Proposed

2014 BUDGET & CAPITAL IMPROVEMENTS PLAN

Built on a strong foundation.

MADISON METROPOLITAN SEWERAGE DISTRICT

PUBLICATION DATE: September 12, 2013
The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to Madison Metropolitan Sewerage District, Wisconsin for its annual budget for the fiscal year beginning January 1, 2013. In order to receive this award, a governmental unit must publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan, and as a communications device.
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David Taylor, Director of Special Projects
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Section 1

Introduction to the District Budget

Fall 1931 - 1st Interceptor Construction Crew

1934 - Nine Springs Sewage Treatment Works
Commissioners:

I am pleased to present the 2014 Budget and Capital Improvements Plan. This budget continues the practice of effective management that has allowed the District to proactively address future mandates, invest in infrastructure maintenance and accommodate growth while keeping user fees well below national averages.

The District’s 50 Year Master Plan envisions a future where the District will be a manager of valuable resources and a leader in the watershed community, delivering maximum environmental benefits at the lowest cost to society. Meeting these long-term obligations requires fiscal stability.

The District retained a financial advisor in late 2012 to review the District’s financial condition, evaluate policies and build a strategic financial management model to sustain our strong financial situation. This model will help the District anticipate future funding needs, keeping user charges adequate and predictable without major fluctuations. The conclusions of our advisor so far include:

- The District’s practices are sound and reflect a historically disciplined approach to financial management.
- The District’s watershed planning and asset management initiatives are industry-leading approaches that will not only deliver environmental benefits but will help minimize District costs over the long term.
- The District’s current capital structure, characterized by the shares of asset value financed through debt and equity, is appropriate and reflects historically sound capital financing practices. The District’s future capital structure will continue to be within the range of well-positioned wastewater utilities.
- The District’s Operations & Maintenance budget levels are at the lower end of the range for similarly situated utilities.

The Commission has approved revised financial policies and the District is nearing completion of a financial model that will help us predict our financial future position looking at a variety of potential scenarios.

**Budget Transparency**

As we move toward our future vision of enriching life through clean water and resource recovery, we must bring our customers along with us. This budget document includes two initiatives aimed at improving public access and understanding of the District’s priorities. First, the 2014 Budget includes better descriptions of our programs, trends, performance metrics, and status reports. These improvements are building on our 2013 Annual Budget that received the Government Finance Officers Association’s Distinguished Budget Presentation Award. This
award, determined by an independent panel of experts, is considered the highest form of recognition in government budgeting. It recognizes government units that publish a budget document that meets program criteria as a policy document, as an operations guide, as a financial plan, and as a communication device.

Another improvement this year involves reviewing the 2014 capital and operating budgets separately allowing more time to understand how capital needs drive the District’s revenue requirements. The Commission received a six-year capital improvements plan two months ahead of the operating budget. This allowed the Commission and the public to see justifications for the District’s long-term capital needs before we incorporate those debt requirements into the budget.

**2014 Major Budget Considerations**

**New Projects Online**
The past two budgets were building blocks for the 2014 budget and supported several key studies and initiatives. In addition to financial planning, the District performed a staffing study, conducted a space needs analysis and initiated an energy independence roadmap. These initiatives provide detailed plans for how the District can operate even more effectively and efficiently.

The District also embarked on major capital improvement projects within the collection system and at the Nine Springs Wastewater Treatment Plant. The 11th Addition to the Nine Springs Plant will lead to operational efficiencies and enhance the District’s resource recovery capabilities by:

- Reducing the amount of phosphorus in our biosolids.
- Expanding biosolids markets and increasing operational flexibility through the production of a Class A biosolid.
- Building capacity to accept high-strength waste, which can increase methane production and move us closer to energy neutrality.
- Reducing maintenance costs related to struvite.
- Creating a new phosphorus-rich product that will generate a revenue stream.
- Controlling foaming in the anaerobic digesters.

The completion of the 11th Addition, and a new District Pumping Station 18 and its related force main will increase the District’s total assets by 20%. These new facilities will be on-line in 2014. The operating budget includes $800,000 for new staff, vehicles, equipment and supplies to assure we can operate and maintain these new assets effectively.

**Understanding the Cost of Traditional Treatment Technologies**
This budget includes funds to conduct an evaluation of treatment technologies for chlorides and other parameters. The District is currently operating under chloride and mercury variances and it is expected that increasingly stringent limits will be included in future permits. Both the Commission and staff are interested in the costs associated with chloride removal and whether
the available technology could address multiple parameters on the regulatory horizon including phosphorous, chloride, mercury, nitrogen, and select pharmaceuticals.

Using the results from this and other studies will be crucial as we prepare to renew our permit in 2015. Previously, the District had conducted a study to evaluate the costs associated with building traditional treatment technology to address potential future phosphorous and nitrogen limits. That study, next year’s chloride study, and other available studies will provide benchmarks against which to compare new and innovative compliance options such as adaptive management or water quality trading, and assist us in making informed decisions about the best approach to meet our permit obligations.

**Building Organizational Capacity**
In 2013, we concentrated on addressing workload and preparing for the retirement of key staff. The recommendations of a subsequent staffing study were approved by the Commission in June and are incorporated into this budget. Some of our primary efforts will include:

- Developing an information technology (IT) strategic plan to prioritize technology needs that help us make sound business decisions and determine the impact on workload.
- Using interns and temporary hires in the pretreatment and IT areas to fulfill immediate peak workload demands.
- Developing standardized business software applications to allow the District to transfer knowledge easily from retiring middle and upper management staff to new hires.
- Developing succession plans for retiring senior staff.

**New Capital Projects**
Several major capital projects will continue or begin in 2014.

- The District will conduct an inflow and infiltration study of the Pumping Station 14 service area. We are experiencing higher flows than normal from this area. Identifying the sources of inflow and correcting those problems can be a cost effective way to reduce flow to the system and delay the need for expanded downstream facilities.
- Construction of Pumping Station 18 and its force main will continue through 2014.
- Begin construction to rehabilitate Pumping Stations 11 and 12.
- The District will begin construction of a modern, energy efficient and consolidated maintenance facility.

**2015 and Beyond**
While the 2014 budget maintains a proactive position for the District, the Commission should be aware of the following items that may be the subjects of further discussion in 2014.

- We will spend 2014 developing a long-term equipment replacement strategy for the Metrogro Program. The District has four application vehicles that are nearing the end of their useful life. Replacing them may cost approximately $500,000 per vehicle. These vehicles are no longer produced in the U.S. making us more vulnerable to international
price fluctuations and unpredictable vendor service. We will evaluate applicator methods, and develop a funding plan as part of the strategy.

- We will review how the District manages risk and whether we should continue to be self-insured or obtain insurance for our facilities. Given the frequency of extreme weather events, the potential risk to District facilities is becoming a greater concern.

- While this year’s budget does not anticipate major increases in employee benefit costs, it is still not fully known how the Affordable Care Act will affect future costs beyond 2014. Also, with Act 10, District employees will be shouldering an even greater burden for the cost of health care. The District will therefore explore alternatives to control health care costs.

- By the end of 2014, the District will better understand the potential costs to address phosphorus and nitrogen and will be better positioned to make some key decisions regarding regulatory compliance approaches.

In closing, the District continues its longstanding tradition of financial strength. Our 50 Year Master Plan keeps us moving in the right direction to meet this region’s needs for sustainable water management to support our region’s overall prosperity. I look forward to working with you towards that end.

Sincerely,

D. Michael Mucha, P.E.
Chief Engineer and Director
Budget Process

The purpose of the annual budgeting process is to assure that the District has adequate resources to deliver its planned services during the upcoming year and in future years. Questions that need to be answered as part of this process include:

1. What are the estimated expenses for operating the District’s facilities next year?
2. What are the estimated costs for construction of new or replacement facilities over the next six years?
3. How much money can we expect from the various revenue sources next year, and how much money will we need to recover through service charges?
4. How much money will we need to borrow to finance construction work?
5. How much money do we need in the bank to assure adequate cash flow, to fulfill promises made when borrowing money, and to address unforeseen emergencies?

The annual budget process addresses the upcoming year’s financial management plan in three areas:

1. The **Operating Fund budget** addresses the operation of facilities and includes recovery of future years’ debt service costs to comply with promises made at the time the District borrows money to finance construction projects. The primary source of funds to pay for the operation of facilities is service charge revenue.

2. The **Capital Projects Fund budget** addresses construction of new or replacement facilities. Larger projects are typically funded with proceeds from a Clean Water Fund loan. These loans are administered by the State of Wisconsin. The District uses its taxing authority as collateral for these loans; however, the intent is to repay these loans with revenues generated through service charges. Smaller construction projects are funded through connection charge revenue and interest earned on the fund’s investments.

3. The **Debt Service Fund budget** addresses debt service, the annual principal and interest payments due on borrowed funds. When the District borrows money from the state in the form of a Clean Water Fund loan, the District promises to place the amount of the next year’s debt service payments on the tax roll unless the Debt Service Fund has a balance by October 1 sufficient to make those payments. Since the District intends to repay its debt through service charges, each year’s Operating Fund budget includes sufficient amounts of principal and interest in its operating expenses to fulfill this requirement. This money is
transferred from the Operating Fund to the Debt Service Fund prior to October 1 each year to assure that no amount needs to be placed on the tax roll. Table 2 summarizes the budget calendar for the 2013 Budget and Capital Improvements Plan.

The Chief Engineer and Director submits annually a Proposed Operating Budget, Proposed Capital Projects Budget and Proposed Debt Service Budget. These proposed budgets are typically submitted at the first Commission meeting in September. After a public hearing and further consideration by the Commission, the Commission typically approves the Operating, Capital Projects, and Debt Service budgets at the second Commission meeting in October.

**Budget Amendment Procedures**

Amendments to the proposed Operating, Capital Projects, and Debt Service budgets or to the approved budgets can be initiated by either the Commission or the staff. Once the Commission approves the budgets for the succeeding calendar year, amendments to the budgets must be approved by the Commission as shown in Table 1.

### Amendment Procedures

<table>
<thead>
<tr>
<th>Budget</th>
<th>Requirements for Budget Amendments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Budget</td>
<td>Any increase in the total authorized expenditures.</td>
</tr>
<tr>
<td>Capital Projects Budget</td>
<td>Any increase in the budget total for the year.</td>
</tr>
<tr>
<td></td>
<td>The addition of a new project not previously included in the adopted budget.</td>
</tr>
<tr>
<td></td>
<td>Any increase to a previously approved total project cost.</td>
</tr>
<tr>
<td>Debt Service Budget</td>
<td>Any change to the approved amount to be transferred from the Operating Fund to the Debt Service Fund.</td>
</tr>
</tbody>
</table>

### Budget Calendar

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>June-July</td>
<td>Commission review and acceptance of the Draft Capital Improvements Plan</td>
</tr>
<tr>
<td>July-August</td>
<td>The Executive Team discusses critical needs, expense and revenue trends and goals. The team is made up of the Chief Engineer and Director, Department Directors, HR Manager and Executive Coordinator</td>
</tr>
<tr>
<td>August</td>
<td>Department staff develops and submits their budget requests to the Budget Review Team (Chief Engineer and Director, Director of Administration and Controller/Office Manager). The team balances revenue and expenditures and develops the Chief Engineer and Director’s proposed budget</td>
</tr>
<tr>
<td>September 11th</td>
<td>A summary of the proposed budget is published and notice given of the upcoming budget hearing as required by Wisconsin Statutes Section 65.90</td>
</tr>
<tr>
<td>September 12th</td>
<td>Chief Engineer and Director presents preliminary budget</td>
</tr>
<tr>
<td>September 13th</td>
<td>Notification of MMSD 2013 Budget &amp; Budget Hearing mailed to communities</td>
</tr>
<tr>
<td>September 26th</td>
<td>Public hearing and Commission discussion</td>
</tr>
<tr>
<td>October 7th</td>
<td>Deadline to receive written comments from the public on the proposed budget</td>
</tr>
<tr>
<td>October 10th</td>
<td>Commission discussion and direction to staff</td>
</tr>
<tr>
<td>October 24th</td>
<td>Commission adopts operating and capital budgets and service charge rates</td>
</tr>
<tr>
<td>November 1st</td>
<td>Notify customers and septage haulers of new rates and estimated charges</td>
</tr>
</tbody>
</table>
Budget Philosophy

Several principles combine to form the District’s philosophy related to payment for the services provided by the District:

1. **Users pay charges based on the cost of the service.**

2. **Operating costs are funded on a “pay-as-you-go” basis.** Annual costs for operating the District’s facilities are recovered from current users through the payment of service charges that reflect the customer’s use of the service and the current costs of providing that service. We do not use borrowed money to pay for current operating costs.

3. **Construction of new facilities is financed primarily with debt.** New facilities are built to last twenty years or more and built with sufficient capacity to handle increasing loads caused by expected growth over their useful lives. Debt for new facilities is generally paid back over a twenty-year period. This spreads the up-front construction costs over those users that are actually using the facility during its service life.

4. **Detailed long-range planning helps to assure stable rates and charges.** The District’s Capital Projects Fund budget includes a 6-year projection of construction-related expenses and revenues. The financial plan that evaluates the impacts of long-term borrowing on future budgets uses a 20-year projection.

Budget Principles

A number of principles guide the preparation of the annual budget for each of the three District funds.

**The Operating Fund budget principles are:**

1. Maintain a minimum fund balance equal to 180 days of the annual operating costs (does not include debt service), to assure adequate cash flow capabilities.

2. If a specific budgeted item from the previous year was not purchased, and the item is included in the current budget, it should be funded from reserves since the money was collected for the item in the prior year.

3. Balance the budget by calculating the required service charge revenues so that total revenues equal the total expenditures. Service charge rates are set annually so that the projected flows and loadings will provide the required service charge revenue.

**The Capital Projects Fund budget principles are:**

1. Maintain a minimum fund balance of $3 million to fund any unforeseen project that may arise during the year.

2. Utilize reserve funds, interest earnings, and connection charge revenues to pay project costs before borrowing additional funds, unless the estimated project cost significantly
exceeds the sum of these sources. In such cases, money is borrowed through the Clean
Water Fund program.

The Debt Service fund budget principles are:
1. Maintain a minimum balance in the Debt Service Fund to assure that no amounts have to be
   placed on the tax roll.

Definitions

Fiscal Year: The fiscal year for Madison Metropolitan Sewerage District begins on January 1 of
each year and ends on December 31 of that year. The fiscal year is accounting and budget year.

Enterprise Fund: The District prepares its financial statements on an enterprise fund basis.
Generally Accepted Accounting Principles (GAAP) require state and local governments to use
the enterprise fund to account for “business-type activities” – activities similar to those found
in the private sector. Business-type activities include services primarily funded through service
charges.

Balanced Budget: The Madison Metropolitan Sewerage District is required to annually adopt a
budget that is balanced. A balanced budget is one in which anticipated District revenues equal
anticipated District expenditures for the fiscal year. The District achieves this for the Operating
Budget by offsetting total expenditures and all other operating expenditures with funds from
service charge billings, other operating income, and fund reserves. The District’s Capital
Projects Budget achieves this by offsetting total project expenditures with Clean Water Fund
loans, fund reserves, and all other capital projects fund income. The District’s Debt Service
Budget achieves this by offsetting total debt service expenses with funds transferred from the
Operating Fund, debt service reserves, and interest income.
The District prepares its financial statements and budgets on an enterprise fund basis. The District’s operating expenses are funded within the Operating Budget, the long-term capital expenditures are funded within the Capital Projects Budget and the Debt Service Budget is funded by transfers from the Operating funds.

**Table 3** summarizes the fund structure for the Operating, Capital Projects, and Debt Service budgets. **Table 4** provides a combined summary of revenues and expenditures for the 2012 through 2014. **Table 5** provides details on the sources of funds, use of funds, basis of accounting, and basis for expense for the Operating and Capital Projects budgets.

### FUND STRUCTURE FOR BUDGETS

<table>
<thead>
<tr>
<th>Operating Budget</th>
<th>Capital Project Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Funding</strong></td>
<td><strong>Capital Funding</strong></td>
</tr>
<tr>
<td>User Charges</td>
<td>Wisconsin Clean Water Fund Loans</td>
</tr>
<tr>
<td>Servicing Pumping Stations</td>
<td>Interceptor and Treatment Plant Connection Charges</td>
</tr>
<tr>
<td>Septage Disposal</td>
<td>Interest Income</td>
</tr>
<tr>
<td>Struvite Fertilizer Sales</td>
<td></td>
</tr>
<tr>
<td>Interest Income</td>
<td></td>
</tr>
<tr>
<td>Other Income</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Operating Expenses</strong></th>
<th><strong>Capital Expenditures</strong></th>
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</thead>
<tbody>
<tr>
<td>Net Division Expenses*</td>
<td>Treatment Plant Projects</td>
</tr>
<tr>
<td>Net Fringe Benefit Expenses*</td>
<td>Conveyance System Projects</td>
</tr>
<tr>
<td>Debt Service</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Debt Service Budget</strong></th>
<th><strong>Debt Service Budget</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Debt Funding</strong></td>
<td><strong>Debt Expenditures</strong></td>
</tr>
<tr>
<td>Transfers from Operations</td>
<td>Principal and Interest payments</td>
</tr>
<tr>
<td>Interest Income</td>
<td></td>
</tr>
</tbody>
</table>
## COMBINED SUMMARY OF REVENUES & EXPENDITURES

(Net of Transfers and Reserves)

| TABLE 4 |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| **REVENUE CATEGORY** | **2012 Actual** | **2013 Estimated Total** | **2013 Budget** | **2014 Proposed Budget** | **Change from 2013 Adopted Budget** | **Percent Change** |
| **OPERATIONS & MAINTENANCE** | | | | | | |
| Sewer Service Charges | $23,747,386 | $26,750,000 | $26,026,226 | $27,702,135 | $1,675,909 | 6.44% |
| Septage Disposal Income | 377,419 | 370,000 | 340,000 | 370,000 | 30,000 | 8.82% |
| Servicing Pumping Stations | 265,183 | 250,000 | 306,000 | 270,000 | (36,000) | -11.76% |
| Struvite Fertilizer Sales | - | 45,000 | 230,000 | 400,000 | 170,000 | 73.91% |
| All Other Operating Income | 158,739 | 230,210 | 183,000 | 195,600 | 12,600 | 6.89% |
| Cash Reserves | - | - | 138,350 | 150,000 | 11,650 | 8.42% |
| **TOTAL OPERATIONS & MAINTENANCE REVENUES** | $24,548,727 | $27,645,210 | $27,223,756 | $29,087,735 | $1,864,159 | 6.85% |
| **CAPITAL PROJECTS** | | | | | | |
| Clean Water Fund Loans | $36,149,000 | $25,835,000 | $29,974,000 | $38,409,000 | $8,435,000 | 28.14% |
| Interceptor & Treatment Plant Connection Charges | 784,000 | 850,000 | 600,000 | 750,000 | 150,000 | 25.00% |
| Interest on Investments | 75,000 | - | 80,000 | 25,000 | (55,000) | -87.50% |
| **TOTAL CAPITAL PROJECTS REVENUES** | $37,008,000 | $26,685,000 | $30,654,000 | $39,184,000 | $8,530,000 | 27.83% |
| **DEBT SERVICE** | | | | | | |
| Transfer from Operating Fund | $8,980,000 | $9,878,000 | $9,878,000 | $10,865,000 | $987,000 | 9.99% |
| Interest on Investments | 118,579 | 1,000 | 70,000 | 18,000 | (52,000) | -74.29% |
| **TOTAL DEBT SERVICE REVENUES** | $9,098,579 | $9,879,000 | $9,948,000 | $10,883,000 | $935,000 | 9.40% |
| **TOTAL REVENUES (net of transfers & reserves)** | $61,675,306 | $54,331,210 | $57,809,226 | $68,139,735 | $10,330,509 | 17.87% |
| **EXPENSE CATEGORY** | **2012 Actual** | **2013 Estimated Total** | **2013 Budget** | **2014 Proposed Budget** | **Change from 2013 Adopted Budget** | **Percent Change** |
| **OPERATIONS & MAINTENANCE** | | | | | | |
| Administration, Engineering & Commission | $2,606,474 | $3,111,890 | $3,036,974 | $3,351,041 | $314,067 | 10.34% |
| User Charge & Pretreatment Program | 355,764 | $457,181 | $403,403 | $480,226 | $76,823 | 19.04% |
| Wastewater Collection | 1,924,129 | $2,095,110 | $2,197,578 | $2,333,893 | $136,315 | 6.20% |
| Wastewater Treatment | 7,932,124 | $9,122,705 | $9,113,298 | $9,858,680 | 745,382 | 8.18% |
| Effluent Diversion | 116,994 | $81,244 | $90,790 | $95,700 | $4,910 | 5.41% |
| Metrogro Biosolids Reuse Program | 1,421,219 | $1,630,629 | $1,543,218 | $1,517,695 | (25,523) | -1.65% |
| Capital Outlay | 297,426 | $538,513 | $654,315 | $315,500 | (338,815) | -57.18% |
| Servicing Pumping Stations Owned by Others | 265,183 | $250,000 | $306,000 | $270,000 | (36,000) | -11.76% |
| Transfer to Debt Service Fund | 8,980,000 | $9,878,000 | $9,878,000 | $10,865,000 | $987,000 | 9.99% |
| **TOTAL OPERATIONS & MAINTENANCE EXPENDITURES** | $23,899,313 | $27,165,272 | $27,223,576 | $29,087,735 | $1,864,159 | 6.85% |
| **CAPITAL PROJECTS** | | | | | | |
| Nine Springs Wastewater Treatment Plant Projects | $34,459,000 | $14,642,000 | $12,749,000 | $10,420,000 | ($2,329,000) | -18.27% |
| Interceptors | 460,300 | 8,293,000 | 8,282,000 | 1,053,000 | (7,229,000) | -87.29% |
| Pumping Stations and Force Mains | 559,000 | 4,004,000 | 8,988,000 | 23,988,000 | 15,000,000 | 166.89% |
| Capital Budget Expenses | 36,500 | 125,000 | 250,000 | 608,000 | 358,000 | 143.20% |
| **TOTAL CAPITAL PROJECTS EXPENDITURES** | $35,514,800 | $27,064,000 | $30,269,000 | $36,069,000 | $5,800,000 | 19.16% |
| **DEBT SERVICE** | | | | | | |
| Principal Payments | $6,321,212 | $5,114,733 | $5,126,000 | $6,017,000 | $891,000 | 17.38% |
| Interest Payments | 1,857,413 | 2,519,409 | 2,784,000 | 2,827,000 | 43,000 | 1.54% |
| **TOTAL DEBT SERVICE EXPENDITURES** | $8,178,625 | $7,634,142 | $7,910,000 | $8,844,000 | $934,000 | 11.81% |
| **TOTAL EXPENDITURES (net of transfers & reserves)** | $58,612,738 | $51,985,414 | $55,524,576 | $63,135,735 | $7,611,159 | 13.71% |
# OPERATING & CAPITAL PROJECT BUDGETS
## COMBINED SUMMARY

<table>
<thead>
<tr>
<th>Item</th>
<th>Operations</th>
<th>Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sources of Funds</strong></td>
<td>Service Charges, Servicing Pump Stations, Struvite Fertilizer Sales, Reserve Funds, Interest and Other Income</td>
<td>Wisconsin Clean Water Fund Loans, Interceptor and Treatment Plant Connection Charges, Reserve Funds, and Interest.</td>
</tr>
<tr>
<td><strong>Use of Funds</strong></td>
<td>Operating and Maintenance Expenses, Debt Service</td>
<td>Project Expenses and All Other Capital Expenses</td>
</tr>
<tr>
<td><strong>Budgetary Basis of Accounting</strong></td>
<td>Actual revenues and expenses are recorded on a full accrual basis in accordance with Generally Accepted Accounting Principles. Revenues and expenses are budgeted on a full accrual basis, except capital outlays. These are budgeted as expense in the year incurred, but capitalized and depreciated for financial reporting purposes. Depreciation is not budgeted.</td>
<td>For financial reporting, actual revenues and expenses are recorded on a full accrual basis in accordance with Generally Accepted Accounting Principles. Revenues are budgeted on a cash basis. Because the Capital Budget serves as a financing plan, it is important to plan when revenues are received rather than when they are earned. Expenses are budgeted according to what is projected to be completed for that particular year.</td>
</tr>
<tr>
<td><strong>Basis for Expense</strong></td>
<td>Costs of operating and maintaining the sewerage system. Costs also include asset repair and replacement that is necessary to maintain the capacity and performance to meet the needs of the communities we serve, our regulatory requirements, and to protect the environment.</td>
<td>Costs of acquiring, purchasing, planning, designing, construction, extending and improving all or any part of the sewerage system.</td>
</tr>
</tbody>
</table>

TABLE 5
2014 Combined Summary of Revenues & Expenditures

The District’s 2014 combined budget totals approximately $68 million dollars. As seen in Table 6, the primary sources of revenue in the 2014 combined budgets are sewer service charges (41.0%) and clean water fund loans (56.0%).

On the expenditure side (as seen in Table 7), the capital budget comprises 57.0% of the 2014 combined budget while operations and maintenance of the District facilities (net of debt service) totals 29.0%. Debt service is 14.0% of 2014 expenditures.
Section 2

Operating Budget

April 17, 1953 – Tryout of new 72" Toro Mower

Original Switchgear at Treatment Plant
Overview

Table 8 summarizes the Districts operating expenditures, revenues and operating reserves for the years 2012 through 2014. The proposed 2014 Operating Budget includes a 6.85 percent increase ($1.9 million) in expenses over the current year’s budget and will require a 6.44 percent increase ($1.7 million) in service charge revenues. The smaller increase in service charges is due to expected income from struvite fertilizer sales.

We project 2013 revenues to be $560,000 more than budgeted with 2013 expenses $58,000 less than budgeted. Operating budget reserves are projected to increase by $480,000. The expected operating reserves at the end of this year are $12.2 million.

2013 Revenues

We estimate 2013 revenues will be approximately $560,000 or 2.1 percent more than budgeted. This is largely due to revenue from estimated service charges being $724,000 or 3.6 percent, more than budgeted. Higher than normal precipitation for the first half of the year caused significantly higher than anticipated wastewater flows. Pollutant loadings for biochemical oxygen demand and phosphorus will be slightly lower than the budgeted values. Pollutant loadings for nitrogen are expected to be slightly higher than budgeted.

Struvite fertilizer sales are estimated to be $185,000 less than budgeted because of a later than expected startup of the struvite harvesting facility. Income from servicing pumping stations is estimated to be $56,000 less than budgeted due to lower than expected levels of required maintenance. Miscellaneous income is estimated to be $52,000 more than budgeted because of one-time revenues. Septage revenues are estimated to be $30,000 higher than budgeted due to higher volumes of septage discharges at Nine Springs. Interest on investments is expected to be $1,000 less than budgeted, and annexation and plan review fees $4,000 less than budgeted.

2013 Expenditures

The District anticipates expenditures for 2013 to be $58,000, or 0.2 percent, less than budgeted. Amounts under budget for Wastewater Collection ($102,000), Capital Outlay ($116,000), and Servicing Pumping Stations ($56,000) offset amounts over budget for Administration ($74,000), User Charge and Pretreatment ($54,000), and the Metrogro Program ($87,000). Large items affecting these totals include $130,000 of higher than expected costs for the spring biosolids application incentive program because of the wet spring and two capital outlay items that were purchased for a combined savings of $113,000.

2014 Revenues

The proposed revenues for 2014 are 6.85 percent greater than the budget for 2013 and 5.2 percent greater than the estimated 2013 revenues. Required service charge revenues will
increase $1,676,000 (6.4 percent) over the 2013 budgeted amount and $952,000 over the estimated 2013 revenues. Assuming no growth in loadings over the budgeted loadings for 2013, overall rates would increase 6.4 percent. Revenues from struvite fertilizer sales are expected to increase by 170,000 due to the facilities operating for a full calendar year. Revenues from servicing pump stations are expected to decrease by $36,000. Revenues from septage disposal are expected to increase by $30,000. We expect interest rates to remain low and interest income to increase slightly by $2,000 to $10,000. Plan review and annexation fees are projected to decrease by $4,000 to match our experience in 2013.

2014 Expenditures
The proposed expenditures of $29.1 million are $1.9 million, 6.85 percent, more than the budget for 2013. Total operating budget personnel services related costs (salaries, benefits, payroll taxes, etc.) increase by $547,000, 6.5 percent, to $8.99 million. Non-personnel related costs increase by $1.3 million, 7.0 percent, to $20.1 million.

The personnel services increase is due to the following factors:
- Base wage increase of 1.5 percent on January 1, 2014, and 0.5 percent increase on September 1, 2014 for represented and non-represented employees
- Step and/or longevity increases for represented employees.
- Progression increases for non-represented employees.
- Net addition of two and one-half full time equivalent positions – total salary and benefits cost of $194,000.
- Employee WRS contributions of 7.0% for represented and non-represented employees.
- A 7.75 percent increase in health insurance rates.
- District contributions to health insurance of 95% of the lowest single and family premiums through August 2014 and District contributions of 88% of the lowest single and family premiums starting in September 2014.

Significant non-personnel related operating expenditure changes include:
- Clean Water Fund debt service expenses $987,000
- Added costs for operation of 11th Addition facilities (chemicals, etc.) 350,000
- Overhaul of Generator 2 engine 175,000
- Added costs to rebuild blowers 87,000
- Installation of oxidation catalysts on 2 digester gas driven engines 72,000
- Ventilation modifications at Pumping Station 16 60,000
- Replace pump 16A at Pumping Station 16 50,000
- Additional research with UW 40,000
- New truck for mechanics 35,000
- Selector mixer replacements (250,000)
- Energy study and research (235,000)
- Staffing study (130,000)
The District’s proposed 2013 Capital Plan includes increases of 10.0% in future debt service expenses raised through service charges for 2014 through 2016. The District will continue to finance future construction primarily with loans from the Wisconsin Clean Water Fund. The amount of debt service necessary to pay the May 2014 principal and interest and November 2014 interest is $8,844,000. The amount recovered through service charges in 2014 for debt service will be $10,865,000.

Operating Fund Balance
The Operating Fund balance is projected to decrease by 1.2% or $150,000 in 2014 compared to the estimated 2013 ending balance. This decrease is due to the budgeted use of $150,000 of reserves. The District expects the actual Operating Fund 2013 ending balance to increase $480,000 over the 2012 ending balance.

The District’s Operating Fund balance includes the District’s Equipment Replacement Fund of $3,000,000 and unrestricted operating reserves. The projected Operating Fund balance at the end of 2014 of $12.1 million includes unrestricted operating reserves of 182 days operating expenses and meets the District’s target end-of-year reserves of 180 days operating expenses. Operating expenses for this purpose are defined as the Operating Budget expenditure total less the debt service expenditures.

### Operating Budget

#### REVENUES

<table>
<thead>
<tr>
<th>REVENUE CATEGORY</th>
<th>2012 Actual</th>
<th>2013 Thru June</th>
<th>2013 Estimated Total</th>
<th>2013 Budget</th>
<th>2014 Proposed Budget</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewer Service Charges</td>
<td>$23,747,386</td>
<td>$13,777,581</td>
<td>$26,750,000</td>
<td>$26,026,226</td>
<td>$27,702,135</td>
<td>6.44%</td>
</tr>
<tr>
<td>Servicing Pumping Stations</td>
<td>$265,183</td>
<td>$114,846</td>
<td>$250,000</td>
<td>$306,000</td>
<td>$270,000</td>
<td>-11.76%</td>
</tr>
<tr>
<td>Rent</td>
<td>65,848</td>
<td>35,675</td>
<td>67,210</td>
<td>67,000</td>
<td>67,600</td>
<td>0.90%</td>
</tr>
<tr>
<td>Interest</td>
<td>6,768</td>
<td>4,894</td>
<td>7,000</td>
<td>8,000</td>
<td>10,000</td>
<td>25.00%</td>
</tr>
<tr>
<td>Annexation and Plan Review Fees</td>
<td>8,550</td>
<td>29,400</td>
<td>50,000</td>
<td>54,000</td>
<td>50,000</td>
<td>-7.41%</td>
</tr>
<tr>
<td>Miscellaneous Income</td>
<td>59,077</td>
<td>71,886</td>
<td>88,000</td>
<td>80,000</td>
<td>50,000</td>
<td>38.89%</td>
</tr>
<tr>
<td>Septage Disposal Revenue</td>
<td>377,419</td>
<td>146,702</td>
<td>370,000</td>
<td>340,000</td>
<td>370,000</td>
<td>8.82%</td>
</tr>
<tr>
<td>Pretreatment Monitoring</td>
<td>18,496</td>
<td>-</td>
<td>18,000</td>
<td>18,000</td>
<td>18,000</td>
<td>0.00%</td>
</tr>
<tr>
<td>Struvite Fertilizer Sales</td>
<td>-</td>
<td>-</td>
<td>45,000</td>
<td>230,000</td>
<td>400,000</td>
<td>73.91%</td>
</tr>
<tr>
<td>Cash Reserves</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>138,350</td>
<td>150,000</td>
<td>8.42%</td>
</tr>
<tr>
<td>TOTAL REVENUES</td>
<td>$24,548,727</td>
<td>$14,180,984</td>
<td>$27,645,210</td>
<td>$27,223,576</td>
<td>$29,087,735</td>
<td>6.85%</td>
</tr>
</tbody>
</table>

#### EXPENDITURES

<table>
<thead>
<tr>
<th>EXPENSE CATEGORY</th>
<th>2012 Actual</th>
<th>2013 Thru June</th>
<th>2013 Estimated Total</th>
<th>2013 Budget</th>
<th>2014 Proposed Budget</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration, Engineering &amp; Commission</td>
<td>$2,606,474</td>
<td>$1,512,655</td>
<td>$3,111,890</td>
<td>$3,036,974</td>
<td>$3,351,041</td>
<td>10.34%</td>
</tr>
<tr>
<td>User Charge &amp; Pretreatment Programs</td>
<td>355,764</td>
<td>196,481</td>
<td>457,181</td>
<td>403,403</td>
<td>480,226</td>
<td>19.04%</td>
</tr>
<tr>
<td>Wastewater Collection</td>
<td>1,924,129</td>
<td>773,113</td>
<td>2,095,110</td>
<td>2,197,578</td>
<td>2,333,893</td>
<td>6.20%</td>
</tr>
<tr>
<td>Wastewater Treatment</td>
<td>7,932,124</td>
<td>4,088,051</td>
<td>9,122,705</td>
<td>9,113,298</td>
<td>9,858,680</td>
<td>8.18%</td>
</tr>
<tr>
<td>Effluent Diversion</td>
<td>116,994</td>
<td>28,047</td>
<td>81,244</td>
<td>90,790</td>
<td>95,700</td>
<td>5.41%</td>
</tr>
<tr>
<td>Metrogro Biosolids Reuse Program</td>
<td>1,421,219</td>
<td>502,565</td>
<td>1,630,629</td>
<td>1,543,218</td>
<td>1,517,695</td>
<td>-1.65%</td>
</tr>
</tbody>
</table>
Personnel

The District’s current workforce consists of two categories of employees: a) represented and b) management and non-represented. Unionized employees are represented by Wisconsin Council 40, Local 60, AFSCME, AFL-CIO. The Labor agreement with represented employees was due to expire on December 31, 2013. 2011 Wisconsin Act 10 is currently being challenged in the courts and if found constitutional will change the rules for collective bargaining. Until that ruling is announced, the District Commissioners agreed to negotiate a one-year labor agreement with the union for 2014. The outcome of these negotiations: 1.) Require union members to pay half of the WRS contribution 2.) The District will pay 95% of the lowest single and family health insurance premium and September 1, 2014 the District will pay 88% of the lowest single and family premium. Benefits and working conditions remain unchanged in the 2014 contract. Benefits and the requirement to pay WRS contributions and health care premiums is the same for management and non-represented employees.

Table 9 shows changes in the District’s overall staffing from 2012 – 2014. The increase in staffing levels is due to the addition of new facilities and more equipment to operate and maintain.

Full-Time Equivalent Positions (FTE)

<table>
<thead>
<tr>
<th>Department</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>Changes for 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration</td>
<td>10</td>
<td>10</td>
<td>9</td>
<td>Admin Support person added-reallocation an engineering half-time position to a full-time Administrative Support position and Admin Assistant transferred from Admin</td>
</tr>
<tr>
<td>Chief Engineer &amp; Director</td>
<td>4.5</td>
<td>4</td>
<td>6</td>
<td>Half-time position reallocated to Chief Engineer &amp; Director’s Dept.</td>
</tr>
<tr>
<td>Engineering</td>
<td>11.5</td>
<td>12.5</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Operations</td>
<td>55</td>
<td>57</td>
<td>59</td>
<td>Added an Operator and a Maintenance position</td>
</tr>
<tr>
<td>Special Projects</td>
<td>10</td>
<td>10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>91</td>
<td>93.5</td>
<td>96</td>
<td></td>
</tr>
</tbody>
</table>
Revenues

Sewer Service Charges
This category covers charges paid by the District’s customer communities for the wastewater conveyance and treatment services provided by the District. Customer communities pay these charges according to the volume and strength of the wastewater they discharge to the District. These charges are the primary revenue source for the District. The District currently serves five cities, seven villages, and twenty-five sanitary or utility districts.

Servicing Pumping Stations
This category covers charges to various customer communities for District services to operate and maintain pumping stations owned by the communities. The District currently services forty-three pumping stations owned by others. The station owner and the number of stations served are shown below:

<table>
<thead>
<tr>
<th>Owner</th>
<th>Number of Pumping Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Madison</td>
<td>28</td>
</tr>
<tr>
<td>City of Verona</td>
<td>1</td>
</tr>
<tr>
<td>Village of Maple Bluff</td>
<td>3</td>
</tr>
<tr>
<td>Town of Dunn Sanitary District No. 1</td>
<td>4</td>
</tr>
<tr>
<td>Town of Dunn Sanitary District No. 3</td>
<td>3</td>
</tr>
<tr>
<td>Town of Madison</td>
<td>3</td>
</tr>
<tr>
<td>Dane County Lake Farm Park</td>
<td>1</td>
</tr>
</tbody>
</table>

Rent
This category covers rent the District receives for use of District-owned property. The District rents three houses; one set of farm buildings including a house, barn, sheds, and associated acreage; one hundred fifty-seven acres of farmland; and land for an electrical substation.

Interest
This category covers interest earned on the District’s cash reserves.

Annexation & Plan Review Fees
This category covers District expenses for the annexation process and sewer plan review and approval processes. Customer communities pay annexation fees when new lands are added to the District. Customer communities pay sewer plan review fees for modifications or additions to their sewer systems.
Miscellaneous Income
This category covers income received for various revenues that do not fit in other categories. For instance, the income from the sale of scrap materials and income for laboratory services performed for others is placed in this category.

Septage Disposal Income
This category covers charges the District receives for wastes delivered by truck to the Nine Springs Treatment Plant. The largest single source of waste delivered by truck is septage from homes and businesses on septic systems. Twenty-five haulers have permits to discharge at the treatment plant.

Pretreatment Monitoring
This category covers the District’s expenses for industrial monitoring. The fees are paid by businesses that are required to have industrial treatment permits issued by the District. Nineteen businesses have industrial discharge permits issued by the District.

Struvite Fertilizer Sales
This category covers the income from the sale of struvite fertilizer pellets. The District plans to begin operating in 2013 a process to recover phosphorus from the wastewater treated at the Nine Springs Wastewater Treatment Plant. The process will recover phosphorus in the form of struvite pellets, which will be sold as fertilizer.

Cash Reserves
This category covers funds used from our cash reserves.

Expenditures
Administration, Engineering & Commission
This cost center includes Accounting, Information Systems, Engineering and the Chief Engineer’s office.

Definitions

Accounting: Provides general accounting, payroll, grants and loan administration.

Information Systems: Ensures data integrity, optimal network functionality, and provides hardware, software and user support. IS also provides technological expertise to District staff.

Engineering: Oversees engineering, design and construction of projects within the District’s capital improvement plan and the planning for the District’s long-term and asset management needs.

Chief Engineer and Director: Provides organizational leadership to the District. Oversees communication and public information, coordinates District strategic efforts and oversees overall District performance and general administration of District business.
**Human Resources:** Provides opportunities for growth of the organizational culture and performance. Provides cost effective employee management services for recruitment, safety and leadership development. Minimizes the District’s liability in employment matters.

**Special Projects:** Oversees a wide range of regulatory, legislative, environmental and strategic initiatives that impact District operations and/or help establish overall District focus.

**User Charge & Pretreatment Program**
This cost center implements state and federal requirements directed towards industrial users and implements strategies for pollution prevention and source control. In addition, this cost center includes wastewater flow and loadings data sampling and analysis for customer billing.

**Wastewater Collection**
This cost center provides funding to operate and maintain the District’s ninety-six miles of gravity sewers, seventeen pumping stations and twenty-nine miles of raw wastewater force mains.

**Wastewater Treatment**
This cost center includes funding to operate and maintain the Nine Springs Wastewater Treatment Plant. This plant treats about forty million gallons of wastewater per day from thirty-seven communities and districts and accepts septage from twenty-five permitted haulers.

**Effluent Diversion**
This cost center includes operations and maintenance for the District’s force mains that discharge treated effluent to Badfish Creek and the Badger Mill Creek. The cost center also includes monitoring to determine the impact on receiving streams.

**Metrogro Biosolids Reuse Program**
This cost center recycles biosolids to agricultural land through the Metrogro program.

**Capital Outlay**
This cost center funds asset purchases such as vehicles and equipment.

**Service Pumping Stations Owned by Others**
This cost center funds activities to operate and maintain forty-four local pump stations owned by other cities and districts on a contract basis.

**Transfer to Debt Service**
This cost center pays the annual debt service on the District’s long-term debt.
Section 3

Capital Projects Budget & Capital Improvements Plan Summary

November 9, 1956 - Repair of air leaks

February 13, 1939 - Sludge lagoon pipes installation

August 27, 1937 - Installation of Northeast Interceptor
Introduction
The District’s Capital Improvements Plan (CIP) represents the foreseen major capital projects for the next six years and in some cases, beyond. The projects included represent our best estimate of what might happen over the next six-year period. Staff updates this plan on an annual basis using the latest information, estimates, and the District’s financial situation. The CIP is a planning document and as such, it is subject to change. Projects and projections in the near-term are likely to be more definite, accurate, and less speculative than those further out in the future.

As a planning document, one of the main purposes of the District’s Capital Improvements Plan is to set the stage for development of the next year’s Capital Projects Fund Budget (also known as the Capital Budget or Capital Projects Budget). Therefore, the CIP includes the proposed projects for the six-year period, their approximate costs, and an anticipated timeframe for planning, design, and construction. Please note that in some cases the approximate costs and schedule may not yet be well developed and included as rough allocations or placeholders, subject to change as final scopes and plans are developed.

The proposed 2014 Capital Budget has been developed from the Capital Improvements Plan, the status of ongoing and pending projects, and the District’s current financial situation. The Capital Budget shows past actual expenditures for projects through the end of 2012, anticipated expenditures through the remainder of 2013, and projected expenditures for 2014. In addition, the Capital Budget includes anticipated total project expenditures for projects underway and those that will be approved prior to the end of 2014. Note that projects in the CIP that begin after 2014 will require approval in subsequent budgets. In actuality, approval of the Capital Budget on an annual basis also reapproves funding for ongoing projects.

The total project costs, and present funding source and expenditures information have changed somewhat from the Draft 2014 Capital Improvements Plan (published June 26, 2013). The District generally takes a conservative approach and anticipates project spending as “early and often”. Typically, this means that subsequent projections often show less spending in nearer-term periods. However, project costs often change and unexpected events can and do change the projects or amounts included in the projections.

Appendix A includes brief project summaries for projects within the CIP six-year timeframe and Appendix B provides a short summary of completed projects and retainers. Business case summaries highlighting the need for each new project were included in the Draft 2014 Capital Improvements Plan document and will be available under a separate supplement to this budget document. For each project, the financing mechanisms are identified with any resulting debt or debt service included in the projections.
### Overview and Highlights

For 2014, the MMSD Capital Budget anticipates total funds received of $39.2 million, expenditures of $36.1 million, and a projected 2014 year-end capital fund reserve of $6.8 million. The plan projects that the District will incur additional debt of $38.4 million from construction activities during 2014 and that the debt service revenue collected in rates will increase from $9,878,000 to $10,865,000. This level of increase, $987,000 (10%), is necessary to address debt service related to the Eleventh Addition ($50 million) and the Pumping Station 18 related projects (now estimated at $36 million).

Major construction activities through 2014 include completing construction related to the Eleventh Addition; construction related to a new District Pumping Station 18, its force main, and relief of the District’s Northeast Interceptor upstream of the new pumping station site; installation of a new Process Control System; design and construction to rehabilitate the District’s Pumping Stations 11 and 12; design and construction of a new maintenance facility; and completion of two sewer lining projects among several other smaller projects. Final project costs related to the Eleventh Addition project are estimated around $50 million while the latest estimates for Pumping Station 18 (PS 18), its force main, and the Northeast Interceptor above PS 18 anticipate total expenditures near $36 million.

In addition to construction activities, 2014 projects will include planning and/or design related to Plant energy projects, two interceptor projects, and the rehabilitation of District Pumping Station 15.

Longer term, significant Plant additions related to nutrients may be required. Although presently uncertain of specific details, we are reasonably certain that the District’s next discharge permit (2015) will include language related to reducing phosphorous. Additionally, nitrogen will become a greater issue and stricter related requirements may be included in the District’s permit by the year 2020. In anticipation of these potential changes to our permit, we have included two different scenarios that show what the effects of these requirements might be to the District’s long-term debt and finances. Other changes to the District’s permit requirements will likely include thermal regulations and stricter chloride regulations. At this time, we anticipate that the financial impacts of these two items related to capital improvements will be minimal; however, this could change going forward.

Further details of anticipated projects and long-term financial projections are included in the attached tables and charts. **Table 10** provides a summary of the 2012 through 2014 budget details. **Table 11** provides a six-year projection of projects and costs. Project summaries are included in **Appendix A** providing brief descriptions of the projects in the **Table 11** projection. **Table 12** provides a six-year summary of the District’s Construction Account Cash Flow, and **Tables 13 and 14** in the next section provide a summary of the District’s long-term debt and debt service over the same period. **Charts 1 to 3**, also in Section 4 on Debt Service, provide graphics of the District’s projected debt and the impacts that two different nutrient removal scenarios might have on the District’s long-term financing for capital improvements.
Historically, the District has been able to maintain its level of service charge increases close to cost of living increases. The anticipated ongoing annual increases of 10 percent or greater for debt service is high by District historical standards and will continue to impact the District’s service rate increases for a number of years going forward. However, we believe the projects included in the budget and the associated increases are justified and necessary to maintain and improve the District’s level of service.

Although the cost of the Eleventh Addition and Pumping Station 18 related projects overshadow most other projects included in the budget, several factors continue to drive the trend toward higher annual increases to service capital improvement debt. The District constructed many of its facilities around the same time-period and many are or will be in need of renewal within similar timeframes. Additionally, although increasing slightly from the low point, lesser amounts of interest earned and connection charges have contributed to a greater need for borrowing.

It is not possible to anticipate all projects that may become necessary in the future, but we believe that the District’s plant asset management and collection system facilities planning efforts coupled with the Capital Improvements Plan reasonably anticipate most major expenditures that will be necessary. Reviewing these on an annual basis helps ensure that the Capital Improvements Plan and subsequent Capital Budget continue to anticipate necessary improvements and reflect good long-term planning.

Although greater than historical levels, the ongoing level of increase in debt service and subsequent increases in service charge rates are necessary to sustain the District’s Capital Improvements Plan, to maintain the level of service District customers are accustomed to over the long-term, and to remain in compliance with the District’s regulatory obligations.

### 2014 Capital Projects Budget Summary

Table 10 provides a summary of the Capital Budget for years 2012 through 2014. For 2012, the summary shows the actual year-end totals for each project; for the current year, 2013, the summary shows the budgeted amount, the actual expenses through June, and the estimated year-end totals; and for 2014, the summary shows anticipated expenditures. Please note that all numbers are rounded to the nearest thousand dollars.

#### Capital Projects Budget

<table>
<thead>
<tr>
<th>REVENUE CATEGORY</th>
<th>2012 Actual</th>
<th>2013 Thru June</th>
<th>2013 Estimated Total</th>
<th>2013 Budget</th>
<th>2014 Proposed Budget</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOANS</td>
<td>$36,149,000</td>
<td>$11,048,000</td>
<td>$25,835,000</td>
<td>$29,974,000</td>
<td>$38,409,000</td>
<td>28.14%</td>
</tr>
<tr>
<td>CWF Loan-Operations Building HVAC Rehabilitation</td>
<td>$2,976,000</td>
<td>$0</td>
<td>$309,000</td>
<td>$0</td>
<td>$0</td>
<td>NMF</td>
</tr>
<tr>
<td>CWF Loan-Eleventh Addition</td>
<td>33,173,000</td>
<td>7,273,000</td>
<td>13,419,000</td>
<td>8,680,000</td>
<td>3,768,000</td>
<td>-56.59%</td>
</tr>
<tr>
<td>CWF Loan-Process Control System Upgrades</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>NMF</td>
</tr>
<tr>
<td>CWF Loan-NEI-For East Interceptor To Southeast Interceptor</td>
<td>-</td>
<td>3,775,000</td>
<td>8,191,000</td>
<td>8,135,000</td>
<td>10,283,000</td>
<td>13.45%</td>
</tr>
<tr>
<td>CWF Loan-PS 18</td>
<td>-</td>
<td>-</td>
<td>3,916,000</td>
<td>-</td>
<td>-</td>
<td>NMF</td>
</tr>
<tr>
<td>CWF Loan-PS 18 Force Main</td>
<td>-</td>
<td>-</td>
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Table continued on next page...
2013 Summary
The 2013 Capital Projects budget showed 2013 revenues exceeding expenditures by $400,000; we now anticipate that expenditures will exceed revenues by about $400,000. The 2013 year-end fund balance will be $3.6 million, which is less than the budgeted $6.6 million. This is primarily due to a slower than anticipated pace for several construction project starts and
therefore, slower than anticipated loan proceeds to offset the District’s costs for the planning and design phases for these projects.

For Clean Water Fund loan projects, the District continues to pay for planning and design from reserves until projects have been bid and move into the construction phase. For larger projects, the planning and design costs can be significant and in the future, short-term lending may be required to cover these costs until loans close after the bidding process. An alternative to this approach would be to increase the District’s Capital Fund minimum balance above its present $3 million; however, at this time, no significant changes in the reserve amount have been contemplated.

2014 Revenues & Expenditures

The proposed 2014 Capital Budget anticipates revenues from all sources totaling $39.2 million and expenditures of $36.1 million with a resulting year-end fund balance of $6.8 million, which represents a fund balance increase of $3.1 million above the estimated yearend balance for 2013.

As detailed in Table 10, anticipated 2014 revenues include $38.4 million in Clean Water Fund Loan proceeds for the six projects listed below:

- Pumping Station 18 Force Main ($13.0 million)
- Pumping Station 18 ($10.3 million)
- Process Control System Upgrade ($4.8 million)
- Maintenance Facilities Expansion ($4.7 million)
- Eleventh Addition to Nine Springs WTP ($3.8 million)
- Pumping Stations 11 & 12 Rehab ($1.9 million)

Other anticipated revenues include $750,000 in interceptor and treatment plant connection charges (connection charge revenues), and $25,000 in interest on investments. Since its low point, we have begun to see modest increases in connection charge amounts and we anticipate that connection charge amounts will continue to increase slowly. Interest on investments continues to remain at historically low amounts and we do not anticipate any significant changes in the near-term.

Also detailed in Table 10, the highest expense items for 2014 include the following projects:

- Pumping Station 18 Force Main construction ($12.0 million)
- Pumping Station 18 – second year construction ($10.3 million)
- New Maintenance Facility/Space Needs – design/first year construction ($4.3 million)
- Eleventh Addition to Nine Springs WTP – third year construction ($3.8 million)
- Pumping Stations 11 & 12 Rehab – design/first year construction ($1.7 million)
- Process Control System Upgrade – second year construction ($1.6 million)

Other anticipated expenditures include an additional $1.8 million in other capital project expenditures as well as $608,000 in Capital Budget Expenses, detailed later in this section.
2014 Capital Projects Fund Balance

The Capital Projects Fund ending balance is projected to increase by 2.1% or $138,000 in 2014 compared to the 2013 budget ending balance of $6,624,000 and to increase by 85% or $3,115,000 compared to the present estimated 2013 ending balance of $3,647,000. The budgeted 2014 ending balance is $6,762,000. The end-of-year Capital Projects Fund balance varies significantly from year-to-year depending upon the timing of project expenses and loan proceeds. The 2013 budget ending balance reflects an assumption that certain project construction starts and therefore the corresponding loan proceeds would occur earlier than they will actually occur. The budgeted 2014 ending balance therefore reflects those additional loan proceeds as occurring in 2014.

Per District policy, we aim to maintain a minimum Capital Projects Fund balance (or reserve) of the greater of $3,000,000 or 10 percent of anticipated expenditures. Therefore, for 2014, the minimum balance should be $3.6 million (10 percent of $36 million). This is roughly the estimate for the 2013 end of year balance. We anticipate that the loan for the Process Control System Upgrade project will close near or shortly after yearend and therefore, its proceeds should increase and maintain reserves for 2014 well above this minimum balance.

Six-Year Capital Projects Summary

Table 11 provides a Six-Year Capital Projects Summary for the period 2014 to 2019. This projection includes completion of projects currently underway and future projects identified as high priority in MMSD’s Collection System Facilities Plan and Plant Asset Management Plan, as well as projects required to address other facility and regulatory requirements. As with the 2013 Capital Budget and Capital Improvements Plan, this projection assumes implementation of Master Plan Alternative 1A or potentially, Alternative 1B or 1C, and relief of the Nine Springs Valley Interceptor and other related capacity relief projects. Alternative 1A maintains the present effluent return flow of 3.6 million gallons per day to Badger Mill Creek while Alternative 1B or 1C would increase flows to match the amount of flow taken out of the Sugar River basin. Future regulations and decisions will help determine if either Alternative 1B or 1C is a feasible option.

Per the District’s 2009 Master Plan, Alternative 1 options (1A, 1B, or 1C) are centralized treatment options as opposed to Alternative 2 options, which would require construction of a satellite treatment plant in the Sugar River Basin. Alternative 1 options rely on continued pumping to the Nine Springs Wastewater Treatment Plant and return of treated effluent to the Sugar River Basin.

For clarity, the base alternative includes no nutrient removal alternatives. A more thorough discussion of nutrient removal scenarios occurs below as well as in Section 4 on Debt Service. At this time, the nutrient removal scenarios are still somewhat speculative; however, the Nutrient Removal Cost Study completed by CH2M Hill in 2011 to 2012, ongoing Adaptive Management discussions, and the Adaptive Management Pilot Project continue to provide
more clarity to each scenario. Unfortunately, staff will not know the full impact of nutrient regulations until they are included in the District’s permit.

The base scenario shows $95 million worth of expenditures over the six-year period of 2014 to 2019, representing projects whose costs total $188 million. At the bottom of the summary, the two nutrient removal scenarios speculate additional expenditures based upon construction of phosphorous removal facilities or an adaptive management scenario. Each phosphorous scenario anticipates nitrogen removal facilities as a requirement in the District’s 2020 discharge permit.

Note that the comparison between adaptive management and phosphorous removal facilities is somewhat inaccurate since adaptive management would likely, but not necessarily, be a program cost that appears in the District’s operating budget versus a facilities cost included in the District’s capital budget. However, the method we have used provides the simplest means to compare the two alternatives and to show the large magnitude of cost differences between the two alternatives. In addition, new facilities for advanced phosphorous removal and/or advanced nitrogen removal would both require significant additional operating and maintenance costs; these O&M costs, not included directly in this analysis, would alone be greater than costs for an adaptive management program. Again, the intent here is not to include a detailed analysis as a more thorough analysis has already been completed in the CH2M Hill cost study available on the District’s website.
## Six-Year Capital Projects Summary

### 2014-2019

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### Six-Year Capital Projects Summary

#### 2014-2019

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<td>CS-12</td>
<td>NEI-Far East Int. to Southeast Int. Junction (lining project)</td>
<td>$1,463,000</td>
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<td><strong>PUMPING STATIONS &amp; FORCE MAINS</strong></td>
<td>$60,779,000</td>
<td>$42,430,000</td>
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<td>CS-14</td>
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<td>$14,794,000</td>
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<td>CS-15</td>
<td>PS 18 Force Main Construction</td>
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<td>CS-16</td>
<td>PS 11 &amp; 12 Rehabilitation</td>
<td>$8,336,000</td>
<td>$8,108,000</td>
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<td>CS-17</td>
<td>PS 15 Rehabilitation</td>
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<td>$1,874,000</td>
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<td>CS-18</td>
<td>PS 6 &amp; 8 Rehabilitation (retainers in 2014)</td>
<td>$6,771,000</td>
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<td>CS-19</td>
<td>PS 17 Force Main Relief</td>
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<td>CS-20</td>
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<td>CS-21</td>
<td>Telemetry System - Third Upgrade</td>
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<td>CS-22</td>
<td>PS 13 &amp; 14 Rehabilitation</td>
<td>$8,935,000</td>
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<td>$696,000</td>
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<td>CS-23</td>
<td>PS 4 Rehabilitation</td>
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<td>** CAPITAL BUDGET EXPENSES**</td>
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<td>$2,016,000</td>
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<td>$290,000</td>
<td>$299,000</td>
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<td>Capital Budget Expenses</td>
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<td>$281,000</td>
<td>$290,000</td>
<td>$299,000</td>
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<td></td>
<td>PS 14 Service Area I/II Study</td>
<td>$250,000</td>
<td>$250,000</td>
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<td>Chlorides Study</td>
<td>$100,000</td>
<td>$100,000</td>
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<td>** TOTALS BEFORE NUTRIENT REMOVAL PROJECTS**</td>
<td>$187,847,000</td>
<td>$94,551,000</td>
<td>$8,866,000</td>
<td>$8,698,000</td>
<td>$13,100,000</td>
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<td></td>
<td>** NUTRIENT REMOVAL PROJECTS**</td>
<td>$125,000,000</td>
<td>$12,437,500</td>
<td>$312,500</td>
<td>$1,687,500</td>
<td>$10,125,000</td>
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<td></td>
<td>Advanced Phosphorous Removal Facilities ($100 million over 6 years)</td>
<td>$25,000,000</td>
<td>$0</td>
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<td></td>
<td>Advanced Nitrogen Removal Facilities (beyond 6 year planning period)</td>
<td>$75,000,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
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<td></td>
<td>** TOTALS INCLUDING NUTRIENT REMOVAL FACILITIES ALTERNATIVE**</td>
<td>$387,847,000</td>
<td>$106,988,500</td>
<td>$9,178,500</td>
<td>$10,385,500</td>
<td>$23,225,000</td>
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<td></td>
<td>Adaptive Mgt. ($125K/year * 3 yr, pilot study, $405K/year - 2016+ for 20 yrs.)</td>
<td>$8,500,000</td>
<td>$2,874,000</td>
<td>$405,000</td>
<td>$405,000</td>
<td>$405,000</td>
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<tr>
<td></td>
<td>Advanced Nitrogen Removal Facilities (beyond 6 year summary)</td>
<td>$75,000,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
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<td>** TOTALS INCLUDING TRADING/ADAPTIVE MGMNT APPROACH**</td>
<td>$271,347,000</td>
<td>$96,425,000</td>
<td>$9,271,000</td>
<td>$9,103,000</td>
<td>$13,505,000</td>
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</table>
Project Summaries and Business Cases
Summary descriptions for each of the projects in Table 11 are included in Appendix A. The projects are categorized by Nine Springs Wastewater Treatment Plant Projects, Conveyance System Projects, or Capital Budget Expenses. Conveyance System Projects are further categorized by Interceptor Projects, and Pumping Station and Force Main Projects. Project numbering in the appendix matches the numbering in Table 11.

Business case summaries for projects not yet underway were included in the District’s Draft 2014 Capital Improvements Plan published June 26, 2013 and available on the District’s website. Updated business case summaries will be published in a separate supplement to this budget document, but may not be available until the final approved budget is published. Please note that some projects have been included as placeholders or allowances to identify a need and that the details have not yet been fully developed. This may be due to a number of reasons including waiting for a study to be completed, lack of knowledge as to how the District’s next permit will affect the outcome, or a lack of understanding of how new facilities or operation may change project requirements. Although the details are yet not fully known, it is known and likely that funds will be required to address the known concern. The amount included is based upon best judgment and represents an order of magnitude rough estimate. For all projects, as better information, study, details, and estimates become available, District staff will update the business cases and their corresponding project cost estimates. The projects as summarized and presented are our best attempt to summarize the need, cost, and justification for ongoing improvements to the District’s infrastructure assets.

Capital Projects Budget Expenses
Planning for the future ensures long-term quality service for the District’s customers. Capital budget expenses typically include planning and studies assessed against the capital fund that are not easily capitalized to a specific asset. The 2013 budget included $250,000 related to ongoing planning efforts in the collection system and treatment plant. The District used some of these funds to obtain additional services from the Capital Area Regional Planning Commission related to collection system projections and preliminary infiltration and inflow analysis in the Pumping Station 14 service area.

For the 2014 budget, $258,000 in funds have been included to follow-up on the District’s Master Plan, to begin implementing the Collection System Facilities Plan recommendations, and to complete the District’s Plant Asset Management Plan. Additionally, the District will be placing a greater emphasis on asset management and will begin developing a more formal approach to asset management. The Asset Management Program will include a new Sustainable Infrastructure Manager, who will be responsible for program development and implementation. For 2014, we have also included a $250,000 expenditure for an inflow and infiltration study in the Pumping Station 14 service area. This service area includes the very north side of Madison and District areas north of Madison. $100,000 has also been included in this section of the budget to study details and costs associated with reducing chloride levels in the District’s effluent. Although chloride is the driving factor for the study, the District also
hopes to determine ancillary benefits associated with installing chloride treatment technologies, i.e. the ability of technologies to address multiple parameters that have a current or reasonably anticipated regulatory driver (e.g. phosphorus and mercury).

Subsequent Capital Budget Expense category expenditures have been shown in years 2015 through 2019 reflecting an ongoing approach to funding the Asset Management Program and capital budget efforts similar to those funded in the past.

**Capital Projects Cash Flow Summary**

### Table 12

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<tbody>
<tr>
<td>Clean Water Fund Loan Proceeds</td>
<td>$38,409,000</td>
<td>$10,492,000</td>
<td>$13,598,000</td>
<td>$6,376,000</td>
<td>$7,506,000</td>
<td>$11,678,000</td>
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<tr>
<td>Connection Charges Collected</td>
<td>750,000</td>
<td>900,000</td>
<td>1,050,000</td>
<td>1,200,000</td>
<td>1,400,000</td>
<td>1,600,000</td>
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<tr>
<td>Interest</td>
<td>25,000</td>
<td>60,000</td>
<td>100,000</td>
<td>90,000</td>
<td>120,000</td>
<td>130,000</td>
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<tr>
<td><strong>TOTAL REVENUES</strong></td>
<td><strong>$39,184,000</strong></td>
<td><strong>$11,452,000</strong></td>
<td><strong>$14,748,000</strong></td>
<td><strong>$7,666,000</strong></td>
<td><strong>$9,026,000</strong></td>
<td><strong>$13,408,000</strong></td>
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</thead>
<tbody>
<tr>
<td>Nine Springs Wastewater Treatment Projects</td>
<td>$10,420,000</td>
<td>$5,363,000</td>
<td>$6,409,000</td>
<td>$5,638,000</td>
<td>$5,457,000</td>
<td>$6,336,000</td>
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<tr>
<td>Interceptors</td>
<td>1,053,000</td>
<td>2,700,000</td>
<td>1,350,000</td>
<td>1,040,000</td>
<td>2,232,000</td>
<td>2,107,000</td>
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<tr>
<td>Pumping Stations &amp; Force Mains</td>
<td>23,988,000</td>
<td>5,370,000</td>
<td>6,088,000</td>
<td>1,907,000</td>
<td>719,000</td>
<td>4,358,000</td>
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<tr>
<td>Capital Budget Expenses</td>
<td>608,000</td>
<td>265,000</td>
<td>273,000</td>
<td>281,000</td>
<td>290,000</td>
<td>299,000</td>
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<tr>
<td><strong>TOTAL EXPENDITURES</strong></td>
<td><strong>$36,069,000</strong></td>
<td><strong>$13,698,000</strong></td>
<td><strong>$14,120,000</strong></td>
<td><strong>$8,866,000</strong></td>
<td><strong>$8,698,000</strong></td>
<td><strong>$13,100,000</strong></td>
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</tbody>
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<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BEGINNING BALANCE</td>
<td>$3,647,000</td>
<td>$6,762,000</td>
<td>$4,516,000</td>
<td>$5,144,000</td>
<td>$3,944,000</td>
<td>$4,272,000</td>
</tr>
<tr>
<td><strong>TOTAL REVENUES</strong></td>
<td>39,184,000</td>
<td>11,452,000</td>
<td>14,748,000</td>
<td>7,666,000</td>
<td>9,026,000</td>
<td>13,408,000</td>
</tr>
<tr>
<td><strong>TOTAL EXPENDITURES</strong></td>
<td>36,069,000</td>
<td>13,698,000</td>
<td>14,120,000</td>
<td>8,866,000</td>
<td>8,698,000</td>
<td>13,100,000</td>
</tr>
<tr>
<td>ENDING BALANCE</td>
<td>$6,762,000</td>
<td>$4,516,000</td>
<td>$5,144,000</td>
<td>$3,944,000</td>
<td>$4,272,000</td>
<td>$4,580,000</td>
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</table>

**Capital Projects Cash Flow Summary**

Table 12 provides a summary of the District’s construction account cash flow for the period 2014 to 2019. The table includes anticipated revenue and expenditures for this six-year period. Total revenues for the period are anticipated at $95 million with total expenditures anticipated at $95 million and an ending balance of $4.6 million. Specifics related to revenues are provided below, while expenditures were discussed previously as part of the six-year project summary for the District’s Capital Improvements Plan.

The District’s construction account includes revenues from three sources: loan proceeds, interceptor and treatment plant connection charges, and interest received on account balances. The projection anticipates funds from each of these sources during the six-year
period; $88 million from loan proceeds, $6.9 million from collection of connection charges, and
$525,000 from interest.

**Wisconsin Clean Water Fund Loan Program**

We anticipate continued use of the Wisconsin Clean Water Fund Loan program to fund larger
projects and to ensure adequate capital reserves to address any unforeseen capital costs. As of
August 19, 2013, the District has borrowed $164 million from this program for the following
projects:

- Modifications to Pumping Station No. 7 ($1.9 million)
- Eighth Addition to Nine Springs ($19.9 million)
- Replacement of Pumping Station No. 5 ($1.2 million)
- Verona Force Main and Pumping Station ($2.7 million)
- Ninth Addition to Nine Springs ($14.9 million)
- Badger Mill Creek Effluent Return Project ($4.7 million)
- Pumping Station No. 2 Force Main Replacement ($3.8 million)
- Rehabilitation of Pumping Stations 1, 2, & 10 ($8.0 million)
- Tenth Addition to Nine Springs ($35.4 million)
- Effluent Equalization/Aeration Tanks 1-6 Rehab ($1.7 million)
- WI Ext. Replacement/PS 13 & PS 14 Firm Capacity Improvements ($2.6 million)
- Rehabilitation of PS 6 & PS 8/NEI – Truax Extension Liner ($8.4 million)
- NEI – PS 10 to Lien Road and FEI – Cottage Grove Extension Liner ($8.9 million)
- Eleventh Addition ($41.8M as of 8/9/2013 - $50.4M anticipated)
- Operations Bldg. HVAC Rehab ($3.3 million)
- NEI - FEI to SEI Junction ($4.9M as of 8/9/2013 - $8.2M anticipated)

The District also anticipates funding the following future projects with Clean Water Fund Loans:

- Nine Springs Process Control System Upgrade ($ 5.0 million in 2013-2014)
- Pumping Station 18 ($14.8 million in 2013-2015)
- Pumping Station 18 Force Main ($13.5 million in 2014-2015)
- Maintenance Facility/Space Need Improvements ($9.4 million in 2014-2016)
- Rehabilitation of PS 11 and PS 12 ($8.3 million in 2014-2015)
- West Interceptor – West Randall to PS 2 Lining Project ($1.3 million in 2015)
- Plant Energy and Aeration System Projects ($10.1M in 2016-2017)
- Plant Unit Substation Improvements ($1.4M in 2016)
- NEI – West of Airport Lining - Phase 2 ($1.2 million in 2016)
- Rehabilitation of PS 15 ($4.2 million 2016-2017)
- NEI - Truax Lining Project Phase 1 ($1.8 million in 2018)
- Headworks Facility Rehab Project ($4.0M in 2018-2019)
- Plant Peak Capacity Improvements ($4.2M in 2018-2019)
- Metromix Facility Improvements ($1.3 million in 2018)
- Rehabilitation of PS 13 and PS 14 ($8.9 million in 2019-2021)
- UV Disinfection System Replacement/Rehab ($5.5M in 2019-2020)
If facilities are required for phosphorous and/or nitrogen removal in lieu of trading or adaptive management approaches, the District will have additional borrowing related to construction of these facilities. We anticipate that this additional borrowing would most likely be from the Clean Water Fund Loan program and would represent significant additional borrowing, anticipated at $125 million and $75 million respectively.
Section 4

Debt Service

1930 - Original Service Area

2013 - Service Area
Overview

The District’s Debt Service Budget supports the District’s Capital Budget and Capital Improvements Plan. The District collects service charge revenues into the Operating Budget to meet debt service obligations. By October 1 of each year, the District deposits sufficient funds, enough to make principle and interest payments for the following year, in a designated debt service fund. Doing so allows the District to abate levying a property tax to meet its debt service obligations. As part of a rate smoothing strategy, the District may deposit in a particular year more or less revenue in the Debt Service Fund than is needed to fund the following year’s debt service.

Table 13 provides a summary of the 2012 through 2014 Debt Service Budget details. The District pays principal payments on its Clean Water Fund loans on May 1 of each year and interest payments each November 1 and May 1.

### 2014 Debt Service Budget

#### REVENUES

<table>
<thead>
<tr>
<th>REVENUE CATEGORY</th>
<th>2012 Actual</th>
<th>2013 Thru June</th>
<th>Estimated 2013 Total</th>
<th>2013 Budget</th>
<th>Proposed 2014 Budget</th>
<th>Percent Change</th>
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<tbody>
<tr>
<td>Transfer from Operating Fund</td>
<td>$8,980,000</td>
<td>$0</td>
<td>$9,878,000</td>
<td>$9,878,000</td>
<td>$10,865,000</td>
<td>9.99%</td>
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<td>Interest</td>
<td>118,579</td>
<td>(10,596)</td>
<td>1,000</td>
<td>70,000</td>
<td>18,000</td>
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<td>TOTAL REVENUES</td>
<td>$9,098,579</td>
<td>($10,596)</td>
<td>$9,879,000</td>
<td>$9,948,000</td>
<td>$10,883,000</td>
<td>9.40%</td>
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</table>

#### EXPENDITURES

<table>
<thead>
<tr>
<th>EXPENSE CATEGORY</th>
<th>2012 Actual</th>
<th>2013 Thru June</th>
<th>Estimated 2013 Total</th>
<th>2013 Budget</th>
<th>Proposed 2014 Budget</th>
<th>Percent Change</th>
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<tr>
<td>First Half Interest</td>
<td>$880,813</td>
<td>$1,219,409</td>
<td>$1,219,409</td>
<td>$1,322,000</td>
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<td>Principal</td>
<td>6,321,212</td>
<td>5,114,733</td>
<td>5,114,733</td>
<td>5,126,000</td>
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<td>Second Half Interest</td>
<td>976,600</td>
<td>-</td>
<td>1,462,000</td>
<td>1,726,000</td>
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<td>18.06%</td>
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<tr>
<td>TOTAL EXPENDITURES</td>
<td>$8,178,625</td>
<td>$6,334,142</td>
<td>$7,634,142</td>
<td>$7,910,000</td>
<td>$8,844,000</td>
<td>11.81%</td>
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#### DEBT SERVICE FUND BALANCE

<table>
<thead>
<tr>
<th>DEBT SERVICE FUND BALANCE</th>
<th>2012 Actual</th>
<th>2013 Thru June</th>
<th>Estimated 2013 Total</th>
<th>2013 Budget</th>
<th>Proposed 2014 Budget</th>
<th>Percent Change</th>
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<tr>
<td>BEGINNING BALANCE</td>
<td>$12,922,260</td>
<td>$13,842,214</td>
<td>$13,842,214</td>
<td>$13,820,235</td>
<td>$16,087,072</td>
<td>16.40%</td>
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<tr>
<td>TOTAL REVENUES</td>
<td>$9,098,579</td>
<td>($10,596)</td>
<td>$9,879,000</td>
<td>$9,948,000</td>
<td>$10,883,000</td>
<td>9.40%</td>
</tr>
<tr>
<td>TOTAL EXPENDITURES</td>
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<td>$6,334,142</td>
<td>$7,634,142</td>
<td>$7,910,000</td>
<td>$8,844,000</td>
<td>11.81%</td>
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<tr>
<td>ENDING BALANCE</td>
<td>$13,842,214</td>
<td>$7,497,476</td>
<td>$16,087,072</td>
<td>$15,858,235</td>
<td>$18,126,072</td>
<td>14.30%</td>
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</table>
2014 Debt Service Fund Balance

The Debt Service Fund ending balance is projected to increase by 14.3% to $18.1 million in 2014. The increase is required to pay principal and interest payments on existing and anticipated Clean Water Fund loans.

Six-Year Debt Service Summary

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<tr>
<td>DEBT SERVICE PAYMENTS</td>
<td>$8,844,000</td>
<td>$13,377,000</td>
<td>$12,843,000</td>
<td>$13,744,000</td>
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<td>DEBT SERVICE COLLECTED IN RATES</td>
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<tr>
<td>Debt Service Requirements</td>
<td>13,379,587</td>
<td>12,843,000</td>
<td>13,744,000</td>
<td>14,142,000</td>
<td>14,582,000</td>
<td>15,448,000</td>
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<td>Transfers to (from) Debt Service Fund</td>
<td>(2,514,587)</td>
<td>(891,000)</td>
<td>(597,000)</td>
<td>320,000</td>
<td>675,000</td>
<td>649,000</td>
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<tr>
<td>DEBT SERVICE RESERVES INCLUDED IN SERVICE CHARGE RATES</td>
<td>$10,865,000</td>
<td>$11,952,000</td>
<td>$13,147,000</td>
<td>$14,462,000</td>
<td>$15,257,000</td>
<td>$16,097,000</td>
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<tr>
<td>PRINCIPAL AMT. OF OUTSTANDING DEBT AT FIRST OF THE YEAR</td>
<td>$112,228,000</td>
<td>$145,058,000</td>
<td>$146,151,000</td>
<td>$151,015,000</td>
<td>$148,052,000</td>
<td>$145,718,000</td>
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</table>

Six-Year Debt & Debt Service

In Table 14, the bottom line shows the effect that future Clean Water Fund loans will have on the District’s principle amount of outstanding debt as of the first of each year 2014 through 2019. Thus on January 1, 2014, anticipated District debt will be roughly $112 million while on January 1, 2019 it will be roughly $146 million.

The Wisconsin Statutes sets the District’s legal debt limit at 5 percent of the equalized property valuation of the District. For 2012, the equalized property valuation was $36.31 billion. Therefore, the District’s legal debt limit as of January 1, 2013 was $1.82 billion. At the end of 2012, the District’s debt of $91.7 million was at 5.0 percent of this limit. If the debt limit does not increase, the District’s debt in 2019 would be no more than 9 percent of this limit.

Although the District’s debt has increased during 2013 and the equalized property valuation has not yet been updated for 2013, it is clear from the 2012 numbers that the District’s debt, though increasing, will not exceed its legal limit over the time period shown in Table 14. However, other factors such as EPA’s affordability criterion (i.e., 2% of median household income for wastewater services) and other local and regional factors can and will be considered when assuming more debt.

Table 14 also shows the resulting levels of debt service that will be collected and paid from service charge revenues during the period of 2014 to 2019.
Debt Stabilization

In 2004, the District transferred $1,515,000 from the General Fund to the Debt Service Fund above the amount necessary to satisfy the 2004 debt service requirements. Those extra funds have been used strategically, beginning in 2005, to smooth and limit the annual increases in the future debt service expenses raised through service charges. In 2005 and 2006, these funds were used to limit the increase to 2.0 percent. Due to projected increases in the cost of future collection system and treatment plant projects, beginning in 2007 the annual increase was raised to 3.4 percent. For the 2010 and 2011 budgets, due to further projected increases in the cost of future collection system and treatment plant projects, including the Eleventh Addition, we projected annual increases of at least 4.8 percent in debt service expenses over an extended period would be necessary to fund the District’s ongoing capital improvements.

For 2012, a significant increase in projected debt service required the annual amount collected for debt service (the transfer rate) to increase to 12% and it appeared that similar increases would be required through the year 2016. Since the Eleventh Addition project will cost about 10 million dollars less than anticipated for the 2012 budget, the required increase in the amount collected for debt service was decreased to 10% for 2013 and that level of increase will be required through 2017.

After 2017, the transfer rate increases taper back to 3% after being at 9% for 2018 and 5% for 2019 and 2020. However, this does not take into account increases that may be required for advanced phosphorous or nitrogen removal facilities, or any additional costs for trading or adaptive management approaches. A large portion of the increase over the 2013 projection is still associated with the anticipated additional debt service required for the Eleventh Addition and for Pumping Station 18 and related projects. Should project costs change significantly from the projections, next year’s projections will be modified accordingly.

The actual cash flows and costs for the projects in this summary will have significant impacts on the District’s resulting debt service. Although, as with any projection, there is some uncertainty related to what those actual project cash flows and costs will be, there is certainty that the District’s debt is increasing due to the Eleventh Addition and other ongoing projects and that we will soon have a better understanding of the total costs of several other major pending projects. The importance of keeping ahead of the District’s growing debt service needs cannot be overstated; by keeping ahead of its pending debt, the District will help prevent more significant rate increases in future years. Thus, given the present outlook, we believe and recommend that maintaining the transfer growth rate at 10 percent through 2017 is appropriate and necessary.

Current Debt Service Payment

Currently all debt is financed through the state of Wisconsin Clean Water Fund program. The District makes principal payments on its long-term debt in May of each year, and interest payments in May and November of each year. Future principal and interest due on long-term debt incurred as of September 30, 2013 are approximately as shown in Table 15.
Debt Service Payment Schedule

<table>
<thead>
<tr>
<th>YEARS ENDING DECEMBER 31&lt;sup&gt;ST&lt;/sup&gt;</th>
<th>PRINCIPAL</th>
<th>INTEREST</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>0</td>
<td>1,287,426</td>
<td>1,287,426</td>
</tr>
<tr>
<td>2014</td>
<td>5,453,030</td>
<td>2,574,189</td>
<td>8,027,219</td>
</tr>
<tr>
<td>2015</td>
<td>7,549,574</td>
<td>2,390,701</td>
<td>9,940,275</td>
</tr>
<tr>
<td>2016</td>
<td>9,448,956</td>
<td>2,199,417</td>
<td>11,648,373</td>
</tr>
<tr>
<td>2017</td>
<td>6,621,625</td>
<td>2,024,420</td>
<td>8,646,045</td>
</tr>
<tr>
<td>2018-2022</td>
<td>33,706,596</td>
<td>7,472,828</td>
<td>41,179,424</td>
</tr>
<tr>
<td>2023-2027</td>
<td>24,364,384</td>
<td>3,513,419</td>
<td>27,877,803</td>
</tr>
<tr>
<td>2028-2032</td>
<td>16,146,644</td>
<td>883,018</td>
<td>17,029,662</td>
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<tr>
<td>2033</td>
<td>356,754</td>
<td>4,952</td>
<td>361,706</td>
</tr>
<tr>
<td>TOTAL</td>
<td>103,647,563</td>
<td>22,350,370</td>
<td>125,997,933</td>
</tr>
</tbody>
</table>

Charts/Scenarios

The attached charts are intended to help provide a better picture of the District’s future debt service needs. The charts all show the annual amounts collected through service charges and used to fund capital projects or pay debt service since 1997. Each chart also provides a forecast for the next twenty years of: 1) the amount of required funds that the District will have to deposit in a debt service reserve each year to satisfy the bond ordinances; and 2) the projected annual amounts that the District will have to collect through service charges to address debt service.

Assumptions

Although the capital projects summary does not show expenditures and revenues beyond six-years, the projection includes known projects through 2023 and in some cases beyond. In addition, beginning in 2024, expenditures are included for the projects that begin in 2023 or earlier but run past the end of the projection, as well as assumed costs for undefined projects. The assumed costs for the undefined future projects are based on annual expenditures of $10 million (in 2013 dollars). That amount is inflated to the correct year for each year where it is included in the projection; inflation is assumed at 3 percent per year. These represent longer-range projects that will result from the District’s future Collection System Facilities Plan and Plant Asset Management Plan updates and the ongoing interceptor and Plant inspection and maintenance programs. Identification and prioritization of these projects will be addressed in future budgets as specific projects are defined.

The costs for Plant additions associated with new phosphorous limits and potential nitrogen limits are, at this time, not entirely definite. The scenario assumes the new limits for phosphorous would require the addition of chemical polishing and effluent filtration processes with associated capital costs estimated to be $125 million (future costs in 2016-2022). Likewise, new tanks and processes associated with advanced nitrogen treatment are assumed...
to be $75 million (future costs 2020-2026), and adaptive management approaches are assumed to cost $405,000 per year starting in 2016 with pilot study costs of $127,000 from 2013 to 2015. Actual costs could be more or less than these assumptions and those differences will affect each scenario accordingly.

Note that the comparison between adaptive management and phosphorous removal facilities is somewhat inaccurate since adaptive management would likely be a program cost that appears in the District’s operating budget versus a facilities cost included in the District’s capital budget. However, the method we have used provides the simplest means to compare the two alternatives and to show the large magnitude of cost differences between the two alternatives.

**Chart 1** shows debt service for anticipated projects assuming no additional projects or debt for nutrient removal. As discussed previously, transfer rate increases of 10 percent from 2014 to 2017 would be required to fund debt service associated with the Eleventh Addition and other near-term projects. In 2018 and 2019, the transfer rate decreases to 5.5 percent; and in 2020 and beyond, the transfer rate will be 3 percent or lower.

**Chart 2** shows the effect of the debt for a $125 million Plant expansion related to advanced phosphorous treatment. In this scenario, construction of such a facility is anticipated in 2020 and 2021. The chart also shows the impact of a $75 million Plant expansion related to advanced nitrogen treatment. For purposes of this scenario, construction of such a facility is anticipated in 2024 and 2025.

**Chart 3** still includes the impact of a $75 million Plant expansion related to advanced nitrogen treatment; however, in lieu of a Plant expansion for advanced phosphorous treatment, the projection shows $127,000 per year for pilot study costs from 2013 to 2015 and $405,000 per year starting in 2016 to address adaptive management needs. Note that the $127,000 or $405,000 per year would most likely be an additional operating expense and not a debt service expense. However, these expenses are shown on the chart as a simple means to show the significant differences of the alternatives.

Please note that success of an adaptive management approach does not directly increase the amount of funds available to the District for other purposes, it merely means that the District would not incur the additional debt that would otherwise be required to construct advanced phosphorous treatment facilities. By comparison, the District’s anticipated debt at the beginning of 2022 would increase to $285 million or roughly 75% more than its anticipated debt of $163 million without construction of such advanced treatment facilities.

It is difficult to estimate service charge rates directly since there are so many variables that affect them. The discussion herein is provided for comparative purposes only and may not reflect actual rate increases, especially for different communities served by the District. Debt service increases in the 10 percent range may mean increases for a typical District household in the neighborhood of $7 to $8 more each year. This would add to any increase or decrease resulting from changes in general operating expenses. Thus, at the end of four years (through
a typical household could be paying roughly $30 more per year for the additional debt service.

Under the Plant expansion scenario, i.e., construction of advanced phosphorous treatment facilities and advanced nitrogen facilities, a typical resident in 2026 might pay $20 per month in debt service versus the $6 per month they now pay in 2013. Under the phosphorous trading/adaptive management approach, a resident in 2026 might pay $15 per month to cover debt service. In addition, they may pay an additional $0.20 to $0.40 per month for the District’s adaptive management program costs. (Please note that these numbers are very speculative and reflect numerous assumptions.)

The intent of the tables and charts is to provide long-term projections of what might happen. Note that the charts go beyond the planning horizon of ten years. A word of caution; the projections are based upon assumptions that are subject to change. Items in the near-term are less likely to change or change as significantly as items further into the future. Even though the debt service trend appears generally to follow the assumed general inflation rate beyond ten years, changes in regulations, system renewal, new initiatives, system growth, changes in services provided, and other circumstances are likely to occur that will require additional construction not anticipated in the model. Most likely, those unforeseen changes would require the District to incur additional debt over and above the projections; however, in some instances, the result may be less debt.

It is not possible to envision or project all of the possible scenarios that might happen. That is why the District’s Capital Improvements Plan is a continuous ongoing and evolving process. Planning occurs throughout the year, not just at planning and budgeting time. It is also the reason that formal plans and budgets are updated annually for presentation to the Commission and to the general public. As new information becomes available, plans, schedules, and corresponding estimates must change accordingly. Given the information available when developed, this Capital Improvements Plan and subsequent Capital Budget and debt analysis represent our best prospective view of the scope of projects we see going forward, their relative timeframes, their relative levels of cost, and the level of debt the District is likely to incur.
Chart 1

Annual Transfers Included in Service Charge Rates and Annual Requirements of Debt Service Fund

Future debt service expense is based on estimates for actual anticipated projects through 2025 plus estimated project costs of $10 million per year (2013 dollars increasing at 3% per year) beginning in 2026. Assumes no nutrient removal projects and Clean Water Fund effective loan rates of 4% for loans beyond 2013.

Transfer amount increases by 10% per year for 2014 thru 2017, 5.5% in 2018 and 2019, and 3% thereafter.
Chart 2

Debt Service Requirements
Scenario includes nutrient removal facilities for phosphorus and nitrogen

Scenario includes $125 million Plant addition to construct advanced phosphorus treatment facilities - construction in 2020 and 2021 - and a $75 million Plant addition to construct advanced nitrogen treatment facilities - construction in 2024 and 2025.
Chart 3

Debt Service Requirements
Scenario includes adaptive management and nitrogen removal facilities

Scenario includes $125,000 per year from 2013 through 2015 for pilot study costs and $405,000 per year beginning in 2016 for adaptive management program costs. Additionally, the scenarios includes a $75 million Plant addition to construct advanced nitrogen treatment facilities - construction in 2024 and 2025.
Section 5

Appendices

May 19, 1936 - 1st sewage being treated

May 11, 1955 - Sludge Control Bldg.

1947 - District Maintenance Employees

Feb. 10, 1935
Blower Bldg. - Check on Boiler Boilers
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Appendix A: Project Summaries

Nine Springs Wastewater Treatment Plant Projects

TP-1. Eleventh Addition to Nine Springs Wastewater Treatment Plant

The Eleventh Addition project’s multi-faceted improvements to the Plant will:

A. Increase the Plant’s solids handling capacity to the year 2030.
B. Improve biosolids handling with higher temperature digestion processes providing the District with Class A biosolid products and a diversified biosolids end-use program.
C. Harvest struvite from the District’s biosolids processing stream, thereby decreasing the amount of phosphorous in its biosolids end-products while improving Plant operations and allowing sale of the struvite back to the system vendor.
D. Mitigate plant operational problems associated with grease and foaming.

Design of the Eleventh Addition facilities, related to recommendations contained in the Solids Handling Facilities Plan, began in late 2009 and continued into the fall of 2011. Design phase costs totaled about $3.4 million. The project bid in the fall of 2011 and resulted in a near $40 million dollar construction contract, awarded to C.D. Smith. The budget projection anticipates $50 million for the entire project including planning, design, and construction. Construction began in late 2011 with project completion anticipated in mid to late 2014. Major work includes construction of two acid digesters, two anaerobic digesters and related control building, a waste activated sludge thickening facility, a struvite harvesting facility, and other plant improvements. This project is financed through a Clean Water Fund Loan.
TP-2. **New Maintenance Facility/Space Needs Improvements**

A new maintenance facility would provide District staff with the necessary tools and equipment to address maintenance space needs well into the future. In August 2012, the District hired a consultant to conduct a space needs analysis for its existing maintenance facilities and operations space in order to help determine the best long-term facilities solution for its maintenance and operation needs. The District spent $37,000 in 2012 and anticipates spending $343,000 in 2013 to finish the needs study and begin the related design phase. The plan anticipates spending $9.4 million total assuming new maintenance facility construction in late 2014 to 2015 followed by space needs improvements in the Operations Building and existing Maintenance Shop 1, potentially into early 2016. The space needs improvements to the Operations Building and Maintenance Shop 1 may be included as optional construction during the new maintenance facility bidding process. Project estimates will be updated throughout the design and construction phases. The projection anticipates that the District will finance the project with a Clean Water Fund Loan.

TP-3. **Nine Springs Process Control System Upgrade**

The process control system upgrade will improve reliability and efficiency, and address existing control system obsolescence. The District installed its existing process control system in 1996 as part of the Ninth Addition to the Plant. Although fully functional, parts of the system are obsolete and in need of new computers, software upgrades, and controller replacements. Facility planning took place during 2010 and 2011 with design beginning in late 2011 and implementation commencing in the fall of 2012. Implementation includes replacement of the operations reporting system, purchase of a new development system, and construction to replace the process control system hardware and software. The project is scheduled for completion by the end of 2014 with total project costs of $5.0 million financed through use of a Clean Water Fund Loan.

TP-4. **Engine Stacks and Oxidation Catalysts**

The District’s air permit requires the District to install taller exhaust stacks on the District’s three gas engines. In addition, the Wisconsin DNR requires oxidation catalysts to be installed on all three engines; however, installation of one catalyst will take place in 2013 and will help determine if oxidation catalysts are a feasible technology for installation on digester gas exhaust. This $300,000 project anticipates stack and catalyst modifications to all three engines. The work, initially projected for completion in 2013, could include work related to the oxidation catalysts in 2014 if the first oxidation catalyst proves successful. The project is funded from Capital Fund reserves.

TP-5. **Operations Building HVAC System Rehab**

A refurbished heating, ventilating, and air conditioning system improved the overall environment and impression of the Operations Building. Design for the Operations Building HVAC Rehabilitation project began in 2010 with Affiliated Engineer’s thorough
review of the existing control and mechanical systems. The review concluded that deficiencies existed in those systems requiring replacement and/or refurbishment. To meet a fall 2011 construction start, the District began the design phase in October 2010, completing design in late spring of 2011 with total design phase costs of $230,000. Construction began in July 2011 and included replacement or modification of HVAC controls, chillers, ductwork, and air handling units. The project, which closed out June 2013 with a final cost of roughly $3.3 million, was financed through use of a Clean Water Fund Loan.

**TP-6. Plant Energy and Aeration System Projects**

Improving the efficiency of the Plant’s generation and aeration systems will reduce overall Plant energy use and improve Plant performance. The purpose of this project is to address issues related to inefficiencies, replacement, and operations and maintenance of the secondary treatment system aeration-related equipment including blowers, diffusers, control systems, electrical systems, dissolved oxygen probes, and transmitters. Projects identified during the 2013 Energy Study, potentially relating to the Plant’s generation systems and process improvements, and changes required by the District’s permit renewal in 2015 may be included. The CIP includes $10.1 million in funds as a placeholder for these related projects. Cost estimates and project details will be presented as they become more refined. The projection anticipates planning and design in 2014 and 2015, construction in 2016 and 2017, and financing through the Clean Water Fund Loan program.

**TP-7. Plant Unit Substation Improvements**

Improving the Plant’s system of low voltage substations will help insure reliable power for Plant operation. Three of the District’s low voltage unit substations are approaching the end of their useful lives. This project will update the power system as necessary to maintain power to all Plant loads fed by these substations. The CIP includes $1.45 million (2015 design, 2016 construction and anticipates that the project will be financed with a Clean Water Fund Loan.

**TP-8. Headworks Facility Rehab Project**

Keeping the Plant’s Headworks Facility in proper working condition will help provide effective Plant operation. The Headworks Facility provides screenings and grit removal for the entire Plant; processes that require significant attention and maintenance. The intent of this project is to address issues related to inefficiencies in the operations and maintenance of raw wastewater screening, screenings handling, grit handling, and septage receiving equipment and facilities. The project will also investigate the possibility of providing back-up power for the Headworks Building. The CIP includes $4.0 million as a placeholder for related work, with planning and design in 2016 and

**TP-9. Plant Peak Capacity Improvements**
Adding capacity or diversion capability will help the District address peak flows to the Plant. With the construction of Pumping Station 18, the conveyance system has the potential of overwhelming the Plant’s hydraulic capacity. Potential alternatives to address this concern include, but are not limited to, adding influent storage, adding diversion/return capacity to/from the lagoons, blending options, and adding Plant capacity to the areas that are hydraulically deficient. The CIP includes a $4.2 million placeholder to address peak flows with planning and design occurring in 2016 and 2017, and construction in 2018 and 2019. The Plan anticipates financing through use of a Clean Water Fund Loan.

**TP-10. UV Disinfection System Replacement/Rehab**
Replacing the District’s aging infrastructure will help insure the District continues to treat its wastewater successfully and operate within its permit limits. The ultraviolet disinfection system, installed during the Ninth Addition in the mid-1990s, will need refurbishment or replacement to continue to disinfect the District’s effluent prior to discharge from the Plant. Planning and design would occur in 2017-18 with construction following in 2019-20. The CIP includes $5.5 million as a placeholder with funding anticipated through use of the Clean Water Fund Loan program.

**TP-11. Metromix Facility Expansion**
Diversifying the District’s biosolids program helps ensure long-term markets for the District’s biosolids. This project would expand the size of the existing Biosolids End-Use Facility providing additional space to process and store soil-amendment products. The CIP includes $1.3 million, anticipating design in 2017 and construction in 2018. Funding would be through use of the Clean Water Fund Loan program.
TP-12. Annual Clarifier Coating

Recoating clarifiers increases their life and value, insuring that they can serve the District’s operation well into the future. The 2013 budget included funds to sandblast and coat the metal components on two final clarifiers. For 2014, we have included $160,000 to coat two more clarifiers. The 2014 coating projects will be funded from Capital Fund reserves.

TP-13. Annual Pavement Improvements

Replacing the District’s damaged roadways provides unimpaired access for District and customer vehicles; where possible, the District looks at environmentally friendly alternatives. The 2013 budget included just $25,000 in funds to replace damaged roadways within the Plant since some roadway replacement was also included as part of the Eleventh Addition. For 2014, the projection includes $30,000 for pavement improvements. Subsequent years include $144,000 for improvements in year 2015 and escalating 3 percent annually for years following. Pavement projects are typically funded through Capital Fund reserves.

Interceptors

CS-1. NEI-Far East Int. to Southeast Int. Junction

A relief sewer for this portion of the Northeast Interceptor provides additional capacity for the District’s east side well into the future. The Northeast Interceptor from its junction with the Far East Interceptor to its junction with the Southeast Interceptor consists of approximately 5,600 feet of 48-inch concrete sewer that is in need of capacity relief. Design of the project began in May 2011 in close coordination with the Pumping Station 18 and Pumping Station 18 Force Main projects. The design has been completed and construction began in April of 2013, with completion scheduled by the end of 2013. Total project cost is estimated at $8.2 million. The District is financing this project with a Clean Water Fund Loan.
CS-2. **NSVI-Morse Pond Extension**
A new interceptor to the Morse Pond area will provide sewer service to new locations within the region. This project extends a new leg of the District’s Nine Springs Valley Interceptor to the Morse Pond area to serve future development near the intersection of County Highways M and PD, north of Verona. Approximately 3,100 feet of new interceptor will serve growth in the Cities of Verona and Madison. Preliminary design began in 2012 and will continue into 2014 with construction planned for 2015. Staff estimates total project cost at $837,000 with project funding anticipated from Capital Fund reserves.

CS-3. **NEI-Rehab West of Airport (lining project) – Phase 1**
Lining this portion of the District’s Northeast Interceptor will bring it back up to District standards and ensure long-term quality service for the customers served. As part of the District’s ongoing sewer maintenance program, the District televises portions of its interceptor system on an annual basis. This portion of the Northeast Interceptor, located west of the Dane County Airport, was found to be deficient and is in need of rehabilitation via a cured-in-place liner. Lining will consist of three phases with Phase 1 occurring in 2014. Phase 1 includes the most deficient areas. Staff estimates total project cost for Phase 1 at $933,000 with project funding anticipated from Capital Fund reserves.

CS-4. **West Int.-West Randall to Near PS2 (lining project)**
This interceptor was constructed in 1916 and is one of the District’s oldest facilities in the collection system. The District’s sewer televising program identified this portion of the West Interceptor along Randall Avenue and Regent Street to be deficient and in need of lining. Flows in the service area will be studied further in 2013 and 2014 to determine if additional capacity is required for segments of the interceptor. Assuming adequate capacity exists, approximately 5,000 feet of 24-inch sewer will be lined in 2015 at an estimated cost of $1.35 million. The District anticipates financing this project with a Clean Water Fund Loan.

CS-5. **Rimrock Int. Replacement/Relief**
Replacing the District’s Rimrock Interceptor will improve the District’s conveyance system by decreasing inflow and infiltration. The District televised the Rimrock Interceptor in 2009, finding a variety of deficiencies that included areas with root intrusion, sags, and infiltration. This sewer section has also been under further evaluation for capacity relief. Present plans include replacement of the existing sewer in 2015 at a total project cost of $678,000 with project funding anticipated from Capital Fund reserves.
CS-6. **NEI-Rehab West of Airport (lining project) – Phase 2**
Lining of this portion of the District’s Northeast Interceptor will bring it back up to District standards and ensure long-term quality service for the customers served. As part of the District’s ongoing sewer maintenance program, the District televises portions of its interceptor system on an annual basis. This portion of the Northeast Interceptor, located west of the Dane County Airport, was found to be deficient and is in need of lining. Lining will consist of three phases with Phase 2 scheduled for 2016. Phase 2 includes areas that are less deficient than Phase 1, but still in need of attention. Staff estimates total project costs for Phase 2 of $1.17 million with financing anticipated through a Clean Water Fund Loan. Phase 3 consists of areas that will need attention at some time in the future but have less urgency than the Phase 1 and Phase 2 locations. Phase 3 lining has not been scheduled at this time.

CS-7. **Northend Int. – Sherman Avenue (lining project)**
This short section of interceptor along Sherman Avenue is in need of rehabilitation. Lining this portion of the Northeast Interceptor will address condition deficiencies in the 86-year old sewer and prolong its service life. The section to be lined consists of 1,480 feet of 10-inch and 12-inch sewer. District staff anticipates lining this sewer in 2016 at a total project cost of $164,000 funded from Capital Fund reserves.

CS-8. **Lower Badger Mill Creek Int. Phases 3 & 4 (CS-8a and CS-8b)**
Completion of the Lower Badger Mill Creek Interceptor will provide gravity sewer service for the entire Lower Badger Mill Creek drainage basin. A portion of the Lower Badger Mill Creek Interceptor construction, Phase 3 - originally scheduled for 2016, will be completed in 2013 as a joint project between the District, the City of Verona, and Epic Systems Corporation extending service 900 feet further to the north from the location where Phase 2 ended near Northern Lights Road in Verona. The project will meet all District standards of construction, but will be constructed at no cost to the District except for project inspection costs. Staff now anticipates that Phase 4, about 3,850 feet of sewer from the end of Phase 3 to County Highway PD, will be constructed in 2017. Total project costs for Phase 4 are anticipated to be $979,000 funded from Capital Fund reserves.

CS-9. **NEI-Truax Extension (lining project) – Phase 1**
Approximately two miles of the Truax Extension, from the end of the Pumping Station 13 Force Main to Lien Road, has been found to be deficient and in need of rehabilitation. Lining the Northeast Interceptor from Lien Road to the end of the
Pumping Station 13 Force Main will correct existing condition defects and prolong the service life of the sewer. This first phase, scheduled for 2018, will cover approximately one-third of the distance. Construction of the two subsequent phases will occur beyond the six-year planning window. District staff anticipates funding the Phase 1 costs of $1.83 million with a Clean Water Fund Loan.

**CS-10. NEI-Truax Extension Relief**

The Truax Extension, from the end of the Pumping Station 13 Force Main to Lien Road will require capacity relief in approximately the year 2020. In order to provide the necessary system capacity it is proposed to preserve and rehabilitate the existing sewer with a cured-in-place liner and to provide additional capacity through the installation of approximately 9,750 feet of new sewer. Design of the relief sewer is scheduled to occur in 2019, with construction beginning in 2020. Total project costs are estimated to be $8.92 million with anticipated funding through a Clean Water Fund Loan.

**CS-11. West Int.– PS 5 to Gammon Junction (lining project)**

This section of the West Interceptor was inspected in 2009 as part of the District’s sewer televising program and was found to be suffering from internal corrosion. It is proposed that 3,550 feet of 18-inch diameter sewer upstream of Pump Station 5 be lined to extend the service life of this 82-year old facility. District staff anticipates lining this sewer in 2018 at a project cost of $436,000 funded from Capital Fund reserves.

**CS-12. NEI-Far East Int. to Southeast Int. Junction (lining project)**

This section of the Northeast Interceptor consists of 5,600 feet of 48-inch diameter reinforced concrete sewer. It was televised in 2010 and 2011 as part of the District’s sewer televising program and contains defects related to corrosion of the interior concrete surface. Approximately 2,300 feet of the section will be abandoned upon completion of the District’s ongoing NEI–SEI to FEI Replacement/Relief project. District staff anticipates lining the remaining 3,300 feet of sewer in 2019 at a cost of $1.46 million funded from Capital Fund reserves.

**CS-13. NEI-Truax Extension (lining project) – Phase 2**

Approximately two miles of the Truax Extension, from the end of the Pumping Station 13 Force Main to Lien Road, has been found to be deficient and in need of rehabilitation. Lining the Northeast Interceptor from Lien Road to the end of the Pumping Station 13 Force Main will correct existing condition defects and prolong the service life of the sewer. The first phase, scheduled for 2017, will cover approximately one-third of the distance. Design of the second phase of the project will occur in 2019, with construction scheduled for 2020. A schedule for Phase 3 has not yet been determined. District staff anticipates funding the Phase 2 costs of $2.12 million with a Clean Water Fund Loan.
CS-14. PS 18 Construction

Pumping Station 18 and its force main will increase the capacity and reliability of the District’s conveyance system. Pumping Station 7 is expected to reach firm capacity prior to the year 2020. A new Pumping Station 18, located just off of East Broadway in Monona, will provide capacity relief for Pumping Station 7 and provide much needed redundancy for the east side of the District’s collection system. Design of the project began in May 2011 with construction scheduled to begin in fall of 2013. The Pumping Station 18 Force Main and Northeast Interceptor Relief (SEI Junction to FEI Junction) projects will be coordinated with the construction of Pumping Station 18. Total project costs for construction of Pumping Station 18 are estimated at $14.8 million. The District will finance this project with a Clean Water Fund Loan.

CS-15. PS 18 Force Main Construction

The Pumping Station 18 Force Main will provide means to convey raw wastewater from Pumping Station 18 to the Headworks Facility at the Nine Springs Wastewater Treatment Plant. Approximately 650 feet of 42-inch pipe was installed at the treatment plant during the Tenth Addition construction in anticipation of this project. An additional 15,000 feet of 48-inch force main will be constructed as part of this project. Design began in May 2011 in conjunction with the design of Pumping Station 18 and relief of the Northeast Interceptor between the Southeast Interceptor and the Far East Interceptor. Total project costs for the force main construction are estimated at $13.5 million. The project will bid in the fall of 2013 with the majority of the construction taking place in 2014. The District will finance this project with a Clean Water Fund Loan.

CS-16. PS 11 and 12 Rehabilitation

Rehabilitating Pumping Stations 11 and 12 will bring old facilities to like new condition. The District has identified many of its pumping facilities as needing rehabilitation and improvements to bring them up to the proper standards. The District prioritized its needs in its updated Collection System Facilities Plan (approved by WDNR in July of 2012). The Plan determined that Pumping Stations 11 and 12 are both in need of rehabilitation and require a closer look at their long-term capacity needs. The District constructed Pumping Station 11, located on Clayton Road to the southwest of the Plant, in 1966 and Pumping Station 12, located on Fitchrona Road, in 1969. Preliminary costs for the project are $8.34 million with design beginning in 2013 and construction occurring in 2014 and 2015. The District anticipates financing this project with a Clean Water Fund Loan.
CS-17. **PS 15 Rehabilitation**
Upgrading Pumping Station 15 will ensure that reliable sewer service continues. Pumping Station 15 is another pumping facility that the District has identified as needing rehabilitation and improvements to bring it up to the proper standards. Pumping Station 15, located on Allen Boulevard on the west side of Lake Mendota, needs rehabilitation and a closer look at long-term capacity needs due to the proposed Bishops Bay development in the City of Middleton and Town of Westport. The District started up Pumping Station 15 in 1975. Preliminary costs for the project are $4.20 million with design beginning in 2015 and construction in 2016 and 2017. The District anticipates financing this project with a Clean Water Fund Loan.

CS-18. **PS 6 and 8 Rehabilitation (retainers in 2014)**
Rehabilitating Pumping Stations 6 and 8 brought these two facilities up to present day standards. The District constructed Pumping Station 6 between 1948 and 1950. It was part of the original East Interceptor project, which also included Pumping Stations 1 and 7. Pumping Station 8 began operation in 1964. Major renovations to both pumping stations were necessary to improve reliability and meet present day standards. The project was bid in June of 2008 and construction was completed in 2011. Total project costs were roughly $6.8 million. In 2014 the District will release two $10,000 maintenance retainers, one to the mechanical contractor and one to the electrical contractor, barring any problems with related project work. The District financed this project with a Clean Water Fund Loan.

CS-19. **PS 17 Force Main Relief**
Relief of the Pumping Station 17 Force Main will provide additional capacity to serve Verona and the west side of Madison. With future completion of the Lower Badger Mill Creek Interceptor, Pumping Station 17 and its force main will need capacity relief. This project anticipates construction of the relief force main in two phases. In Phase 1 approximately 4,600 feet of force main will be constructed in conjunction with construction of the City of Verona’s East Interceptor in 2016. Total project costs for Phase 1 are projected at $1.06 million. It is proposed that the remaining 9,400 feet of force main be built in Phase 2 in approximately 2022. Staff presently anticipates funding Phase 1 from Capital Fund reserves subject to availability of funds.

CS-20. **PS Improvements – Phase 1**
Improving Pumping Station 7 and constructing Pumping Station 18 will provide redundant and reliable service for the District’s east side well into the future. Pumping Station 18 construction will provide significant relief to Pumping Station 7 on the east side of the District’s conveyance system. Although the District rehabilitated Pumping Station 7 in 1992, the station is critical to the District’s operation and is in need of
condition-based improvements. District staff has identified several areas of need at Pumping Station 7. Potential improvement projects include the following: replacement of existing controllers and the control system; replacement of electrical switchgear; installation of an odor control system and upgrades to the HVAC system; installation of screenings equipment; separating the control room from the garage area and screen room; installing variable speed drives to optimize pumping operations; firm capacity upgrade; and installation of electric valve actuators. Since the need and/or timing for many of the improvements is dependent on how Pumping Station 7 interacts with Pumping Station 18, it is proposed that the most pressing needs be addressed in the near term and the remainder of the improvements be re-evaluated following start-up of Pumping Station 18 in 2015. Therefore, Phase 1 improvements for Pumping Station 7 include replacing controllers and the control system in 2016 at an estimated cost of $251,000 funded from Capital Fund reserves. Phase 2 improvements are tentatively scheduled for implementation starting in 2021 at a preliminary cost of $2.92 million with funding from a Clean Water Fund loan.

CS-21. **Telemetry System – Third Upgrade**
Replacing the District’s radio telemetry system will ensure the reliable flow of information from the District’s conveyance system. The District’s radio-based telemetry system monitors the District’s seventeen pumping stations and most of the other pumping stations that the District maintains for other entities. While planning for the District’s process control system upgrade, staff determined that the telemetry system, installed in 2000, still functions reasonably well and is still maintainable. However, staff also determined that the system should be replaced within five to ten years. The projection includes $315,000 in 2016 to replace the District’s portion of the telemetry system. The District anticipates collecting additional funds from customers that utilize the telemetry system to replace radios within their pumping/lift stations. The District’s portion of this project’s cost ($315,000) would be funded from Capital Fund reserves.

CS-22. **PS 13 & 14 Rehabilitation**
Upgrading District Pumping Stations 13 and 14 will improve the north side of the District’s conveyance system and bring both pumping stations up to present day standards. The District’s Pumping Station 13, located at Amelia Earhart Drive near Truax Field, and Pumping Station 14, located near the corners of School and Wheeler Roads, have both been identified in the District’s Collection System Facilities Plan as needing rehabilitation and improvements to bring them up to the proper standards. The District constructed Pumping Station 13 in 1970 and Pumping Station 14 in 1971. Preliminary costs for the project include $8.94 million with design beginning in 2018 and construction occurring in 2019 and 2020. The District anticipates financing this project with a Clean Water Fund Loan.

CS-23. **PS 4 Rehabilitation**
Modifications to this pumping station will improve conveyance system reliability and prevent backups. The District originally constructed Pumping Station 4, located on John
Nolen Drive, in 1967. It was identified in the Collection System Facilities Plan as requiring capacity upgrades, modifications to aging electrical equipment, and enhancements to the power supply system. Staff anticipates total project costs at $2.6 million with design beginning in 2018 and construction occurring in 2019. The District anticipates financing this project with a Clean Water Fund Loan.
Appendix B: Completed Projects & Retainers

2012 Project Completions

**West Interceptor Rehab at Old University Avenue**
This project, completed in conjunction with City of Madison’s street reconstruction project, lined the West Interceptor along a section of Old University Avenue. Total project costs of $361,000 were funded from Capital Fund reserves.

**East Monona Interceptor at Fair Oaks u/s of Starkweather Creek**
The District lined this 85-year old portion of the East Monona Interceptor, consisting of 14-inch and 15-inch vitrified clay and cast iron sewer, to improve the integrity of the sewer and to bring it up to District standards. Total project costs of $121,000 were funded from Capital Fund reserves.

2013 Project Completions/Anticipated Completions

**Operations Building HVAC Rehab**
This project completed in June 2013. A detailed description of this project is included in the Project Summaries (Appendix A – TP-5).

**West Interceptor Extension/West Point Extension (lining project)**
This project, scheduled to complete in late 2013, includes a portion of the District’s West Interceptor Extension and a portion of the West Point Extension, both in Middleton. The sewers will be lined with anticipated project costs of $500,000 funded from reserves.

**Northeast Interceptor – Far East Interceptor to Southeast Interceptor**
This project, presently underway, is projected to complete in 2013. A more detailed description of the project is included in the Project Summaries (Appendix A – CS-1).

Retainers

The District often includes maintenance or performance retainers within its contracts. The retainers are typically released to the contractor at the end of one year (in some cases contracts include longer performance periods) following completion of the contract and assuming satisfactory performance. The following are retainers that the District has released or are presently withholding:

**West Interceptor upstream of PS5 (WI MH05-011 to MH05-021 Liner)**
Released $5,000 retainer in 2012

**West Interceptor Rehab at Old University Avenue**
Released $5,000 retainer in 2013.
**East Monona Interceptor at Fair Oaks u/s of Starkweather Creek**
Released $5,000 retainer in 2013.

**NEI - PS 10 to Lien Road**
Released $25,000 retainer in 2013.

**Pumping Station 6 & 8 Rehabilitation**
Presently withholding $20,000, which will be released to two separate contractors ($10,000 each) in 2014 pending satisfactory equipment performance.

**Operations Building HVAC Rehabilitation**
The District withheld a $10,000 maintenance retainer upon final project closeout. The retainer will be released to the contractor in 2014 pending satisfactory performance.
### Appendix C: Budget Summaries

#### NOTICE OF BUDGET HEARING

A Public Hearing on the budgets of the Madison Metropolitan Sewerage District for the year 2014 will be held at 8:00 a.m. on September 26, 2013, at the District offices located at 1610 Moorland Road, Madison, Wisconsin.

### 2014 OPERATING BUDGET SUMMARY

#### EXPENDITURES

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>2013 Thru June</th>
<th>Estimated 2013 Total</th>
<th>2013 Budget</th>
<th>Proposed 2014 Budget</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration, Engineering &amp; Commission</td>
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<td>9,878,000</td>
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<td><strong>$27,223,576</strong></td>
<td><strong>$29,087,735</strong></td>
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#### REVENUES

<table>
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<tr>
<th>Revenue Category</th>
<th>2013 Thru June</th>
<th>Estimated 2013 Total</th>
<th>2013 Budget</th>
<th>Proposed 2014 Budget</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sewer Service Charges</td>
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<td>$26,026,226</td>
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<td>Servicing Pumping Stations</td>
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<td>Rent</td>
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<td>67,600</td>
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<td>Miscellaneous Income</td>
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<td>Pretreatment Monitoring</td>
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<td>18,000</td>
<td>18,000</td>
<td>18,000</td>
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<td>Struvite Fertilizer Sales</td>
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<td>Cash Reserves</td>
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<td><strong>TOTAL REVENUES</strong></td>
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<td><strong>$27,645,210</strong></td>
<td><strong>$27,223,576</strong></td>
<td><strong>$29,087,735</strong></td>
<td><strong>6.85%</strong></td>
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#### OPERATING RESERVE BALANCE

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<tr>
<th>Operating Reserves</th>
<th>2013 Thru June</th>
<th>Estimated 2013 Total</th>
<th>2013 Budget</th>
<th>Proposed 2014 Budget</th>
<th>Percent Change</th>
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<tbody>
<tr>
<td>Beginning Balance</td>
<td>$11,735,948</td>
<td>$11,735,948</td>
<td>$11,221,757</td>
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<td>Ending Balance</td>
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<td>$12,215,886</td>
<td>$11,083,407</td>
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## CAPITAL PROJECTS BUDGET SUMMARY

### EXPENDITURES

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<tr>
<th>Project</th>
<th>2013 Estimated</th>
<th>2013 Thru June</th>
<th>2013 Total</th>
<th>2014 Budgeted</th>
<th>Percent Change</th>
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<tbody>
<tr>
<td><strong>Nine Springs Wastewater Treatment Plant Projects</strong></td>
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<td>Eleventh Addition to Nine Springs Wastewater Treatment Plant</td>
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<td>$11,543,000</td>
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<td>New Maintenance Facility/Space Needs Improvements</td>
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<td>797,000</td>
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<td>Annual Clarifier Coating</td>
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<td>412,000</td>
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<td><strong>Interceptors</strong></td>
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<td>NEI - Far East Int. to Southeast Int. Junction</td>
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<td>7,716,000</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>NMF</td>
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<td>West Interceptor Rehab at Old University Avenue</td>
<td>5,000</td>
<td>5,000</td>
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<td>PS 15 Rehabilitation</td>
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<td>NMF</td>
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<td>PS 6 &amp; 6 Rehabilitation (retainers in 2014)</td>
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<td>-</td>
<td>20,000</td>
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<td><strong>Capital Budget Expenses</strong></td>
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### REVENUES

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<th>Revenue Source</th>
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<th>2013 Total</th>
<th>2014 Budgeted</th>
<th>Percent Change</th>
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<tr>
<td>CWF Loan - Operations Building HVAC Rehab</td>
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</tr>
<tr>
<td>CWF Loan - NEI - Far East Interceptor to Southeast Interceptor</td>
<td>3,775,000</td>
<td>8,191,000</td>
<td>8,135,000</td>
<td>-</td>
<td>-100.00%</td>
</tr>
<tr>
<td>CWF Loan - Pumping Station 18</td>
<td>-</td>
<td>3,916,000</td>
<td>9,064,000</td>
<td>10,283,000</td>
<td>13.45%</td>
</tr>
<tr>
<td>CWF Loan - Pumping Station 18 FM</td>
<td>-</td>
<td>-</td>
<td>12,982,000</td>
<td>NMF</td>
<td></td>
</tr>
<tr>
<td>CWF Loan - Maintenance Facilities</td>
<td>-</td>
<td>-</td>
<td>4,710,000</td>
<td>NMF</td>
<td></td>
</tr>
<tr>
<td>CWF Loan - Rehab of PSs 11 and 12</td>
<td>-</td>
<td>-</td>
<td>1,900,000</td>
<td>NMF</td>
<td></td>
</tr>
<tr>
<td><strong>CONNECTION CHARGE REVENUES</strong></td>
<td>330,000</td>
<td>850,000</td>
<td>600,000</td>
<td>750,000</td>
<td>25.00%</td>
</tr>
<tr>
<td>INTEREST ON INVESTMENTS &amp; MISC. INCOME</td>
<td>(7,000)</td>
<td>-</td>
<td>80,000</td>
<td>25,000</td>
<td>-88.75%</td>
</tr>
<tr>
<td><strong>TOTAL OF FUNDS RECEIVED</strong></td>
<td>$11,371,000</td>
<td>$26,685,000</td>
<td>$30,654,000</td>
<td>$39,184,000</td>
<td>27.83%</td>
</tr>
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</table>

### CAPITAL PROJECTS RESERVE BALANCE

<table>
<thead>
<tr>
<th>CAPITAL PROJECTS RESERVES</th>
<th>2013 Estimated</th>
<th>2013 Thru June</th>
<th>2013 Total</th>
<th>2014 Budgeted</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Reserve Balance</td>
<td>$4,026,000</td>
<td>$4,026,000</td>
<td>$6,239,000</td>
<td>$3,647,000</td>
<td>-41.55%</td>
</tr>
<tr>
<td>Ending Reserve Balance</td>
<td>$5,469,000</td>
<td>$3,647,000</td>
<td>$6,624,000</td>
<td>$7,626,000</td>
<td>2.08%</td>
</tr>
</tbody>
</table>
## DEBT SERVICE BUDGET SUMMARY

### EXPENDITURES

<table>
<thead>
<tr>
<th>Expenditure Category</th>
<th>2013 Thru June</th>
<th>2013 Estimated Total</th>
<th>2013 Budget Total</th>
<th>2014 Proposed Budget</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Half Interest</td>
<td>$1,219,409</td>
<td>$1,219,409</td>
<td>$1,322,000</td>
<td>$1,101,000</td>
<td>-16.72%</td>
</tr>
<tr>
<td>Principal</td>
<td>5,114,733</td>
<td>5,114,733</td>
<td>5,126,000</td>
<td>6,047,000</td>
<td>17.38%</td>
</tr>
<tr>
<td>Second Half Interest</td>
<td>-</td>
<td>1,300,000</td>
<td>1,462,000</td>
<td>1,726,000</td>
<td>18.06%</td>
</tr>
<tr>
<td><strong>TOTAL EXPENDITURES</strong></td>
<td><strong>$6,334,142</strong></td>
<td><strong>$7,634,142</strong></td>
<td><strong>$7,910,000</strong></td>
<td><strong>$8,844,000</strong></td>
<td><strong>11.81%</strong></td>
</tr>
</tbody>
</table>

### REVENUES

<table>
<thead>
<tr>
<th>Revenue Category</th>
<th>2013 Thru June</th>
<th>2013 Estimated Total</th>
<th>2013 Budget Total</th>
<th>2014 Proposed Budget</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer From Operating Fund</td>
<td>$0</td>
<td>$9,878,000</td>
<td>$9,878,000</td>
<td>$10,865,000</td>
<td>9.99%</td>
</tr>
<tr>
<td>Interest</td>
<td>(10,596)</td>
<td>1,000</td>
<td>70,000</td>
<td>10,000</td>
<td>-74.29%</td>
</tr>
<tr>
<td><strong>TOTAL REVENUES</strong></td>
<td><strong>($10,596)</strong></td>
<td><strong>$9,878,000</strong></td>
<td><strong>$9,948,000</strong></td>
<td><strong>$10,883,000</strong></td>
<td><strong>9.40%</strong></td>
</tr>
</tbody>
</table>

### DEBT SERVICE RESERVE BALANCE

<table>
<thead>
<tr>
<th>DEBT SERVICE RESERVES</th>
<th>2013 Thru June</th>
<th>2013 Estimated Total</th>
<th>2013 Budget Total</th>
<th>2014 Proposed Budget</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning Balance</td>
<td>$13,842,214</td>
<td>$13,842,214</td>
<td>$13,820,235</td>
<td>$16,087,072</td>
<td>16.40%</td>
</tr>
<tr>
<td>Ending Balance</td>
<td>$7,497,476</td>
<td>$16,087,072</td>
<td>$15,856,235</td>
<td>$18,126,072</td>
<td>14.30%</td>
</tr>
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### SCHEDULE OF PRINCIPAL AMOUNT OF INDEBTEDNESS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Series 1994 Pumping Station No. 5</td>
<td>$163,414</td>
<td>$83,013</td>
<td>-</td>
</tr>
<tr>
<td>Series 1995 Verona Force Main and Pumping Station</td>
<td>541,090</td>
<td>367,017</td>
<td>180,518</td>
</tr>
<tr>
<td>Series 1996 Ninth Addition</td>
<td>3,144,573</td>
<td>2,130,063</td>
<td>1,082,237</td>
</tr>
<tr>
<td>Series 1997 Badger Mill Creek Effluent Return</td>
<td>1,507,353</td>
<td>1,224,258</td>
<td>932,260</td>
</tr>
<tr>
<td>Series 2000 P.S. No. 2 Force Main Replacement - Phase</td>
<td>884,801</td>
<td>786,010</td>
<td>684,056</td>
</tr>
<tr>
<td>Series 2001 P.S. No. 2 Force Main Replacement - Phase</td>
<td>1,087,000</td>
<td>980,860</td>
<td>871,186</td>
</tr>
<tr>
<td>Series 2003A P.S. 1, 2 and 10 Rehabilitation</td>
<td>4,941,348</td>
<td>4,552,038</td>
<td>4,151,730</td>
</tr>
<tr>
<td>Series 2008 Benth Addition</td>
<td>23,935,433</td>
<td>22,046,930</td>
<td>20,105,625</td>
</tr>
<tr>
<td>Series 2005 P.S. 1, 2 and 10 Rehabilitation</td>
<td>198,892</td>
<td>186,632</td>
<td>173,021</td>
</tr>
<tr>
<td>Series 2006 Effluent Equalization Projects and AT’s 1-6</td>
<td>1,295,281</td>
<td>1,216,154</td>
<td>1,135,156</td>
</tr>
<tr>
<td>Series 2007 West in Ext and PS 13-14 Projects</td>
<td>2,173,283</td>
<td>2,052,571</td>
<td>1,928,775</td>
</tr>
<tr>
<td>Series 2008 P.S. 6-8 Rehabilitation and NEI Triax Ext Li</td>
<td>7,636,755</td>
<td>7,236,618</td>
<td>6,831,053</td>
</tr>
<tr>
<td>Series 2010A NEI-PS 10 to Lien Rd</td>
<td>8,177,196</td>
<td>7,807,823</td>
<td>7,429,295</td>
</tr>
<tr>
<td>Series 2012A Nine Springs Eleventh Addition</td>
<td>33,173,013</td>
<td>46,592,013</td>
<td>50,360,000</td>
</tr>
<tr>
<td>Series 2012B Operations Building HVAC Rehab</td>
<td>2,647,307</td>
<td>2,857,428</td>
<td>2,750,836</td>
</tr>
<tr>
<td>Series 2013A NEI-SEI to FEI Replacement Project</td>
<td>-</td>
<td>8,191,338</td>
<td>7,880,081</td>
</tr>
<tr>
<td>Series 2013B Pumping Station No. 18</td>
<td>-</td>
<td>3,915,549</td>
<td>14,198,549</td>
</tr>
<tr>
<td>Series 2014A Process Control System Upgrade</td>
<td>-</td>
<td>-</td>
<td>4,765,545</td>
</tr>
<tr>
<td>Series 2014B Pumping Station No. 18 Force Main</td>
<td>-</td>
<td>-</td>
<td>12,982,000</td>
</tr>
<tr>
<td>Series 2014C Maintenance Facility Expansion</td>
<td>-</td>
<td>-</td>
<td>4,710,000</td>
</tr>
<tr>
<td>Series 2014D P.S. 11 &amp; 12 Rehabilitation</td>
<td>-</td>
<td>-</td>
<td>1,900,000</td>
</tr>
<tr>
<td><strong>Total Indebtedness</strong></td>
<td><strong>$91,508,308</strong></td>
<td><strong>$112,228,103</strong></td>
<td><strong>$145,058,099</strong></td>
</tr>
</tbody>
</table>
### OVERALL BUDGET SUMMARY, NET OF TRANSFERS

<table>
<thead>
<tr>
<th>Summarized Budget Items</th>
<th>2013 Thru June</th>
<th>Estimated 2013 Total</th>
<th>2013 Budget</th>
<th>Proposed 2014 Budget</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Revenues</td>
<td>$81,675,300</td>
<td>$54,331,210</td>
<td>$57,809,226</td>
<td>$68,139,735</td>
<td>17.9%</td>
</tr>
<tr>
<td>Total Expenditures</td>
<td>58,612,738</td>
<td>51,985,414</td>
<td>55,524,576</td>
<td>63,135,735</td>
<td>13.7%</td>
</tr>
<tr>
<td>Beginning Reserve Balance</td>
<td>$29,604,162</td>
<td>$29,604,162</td>
<td>$31,280,992</td>
<td>$31,949,958</td>
<td>2.1%</td>
</tr>
<tr>
<td>Ending Reserve Balance</td>
<td>$31,382,752</td>
<td>$31,949,958</td>
<td>$33,585,842</td>
<td>$36,953,958</td>
<td>10.1%</td>
</tr>
</tbody>
</table>

Details of the budgets will be available on the District’s web site, [http://madsewer.org](http://madsewer.org) on or about September 17, 2013 and may be inspected at the Madison Metropolitan Sewerage District office in the Operations Building, 1610 Moorland Road, Madison, Wisconsin, between the hours of 7:00 a.m. and 4:00 p.m.

/s/ Ezra J. Meyer, Secretary
### Appendix D: Represented Wage Schedule

**Local 60 - Madison Metropolitan Sewerage District**

**Classification Salary Schedule**

**Bi-Weekly-Hourly Rates of Pay**

**January 1-August 31, 2014**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Range</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bi-Weekly</td>
<td>1,306.39</td>
<td>1,345.56</td>
<td>1,384.75</td>
<td>1,426.86</td>
<td>1,470.40</td>
</tr>
<tr>
<td></td>
<td>Hourly</td>
<td>16.3298</td>
<td>16.8194</td>
<td>17.3094</td>
<td>17.8357</td>
<td>18.3800</td>
</tr>
<tr>
<td>Custodian &amp; Grounds Worker</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administrative Secretary</td>
<td>Bi-Weekly</td>
<td>1,388.50</td>
<td>1,430.17</td>
<td>1,473.08</td>
<td>1,517.26</td>
<td>1,562.79</td>
</tr>
<tr>
<td></td>
<td>Hourly</td>
<td>17.3562</td>
<td>17.8771</td>
<td>18.4135</td>
<td>18.9658</td>
<td>19.5348</td>
</tr>
<tr>
<td>Maintenance Worker</td>
<td>7 Bi-Weekly</td>
<td>1,702.17</td>
<td>1,745.26</td>
<td>1,802.63</td>
<td>1,860.02</td>
<td>1,911.60</td>
</tr>
<tr>
<td>Sr Custodian &amp; Grounds Worker</td>
<td>8 Bi-Weekly</td>
<td>1,745.26</td>
<td>1,802.63</td>
<td>1,860.02</td>
<td>1,911.60</td>
<td>1,966.14</td>
</tr>
<tr>
<td></td>
<td>Hourly</td>
<td>21.8158</td>
<td>22.5329</td>
<td>23.2502</td>
<td>23.8950</td>
<td>24.5767</td>
</tr>
<tr>
<td>Monitoring Services Helper; Utility II; Reuse Diesel Truck Driver I; Sr Building &amp; Grounds Worker</td>
<td>9 Bi-Weekly</td>
<td>1,802.63</td>
<td>1,860.02</td>
<td>1,911.60</td>
<td>1,966.14</td>
<td>2,009.21</td>
</tr>
<tr>
<td></td>
<td>Hourly</td>
<td>22.5329</td>
<td>23.2502</td>
<td>23.8950</td>
<td>24.5767</td>
<td>25.1152</td>
</tr>
<tr>
<td>Station Maintenance Worker, Relief Oper. I; Oper I; Apprentice Mech.; Asst Metrogro Mech.; Apprentice Electrician; Reuse Diesel Truck Driver II; Reuse Relief Diesel Truck Driver; MS/SM Worker I</td>
<td>10 Bi-Weekly</td>
<td>1,860.02</td>
<td>1,911.60</td>
<td>1,966.14</td>
<td>2,009.21</td>
<td>2,060.77</td>
</tr>
<tr>
<td></td>
<td>Hourly</td>
<td>23.2502</td>
<td>23.8950</td>
<td>24.5767</td>
<td>25.1152</td>
<td>25.7597</td>
</tr>
<tr>
<td>Building &amp; Grounds Crew Leader; Apprentice Mech II; Apprentice Elec II; Oper. II; Relief Oper II; MS/SM Worker II</td>
<td>11 Bi-Weekly</td>
<td>1,911.60</td>
<td>1,966.14</td>
<td>2,009.21</td>
<td>2,060.77</td>
<td>2,121.05</td>
</tr>
<tr>
<td></td>
<td>Hourly</td>
<td>23.8950</td>
<td>24.5767</td>
<td>25.1152</td>
<td>25.7597</td>
<td>26.5131</td>
</tr>
<tr>
<td>Metrogro Mechanic; Jnynman Mech.; Jnynman Elect.; Oper III; Relief Oper III; Sr Building &amp; Grounds Crew leader</td>
<td>12 Bi-Weekly</td>
<td>1,966.14</td>
<td>2,009.21</td>
<td>2,060.77</td>
<td>2,121.05</td>
<td>2,175.54</td>
</tr>
<tr>
<td></td>
<td>Hourly</td>
<td>24.5767</td>
<td>25.1152</td>
<td>25.7597</td>
<td>26.5131</td>
<td>27.1943</td>
</tr>
<tr>
<td>Sr. Mechanic; Sr Mech. (Metrogro); Sr Jnynman Mech.; Sr Journeyman Elect.; MS/SM Crew Leader, Oper IV, Relief Oper IV</td>
<td>13 Bi-Weekly</td>
<td>2,009.21</td>
<td>2,060.77</td>
<td>2,121.05</td>
<td>2,175.54</td>
<td>2,232.92</td>
</tr>
<tr>
<td></td>
<td>Hourly</td>
<td>25.1152</td>
<td>25.7597</td>
<td>26.5131</td>
<td>27.1943</td>
<td>27.9115</td>
</tr>
<tr>
<td>Sr. Jnynman Mech II; Sr Journeyman Electrician II; Sr Mech (Diesel &amp; HE), Purchasing/Inventory Asst</td>
<td>14 Bi-Weekly</td>
<td>2,060.77</td>
<td>2,121.05</td>
<td>2,175.54</td>
<td>2,232.92</td>
<td>2,318.97</td>
</tr>
<tr>
<td></td>
<td>Hourly</td>
<td>25.7597</td>
<td>26.5131</td>
<td>27.1943</td>
<td>27.9115</td>
<td>28.9871</td>
</tr>
<tr>
<td>Sr. Jnynman Mech II; Sr Journeyman Electrician II; Sr Mech (Diesel &amp; HE), Purchasing/Inventory Asst</td>
<td>15 Bi-Weekly</td>
<td>2,121.05</td>
<td>2,175.54</td>
<td>2,232.92</td>
<td>2,318.97</td>
<td>2,379.31</td>
</tr>
<tr>
<td></td>
<td>Hourly</td>
<td>26.5131</td>
<td>27.1943</td>
<td>27.9115</td>
<td>28.9871</td>
<td>29.7414</td>
</tr>
</tbody>
</table>
## Appendix D: Represented Wage Schedule

### Local 60 - Madison Metropolitan Sewerage District

**Classification Salary Schedule**

**Bi-Weekly-Hourly Rates of Pay**

**September 1-December 31, 2014**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Range</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Custodian &amp; Grounds Worker</td>
<td>Bi-Weekly</td>
<td>1,312.92</td>
<td>1,352.28</td>
<td>1,391.68</td>
<td>1,433.99</td>
<td>1,477.75</td>
</tr>
<tr>
<td></td>
<td>Hourly</td>
<td>16.4115</td>
<td>16.9035</td>
<td>17.3960</td>
<td>17.9249</td>
<td>18.4719</td>
</tr>
<tr>
<td>Administrative Secretary</td>
<td>Bi-Weekly</td>
<td>1,395.44</td>
<td>1,437.32</td>
<td>1,480.45</td>
<td>1,524.85</td>
<td>1,570.60</td>
</tr>
<tr>
<td></td>
<td>Hourly</td>
<td>17.4430</td>
<td>17.9665</td>
<td>18.5056</td>
<td>19.0606</td>
<td>19.6325</td>
</tr>
<tr>
<td>Maintenance Worker</td>
<td>7</td>
<td>Bi-Weekly</td>
<td>1,710.68</td>
<td>1,753.99</td>
<td>1,811.64</td>
<td>1,869.32</td>
</tr>
<tr>
<td>Sr Custodian &amp; Grounds Worker</td>
<td>8</td>
<td>Bi-Weekly</td>
<td>1,753.99</td>
<td>1,811.64</td>
<td>1,869.32</td>
<td>1,921.16</td>
</tr>
<tr>
<td>Monitoring Services Helper; Utility II; Reuse Diesel Truck Driver I; Sr Building &amp; Grounds Worker</td>
<td>9</td>
<td>Bi-Weekly</td>
<td>1,811.64</td>
<td>1,869.32</td>
<td>1,921.16</td>
<td>1,975.97</td>
</tr>
<tr>
<td></td>
<td>Hourly</td>
<td>22.6455</td>
<td>23.3665</td>
<td>24.0145</td>
<td>24.6996</td>
<td>25.2407</td>
</tr>
<tr>
<td>Station Maintenance Worker, Relief Oper. I; Oper I; Apprentice Mech.; Asst Metrogro Mech.; Apprentice Electrician; Reuse Diesel Truck Driver II; Reuse Relief Diesel Truck Driver; MS/SM Worker I</td>
<td>10</td>
<td>Bi-Weekly</td>
<td>1,869.32</td>
<td>1,921.16</td>
<td>1,975.97</td>
<td>2,019.26</td>
</tr>
<tr>
<td></td>
<td>Hourly</td>
<td>23.3665</td>
<td>24.0145</td>
<td>24.6996</td>
<td>25.2407</td>
<td>25.8885</td>
</tr>
<tr>
<td>Building &amp; Grounds Crew Leader; Apprentice Mech II; Apprentice ELEC II; Oper. II; Relief Oper II; MS/SM Worker II</td>
<td>11</td>
<td>Bi-Weekly</td>
<td>1,921.16</td>
<td>1,975.97</td>
<td>2,019.26</td>
<td>2,071.08</td>
</tr>
<tr>
<td>Metrogro Mechanic; Jnryman Mech.; Jnryman Elect.; Oper III; Relief Oper III; Sr Building &amp; Grounds Crew leader</td>
<td>12</td>
<td>Bi-Weekly</td>
<td>1,975.97</td>
<td>2,019.26</td>
<td>2,071.08</td>
<td>2,131.65</td>
</tr>
<tr>
<td></td>
<td>Hourly</td>
<td>24.6996</td>
<td>25.2407</td>
<td>25.8885</td>
<td>26.6456</td>
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<td>13</td>
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<td>2,019.26</td>
<td>2,071.08</td>
<td>2,131.65</td>
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### Appendix E: Non-Represented Wage Schedule

**Bi-Weekly--Hourly Rates of Pay**  
**January 1-August 31, 2014**

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*Schedule assumes a 1.5% increase*

### September 1-December 31, 2014

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<td>20.31</td>
<td>23.36</td>
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</tbody>
</table>

*Schedule assumes a .5% increase*
Appendix F: Organizational Chart

Commissioners

Chief Engineer & Director

Assistant Chief Engineer & Director of Planning
Staff Includes:
- Asset Manager
- Electrical Const. Mgr.
- Electrical PE
- Collection System Eng.

Director of Engineering
Staff Includes:
- 4 Civil Engineers
- GIS Technician
- Engineering Technician

Director of Operations & Maintenance
Purchasing Agent
Staff Includes:
- Purchasing & Inventory Asst.

Collection System Supervisor
Staff Includes:
- 4 Monitoring Services/Sewer Maintenance Workers

Metrogro Manager
Staff Includes:
- 2 Diesel Truck Drivers
- 2 Mechanics

Mechanical Maintenance Supervisor
Staff Includes:
- 9 Mechanics

Electrical Maintenance Supervisor
Staff Includes:
- 8 Electricians

Operations Engineer
Staff Includes:
- Asst. Operations Engineer
- Process & Research Engineer
- Process Control System Programmer
- Asset Coordinator
- Operations Supervisor (see box to right→)

Operations Supervisor
Staff Includes:
- 4-12 Hour Operators
- 5 Relief Operators

Building & Grounds Supervisor
Staff Includes:
- 2 Custodians
- 8 Maintenance Workers

Senior Maintenance Supervisor

Director of Special Projects
Pretreatment Coordinator

Lab Manager
Staff Includes:
- 5 Chemists
- Microbiologist

Information Systems Manager
Staff Includes:
- Programmer/Analyst
- 2 Network Technicians

Director of Administration
Controller/Office Manager
Staff Includes:
- Staff Accountant
- Accounting Clerk
- Business Analyst

Human Resources Manager

Executive Coordinator

Staff Includes:
- Admin Assistant
- Admin Support Asst.

Health & Safety Specialist

Operations Engineer
Staff Includes:
- Asst. Operations Engineer
- Process & Research Engineer
- Process Control System Programmer
- Asset Coordinator
- Operations Supervisor (see box to right→)

Human Resources Manager

Controller/Office Manager
Staff Includes:
- Staff Accountant
- Accounting Clerk
- Business Analyst

Environmental Specialist

Pretreatment Coordinator

Lab Manager
Staff Includes:
- 5 Chemists
- Microbiologist

Information Systems Manager
Staff Includes:
- Programmer/Analyst
- 2 Network Technicians

Director of Administration

Human Resources Manager

Executive Coordinator

Staff Includes:
- Admin Assistant
- Admin Support Asst.

Health & Safety Specialist

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Staff Includes:
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- Process Control System Programmer
- Asset Coordinator
- Operations Supervisor (see box to right→)

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Human Resources Manager

Executive Coordinator

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Appendix G: Director Narratives

Chief Engineer and Director’s Office

Department Description
The Chief Engineer and Director’s (CED) office provides organizational leadership to implement Commission policies that ensure the District meets its customers’ needs in a sustainable manner. The CED’s office also provides support to employees so that they can work safely, productively and effectively fulfill the mission of the District. Programs within the CED’s office include human resources, strategic communications, safety and training.

Trends

- After 40 years of ever increasing regulatory pressures on US wastewater agencies, most of the easy and cost effective solutions are already in place. With current technology, achieving further reductions in pollutant loadings will be disproportionately expensive relative to the potential gains in water quality using traditional compliance approaches.

- Increasing extreme weather conditions tax the limits of infrastructure to maintain public health and the environment. The District must develop policies, procedures and infrastructure that are more resilient to more frequent events.

- Rising public interest in water quality issues and our customer’s limited ability to pay more is increasing overall attention to the business of the District. The District must therefore engage more fully with others that share the local water resource through watershed based approaches and pollution prevention, enter nontraditional collaborations and employ adaptive management techniques to ensure actions maximize environmental and community benefits at the lowest cost to our customers.

- Several managers and directors are within the planning horizon for retirement.

- The Commission is dedicating more time to agenda topics and meetings are well attended.

- New technologies involving the way people communicate are changing and evolving at a rapid pace.

- Recruitment and retention of top talent will continue to get more competitive as baby boomers retire and the economy improves. The expectations of job candidates are changing such as a strong desire for flexible working arrangements.

- Health care reform and continued increases in health care costs will require us to examine our benefit offerings and plan designs. In 2014, the District will be subject to a 3.5% Affordable Care Act (ACA) fee on our health insurance premiums.
• The first phase of the Global Harmonization System (GHS) goes into effect for the standardized classification and labeling of chemicals.

**2013 Goals/Priorities Status**

- Implement cost effective communication standards and policies. *Completed.*

- Work with the Friends of the Capital Springs Recreation Area on interpretive displays on water quality and resource recovery. *Completed.*

- Participate and provide ongoing leadership on regional sustainability initiatives as part of the Sustainable Communities Partnership. *Completed.*

- Support the Commission in performing strategic planning to set short and midterm goals and strategies to advance the 50 Year Master Plan. *Still in planning phase.*

- Creation of an employee handbook. *Completed by end of year.*

- Development and implementation of a robust safety program. *In progress, 50% complete.*

- Streamline and standardize the hiring and onboarding process. *In progress.*

- Focused effort on identifying future needs and skills, leadership development and knowledge retention to prepare for retirements. *Ongoing. Identified software needs to standardize systems and capture knowledge. Budget software will be purchased by end of year.*

- Peer review of District’s capital budgeting and estimating practices. *Completed.*

- Co-lead the launch of the 2013 MPower Champions program to incorporate sustainable practices District-wide. *Completed.*

- Content Manager role and co-development of a new MMSD website that is more engaging, navigates well, incorporates who we are, and reaches our target audiences. *In progress, 75%.*

- Document and web development for the new Capital Improvements Plan-*Completed.*

- Assessment and development of new asset need-replacement of obsolete phone system-*Completed.*

**2014 Goals/Priorities**

- Continue to be visible in the community by making presentations and getting involved with community groups.

- Develop a knowledge transfer and transition plan for retiring employees.
• Improve campus wide sustainability practices by leading the 2014 M-Power Champions program.

• Development of crisis communication practices for communication to the public.

• Development of staff capacity to assist in marketing and graphic media needs.

• Evaluate benefit options to control costs and provide better employee care.

• Develop an integrated District support team that will provide seamless program support to departments and consistent responsive communication to the public.

• Work with the Friends of the Capital Springs Recreation Area on a long term integrated communication and engagement plan that includes the treatment plant campus.

• Implement the employee handbook.

• Implement safety training for the new safety manual.

• Train employees on the Globally Harmonized System (GHS) for Hazard Communication.

• Streamline and standardize the hiring and onboarding process through applicant tracking software.

• Advance the Leadership Academy for new and prospective supervisors.

• Advise EPA on the Effective Practices Roadmap for water sector utilities and take the lead on sustainability practices. Also engage with professional organizations on resource recovery and sustainability issues advantageous to the Districts 50 Year Master Plan.

**Key Result Measures**

• Increased website visits.

• Days to fill a vacancy.

• Lost time accidents.

• Ribbon cutting for the 11th Addition.

• Connect in person with each City, Town or Village administrator at least once a year.

• Cross training of administrative support staff.

• 5 sustainable activities/projects completed in 2014 (MPower).
**Engineering Department**

**Department Description**
The Engineering Department oversees the design and construction of all major capital improvement projects at the District. This includes all key engineering functions, which encompass civil, structural, mechanical, plumbing, electrical, controls and HVAC disciplines. The Engineering Department also provides long-range planning, capital improvement planning, and asset management, all in an effort to cost-effectively manage District assets and to meet the District's mission of protecting public health and the environment. Other major programs within the Engineering Department include:

1) Quarterly billing administration.
2) GIS/mapping services.
3) Annexations and sewer extensions.
4) Real estate and property issues.

**Trends**
- As the economy continues to improve, there will be increased competition for construction-related services. This could reduce contractor interest in MMSD capital improvement projects and increase the cost of projects.
- As with most sewerage districts, MMSD's collection system and treatment plant assets are aging. Managing these facilities with limited funds will be an ever-increasing challenge.
- Regulatory and permitting requirements are increasing with time. These will impact the costs associated with completing the capital improvements plan.
- As the new housing market continues to improve, District revenue from connection charges will slowly increase. While good for the District, this also requires additional staff time to process.
- Educating MMSD's municipal customers about our policies and practices presents an ongoing challenge and need, especially concerning connection charges and annexations.
- Climate change and associated impacts, including extreme weather events, need further consideration and may cause the need to adopt sustainable infrastructure practices and additional capital improvements to provide greater system capacity.

**2013 Goals/Priorities Status**
- Continued management of 11th Addition construction. **Completed.**
- Start-up of key 11th Addition processes, including struvite (phosphorous) harvesting. **In progress. Expected completion in late 2013.**
• Upgrades to the process control system at the treatment plant. *In progress.*

• Planning and design of "non-process" space needs. *Planning completed - design to begin.*

• Rehabilitation of the West Interceptor Extension. *In progress. Expected completion in late 2013 or early 2014.*

• Construction of the Northeast Interceptor Relief/Replacement from the Far East Interceptor to the Southeast Interceptor. *In progress. Expected completion in October.*

• Design and initial construction activities for new Pumping Station 18. *Complete.*

• Design and permitting for the Pumping Station 18 Force Main. *Complete.*

• Planning and design for the Rehabilitation of Pumping Stations 11 & 12. *In progress.*

• Peer review of District’s capital budgeting and estimating practices. *Complete.*

• Hire an Asset Manager by the end of the third quarter, who will be responsible for the development and implementation of the Asset Management Program. *In progress. Expected completion in October.*

### 2014 Goals/Priorities

• Complete 11th Addition construction and start-up of facilities.

• Complete the process control system upgrade.

• Complete design of the maintenance/space needs facilities.

• Complete an inflow/infiltration study of the Pumping Station 14 service area.

• Begin initial planning associated with lining of the West Interceptor from MH02-112 to Pumping Station 2.

• Begin initial planning and design for replacement of the Rimrock Interceptor.

• Continue planning and coordination efforts associated with the Nine Springs Valley Interceptor-Morse Pond Extension.

• Complete lining of the Northeast Interceptor west of the Dane County Regional Airport.

• Continue I-I/chloride reduction initiatives.

• Oversee Pumping Station 18 construction activities, including resident engineering and administration.
• Complete construction of the Pumping Station 18 Force Main.

• Complete Pumping Stations 11 & 12 Rehabilitation planning/design and bid the project.

• Begin initial planning activities and retain consultant services for the Rehabilitation of Pumping Station 15.

• Use the ISI/Envision tool to evaluate and improve sustainable features during project design and construction.

• Perform a pilot on GIS software advancements, which would improve access to land records, sewer tapes, and record drawings.

• Meet with customer communities and municipalities as needed to discuss MMSD procedures, especially related to annexations and sewer extensions.

• Perform engineering and administrative duties associated with annual TV/clean and manhole rehabilitation.

• Continue development and implementation of a strategic asset management program.

**Key Result Measures**

- Keep capital improvement construction project contract modifications below 5% (barring any major changes in scope of the project).

  This goal is well below industry standards, which can be 15% or more. For the two major projects under construction in 2013 (the 11th Addition and the Northeast Interceptor-Southeast Interceptor to Far East Interceptor Relief/Replacement), contract modifications are anticipated to be in the 1% -3% range. Minimizing contract modifications keeps project costs in-check, thus reducing potential rate increases.

- Keep litigation associated with construction projects minimal.

  Disputes, clarifications, and problems associated with the construction projects can quickly escalate to expensive litigation. District staff continues to seek ways to minimize litigation, work cooperatively with others, and to quickly resolve any potential disputes. In 2013, no District capital improvement projects involved litigation. Keeping litigation costs low saves the District money, and keeps user rates below the national average.
Operations and Maintenance Department

Department Description
The Operations and Maintenance Department is responsible for the core business of the District- conveying wastewater to the treatment plant, treating the wastewater to meet the District’s discharge permit, and recycling and reusing the effluent, biosolids, and biogas. This is central to the District’s mission of protecting human health and the environment. These activities are accomplished by the following sections within the department:

- Operations
- Building and Grounds
- Mechanical Maintenance
- Electrical Maintenance
- Metrogro
- Monitoring Services/Sewer Maintenance
- Purchasing

The Operations Section is responsible for control of the treatment processes while the Metrogro Section is responsible for recycling of all biosolids to farmland. The various maintenance sections ensure that the pumping stations operate effectively and that adequate equipment is available to treat all of the wastewater that is received at the treatment plant.

Trends
- With the start-up of the 11\textsuperscript{th} Addition facilities there will be the need to operate and maintain them. This requires additional time and equipment. During 2014 the department will need to review the work we are currently performing to determine if we are doing the correct work and, if so, are we doing it in the most efficient manner.

- The number of assets is increasing and existing assets continue to age. We will need to work closely with the Sustainable Infrastructure Manager to ensure that we are maintaining them at the correct level to maximize the value of each asset.

- Experienced employees will continue to approach retirement age. We will need to capture the knowledge that these individuals have before they leave District employment.

- Activities associated with air emissions will become more critical. During 2014 we will be testing an oxidation catalyst on one of the engines. We will need to determine if this piece of equipment successfully reduces formaldehyde concentrations to the level specified by the Department of Natural Resources. Based on these results, we will either have to install oxidation catalysts on the other two engines or develop best practices to meet the limits. We will also need to perform stack tests on an engine and the new steam boilers.
• We need to continue on our quest for energy independence. At this point it appears that the emphasis will need to be on developing a dependable source of high strength waste. However, we will also be evaluating alternative energy options such as wind, solar, and manure digesters.

2013 Goals/Priorities Status
• Complete an energy study by the end of the year. The goal of this effort will be to provide a road map that the District will follow to achieve energy neutrality. In progress. Will be completed by the end of the year.
• Complete a staffing study by mid-year. The study will be used to provide direction for the personnel needs of the Department. Completed.
• Conduct a trial of an oxidation catalyst on one of the generator engines. In progress. Will continue into 2014.
• Successfully start up the 11th Addition processes including struvite recovery and sale. Mesophilic digestion facilities are in operation. Thickening, acid phase digestion, and struvite harvesting facilities will be in operation by the end of the year.
• Hire an Asset Information Specialist by the end of the first quarter, who will assist with new asset data entry and who will become a power user of the Computerized Maintenance Management System. Completed.
• Hire a Process Control System Programmer to perform a major role in upgrading the process control system. Completed.

2014 Goals/Priorities
• Proceed along the roadmap developed by the Energy Study. This will involve some immediate projects as well as some facility planning. Pilot studies with sources of food waste will be included.
• Follow up on the Staffing Study by using the procedures provided by EMA to evaluate the work being performed within the system. If justified, hire an additional Operator and an additional maintenance person.
• Successfully complete the evaluation of formaldehyde removal from the exhaust of a generator engine by an oxidation catalyst. Based on the results of this evaluation either add oxidation catalysts to the remaining engines or recommend to DNR the best practices to control formaldehyde emissions.
• Optimize the production of struvite. Recover at least 40% of the total phosphorus in the waste activated sludge.
• Successfully operate the steam boilers and the steam injection system.
• Complete the conversion of the Process Control System. Have all new equipment installed and have all of the necessary displays built.

**Key Result Measures**

• Have no bypasses, spills, or basement backups in the collection system for the entire year.

• Each month provide effluent quality that meets or exceeds the requirements of the District’s discharge permit.

• Maximize the amount of struvite produced for sale.

• Reduce the cost of purchased electricity.

• Complete preventive maintenance work orders within the allowable timeframe.
Ecosystem Services Department

Department Description
The Ecosystem Services Department includes programs and supporting services with a focus on improving environmental outcomes. Outcomes are broadly focused and include beneficial reuse, resource recovery, improved water quality, and cost effective regulatory compliance strategies. Ecosystem Services also focuses on addressing a wide range of regulatory, legislative, and strategic initiatives that impact District operations and/or help establish overall District focus. Ecosystem Services includes the laboratory and the pretreatment/waste acceptance programs. The laboratory provides analytical services to support plant operations and regulatory compliance requirements, pretreatment and waste acceptance initiatives, environmental monitoring, research, and billing. The Pretreatment and Waste Acceptance Program administers state/federally mandated pretreatment requirements, implements pollution prevention/source reduction initiatives, and makes waste acceptance determinations.

Trends
- **Movement Toward Innovative Regulatory Compliance Strategies**
  Traditional regulatory compliance strategies involve adding or expanding capacity at the Nine Springs Wastewater Treatment Plant. This approach is discharged focused, and often results in expensive and resource intensive solutions. As regulatory requirements become increasingly stringent, the District will explore innovative compliance strategies. For example, the District is currently evaluating a watershed adaptive management approach to comply with stringent phosphorus limits. In adaptive management, all sources of phosphorus work collaboratively to implement cost effective phosphorus control practices throughout the watershed. The District initiated an adaptive management pilot project in 2012. Information gained from this pilot will help shape the District’s long-term control strategy for phosphorus and perhaps nitrogen.

- **Increased Use of Pollution Prevention/Source Reduction Initiatives**
  There will be an increased reliance on pollution prevention/source reduction initiatives to prevent pollutants from entering the waste stream and requiring removal at the wastewater treatment plant. The District has successfully used this approach to control mercury discharges from dental clinics. Areas that will receive increased focus in the near term include chlorides, phosphorus, and fats/oil/grease (FOG). Pharmaceuticals and “non-flushables” will also likely receive attention. Pollution prevention/source reduction initiatives will reach across multiple District areas including the laboratory, pretreatment, operations, engineering and strategic communications.

- **Increased Emphasis on Process and Environmental Monitoring**
  There will be an increased emphasis on environmental monitoring (physical, chemical and biological parameters) and use of the resulting data to support decision-making. Efforts will focus on a number of areas, including plant process changes, resource recovery, adaptive management/water quality trading, pollution prevention/source reduction initiatives.
reduction initiatives, and the derivation of future effluent limitations. The District will
design monitoring programs, coordinate implementation of these programs and serve
as the central laboratory for associated analytical requirements.

- **Proactive Engagement on Regulatory and Legislative Initiatives**
The District has been well served by engaging in regulatory and legislative initiatives at
the local, state and national level. This includes providing input on the development of
new regulations and/or legislative initiatives, tracking a wide variety of new regulatory
and legislative initiatives to determine potential impacts on District operations, and
positioning the District so that it is compliant with new requirements. Recent examples
include participating in the Mississippi River Nutrient Dialog series to identify nutrient
reduction approaches for the Mississippi River Basin, working at the state and national
levels to develop a more functional water quality trading framework, and providing
input on the development of a statewide nutrient reduction strategy.

### 2013 Goals/Priorities

- Evaluate multiple long-term compliance strategies for phosphorus. **Ongoing-District staff is evaluating a range of compliance options including adaptive management, water quality trading, and treatment technologies.**

- Effectively manage the adaptive management pilot project. **Ongoing-the 2013 focus is on water quality monitoring, development of inventories of agricultural practices, phosphorus reduction demonstration projects.**

- Build the organizational and regulatory framework needed to support transition from a pilot adaptive management project to a full-scale project. **Ongoing-District staff is in leadership roles with the Yahara WINS Strategic Planning Committee and the Executive Committee, has engaged DNR and EPA in multiple discussions related to long term planning for adaptive management.**

- Provide laboratory analytical services to support the adaptive management pilot project and implementation of the District’s struvite harvesting system (the Ostara Process). **Ongoing-the District’s laboratory in the central laboratory for water quality monitoring related to the Yahara WINS project and is providing support for the Ostara process.**

- Implement chloride pollution prevention/source reduction initiatives with the ultimate goal of achieving a 15% reduction in effluent chloride concentration and mass by the end of the District’s current WPDES permit term. **Ongoing-District staff is implementing priorities identified in the 2013 chloride source reduction plan.**
• Initiate a robust temperature monitoring effort in receiving streams (Badfish Creek and Badger Mill Creek) and conduct evaluations to determine the best approach to address potential thermal requirements. **Ongoing-temperature probes were installed at multiple locations in both streams and data continues to be collected. The data will be used to determine a thermal compliance strategy.**

• Engage the Commission on key policy issues related to the 50-Year Master Plan and related sustainability issues through the development of white papers as appropriate. **Ongoing-an outline has been developed for the first white paper, which focuses on water conservation/water reuse. The commission will discuss the outline during the 4th quarter of 2013.**

• Work with DNR and other partners to develop a statewide nutrient framework. **Ongoing-District staff has participated in a phosphorus summit and in two stakeholder meetings convened by DNR to provide assistance in developing the Wisconsin Nutrient Reduction Strategy.**

### 2014 Goals/Priorities

• Implement chloride pollution prevention/source reduction initiatives with an internal goal of achieving a 15% reduction in effluent chloride concentration and mass by the end of the District’s current WPDES permit term.

• Develop and implement a communications strategy that effectively engages District customers, local governments, the general public and other interested parties in pollution prevention/source reduction issues.

• Rebuild key portions of the laboratory information management system (LIMS).

• Provide laboratory analytical services to support the adaptive management pilot project, startup of the 11th addition processes (including struvite harvesting and development of a Class A biosolid), and chloride reduction initiatives.

• Engage DNR on key issues related to the District’s WPDES permit in advance of permit reissuance and reach agreement on how these issues will be addressed.

• Evaluate treatment technologies to address reasonably anticipated new and/or increasingly stringent regulatory requirements.

• Evaluate long-term compliance strategies for phosphorus and identify a preferred alternative(s).

• Recalculate costs associated with adaptive management using new and/or updated information developed as part of the pilot project and other related efforts.

• Engage the Commission on key considerations related to the development of a white paper on water conservation/water reuse.
• Work with DNR, EPA and other partners on initiatives related to nutrients, including water quality trading, development a statewide nutrient framework, and codification of the site specific criterion development process.
• Characterizing the health/biology of the receiving streams to support the potential development of site specific criterion.

**Key Result Measures**

• Change in effluent chloride mass.

• Laboratory sample turnaround times that meet or exceed customer expectations.
**Department Description**

The Administrative Services Department performs a variety of services for internal and external customers. The Accounting/Finance/Office work group provides accounting, payroll, rate setting, and grants and loan administration services. The group also supports the District’s work and asset management and document management software and processes and provides administrative support for the Commission, Chief Engineer and Director, and the other District groups. The Information Systems group manages the District’s network infrastructure and applications, ensures data integrity and security, manages the District’s web site, and provides application design services and other technical assistance. The group provides hardware, software, user support, and training.

**Trends**

- District needs require that we develop a long-range financial strategy to ensure we have sufficient revenues to meet existing and emerging needs.

- We see a growing need to communicate with the general public and other interested stakeholders about District activities and initiatives.

- The District is using increasingly complex technology and systems as part of its business processes.

- A significant number of managers and supervisors have retired in the last few years and more are likely to retire in the next three years.

- Technology needs for external connectivity and mobility are increasing.

- The information systems workgroup is experiencing high workloads and has a significant work backlog.

**2013 Goals/Priorities Status**

- Develop a strategic financial plan to support the District’s long-term financial needs. *Ongoing. Developed formal financial and budgeting policies. Made good progress in developing a comprehensive financial model. The work will continue through 2014.*

- Achieve a financial audit report for fiscal year 2012 that shows no significant deficiencies or material weaknesses. *Completed.*

- Produce budget reports, financial statements, and an annual report in a format that better tells the District’s story and are more easily understood by the public. *The budget document for FY 2013 was improved and received the GFOA Distinguished Budget Presentation Award.*

- Develop our capability to support our work and asset management (WAM) and
document management (OnBase) software applications.  **Ongoing. Developed new WAM reports. Business Analyst is learning the WAM software.**

- Maintain 97% availability for our network servers in 2013. Planned downtime that occurs during off hours – early in the morning, late in the day, and weekends – will not count as downtime.  **Currently meeting this goal, at 97.4% availability for the year to date.**

- Implement a disk-to-disk backup system and convert 85% of our individual server tape backup jobs to this new system in 2013. **Completed. 100% of backup jobs now on the disk-to-disk system.**

- Develop a formal long-range plan for our office computer network infrastructure.  **Significant amount of preliminary work done. Completion planned for 2014 with development of an IT strategic plan.**

**2014 Goals/Priorities**

- Develop a strategic financial plan to support the District’s long-term financial needs.

- Produce budget reports, financial statements, and an annual report in a format that better tells the District’s story and are more easily understood by the public.

- Maintain effective accounting and control practices to achieve financial audit reports that show no significant deficiencies or material weaknesses.

- Develop our capability to support our work and asset management (WAM) and document management (OnBase) software applications.

- Replace the existing budgeting application.

- Develop an IT strategic plan to guide IT priorities, direction, and investments to cover the next 3 to 5 years.

- Complete network development work on the process control system and application development work for the new operations reporting system (DARC).

- Assist with the development and implementation of a new Laboratory Information System (LIMS).

- Plan, implement, and manage a new VOIP phone system for the District.

- Maintain 97% availability for our network servers in 2013. Planned downtime that occurs during off hours – early in the morning, late in the day, and weekends – will not count as downtime.
Key Result Measures

- Achieve a rating of proficient or better on mandatory criteria for the GFOA Budget Presentation Award.

- Achieve a rating of proficient or better on optional criteria for the GFOA Budget Presentation Award.

- Maintain 97% availability for our network servers.
### Appendix I: Glossary of Acronyms & Definitions

#### Common Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>CARPC</td>
<td>Capital Area Regional Planning Committee</td>
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<tr>
<td>CIP</td>
<td>Capital Improvements Plan</td>
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<tr>
<td>CMMS</td>
<td>Computerized Maintenance Management System</td>
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<tr>
<td>CWF</td>
<td>Clean Water Fund (loan program for wastewater facilities)</td>
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<tr>
<td>DNR</td>
<td>Department of Natural Resources</td>
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<tr>
<td>FEI</td>
<td>Far East Interceptor</td>
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<tr>
<td>FOG</td>
<td>Fats, Oils, and Grease</td>
</tr>
<tr>
<td>MH</td>
<td>Manhole</td>
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<tr>
<td>MMSD</td>
<td>Madison Metropolitan Sewerage District</td>
</tr>
<tr>
<td>NACWA</td>
<td>National Association of Clean Water Agencies</td>
</tr>
<tr>
<td>NEI</td>
<td>North East Interceptor</td>
</tr>
<tr>
<td>NSVI</td>
<td>Nine Springs Valley Interceptor</td>
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<tr>
<td>O&amp;M</td>
<td>Operations and Maintenance</td>
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<tr>
<td>PCS</td>
<td>Process Control System</td>
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<tr>
<td>PS</td>
<td>Pumping Station</td>
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<tr>
<td>SEI</td>
<td>South East Interceptor</td>
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<tr>
<td>WAM</td>
<td>Work and Asset Management (MMSD’s CMMS software)</td>
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<tr>
<td>WPDES</td>
<td>Wisconsin Pollutant Discharge Elimination System (District permit)</td>
</tr>
<tr>
<td>WRS</td>
<td>Wisconsin Retirement System</td>
</tr>
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</table>
MMSD Definitions

**Adaptive Management**- Watershed approach developed to comply with stringent phosphorus limits.

**Additions (9th, 10th, 11th, etc.)**- Major Construction related additions, alterations, conversions, reconstruction, renovations, rehabilitations and replacements at the Nine Springs Wastewater Treatment Plant.

**Anaerobic Digestion**- Under this process the organic sludge is treated in the absence of oxygen to reduce both the quantity and odor of sludges by breaking down the organic matter and producing methane and carbon dioxide.

**Acid Digestion**- One of the primary steps of the anaerobic digestion process in which soluble products are fermented to acids and alcohols of lower molecular weight.

**Annexation**- The process whereby a city, village, town, or other unit of government (e.g., MMSD) expands its boundaries to include a specific geographic area.

**Asset Management**- The strategic management of physical assets during their life in the organization.

**Billing Parameters**- MMSD billing parameters include: carbonaceous biochemical oxygen demand (CBOD), total suspended solids (TSS), Total phosphorus (TP), Total Kjehldahl nitrogen (TKN), volume, equivalent meters and actual customers.

**Biosolids**- The soil-like residue of materials removed from sewage during the treatment process.

**Capital Projects Fund**- Fund that accounts for financial resources used for the acquisition, construction or rehabilitation of major capital facilities.

**Class “A” Products (Biosolids)**- Refers to sludge that contains minute levels of pathogens (disease causing organisms). To achieve Class A certification, biosolids must undergo heating, composting, digestion or increased pH that reduces pathogens to below detectable levels. Once these goals are achieved, Class A biosolids can be land applied without any pathogen-related restrictions at the site.

**Class “B” Products (Biosolids)**- Refers to sludge that has undergone treatment that has reduced but not eliminated pathogens. Class B biosolids have less stringent standards for treatment and contain small but compliant amounts of pathogens. Class B requirements ensure that pathogens in biosolids have been reduced to levels that protect public health and the environment and include certain restrictions for crop harvesting, grazing animals and public contact. As is true of their Class A counterpart, Class B biosolids are treated in a wastewater...
treatment facility and undergo heating, composting, digestion or increased pH processes before leaving the plant.

**CMOM/SSO Regulations**- Refers to a Capacity, Management, Operation, and Maintenance Program (CMOM) that focuses on sewer collection systems with a goal of eliminating sanitary sewer overflows (SSO).

**Collection System**- A system of pipes and pumping facilities carrying sewage for disposal.

**Collection System Facilities Plan (CSFP)**- An overall assessment of the condition and capacity of the key components that comprise the District’s wastewater collection system. The Plan identifies the scope and timing of required projects over the next 20 years so that the infrastructure continues to provide a high level of service to the District’s customers while also addressing environmental concerns and regulatory requirements.

**Commission**- A group appointed pursuant to law to conduct certain government business; MMSD has five appointed Commissioners.

**Connection Charges**- Charges related to connecting with MMSD sewers.

**Conveyance System**- Synonymous with collection system.

**Debt Service Fund**- A fund established by a government agency or business for the purpose of reducing debt by repaying or purchasing outstanding loans and securities held against the entity. MMSD transfers a portion of its collected service charges to this fund to pay for its debt service.

**Effluent**- Wastewater - treated or untreated - that flows out of a treatment plant or sewer outfall. The Nine Springs Wastewater Treatment Plant returns treated effluent to the environment.

**Executive Team**- Refers to the Executive team at MMSD made up of the Chief Engineer and Director, Assistant Chief Engineer and Director of Planning, Director of Engineering, Director of Operations and Maintenance, Director of Special Projects, Director of Administration, HR Manager, and the Executive Coordinator.

**Sewer Extension Permit**- Refers to a required permit for an extension, addition, or modification to the sanitary sewer collection system.

**Force Main**- The discharge pipeline of a pumping station.
Interceptor Connection Charge (ICC)- ICC represents the users “fair share” of collection system investments MMSD has made to install interceptor sewers and pump stations.

Influent- Water or wastewater entering a physical structure or process such as a treatment plant, pumping station or tank.

Interceptor- Large sewer lines that convey the flow of sewage to a pumping station or treatment plant by gravity.

Lining- A rehabilitation process where a length of coating material is introduced to extend the life of the existing sewer.

Master Plan- MMSD’s 50-year blueprint for the future.

Metrogro- A program that recycles liquid biosolids to agricultural land as fertilizer and soil conditioner.

Metromix- a “soil like” material created by MMSD that combines biosolids with amendments such as sand, sawdust and/or bulking agents. Metromix is intended for use in landscaping, turf production, general gardening, and other similar applications.

Nine Springs Wastewater Treatment Plant (NSWTP)- Wastewater treatment plant originally constructed in the late 1920s in Madison, WI. Since then, the plant has experienced numerous changes and additions. The plant presently serves 40 communities in the Madison area.

Nutrient Removal- The removal of phosphorus and nitrogen from wastewater. MMSD uses a process called Biological Nutrient Removal (BNR) that removes nitrogen and phosphorus from wastewater by using specific groups of micro-organisms and providing suitable conditions for their growth.

OnBase- OnBase is a software application that electronically captures, stores and manages documents generated or received by a company.

Operating Fund- In government accounting, fund used to account for all assets and liabilities of a nonprofit entity except those particularly assigned for other purposes in another more specialized fund. The cost of normal operations is expended from this fund.

Ostara- A process to recover phosphorus-containing fertilizer (struvite) as a natural byproduct of wastewater treatment.
**Plan Review Fee**- Customer communities pay sewer plan review fees for MMSD’s plan review of modifications or additions to their sewer systems.

**Pretreatment**- Processes used by industrial or commercial customers to reduce or eliminate the contaminants in non-domestic wastewater to alter its nature, before discharging it into the collection system.

**Pumping Stations**- Also called lift stations, are normally designed to handle raw sewage that is fed from underground gravity pipelines (pipes that are laid at an angle so that a liquid can flow in one direction by gravity). Sewage is fed into and stored in an underground pit, commonly known as a wet well. The well is equipped with instruments to detect the level of sewage present. When the sewage level rises to a predetermined point, a pump will start and lift the sewage upward through a pressurized pipe system called a sewer force main. The sewage discharges into another gravity sewer or its final destination—a treatment plant.

**Relief Sewer**- A sewer built to carry the flows in excess of the capacity of an existing sewer; generally in parallel with the existing sewer, also, a sewer intended to carry a portion of the flow from an area where the existing sewers are of insufficient capacity.

**Septage**- The waste content found in a septic tank.

**Service Charges**- Annual amounts collected through customer rates that are used to fund MMSD’s ongoing operations and debt service.

**Struvite**- A phosphate mineral (magnesium ammonium phosphate).

**Televising**- A method using video camera(s) to assess the condition of a sewer line in real time. It can reveal blockages from debris, roots, or grease; show cracks, breaks or deterioration of a pipe. It allows detailed diagnosis without the need for excavation, saving time and money.

**Thermal Requirements**- Potential regulatory requirements to meet particular thermal temperatures in effluent receiving streams.

**Treatment Plant Connection Charge (TPCC)**- Represents a new users fair-share of the debt service for excess capacity at the wastewater treatment plant.

**User Charge**- Service charge based on wastewater flow and loadings data for a specific customer. The wastewater flow and loadings are used to develop customer bills (see also Billing Parameters).