Current Assets)</b> | <b>\$ 6,224,881</b>                 | <b>\$ 6,910,605</b>  |
| <b><u>Long Term Liabilities</u></b>                            |                                     |                      |
| Accrued Vacations Payable                                      | 53,032                              | 28,864               |
| Leases Payable   | 2,539,132                           | 2,359,228            |
| Net Other Post Employment Benefits                             | 0                                   | 42,654               |
| Bonds Payable  | 6,079,857                           | 5,221,877            |
| Less Unamortized Bond Discount                                 | 145,488                             | 123,909              |
| <b>Total Long Term Liabilities</b>                             | <b>8,817,509</b>                    | <b>7,776,532</b>     |
| <b>Total Liabilities</b>                                       | <b>15,042,390</b>                   | <b>14,687,137</b>    |
| <b><u>Net Assets</u></b>                                       |                                     |                      |
| Invested in Capital Assets, Net of Related Debt                | 34,232,441                          | 35,645,455           |
| Unrestricted   | 9,132,592                           | 8,601,199            |
| <b>Total Net Assets</b>  | <b>43,365,033</b>                   | <b>44,246,654</b>    |
| <b>Total Liabilities and Net Assets</b>                        | <b>\$ 58,407,423</b>                | <b>\$ 58,933,791</b> |

**City of Duluth  
Gas Utility Bonds and Capital Leases Payable  
December 31, 2012**

|   | <u>Issued</u> | <u>Issue Date</u> | <u>Final Maturity</u> | <u>Principal<br/>Outstanding<br/>12/31/2011</u> | <u>Issued</u> | <u>Draw Down</u> | <u>Retired</u>    | <u>Principal<br/>Outstanding<br/>12/31/2012</u> |
|---|---------------|-------------------|-----------------------|---|---------------|------------------|-------------------|---|
| <b>Gas Utility</b>                                |               |                   |                       |   |               |                  |                   |   |
| Bonds   |               |                   |                       |   |               |                  |                   |   |
| Revenue and General Obligation                    | 1,190,000     | 12/19/2006        | 2/1/2022              | 945,000   | 0             | 0                | 70,000            | 875,000   |
| Revenue and General Obligation Refunding          | 2,846,814     | 12/17/2009        | 2/1/2017              | 2,470,814                                       | 0             | 0                | 390,957           | 2,079,857                                       |
| Revenue and General Obligation Refunding          | 3,125,000     | 11/29/2011        | 2/1/2019              | 3,125,000                                       | 0             | 0                | 0                 | 3,125,000                                       |
| Bond Total  |               |                   |                       | \$ 6,540,814                                    | \$ 0          | \$ 0             | \$ 460,957        | \$ 6,079,857                                    |
| Capital Leases                                    |               |                   |                       |   |               |                  |                   |   |
| AMR System  | \$ 3,156,533  | 7/12/2007         | 2/1/2024              | \$ 2,712,406                                    | \$ 0          | \$ 0             | \$ 173,275        | \$ 2,539,131                                    |
| Capital Lease Total                               |               |                   |                       | \$ 2,712,406                                    | \$ 0          | \$ 0             | \$ 173,275        | \$ 2,539,131                                    |
| <b>Total Gas Utility Bonds and Capital Leases</b> |               |                   |                       | <u>\$ 9,253,220</u>                             | <u>\$ 0</u>   | <u>\$ 0</u>      | <u>\$ 634,232</u> | <u>\$ 8,618,988</u>                             |

| <b>Future Payments:</b> |                  |                 |              |
|-------------------------|------------------|-----------------|--------------|
| <u>Year</u>             | <u>Principal</u> | <u>Interest</u> | <u>Total</u> |
| 2013                    | \$ 1,037,883     | \$ 280,119      | \$ 1,318,002 |
| 2014                    | 1,082,806        | 249,487         | 1,332,293    |
| 2015                    | 1,116,904        | 216,619         | 1,333,523    |
| 2016                    | 1,151,308        | 181,608         | 1,332,916    |
| 2017                    | 1,196,987        | 141,866         | 1,338,853    |
| 2018                    | 787,054          | 105,003         | 892,057      |
| 2019                    | 820,358          | 73,445          | 893,803      |
| 2020                    | 328,981          | 50,975          | 379,956      |
| 2021                    | 342,932          | 38,000          | 380,932      |
| 2022                    | 357,227          | 24,427          | 381,654      |
| 2023                    | 261,876          | 12,571          | 274,447      |
| 2024                    | 134,672          | 2,552           | 137,224      |
|                         | \$ 8,618,988     | \$ 1,376,672    | \$ 9,995,660 |

**Gas Fund**  
**Schedule of Fixed Assets**  
**Year Ending December 31, 2012**

|                          | <u>Balance Jan.</u><br><u>1, 2012</u> | <u>Additions</u>    | <u>Deductions</u>   | <u>Balance Dec.</u><br><u>31, 2012</u> | <u>Accumulated</u><br><u>Depreciation</u> | <u>Book Value</u>    |
|--------------------------|---------------------------------------|---------------------|---------------------|--|---|----------------------|
| Lands and Grounds        | \$ 420,815                            | \$ 0                | \$ 0                | \$ 420,815                             | \$ 0                                      | \$ 420,815           |
| Infrastructure           | 50,030,475                            | 1,087,237           | 0                   | 51,117,712                             | 16,320,983                                | 34,796,729           |
| Buildings and Structures | 2,592,124                             | 0                   | 0                   | 2,592,124                              | 727,684                                   | 1,864,440            |
| Equipment and Tools      | 7,924,357                             | 170,052             | 76,735              | 8,017,674                              | 4,194,718                                 | 3,822,956            |
| Work in Progress         | <u>2,621,732</u>                      | <u>1,889,424</u>    | <u>1,103,700</u>    | <u>3,407,456</u>                       | <u>0</u>                                  | <u>3,407,456</u>     |
| <b>Total</b>             | <u>\$ 63,589,503</u>                  | <u>\$ 3,146,713</u> | <u>\$ 1,180,435</u> | <u>\$ 65,555,781</u>                   | <u>\$ 21,243,385</u>                      | <u>\$ 44,312,396</u> |

## GAS STATISTICS

|  | 2012          | 2011          | 2010          | 2009          | 2008          | 2007          | 2006          |
|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Gas sold MMBTU                                     | 4,191,481     | 4,864,262     | 4,617,923     | 4,804,897     | 5,169,299     | 4,544,616     | 4,285,167     |
| Cost of gas sold                                   | \$ 19,376,845 | \$ 25,207,873 | \$ 25,014,748 | \$ 27,647,451 | \$ 42,819,209 | \$ 36,093,665 | \$ 35,703,140 |
| Cost per MMBTU sold                                | \$ 4.6229     | \$ 5.1823     | \$ 5.4169     | \$ 5.7540     | \$ 8.2834     | \$ 7.9421     | \$ 8.3318     |
| Other operating costs,<br>including maintenance(*) | \$ 9,314,644  | \$ 9,168,387  | \$ 9,238,887  | \$ 9,243,290  | \$ 10,106,846 | \$ 9,561,803  | \$ 7,952,616  |
| Cost per MMBTU sold                                | \$ 2.2223     | \$ 1.8848     | \$ 2.0007     | \$ 1.9237     | \$ 1.9552     | \$ 2.1040     | \$ 1.8558     |
| Interest charges                                   | \$ 274,210    | \$ 295,311    | \$ 503,288    | \$ 554,975    | \$ 505,728    | \$ 540,182    | \$ 523,749    |
| Cost per MMBTU sold                                | \$ 0.0654     | \$ 0.0607     | \$ 0.1090     | \$ 0.1155     | \$ 0.0978     | \$ 0.1189     | \$ 0.1222     |
| Depreciation charge(**)                            | \$ 1,272,122  | \$ 1,240,613  | \$ 1,219,538  | \$ 1,056,585  | \$ 1,088,666  | \$ 1,060,245  | \$ 999,663    |
| Cost per MMBTU sold                                | \$ 0.3035     | \$ 0.2550     | \$ 0.2641     | \$ 0.2199     | \$ 0.2106     | \$ 0.2333     | \$ 0.2333     |
| Total cost per MMBTU sold                          | \$ 7.2141     | \$ 7.3829     | \$ 7.7906     | \$ 8.0131     | \$ 10.5470    | \$ 10.3982    | \$ 10.5432    |
| Operating revenue<br>per MMBTU                     | \$ 8.0974     | \$ 8.4867     | \$ 8.5967     | \$ 9.6227     | \$ 11.3061    | \$ 10.4177    | \$ 11.5200    |
| Gas meters in service                              | 27,075        | 26,592        | 26,668        | 26,148        | 25,983        | 25,726        | 25,369        |
| Gas main miles                                     | 520           | 510.1         | 512.4         | 506           | 510.2         | 508           | 495.34        |
| Gas transmission miles                             | 5.3           | 5.3           | 5.3           | 5.3           | 5.3           | 5.3           | -             |
| Gas meters per mile of main                        | 52.07         | 52.13         | 52.05         | 51.68         | 50.93         | 50.64         | 51.22         |

(\*) Does not include depreciation for the cost of natural gas

(\*\*) Does not include depreciation due to change in Capital Policy

## GAS ANALYSIS 2012

| Month                    | Gas Purchased MMBTU | Storage Gas    | MMBTU Transport | Consumption w/o Transport MMBTU | Total Transport BTU's | Number of Transport Customers |
|--------------------------|---------------------|----------------|-----------------|---------------------------------|-----------------------|-------------------------------|
| <b>Beginning Balance</b> |                     | <b>691,819</b> |                 |                                 |                       |                               |
| January                  | 491,419             | -254,114       | 29,620          | 461,799                         | 1,012                 | 2                             |
| February                 | 418,543             | -195,284       | 25,190          | 393,353                         | 1,015                 | 2                             |
| March                    | 381,331             | -32,502        | 23,440          | 357,891                         | 1,010                 | 2                             |
| April                    | 223,629             | -140,948       | 20,250          | 203,379                         | 1,011                 | 2                             |
| May                      | 223,519             | 19,136         | 19,530          | 203,989                         | 1,015                 | 2                             |
| June                     | 253,695             | 117,540        | 18,768          | 234,927                         | 1,013                 | 2                             |
| July                     | 275,905             | 148,749        | 17,825          | 258,080                         | 1,007                 | 2                             |
| August                   | 282,594             | 151,799        | 17,825          | 264,769                         | 1,008                 | 2                             |
| September                | 273,691             | 133,630        | 21,454          | 252,237                         | 1,009                 | 2                             |
| October                  | 329,307             | 104,517        | 24,427          | 304,880                         | 1,015                 | 2                             |
| November                 | 388,994             | -98,766        | 23,940          | 365,054                         | 1,022                 | 1                             |
| December                 | 526,909             | -168,753       | 31,629          | 495,280                         | 1,027                 | 1                             |
| <b>Storage Balance</b>   |                     | <b>476,823</b> |                 |                                 |                       |                               |
| <b>Totals</b>            | 4,069,536           |                | 273,898         | 3,795,638                       | 1,014                 |                               |

- withdraw, + inject

## LENGTH OF GAS MAINS IN FEET 2012

| Diameter - Inches | Polyethylene     | Steel          | Total            | Valves       | Vaults    |
|-------------------|------------------|----------------|------------------|--------------|-----------|
| 1                 | 45,595           | 0              | 45,595           | 60           | 0         |
| 1 1/4             | 0                | 2,919          | 2,919            | 29           | 0         |
| 2                 | 1,752,816        | 31,056         | 1,783,872        | 854          | 1         |
| 3                 | 364,625          | 9,009          | 373,634          | 251          | 0         |
| 4                 | 0                | 48,444         | 48,444           | 62           | 4         |
| 6                 | 48,928           | 81,383         | 130,311          | 100          | 8         |
| 8                 | 7,404            | 152,159        | 159,563          | 62           | 3         |
| 10                | 0                | 93,339         | 93,339           | 32           | 5         |
| 12                | 0                | 12,183         | 12,183           | 9            | 2         |
| 14                | 0                | 4,118          | 4,118            | 0            | 0         |
| 16                | 0                | 91,677         | 91,677           | 9            | 4         |
| <b>Totals</b>     | <b>2,219,368</b> | <b>526,287</b> | <b>2,745,655</b> | <b>1,468</b> | <b>27</b> |

**Total Miles Gas Main                    520.0**  
**Added in 2012                                9.9**  
**Pressure Regulators                         16**  
**Gas Valves added in 2012                 40**

Note: Valves used only as plugs on end of mains are not included in the above table.  
Gas main quantities are derived from Geographic Information System.



## GAS UTILITY ACTIVITIES 2012

| ACTIVITY  | WORK COMPLETED |
|---|----------------|
| SERVICES AND MAINS                                |                |
| Installations                                     | 479            |
| Cutoffs   | 71             |
| Repaired services and mains (not considered hits) | 25             |
| Rerouted/replaced                                 | 192            |
| Lowered gas services/mains                        | 6              |
| Valves inspected and operated                     | 401            |
| Hits  | 51             |

## CUSTOMER SERVICE DIVISION GAS ACTIVITIES 2012

| ACTIVITY                                       | WORK COMPLETED |
|--|----------------|
| <b>Service Workorders Completed:</b>           |                |
| Appliance service                              | 3,950          |
| Furnace cleaning                               | 3,008          |
| Tin shop                                       | 348            |
| <b>Meter Truck:</b>                            |                |
| Applications (water & gas)                     | 8,201          |
| Credit (water & gas)                           | 2,041          |
| Emergency (water & gas)                        | 894            |
| General (water & gas)                          | 2,056          |
| <b>Meter Shop:</b>                             |                |
| Gas meters repaired                            | 813            |
| Gas meters tested                              | 340            |
| Plumbing truck orders (water & gas)            | 292            |
| <b>Other:</b>                                  |                |
| Gas leak detection surveys                     | 11,896         |
| Inspect and paint gas meters and risers        | 3,310          |
| Gas meter visual verification and safety check | 15,183         |
| Skips/Previewers                               | 1,413          |

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**Sewer Utility**  
**Statement of Net Income**  
**For The Year Ended December 31, 2011 and 2012**  
**(Unaudited)**

|  | 2011                        | 2012                        |
|--|-----------------------------|-----------------------------|
| <b><u>Operating Revenue</u></b>            |                             |                             |
| General Sewage Revenue                     | \$ 17,006,172               | \$ 18,329,389               |
| Other                                      | <u>149,513</u>              | <u>187,763</u>              |
| <b>Total Operating Revenue</b>             | <b>\$ <u>17,155,685</u></b> | <b>\$ <u>18,517,152</u></b> |
| <b><u>Operating Expense</u></b>            |                             |                             |
| Director's Office                          | 54,101                      | 68,722                      |
| Capital Related Expenses                   | 1,376,088                   | 1,342,568                   |
| Utility General Expense                    | 1,141,343                   | 918,097                     |
| Engineering                                | 376,512                     | 450,509                     |
| Utility Operations                         | 1,876,190                   | 2,282,799                   |
| Wastewater Treatment                       | 8,743,111                   | 8,725,682                   |
| Inflow and Infiltration                    | 1,496,974                   | 1,847,356                   |
| Customer Service                           | <u>446,479</u>              | <u>356,982</u>              |
| <b>Total Operating Expense</b>             | <b><u>(15,510,798)</u></b>  | <b><u>(15,992,715)</u></b>  |
| <b>Operating Income</b>                    | <b><u>1,644,887</u></b>     | <b><u>2,524,437</u></b>     |
| <b><u>Other Revenue</u></b>                |                             |                             |
| Grants Non-Capital                         | 0                           | 0                           |
| Contributed Assets                         | 60,987                      | 436,161                     |
| Gain or Loss on Sale of Fixed Assets       | 0                           | 1,001                       |
| Transfer from Other Funds                  |                             |                             |
| Street Lighting                            | 0                           | 9,430                       |
| Intergovernmental                          | 8,283                       | 8,283                       |
| Interest Income                            | <u>52,391</u>               | <u>17,715</u>               |
| <b>Total Other Revenue</b>                 | <b><u>121,661</u></b>       | <b><u>472,590</u></b>       |
| <b><u>Other Expenses and Transfers</u></b> |                             |                             |
| Transfer to Other Funds                    |                             |                             |
| Investing Activities                       | 30,076                      | 9,387                       |
| Other Transfers                            | 33,215                      | 29,747                      |
| Interest on Long Term Debt                 | <u>605,429</u>              | <u>528,015</u>              |
| <b>Total Other Expenses and Transfers</b>  | <b><u>(668,720)</u></b>     | <b><u>(567,149)</u></b>     |
| <b>Net Income or Loss</b>                  | <b>\$ <u>1,097,828</u></b>  | <b>\$ <u>2,429,878</u></b>  |

**Sewer Utility  
Statement of Net Assets  
For The Year Ending December 31, 2011 and 2012  
(Unaudited)**

|                                   | <b>Assets</b>                      |                                    |
|-----------------------------------|------------------------------------|------------------------------------|
|                                   | <b>2011</b>                        | <b>2012</b>                        |
| <b><u>Current Assets</u></b>      |                                    |                                    |
| Cash                              | \$ 821,775                         | \$ 1,199,316                       |
| Restricted Cash and Equivalents:  |                                    |                                    |
| Construction                      | 8,634                              | 20,680                             |
| Accounts Receivable (Net)         | 1,720,639                          | 1,848,101                          |
| Special Assessments               | 18,375                             | 13,551                             |
| Due from Other Funds              | 6,740                              | 248,685                            |
| Due from Other Governments        | 221                                | 53,707                             |
| Inventory                         | 137,841                            | 69,037                             |
| Prepays                           | <u>225,000</u>                     | <u>38,135</u>                      |
| <b>Total Current Assets</b>       | <b>\$ <u>2,939,225</u></b>         | <b>\$ <u>3,491,212</u></b>         |
| <b><u>Utility Plant</u></b>       |                                    |                                    |
| In Service                        | 60,829,379                         | 61,192,491                         |
| Construction                      | <u>3,152,074</u>                   | <u>3,909,305</u>                   |
| <br>                              |                                    |                                    |
| Less Accumulated Depreciation     | <u>(12,695,872)</u>                | <u>(13,953,601)</u>                |
| <b>Total Utility Plant Assets</b> | <b><u>51,285,581</u></b>           | <b><u>51,148,195</u></b>           |
| <b><u>Other Assets</u></b>        |                                    |                                    |
| Special Assessments Receivable    | 110,699                            | 128,273                            |
| Issuance Costs                    | <u>207,351</u>                     | <u>212,430</u>                     |
| <b>Total Other Assets</b>         | <b><u>318,050</u></b>              | <b><u>340,703</u></b>              |
| <b>Total Assets</b>               | <b>\$ <u><u>54,542,856</u></u></b> | <b>\$ <u><u>54,980,110</u></u></b> |

**Sewer Utility  
Statement of Net Assets  
For The Year Ending December 31, 2011 and 2012  
(Unaudited)**

|  | <b>Liabilities &amp; Net Assets</b> |                      |
|--|-------------------------------------|----------------------|
|  | <b>2011</b>                         | <b>2012</b>          |
| <b><u>Current Liabilities</u></b>                              |                                     |                      |
| Accounts Payable   | \$ 120,257                          | \$ 122,644           |
| Contracts Payable  | 175,931                             | 129,758              |
| Notes Payable  | 238,458                             | 273,113              |
| Leases Payable   | 162,773                             | 169,000              |
| Due to Other Funds   | 369,865                             | 77,518               |
| Due to Other Governments                                       | 713,708                             | 715,933              |
| Interest Payable   | 250,825                             | 217,102              |
| Accrued Salaries Payable                                       | 95,566                              | 107,249              |
| Vacations Payable  | 164,895                             | 167,431              |
| Deferred Revenue   | 52,395                              | 70,751               |
| Bonds Payable  | 1,306,141                           | 1,378,944            |
| <b>Total Current Liabilities (Payable from Current Assets)</b> | <b>\$ 3,650,814</b>                 | <b>\$ 3,429,443</b>  |
| <b><u>Long Term Liabilities</u></b>                            |                                     |                      |
| Notes Payable  | 2,177,222                           | 1,904,109            |
| Vacations Payable  | 10,892                              | 11,450               |
| Leases Payable   | 2,385,244                           | 2,216,245            |
| Bonds Payable  | 12,039,374                          | 10,740,429           |
| Less Unamortized Bond Discount or Premium                      | (48,827)                            | (79,581)             |
| <b>Total Long Term Liabilities</b>                             | <b>16,563,905</b>                   | <b>14,792,652</b>    |
| <b>Total Liabilities</b>                                       | <b>20,214,719</b>                   | <b>18,222,095</b>    |
| <b><u>Net Assets</u></b>                                       |                                     |                      |
| Invested in Capital Assets, Net of Related Debt                | 33,232,547                          | 34,758,366           |
| Legal Restricted Assets  | 8,633                               | 20,680               |
| Unrestricted   | 1,086,957                           | 1,978,969            |
| <b>Total Net Assets</b>  | <b>34,328,137</b>                   | <b>36,758,015</b>    |
| <b>Total Liabilities and Net Assets</b>                        | <b>\$ 54,542,856</b>                | <b>\$ 54,980,110</b> |

**City of Duluth**  
**Sewer Utility Bonds, Notes and Capital Leases Payable**  
**December 31, 2012**

|   | Issued       | Issue Date | Final Maturity | Principal            | Issued              | Draw Down   | Retired             | Principal            |
|---|--------------|------------|----------------|----------------------|---------------------|-------------|---------------------|----------------------|
|   |              |            |                | Outstanding          |                     |             |                     | Outstanding          |
|   |              |            |                | 12/31/2011           |                     |             |                     | 12/31/2012           |
| <b>Sewer Utility Bonds</b>                                  |              |            |                |                      |                     |             |                     |                      |
| Revenue and General Obligation                              | 4,045,000    | 12/1/2004  | 2/1/2020       | 520,000              | 0                   | 0           | 255,000             | 265,000              |
| Revenue and General Obligation                              | 1,011,831    | 12/19/2005 | 2/1/2021       | 742,681              | 0                   | 0           | 613,143             | 129,538              |
| Revenue and General Obligation                              | 2,503,169    | 12/19/2005 | 2/1/2021       | 1,837,319            | 0                   | 0           | 1,516,857           | 320,462              |
| Revenue and General Obligation                              | 765,450      | 12/19/2006 | 2/1/2022       | 603,450              | 0                   | 0           | 44,550              | 558,900              |
| Revenue and General Obligation                              | 179,550      | 12/19/2006 | 2/1/2022       | 141,550              | 0                   | 0           | 10,450              | 131,100              |
| Revenue and General Obligation                              | 2,120,000    | 12/13/2007 | 2/1/2023       | 1,795,000            | 0                   | 0           | 120,000             | 1,675,000            |
| Revenue and General Obligation Refunding                    | 1,325,000    | 12/13/2007 | 2/1/2016       | 825,000              | 0                   | 0           | 185,000             | 640,000              |
| Revenue and General Obligation                              | 1,244,000    | 2/19/2009  | 2/1/2024       | 1,111,330            | 0                   | 0           | 72,366              | 1,038,964            |
| Revenue and General Obligation Refunding                    | 713,186      | 12/17/2009 | 2/1/2017       | 619,186              | 0                   | 0           | 99,043              | 520,143              |
| Revenue and General Obligation                              | 905,000      | 12/17/2009 | 2/1/2025       | 860,000              | 0                   | 0           | 50,000              | 810,000              |
| Revenue and General Obligation Refunding                    | 2,025,000    | 11/23/2010 | 2/1/2018       | 2,025,000            | 0                   | 0           | 259,733             | 1,765,267            |
| Revenue and General Obligation Refunding                    | 2,265,000    | 11/29/2011 | 2/1/2020       | 2,265,000            | 0                   | 0           | 0                   | 2,265,000            |
| Revenue and General Obligation Refunding                    | 2,000,000    | 11/27/2012 | 2/1/2021       | 0                    | 2,000,000           | 0           | 0                   | 2,000,000            |
| <b>Bond Total</b>   |              |            |                | <b>\$ 13,345,516</b> | <b>\$ 2,000,000</b> | <b>\$ 0</b> | <b>\$ 3,226,142</b> | <b>\$ 12,119,374</b> |
| <b>Notes</b>  |              |            |                |                      |                     |             |                     |                      |
| Public Facilities Authority                                 | \$ 100,000   | 8/25/2003  | 8/20/2018      | \$ 52,680            | \$ 0                | \$ 0        | \$ 6,907            | \$ 45,773            |
| Public Facilities Authority                                 | 1,179,115    | 10/17/2003 | 8/20/2018      | 626,000              | 0                   | 0           | 86,000              | 540,000              |
| Public Facilities Authority (Note 1)                        | 2,042,350    | 7/12/2007  | 8/20/2022      | 1,629,000            | 0                   | 0           | 140,000             | 1,489,000            |
| Public Facilities Authority (Note 3)                        | 354,551      | 11/18/2011 | 8/20/2021      | 108,000              | 0                   | 0           | 5,551               | 102,449              |
| <b>Note Total</b>   |              |            |                | <b>\$ 2,415,680</b>  | <b>\$ 0</b>         | <b>\$ 0</b> | <b>\$ 238,458</b>   | <b>\$ 2,177,222</b>  |
| <b>Capital Leases</b>                                       |              |            |                |                      |                     |             |                     |                      |
| AMR System  | \$ 2,965,228 | 7/12/2007  | 2/1/2024       | \$ 2,548,017         | \$ 0                | \$ 0        | \$ 162,772          | \$ 2,385,245         |
| <b>Capital Lease Total</b>                                  |              |            |                | <b>\$ 2,548,017</b>  | <b>\$ 0</b>         | <b>\$ 0</b> | <b>\$ 162,772</b>   | <b>\$ 2,385,245</b>  |
| <b>Total Sewer Utility Bonds, Notes, and Capital Leases</b> |              |            |                | <b>\$ 18,309,213</b> | <b>\$ 2,000,000</b> | <b>\$ 0</b> | <b>\$ 3,627,372</b> | <b>\$ 16,681,841</b> |

| <b>Future Payments:</b> |                      |                     |                      |
|-------------------------|----------------------|---------------------|----------------------|
| <u>Year</u>             | <u>Principal</u>     | <u>Interest</u>     | <u>Total</u>         |
| 2013                    | \$ 1,821,058         | \$ 480,494          | \$ 2,301,552         |
| 2014                    | 1,894,296            | 399,187             | 2,293,483            |
| 2015                    | 1,956,458            | 350,251             | 2,306,709            |
| 2016                    | 1,841,256            | 303,215             | 2,144,471            |
| 2017                    | 1,842,363            | 257,079             | 2,099,442            |
| 2018                    | 1,785,208            | 210,098             | 1,995,306            |
| 2019                    | 1,404,712            | 165,770             | 1,570,482            |
| 2020                    | 1,454,118            | 124,292             | 1,578,410            |
| 2021                    | 1,136,974            | 86,535              | 1,223,509            |
| 2022                    | 813,705              | 55,903              | 869,608              |
| 2023                    | 599,216              | 29,206              | 628,422              |
| 2024                    | 304,028              | 8,948               | 312,976              |
| 2025                    | 75,000               | 1,500               | 76,500               |
|                         | <b>\$ 16,928,392</b> | <b>\$ 2,472,478</b> | <b>\$ 19,400,870</b> |

**Sewer Fund  
Schedule of Fixed Assets  
Year Ending December 31, 2012**

|                          | <u>Balance Jan.<br/>1, 2012</u> | <u>Additions</u>    | <u>Deductions</u> | <u>Balance Dec.<br/>31, 2012</u> | <u>Accumulated<br/>Depreciation</u> | <u>Book Value</u>    |
|--------------------------|---------------------------------|---------------------|-------------------|----------------------------------|-------------------------------------|----------------------|
| Lands and Grounds        | \$ 156,349                      | \$ 0                | \$ 0              | \$ 156,349                       | \$ 0                                | \$ 156,349           |
| Infrastructure           | 47,606,379                      | 291,229             | 0                 | 47,897,608                       | 8,095,796                           | 39,801,812           |
| Buildings and Structures | 7,086,945                       | 14,205              | 0                 | 7,101,150                        | 2,594,404                           | 4,506,746            |
| Equipment and Tools      | 5,979,706                       | 78,618              | 20,940            | 6,037,384                        | 3,263,401                           | 2,773,983            |
| Work in Progress         | <u>3,152,074</u>                | <u>1,071,124</u>    | <u>313,893</u>    | <u>3,909,305</u>                 | <u>0</u>                            | <u>3,909,305</u>     |
| Total                    | <u>\$ 63,981,453</u>            | <u>\$ 1,455,176</u> | <u>\$ 334,833</u> | <u>\$ 65,101,796</u>             | <u>\$ 13,953,601</u>                | <u>\$ 51,148,195</u> |



## PUMPING STATIONS - SEWAGE PUMPING EQUIPMENT 2012

|     | Station Location       | Station Type - Year Updated                              | Daily Flow Basin No. | Wet Well Capacity | Pump Cap. GPM each unit          | Pump Mfg.        | Motor HP                            | Motor Voltage - Phase | Motor F.L.A.                     | Force Main Size | Force Main Discharge Location                               | Aux. Power Gen. Set No.               |
|-----|------------------------|--|----------------------|-------------------|----------------------------------|------------------|-------------------------------------|-----------------------|----------------------------------|-----------------|---|---------------------------------------|
| 1   | 215 S.<br>60th Ave. E. | Triplex Submersible<br>2006                              | 305,280 gal.<br>1    | 301,397 gal.      | 1 - 1700<br>2 - 1700<br>3 - 1700 | KSB              | 1 - 83 hp<br>2 - 83 hp<br>3 - 83 hp | 480<br>3              | 105                              | 10"             | 5005 London Rd.<br>SA0880119                                | Permanent Onsite                      |
| 2   | 20<br>Lakeside Ct.     | Simplex Wet well, dry well<br>1932                       | 2,160 gal.<br>1      | 927.6 gal.        | 81                               | Worthington      | 3 hp                                | 240<br>3              | 8.75                             | 3"              | 55th Ave. E.<br>Lakeside Ct &<br>London Rd.<br>SA0880117    | 2766<br>2770                          |
| 3   | 35 S.<br>45th Ave. E.  | Triplex Submersible<br>1999                              | 397,872 gal.<br>4    | N/A               | 1 - 1200<br>2 - 1200<br>3 - 265  | KSB              | 1 - 34 hp<br>2 - 34 hp<br>3 - 10 hp | 480<br>3              | 1 - 47.5<br>2 - 47.5<br>3 - 15.1 | 16"             | Lower side of<br>London Rd. on<br>42nd Ave. E.<br>SD1210001 | 2765<br>2767                          |
| 4   | 720 S.<br>23rd Ave. E. | Duplex Submersible                                       | 3,024 gal.<br>6      | 927.52 gal.       | 1 - 100<br>2 - 100               | KSB              | 1 - 5 hp<br>2 - 5 hp                | 208<br>3              | 1 - 15.4<br>2 - 15.4             | 4"              | 23rd Ave. E. &<br>Water St.<br>SW0430011                    | 2766<br>2770                          |
| 5   | 715 S.<br>22nd Ave. E. | Simplex Submersible<br>1970                              | 720 gal.<br>6        | 97.3 gal.         | 1 - 67.42                        | Flygt            | 1.9 hp                              | 240<br>1              | 9                                | 3"              | 22nd Ave. E. &<br>Water St.<br>SW0430012                    | 2770 (1)<br>2766 (2)                  |
| 6   | 200<br>Lake Place Dr.  | Wet well Dry well<br>Pump 1 - 1970s<br>Pumps 2&3 - 1980s | 1,106,064 gal.<br>16 | 9,313.8 gal.      | 1 - 2400<br>2 - 1800<br>3 - 1800 | Chicago          | 40 hp                               | 240<br>3              | 1 - 98<br>2 - 98<br>3 - 98       | 24"             | 1st Ave. E. &<br>1st St.<br>CH0460269                       | 2765 (1)<br>1                         |
| 6SF | 200<br>Lake Place Dr.  | Duplex Submersible                                       |                      | 8 mg              |                                  | KSB              |                                     |                       |                                  |                 |   |                                       |
| 7   | 528<br>Lake Ave. S.    | Duplex Submersible<br>2006                               | 78,048 gal.<br>16    | N/A               | 1 - 400<br>2 - 400               | KSB<br>(+ mixer) | 6.5 hp<br>6.5 hp<br>5.4 hp          | 208<br>3              | 23<br>23<br>18.2                 | 6"              | Northeast side of<br>station<br>SA1090003                   | 2765<br>2767                          |
| 8   | 729<br>Lake Ave. S.    | Wet well Dry well<br>1983 & 1987<br>new pumps & motors   | 228,960 gal.<br>15   | 8,863.8 gal.      | 1 - 808<br>2 - 808               | Fairbank Morse   | 30 hp                               | 480<br>3              | 37.7                             | 8"              | Northeast side of<br>station #7<br>SA1090003                | 2765<br>2767                          |
| 9   | 1202<br>Minnesota Ave. | Wet well Dry well<br>New motors<br>1985                  | 165,888 gal.<br>15   | 3,941 gal.        | 1 - 702<br>2 - 702               | Fairbank Morse   | 1- 10 hp                            | 240<br>3              | 27.2                             | 10"             | 11th St. &<br>Lake Ave.<br>SA1090015                        | 2766 (1)<br>2770 (2)<br>one pump only |
| 10  | 1939<br>Minnesota Ave. | Duplex Submersible<br>1996                               | N/A<br>15            | N/A               | 1 - 207.7<br>2 - 247.1           | KSB              | 1 - 2.4 hp<br>2 - 2.4 hp            | 208<br>3              | 8.7                              | 4'              | 20th St. &<br>Minnesota Ave.<br>SA0009                      | 2770 (1)<br>2766 (2)                  |

## PUMPING STATIONS - SEWAGE PUMPING EQUIPMENT 2012

|    | Station Location     | Station Type - Year Updated              | Daily Flow Basin No. | Wet Well Capacity | Pump Cap. GPM each unit          | Pump Mfg.   | Motor HP                            | Motor Voltage - Phase | Motor F.L.A.         | Force Main Size | Force Main Discharge Location                   | Aux. Power Gen. Set No. |
|----|----------------------|--|----------------------|-------------------|----------------------------------|-------------|-------------------------------------|-----------------------|----------------------|-----------------|---|-------------------------|
| 11 | 2845 Minnesota Ave.  | Duplex Submersible<br>1996               | N/A<br>15            | N/A               | 1 - 164.4<br>2 - 161.4           | KSB         | 1 - 2.4 hp<br>2 - 2.4 hp            | 208<br>3              | 39301                | 4"              | 29th St. & Minnesota Ave.<br>SA1110002          | 2770 (1)<br>2766 (2)    |
| 12 | 3539 Minnesota Ave.  | Duplex Submersible<br>1996               | 80,640 gal.<br>15    |                   | 1 - 170<br>2 - 170 (approx.)     | KSB         | 1 - 1.75 hp<br>2 - 1.75 hp          | 208<br>3              | 1 - 6.9<br>2 - 6.9   | 4"              | 36th St. & Minnesota Ave.<br>SA1110013          | 2770 (1)<br>2766 (2)    |
| 13 | 432 Railroad St.     | Duplex Submersible<br>1995               | N/A<br>16            | N/A               | 1 - 650<br>2 - 650<br>1&2 - 710  | KSB         | 1 - 12.8 hp<br>2 - 12.8 hp          | 480<br>3              | 1 - 19<br>2 - 19     | 12"             | 11th Ave. W. & Railroad St.<br>SW0400031        | 2765<br>2767            |
| 14 | 735 Garfield Ave.    | Wet well<br>Dry well<br>~1940            | 50,976 gal.<br>18    | 2,476 gal.        | 1 - 163<br>2 - 276               | Worthington | 1 - 3 hp<br>2 - 7.5 hp              | 240<br>3              | 1 - 9.5<br>2 - 18.5  | 8"              | Michigan St.<br>SA0310022                       | 2766<br>2770            |
| 15 | 2132 Michigan St.    | Triplex<br>Wet well<br>Dry well<br>~1975 | 248,688 gal.<br>18   | N/A               | 1 - 2400<br>2 - 2400<br>3 - 2400 | Chicago     | 1 - 40 hp<br>2 - 40 hp<br>3 - 40 hp | 480<br>3              | 54                   | 10"             | 23rd Ave. W.<br>below Michigan St.<br>SW0310030 | 2765                    |
| 16 | 210 S. 37th Ave. W.  | Duplex Submersible                       | 23                   |                   |                                  | KSB         |                                     | 3                     |                      |                 |   |                         |
| 17 | 4100 Oneota St.      | Duplex Submersible<br>~1975<br>2001      | 243,072 gal.<br>23   | N/A               | 1 - 1000<br>2 - 1000             | KSB         | 1 - 10 hp<br>2 - 10 hp              | 240<br>3              | 1 - 32.5<br>2 - 32.5 | 8"              | Oneota<br>SW0290038                             | 2767<br>2765            |
| 18 | 700 S. 63rd Ave. W.  | Duplex Submersible<br>1996               | N/A<br>26            | N/A               | 1 - 58.56<br>2 - 54.92           | KSB         | 1 - 1.75 hp<br>2 - 1.75 hp          | 208<br>3              | 1 - 6.9<br>2 - 6.9   | 6"              | 63rd Ave. W.<br>SA0180041                       | 2770                    |
| 19 | 107 Spring St. South | Duplex Submersible<br>1984               | 2,880 gal.<br>28     | 409 gal.          | 1 - 73.7<br>2 - 79.2             | Meyers      | 1 - 2 hp<br>2 - 2 hp                | 240                   | 1 - 3.2<br>2 - 3.2   | 4"              | Below RR tracks<br>SW1230034                    | 2770<br>2766            |
| 20 | 1325 Hilton St. New  | Duplex Submersible<br>2004               |                      |                   | 1 - 169<br>2 - 160               | KSB         | 1 - 5 hp<br>2 - 5 hp                | 208<br>30             | 1 - 17.7             |                 | Hilton<br>SA0090036                             |                         |

## PUMPING STATIONS - SEWAGE PUMPING EQUIPMENT 2012

|    | Station Location     | Station Type - Year Updated                   | Daily Flow Basin No.  | Wet Well Capacity | Pump Cap. GPM each unit                     | Pump Mfg.           | Motor HP                 | Motor Voltage - Phase | Motor F.L.A.          | Force Main Size | Force Main Discharge Location                     | Aux. Power Gen. Set No. |
|----|----------------------|---|-----------------------|-------------------|---|---------------------|--------------------------|-----------------------|-----------------------|-----------------|---|-------------------------|
| 21 | 11 Commonwealth Ave. | Duplex<br>Wet well<br>Dry well<br>2007        | 3,600 gal.<br><br>30  | 480 gal.          | 1 - 125<br>2 - 96.0                         | Chicago             | 2 - 5 hp<br>3 - 5 hp     | 240<br><br>3          | 2 - 13.4<br>3/13/2004 | 4"              | Commonwealth & Prescott St.<br><br>SA0030035      | 2770<br><br>2765        |
| 22 | 629 Walnut St.       | Duplex<br>Submersible<br><br>2002             | 43,344 gal.<br><br>33 |                   | 1 - 180<br>2 - 135.3<br><br>1-2:337.6       | KSB                 | 1 - 5 hp<br>2 - hp       | 240<br><br>3          | 1 - 29.2<br>2 - 10.1  | 4"              | Walnut St. & Eklund Ave.<br><br>SA0730023         | 2770<br><br>2766        |
| 23 | 346 E. Owatonna St.  | Duplex<br>steel shell<br>Submersible<br>~1975 | 3,168 gal.<br><br>11  | 295.5 gal.        | 1 - 120.6<br>2 - 131.3                      | Flygt               | 1 - 3.8 hp<br>2 - 3.8 hp | 240<br><br>1          | 14                    | 4"              | <br><br>SA0960002                                 | 2766<br><br>2770        |
| 24 | Removed              |   |                       |                   |   |                     |                          |                       |                       |                 |   |                         |
| 25 | 4634 Woodland Ave.   | Duplex<br>Submersible<br>2001                 | 8,352 gal.<br><br>11  |                   | 1 -<br>2 -                                  | KSB                 | 1 - 15 hp<br>2 - 15 hp   | 240<br><br>3          | 1 - 52<br>2 - 52      |                 | Woodland Ave.<br>near Vassar St.<br><br>SA1000001 |                         |
| 26 | 1015 Jean Duluth Rd. | Duplex<br>Submersible<br>1999                 | 49,680 gal.<br><br>5  |                   | 1 - 175<br>2 - 175                          | KSB                 | 1 - 16.5<br>2 - 16.5     | 240<br><br>3          | 1 - 52<br>2 - 52      | 4"              | Woodbury Lane<br><br>SA0860115                    | 2767<br><br>2765        |
| 27 | 835 E. Superior St.  | Duplex<br>Submersible<br>1984                 | 4,320 gal.<br><br>13  | 145.9 gal.        | 1 - 46.8<br>2 - 49.4                        | Myers               | 1 - 2 hp<br>2 - 2 hp     | 240<br><br>3          | 1 - 7.5<br>2 - 7.5    | 3"              | Superior St.<br><br>SA0420086                     | 2766<br><br>2770        |
| 28 | 4937 Airport Rd.     | Duplex<br>Submersible<br>1998                 | 17,136 gal.<br><br>22 | N/A               | 1 - 150<br>2 - 150<br>rated from<br>factory | KSB                 | 1 - 3.4 hp<br>2 - 3.4 hp | 240<br><br>3          | 1 - 10.2<br>2 - 10.2  | 4"              | Washington St.<br><br>SA1170006                   | 2770<br><br>2766        |
| 29 | 15 N. 7th Ave. E.    | Duplex<br>Submersible<br>1984                 | 5,184 gal.<br><br>13  | 456.3 gal.        | 1 - 159<br>2 - 159<br>(approx.)             | Flygt               | 1 - 3 hp<br>2 - 3 hp     | 240<br><br>3          | 1 - 9<br>2 - 9        | 4"              | 1st St. Alley<br>east of station<br><br>SA0470148 | 2770                    |
| 30 | 2939 Morris Thomas   | Duplex<br>Submersible<br>1989                 | 14,112 gal.<br><br>20 | 377.8 gal.        | 1 - 120.6<br>2 - 124.6                      | Flygt<br><br>CP3102 | 1 - 5 hp<br>2 - 5 hp     | 240<br><br>3          | 1 - 13<br>2 - 13      | 6"              | Morris Thomas<br>W. of Keel                       | 2766<br><br>2770        |

## PUMPING STATIONS - SEWAGE PUMPING EQUIPMENT 2012

|    | Station Location                 | Station Type - Year Updated                    | Daily Flow Basin No.              | Wet Well Capacity | Pump Cap. GPM each unit           | Pump Mfg.        | Motor HP                 | Motor Voltage - Phase | Motor F.L.A.         | Force Main Size | Force Main Discharge Location                     | Aux. Power Gen. Set No. |  |
|----|----------------------------------|--|-----------------------------------|-------------------|-----------------------------------|------------------|--------------------------|-----------------------|----------------------|-----------------|---|-------------------------|--|
| 31 | 3822 Haines Rd.                  | Duplex Submersible 1989                        | 13,104 gal.<br>21                 | 658.3 gal.        | 1 - 200.5<br>2 - 154.3            | Flygt<br>CP3102  | 1 - 5 hp<br>2 - 5 hp     | 240<br>3              | 1 - 13<br>2 - 13     | 6"              | Hutchinson Rd.<br>near Piedmont                   | 2766<br>2770            |  |
| 32 | 3862 Haines Rd.                  | Duplex Submersible 1989                        | 5,472 gal.<br>21                  | 613.4 gal.        | 1 - 138.9<br>2 - 155.3            | Flygt<br>CP3102  | 1 - 5 hp<br>2 - 5 hp     | 240<br>3              | 1 - 13<br>2 - 13     | 4"              | Haines Rd.<br>south of Piedmont<br>SA0600093      | 2766<br>2770            |  |
| 33 | 11503 Hwy #23                    | Duplex Submersible 1995                        | NA                                | 420 gal.          | 1 - 140<br>2 - 140<br>(estimated) | KSB              | 1 - 3 hp<br>2 - 3 hp     | 208                   | 1 - 9.8<br>2 - 9.8   | 4"              | Peary St. in woods before access rd.<br>SA0030061 | 2766<br>2770            |  |
| 34 | 2706 Parkwood Lane               | Duplex Submersible 1993                        | NA<br>20                          | 433.9 gal.        | 1 - 166<br>2 - 166                | Flygt<br>CP3127  | 1 - 10 hp<br>2 - 10 hp   | 480<br>3              | 1 - 13<br>1 - 13     | 4"              | Hanford Ave.<br>N. of Station<br>SA0560093        | 2767<br>2765            |  |
| 35 | 405 Coffee Creek Blvd            |  |                                   |                   |                                   | KSB              |                          |                       |                      |                 |   |                         |  |
| 36 | 412 Hastings Dr.                 | Duplex Submersible 1992                        | 1,152 gal.<br>11                  | 980 gal.          | 1 - 195.4<br>2 - 196.7            | Flygt<br>CP3127X | 1 - 10 hp<br>2 - 10 hp   | 240<br>3              | 1 - 26<br>2 - 26     | Twin 4"         | Ewing & Marshall St.<br>SA0900005                 | 2767<br>2765            |  |
| 37 | 1031 London Rd.                  | Duplex Submersible 1984                        | 3,888 gal.<br>13                  | 441.4 gal.        | 1 - 186.5<br>2 - 191.9            | Flygt<br>CP3085  | 1 - 3 hp<br>2 - 3 hp     | 208<br>3              | 1 - 10<br>2 - 10     | 4"              | E. Superior St.<br>SA0420080                      | 2766<br>2770            |  |
| 38 | 4600 Minnesota Ave<br>Park Point | Duplex Submersible                             | Operated by Facilities Management |                   |                                   |                  |                          |                       |                      |                 |   |                         |  |
| 39 | 7301 Grand Ave.                  | Duplex Submersible 1988                        | 20,880 gal.<br>23                 | 643.2 gal.        | 1 - 306.3<br>2 - 313.8            | Flygt            | 1 - 5 hp<br>2 - 5 hp     | 240<br>3              | 1 - 13<br>2 - 13     | 6"              | Grand Ave.  | 2766<br>2770            |  |
| 40 | 1200 Port Terminal Dr.           | Steel shell dry well with 6' concrete wet well | 36, 864 gal.<br>18                | 534.9 gal.        | 1 - 286.6<br>2 - 281.5            | Fairbanks Morse  | 1 - 7.5 hp<br>2 - 7.5 hp | 240<br>3              | 1 - 22.6<br>2 - 22.6 | 8"              | Near Sta #14<br>SA0320008                         | None                    |  |

## PUMPING STATIONS - SEWAGE PUMPING EQUIPMENT 2012

|    | Station Location                            | Station Type - Year Updated       | Daily Flow Basin No. | Wet Well Capacity | Pump Cap. GPM each unit          | Pump Mfg.                 | Motor HP                            | Motor Voltage - Phase | Motor F.L.A.         | Force Main Size | Force Main Discharge Location               | Aux. Power Gen. Set No. |
|----|---|-----------------------------------|----------------------|-------------------|----------------------------------|---------------------------|-------------------------------------|-----------------------|----------------------|-----------------|---|-------------------------|
| 41 | 1037 Joshua Ave.                            | Duplex Submersible                | 8,928 gal.<br>22     |                   | 1 - 400<br>2 - 400               | KSB                       | 1 - 15 hp<br>2 - 15 hp              | 240<br>3              | 1 - 43.5<br>2 - 43.5 | 6"              | Joshua Ave. & Maple Grove<br>SA0680029      | 2767<br>2765            |
| 42 | 4551 Stebner Rd.                            | Duplex Submersible 1996           | NA<br>22             | NA                | NA                               | KSB                       | 1 - 5 hp<br>2 - 5 hp                | 480<br>3              | 1 - 7.8<br>2 - 7.8   | 4"<br>6"        | Airport Approach & Airport Rd.<br>SD1180032 | 2767<br>2765            |
| 43 | 11600 Perch Lake Dr.                        | Duplex Submersible 2000           |                      |                   | 1 - 100<br>2 - 100<br>3 - 150    | KSB                       | 1 - 15 hp<br>2 - 15 hp              | 240<br>3              | 1 - 43.5<br>2 - 43.5 |                 | SA1280001                                   | 2767<br>2765            |
| 44 | 12800 W. 5th St.                            | Duplex Submersible 2000           |                      |                   | 1 - 180<br>2 - 180<br>3 - 200    | KSB                       | 1 - 10 hp<br>2 - 10 hp              | 208<br>3              | 29<br>29             | 6"              | Lift Station #43                            | 2767<br>2765            |
| 45 | 52nd Ave. E. & Dodge St.                    | Triplex Submersible 2005          |                      | 2 MG              | 1 - 1100<br>2 - 1100<br>3 - 1100 | KSB                       | 1 - 32 hp<br>2 - 32 hp<br>3 - 32 hp | 480<br>3              | 39                   | 12"             | 47th Ave. E. & Superior St.<br>SW0830136    | Permanent on site       |
| 46 | Grinder Pump #1 (behind) 1467 88th Ave. W.  | Duplex Submersible Grinder ~2005  |                      |                   |                                  | Barnes                    | 1 - 2 hp<br>2 - 2 hp                | 208<br>3              | 9.2<br>9.2           | 1.25"           |   |                         |
| 47 | Grinder Pump #2 9239 Idaho St.              | (in Bethany Crisis Shelter) ~2005 |                      |                   |                                  | Barnes                    |                                     |                       |                      |                 |   |                         |
| 48 | Grinder Pump #3 2501 Commonwealth Ave.      | (9) 723-3870 ~2005                |                      |                   |                                  | Barnes                    |                                     |                       |                      |                 |   |                         |
| 49 | Beacon PT 21st Ave. E. & Water St.          | Private 724-4053                  |                      |                   |                                  |                           |                                     |                       |                      |                 |   |                         |
| 50 | 505 S. 18th Ave. E. & Lakewalk (Endion St.) | Storage Basin 2007                |                      | 1 MG              | No Pumps                         | Gravity In<br>Gravity Out |                                     |                       |                      |                 |   |                         |
| 51 | 2027 Water St                               | Storage Basin Oct. 2010           |                      | 3 MG              |                                  |                           |                                     |                       |                      |                 |   |                         |

## LENGTH OF SANITARY SEWER PIPE IN FEET 2012

### PIPE MATERIAL

| Dia. Inches    | Force Main     | ABS          | ACP           | BRA           | CBR          | CI/DI         | CIPP          | CMP          | HDPE         | PVC            | RCP            | STL        | VCP              | Totals           |
|----------------|----------------|--------------|---------------|---------------|--------------|---------------|---------------|--------------|--------------|----------------|----------------|------------|------------------|------------------|
| 2              | 34,674         |              |               |               |              |               |               |              | 1,615        | 644            |                |            |                  | 36,933           |
| 3              | 13,031         |              |               |               |              |               |               |              |              |                |                |            |                  | 13,031           |
| 4              | 23,904         |              |               |               |              |               |               |              |              |                |                |            |                  | 23,904           |
| 6              | 12,860         | 48           |               |               |              |               | 55            |              |              | 1,446          |                |            | 9,330            | 23,739           |
| 8              | 6,314          | 7,045        | 7,026         |               |              | 12,712        | 42,145        |              | 1,003        | 445,328        | 305            | 459        | 1,029,354        | 1,551,691        |
| 9              |                |              |               |               |              |               | 3,913         |              |              |                |                |            | 27,143           | 31,056           |
| 10             | 5,374          |              | 14,969        |               |              | 3,901         | 3,986         |              | 153          | 30,160         | 3,335          |            | 77,689           | 139,567          |
| 12             | 3,490          |              | 2,143         |               |              | 1,264         | 3,953         |              | 656          | 19,020         | 47,743         |            | 54,933           | 133,202          |
| 14             |                |              |               |               |              | 165           |               |              |              |                |                |            |                  | 165              |
| 15             |                |              |               |               |              |               | 2,334         |              |              | 11,125         | 36,031         |            | 31,757           | 81,247           |
| 16             | 2,092          |              |               |               |              | 507           |               |              | 998          |                |                |            |                  | 3,597            |
| 18             |                |              |               | 1,286         |              | 79            | 4,084         | 1,057        |              | 735            | 19,145         |            | 19,181           | 45,567           |
| 20             |                |              |               | 115           |              | 12            | 514           |              |              |                | 466            |            | 3,232            | 4,339            |
| 21             |                |              |               | 453           |              | 91            |               |              |              | 1,093          | 6,176          |            | 8,457            | 16,270           |
| 22             |                |              |               | 2,570         |              |               |               |              |              |                |                |            | 1,221            | 3,791            |
| 24             |                |              |               | 1,007         |              | 795           |               |              |              | 694            | 12,585         |            | 4,084            | 19,165           |
| 26             |                |              |               | 596           |              |               |               |              |              |                | 417            |            |                  | 1,013            |
| 27             |                |              |               | 454           |              |               |               |              |              |                | 737            |            | 530              | 1,721            |
| 28             |                |              |               | 1,385         |              |               |               |              |              |                |                |            |                  | 1,385            |
| 30             |                |              |               | 499           |              | 218           |               |              |              |                | 3,440          |            |                  | 4,157            |
| 32             |                |              |               | 1,403         |              |               |               |              |              |                | 883            |            |                  | 2,286            |
| 34             |                |              |               | 481           |              |               |               |              |              |                | 65             |            |                  | 546              |
| 36             |                |              |               | 1,427         |              | 878           |               |              |              |                | 1,776          |            |                  | 4,081            |
| 42             |                |              |               |               | 467          |               |               |              |              |                |                |            |                  | 467              |
| 45             |                |              |               | 7             | 460          |               |               |              |              |                |                |            |                  | 467              |
| 48             |                |              |               | 191           | 157          | 35            |               |              |              |                | 802            |            |                  | 1,185            |
| 54             |                |              |               |               |              |               |               |              |              |                |                |            |                  | 0                |
| 55             |                |              |               |               | 49           |               |               |              |              |                |                |            |                  | 49               |
| <b>Total -</b> | <b>101,739</b> | <b>7,093</b> | <b>24,138</b> | <b>11,874</b> | <b>1,133</b> | <b>20,657</b> | <b>60,984</b> | <b>1,057</b> | <b>4,425</b> | <b>510,245</b> | <b>133,906</b> | <b>459</b> | <b>1,266,911</b> | <b>2,144,621</b> |

Notes: The City of Duluth Sanitary Sewer system includes 8,495 manholes.

ABS - Acrylonitrile Butadiene Styrene  
 ACP - Asbestos Cement Pipe  
 BRA - Brick Arch  
 CBR - Circular Brick Pipe

CI/DI - Cast or Ductile Iron  
 CIPP - Cured in Place Pipe  
 CMP - Corrugated Metal Pipe  
 HDPE - High Density Polyethylene

PVC - Polyvinyl Chloride  
 RCA - Reinforced Concrete Arch  
 RCP - Reinforced Concrete Pipe  
 VCP - Vitrified Clay Pipe

**Miles - 406.2**

Note: Pipe quantities are derived from Geographic Information System.

## SANITARY SEWER ACTIVITIES 2012

| ACTIVITY  | WORK COMPLETED                                      |
|---|---|
| Cleaning sanitary sewer pipe                              | 619,091 ft  |
| Televising sanitary sewer pipe                            | 96,499 ft   |
| I & I inspections (Inflow and Infiltration Grant Program) |   |
| Homes inspected   | 1,666   |
| Sump pumps installed                                      | 711   |
| Public informational meetings                             | 5   |
| Contractor meetings                                       | 1   |
| Laterals rehabilitated                                    | 337   |
| Inspections for connections and disconnections            | 78  |
| Dye testing   | As needed   |
| Field sampling  | As needed   |
| Flow monitoring   | Ongoing with approximately 25 flow monitoring units |

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**Clean Water Utility  
Statement of Net Income  
For The Year Ended December 31, 2011 and 2012  
(Unaudited)**

|  | <b>2011</b>                | <b>2012</b>                |
|--|----------------------------|----------------------------|
| <b><u>Operating Revenue</u></b>            |                            |                            |
| Charges for Services                       | \$ <u>2,885,307</u>        | \$ <u>1,833,354</u>        |
| <b>Total Operating Revenue</b>             | \$ <u>2,885,307</u>        | \$ <u>1,833,354</u>        |
| <b><u>Operating Expense</u></b>            |                            |                            |
| Clean Water Expense                        | <u>1,040,500</u>           | <u>1,389,433</u>           |
| <b>Total Operating Expense</b>             | <u>(1,040,500)</u>         | <u>(1,389,433)</u>         |
| <b>Operating Income</b>                    | <u>1,844,807</u>           | <u>443,921</u>             |
| <b><u>Other Revenue</u></b>                |                            |                            |
| Contributed Assets                         | 4,457,016                  | 2,388,631                  |
| Interest Income                            | <u>37,204</u>              | <u>18,820</u>              |
| <b>Total Other Revenue</b>                 | <u>4,494,220</u>           | <u>2,407,451</u>           |
| <b><u>Other Expenses and Transfers</u></b> |                            |                            |
| Transfers to Other Funds                   |                            |                            |
| Investing Activities                       | 36,277                     | 17,880                     |
| Interest on Long Term Debt                 | <u>114,213</u>             | <u>171,809</u>             |
| <b>Total Other Expenses and Transfers</b>  | <u>(150,490)</u>           | <u>(189,689)</u>           |
| <b>Net Income or Loss</b>                  | <u>\$ <u>6,188,537</u></u> | <u>\$ <u>2,661,683</u></u> |

**Clean Water Utility  
Statement of Net Assets  
For The Year Ending December 31, 2011 and 2012  
(Unaudited)**

**Assets**

|                                   | 2011                 | 2012                 |
|-----------------------------------|----------------------|----------------------|
| <b><u>Current Assets</u></b>      |                      |                      |
| Cash                              | \$ 2,295,747         | \$ 1,338,833         |
| Accounts Receivable (Net)         | 310,910              | 214,647              |
| Due from Other Governments        | 1,058,762            | 711,588              |
| <b>Total Current Assets</b>       | <b>\$ 3,665,419</b>  | <b>\$ 2,265,068</b>  |
| <b><u>Utility Plant</u></b>       |                      |                      |
| In Service                        | 5,697,496            | 12,836,273           |
| Construction                      | 26,870,964           | 24,969,782           |
| Less Accumulated Depreciation     | (87,352)             | (244,201)            |
| <b>Total Utility Plant Assets</b> | <b>32,481,108</b>    | <b>37,561,854</b>    |
| <b><u>Other Assets</u></b>        |                      |                      |
| Issuance Costs                    | 22,326               | 24,510               |
| <b>Total Other Assets</b>         | <b>22,326</b>        | <b>24,510</b>        |
| <b>Total Assets</b>               | <b>\$ 36,168,853</b> | <b>\$ 39,851,432</b> |

**Clean Water Utility  
Statement of Net Assets  
For The Year Ending December 31, 2011 and 2012  
(Unaudited)**

|  | <b>Liabilities &amp; Net Assets</b> |                      |
|--|-------------------------------------|----------------------|
|  | <b>2011</b>                         | <b>2012</b>          |
| <b><u>Current Liabilities</u></b>                              |                                     |                      |
| Accounts Payable   | \$ 60,237                           | \$ 81,067            |
| Contracts Payable  | 2,239,694                           | 1,012,074            |
| Notes Payable  | 1,007,620                           | 1,107,175            |
| Due to Other Governments                                       | 9,706                               | 875                  |
| Interest Payable   | 55,688                              | 68,196               |
| Deferred Revenue   | 12,403                              | 9,778                |
| Bonds Payable  | 11,634                              | 11,496               |
| <b>Total Current Liabilities (Payable from Current Assets)</b> | <b>\$ 3,396,982</b>                 | <b>\$ 2,290,661</b>  |
| <b><u>Long Term Liabilities</u></b>                            |                                     |                      |
| Bonds Payable  | 10,508,976                          | 12,647,689           |
| Notes Payable  | 167,036                             | 155,540              |
| <b>Total Long Term Liabilities</b>                             | <b>10,676,012</b>                   | <b>12,803,229</b>    |
| <b>Total Liabilities</b>                                       | <b>14,072,994</b>                   | <b>15,093,890</b>    |
| <b><u>Net Assets</u></b>                                       |                                     |                      |
| Invested in Capital Assets, Net of Related Debt                | 20,808,168                          | 23,664,464           |
| Unrestricted   | 1,287,691                           | 1,093,078            |
| <b>Total Net Assets</b>  | <b>22,095,859</b>                   | <b>24,757,542</b>    |
| <b>Total Liabilities and Net Assets</b>                        | <b>\$ 36,168,853</b>                | <b>\$ 39,851,432</b> |

**City of Duluth  
Clean Water Utility Bonds and Notes Payable  
December 31, 2012**

|  | <u>Issued</u> | <u>Issue Date</u> | <u>Final Maturity</u> | <u>Principal<br/>Outstanding<br/>12/31/2011</u> | <u>Issued</u> | <u>Draw Down</u> | <u>Retired</u> | <u>Principal<br/>Outstanding<br/>12/31/2012</u> |
|--|---------------|-------------------|-----------------------|---|---------------|------------------|----------------|---|
| <b>Clean Water Utility</b>                       |               |                   |                       |   |               |                  |                |   |
| Bonds  |               |                   |                       |   |               |                  |                |   |
| Revenue and General Obligation                   | \$ 200,000    | 2/19/2009         | 2/1/2024              | \$ 178,670                                      | \$ 0          | \$ 0             | \$ 11,634      | \$ 167,036                                      |
| Bond Total                                       |               |                   |                       | \$ 178,670                                      | \$ 0          | \$ 0             | \$ 11,634      | \$ 167,036                                      |
| Notes  |               |                   |                       |   |               |                  |                |   |
| Public Facilities Authority                      | \$ 796,835    | 6/17/2009         | 8/20/2024             | \$ 574,726                                      | \$ 0          | \$ 143,274       | \$ 49,000      | \$ 669,000                                      |
| Public Facilities Authority                      | 2,414,150     | 12/10/2009        | 8/20/2024             | 2,239,000                                       | 0             | 0                | 152,000        | 2,087,000                                       |
| Public Facilities Authority                      | 9,087,385     | 8/31/2010         | 8/20/2025             | 7,110,447                                       | 0             | 692,650          | 562,000        | 7,241,097                                       |
| Public Facilities Authority                      | 3,753,059     | 8/31/2010         | 8/20/2025             | 1,510,681                                       | 0             | 2,016,319        | 232,000        | 3,295,000                                       |
| Public Facilities Authority                      | 278,149       | 11/18/2011        | 8/20/2021             | 0   | 0             | 69,540           | 11,149         | 58,391  |
| Public Facilities Authority                      | 282,620       | 11/30/2011        | 8/20/2021             | 81,741  | 0             | 18,292           | 12,620         | 87,413  |
| Public Facilities Authority                      | 600,175       | 9/10/2012         | 8/20/2022             | 0   | 0             | 72,331           | 0              | 72,331  |
| Note Total                                       |               |                   |                       | \$ 11,516,595                                   | \$ 0          | \$ 3,012,406     | \$ 1,018,769   | \$ 13,510,232                                   |
| <b>Total Clean Water Utility Bonds and Notes</b> |               |                   |                       | \$ 11,695,265                                   | \$ 0          | \$ 3,012,406     | \$ 1,018,769   | \$ 13,677,268                                   |

| <b>Future Payments:</b> |                  |                 |               |
|-------------------------|------------------|-----------------|---------------|
| <u>Year</u>             | <u>Principal</u> | <u>Interest</u> | <u>Total</u>  |
| 2013                    | \$ 1,118,671     | \$ 200,699      | \$ 1,319,370  |
| 2014                    | 1,154,188        | 198,420         | 1,352,608     |
| 2015                    | 1,168,189        | 182,423         | 1,350,612     |
| 2016                    | 1,184,880        | 166,210         | 1,351,090     |
| 2017                    | 1,202,435        | 149,751         | 1,352,186     |
| 2018                    | 1,217,435        | 133,030         | 1,350,465     |
| 2019                    | 1,234,989        | 116,039         | 1,351,028     |
| 2020                    | 1,252,682        | 98,770          | 1,351,452     |
| 2021                    | 1,269,235        | 81,231          | 1,350,466     |
| 2022                    | 1,225,236        | 63,432          | 1,288,668     |
| 2023                    | 1,176,789        | 45,939          | 1,222,728     |
| 2024                    | 1,194,482        | 28,812          | 1,223,294     |
| 2025                    | 934,000          | 11,750          | 945,750       |
|                         | \$ 15,333,211    | \$ 1,476,506    | \$ 16,809,717 |

**Clean Water Fund  
Schedule of Fixed Assets  
Year Ending December 31, 2012**

|                          | <u>Balance Jan.<br/>1, 2012</u> | <u>Additions</u>            | <u>Deductions</u>          | <u>Balance Dec.<br/>31, 2012</u> | <u>Accumulated<br/>Depreciation</u> | <u>Book Value</u>           |
|--------------------------|---------------------------------|-----------------------------|----------------------------|----------------------------------|-------------------------------------|-----------------------------|
| Lands and Grounds        | \$ 525,000                      | \$ 0                        | \$ 0                       | \$ 525,000                       | \$ 0                                | \$ 525,000                  |
| Infrastructure           | 5,000,378                       | 7,138,777                   | 0                          | 12,139,155                       | 158,142                             | 11,981,013                  |
| Buildings and Structures | 0                               | 0                           | 0                          | 0                                | 0                                   | 0                           |
| Equipment and Tools      | 172,118                         | 0                           | 0                          | 172,118                          | 86,059                              | 86,059                      |
| Work in Progress         | <u>26,870,964</u>               | <u>5,238,487</u>            | <u>7,139,669</u>           | <u>24,969,782</u>                | <u>0</u>                            | <u>24,969,782</u>           |
| <b>Total</b>             | <u><u>\$ 32,568,460</u></u>     | <u><u>\$ 12,377,264</u></u> | <u><u>\$ 7,139,669</u></u> | <u><u>\$ 37,806,055</u></u>      | <u><u>\$ 244,201</u></u>            | <u><u>\$ 37,561,854</u></u> |

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# **STORMWATER**

**Stormwater Utility  
Statement of Net Income  
For The Year Ended December 31, 2011 and 2012  
(Unaudited)**

|  | 2011         | 2012         |
|--|--------------|--------------|
| <b><u>Operating Revenue</u></b>            |              |              |
| Stormwater Charges                         | \$ 4,598,436 | \$ 4,777,794 |
| Other                                      | 34,105       | 20,372       |
| <b>Total Operating Revenue</b>             | \$ 4,632,541 | \$ 4,798,166 |
| <b><u>Operating Expense</u></b>            |              |              |
| Director's Office                          | 53,638       | 69,424       |
| Capital Related Expenses                   | 545,682      | 517,535      |
| Utility General Expense                    | 553,002      | 459,139      |
| Engineering                                | 442,494      | 515,564      |
| Utility Operations                         | 1,530,798    | 1,643,365    |
| Customer Service                           | 194,982      | 170,668      |
| <b>Total Operating Expense</b>             | (3,320,596)  | (3,375,695)  |
| <b>Operating Income</b>                    | 1,311,945    | 1,422,471    |
| <b><u>Other Revenue</u></b>                |              |              |
| Grants Non-Capital                         | 0            | 2,705        |
| Capital Contributions                      | 106,000      | 9,894        |
| Gain or Loss on Sale of Fixed Assets       | (1,621)      | 50,000       |
| Transfer from Other Funds                  |              |              |
| Street Lighting                            | 0            | 4,920        |
| Interest Income                            | 39,944       | 22,463       |
| <b>Total Other Revenue</b>                 | 144,323      | 89,982       |
| <b><u>Other Expenses and Transfers</u></b> |              |              |
| Bond Interest                              | 70,784       | 65,101       |
| Transfers to Other Funds                   |              |              |
| Investing Activities                       | 38,425       | 20,730       |
| Other Transfers                            | 515,710      | 498,792      |
| <b>Total Other Expenses and Transfers</b>  | (624,919)    | (584,623)    |
| <b>Net Income or Loss</b>                  | \$ 831,349   | \$ 927,830   |



**Stormwater Utility  
Statement of Net Assets  
For The Year Ending December 31, 2011 and 2012  
(Unaudited)**

|                                   | <b>Assets</b>                      |                                    |
|-----------------------------------|------------------------------------|------------------------------------|
|                                   | <b>2011</b>                        | <b>2012</b>                        |
| <b><u>Current Assets</u></b>      |                                    |                                    |
| Cash                              | \$ 1,649,337                       | \$ 2,379,526                       |
| Accounts Receivable               | 481,145                            | 464,520                            |
| Special Assessments               | 30,417                             | 22,399                             |
| Due from Other Funds              | 164,224                            | 21,186                             |
| Due from Component Units          | 2,613                              | 0                                  |
| Due from Other Governments        | 26,022                             | 0                                  |
| Inventory                         | 137,841                            | 69,037                             |
| Prepays                           | <u>65,971</u>                      | <u>0</u>                           |
| <b>Total Current Assets</b>       | <b>\$ <u>2,557,570</u></b>         | <b>\$ <u>2,956,668</u></b>         |
| <b><u>Utility Plant</u></b>       |                                    |                                    |
| In Service                        | 13,862,222                         | 15,684,658                         |
| Construction                      | <u>2,313,626</u>                   | <u>1,044,974</u>                   |
| Less Accumulated Depreciation     | <u>(2,792,709)</u>                 | <u>(3,010,244)</u>                 |
| <b>Total Utility Plant Assets</b> | <b><u>13,383,139</u></b>           | <b><u>13,719,388</u></b>           |
| <b><u>Other Assets</u></b>        |                                    |                                    |
| Bond Issuance Charges             | <u>27,459</u>                      | <u>24,270</u>                      |
| <b>Total Other Assets</b>         | <b><u>27,459</u></b>               | <b><u>24,270</u></b>               |
| <b>Total Assets</b>               | <b>\$ <u><u>15,968,168</u></u></b> | <b>\$ <u><u>16,700,326</u></u></b> |

**Stormwater Utility**  
**Statement of Net Assets**  
**For The Year Ending December 31, 2011 and 2012**  
**(Unaudited)**

|  | <b>Liabilities &amp; Net Assets</b> |                      |
|--|-------------------------------------|----------------------|
|  | <b>2011</b>                         | <b>2012</b>          |
| <b><u>Current Liabilities</u></b>                              |                                     |                      |
| Accounts Payable   | \$ 49,150                           | \$ 45,116            |
| Contracts Payable  | 93,344                              | 114,304              |
| Due to Other Funds   | 150,052                             | 62,137               |
| Due to Other Governments                                       | 6,480                               | 5,000                |
| Accrued Interest Payable                                       | 29,432                              | 26,986               |
| Accrued Salaries Payable                                       | 54,176                              | 65,242               |
| Vacations Payable  | 96,192                              | 91,520               |
| Deferred Revenue   | 16,130                              | 14,142               |
| Bonds Payable  | 196,839                             | 204,552              |
| <b>Total Current Liabilities (Payable from Current Assets)</b> | <b>\$ 691,795</b>                   | <b>\$ 628,999</b>    |
| <b><u>Long Term Liabilities</u></b>                            |                                     |                      |
| Vacations Payable  | 16,497                              | 17,594               |
| Net Other Post Employment Benefits                             | 0                                   | 71,327               |
| Bonds Payable  | 1,908,161                           | 1,703,610            |
| Less Unamortized Bond Discount or Premium                      | 6,343                               | 5,594                |
| <b>Total Long Term Liabilities</b>                             | <b>1,931,001</b>                    | <b>1,798,125</b>     |
| <b>Total Liabilities</b>                                       | <b>2,622,796</b>                    | <b>2,427,124</b>     |
| <b><u>Net Assets</u></b>                                       |                                     |                      |
| Invested in Capital Assets, Net of Related Debt                | 11,299,255                          | 11,829,902           |
| Unrestricted   | 2,046,117                           | 2,443,300            |
| <b>Total Net Assets</b>  | <b>13,345,372</b>                   | <b>14,273,202</b>    |
| <b>Total Liabilities and Net Assets</b>                        | <b>\$ 15,968,168</b>                | <b>\$ 16,700,326</b> |

**City of Duluth  
Stormwater Utility Bonds Payable  
December 31, 2012**

|  | <u>Issued</u> | <u>Issue Date</u> | <u>Final Maturity</u> | <u>Principal<br/>Outstanding<br/>12/31/2011</u> | <u>Issued</u> | <u>Retired</u>    | <u>Principal<br/>Outstanding<br/>12/31/2012</u> |
|--|---------------|-------------------|-----------------------|---|---------------|-------------------|---|
| <b>Stormwater Utility</b>                |               |                   |                       |   |               |                   |   |
| Bonds                                    |               |                   |                       |   |               |                   |   |
| Revenue and General Obligation           | 1,705,000     | 9/7/2006          | 2/1/2022              | 1,350,000                                       | 0             | 100,000           | 1,250,000                                       |
| Revenue and General Obligation Refunding | 755,000       | 11/23/2010        | 2/1/2018              | 755,000   | 0             | 96,839            | 658,161   |
| Bond Total                               |               |                   |                       | \$ 2,105,000                                    | \$ 0          | \$ 196,839        | \$ 1,908,161                                    |
| <b>Total Stormwater Utility Bonds</b>    |               |                   |                       | <u>\$ 2,105,000</u>                             | <u>\$ 0</u>   | <u>\$ 196,839</u> | <u>\$ 1,908,161</u>                             |

| <b>Future Payments:</b> |                  |                 |              |
|-------------------------|------------------|-----------------|--------------|
| <u>Year</u>             | <u>Principal</u> | <u>Interest</u> | <u>Total</u> |
| 2013                    | \$ 204,552       | \$ 62,297       | \$ 266,849   |
| 2014                    | 210,408          | 56,115          | 266,523      |
| 2015                    | 218,837          | 49,689          | 268,526      |
| 2016                    | 224,693          | 43,022          | 267,715      |
| 2017                    | 233,122          | 35,551          | 268,673      |
| 2018                    | 241,549          | 27,234          | 268,783      |
| 2019                    | 135,000          | 20,300          | 155,300      |
| 2020                    | 140,000          | 14,800          | 154,800      |
| 2021                    | 145,000          | 9,100           | 154,100      |
| 2022                    | 155,000          | 3,100           | 158,100      |
|                         | \$ 1,908,161     | \$ 321,208      | \$ 2,229,369 |

**Stormwater Fund  
Schedule of Fixed Assets  
Year Ending December 31, 2012**

|                          | <u>Balance Jan.<br/>1, 2012</u> | <u>Additions</u>    | <u>Deductions</u>   | <u>Balance Dec.<br/>31, 2012</u> | <u>Accumulated<br/>Depreciation</u> | <u>Book Value</u>    |
|--------------------------|---------------------------------|---------------------|---------------------|----------------------------------|-------------------------------------|----------------------|
| Lands and Grounds        | \$ 8,481                        | \$ 0                | \$ 0                | \$ 8,481                         | \$ 0                                | \$ 8,481             |
| Infrastructure           | 9,901,189                       | 1,829,049           | 0                   | 11,730,238                       | 950,753                             | 10,779,485           |
| Buildings and Structures | 1,401,897                       | 0                   | 0                   | 1,401,897                        | 238,323                             | 1,163,574            |
| Equipment and Tools      | 2,550,655                       | 253,821             | 260,434             | 2,544,042                        | 1,821,168                           | 722,874              |
| Work in Progress         | <u>2,313,626</u>                | <u>637,809</u>      | <u>1,906,461</u>    | <u>1,044,974</u>                 | <u>0</u>                            | <u>1,044,974</u>     |
| Total                    | <u>\$ 16,175,848</u>            | <u>\$ 2,720,679</u> | <u>\$ 2,166,895</u> | <u>\$ 16,729,632</u>             | <u>\$ 3,010,244</u>                 | <u>\$ 13,719,388</u> |

## LENGTH OF STORM SEWERS IN FEET 2012

| Dia. Inch. | BR    | CMP    | CPD   | CI/DI | HDPE   | NCP | PPC | PVC    | RCP     | STN | STL | TP  | VCP   | UNK     | Totals  |
|------------|-------|--------|-------|-------|--------|-----|-----|--------|---------|-----|-----|-----|-------|---------|---------|
| 3          |       |        |       |       |        |     |     |        | 25      |     |     | 840 |       |         | 865     |
| 4          |       |        | 1,918 |       |        |     |     | 18,578 |         |     | 13  | 135 |       | 4,324   | 24,968  |
| 6          |       | 914    | 155   |       |        |     |     | 3,977  | 61      |     |     | 278 |       | 1,029   | 6,414   |
| 8          |       | 267    | 61    | 132   | 33     | 41  |     | 5,062  | 63      |     |     | 128 | 445   | 3,083   | 9,315   |
| 10         |       | 2,103  |       | 236   | 40     |     |     | 2,298  | 9,983   |     |     |     | 1,753 | 24,114  | 40,527  |
| 12         |       | 42,862 | 4,435 | 1,875 | 23,071 | 769 |     | 12,109 | 424,387 |     | 68  |     | 1,210 | 81,160  | 591,946 |
| 13         |       |        |       |       |        |     |     |        | 30      |     |     |     |       |         | 30      |
| 14         |       | 60     |       | 38    |        |     |     |        | 249     |     |     |     |       | 358     | 705     |
| 15         |       | 3,485  |       | 475   | 3,532  | 170 | 55  | 501    | 188,596 |     |     |     | 421   | 49,653  | 246,888 |
| 16         |       | 89     |       | 682   |        |     |     |        | 249     |     |     |     |       | 785     | 1,805   |
| 17         |       |        |       |       |        |     |     |        |         |     |     |     |       | 81      | 81      |
| 18         |       | 6,736  | 694   |       | 1,197  | 61  |     | 938    | 115,830 |     | 54  |     | 759   | 34,119  | 160,388 |
| 20         |       |        |       | 87    |        |     |     |        | 1,306   |     | 272 |     |       | 4,492   | 6,157   |
| 21         |       | 963    | 43    | 61    |        |     |     | 7      | 38,749  |     |     |     | 572   | 8,325   | 48,720  |
| 22         |       |        |       |       |        |     |     |        | 1,101   |     |     |     |       | 1,481   | 2,582   |
| 23         |       |        |       |       |        |     |     |        |         |     |     |     |       | 1,079   | 1,079   |
| 24         | 321   | 4,423  | 1,107 | 188   | 520    |     |     | 79     | 71,231  | 83  | 70  |     | 656   | 121,436 | 200,114 |
| 26         | 1,751 |        |       |       |        |     |     | 39     | 4,041   |     |     |     |       | 13,545  | 19,376  |
| 27         |       |        |       |       | 18     |     |     |        | 16,103  |     |     |     |       | 1,820   | 17,941  |
| 28         | 673   | 125    |       |       |        |     |     |        | 3,644   |     |     |     |       | 2,730   | 7,172   |
| 29         |       |        |       |       |        |     |     |        | 815     |     |     |     |       | 431     | 1,246   |
| 30         |       | 1,038  |       |       | 1,969  |     |     |        | 40,255  |     |     |     |       | 12,234  | 55,496  |
| 31         |       |        |       |       |        |     |     |        | 385     |     |     |     |       |         | 385     |
| 32         | 375   |        |       |       |        |     |     |        | 1,956   | 52  |     |     |       | 2,361   | 4,744   |
| 33         |       |        |       |       |        |     |     |        | 711     |     |     |     |       |         | 711     |
| 34         |       |        |       |       |        |     |     |        |         |     |     |     |       | 371     | 371     |
| 36         | 247   | 1,319  |       |       |        | 460 |     |        | 33,985  | 162 |     |     |       | 15,774  | 51,947  |
| 40         |       |        |       |       |        |     |     |        | 1,285   | 629 |     |     |       | 203     | 2,117   |
| 42         |       | 51     |       | 250   |        |     |     | 80     | 14,805  |     |     |     |       | 2,581   | 17,767  |
| 44         |       | 190    |       |       |        |     |     |        | 3,516   |     |     |     |       | 946     | 4,652   |
| 45         |       |        |       |       |        |     |     |        | 617     |     |     |     |       | 380     | 997     |
| 46         |       |        |       |       |        |     |     |        |         |     |     |     |       | 79      | 79      |
| 48         | 354   | 568    |       |       |        |     | 104 |        | 16,547  | 475 |     |     |       | 11,092  | 29,140  |
| 50         | 240   |        |       |       |        |     |     |        | 292     |     |     |     |       | 37      | 569     |

## LENGTH OF STORM SEWERS IN FEET 2012

| Dia. Inch. | BR    | CMP    | CPD   | CI/DI | HDPE   | NCP   | PPC   | PVC    | RCP       | STN   | STL | TP    | VCP   | UNK     | Totals    |
|------------|-------|--------|-------|-------|--------|-------|-------|--------|-----------|-------|-----|-------|-------|---------|-----------|
| 51         |       |        |       |       |        |       |       |        | 1,086     |       |     |       |       |         | 1,086     |
| 52         |       |        |       |       |        |       |       |        | 401       |       |     |       |       |         | 401       |
| 54         |       |        |       |       |        |       | 70    |        | 13,534    |       |     |       |       | 5,123   | 18,727    |
| 56         |       |        |       |       |        |       |       |        | 89        |       |     |       |       | 61      | 150       |
| 58         |       |        |       |       |        |       |       |        | 600       |       |     |       |       | 799     | 1,399     |
| 59         |       |        |       |       |        |       |       |        |           |       |     |       |       | 83      | 83        |
| 60         |       | 321    |       |       |        | 28    | 979   |        | 2,787     | 263   |     |       |       | 5,177   | 9,555     |
| 62         |       |        |       |       |        |       |       |        | 638       |       |     |       |       | 60      | 698       |
| 65         |       |        |       |       |        |       |       |        | 76        |       |     |       |       | 362     | 438       |
| 66         | 30    |        |       |       |        |       |       |        | 280       | 80    |     |       |       | 263     | 653       |
| 72         |       | 156    |       |       |        |       | 373   |        | 2,448     | 279   |     |       |       | 3,880   | 7,136     |
| 73         |       |        |       |       |        |       |       |        |           |       |     |       |       | 77      | 77        |
| 78         |       | 82     |       |       |        |       | 228   |        | 389       |       |     |       |       |         | 699       |
| 84         | 472   | 122    |       |       |        |       |       | 138    | 472       | 1,170 |     |       |       | 1,465   | 3,839     |
| 88         | 180   |        |       |       |        |       | 50    |        | 241       |       |     |       |       |         | 471       |
| 96         |       |        |       |       |        |       | 81    |        | 420       | 65    |     |       |       | 434     | 1,000     |
| 108        |       |        |       |       |        |       |       |        | 116       |       |     |       |       | 217     | 333       |
| 120        |       |        |       |       |        |       |       |        | 977       |       |     |       |       | 1,468   | 2,445     |
| 122        |       |        |       |       |        |       |       |        | 54        |       |     |       |       |         | 54        |
| 128        |       |        |       |       |        |       |       |        | 52        | 1,143 |     |       |       | 549     | 1,744     |
| 132        |       |        |       |       |        |       |       |        | 170       |       |     |       |       | 714     | 884       |
| 144        |       |        |       |       |        |       |       |        | 119       |       |     |       |       |         | 119       |
| 156        |       |        |       |       |        |       |       |        | 143       |       |     |       |       |         | 143       |
| 192        |       |        |       |       |        |       |       |        | 30        |       |     |       |       |         | 30        |
| UNK        | 816   | 303    |       |       | 108    |       |       | 547    | 4,276     | 1,049 |     |       |       | 93,423  | 100,522   |
|            | 5,459 | 66,177 | 8,413 | 4,024 | 30,488 | 1,529 | 1,940 | 44,353 | 1,020,215 | 5,450 | 477 | 1,381 | 5,816 | 514,258 | 1,709,980 |

Note: The Storm Sewer system also includes 12,229 catch basins and 5,742 manholes.  
Pipe quantities are derived from Geographic Information System.

BR - Brick  
 CMP - Corrugated Metal  
 CPD - Corrugated Polyethylene Drainage Pipe  
 CI/DI - Cast or Ductile Iron  
 HDPE - High Density Polyethylene

NCP - Non-Reinforced Concrete Perforated Pipe  
 PPC - Pour-in-Place Concrete  
 PVC - Polyvinyl Chloride  
 RCP - Reinforced Concrete  
 STN - Stone

STL - Steel  
 TP - Thermoplastic  
 VCP - Vitrified Clay Pipe  
 UNK - Unknown

## DULUTH CREEKS AND STREAMS

| Creek or Stream | Drainage Area<br>(square miles) |
|-----------------|---------------------------------|
| Amity           | 16.60                           |
| 58th Ave E      | 0.59                            |
| 50th Ave E      | 0.63                            |
| 47th Ave E      | 0.36                            |
| 43rd Ave E      | 0.59                            |
| 40th Ave E      | 0.45                            |
| 38th Ave E      | 0.03                            |
| 37th Ave E      | 0.13                            |
| 34th Ave E      | 0.53                            |
| Tischer         | 7.30                            |
| Chester         | 7.30                            |
| Oregon          | 0.85                            |
| Brewery         | 1.66                            |
| Greys           | 0.63                            |
| Clarkhouse      | 1.00                            |
| Buckingham      | 1.10                            |
| Miller          | 9.70                            |
| Coffee          | 1.76                            |
| Merritt         | 2.30                            |
| 32nd Ave W      | 0.73                            |
| 41st Ave W      | 0.36                            |
| Keene           | 6.40                            |

| Creek or Stream | Drainage Area<br>(square miles) |
|-----------------|---------------------------------|
| 44th Ave W      | 0.78                            |
| 49th Ave W      | 0.80                            |
| 62nd Ave W      | 0.90                            |
| Kingsbury       | 8.60                            |
| 68th Ave W      | 0.15                            |
| 79th Ave W      | 0.14                            |
| 82nd Ave W      | 0.26                            |
| Knowlton        | 1.56                            |
| 84th Ave W      | 0.23                            |
| 86th Ave W      | 0.08                            |
| Gogebic Street  | 0.34                            |
| Lenroot Street  | 0.61                            |
| Stewart Street  | 1.97                            |
| Morgan Park     | 1.31                            |
| U. S. Steel     | 2.70                            |
| Gary Street     | 0.33                            |
| Bowser Street   | 0.08                            |
| Heard Street    | 0.06                            |
| Sargent         | 3.30                            |
| Fond du Lac     | 0.58                            |
| Mission         | 10.30                           |
| Lester River    | 35.60                           |

## MPCA MS4 CREEK DATA

| MS4 Discharge Waterbodies       | Water Quality Status           | Cause of Impairment  | TMDL Development Status  | Other                             |
|---------------------------------|--------------------------------|--|--|-----------------------------------|
| Lake Superior                   | ORVW Impaired                  | Mercury (fish tissue)<br>PCB (fish tissue)   | Not started  | Restricted Discharge Area         |
| St Louis River                  | Impaired                       | Mercury (fish tissue and water column)<br>PCB (fish tissue and water column)<br>DDT<br>Dieldrin<br>Dioxin<br>Toxaphene<br>Fecal Coliform<br>Aquatic Macroinvertebrate Bioassessments | Not started*   | Area of Concern & Protected Water |
| Amity Creek                     | Impaired                       | Turbidity  | Underway   | Trout stream                      |
| E Br Amity                      | Impaired                       | Turbidity  | Underway   | Trout stream                      |
| Lester River                    | Impaired                       | Turbidity & Mercury (water column)   | Underway (Turbidity)   | Trout stream                      |
| Twin Ponds-<br>Buckingham Creek | Impaired<br>(Upper Twin Ponds) | PCB (fish tissue)- Upper Twin<br>Mercury (fish tissue)- South Twin   | Not started  | Trout stream                      |
| Miller Creek                    | Impaired                       | Temperature<br>Lack of coldwater assemblage<br>Aquatic Macroinvertebrates<br>E. coli<br>Chloride   | Study started for temp.<br>and Lack of coldwater<br>assemblage<br>TMDL started | Trout stream                      |
| Chester Creek                   |                                |  |  | Trout stream                      |
| E Br Chester                    |                                |  |  | Trout stream                      |
| Keene Creek                     |                                | E. coli  |  | Trout stream                      |
| Kingsbury Creek                 |                                | Fish Bioassessment<br>Aquatic Macroinvertebrates   |  | Trout stream                      |
| Mission Creek                   |                                |  |  | Trout stream                      |
| Sergeant Creek                  |                                | E. coli  |  | Trout stream                      |
| Stewart Creek                   |                                | E. coli  |  | Trout stream                      |
| Tischer Creek                   |                                |  |  | Trout stream                      |
| 58th Ave E                      |                                |  |  |                                   |
| 50th Ave E                      |                                |  |  |                                   |
| 47th Ave E                      |                                |  |  |                                   |



## MPCA MS4 CREEK DATA

| MS4 Discharge Waterbodies | Water Quality Status | Cause of Impairment | TMDL Development Status | Other        |
|---------------------------|----------------------|---------------------|-------------------------|--------------|
| 43rd Ave E                |                      |                     |                         |              |
| 38th Ave E                |                      |                     |                         |              |
| 37th Ave E                |                      |                     |                         |              |
| 34th Ave E                |                      |                     |                         |              |
| Oregon                    |                      |                     |                         |              |
| Brewery                   |                      |                     |                         |              |
| Greys                     |                      |                     |                         |              |
| Clarkhouse                |                      |                     |                         |              |
| Coffee                    |                      |                     |                         | Trout stream |
| Merritt                   |                      |                     |                         | Trout stream |
| 32nd Ave W                |                      |                     |                         |              |
| 41st Ave W                |                      |                     |                         |              |
| 44th Ave W                |                      |                     |                         |              |
| 49th Ave W                |                      |                     |                         |              |
| 62nd Ave W                |                      |                     |                         |              |
| 68th Ave W                |                      |                     |                         |              |
| 79th Ave W                |                      |                     |                         |              |
| 82nd Ave W                |                      |                     |                         |              |
| Knowlton                  |                      |                     |                         | Trout stream |
| 84th Ave W                |                      |                     |                         |              |
| 85th Ave W                |                      |                     |                         |              |
| Gogebic St                |                      |                     |                         |              |
| Lenroot St                |                      |                     |                         |              |
| Morgan Park               |                      |                     |                         |              |
| U.S. Steel                |                      |                     |                         |              |
| Gary St                   |                      |                     |                         |              |
| Bowser                    |                      |                     |                         |              |
| Heard St                  |                      |                     |                         |              |

\*Not listed as underway in the MPCA status file:

<http://www.pca.state.mn.us/index.php/view-document.html?gid=8533>

## STORMWATER UTILITY ACTIVITIES 2012

| ACTIVITY  | WORK COMPLETED               |
|---|------------------------------|
| Cleaning creeks                                       | 0                            |
| Televising storm sewer pipe                           | 2,825 ft                     |
| Line flushing   | 214 in-house, 889 contracted |
| Manhole/catch basin repairs                           | 96                           |
| Ditch line (dug or repaired and seeded or sodded)     | 5,540                        |
| Culverts repaired                                     | 38                           |
| Steaming:   |                              |
| Steamed culverts and ditches blocked with ice         | 29                           |
| Sediment trap cleaning                                | 4                            |
| Sewer calls   | 215                          |
| Presentations:  |                              |
| Public  | 11                           |
| Staff   | 9                            |
| School presentations, school group, children's groups | 6                            |
| Radio, television and newspaper articles              | 4                            |
| Regional conferences                                  | 3                            |