Madison Metropolitan
Sewerage District

# 2025 District Operating Budget & Capital Improvements Plan

*ADOPTED OCTOBER 31, 2024*

Cover photo: A child explores the clear waters of Six Mile Creek, a tributary to Lake Mendota, under a bridge at Waunakee Village Park.


## GFOA AWARD

The Government Finance Officers Association of the United States and Canada (GFOA) presented a Distinguished Budget Presentation Award to Madison Metropolitan Sewerage District for its annual budget for the fiscal year beginning January 1, 2023. 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. This award is valid for one year only. We believe this budget continues to conform to program requirements, and we are submitting it to GFOA to determine its eligibility for another award.

## YEARS WON

2013 • 2014 • 2015 • 2016

2017 • 2018 • 2019 • 2020

2021 • 2022 • 2023 • 2024

# Madison Metropolitan Sewerage District Commission

The District is governed by nine Commissioners serving staggered terms.

President
Thomas Hovel

Vice President
Ezra Meyer

Secretary
Brad Murphy

Commissioner
Beth Bookland

Commissioner
Kenneth Clark

Commissioner
Sara Eskrich

Commissioner
Greg Fries

Commissioner
Marsha Rummel

Commissioner
Thomas Wilson

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Note: Madison Metropolitan Sewerage District is required, by Wisconsin State Statute to submit an annual report each year. It has been determined that our approved annual budget and Capital Improvements Plan meet all requirements outlined in the Statute; for the 2024 budget year and forward, the District will no longer create and mail a separate annual report document.

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SECTION ONE

# Introduction to the Budget

A mother and child visit Waunakee Village Park to walk along Sixmile Creek, a tributary to Lake Mendota.

# Budget Message & Highlights

Homes and businesses rely on water for daily life. Whether for cooking, washing, personal care or making products, clean water is important to us all. But what about afterward, when the water has done its job for us? That “waste” water needs to go somewhere, safely and reliably.

That’s where Madison Metropolitan Sewerage District comes in. We are charged with collecting and treating wastewater and then returning it to nature, all with a mission to protect public health and the environment.

To do that, we rely on infrastructure that has cost more than $1.5 billion to build since we took up the charge to serve as the area’s wastewater utility over nine decades ago. This infrastructure — the programs and work that support our greater mission — requires a strong team of over 135 dedicated staff. Our annual budget is critical to funding this vital work.

The work we do is non-negotiable. We need to keep doing this work and fulfill our mission and purpose, consistently and reliably, for many decades to come. And our annual budgets need to be stable to keep this essential work going.

For one, we need to maintain our vast network of infrastructure, both at the treatment plant and throughout the collection system – it is old and in real need of maintenance or replacement. Over 70% of our collection system — the pipes and pumps that bring wastewater from homes and businesses to the treatment plant — was built before 1980. Much of the system’s hub, the Nine Springs Wastewater Treatment Plant, was built in the 1970s and 1980s and funded by hundreds of millions of dollars in state and federal grants, money that is no longer available. In short, much of our infrastructure is around 50 years old and in dire need of attention.

Two-thirds of the capital expenditures in the 2025–2030 Capital Improvements Plan, which is included in this annual budget, are for this age-related work. The remaining one-third is to serve the needs of growing communities in our area. Dane County is the fastest-growing county in Wisconsin. Providing capacity for that growth means extending the collection system and expanding the treatment plant’s capacity.

Growing demands also require increased staffing. This budget provides five new frontline positions. These will ensure full operator coverage at the plant, address growing service and regulatory needs for industrial facilities that discharge to the plant, and increase maintenance work at the plant and in the collection system. In addition to these new positions, the budget supports our existing workforce with market wages, so the many existing programs we offer and run can continue to work effectively.

The District seeks to be a responsible financial steward of ratepayer dollars. This has been made more challenging by high demand for the Wisconsin Clean Water Fund loan program, which limits available funding for utilities like the District and reduces the availability of attractive, low-interest loans. We have worked closely with utility colleagues and state agency staff to understand and manage these challenges. We have also looked for alternative financing sources with the help of a municipal financial advisor. In addition to identifying bonding options and helping us plan for them, our advisor identified appropriate financial reserve levels to ensure financial resiliency, which is reflected in our 2025 budgets.

Households and businesses rely on clean water. And they need the water they have used to be moved and recovered safely and reliably. That’s our job. We’ll take it from here.

William D. Walker
Interim Executive Director
Madison Metropolitan Sewerage District

# BUDGETING PRINCIPLES AND POLICIES

The District's annual budget process aims to identify prioritized spending needs and develop a financing plan to cover those needs. The budget reflects capital project spending, debt service costs, ongoing operational costs, new program needs, forecasted non-service charges revenues and reserve requirements. Service charges are set to provide adequate revenue for the coming year.

The District follows several key principles in budgeting. First, the annual budget is based on a six-year capital spending plan and a six-year financing plan. This advanced planning helps the District anticipate and prepare for significant future infrastructure costs. It also allows the District to smooth revenue collection and maintain adequate financial reserves.

Second, the District manages its overall budget with three individual budgets, each with a corresponding fund. The operating budget supports operational costs for District programs. Significant components include District labor, materials and professional services costs. The operating budget includes transfers to the capital projects fund to support capital project costs and to the debt service fund to support the repayment of District debt. Revenues from the operating fund are primarily from service charges, with lesser revenues from septage hauling fees, interest earnings and similar sources.

The capital projects budget supports the costs of capital construction projects to serve the District's growing service area, repair and replace existing infrastructure, improve infrastructure reliability and meet additional regulatory requirements. Staff costs related to capital projects are charged to the capital projects budget. Funding for capital projects comes from a transfer from the operating fund, connection charges paid when new areas connect to the District, and loan proceeds from the State of Wisconsin's Clean Water Fund Loan program. Starting in the 2025 budget year, the District is including general obligation bonds in its funding mix. The Clean Water Fund program has recently become over-subscribed and is unlikely to have adequate funding for all District needs.

The debt service budget pays principal and interest on Clean Water Fund loans. Figure 1, page 5, summarizes the fund structure for the operating, capital projects and debt service budgets.

The third principle regards borrowing. The District finances operating expenditures through current revenues and reserves; it does not incur debt for operational costs. The District borrows for certain capital projects through the State of Wisconsin's Clean Water Fund Loan program and general obligation bonding. The District uses its authority to collect a property tax as collateral for Clean Water Fund loans and support for a general obligation bond rating, but the District repays loans through service charges revenue. The District has no plans to collect a property tax.

Fourth, most District costs are funded by service charges paid by the communities the District serves, which we refer to as owner communities. These charges are allocated proportionally to a community's population and the volume and strength of wastewater from each community in the billing period. This arrangement is meant to fairly allocate the costs of the District's regional wastewater collection system and treatment plant to the communities that benefit.

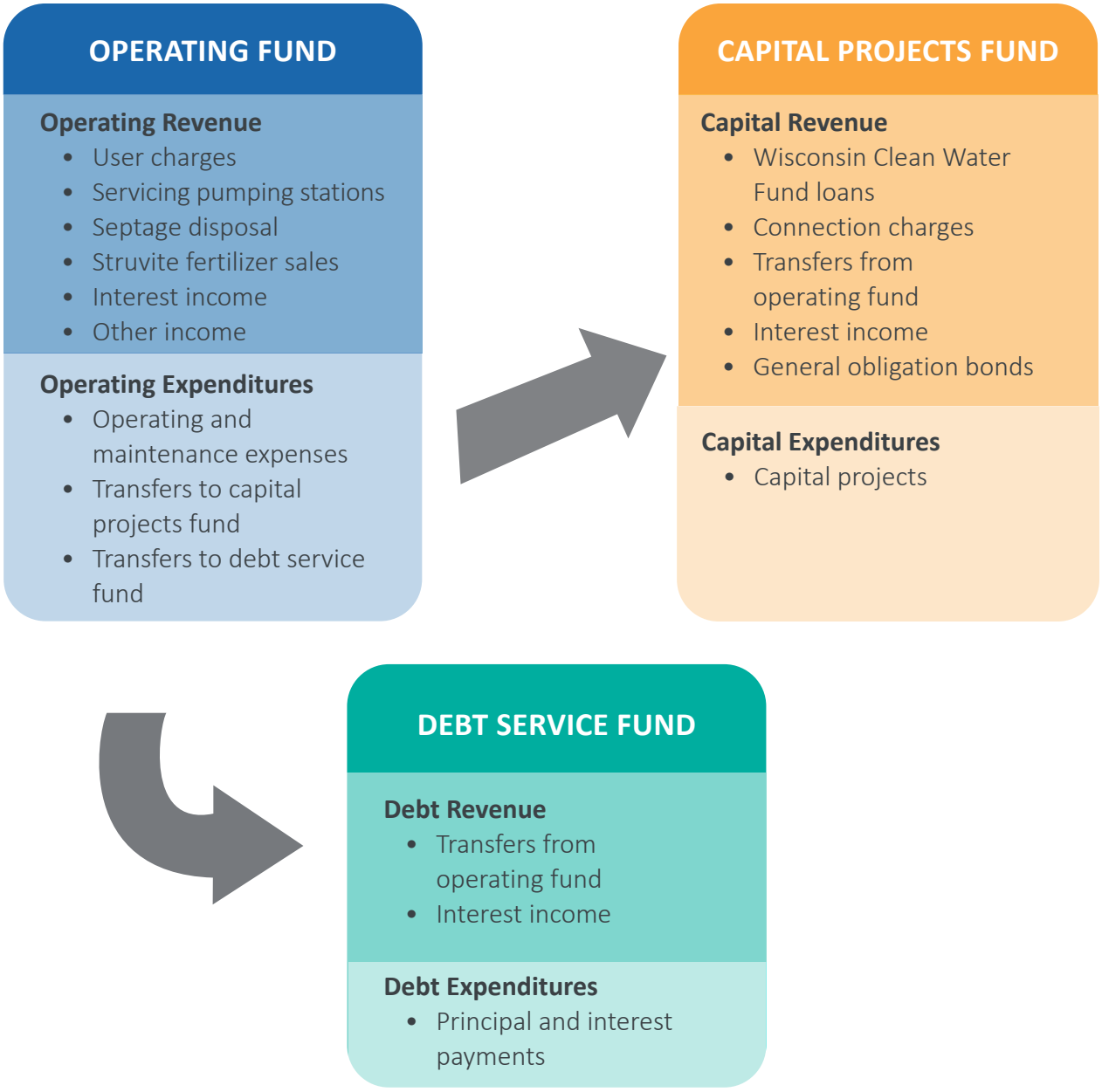
Fifth, the District strives to maintain stable service charge increases and financial resiliency. Fund reserves, part of the six-year financing plan, support these goals.

Several Commission policies govern the budget. Policies that guide the preparation of the annual budget for each fund include:

- ATT-2A regarding capital projects and debt service budget development and approval;
- ATT-2B regarding debt financing;
- ATT-2D regarding fund reserves;
- ATT-2E fund structure; and
- ATT-2F regarding operating budget development and approval.

Find the District's Commission Policy Book at madsewer.org/commission

## Figure 1: **Fund Structure for Budgets**



# ROLES

District budgeting involves efforts from several key groups. The Executive Director (ED) is ultimately responsible for the development and content of the annual budget and oversight of budget implementation once adopted. The Executive Office (EO) oversees budget development and advises the ED on the final budget proposal. Department Directors manage departmental budgets, identify needs and advise the EO and ED on budgetary needs and options. The Department of Enterprise Services' Accounting group manages District revenues and expenditures and provides essential information for budget development and monitoring. The Budget and Planning department develops the Capital Improvements Plan (CIP) and the annual budget. Finally, the Commission sets overall policy direction, represents the interests of owner communities and approves the final annual budget.

# SCHEDULE & AMENDMENTS

The annual budget process begins with developing the CIP, which identifies capital spending needs and includes a financing plan covering the next six years. Development of the CIP includes work by many staff on capital project business cases and work by the Budget and Planning Department, Director of Engineering, and District Principal Engineer/Director of Wastewater Operations and Maintenance to schedule projects to balance urgency, feasibility and revenue requirements. District staff provide Commission study sessions on the capital program and financing issues in July and August to preview issues and get general Commission guidance. District staff also engage with owner communities to provide similar information and raise awareness of key spending, finance and revenue factors for the coming budget.

District staff and leadership then identify operating needs for the coming year, including needed new positions, general cost increases and programmatic needs. These are combined with the CIP to form the full budget proposal for review and approval by the Commission in September and October. Figure 2, page 7, shows the District's budget calendar by month and activity.

If needed, the District may amend the budget after adoption; see Table 1.

## Table 1: **Amendment Procedures**

| BUDGET | REQUIREMENTS FOR BUDGET AMENDMENTS |
|---|---|
| **Operating** | • Any increase in the total authorized expenditures. |
| **Capital Projects** | • Any increase in the budget total for the year.<br>• The addition of a new project not previously included in the adopted budget.<br>• Any increase to a previously approved total project cost limit for an individual project |
| **Debt Service** | • Any change to the approved amount to be transferred from the operating fund to the debt service fund. |

For the operating budget, any increase in total expenditure authority requires Commission approval. In addition, any change in the amount to be transferred from the operating fund to the debt service fund requires Commission approval. Staff may change transfers to the capital budget to reflect changes in service charges revenue or capital project spending. However, the general practice is to make such changes in the next budget year after full and audited information is available to show final actual expenditures and revenues. For the capital budget, Commission approval is required to increase expenditure authority for an individual project, add a new project, or if total spending on all projects will exceed the total authorization for the year. Debt service payments are an obligation, and their budget cannot be reduced.

**Commissioners set District policy and approve the final annual budget.**

## Figure 2: **Milestones for Developing the 2025 Budget**

### THROUGH JUNE 2024

**DISTRICT -** *Beginning in January*
Staff work to plan and refine the 2025-2029 Capital Improvements Plan

**COMMISSION -** *May 30*
District staff present study sessions to Commission on Collection System Facilities Plan and 2025 budget process improvements

### JULY 2024

**DISTRICT STAFF -** *Throughout month*
Departments identify critical needs and budget forecasts to develop 2025 operating budget

**COMMISSION -** *July 25*
Commission receives overview of 2025 Capital Improvements Plan and bonding

### AUGUST 2024

**COMMISSION -** *August 8*
Commission receives 2025 Budget preview

**DISTRICT STAFF -** *Through mid-August*
Budget & Planning staff finalize 2025 financial model; Budget team begins production of budget document

**OWNER COMMUNITIES -** *August 13*
District staff provide an early preview of 2025 Capital Improvements Plan and budget to owner communities

### SEPTEMBER 2024

**DISTRICT -** *September 11*
Proposed budget summary is published. Notification of the upcoming budget hearing as required by Wisconsin Statutes Section 65.90 mailed and noticed in newspaper

**COMMISSION -** *September 12*
Staff present proposed budget to Commission

**OWNER COMMUNITIES -** *September 16*
District staff present 2025 budget to owner communities that belong to Dane County Cities & Villages Association

**DISTRICT -** *September 15*
Notification of District's proposed budget and budget hearing mailed to owner communities

**COMMISSION -** *September 26*
Public hearing and Commission discussion on proposed budget

### OCTOBER 2024

**DISTRICT -** *October 11*
Deadline to receive written public comments on the proposed budget

**COMMISSION -** *October 17*
Commission deliberates on budget

**COMMISSION -** *October 31*
Commission adopts budget and service charge and septage disposal rates

### NOVEMBER 2024

**DISTRICT -** *By November 1*
Notify customers and septage haulers of new rates and estimated charges

# ACCOUNTING

The District's budget reflects the following key accounting factors. First, the District's accounting and budget fiscal year begins on January 1 of each year and ends on December 31 of that year.

Second, District expenditures are recorded on a cash basis. Revenues are recorded on an accrual basis. Capital outlay is budgeted as expenses in the year incurred but capitalized and depreciated for financial reporting purposes. Capital project expenses are budgeted according to what is projected to be completed for that particular year.

Third, although the District develops three separate budgets for operations, capital and debt, it prepares its financial statements on an enterprise fund basis. Generally accepted accounting principles 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.

Fourth, the District must meet statutory requirements for municipal budgeting in Chapter 65 of Wisconsin state statute, including adopting a balanced budget. A balanced budget is one in which anticipated revenues equal anticipated expenditures for the fiscal year. The District achieves this with the operating budget by offsetting expenditures with service charge billings, other operating income and fund reserves. The District's capital projects budget is balanced by offsetting total project expenditures with Clean Water Fund loans, general obligation bonds, connection charge revenues, fund reserves and all other capital projects fund income. The District's debt service budget achieves balance by offsetting total debt service expenses with funds transferred from the operating fund, debt service reserves and interest income.

# SERVICE CHARGE RATES

The District's service charge rates depend on the budget and the predicted loadings for the coming year. The budget determines the revenues required to cover expenditures. The service charge rates are determined by dividing the required service charge revenues by the flows and loadings expected to be received at the treatment plant.

***Rate = (Required Revenue)/Predicted Loading***

The District has seven billing parameters: five wastewater parameters and two customer parameters. District expenses are allocated to these seven parameters, and loadings to the treatment plant are estimated from recent loadings history and expected changes in wastewater discharge from high-strength users. Rates are determined for each parameter.

It is important to note that the District is a wholesaler; it bills owner communities for the services provided and does not directly bill residential and business users of the sewerage system. Local sewer utilities add their costs to operate and maintain their local sewer systems to the District charges and then bills individual residences and businesses for sewer service charges provided by both the District and the local sewer utility. More details about the District's rate structure can be found in our Sewer Use Ordinance on the District's website.

Service charge rates are set following the adoption of the final budget and provided to owner communities at that time. The District also provides an estimate of each owner community's charges for the coming year. Actual charges will vary based on the flows and loadings from the community during the year.

Find the District's Sewer Use Ordinance at madsewer.org/suo

Additional information about services charges can be found at madsewer.org/service-charges

# FUND RESERVES

Fund reserves play an important role in managing risks, including risks related to cash flow (variation in revenue and expenditure timing), unplanned expenditures, revenue shortfalls, multi-year revenue smoothing, regulatory requirements and borrowing requirements. The District follows general utility practices in managing reserves. Key requirements are set in Commission policy.

**Operating fund reserves:**

- 180 days to 210 days of annual operating costs — cash flow risk (Commission policy); and
- Amounts for Wisconsin Department of Natural Resources (WDNR) equipment replacement requirements — regulatory requirement and unplanned expenditure risks.

**Capital projects fund reserves:**

- Minimum of $3 million or 10% of subsequent year expenditures — general minimum (Commission policy);
- A weighted sum of current and subsequent year debt-funded capital expenditures and current and next year cash support from the operating fund. Debt funding is weighted 0.75; cash support is weighted 0.05. The current year is weighted 0.5; the subsequent year is weighted 0.25 — cash flow management (guidance from the District's municipal financial advisor).

**Debt service fund reserves:**

- Balance as of October 1 at least as large as the subsequent year's debt service obligations — regulatory requirement and cash flow risk.

**Reliability and Maintenance workgroup staff like Matt Rodenkirch sustain plant equipment by conducting semi-annual oil change maintenance on collectors for the primary tanks.**

SECTION TWO

# 2025 Operating Budget Summary

A couple enjoys the serene views at Picnic Point and Lakeshore Nature Preserve along Lake Mendota.

The operating budget is an annual financing plan that accounts for revenues and expenses to support daily operations and maintenance of all District facilities. This section summarizes spending and position changes for 2025 from the prior year's budget; presents the overall budget, including revenues, expenditures, reserves and positions; and briefly discusses the all-funds budget and financing plan. More details on the financing plan are found in the Capital Finance section.

## CHANGES FROM PRIOR BUDGET

The operating budget is developed using the prior year's operating budget as a starting point. This is the so-called "base budget" and a variety of adjustments are added to that base budget. Some of these are necessary housekeeping items, such as incorporating updated 2024 revenue estimates, truing up actual labor costs for the current complement of employees, and removing one-time items from the budget. Next, changes in capital program support to accomplish critical capital projects are added to the base budget.

Third, various unavoidable cost-of-doing-business increases needed to maintain current operations are added. These include costs of chemicals, power and insurance. Fourth, there are added changes to reflect growing program needs and a general wage adjustment. Finally, needed new positions are added. These are summarized in Table 2, page 12.

## OPERATING BUDGET AND FUND SUMMARY

A full operating budget summary is given in Table 3, page 13. The table reports actual values for the preceding budget year, estimated values for the current budget year and budgeted values for the current year and subsequent year.

Service charges revenue for 2024 is forecast to be about $973,000 higher than was estimated in the 2024 budget, due primarily to increased flows from higher rainfall. In addition, interest earnings in the operating fund are forecast to be about $396,000 higher than was estimated last year, due to higher interest rates. These factors reduce the service charges requirement for 2025 below what it would otherwise have been.

Expenditures are given by District department, with lines for interfund transfers to the capital projects fund and debt service fund.

Current year expenditures are estimated as equivalent to the budgeted amounts. Although amounts through June 2024 are greater than half the budgeted amounts for the year, the budgeted amounts remain the best estimate of final spending. Note that the through-June amounts and the 2025 budget reflect several reorganizations that occurred during 2023 and 2024, as described in Table 4, page 15.

The reserve requirements for the current year and budget year include the required 180-day expenditure equivalent amount. The reserve in the current year is forecast to exceed the minimum by approximately $3.4 million or 34 days' equivalent. The 2025 budget year is forecast to close with reserves exactly equal to the minimum. The reserve includes money to meet the Wisconsin Department of Natural Resources (WDNR) requirement to have a reserve for equipment replacement. The equipment replacement reserve amount for the budget year is approximately $5.2 million.

The District has a separate account for vehicle replacement costs. The current balance in that account is $484,300. Appendix E, page 138, shows the proposed five-year vehicle replacement schedule.

# Table 2: **2025 Service Charge Changes from 2024**

| BUDGET STEP | AMOUNT | % CHANGE | NOTE |
|---|---|---|---|
| **2024 Budgeted Service Charges** | **$55,063,000** | N/A | Service charges requirement set in 2024 budget |
| **2024 Estimated Additional Revenue** | | | *Shown as negative because additional revenue reduces service charges needs* |
| Service Charges | (973,100) | -1.8% | Estimated additional 2024 services charges mainly due to higher wet-weather flows |
| Interest Earnings | (395,700) | -0.7% | Estimated additional 2024 interest earnings due to higher interest rates |
| Other | 21,500 | 0.0% | Minor 2024 revenue differences |
| ***Subtotal*** | ***(1,347,300)*** | ***-2.4%*** | |
| **2025 Estimated Additional Non-Service-Charges Revenue** | (141,300) | -0.3% | Shown as negative because additional revenue reduces service charges needs |
| **Capital Program Support** | 1,703,000 | 3.1% | Transfers to capital projects fund and debt service fund per the Capital Improvements Plan |
| **Cost of Business** | | | |
| Utilities and Chemicals | 626,000 | 1.1% | Increasing costs for electric power, natural gas, water and chemicals for plant operations |
| Labor Market Adjustment | 591,300 | 1.1% | Match market cost of labor with 3% increase for all pay ranges |
| District Fleet Vehicles | 200,000 | 0.4% | Contribution to vehicle replacement reserve |
| Legal Fees, Memberships, Commission | 110,200 | 0.2% | Legal cost and staff membership increases; Commission stipends |
| IT Rising Costs | 61,100 | 0.1% | Software licensing cost increases |
| Insurance, Audit | 45,000 | 0.1% | Insurance and audit fee cost increases |
| ***Subtotal*** | ***1,633,600*** | ***3.0%*** | |
| **Additional Needs** | | | |
| Maintenance Projects | 1,468,300 | 2.7% | Various mid-sized maintenance needs |
| Frontline Positions | 381,000 | 0.7% | Funding for new frontline positions |
| IT Security and Service Improvement | 85,000 | 0.2% | Additional software and services to increase security of IT systems |
| Expand Collection System Monitoring | 50,000 | 0.1% | Increase monitoring to identify collection system maintenance needs |
| Enterprise Resource Planning (ERP) Accounting Support | 25,000 | 0.0% | Additional support for accounting staff related to ERP implementation |
| Employee Engagement | 17,800 | 0.0% | Training and tools for organizational development; staff tuition reimbursement |
| ***Subtotal*** | ***2,027,500*** | ***3.7%*** | |
| **Automatic Budget Adjustments** | | | |
| Labor True Up | 111,700 | 0.2% | Update labor budget to match current employee complement |
| Non-Continuing Items | (49,200) | -0.1% | Remove one-time and unneeded budget for Executive Director, Enterprise Services and Ecosystem Servies |
| ***Subtotal*** | ***42,500*** | ***0.1%*** | |
| Balance Adjustment | (339,500) | -0.6% | Balance adjustment to meet 180-day reserve requirement |
| ***Grand Total*** | ***$3,578,500*** | ***6.5%*** | ***2025 budgeted service charges*** |

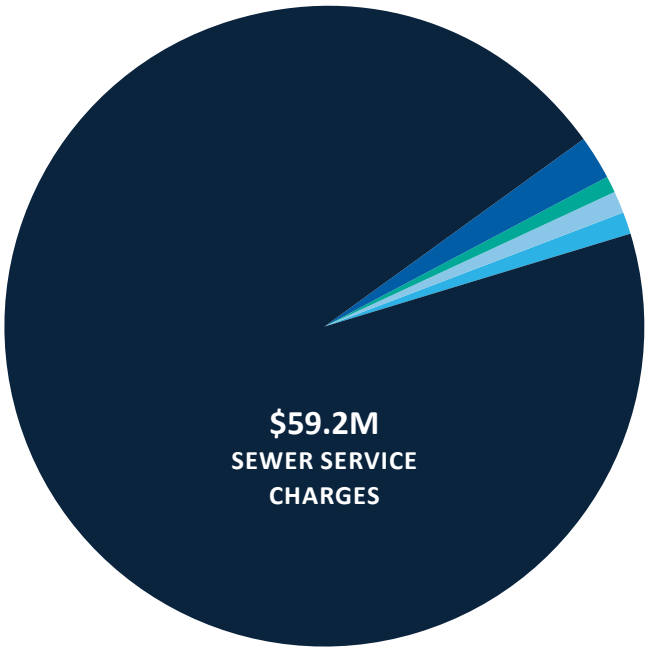
# Table 3: **2025 Operating Budget Summary**

| | 2023 Actual | 2024 Budget | 2024 Through June Actual | 2024 Total Estimated | Proposed 2025 Budget |
|---|---|---|---|---|---|
| **OPENING BALANCE** | **$18,792,900** | **$18,465,700** | **N/A** | **$17,893,000** | **$24,261,200** |
| Debt and Operating Funds Adjustment | - | - | - | 5,216,800 | - |
| **Revenues** | | | | | |
| Sewer Service Charges | 49,946,400 | 55,063,000 | 28,504,600 | 56,036,100 | 58,641,500 |
| Servicing Pumping Stations | 584,200 | 517,500 | 311,500 | 611,200 | 638,200 |
| Rent | 90,000 | 92,300 | 63,200 | 93,300 | 96,600 |
| Interest Earnings | 630,300 | 242,500 | 680,100 | 638,200 | 646,100 |
| Annexation and Plan Review Fees | 86,900 | 69,100 | 55,600 | 69,100 | 69,100 |
| Miscellaneous Income | 130,100 | 172,400 | 185,500 | 133,700 | 137,300 |
| Septage Disposal Revenue | 1,093,300 | 1,272,300 | 589,600 | 1,190,500 | 1,287,700 |
| Pretreatment Monitoring | 41,100 | 39,100 | 41,100 | 43,400 | 45,700 |
| Struvite Fertilizer Sales | 253,500 | 231,900 | 117,000 | 231,900 | 231,900 |
| **TOTAL REVENUES** | **$52,855,800** | **$57,700,100** | **$30,548,200** | **$59,047,400** | **$61,794,100** |
| **Expenditures** | | | | | |
| Budget and Planning | 1,062,300 | 2,001,500 | 660,800 | 2,001,500 | 1,964,100 |
| Ecosystems Services | 2,923,600 | 3,986,900 | 1,757,600 | 3,986,900 | 4,118,500 |
| Engineering | 2,076,600 | 1,843,500 | 8,844,700 | 1,843,500 | 1,881,300 |
| Enterprise Services | 3,826,800 | 3,935,900 | 2,099,800 | 3,935,900 | 4,342,900 |
| ED, Comms, Business Srvcs | 1,674,100 | 1,734,400 | 774,500 | 1,734,400 | 1,879,100 |
| Human Resources | 469,000 | 932,200 | 258,500 | 932,200 | 1,003,600 |
| Operations and Maintenance | 20,906,300 | 21,401,600 | 10,765,400 | 21,401,600 | 24,350,100 |
| Interfund Transfer, Capital | 4,791,000 | 15,521,000 | - | 15,521,000 | 9,417,000 |
| Interfund Transfer, Debt | 16,026,000 | 6,539,000 | - | 6,539,000 | 14,346,000 |
| **TOTAL EXPENDITURES** | **$53,755,700** | **$57,896,000** | **$25,161,300** | **$57,896,000** | **$63,302,600** |
| **CLOSING BALANCE** | **$17,893,000** | **$18,269,800** | **N/A** | **$24,261,200** | **$22,752,700** |
| Reserve Requirement | 20,340,700 | 17,756,300 | N/A | 20,876,178 | 22,752,700 |
| Closing Balance Net of Reserves | ($2,447,700) | $513,500 | N/A | $3,385,022 | $0 |

**Note:** The Debt and Operating Fund Adjustment entry reflects the reassignment of certain reserve funds to the operating fund from the debt fund for accounting purposes.

# Figure 3: **2025 Operating Budget Summary**

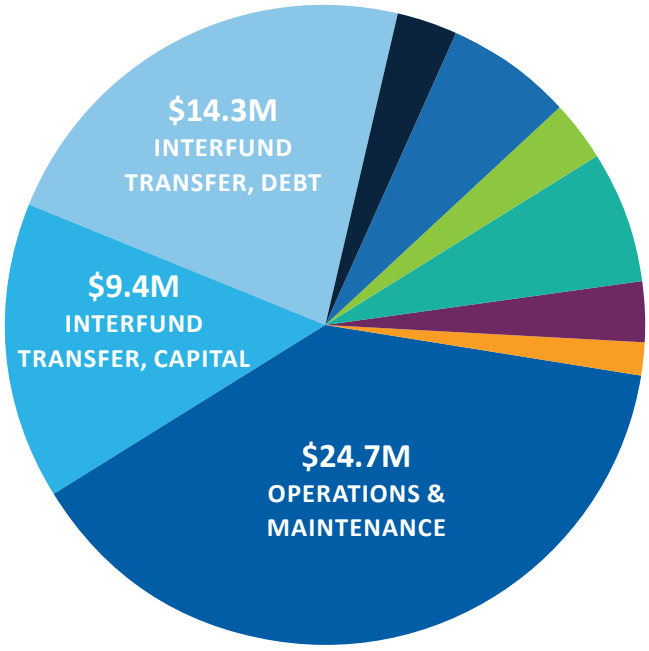
## OPERATING REVENUES




| | | |
|---|---|---|
| SEWER SERVICE CHARGES | $58,641,500 | 94.9% |
| SEPTAGE DISPOSAL REVENUE | $1,287,700 | 2.1% |
| SERVICING PUMPING STATIONS | $638,200 | 1.0% |
| INTEREST EARNINGS | $646,100 | 1.0% |
| ALL OTHER | $580,600 | 1.0% |

**TOTAL OPERATING REVENUE:**
**$61,794,100**

## OPERATING EXPENDITURES




| | | |
|---|---|---|
| BUDGET & PLANNING | $1,964,100 | 3.1% |
| ECOSYSTEM SERVICES | $4,118,500 | 6.5% |
| ENGINEERING | $1,881,300 | 3.0% |
| ENTERPRISE SERVICES | $4,342,900 | 6.9% |
| EXECUTIVE DIRECTOR, COMMUNICATIONS & BUSINESS SERVICES | $1,879,100 | 3.0% |
| HUMAN RESOURCES | $1,003,600 | 1.6% |
| OPERATIONS & MAINTENANCE | $24,350,100 | 38.5% |
| INTERFUND TRANSFER, CAPITAL | $9,417,000 | 14.9% |
| INTERFUND TRANSFER, DEBT | $14,346,000 | 22.7% |

**TOTAL OPERATING EXPENDITURES:**
**$63,302,600**

# POSITIONS

This budget includes six new positions. The overall driver for these positions is the need for additional front-line support in key areas. The Operator position will address safety and coverage issues that arise when one operator must work alone at the plant. It will allow for two-person coverage at all times and qualified coverage to permit operators to use paid time off, build in time for training and absorb the impact of normal staff turnover. The position is also expected to allow for better support of continuing Reliability Centered Maintenance (RCM) initiatives within the Operations workgroup on the day shift.

The Collection System Engineer or Specialist position will lead routine collection system duties, utility coordination and maintenance projects, allowing Engineering department project engineers to leverage the majority of their time on critical capital projects.

The Facilities Maintenance Worker position will take over custodial duties currently fulfilled by a contracted cleaning service and support other Facilities Maintenance work. The goal is to achieve higher custodial performance than can be obtained through a contract, at comparable or lower cost, and with less contract-management burden.

The Waste Acceptance Coordinator position will help accommodate the program's growing workload due to the increasing number of businesses in the region and additional regulatory requirements.

Finally, the budget includes a 0.2 FTE increase in a purchasing-related position to allow this position to shift to full-time work.

Proposals for all new full-time positions are in Appendix F, page 139.

## Table 4: **Full-time Equivalent Positions**

| Department | 2023 | 2024 | 2025 | Changes from 2024 to 2025 |
|---|---|---|---|---|
| Budget and Planning | 15.0 | 8.0 | 7.0 | • Shift GIS staff to Enterprise Services |
| Ecosystems Services | 14.0 | 14.0 | 15.0 | • New Pretreatment/Waste Acceptance Program Coordinator |
| Engineering | — | 13.0 | 14.0 | |
| Enterprise Services | 12.0 | 11.0 | 11.0 | • Shift GIS staff to Enterprise Services |
| Executive Director, Communications & Business Services | — | 7.4 | 7.4 | |
| Human Resources | — | 4.0 | 4.0 | |
| Leadership Support | 17.9 | — | — | |
| Operations and Maintenance | 67.3 | 72.8 | 76.0 | • New Operator, Collection System Engineer, and Facilities Maintenance Worker<br>• Increase Purchasing & Inventory Assistant to full-time (0.2 FTE) |
| | **126.2** | **130.2** | **134.4** | |

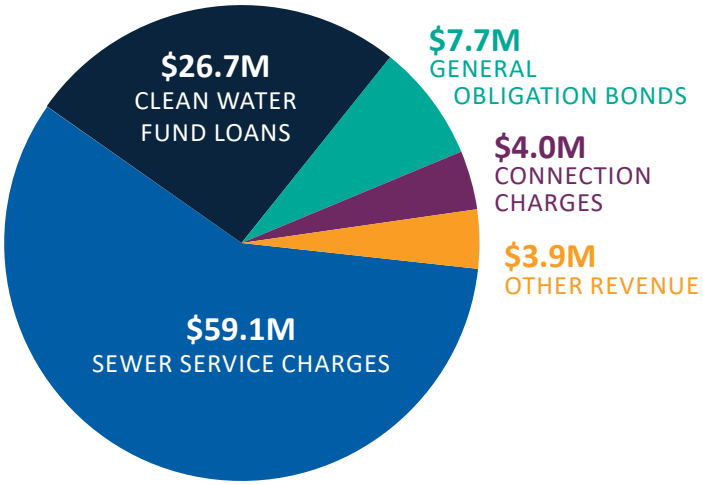
# ALL-FUNDS SUMMARY AND PLAN

The operating budget includes transfers to the capital projects fund and the debt service fund. Details on those funds are presented in the capital finance section, including revenues from connection charges. Combining the three budgets yields an all-funds budget, shown in detail in **Appendix C, page 125**. A simplified illustration of all-funds spending and revenue is given in **Figure 4**, below and **Table 5, next page.**

## Figure 4: **2025 Combined Summary of Revenues & Expenditures**

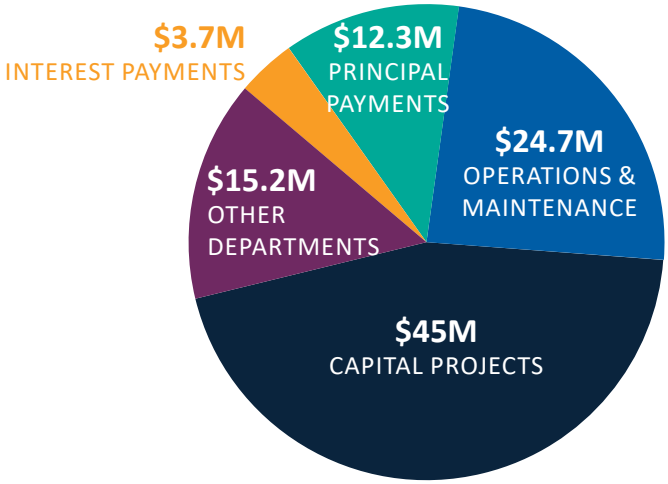
### ALL-FUNDS BUDGETED REVENUES

**$101.5 MILLION**




### ALL-FUNDS BUDGETED EXPENDITURES

**$100.9 MILLION**




## REVENUE & EXPENDITURE CATEGORIES DEFINED

### REVENUE CATEGORIES

**Sewer service charges:** Charges paid by the District's owner communities to cover each community's share of District costs. These charges are the primary revenue source for the District. See the information on service charge rates on **page 8**.

**Servicing pumping stations:** Charges paid by communities whose pumping stations are operated and maintained by the District.

**Rent:** Rental revenue from District-owned properties.

**Interest:** Interest earned on the District's cash reserves.

**Annexation & plan review fees:** Payments from owner communities for District services in reviewing plans for annexations of land to the District's area of service and for modifications or additions to their sewer systems.

**Miscelleanous income:** Smaller sources of revenue including sale of scrap materials and providing laboratory services.

**Septage disposal income:** Income received for waste delivered by truck to the plant. The largest source of waste delivered is from homes and businesses on septic systems.

**Pretreatment monitoring:** Payments by businesses for District industrial discharge permits.

### EXPENDITURE CATEGORIES

**Department expenditures:** Expenditures for each District department individually.

**Interfund transfer, capital:** Transfer to the capital projects fund to support capital project costs.

**Interfund transfer, debt:** Transfer to the debt service fund to support District debt service payments.

# Table 5: **2025 All-Funds Budget Summary**

| | 2023 Actual | 2024 Budget | 2024 Through June Actual | 2024 Total Estimated | Proposed 2025 Budget |
|---|---|---|---|---|---|
| **OPENING BALANCE** | **$58,171,900** | **$65,589,700** | **N/A** | **$71,365,800** | **$72,947,200** |
| **Revenues - Operating Budget** | | | | | |
| Sewer Service Charges | 49,946,400 | 55,063,000 | 28,504,600 | 56,036,100 | 59,191,900 |
| Servicing Pumping Stations | 584,200 | 517,500 | 311,500 | 611,200 | 638,200 |
| Rent | 90,000 | 92,300 | 63,200 | 93,300 | 96,600 |
| Interest Earnings | 630,300 | 242,500 | 680,100 | 638,200 | 646,100 |
| Annexation and Plan Review Fees | 86,900 | 69,100 | 55,600 | 69,100 | 69,100 |
| Miscellaneous Income | 130,100 | 172,400 | 185,500 | 133,700 | 137,300 |
| Septage Disposal Revenue | 1,093,300 | 1,272,300 | 589,600 | 1,190,500 | 1,287,700 |
| Pretreatment Monitoring | 41,100 | 39,100 | 41,100 | 43,400 | 45,700 |
| Struvite Fertilizer Sales | 253,500 | 231,900 | 117,000 | 231,900 | 231,900 |
| *SUBTOTAL REVENUES - OPERATING* | *$52,855,800* | *$57,700,100* | *$30,548,200* | *$59,047,400* | *$62,344,500* |
| **Revenues - Capital Projects Budget** | | | | | |
| Clean Water Fund Loans | 800,300 | 36,651,000 | 1,329,200 | 12,022,000 | 26,689,000 |
| General Obligation Bonds | - | - | - | - | 7,693,000 |
| Connection Charges | 4,433,000 | 2,450,000 | 2,826,200 | 3,880,000 | 3,996,000 |
| Interest Earnings | 765,100 | 80,000 | 428,400 | 528,000 | 420,000 |
| Transfers From Operating Fund | 4,791,000 | 15,521,000 | - | 15,521,000 | 9,417,000 |
| *SUBTOTAL REVENUES - CAPITAL* | *$10,789,400* | *$54,702,000* | *$4,583,800* | *$31,951,000* | *$48,215,000* |
| **Revenues -Debt Service Budget** | | | | | |
| Transfer from Operating Fund | 16,026,000 | 6,539,000 | - | 6,539,000 | 14,346,000 |
| Interest Earnings | 916,700 | 155,000 | 630,500 | 679,000 | 310,000 |
| | *$16,942,700* | *$ 6,694,000* | *$630,500* | *$7,218,000* | *$14,656,000* |
| **TOTAL REVENUES, OMITTING TRANSFERS** | **$59,770,900** | **$97,036,100** | **$35,762,500** | **$76,156,400** | **$101,452,500** |

(continued)

## Table 5: 2025 All-Funds Budget Summary (continued)

| | 2023 Actual | 2024 Budget | 2024 Through June Actual | 2024 Total Estimated | Proposed 2025 Budget |
|---|---|---|---|---|---|
| **Expenditures - Operating Budget** | | | | | |
| Budget and Planning | 1,062,300 | 2,001,500 | 660,800 | 2,001,500 | 1,964,100 |
| Ecosystems Services | 2,923,600 | 3,986,900 | 1,757,600 | 3,986,900 | 4,158,500 |
| Engineering | 2,076,600 | 1,843,500 | 8,844,700 | 1,843,500 | 1,881,300 |
| Enterprise Services | 3,826,800 | 3,935,900 | 2,099,800 | 3,935,900 | 4,342,900 |
| ED, Comms, Business Srvcs | 1,674,100 | 1,734,400 | 774,500 | 1,734,400 | 1,879,100 |
| Human Resources | 469,000 | 932,200 | 258,500 | 932,200 | 1,003,600 |
| Operations and Maintenance | 20,906,300 | 21,401,600 | 10,765,400 | 21,401,600 | 24,678,700 |
| Interfund Transfer, Capital | 4,791,000 | 15,521,000 | - | 15,521,000 | 9,417,000 |
| Interfund Transfer, Debt | 16,026,000 | 6,539,000 | - | 6,539,000 | 14,346,000 |
| *SUBTOTAL EXPENDITURES - OPERATING* | *$53,755,700* | *$57,896,000* | *$25,161,300* | *$57,896,000* | *$63,671,200* |
| **Expenditures - Capital Projects Budget** | | | | | |
| Treatment Plant | 1,961,500 | 11,963,000 | 3,034,200 | 8,208,000 | 16,346,000 |
| Interceptors | 4,104,400 | 19,304,000 | 1,430,000 | 7,115,000 | 20,170,000 |
| Pumping Stations and Force Mains | 3,786,600 | 13,745,000 | 5,801,900 | 9,351,000 | 8,109,000 |
| Capital Budget Expenses | 571,500 | 533,000 | 116,300 | 363,000 | 369,000 |
| *SUBTOTAL EXPENDITURES - CAPITAL* | *$10,424,000* | *$45,545,000* | *$10,382,400* | *$25,037,000* | *$44,994,000* |
| **Debt Service Budget** | | | | | |
| Principal Payments | 13,038,000 | 11,762,000 | 10,304,500 | 10,781,000 | 12,321,000 |
| Interest Payments | 2,910,000 | 3,578,000 | 1,380,600 | 2,921,000 | 3,687,000 |
| *SUBTOTAL EXPENDITURES - DEBT SERVICE* | *$15,948,000* | *$15,340,000* | *$11,685,100* | *$13,702,000* | *$16,008,000* |
| **TOTAL EXPENDITURES, OMITTING TRANSFERS** | **$59,310,700** | **$96,721,000** | **$47,228,800** | **$74,575,000** | **$100,910,200** |
| **CLOSING BALANCE** | **$58,632,100** | **$65,904,800** | **N/A** | **$72,947,200** | **$73,489,500** |
| Reserve Requirement | 38,252,700 | 54,495,300 | N/A | 47,454,178 | 62,814,500 |
| Closing Balance Net of Reserves | 20,379,400 | 11,409,500 | N/A | 25,493,022 | 10,675,000 |

SECTION THREE

# 2025 Capital Improvements Plan & Budget

A child plays along the shoreline of a lagoon at Winnequah Dream Park in Monona.

District staff develop a Capital Improvements Plan (CIP) as part of the annual operating budget. The CIP is included in the proposed budget document published in September. This section provides an overview and summary of the 2025 capital projects budget and a six-year capital projects summary.

The CIP contributes to District planning and budgeting in the following ways:

- Identifies capital projects needed to keep the District's assets in good working order and meet capacity needs.
- Analyzes and describes projects in detail in individual business cases, including needs, alternatives, costs and timeframes for planning, design and construction.
- Identifies potential large spending requirements for future years and incorporates them into financial planning as needed.
- Estimates project expenditures for six years using the best information available.
- Arranges project timelines to balance urgency, resources and coordination requirements.
- Prepares a financing plan to balance the use of debt, financial resiliency and impact on service charges.
- Proposes an annual capital budget for the succeeding year.

Costs and schedules are generally less developed for projects toward the end of the six-year timeframe. Details of projects in the first one to three years are more precisely known. Many of the early-period projects are underway, and their costs have been committed to by contract. Annual CIP updates allow the District to have more precise spending and work plans in the short term and prepare for potential large work and financial issues over the longer term.

The project summaries in Appendix A, page 63, provide information on specific projects in the CIP. These summaries describe each project's scope, need, cost and schedule. Business cases include more detailed descriptions and analyses of each project. They are not included in the budget document due to their length but are available upon request.

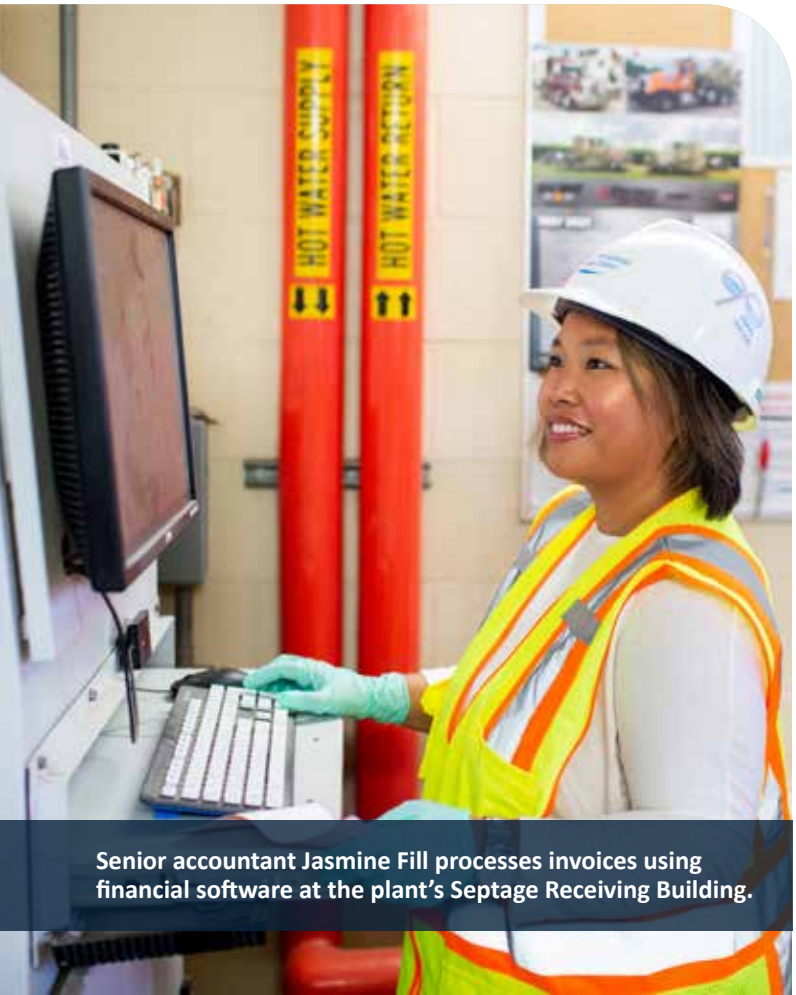
Appendix B, page 121, briefly discusses recently completed projects and the status of maintenance retainers for recently completed or soon-to-be-completed projects.

**Large construction projects, whether on the Nine Springs campus or offsite in the community, require years of planning before work can begin.**

# PROJECT COST ESTIMATES

Annual project costs in the CIP are typically increased at a rate of 3% to account for the effects of inflation. The core inflation rate rose sharply during the COVID-19 pandemic and reached its highest point of approximately 6.6% in September 2022. Corresponding allowances for these inflationary increases were made to cost projections in the last two plans. With core inflation decreasing to nearly 3% in 2024, the 2025 plan assumes inflation rates of 3.5% for 2025 to 2027 and 3.0% for the remaining years of the plan.

Additional cost contingencies have been applied to some projects that may be subject to the Build America Buy America (BABA) Act requirements. The BABA Act requires that recipients of federal infrastructure funding use iron, steel, manufactured products and construction materials produced in the United States. This requirement is expected to add costs to projects, at least in the short term. Thus, all District projects that use funding from the State of Wisconsin's Clean Water Fund must adhere to these requirements and allowances to ensure conformance has been applied to projects where appropriate.




**Senior accountant Jasmine Fill processes invoices using financial software at the plant's Septage Receiving Building.**

# SUMMARY OF 2025 EXPENDITURES

Capital expenditures for 2025 focus on rehabilitating and replacing existing assets at the treatment plant and the collection system and the provision of new assets to provide additional capacity in the collection system. Some of the major construction activities and equipment purchases in 2025 include the following:

- Replacement of the drives and mechanisms on two of the gravity sludge thickeners at the treatment plant.
- Rehabilitation of the flow splitter structure at the treatment plant's Headworks facility.
- Replacement of the outdoor service switchgear, transformers, busway system and indoor distribution switchgear for the electrical service to the treatment plant.
- Replacement of the District's maintenance, financial and human resources systems.
- Completion of the third and final phase of the West Interceptor – Shorewood Relief Project between University Bay Drive and Walnut Street in the City of Madison to provide additional capacity.
- Installation of Phase 6 of the Lower Badger Mill Creek Interceptor between Shady Oak Lane and Midtown Road in the Town of Verona.
- Installation of a relief/replacement sewer for the Northeast Interceptor – Waunakee Extension in the Town of Westport to provide additional capacity.
- Rehabilitation of the Northeast Interceptor between Rieder Road and Lien Road in the City of Madison.
- Rehabilitation of the West Interceptor on University Avenue between Shorewood Boulevard and Segoe Road in the Village of Shorewood Hills and the City of Madison.
- Rehabilitation of the Southeast Interceptor on U.S. Highway 51 in the Village of McFarland.
- Rehabilitation of Pumping Station 4 in the City of Madison.
- Firm capacity improvements and equipment replacements at Pumping Station 17 in the City of Verona.

- Completion of a relief force main for Pumping Station 17 in the City of Verona and Town of Verona.
- Repair of a force main leak at Pumping Station 10 in the City of Madison.

Besides construction, several large projects will be under design in 2025. Construction of the first phase of the Liquid Processing Improvements was completed in 2021. Preliminary design of the second phase of projects occurred in 2023-2024, and detailed design will take place in 2025. These projects include replacement of the air piping in the East Primary Influent Channel; replacement of piping and equipment in the aeration tanks and modifications to allow for treatment at lower levels of dissolved oxygen: replacement of blower and switchgear equipment at both the west and east complexes: and rehabilitation of several primary tanks on the east side of the treatment plant.

Other design work at the treatment plant in 2025 includes improvements to the lagoon dikes east of South Towne Drive and the W4 booster system. A vinyl sheet pile floodwall has been selected as the preferred alternative to raise the south berm of the lagoons as protection against rising water levels in future wet weather events. Work in 2025 will involve obtaining the necessary permits for the floodwall and preparing the final plans and specifications for the improvements.

**Project engineer Theran Jacobson reviews construction plans on replacement pipe at the Pumping Station 17 Force Main Relief project site in Verona.**

For the W4 system, a draft engineering report was completed in June 2024 that recommended improvements to the W4 booster system that uses treated effluent for various process uses around the treatment plant. Preparation of plans and specifications will begin in 2024, with completion scheduled in 2025.

Design work on a significant interceptor project is expected to commence in 2025. The District's Nine Springs Valley Interceptor (NSVI) requires additional capacity between Pumping Station 11 and Pumping Station 12, a distance of approximately 30,000 feet. The capacity projects are expected to be built in multiple phases over the next 15 to 20 years. Work in 2025 will focus on a preliminary study of routes along the corridor and design of the project's first phase, from Pumping Station 11 to Syene Road.

Finally, a project to reinstall bar screens at four District pumping stations will begin design in 2025. The screens will be installed at Pumping Stations 2, 7, 8 and 11 to remove rags and other debris from the wastewater to help reduce the plugging of pumps at these stations and lessen the damage this debris does to the fine screens at the Headworks facility.

Several planning projects are also scheduled to begin or continue in 2025. The two most significant projects include developing facility plans to:

1. Determine the future use of biogas and the related impact on heat and power systems at the treatment plant; and

2. Determine how the District will manage and dispose of its biosolids.

While these projects will be conducted separately, it is anticipated that close coordination will be required throughout the planning process as each project has a significant impact on the District's energy profile.

Finally, the Collection System Facilities Plan Update is expected to be completed in 2025. This document will be used to identify, justify and prioritize collection system projects for inclusion in future CIPs. It will be completed as a joint effort between District staff and an engineering consultant.

# CONFORMANCE WITH ADOPTED PLANS AND PROGRAMS

The 2025 CIP assumes that capital projects will conform with the recommendations of the District's 2009 50-Year Master Plan regarding centralized treatment. The plan recommends that the District continue to treat all wastewater from its service area at the Nine Springs Wastewater Treatment Plant. As such, none of the projects in the CIP assume that a satellite treatment facility will be located anywhere in the District's service area in the near future. This is a key assumption to note as the projects to add capacity in the Pumping Station 17 basin will be constructed in the next two to three years.

While the 50-Year Master Plan provides long-term guidance, shorter-term planning is required to assess the condition and capacity of the District's systems and assets. The District relies upon facility planning efforts, its asset management program and other planning efforts to help direct annual updates to its CIP. The following planning efforts provide the most significant guidance for the District's annual capital improvements planning.

## COLLECTION SYSTEM FACILITIES PLAN

The Collection System Facilities Plan, last updated in 2011, lists recommended capital improvements to the District's collection system. The Capital Area Regional Planning Commission (CARPC) updated its 2009 evaluation of the District's collection system capacity in 2017 and 2018. This update will allow the District to update its Collection System Facilities Plan, currently scheduled for substantial completion in 2025.

## SOLIDS HANDLING FACILITIES PLAN

This Solids Handling Facilities Plan formed the basis for work constructed during the Eleventh Addition to the plant. This addition, completed in 2014, provided a comprehensive update to the treatment plant's solids handling processes. This work should allow the plant to meet solids loadings for the next 20 years. As such, solids handling is not a primary focus of the 2025 CIP.

## LIQUID PROCESSING FACILITIES PLAN

While the Solids Handling Facilities Plan investigated the plant's solids streams and processes, the Liquid Processing Facilities Plan reviewed the plant's liquid streams and processes. This facilities plan was substantially completed in 2017 and included multiple projects addressing the plant's liquid processing needs. The 17 projects identified in the facilities plan will be combined into separate bid packages that will be constructed in multiple phases before 2030. The project's first phase was bid in 2019 and completed in the second half of 2021. Projects to be included in the second and third phases of the Liquid Processing Improvements are included in the 2025 CIP, with the timing and phasing of these projects determined based on project need, staff workload and the District's financial situation.

## 2020 ENERGY MANAGEMENT MASTER PLAN

The 2020 Energy Management Plan built on a 2014 energy study Brown and Caldwell and Strand

**Collection system supervisor Ray Schneider collects wastewater samples for COVID variant testing in the service area.**

Associates by taking a comprehensive look at how the District currently uses energy and creating a roadmap for how to manage energy in the future. The 2020 study, conducted by Carollo Engineers and completed in 2021, emphasized how to select projects and optimize energy use as critical equipment, such as gas-driven electrical generators and the associated hot water system, are replaced in the coming years. Recommendations include further study and facilities planning for heat and power improvements, biosolids processing, and miscellaneous energy enhancements at the treatment plant in the coming years.

## ASSET MANAGEMENT PROGRAM

The District's asset management program informs the CIP. Asset management contributes to capital planning by evaluating the condition and criticality of District assets, implementing proper maintenance processes to extend asset life and providing data on asset repair and replacement needs. The District's program began in 2011, received an updated framework in 2016, and received an updated plant asset management plan in 2019. The next steps in the program include further improvement of maintenance practices, improving asset data and implementing a new computerized maintenance management system to provide better information for planning.

## CAPITAL PROJECT INFRASTRUCTURE PLACEMENT PLAN

The Capital Project Infrastructure Placement Plan is the latest planning effort. The purpose of this plan was to perform an inventory of all major facilities at the Nine Springs Wastewater Treatment Plant and propose a plan that optimizes future infrastructure and operations, given the District's limited space and resources. Specific focus areas of the plan include the future handling and treatment of biogas, biosolids and administrative spaces at the plant. TKDA consultants began the study in 2022; the final report was delivered in 2023. The recommendations from this report will be used to prepare future CIPs.

**Asset management specialist Zenon Kochan reviews asset labels for District equipment as part of his work on the Reliability Process team.**

# 2025 CAPITAL PROJECTS BUDGET OVERVIEW & SUMMARY

This section discusses the District's 2025 capital budget. The capital budget sets spending limits on a per-project basis and total annual spending basis. Spending on individual projects is limited to the authorized total project cost. Individual project spending can and does vary by year if the total cost is not exceeded over the project's life. Spending on all capital projects combined in the budget year is limited to the total amount authorized. The annual total budget limit is set for the current year only. Future year spending totals in the CIP are estimates.

The tables in this section list proposed total project cost authorizations, annual expenditures by project and loan proceeds. Financial matters, including fund balances and the use of debt, are discussed next in the Capital Finance section.

## TOTAL PROJECT COSTS SUMMARY

Table CIP-1A, pages 26-27, lists total project costs. Per Commission Policy ATT-2, which covers the development of the capital budget, the Executive Director is required to submit to the Commission a list of total project costs for all previously approved projects and all projects new to the proposed budget each year. This table also includes total costs for projects included in the six-year CIP. For each project, the total project cost of the current budget year is compared to that of the preceding year.

Table CIP-1B, page 28, provides a breakdown of total project costs for projects authorized in previous CIPs but subsequently combined or bundled into a single consolidated project for bidding and construction purposes. This table is provided for informational purposes per Commission policy, although only the total cost of the consolidated project is used for cost control purposes.

**Biosolids specialist Zac Thompson examines soil types and bedrock and groundwater levels in agricultural fields under consideration for land application of biosolids.**

# Table CIP-1A: **Total Project Cost Authorizations**

| Subprojects shown in separate table as noted | | Authorization in 2024 Plan | Proposed Authorization in 2025 Plan | Change in Authorization | |
|---|---|---|---|---|---|
| **TREATMENT PLANT** | | **$217,419,000** | **$275,952,000** | **$58,533,000** | **27%** |
| A01 | Liquid Processing Improvements- Phase 2 | - | - | - | n/a |
| A01.1 | East Primary Influent Channel Air Piping Replacement | 1,515,000 | 4,000,000 | 2,485,000 | 164% |
| A01.2 | Low Dissolved Oxygen (Partial Plant) | 4,000,000 | 150,000 | (3,850,000) | -96% |
| A01.3 | Low Dissolved Oxygen (Full Plant) | 23,263,000 | 45,000,000 | 21,737,000 | 93% |
| A01.4 | West Blowers and Switchgear Replacement | 11,200,000 | 10,000,000 | (1,200,000) | -11% |
| A01.5 | East Blowers and Switchgear Replacement | 11,400,000 | 10,000,000 | (1,400,000) | -12% |
| A01.6 | East Plant Primary Tank Rehabilitation (LPI) | - | 7,000,000 | 7,000,000 | n/a |
| A02 | Sludge Thickeners No. 1 and No. 2 Drive and Mechanism Replacements | 500,000 | 550,000 | 50,000 | 10% |
| A03 | NSWWTP Electrical Service Equipment Replacement | 13,700,000 | 12,000,000 | (1,700,000) | -12% |
| A04 | Heat and Power Improvements | 50,914,000 | 50,914,000 | - | 0% |
| A05 | Lagoon Dikes Improvements | 5,000,000 | 4,000,000 | (1,000,000) | -20% |
| A06 | Maintenance, Financial and HR Systems | 6,150,000 | 6,150,000 | - | 0% |
| A07 | Metrogro Applicators & Equipment | 4,850,000 | 5,300,000 | 450,000 | 9% |
| A08 | Flow Splitter Improvements | 5,000,000 | 7,600,000 | 2,600,000 | 52% |
| A09 | Treatment Plant HVAC Improvements- Group 1 Projects | 3,875,000 | 4,000,000 | 125,000 | 3% |
| A10 | Liquid Processing Improvements- Phase 3 | - | - | - | n/a |
| A10.1 | Headworks Screening | 5,175,000 | 5,500,000 | 325,000 | 6% |
| A10.2 | Grit Processing Improvements | 2,675,000 | 2,800,000 | 125,000 | 5% |
| A11 | Phosphorus Recovery Improvement Projects | 5,400,000 | - | (5,400,000) | -100% |
| A11.1 | Dryer & Seeding Modifications | - | 1,100,000 | 1,100,000 | n/a |
| A11.2 | DAF Rehabilitation | - | 3,200,000 | 3,200,000 | n/a |
| A12.1 | Miscellaneous Treatment Plant Projects 2025 | - | 175,000 | 175,000 | n/a |
| A12.2 | Miscellaneous Treatment Plant Projects- Future | 680,000 | 960,000 | 280,000 | 41% |
| A13.1 | Minor Capital Improvements 2025 | - | 130,000 | 130,000 | n/a |
| A13.2 | Minor Capital Improvements- Future | 700,000 | 725,000 | 25,000 | 4% |
| A14.1 | Annual Pavement Improvements 2025 | - | 80,000 | 80,000 | n/a |
| A14.2 | Annual Pavement Improvements- Future | 244,000 | 265,000 | 21,000 | 9% |
| A15 | Biosolids Processing Improvements | 24,100,000 | - | (24,100,000) | -100% |
| A15.1 | Biosolids Facilities Plan | - | 750,000 | 750,000 | n/a |
| A15.2 | Biosolids Infrastructure | - | 50,000,000 | 50,000,000 | n/a |
| A16 | W4 System Improvements | 1,100,000 | 1,500,000 | 400,000 | 36% |
| A17.1 | Annual Solids Processing Tank Cleaning 2025 | - | 935,000 | 935,000 | n/a |
| A17.2 | Annual Solids Processing Tank Cleaning- Future | 4,250,000 | 4,650,000 | 400,000 | 9% |
| A18 | Septage Receiving Modifications | 4,710,000 | 8,000,000 | 3,290,000 | 70% |
| A19 | East Plant Primary Tank Rehabilitation- Future | - | 1,500,000 | 1,500,000 | n/a |
| N/A | Engine Generator and Blower Control Panel Replacements | 750,000 | 750,000 | - | 0% |
| N/A | Headworks Flow Metering | 2,291,000 | 2,291,000 | - | 0% |
| N/A | Liquid Processing Improvements- Phase 1* | 16,818,000 | 16,818,000 | - | 0% |
| N/A | Operations Building First Floor Remodel | 2,175,000 | 2,175,000 | - | 0% |
| N/A | 2021 Treatment Plant HVAC Improvement Project | 2,450,000 | 2,450,000 | - | 0% |
| N/A | Maintenance Facility Rooftop Solar Panels | 378,000 | 378,000 | - | 0% |
| N/A | Miscellaneous Treatment Plant Projects 2024 | 121,000 | 121,000 | - | 0% |
| N/A | Minor Capital Improvements 2024 | 200,000 | 200,000 | - | 0% |
| N/A | Annual Solids Processing Tank Cleaning 2024 | 800,000 | 800,000 | - | 0% |
| N/A | Miscellaneous Treatment Plant Projects 2022 | 124,000 | 124,000 | - | 0% |
| N/A | Miscellaneous Treatment Plant Projects 2023 | 119,000 | 119,000 | - | 0% |
| N/A | Minor Capital Improvements 2023 | 122,000 | 122,000 | - | 0% |
| N/A | Annual Pavement Improvements 2023 | 95,000 | 95,000 | - | 0% |
| N/A | Primary Tank 6 Rehabilitation | 575,000 | 575,000 | - | 0% |
| **INTERCEPTORS** | | **$87,222,000** | **$107,452,000** | **$20,230,000** | **23%** |
| B01 | Manhole Rehabilitation on Old West Interceptor | - | 850,000 | 850,000 | n/a |
| B02 | Lower Badger Mill Creek Interceptor- Phase 6 | 4,900,000 | 9,750,000 | 4,850,000 | 99% |
| B03 | West Interceptor Rehab- Segoe Road to Shorewood Boulevard | 1,100,000 | 1,100,000 | - | 0% |
| B04 | NEI- Waunakee Extension Capacity Improvements (Phase 1) | 12,000,000 | 11,000,000 | (1,000,000) | -8% |

**indicates that a project has subprojects, see Table CIP-1B.*

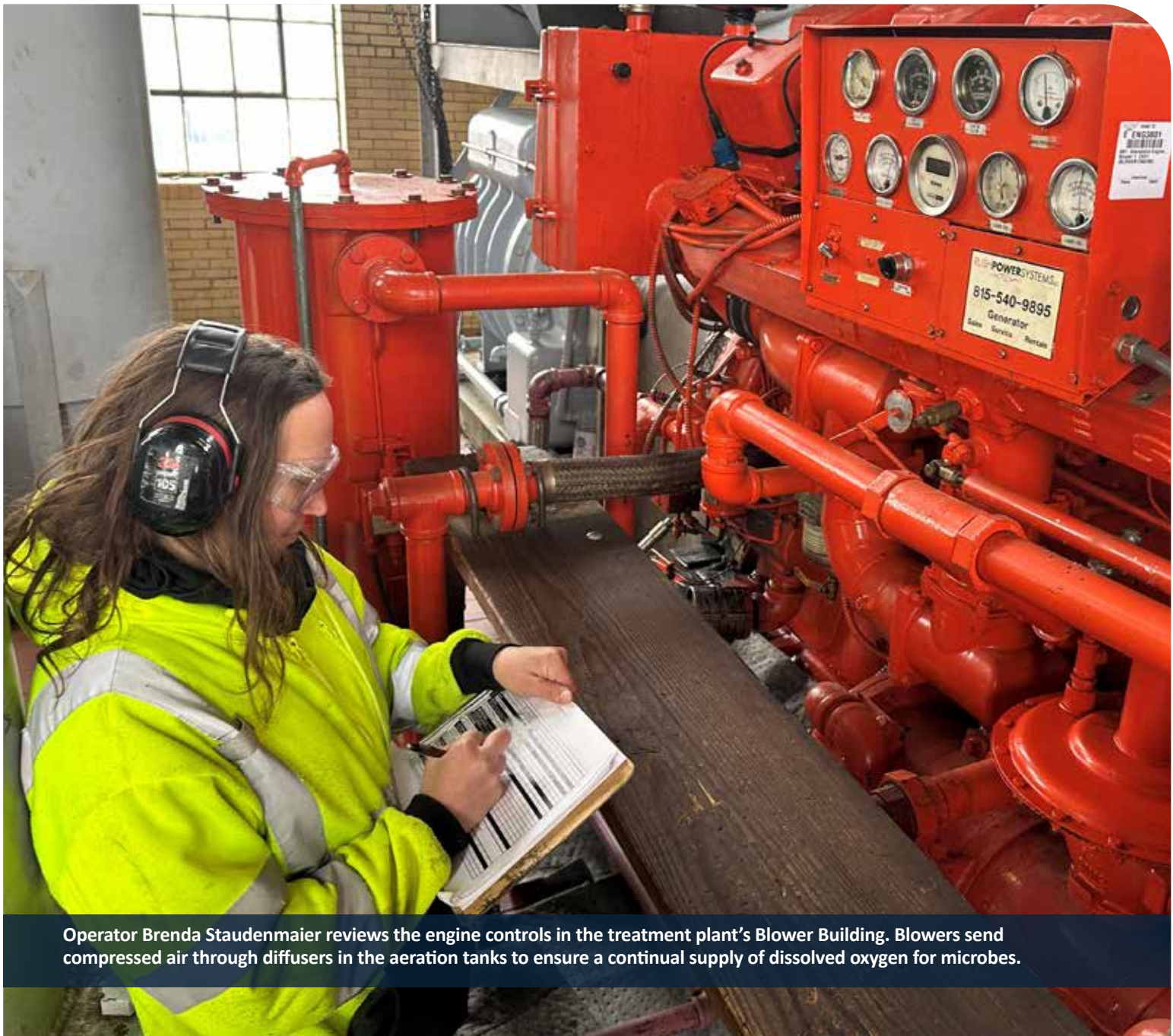
# Table CIP-1A: **Total Project Cost Authorizations** (continued)

| Subprojects shown in separate table as noted | | Authorization in 2024 Plan | Proposed Authorization in 2025 Plan | Change in Authorization | |
|---|---|---|---|---|---|
| B05 | NEI- Truax Extension Rehab | 8,200,000 | 8,950,000 | 750,000 | 9% |
| B06 | NEI- FEI to SEI Rehab | 2,400,000 | 2,600,000 | 200,000 | 8% |
| B07.1 | Southeast Interceptor Rehabilitation on USH 51 (Phase 1) | 1,300,000 | 1,300,000 | - | 0% |
| B07.2 | Southeast Interceptor Rehabilitation on USH 51 (Phase 2) | 1,850,000 | 2,600,000 | 750,000 | 41% |
| | | | | | |
| B08.2 | NSVI Capacity Improvements (Phase 2) | - | 9,650,000 | 9,650,000 | n/a |
| B09.1 | West Interceptor Rehab- Babcock Hall to Dayton Street | 1,360,000 | 1,540,000 | 180,000 | 13% |
| B09.2 | West Interceptor Rehab- Farley Avenue to Marshall Court | - | 825,000 | 825,000 | n/a |
| B10 | District Flow Monitoring Stations | 1,250,000 | 1,250,000 | - | 0% |
| B11 | Southeast Interceptor Relocation at Yahara River | - | 850,000 | 850,000 | n/a |
| B12 | Access to Interceptors | - | 3,900,000 | 3,900,000 | n/a |
| B13 | NEI- Waunakee Extension Rehab (MH14-358 to MH14-362) | 700,000 | 700,000 | - | 0% |
| B14 | West Interceptor on Regent Street (Park Street to East Campus Mall) | 625,000 | 1,300,000 | 675,000 | 108% |
| B15 | NEI- Rehab West of Airport (Phase 2) | 4,000,000 | 4,125,000 | 125,000 | 3% |
| N/A | Lower Badger Mill Creek Interceptor- Phase 5 | 1,900,000 | 1,900,000 | - | 0% |
| N/A | Northeast Interceptor Joint Grouting MH10-101 to MH10-106 | 307,000 | 307,000 | - | 0% |
| N/A | NSVI Improvements-McKee Road to Dunn's Marsh | 4,754,000 | 4,754,000 | - | 0% |
| N/A | NSVI-Morse Pond Extension | 2,300,000 | 2,300,000 | - | 0% |
| N/A | Pump Station 6 to Pump Station 10 Connector | 9,882,000 | 9,882,000 | - | 0% |
| N/A | West Interceptor- Shorewood Relief (Phase 1) | 4,915,000 | 4,915,000 | - | 0% |
| N/A | West Interceptor- Shorewood Relief (Phase 2) | 1,754,000 | 1,754,000 | - | 0% |
| N/A | West Interceptor- Shorewood Relief (Phase 3) | 8,500,000 | 8,500,000 | - | 0% |
| N/A | Repair to West Interceptor Extension on Allen Boulevard | 725,000 | 725,000 | - | 0% |
| **PUMPING STATIONS AND FORCE MAINS** | | **$72,067,000** | **$86,085,000** | **$14,018,000** | **19%** |
| C01 | Pumping Station 10 Force Main Leak | 1,500,000 | 1,500,000 | - | 0% |
| C02 | Emergency Power Generation at District Pumping Stations | 10,000,000 | 16,000,000 | 6,000,000 | 60% |
| C03 | Pumping Station 16 Projects | - | - | - | n/a |
| C03.1 | Pumping Station 16 Rehabilitation | 6,370,000 | 8,200,000 | 1,830,000 | 29% |
| C03.2 | Pumping Station 16 Force Main Rehabilitation | 2,068,000 | 2,700,000 | 632,000 | 31% |
| C04 | Crosstown Force Main Air Release Valve Saddle Tap Replacements | - | 625,000 | 625,000 | n/a |
| C05.1 | Force Main Condition Assessment - PS 10 Force Main | 525,000- | 525,000 | - | 0% |
| C05.2 | Force Main Condition Assessment - Future | 3,159,000 | 3,000,000 | (159,000) | -5% |
| C06 | Pumping Station Bar Screens | - | 4,000,000 | 4,000,000 | n/a |
| C07 | PS 11 & PS 12 Surge Valve Access Platforms | 225,000 | 225,000 | - | n/a |
| C08 | PS 5 & PS 15 Force Main Isolation Valve Replacements | - | 850,000 | 850,000 | n/a |
| C09.1 | Miscellaneous Collection System Projects 2025 | - | 110,000 | 110,000 | n/a |
| C09.2 | Miscellaneous Collection System Projects- Future | 1,130,000 | 1,130,000 | - | 0% |
| N/A | Grass Lake Dike Stabilization | 905,000 | 905,000 | - | 0% |
| N/A | PS 13 & PS 14 Rehabilitation* | 10,755,000 | 10,755,000 | - | 0% |
| N/A | PS 15 Rehab | 4,683,000 | 4,683,000 | - | 0% |
| N/A | Miscellaneous Collection System Projects 2024 | 200,000 | 105,000 | (95,000) | -48% |
| N/A | Miscellaneous Collection System Projects 2023 | 103,000 | 103,000 | - | 0% |
| N/A | Pumping Station 17 Force Main Relief- Phase 1 | 3,490,000 | 3,490,000 | - | 0% |
| N/A | Pumping Station 4 Rehabilitation | 7,069,000 | 7,069,000 | - | 0% |
| N/A | Pumping Station 17 Firm Capacity Improvements | 8,100,000 | 8,100,000 | - | 0% |
| N/A | Pumping Station 17 Force Main Relief (Phase 2) | 12,010,000 | 12,010,000 | - | 0% |
| **CAPITAL BUDGET EXPENSES** | | **$2,846,000** | **$2,876,000** | **$30,000** | **1%** |
| D01 | Capital Budget Expenses | 53,000 | 53,000 | - | 0% |
| D02 | Collection System Facilities Plan Update | 360,000 | 390,000 | 30,000 | 8% |
| D03 | Badger Mill Creek Phosphorus Compliance | 1,750,000 | 1,750,000 | - | 0% |
| N/A | Plant Asset Management Plan Implementation | 323,000 | 323,000 | - | 0% |
| N/A | Capital Project Infrastructure Placement Plan | 360,000 | 360,000 | - | 0% |
| **GRAND TOTAL** | | **$379,554,000** | **$472,365,000** | **$92,811,000** | **24%** |

**indicates that a project has subprojects, see Table CIP-1B.*

# Table CIP-1B: **Total Estimated Subproject Costs for Bundled Projects**

| | 2024 | Estimated 2025 | Increase | |
|---|---|---|---|---|
| **LIQUID PROCESSING IMPROVEMENTS - PHASE 1** | **$16,818,000** | **$16,818,000** | **-** | **0%** |
| 54 Inch Primary Influent Rehabilitation | 662,000 | 662,000 | - | 0% |
| East Blower Controls | 727,000 | 727,000 | - | 0% |
| East-West Plant Flow Metering | 1,848,000 | 1,848,000 | - | 0% |
| Plant Peak Capacity Improvements | 4,695,000 | 4,695,000 | - | 0% |
| Plant Unit Substation Improvements | 3,940,000 | 3,940,000 | - | 0% |
| Primary Tanks 1 and 2 Rehabilitation | 1,055,000 | 1,055,000 | - | 0% |
| Process Control System Upgrade (Phase 2) | 1,112,000 | 1,112,000 | - | 0% |
| UV Disinfection System Replacement | 2,779,000 | 2,779,000 | - | 0% |
| **PUMPING STATION 13 & PUMPING STATION 14 REHABILITATION** | **$10,755,000** | **$10,755,000** | **-** | **0%** |
| Pumping Station 13 Rehabilitation | 5,480,000 | 5,480,000 | - | 0% |
| Pumping Station 14 Rehabilitation | 5,275,000 | 5,275,000 | - | 0% |




**Operator Brenda Staudenmaier reviews the engine controls in the treatment plant's Blower Building. Blowers send compressed air through diffusers in the aeration tanks to ensure a continual supply of dissolved oxygen for microbes.**

## ANNUAL BUDGETS AND EXPENDITURES SUMMARY

Table CIP-2, page 30-31, lists annual expenditures by project. Table CIP-3, page 32, shows total annual budgets for 2023-2025, with actual and estimated spending for 2023 and 2024, respectively. For 2023, actual expenditures were $10.4 million, which was below the budgeted amount of $31.6 million.

The District typically prepares its capital budget in the second quarter of the year preceding the budget year. Projections for future spending are based on the best information available at that time. Due to issues such as easement acquisition, permitting, stakeholder engagement and equipment procurement, project schedules can change appreciably between the time the projection is made and the budget year. The underspending of approximately $21 million in 2023 was due primarily to the following projects:

- **West Interceptor-Shorewood Relief (Phase 3):** Construction was budgeted to occur in 2023. However, due to conflicts with the Wisconsin Department of Transportation's project to reconstruct University Avenue in the same project corridor and coordination issues with the City of Madison's Rapid Bus Transit system project, the District elected to postpone the interceptor project from 2023 to 2024-2025 (a $5.2 million shift from 2023 to 2024-2025).
- **Pumping Station 17 Force Main Relief (Phase 2):** The majority of the construction expenses were budgeted to occur in 2023. However, due to delays in obtaining easements and permits, the design phase took longer than anticipated, and construction did not start until late 2023 (a $7.0 million shift from 2023 to 2024).
- **Pumping Station 4 Rehabilitation:** The District's 2023 budget assumed that 50% of construction expenses for this project would be incurred in 2023. Actual construction expenses in 2023 were approximately 25% of the contract amount due primarily to delays in obtaining equipment. Also, a 20% contingency factor was applied to the 2023 budget estimate for construction to allow for anticipated volatility in equipment prices. Due to favorable bids, the actual amount of the construction contract is well below the budgeted value (actual spending $2.1 million below budget).
- **Pumping Station 17 Firm Capacity Improvements:** Approximately 40% of construction expenses were budgeted for in 2023. Due to delays in completing the final plans and specifications for the project, construction did not commence until April 2024 (a $2.1 million shift from 2023 to 2024).
- **NEI-Waunakee Extension Capacity Improvements (Phase 1):** Approximately 30% of construction expenses were budgeted for in 2023. Due to a slight delay in initiating the project in 2022, no construction occurred in 2023 (a $2.3 million shift from 2023 to 2024).

The five projects described above account for roughly 90% of the amount underspent in 2023 and will be spent in later years. Beginning with the 2025 CIP, the District will no longer prepare a draft CIP document. This will allow future cost projections to be developed closer to the budget year, thereby resulting in greater accuracy.

Expenditures for 2024 are estimated to be $25.3 million. This is below the budgeted value of $45.5 million by $20.2 million. The underspending for 2024 is due primarily to delays in the following projects:

- NEI-Waunakee Extension Capacity Improvements (Phase 1), with $5.6 million shifted from 2024 to 2025;
- West Interceptor-Shorewood Relief (Phase 3), with $2.4 million shifted from 2024 to 2025; and
- Pumping Station 17 Firm Capacity Improvements, with $2.1 million shifted from 2024 to 2025.

# Table CIP-2: **2023-2025 Expenditures by Project**

| | | 2023 Actual | 2024 Through June | 2024 Estimated | 2025 Anticipated |
|---|---|---|---|---|---|
| **TREATMENT PLANT** | | **$1,961,000** | **$3,034,235** | **$8,208,000** | **$16,346,000** |
| A01 | Liquid Processing Improvements (Phase 2) | - | - | - | - |
| A01.1 | East Primary Influent Channel Air Piping Replacement | 39,000 | 40,996 | 60,000 | 191,000 |
| A01.2 | Low Dissolved Oxygen (Partial Plant) | 2,000 | 59,001 | 70,000 | - |
| A01.3 | Low Dissolved Oxygen (Full Plant) | 422,000 | 113,413 | 510,000 | 1,869,000 |
| A01.4 | West Blowers and Switchgear Replacement | 54,000 | 40,405 | 133,000 | 405,000 |
| A01.5 | East Blowers and Switchgear Replacement | 37,000 | 82,793 | 134,000 | 411,000 |
| A01.6 | East Plant Primary Tank Rehabilitation (LPI) | - | - | - | 114,000 |
| A02 | Sludge Thickeners No. 1 and No. 2 Drive and Mechanism Replacements | - | 387 | 170,000 | 360,000 |
| A03 | NSWWTP Electrical Service Equipment Replacement | 336,000 | 356,834 | 935,000 | 2,155,000 |
| A04 | Heat and Power Improvements | 29,000 | 36,569 | 395,000 | 507,000 |
| A05 | Lagoon Dikes Improvements | 87,000 | 50,071 | 243,000 | 233,000 |
| A06 | Maintenance, Financial and HR Systems | 214,000 | 36,981 | 265,000 | 1,515,000 |
| A07 | Metrogro Applicators & Equipment | 19,000 | 863,002 | 870,000 | 1,056,000 |
| A08 | Flow Splitter Improvements | 184,000 | 206,051 | 956,000 | 4,976,000 |
| A09 | Treatment Plant HVAC Improvements - Group 1 Projects | - | - | - | - |
| A10 | Liquid Processing Improvements (Phase 3) | - | - | - | - |
| A10.1 | Headworks Screening | - | - | - | - |
| A10.2 | Grit Processing Improvements | - | - | - | - |
| A11 | Phosphorus Recovery Improvement Projects | - | - | - | - |
| A11.1 | Dryer & Seeding Modifications | - | - | - | 47,000 |
| A11.2 | DAF Rehabilitation | - | - | - | - |
| A12.1 | Miscellaneous Treatment Plant Projects 2025 | - | - | - | 173,000 |
| A12.2 | Miscellaneous Treatment Plant Projects - Future | - | - | - | - |
| A13.1 | Minor Capital Improvements 2025 | - | - | - | 129,000 |
| A13.2 | Minor Capital Improvements - Future | - | - | - | - |
| A14.1 | Annual Pavement Improvements 2025 | - | - | - | 78,000 |
| A14.2 | Annual Pavement Improvements- Future | - | - | - | - |
| A15 | Biosolids Processing Improvements | - | - | - | - |
| A15.1 | Biosolids Facilities Plan | - | - | 25,000 | 350,000 |
| A15.2 | Biosolids Infrastructure | - | - | | |
| A16 | W4 System Improvements | - | 59,761 | 75,000 | 523,000 |
| A17.1 | Annual Solids Processing Tank Cleaning 2025 | - | - | - | 932,000 |
| A17.2 | Annual Solids Processing Tank Cleaning - Future | - | - | - | - |
| A18 | Septage Receiving Modifications | - | - | - | - |
| A19 | East Plant Primary Tank Rehabilitation Future | - | - | - | - |
| N/A | 2021 Treatment Plant HVAC Improvement Project | 33,000 | 802,536 | 1,867,000 | 323,000 |
| N/A | Annual Pavement Improvements 2023 | 89,000 | - | - | - |
| N/A | Annual Solids Processing Tank Cleaning 2024 | - | 2,686 | 600,000 | - |
| N/A | Engine Generator and Blower Control Panel Replacements | 39,000 | - | - | - |
| N/A | Headworks Flow Metering | 5,000 | - | - | - |
| N/A | Liquid Processing Improvements (Phase 1) | 10,000 | - | - | - |
| N/A | Maintenance Facility Rooftop Solar Panels | 280,000 | 8,471 | 25,000 | - |
| N/A | Minor Capital Improvements 2023 | - | - | - | - |
| N/A | Minor Capital Improvements 2024 | - | 147,717 | 200,000 | - |
| N/A | Miscellaneous Treatment Plant Projects 2022 | 7,000 | - | - | - |
| N/A | Miscellaneous Treatment Plant Projects 2023 | 60,000 | - | - | - |
| N/A | Miscellaneous Treatment Plant Projects 2024 | - | 86,881 | 115,000 | - |
| N/A | Operations Building First Floor Remodel | 10,000 | - | - | - |
| N/A | Primary Tank 6 Rehabilitation | 7,000 | 39,679 | 560,000 | - |
| **INTERCEPTORS** | | **$4,104,000** | **$1,430,003** | **$7,380,000** | **$19,109,000** |
| B01 | Manhole Rehabilitation on Old West Interceptor | - | - | - | 67,000 |
| B02 | Lower Badger Mill Creek Interceptor (Phase 6) | 157,000 | 103,033 | 280,000 | 4,652,000 |
| B03 | West Interceptor Rehab- Segoe Road to Shorewood Boulevard | 91,000 | 31,617 | 50,000 | 921,000 |

(continued)

# Table CIP-2: 2023-2025 Expenditures by Project (continued)

| | | 2023 Actual | 2024 Through June | 2024 Estimated | 2025 Anticipated |
|---|---|---|---|---|---|
| B04 | NEI- Waunakee Extension Capacity Improvements (Phase 1) | 459,000 | 293,834 | 2,376,000 | 6,328,000 |
| B05 | NEI-Truax Extension Rehab | - | 15,077 | 20,000 | 5,000 |
| B06 | NEI-FEI to SEI Rehab | - | - | - | - |
| B07.1 | Southeast Interceptor Rehabilitation on USH 51 (Phase 1) | 13,000 | 43,616 | 238,000 | 905,000 |
| B07.2 | Southeast Interceptor Rehabilitation on USH 51 (Phase 2) | - | - | - | - |
| B08.1 | NSVI Capacity Improvements (Phase 1) | | 4,254 | 30,000 | 217,000 |
| B08.2 | NSVI Capacity Improvements (Phase 2) | | | 365,000 | 1,335,000 |
| B09.1 | West Interceptor Rehab- Babcock Hall to Dayton Street | - | - | - | 5,000 |
| B09.2 | West Interceptor Rehab- Farley Avenue to Marshall Court | - | - | - | 5,000 |
| B10 | District Flow Monitoring Stations | - | - | - | 295,000 |
| B11 | Southeast Interceptor Relocation at Yahara River | 20,000 | 30,587 | 50,000 | 52,000 |
| B12 | Access to Interceptors | - | - | - | - |
| B13 | NEI- Waunakee Extension Rehab (MH14-358 to MH14-362) | - | - | - | - |
| B14 | West Interceptor on Regent Street (Park Street to East Campus Mall) | - | - | 5,000 | 31,000 |
| B15 | NEI- Rehab West of Airport (Phase 2) | - | - | - | - |
| N/A | Lower Badger Mill Creek Interceptor (Phase 5) | 937,000 | 452,191 | 615,000 | - |
| N/A | Northeast Interceptor Joint Grouting MH10-101 to MH10-106 | - | 128 | - | - |
| N/A | NSVI Improvements-McKee Road to Dunn's Marsh | 11,000 | 28,157 | 30,000 | - |
| N/A | NSVI-Morse Pond Extension | 1,000 | - | 1,000 | - |
| N/A | Pump Station 6 to Pump Station 10 Connector | 21,000 | - | - | - |
| N/A | Repair to West Interceptor Extension on Allen Boulevard | 632,000 | - | - | - |
| N/A | West Interceptor- Shorewood Relief (Phase 1) | 305,000 | 2,960 | 30,000 | - |
| N/A | West Interceptor- Shorewood Relief (Phase 2) | 1,263,000 | 1,866 | 110,000 | - |
| N/A | West Interceptor- Shorewood Relief (Phase 3) | 193,000 | 422,682 | 3,180,000 | 4,290,000 |
| **PUMPING STATIONS AND FORCE MAINS** | | **$3,787,000** | **$5,801,914** | **$9,351,000** | **$8,109,000** |
| C01 | Pumping Station 10 Force Main Leak | - | 1,080 | 140,000 | 890,000 |
| C02 | Emergency Power Generation at District Pumping Stations | 1,000 | 5,049 | 10,000 | - |
| C03 | Pumping Station 16 Projects | - | - | - | - |
| C03.1 | Pumping Station 16 Rehabilitation | - | - | - | - |
| C03.2 | Pumping Station 16 Force Main Rehabilitation | - | 1,198 | 2,000 | - |
| C04 | Crosstown Force Main Air Release Valve Saddle Tap Replacements | - | - | - | 50,000 |
| C05.1 | Force Main Condition Assessment - PS 10 Force Main | - | - | 100,000 | 425,000 |
| C05.2 | Force Main Condition Assessment - Future | - | - | | |
| C06 | Pumping Station Bar Screens | - | - | 20,000 | 279,000 |
| C07 | PS 11 & PS 12 Surge Valve Access Platforms | - | - | - | - |
| C08 | PS 5 & PS 15 Force Main Isolation Valve Replacements | - | - | - | - |
| C09.1 | Miscellaneous Collection System Projects 2025 | - | - | - | 109,000 |
| C09.2 | Miscellaneous Collection System Projects- Future | - | - | - | - |
| N/A | Grass Lake Dike Stabilization | 10,000 | 10,000 | 10,000 | - |
| N/A | Miscellaneous Collection System Projects 2023 | - | - | - | - |
| N/A | Miscellaneous Collection System Projects 2024 | - | 10,000 | 105,000 | - |
| N/A | PS 13 & PS 14 Rehabilitation | 536,000 | 2,474 | 5,000 | - |
| N/A | Pumping Station 17 Firm Capacity Improvements | 245,000 | 52,760 | 805,000 | 3,144,000 |
| N/A | Pumping Station 17 Force Main Relief (Phase 1) | 46,000 | - | - | - |
| N/A | Pumping Station 17 Force Main Relief (Phase 2) | 1,847,000 | 4,848,656 | 5,425,000 | 2,366,000 |
| N/A | Pumping Station 4 Rehabilitation | 1,102,000 | 870,696 | 2,729,000 | 846,000 |
| **CAPITAL BUDGET EXPENSES** | | **$571,000** | **$116,275** | **$363,000** | **$369,000** |
| D01 | Capital Budget Expenses | - | - | 50,000 | 52,000 |
| D02 | Collection System Facilities Plan Update | 66,000 | 53,293 | 130,000 | 35,000 |
| D03 | Badger Mill Creek Phosphorus Compliance | 240,000 | 62,982 | 183,000 | 282,000 |
| N/A | Capital Project Infrastructure Placement Plan | 162,000 | - | - | - |
| N/A | Plant Asset Management Plan Implementation | 104,000 | - | - | - |
| **GRAND TOTAL** | | **$10,424,000** | **$10,382,427** | **$25,036,000** | **$44,994,000** |

## LOAN REVENUES SUMMARY

Table CIP-4 provides a summary of loan revenues by project(s). Preceding year values are actual disbursements received from the State of Wisconsin's Clean Water Fund (CWF) for projects under construction or recently completed. Current year and subsequent year values are estimates based on the District's financing needs.

In February 2024, the State alerted users of the CWF that financial assistance may be limited due to high demand and limitations in loan capacity. This situation is expected to continue through the State's Fiscal Year 2025. As a result, the District is slightly reducing the anticipated revenue from the CWF and assuming that additional revenue will be needed from sources such as general obligation bonds. This additional borrowing is discussed further in the Capital Finance section and is also shown in Table CIP-8, page 47, for 2025 and subsequent years.

As shown in Table CIP-4, the District received $800,000 in loan proceeds from the Clean Water Fund in 2023. Due to more projects entering the construction phase in 2024, loan revenue is estimated to increase to $12.0 million. This revenue is from projects with existing loans with the CWF or projects on the Department of Natural Resources's approved funding list.

## Table CIP-3: **2023-2025 Annual Budgets & Expenditures**

| | Capital Budget | | 2025 Proposed CIP | |
|---|---|---|---|---|
| | 2023 | 2024 | 2025 | 2024-2025 CHANGE |
| Budgets | $31,566,000 | $45,544,000 | $44,933,000 | -4% |
| Expenditures (Actual 2023; Estimated 2024) | 10,424,000 | 25,301,000 | | |
| *Underspending* | *$21,142,000* | *$20,243,000* | | |

## Table CIP-4: **Loan Proceeds**

| | 2023 Actual | 2024 Estimated | 2025 Anticipated |
|---|---|---|---|
| Pump Station 4 Rehabilitation | | $2,500,000 | $2,371,000 |
| Flow Splitter Rehab | | | 5,877,000 |
| West Interceptor- Shorewood Relief (Phase 3) | | | $7,693,000 |
| Pump Station 17 Force Main- Phase 2 | | 7,000,000 | 2,000,000 |
| 2021 Treatment Plant HVAC Improvement Project | | 1,094,000 | 1,311,000 |
| PS 13&14 Rehab/Ops Bldg Remodel/2019 Plant Piping/Int Rehab | 730,000 | 294,000 | |
| WI-Shorewood Relief (Phase 1)/NSVI-McKee Rd to Dunn's Marsh | 71,000 | 334,000 | |
| Pump Station 17 Firm Capacity Improvements | | 800,000 | 2,500,000 |
| Lower Badger Mill Creek Interceptor- Phase 6 | | | 4,865,000 |
| NSWWTP Electrical Service Equipment Replacement | | | 3,475,000 |
| NEI- Waunakee Extension Capacity Improvements (Phase 1) | | | 9,155,000 |
| **GRAND TOTAL** | **$800,000** | **$12,022,000** | **$39,247,000** |

## 2025 PROJECT FUNDING

As discussed in the finance section, capital projects are funded through the District's capital projects fund. This fund receives revenue from the following sources: loan proceeds from the Clean Water Fund; connection charges collected from new users of the conveyance system and treatment plant; cash transfers from the operating fund; and interest investment. Since 2020, the District has borrowed approximately 76% of its capital expenditures from the Clean Water Fund.

Financing decisions are made on a per-project basis, considering loan eligibility and project size, in addition to overall financing strategy. In 2025, cash revenues net of loan proceeds will be used for approximately 11% of total expenditures. This percentage of cash spending is expected to increase slightly in future years of the plan. The following notable construction projects and major purchases will be paid from revenue sources other than loan proceeds in 2025:

- Sludge Thickeners No. 1 and No. 2 Drive and Mechanism Replacements: $360,000
- Maintenance, Financial and HR Systems: $1,515,000
- Metrogro Applicators & Equipment: $1,056,000
- Annual Solids Processing Tank Cleaning 2025: $932,000
- NEI-Truax Extension Rehabilitation: $4,238,000
- Southeast Interceptor Rehabilitation on USH 51 (Phase 1): $905,000
- West Interceptor Rehabilitation- Segoe Road to Shorewood Boulevard: $921,000
- Pumping Station 10 Force Main Leak: $890,00
- Badger Mill Creek Phosphorus Compliance: $282,000

Cash in the capital projects fund will also be used to pay for planning and design work for the following projects in 2025:

- Liquid Processing Phase 2 Projects: $2,990,000
- Heat and Power Improvements Facilities Plan: $507,000
- Biosolids Facilities Plan: $350,000
- Lagoon Dikes Improvements: $233,000
- Dryer & Seeding Modifications: $47,000
- W4 System Improvement: $523,000
- Manhole Rehabilitation on Old West Interceptor: $67,000
- NSVI Capacity Improvements (Phase 1): $217,000
- NSVI Capacity Improvements (Phase 2): $1,335,000
- District Flow Monitoring Stations: $295,000
- Southeast Interceptor Relocation at Yahara River: $52,000
- Crosstown Force Main Air Release Valve Saddle Tap Replacements: $50,000
- Force Main Condition Assessment - PS 10 Force Main: $425,000
- Pumping Station Bar Screens: $279,000
- West Interceptor on Regent Street (Park Street to East Campus Mall): $31,000
- Collection System Facilities Plan Update: $35,000

These planning and design costs will initially be paid from cash in the fund, and if/when construction commences, all or a portion of them may later be reimbursed through loans from the Clean Water Fund in subsequent years.

# SIX-YEAR CAPITAL PROJECTS SUMMARY

This section discusses planned projects for the six years of the CIP, and the capital finance section discusses financing issues for this period.

The District's CIP includes projections for projects that are either underway and will continue into 2025 or for new projects that will begin within the six-year planning horizon. District staff has identified these projects to address a variety of needs, such as hydraulic capacity, condition or new regulatory requirements. Costs and schedules for these projects are continually updated as the scopes become better defined and priorities and funding strategies change over time.

Table CIP-5, page 35, shows the anticipated annual inflation-adjusted costs for each project. These tables show approximately $279 million worth of expenditures over the six years from 2025 to 2030.

Table CIP-6, page 37, presents the anticipated schedule for each project by phase within the six-year planning window. For each project, the predominant phase of the project is shown for a given year. Where two phases of a project are likely to occur in the same year, both phases are indicated.

## PROJECT SUMMARIES AND BUSINESS CASES

Summary descriptions for each proposed project are included in Appendix A, Page 63. Projects are categorized as Nine Springs Wastewater Treatment Plant projects, interceptor projects, or pumping station and force main projects. Projects are identified using an alphanumeric identifier:

A - Nine Springs Wastewater Treatment Plant

B - Interceptor Projects

C - Pumping Stations and Force Main Projects

D - Capital Budget Expenses

It should also be noted that some projects contain a numerical suffix to indicate that they are related to or dependent upon another project and may be part of a larger constructed project in the future (e.g., Project ID A01.1).

Additional project information for most projects is contained in comprehensive business cases. Since some projects are intricately connected or contingent upon other projects, more than one project may be included in a single business case. Note that some business cases, and hence associated costs, are more developed than others. Where costs have not been fully developed, amounts have been included as placeholders or allowances to identify the need. As with all projects, these costs will be modified as project scopes are refined and better estimates become available. It should be noted that projects that have entered the construction phase are not included in the project summaries in Appendix A and do not have an updated business case.

The remainder of this section summarizes the most notable projects included in each category of the 2025 CIP.

**Electricians Roy Wells and Roy Rodriguez troubleshoot the actuator for a final clarifier at the Nine Springs Wastewater Treatment Plant.**

# Table CIP-5: **Six-Year Spending Forecast**

| Proj. # | Project Title | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|
| **TREATMENT PLANT** | | **$16,346,000** | **$27,177,000** | **$37,313,000** | **$35,055,000** | **$30,340,000** | **$31,496,000** |
| A01 | Liquid Processing Improvements (Phase 2) | | | | | | |
| A01.1 | East Primary Influent Channel Air Piping Replacement | 191,000 | 1,239,000 | 2,383,000 | | | |
| A01.2 | Low Dissolved Oxygen (Partial Plant) | | | | | | |
| A01.3 | Low Dissolved Oxygen (Full Plant) | 1,869,000 | 7,643,000 | 15,821,000 | 16,296,000 | | |
| A01.4 | West Blowers and Switchgear Replacement | 405,000 | 1,730,000 | 3,580,000 | 3,687,000 | | |
| A01.5 | East Blowers and Switchgear Replacement | 411,000 | 1,749,000 | 3,622,000 | 3,731,000 | | |
| A01.6 | East Plant Primary Tank Rehabilitation (LPI) | 114,000 | 1,987,000 | 2,057,000 | 2,118,000 | | |
| A02 | Sludge Thickeners No. 1 and No. 2 Drive and Mechanism Replacements | 360,000 | | | | | |
| A03 | NSWWTP Electrical Service Equipment Replacement | 2,155,000 | 5,390,000 | 2,695,000 | | | |
| A04 | Heat and Power Improvements | 507,000 | | | | | |
| A05 | Lagoon Dikes Improvements | 233,000 | 1,339,000 | 965,000 | | | |
| A06 | Maintenance, Financial and HR Systems | 1,515,000 | 1,274,000 | 1,466,000 | 887,000 | | |
| A07 | Metrogro Applicators & Equipment | 1,056,000 | 562,000 | 144,000 | 143,000 | | |
| A08 | Flow Splitter Improvements | 4,976,000 | 1,422,000 | | | | |
| A09 | Treatment Plant HVAC Improvements-Group 1 Projects | | | 392,000 | 2,617,000 | 902,000 | |
| A10 | Liquid Processing Improvements (Phase 3) | | | | | | |
| A10.1 | Headworks Screening | | | 11,000 | 183,000 | 453,000 | 2,332,000 |
| A10.2 | Grit Processing Improvements | | | | 51,000 | 124,000 | 1,278,000 |
| A11 | Phosphorus Recovery Improvement Projects | | | | | | |
| A11.1 | Dryer & Seeding Modifications | 47,000 | 177,000 | 804,000 | | | |
| A11.2 | DAF Rehabilitation | | 43,000 | 133,000 | 1,525,000 | 1,476,000 | |
| A12.1 | Miscellaneous Treatment Plant Projects 2025 | 173,000 | | | | | |
| A12.2 | Miscellaneous Treatment Plant Projects - Future | | 179,000 | 185,000 | 191,000 | 196,000 | 202,000 |
| A13.1 | Minor Capital Improvements 2025 | 129,000 | | | | | |
| A13.2 | Minor Capital Improvements - Future | | 134,000 | 139,000 | 143,000 | 147,000 | 151,000 |
| A14.1 | Annual Pavement Improvements 2025 | 78,000 | | | | | |
| A14.2 | Annual Pavement Improvements - Future | | | 83,000 | | 88,000 | |
| A15 | Biosolids Processing Improvements | | | | | | |
| A15.1 | Biosolids Facilities Plan | 350,000 | 375,000 | | | | |
| A15.2 | Biosolids Infrastructure | | | 2,051,000 | 2,113,000 | 21,608,000 | 22,256,000 |
| A16 | W4 System Improvements | 523,000 | 702,000 | | | | |
| A17.1 | Annual Solids Processing Tank Cleaning 2025 | 932,000 | | | | | |
| A17.2 | Annual Solids Processing Tank Cleaning - Future | | 1,232,000 | 776,000 | 834,000 | 882,000 | 909,000 |
| A18 | Septage Receiving Modifications | | | 6,000 | 508,000 | 3,011,000 | 4,368,000 |
| A19 | East Plant Primary Tank Rehabilitation-Future | | | | 29,000 | 1,453,000 | |
| N/A | 2021 Treatment Plant HVAC Improvement Project | 323,000 | | | | | |
| **INTERCEPTORS** | | **$19,109,000** | **$14,522,000** | **$17,972,000** | **$8,479,000** | **$5,706,000** | **$5,700,000** |
| B01 | Manhole Rehabilitation on Old West Interceptor | 67,000 | 182,000 | 294,000 | 263,000 | | |
| B02 | Lower Badger Mill Creek Interceptor (Phase 6) | 4,652,000 | 4,606,000 | | | | |
| B03 | West Interceptor Rehab- Segoe Road to Shorewood Boulevard | 921,000 | | | | | |
| B04 | NEI-Waunakee Extension Capacity Improvements (Phase 1) | 6,328,000 | 1,460,000 | | | | |
| B05 | NEI-Truax Extension Rehab | 5,000 | 2,662,000 | 6,231,000 | | | |
| B06 | NEI-FEI to SEI Rehab | | | 33,000 | 1,148,000 | 1,417,000 | |

(continued)

# Table CIP-5: **Six-Year Spending Forecast** (continued)

| Interceptors, cont. | | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|
| B07.1 | Southeast Interceptor Rehabilitation on USH 51 (Phase 1) | 905,000 | | | | | |
| B07.2 | Southeast Interceptor Rehabilitation on USH 51 (Phase 2) | | | | | | |
| B08.1 | NSVI Capacity Improvements (Phase 1) | 217,000 | 520,000 | 3,670,000 | 5,676,000 | | |
| B08.2 | NSVI Capacity Improvements (Phase 2) | 1,335,000 | 2,416,000 | 5,505,000 | | | |
| B09.1 | West Interceptor Rehab- Babcock Hall to Dayton Street | 5,000 | 509,000 | 1,020,000 | | | |
| B09.2 | West Interceptor Rehab- Farley Avenue to Marshall Court | 5,000 | 273,000 | 538,000 | | | |
| B10 | District Flow Monitoring Stations | 295,000 | 884,000 | | | | |
| B11 | Southeast Interceptor Relocation at Yahara River | 52,000 | 161,000 | 44,000 | | | |
| B12 | Access to Interceptors | | | 11,000 | 137,000 | 141,000 | 1,757,000 |
| B13 | NEI- Waunakee Extension Rehab (MH14-358 to MH14-362) | | 21,000 | 33,000 | 628,000 | | |
| B14 | West Interceptor on Regent Street (Park Street to East Campus Mall) | 31,000 | 48,000 | 593,000 | 611,000 | | |
| B15 | NEI- Rehab West of Airport (Phase 2) | | | | 17,000 | 147,000 | 3,944,000 |
| N/A | Collection System Projects - Future | | | | | 4,000,000 | |
| | West Interceptor- Shorewood Relief (Phase 3) | 4,290,000 | 780,000 | | | | |
| **PUMPING STATIONS AND FORCE MAINS** | | **$8,109,000** | **$5,592,000** | **$2,273,000** | **$2,432,000** | **$10,593,000** | **$10,106,000** |
| C01 | Pumping Station 10 Force Main Leak | 890,000 | - | - | - | - | - |
| C02 | Emergency Power Generation at District Pumping Stations | - | - | - | 114,000 | 118,000 | 1,466,000 |
| C03 | Pumping Station 16 Projects | - | - | - | - | - | - |
| C03.1 | Pumping Station 16 Rehabilitation | - | 16,000 | 205,000 | 954,000 | 3,035,000 | 3,907,000 |
| C03.2 | Pumping Station 16 Force Main Rehabilitation | - | 5,000 | 78,000 | 565,000 | 2,000,000 | - |
| C04 | Crosstown Force Main Air Release Valve Saddle Tap Replacements | 50,000 | 566,000 | - | - | - | - |
| C05.1 | Force Main Condition Assessment - PS 10 Force Main | 425,000 | - | - | - | - | - |
| C05.2 | Force Main Condition Assessment- Future | - | 536,000 | 554,000 | 571,000 | 588,000 | 606,000 |
| C06 | Pumping Station Bar Screens | 279,000 | 2,367,000 | 1,319,000 | - | - | - |
| C07 | PS 11 & PS 12 Surge Valve Access Platforms | - | 214,000 | - | - | - | - |
| C08 | PS 5 & PS 15 Force Main Isolation Valve Replacements | - | - | - | 108,000 | 729,000 | - |
| C09.1 | Miscellaneous Collection System Projects 2025 | 109,000 | - | - | - | - | - |
| C09.2 | Miscellaneous Collection System Projects - Future | - | 112,000 | 116,000 | 120,000 | 124,000 | 127,000 |
| N/A | Pumping Station 17 Firm Capacity Improvements | 3,144,000 | 1,310,000 | - | - | - | - |
| | Pumping Station 17 Force Main Relief (Phase 2) | 2,366,000 | 465,000 | - | - | - | - |
| | Pumping Station 4 Rehabilitation | 846,000 | - | - | - | - | - |
| | Pumping Station Projects- Future | - | - | - | - | 4,000,000 | 4,000,000 |
| **CAPITAL BUDGET EXPENSES** | | **$369,000** | **$292,000** | **$293,000** | **$295,000** | **$59,000** | **$61,000** |
| D01 | Capital Budget Expenses | 52,000 | 54,000 | 55,000 | 57,000 | 59,000 | 61,000 |
| D02 | Collection System Facilities Plan Update | 35,000 | - | - | - | - | - |
| D03 | Badger Mill Creek Phosphorus Compliance | 282,000 | 238,000 | 238,000 | 238,000 | - | - |
| **GRAND TOTAL** | | **$43,933,000** | **$47,582,000** | **$57,852,000** | **$ 46,261,000** | **$46,697,000** | **$47,363,000** |

# Table CIP-6: **Six-Year Capital Projects Phases**

A = Annual | C = Construction | C/O = Construction and Operation | D = Design | D/C = Design and Construction | E = Equipment Purchase
O = Operation | P = Planning | P/D = Planning & Design | S = Study | S/T = Study & Testing | T = Testing

| Project # | Project Title | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|
| **TREATMENT PLANT** | | | | | | | |
| A01 | Liquid Processing Improvements (Phase 2) | | | | | | |
| A01.1 | East Primary Influent Channel Air Piping Replacement | D | C | | | | |
| A01.2 | Low Dissolved Oxygen (Partial Plant) | | | | | | |
| A01.3 | Low Dissolved Oxygen (Full Plant) | D | C | C | C | | |
| A01.4 | West Blowers and Switchgear Replacement | D | C | C | C | | |
| A01.5 | East Blowers and Switchgear Replacement | D | C | C | C | | |
| A01.6 | East Plant Primary Tank Rehabilitation (LPI) | D | C | C | C | | |
| A02 | Sludge Thickeners No. 1 and No. 2 Drive and Mechanism Replacements | C | | | | | |
| A03 | NSWWTP Electrical Service Equipment Replacement | C | C | C | | | |
| A04 | Heat and Power Improvements | P | | | | | |
| A05 | Lagoon Dikes Improvements | D | C | C | | | |
| A06 | Maintenance, Financial and HR Systems | C | C | C | C | | |
| A07 | Metrogro Applicators & Equipment | E | E | E | E | | |
| A08 | Flow Splitter Improvements | C | C | | | | |
| A09 | Treatment Plant HVAC Improvements - Group 1 Projects | | | D | C | C | |
| A10 | Liquid Processing Improvements (Phase 3) | | | | | | |
| A10.1 | Headworks Screening | | | P | D | D | C |
| A10.2 | Grit Processing Improvements | | | | D | C | C |
| A11 | Phosphorus Recovery Improvement Projects | | | | | | |
| A11.1 | Dryer & Seeding Modifications | D | D/C | C | | | |
| A11.2 | DAF Rehabilitation | | D | D | C | C | |
| A12.1 | Miscellaneous Treatment Plant Projects 2025 | C | | | | | |
| A12.2 | Miscellaneous Treatment Plant Projects - Future | | C | C | C | C | C |
| A13.1 | Minor Capital Improvements 2025 | C | | | | | |
| A13.2 | Minor Capital Improvements - Future | | C | C | C | C | C |
| A14.1 | Annual Pavement Improvements 2025 | C | | | | | |
| A14.2 | Annual Pavement Improvements - Future | | | C | | C | |
| A15 | Biosolids Processing Improvements | | | | | | |
| A15.1 | Biosolids Facilities Plan | P | P | | | | |
| A15.2 | Biosolids Infrastructure | | | D | D | C | C |
| A16 | W4 System Improvements | D/C | C | | | | |
| A17.1 | Annual Solids Processing Tank Cleaning 2025 | A | | | | | |
| A17.2 | Annual Solids Processing Tank Cleaning - Future | | A | A | A | A | A |
| A18 | Septage Receiving Modifications | | | P | P/D | D/C | C |
| A19 | East Plant Primary Tank Rehabilitation - Future | | | | D | C | |
| N/A | 2021 Treatment Plant HVAC Improvement Project | C | | | | | |
| **INTERCEPTORS** | | | | | | | |
| B01 | Manhole Rehabilitation on Old West Interceptor | D | D/C | C | C | | |
| B02 | Lower Badger Mill Creek Interceptor (Phase 6) | D/C | C | | | | |
| B03 | West Interceptor Rehab- Segoe Road to Shorewood Boulevard | C | | | | | |
| B04 | NEI-Waunakee Extension Capacity Improvements (Phase 1) | C | C | | | | |
| B05 | NEI-Truax Extension Rehab | D | D/C | C | | | |
| B06 | NEI-FEI to SEI Rehab | | | D | D/C | C | |
| B07.1 | Southeast Interceptor Rehabilitation on USH 51 (Phase 1) | C | | | | | |
| B07.2 | Southeast Interceptor Rehabilitation on USH 51 (Phase 2) | | | | | | |
| B08.1 | NSVI Capacity Improvements (Phase 1) | D | D | C | C | | |
| B08.2 | NSVI Capacity Improvements (Phase 2) | D | D/C | C | | | |
| B09.1 | West Interceptor Rehab - Babcock Hall to Dayton Street | P | D/C | C | | | |
| B09.2 | West Interceptor Rehab - Farley Avenue to Marshall Court | P | D/C | C | | | |
| B10 | District Flow Monitoring Stations | D | C | | | | |
| B11 | Southeast Interceptor Relocation at Yahara River | D | C | | | | |
| B12 | Access to Interceptors | | | P | D | D | C |

(continued)

# Table CIP-6: **Six-Year Capital Projects Phases** (continued)

A = Annual | C = Construction | C/O = Construction and Operation | D = Design | D/C = Design and Construction | E = Equipment Purchase
O = Operation | P = Planning | P/D = Planning & Design | S = Study | S/T = Study & Testing | T = Testing

| Project # | Project Title | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|
| B13 | NEI- Waunakee Extension Rehab (MH14-358 to MH14-362) | | P | D | C | | |
| B14 | West Interceptor on Regent Street (Park Street to East Campus Mall) | P/D | D | D/C | C | | |
| B15 | NEI- Rehab West of Airport (Phase 2) | | | | P | D | C |
| N/A | Collection System Projects - Future | | | | C | C | |
| | West Interceptor- Shorewood Relief (Phase 3) | C | C | | | | |
| **PUMPING STATIONS AND FORCE MAINS** | | | | | | | |
| C01 | Pumping Station 10 Force Main Leak | C | | | | | |
| C02 | Emergency Power Generation at District Pumping Stations | | | | D | D | D/C |
| C03 | Pumping Station 16 Projects | | | | | | |
| C03.1 | Pumping Station 16 Rehabilitation | | P | D | C | C | C |
| C03.2 | Pumping Station 16 Force Main Rehabilitation | | P | D | C | C | |
| C04 | Crosstown Force Main Air Release Valve Saddle Tap Replacements | P/D | C | | | | |
| C05.1 | Force Main Condition Assessment - PS 10 Force Main | A | | | | | |
| C05.2 | Force Main Condition Assessment - Future | | A | A | A | A | A |
| C06 | Pumping Station Bar Screens | D | C | C | | | |
| C07 | PS 11 & PS 12 Surge Valve Access Platforms | | D/C | | | | |
| C08 | PS 5 & PS 15 Force Main Isolation Valve Replacements | | | | P/D | C | |
| C09.1 | Miscellaneous Collection System Projects 2025 | C | | | | | |
| C09.2 | Miscellaneous Collection System Projects - Future | | C | C | C | C | C |
| N/A | Pumping Station 17 Firm Capacity Improvements | C | C | | | | |
| | Pumping Station 17 Force Main Relief (Phase 2) | C | C | | | | |
| | Pumping Station 4 Rehabilitation | C | | | | | |
| | Pumping Station Projects- Future | | | | | C | C |
| **CAPITAL BUDGET EXPENSES** | | | | | | | |
| D01 | Capital Budget Expenses | A | A | A | A | A | A |
| D02 | Collection System Facilities Plan Update | P | | | | | |
| D03 | Badger Mill Creek Phosphorus Compliance | A | A | A | A | | |

## TREATMENT PLANT

Work at the treatment plant in 2025 will continue to focus on design work for Phase 2 of the Liquid Processing Improvements. The Liquid Processing Facilities Plan, completed in August 2017, recommended that a series of improvements to the liquid processes at the plant be installed in three separate phases over a roughly 10-year period. The Phase 2 improvements consist of replacement of air piping in the influent channel for the east primary tanks; replacement of air piping and diffusers in the aeration tanks; modifications to implement a low-dissolved oxygen system, replacement of the blowers and switchgear; and rehabilitation of primary tanks for the east complex.

The 2025 plan includes a project to introduce a low dissolved oxygen process to the secondary treatment system. This process will be designed and implemented to be flexible so that the system can run at low dissolved oxygen levels or higher levels if required by operating conditions. Unlike the 2024 plan, the 2025 plan does not contain a separate project to test the new system at full scale on one of the four plants. Instead, these improvements will be implemented at full scale for all four plants. Detailed design of the Liquid Processing Improvements (Phase 2) will take place in 2025, and it is anticipated that construction of all the work will be done as part of a single project from 2026 through 2028.

The treatment plant's high-voltage switchgear equipment will be replaced in 2025. This equipment steps down the utility's incoming voltage so that it can be used by downstream equipment. The switchgear is inspected regularly, and it is in decent working condition. However, it is nearing the end of its useful life by industry standards, and replacement parts are difficult to obtain. Bids for the project were received in June 2024, and construction is scheduled to begin in September 2024 and continue until 2027.

Further study and planning on improvements to the plant's heat and power systems will continue in 2025. The 2020 Energy Management Master Plan evaluated options related to the District's future handling and use of biogas, the replacement of the associated assets and the impacts on ancillary systems. The plan recommended that additional studies be done for the options involving the sale of biogas for regional use and the continued use of biogas to generate on-site electricity. A consultant was retained in 2024 to begin preparing a facility plan to analyze these two alternatives. The 2025 plan includes funds to continue this facility planning work into 2025, although no funds are included to implement any recommended infrastructure improvements due to financial and staffing constraints.

Facility planning for biosolids management is also included in the 2025 plan. The 2024 CIP included a capital project to increase the loadout capacity for the existing Class B liquid program to address storage concerns at the treatment plant. The 2025 plan introduces a facility planning step prior to implementation of this project to ensure the long-term viability of the District's biosolids program. In particular, the facility plan will determine improvements that are necessary to improve facilities and increase storage capacity for the current Class B program, investigate the feasibility of producing a Class A liquid and Class A thermo-dried product for land disposal, and consider other potential disposal options that do not involve land spreading on agricultural land. It is anticipated that facility planning will begin early in 2025 and be completed in the second half of 2026. Costs for biosolids infrastructure improvements have been included in the 2025 plan as a placeholder.

**Assistant operations manager Matt Seib guides visitors on a plant tour, stopping in front of the aeration tanks to explain liquid processing and dissolved oxygen systems.**

## INTERCEPTORS

The 2025 CIP continues the District's investment in increasing the capacity of the collection system in response to growth in the District's service area and increasing rates of inflow and infiltration. Dane County remains one of the fastest-growing counties in Wisconsin. The following capacity improvements are planned in response to this growth:

- West Interceptor–Shorewood Relief: The project includes the construction of new relief and replacement sewers in the City of Madison and the Village of Shorewood Hills along University Avenue between Whitney Way and Walnut Street in three separate phases. This additional capacity is required to serve projected development in the City of Middleton and the Town of Westport. Phase 1 construction was substantially completed in early 2022, and Phase 2 was completed in 2023 as part of the reconstruction of University Avenue. The Phase 3 improvements are scheduled for construction in 2024-2025.

**Project engineer Rachel Feil talks with contractors on the Nine Springs Valley Interceptor Capacity Improvements project site between McKee Road and Dunn's Marsh.**

- Northeast Interceptor–Waunakee Extension (Phase 1): Approximately 9,000 feet of new 30-inch-diameter relief sewer will be installed in 2024 and 2025 to serve future development in the villages of Waunakee and Dane and the Town of Westport. Construction bids were received in June 2024, and construction is scheduled to begin in the second half of 2024, with completion scheduled for early 2026.
- Lower Badger Mill Creek Interceptor (Phase 6): Phase 5 of this interceptor project was completed in 2024 and extended the sewer from County Highway PD to Shady Oak Lane in the City of Verona. The final design of Phase 6 is scheduled to be completed in 2025, with construction occurring in 2025-2026, pending the timely acquisition of easements. Upon completion, existing and future wastewater flows north of Midtown Road will be diverted to Pumping Station 17 in the City of Verona.
- Nine Springs Valley Interceptor Capacity Improvements (Phase 1): This is the first phase of major capacity improvements needed for this intercepting system between Pumping Station 11 and Pumping Station 12. Construction is expected to be divided into at least four phases over a 15- to 20-year period, with the first phase scheduled for construction in 2027 and 2028. Planning work will begin in the second half of 2024, with design scheduled for 2025-2026.

The 2025 plan also includes several projects to rehabilitate existing interceptor sewers. A lining project to rehabilitate the West Interceptor along the University Avenue corridor between Shorewood Boulevard and Segoe Road is scheduled for the first half of 2025. Seven other rehabilitation projects are also included within the six-year planning horizon.

A project to install flow monitoring stations within the collection system is also included in the 2025 plan. These stations support the District's inflow and infiltration (I&I) program by providing long-term records of flows at strategic locations in the collection system. Based on these records, areas with excessive levels of I&I will be identified. Design of the improvements will begin in 2025, with construction scheduled for 2025-2026.

## PUMPING STATIONS AND FORCE MAINS

The District has systematically rehabilitated its pumping stations over the last 20 years as part of its capital improvements program. These rehabilitations have generally included full replacement of the major mechanical, electrical, control and HVAC systems. Rehabilitation of Pumping Station 4 began in early 2023 and will be completed in 2025.

Firm capacity improvements to Pumping Station 17 are included in the 2025 CIP. Additional pumping capacity is needed to serve new growth areas in the Lower Badger Mill Creek basin, especially north of Midtown Road in the City of Madison. Most of the station equipment is in good working condition at this time and can be expected to provide reliable service for 10 to 15 more years. However, the station is not easily expandable, and floodplain issues suggest that a new pumping station may be needed in the longer term for this basin. The 2023 Collection System Facilities Plan Update will further evaluate the need and timing for a new station to serve this basin.

This category also includes the completion of a relief force main for Pumping Station 17 in 2025. Phase 1 work was coordinated with a City of Verona public works project completed in the summer of 2021. When fully complete, the force main will have the capacity needed to serve flows in the upper portions of the Lower Badger Mill Creek basin, which are scheduled to be diverted to Pumping Station 17 in 2025.

Another noteworthy project in this category involves inspecting the District's force mains. These assets are extremely difficult to inspect through traditional methods since they are difficult to access, are under pressure, and must remain in service at all times. The 2025 plan includes funds to inspect the Pumping Station 10 force main in 2024-2025 and an annual allowance for additional work on other force main systems in subsequent years.

Finally, the 2025 plan includes installing coarse bar screens at four pumping stations that directly convey raw wastewater to the treatment plant (Pumping Stations 2, 7, 8 and 11). The bar screens will remove rags and other large materials, which will help protect downstream equipment such as the station pumps and the fine screening units at the Headworks Facility at the plant. It is hoped that the useful lives of the fine screens can be extended with these improvements.


**Project engineer Kailyn Hackeloer-King points out the flow of wastewater through pumping stations to the District on a map of the service area.**

## CAPITAL PROJECTS BUDGET EXPENSES

The final category of expenditures in Table CIP-5, pages 35-36, is capital budget expenses. These typically include expenses related to planning and studies assessed against the capital fund that would make it difficult to capitalize on a specific asset.

Over the next six years, the largest anticipated expenses in this category relate to the compliance plan for new phosphorus requirements for District effluent discharged to Badger Mill Creek.

These new effluent requirements were included in the District's discharge permit that was reissued in May 2020, which calls for full compliance no later than 2028. In May of 2023, the District's Commission approved the staff recommendation to divert all treated effluent to Badfish Creek and discontinue the discharge of effluent to Badger Mill Creek. Included in this recommendation is a commitment for the District to allocate $1 million to improve the health and resiliency of Badger Mill Creek through flow, habitat and other improvements. The 2025 CIP includes funds for this commitment and shows annual disbursements between 2025 and 2028. Funds are also included for staff and consultant time to engage stakeholders in this process.

## PROJECT DRIVERS

Table CIP-7 shows project drivers by year, including condition, regulatory, resilience and capacity. As can be seen in the table, condition is the primary cost driver over the six-year capital planning period. This reflects the District's aging infrastructure and the prioritization of projects to address condition issues and concerns.

### Table CIP-7: **Capital Project Spending by Driver**

| | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|
| Condition | 20,341,677 | 32,853,000 | 44,575,000 | 38,121,000 | 24,972,000 | 23,641,000 |
| Regulatory | 566,625 | 1,738,000 | 1,247,000 | 238,000 | | |
| Resilience | | | | 114,000 | 118,000 | 1,466,000 |
| Capacity | 23,024,375 | 12,992,000 | 12,030,000 | 7,788,000 | 21,608,000 | 22,256,000 |
| **GRAND TOTAL** | **$43,932,677** | **$47,582,000** | **$57,852,000** | **$46,261,000** | **$46,697,000** | **$47,363,000** |

SECTION FOUR

# 2025 Capital Finance

A couple watches recreational activity from a waterfront restaurant on Lake Waubesa.

The previous sections described the annual capital budget and the six-year project plan, including project costs and schedules. This section addresses how this work is to be financed.

The District finances its capital improvements program through a combination of cash and borrowing. Borrowing is done primarily through the state's Clean Water Fund loan program, which provides subsidized, below-market interest rates in support of the state's wastewater infrastructure. Starting in 2025, the District also expects to borrow through the issuance of general obligation bonds. Cash is obtained through charges applied for the connection of areas to the District's collection system and through quarterly service charges from the communities the District serves.

The financing plan is designed to cover anticipated spending needs, avoid highly variable annual increases in service charges and meet minimum fund reserve requirements over the entire planning period.

The current financing plan reflects the following factors. First, the planning period includes high levels of spending needed for various infrastructure projects related to the condition of aging infrastructure and capacity needs for the growing region. This continues recent trends.

Second, the financing plan reflects the easing of some macroeconomic headwinds from the previous plan. Inflation has moderated, easing overall capital cost increases. Connection charges revenues rebounded in 2024 over expectations.

However, some headwinds remain. Enduring changes in the supply chain for electrical equipment and some materials have increased costs and significantly extended the time for delivery for some equipment by a year or more. Additionally, changes in federal law are showing signs of increasing materials costs and administrative requirements for projects funded through the Clean Water Fund loan program.

Third, to accomodate the high spending in the planning period, the financing plan finances approximately 80% of capital expenditures with debt.

Fourth, to limit service charges, the financing plan reduces reserves in the capital projects fund and debt service fund to be only slightly over minimum levels. The debt service fund will reach this level in 2025, and the capital projects fund will reach it in 2027. Planned reserves are adequate to meet Clean Water Fund loan program requirements and manage anticipated cash flows through the planning period.

## POLICY CONTROLS

District capital financing is controlled by several Commission policies. These include:

- Owner Expectations policies regarding cost-effectiveness, operational and business practice sustainability, regulatory compliance, anticipation of future requirements and service to communities;
- Executive Expectations Policy EE-2C, regarding financial planning/budgeting;
- EE-2D (6) regarding adequacy of available funds;
- EE-2G regarding adequacy of rates to fund capital improvements; and
- Commission policy ATT-2, specifically the sections on:
  - Capital projects budget and debt service budget;
  - Debt financing;
  - Fund reserves;
  - Fund structure; and
  - Strategic financial planning.

This capital financing plan is consistent with the above policies.

Find the District's Commission Policy Book at madsewer.org/commission

# FINANCING TOOLS

The District's capital program is financed with a combination of debt and cash:

1. Disbursements from the state's Clean Water Fund loan program;
2. General obligation bond;
3. Revenue from District connection charges (charged for extension of service to new areas); and
4. Revenue from District service charges (paid quarterly by municipalities).

Clean Water Fund loan interest rates are lower than general obligation bonds because of a state interest rate subsidy. Rates in previous years were at or under 2%, but are forecast to be 2.365% for through 2028 and 2.145% thereafter. This is slightly lower than rates used in last year's plan. Clean Water Fund loans typically have a 20-year term.

Clean Water Fund loan proceeds are deposited in the capital projects fund. Loan proceeds are often received a year or more after spending begins on a project. This is because initial planning and design expenses are not eligible for reimbursement until a construction contract for the project has been bid and awarded. These delays are one reason to maintain adequate reserves in the capital projects fund.

General obligation bond interest rates will not be known precisely until bond issue. The plan assumes rates of 5%. General obligation bond proceeds are only used to finance capital projects.

Principal and interest payments are made from a separate debt service fund. Money for these payments comes from District service charges, transferred from the operating fund to the debt service fund. Clean Water Fund program terms require the District to maintain specified reserves in the debt service fund.

Connection charge revenue is paid by municipalities (or directly by developers) on a one-time basis when service is made available to new areas. Connection charges are based on the cost of the conveyance facilities serving a given area and a proportion of the costs of assets at the Nine Springs Wastewater Treatment Plant. Connection charges are meant to recover the infrastructure costs of expanding the system and providing capacity. Ongoing repair and replacement of the system are supported by service charges. Connection charges are deposited directly in the capital projects fund.

Connection charge revenue varies significantly by year depending on the pace and location of development in the region. In preparing the capital financing plan, staff estimate future connection charges based on historical patterns, known rate changes and best judgment about economic conditions. The unpredictability of connection charge revenue is a second reason to maintain adequate reserves in the capital projects fund. (Estimated connection charges in this CIP reflect the phase in of higher treatment plant connection charge rates, authorized by the Commission in 2017.)

Connection charge revenues contribute roughly 39% of the cash financing for the capital program over the six-year planning horizon, with the remaining 56% from service charges and 5% from interest. (Service charges also cover all debt service payments.) Service charge revenues are initially deposited in the operating fund and then transferred to the capital projects fund as part of the District's annual budget.

Use of Clean Water Fund loans remains the largest financing tool for the capital program, financing approximately 61% to 67% of capital expenditures, depending on the year. General obligations bonds are forecast to finance between 11% and 29% of capital expenditures, depending on the year. Total debt financing is approximately 82% of capital expenditures.

**Senior policy advisor Ben Nerad explains District financing, borrowing tools and service charges at an owner community meeting.**

# CAPITAL FINANCING PLAN

The financing plan covers the CIP planning period, 2025 to 2030. In addition to borrowing levels, the plan forecasts annual transfers from the operating fund to the capital projects fund and the debt service fund. These amounts are anticipated. However, the transfer amounts for the plan's first year will be fixed in the District's annual budget in the fall. Borrowing amounts will vary from anticipated, reflecting changes in project costs, loan eligibility and timing of loan disbursements.

## FORECAST ASSUMPTIONS

The forecast in the capital plan makes several assumptions regarding future economic and District conditions. First, the plan assumes inflation will be 3.5% through 2028, declining to 3% thereafter. This reflects an easing of inflationary pressures in construction relative to last year's plan. Second, the plan assumes that Clean Water Fund subsidized loan rates will be higher than historical levels, remaining at 2.365% through 2028 and declining to 2.145% thereafter. Third, the plan assumes that revenue for non-service charges is consistent with historical actuals. (These revenues include septage fees, fertilizer sales, plan review fees and similar sources outside of District control.) Fourth, the plan assumes higher-than-normal connection charges revenue in 2024 and 2025, reflecting recent growth in the area. This growth defied inflation-related expectations for a slowdown in last year's plan.

Chemist Jessica Schwark handles samples in the laboratory within the Operations Building.

The District expects spending after the six-year plan to remain at similar or slightly higher levels. In addition to ongoing trends in capital spending, several needs have either been deferred or are anticipated for future spending. These include continuing expansion of the collection system to serve the Nine Springs Valley area; general collection system rehabilitation needs; potential infiltration and inflow reduction projects; potential changes in biosolids management; and reconfiguration of certain areas of the Nine Springs Wastewater Treatment Plant relating to safety, storage, energy systems and growth.

## CAPITAL PROJECTS FUND BALANCE

The capital projects fund balance is an essential factor in the capital financing plan. The balance provides resiliency against fluctuations in connection charge revenues and delays in loan proceeds. It also covers the costs of the planning and design phases of loan-funded projects until loan proceeds are received. To provide this resiliency, the balance must grow with the size of the capital program.

The District seeks to maintain a capital projects fund reserve equal to a weighted sum of current and subsequent year debt-funded capital expenditures and current and next year cash support from the operating fund. Debt funding is weighted 0.75; cash support is weighted 0.05. The current year is weighted 0.5; the subsequent year is weighted 0.25. This supports adequate cash flow management and reflects guidance from the District's municipal financial advisor.

As shown in Table CIP-8, page 47, the reserve target varies by year, depending on spending levels in any given year.

## DEBT SERVICE FUND BALANCE

Payments for principal and interest obligations come from the debt service fund. The Clean Water Fund loan program requires the District to have sufficient funds on hand to pay debt service requirements for the following calendar year. This minimum requirement assures the ability to pay.

As shown in Table CIP-9, the Clean Water Fund reserve requirement increases over the period, reflecting growing debt levels; transfers from the operating fund to the debt service fund increase correspondingly. Debt service fund balances are forecast adequate to be adequate to pay the required principal and interest payments on existing and anticipated Clean Water Fund loans.

## Table CIP-8: **Capital Projects Fund Cash Flow Summary**

| | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|
| **OPENING BALANCE** | **$21,110,000** | **$27,759,000** | **$36,903,000** | **$29,051,000** | **$28,315,000** | **$27,189,000** | **$24,020,000** |
| *Revenues* | | | | | | | |
| Clean Water Fund Loans | 12,022,000 | 26,689,000 | 28,967,000 | 38,472,000 | 30,482,000 | 29,281,000 | 29,391,000 |
| General Obligation Bonds | - | 12,559,000 | 5,156,000 | 13,269,000 | 7,462,000 | 6,514,000 | 10,453,000 |
| Connection Charges | 3,880,000 | 3,996,000 | 2,950,000 | 3,075,000 | 3,200,000 | 3,325,000 | 3,475,000 |
| Interest Revenues | 528,000 | 416,000 | 554,000 | 436,000 | 425,000 | 272,000 | 240,000 |
| Transfers From Operating Fund | 15,521,000 | 9,417,000 | 2,104,000 | 1,863,000 | 3,566,000 | 4,137,000 | 3,544,000 |
| *Total Revenues* | *31,951,000* | *53,077,000* | *39,731,000* | *57,115,000* | *45,135,000* | *43,529,000* | *47,103,000* |
| *Expenditures* | | | | | | | |
| Treatment Plant | 8,208,000 | 16,346,000 | 27,177,000 | 37,313,000 | 35,055,000 | 30,340,000 | 31,496,000 |
| Interceptors | 7,380,000 | 19,109,000 | 14,522,000 | 17,972,000 | 8,479,000 | 5,706,000 | 5,700,000 |
| Pumping Stations and Force Mains | 9,351,000 | 8,109,000 | 5,592,000 | 2,273,000 | 2,432,000 | 10,593,000 | 10,106,000 |
| Capital Budget Expenses | 363,000 | 369,000 | 292,000 | 293,000 | 295,000 | 59,000 | 61,000 |
| *Total Expenditures* | *25,302,000* | *43,933,000* | *47,583,000* | *57,851,000* | *46,261,000* | *46,698,000* | *47,363,000* |
| **CLOSING BALANCE** | **27,759,000** | **36,903,000** | **29,051,000** | **28,315,000** | **27,189,000** | **24,020,000** | **23,760,000** |
| *Reserve Target* | *9,581,000* | *19,559,000* | *24,865,000* | *26,183,000* | *21,719,000* | *21,892,000* | *21,299,000* |
| *Closing Balance Net of Reserve* | *$18,178,000* | *$17,344,000* | *$4,186,000* | *$2,132,000* | *$5,470,000* | *$2,128,000* | *$2,461,000* |

## Table CIP-9: **Debt Service Fund Cash Flow Summary**

| | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|---|
| **OPENING BALANCE** | **$27,146,000** | **$20,662,000** | **$18,920,000** | **$22,032,000** | **$24,433,000** | **$26,140,000** | **$28,807,000** |
| *Revenues* | | | | | | | |
| Transfer from Operating Fund | 6,539,000 | 14,346,000 | 21,454,000 | 24,087,000 | 25,710,000 | 28,538,000 | 30,398,000 |
| Interest Earnings | 679,000 | 310,000 | 284,000 | 330,000 | 366,000 | 261,000 | 288,000 |
| *Total Revenues* | *7,218,000* | *14,656,000* | *21,738,000* | *24,417,000* | *26,076,000* | *28,799,000* | *30,686,000* |
| Principal Payments | 10,781,000 | 12,468,000 | 14,052,000 | 16,210,000 | 17,871,000 | 19,125,000 | 21,115,000 |
| Interest Payments | 2,921,000 | 3,930,000 | 4,574,000 | 5,806,000 | 6,498,000 | 7,007,000 | 7,676,000 |
| *Total Expenditures* | *13,702,000* | *16,398,000* | *18,626,000* | *22,016,000* | *24,369,000* | *26,132,000* | *28,791,000* |
| **CLOSING BALANCE** | **20,662,000** | **18,920,000** | **22,032,000** | **24,433,000** | **26,140,000** | **28,807,000** | **30,702,000** |
| *Reserve Requirement* | *16,398,000* | *18,626,000* | *22,016,000* | *24,369,000* | *26,132,000* | *28,791,000* | *30,642,000* |
| *Closing Balance Net of Reserve* | *$4,264,000* | *$294,000* | *$16,000* | *$64,000* | *$8,000* | *$16,000* | *$60,000* |

# BORROWING

The Capital Improvements Plan's use of debt is consistent with general financial resiliency principles and with overall Commission policy guidance. Borrowing allows the District to smooth its revenue needs over time. Rather than immediately increase service charges to accommodate sizeable new capital projects, borrowing spreads the costs over the loan term. There are two primary considerations when borrowing for capital projects. First, borrowing increases the long-term total cost of the District by adding interest costs. This cost is mitigated by the subsidized loans provided through the state's Clean Water Fund loan program. Second, borrowing may create concerns over the ability to repay debt. This risk is low for the District because of its ability to raise revenues as needed through service charges and, if necessary, property tax.

Total District debt continues to rise, as expected during this period of high capital spending needs, as shown in Table CIP-9. Correspondingly, annual interest payments also rise. This ongoing increase in nominal debt burden may be concerning for some. However, best practices in financial management evaluate debt burden relative to other organizational factors.

One such measure is the percentage of capital expenditures financed with debt. This indicates the extent to which an organization relies on debt for its capital program. There are no hard and fast rules for appropriate percentages. The key consideration for the CIP is that the District's ratio remains steady, in the range of 72% to 89% over the period. (Percentages are two-year moving averages to smooth annual variation that results from loan and spending timing differences.)

Another relative measure is the percentage of revenue used to pay principal and interest expenses. This indicates the overall increase in long-term costs from debt use. Approximately 5.2% to 8.9% of service charge revenue would be used to pay interest over the period and 21% to 26% to pay principal (Table CIP-10).

A final measure assesses the District's ability to secure sufficient revenue to repay its debt. The District relies on a constitutional measure for this purpose. The Wisconsin Constitution, Article XI, Section 3 limits District debt to 5% of the equalized property valuation of the District. Currently, that valuation is approximately $67.9 billion. As shown in Table CIP-9, debt under the draft plan would remain under 0.32% of property value, well below the constitutional limit.

## Table CIP-10: **Use of Debt in Capital Program**

| | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|
| End of Year Outstanding Principal Obligations | $155,372,000 | $175,443,000 | $210,974,000 | $231,047,000 | $247,717,000 | $266,446,000 |
| Percent of Capital Expenditures Financed with Debt (2 year moving average) | 74% | 80% | 81% | 86% | 79% | 80% |
| Principal Paid | 12,468,000 | 14,052,000 | 16,210,000 | 17,871,000 | 19,125,000 | 21,115,000 |
| Interest Paid | $3,930,000 | $4,574,000 | $5,806,000 | $6,498,000 | $7,007,000 | $7,676,000 |
| Payments as Percent of Service Charges Revenue: | | | | | | |
| Principal | 21.3% | 22.2% | 23.9% | 24.5% | 24.4% | 25.8% |
| *Interest* | 5.2% | 6.7% | 7.2% | 8.6% | 8.9% | 8.9% |
| Total | 26.5% | 28.9% | 31.1% | 33.0% | 33.3% | 34.7% |
| Total Obligations as Percentage of District Property Value (5% constitutional limit) | 0.2% | 0.3% | 0.3% | 0.3% | 0.4% | 0.4% |

On a financial resiliency basis, the District's use of debt is consistent with general financial standards. This is primarily due to the District's reliable revenue sources through service charges and, if necessary, property tax collection.

There remains the Commission-level policy tradeoff with the use of debt, balancing the ability to defer revenue requirements against the increased total cost of borrowing. This plan assumes Clean Water Fund interest rates will be 2.365% through 2028, declining to 2.145% thereafter. At 2.365% interest, the total cost of a capital project over the loan's lifetime would be 27% higher than if paid for in cash. The plan accepts this cost to allow growth in service charges to remain between roughly 7% and 8% per year over the planning period.

Tables CIP-11 and CIP-12 report the debt service budget and forecast debt service expenditures.

## Table CIP-11: **Debt Service Budget**

| | Budget Year | | 2025 Proposed CIP | |
|---|---|---|---|---|
| | **2023** | **2024** | **2025** | **2024-2025 CHANGE** |
| Anticipated in Budget | $17,618,000 | $15,340,000 | $16,398,000 | 7% |
| Expenditures (Actual 2023; Estimated 2024) | 15,948,000 | 13,702,000 | | |
| *Difference* | *$(1,670,000)* | *$(1,638,000)* | | |

## Table CIP-12: **Forecasted Debt Service Expenditures**

Note: Amounts for years beyond 2030 do not reflect potential future debt-funded capital projects.

| Five-Year Intervals | Principal | Interest | Total |
|---|---|---|---|
| 2025-2029 | $79,726,000 | $27,815,000 | $107,541,000 |
| 2030-2034 | 101,688,000 | 37,784,000 | 139,472,000 |
| 2035-2039 | 90,674,000 | 28,571,000 | 119,245,000 |
| 2040-2044 | $88,384,000 | $16,780,000 | $105,164,000 |

# SERVICE CHARGES

Supporting the financing plan will require additional transfers from the operating fund and thus increases in service charge revenues. Table CIP-13 shows the amount transferred from the operating fund to each of the other funds per year. The total amount transferred rises over the period.

Finally, Table CIP–14 forecasts total service charge collections over the planning period. This includes the transfers in Table CIP-13 and a trend-based operating budget expenditure forecast. The table consists of high and low estimates, reflecting uncertainties in non-service charges revenue growth and operating budget growth.

## Table CIP-13: **Service Charges Support for the Capital Program**

| | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|
| Transfer to Capital Projects Fund | $9,417,000 | $2,104,000 | $1,863,000 | $3,566,000 | $4,137,000 | $3,544,000 |
| Transfer to Debt Service Fund | 14,346,000 | 21,454,000 | 24,087,000 | 25,710,000 | 28,538,000 | 30,398,000 |
| *Total Support for Capital Program* | *23,763,000* | *23,558,000* | *25,950,000* | *29,276,000* | *32,675,000* | *33,942,000* |
| *Increase from Prior Year* | *1,703,000* | *(205,000)* | *2,392,000* | *3,326,000* | *3,399,000* | *1,267,000* |

## Table CIP-14: **Forecast Growth in Service Charge Revenues**

| | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---|---|---|---|---|---|
| High Forecast | N/A | $64,091,000 | $69,220,000 | $74,775,000 | $80,713,000 | $85,543,000 |
| Estimate | 58,641,000 | 63,187,000 | 67,864,000 | 72,967,000 | 78,453,000 | 81,927,000 |
| *Low Forecast* | *N/A* | *62,283,000* | *66,508,000* | *71,159,000* | *76,193,000* | *78,310,000* |

**Operators like Brendan Crumrine manually skim our primaries each day to remove fats, oils and greases (FOG) that float on the surface for proper disposal.**

SECTION FIVE

# The Work of the District

A family takes in fall splendor and views of Lake Mendota at Shorewood Hills Beach.

The success of the District is the result of the combined efforts of many talented people. To fulfill its strategic plan and manage day-to-day work, the District organizes its work into functional departments to efficiently manage tasks, budgeting, staff support and accountability.

This section provides an overview of the District, its staff and our strategic plan. It also outlines key initiatives for the year and highlights select performance indicators.

# OUR STRUCTURE & DEPARTMENTS

## EXECUTIVE OFFICE

The **Executive Office** (EO) sets the overall strategic direction for the organization and decides policy questions that affect multiple departments or otherwise require top-level resolution. The EO is three individuals: the Executive Director, Deputy Executive Director (who is also Director of Budget and Planning), and the District Principal Engineer (also Director of Wastewater Operations and Reliability). The EO meets regularly on its own and as a team with other directors. The EO was formed in January 2024. The previous Leadership Support department was divided into Human Resources and Communications/Business Services. For budgeting purposes, the Executive Director is part of Communications/Business Services, and the other members of the EO are counted as part of their home departments.

## BUDGET & PLANNING

The **Budget and Planning** (B&P) department helps the District plan for and meet challenges. The department has four main functions. This includes planning, such as the District's strategic plan, master and facility planning and policy development. B&P oversees performance improvement and capital improvements, including the six-year Capital Improvements Plan. This department also has responsibility for budget and finance, including the six-year financing plan, annual operating budget development, and fund and reserves management. (The Department of Enterprise Services is responsible for District accounting functions.)

## COMMUNICATION & BUSINESS SERVICES

The **Communications & Business Services** department provides several key functions for the District. The Business Services team provides broad-based services for the District, supporting staff, business functions, reception management, virtual and in-person event management and more. This team also staffs the front desk, serving as the frontline for staff, visitors and vendors. Additionally, this team also handles coordination and support for the Commission, Executive Office and Directors. The District's Communications and Marketing staff is responsible for the District's strategic communications. This includes internal and external communications, public relations, community outreach, brand strategy and reputation management, among other things.

**PHOTOS** Aerial view of the Wisconsin State Capitol; Bill Walker, Interim Executive Director/Budget & Planning Director; and Amanda Wegner, Director of Communications and Public Affairs.

## ECOSYSTEM SERVICES

The Ecosystem Services department oversees portions of the discharge permit and provides support services for treatment plant and collection system operations. This includes laboratory services to monitor plant performance, providing information for service charge bills, and ensuring the safety of the environment and public health with rigorous testing. Pollution prevention staff work on programs and initiatives to reduce pollutants from entering the collection system and enable water stewardship. The pretreatment program provides coordination and oversight of industrial wastewater contributors and non-traditional sources. The resource recovery team helps maximize the District's efforts to safely recycle and reuse biosolids on area fields.

## ENGINEERING

The Engineering department plans, designs, constructs and commissions new capital improvements and provides design and construction administration and advisory services to District teams so that safe, reliable and cost-effective infrastructure is built on the plant grounds and beyond the fence. These projects range in value from less than $100,000 to over $50 million. Engineering coordinates with owner communities, other agencies and developers on outside projects affecting the collection system. The department also assists with capital planning and budgeting and real estate and property issues.

## ENTERPRISE SERVICES

The Enterprise Services department provides a range of management services to the organization in the areas of accounting, budget, procurement and IT. This department partners and collaborates with internal customers to provide effective and efficient services that allow departments to do their business better. These services include accounts payable and receivable, payroll, risk management, procurement and contract management, technological infrastructure support, software support, application development, cybersecurity services, data management and records administration.

## HUMAN RESOURCES

The Human Resources (HR) department supports District supervisors and managers with the full range of HR activities. This includes supporting recruitment and hiring of staff, providing new employee orientation, managing employee benefits, providing consultation and support to supervisors and managers on policies and procedures, and working with the Employee Leadership Council on issues affecting employees. HR also supports employee health, safety and security and processes workers compensation claims. Finally, the HR provides organizational development support, including change management, performance management, training and professional development support, employee engagement and DEI leadership.

## OPERATIONS & MAINTENANCE

The Operations & Maintenance (O&M) department is the backbone of the organization, protecting human health and the environment by ensuring that all wastewater generated in the District's service area is safely conveyed to the Nine Springs Wastewater Treatment Plant 24 hours a day, 365 days a year. The largest District department, O&M fulfills its charge by providing an array of critical services through the electrical, mechanical, facilities maintenance, collections systems services, operations, reliability process and Metrogro workgroups, which work together to recover the resources of clean water, biosolids, biogas and phosphorus fertilizer.

**PHOTOS** Martye Griffin, Director of Ecosystem Services; Lisa Coleman, Director of Engineering; Dana Reed, Director of Enterprise Services; Mike Lipski, Director of Human Resources; and Eric Dundee, District Principal Engineer/Director of Wastewater Operations & Reliability.

# REFLECTING OUR VALUES

Working here is about taking care of the communities we live in. We are unseen leaders protecting one of our most valuable resources — our water.

The District employs about 130 staff in a variety of professional, technical and skilled trade positions. Additionally, each year we support a number of interns and youth apprentices, which introduces them to our industry while providing valuable skills and work experience. Each individual brings a wealth of knowledge and deep commitment to our mission of protecting public health and the environment.

In 2023, a number of District staff were invited to participate in internal focus groups to gather feedback on a variety of topics, including the District's values. From those conversations and additional work, the District adopted new values in 2024, which are highlighted below.

Every day, local residents, businesses and visitors to the area depend on us to fulfill our purpose and ensure the reliable conveyance and treatment of wastewater. Our new values reflect our commitment to our purpose and mission, and how we show up in the workplace and the communities we serve. They are also reflected in the work that our 2025 budget commits to and invests in.

## SERVICE

*We are service-minded. We are motivated to help our communities and care for our shared water resources.*

## RELIABILITY

*We are a reliable community partner. We show up and do the right thing, no matter how challenging.*

## SUSTAINABILITY

*We champion sustainability. We bring innovative solutions forward to balance social, economic and environmental responsibility in a rapidly changing world.*

# STRATEGIC PLAN

The District's annual budget supports the District's critical day-to-day work, medium-term projects and initiatives of importance, and long-term goals that support the strategic plan and the organization as a whole.

The structure of the strategic plan, Figure 5, page 56, provides broad direction to guide District work on an ongoing basis. It includes our strategic purpose, owner expectations and performance areas, which are outlined at right.

**Find the District's strategic plan online at madsewer.org/strategic-plan**

**Accountant Amal Bull claps during the staff rollout of the District's strategic plan.**

## STRATEGIC PLAN STRUCTURE, EXPLAINED

**STRATEGIC PURPOSE** Our purpose succinctly describes why the District exists and who it serves. Articulating this purpose helps direct attention and resources to what is most important.

### OUR PURPOSE

*Protect public health, welfare and the environment by providing efficient and strategic wastewater management on behalf of our owner communities.*

**OWNER EXPECTATIONS** These outline the Commission's understanding of how owner communities expect us to approach our work and what aspects are most critical to communities. The following are shortened versions of the owner expectations:

1. *Owners expect the District to protect public health, welfare and the environment.*
2. *Owners expect the District to provide cost-effective and efficient wastewater treatment.*
3. *Owners expect the District to be resilient and sustainable in its operations and business practices.*
4. *Owners expect the District to comply with regulations and proactively anticipate future regulatory needs.*
5. *Owners expect the District to be collaborative, fair, responsive and equitable.*

**PERFORMANCE AREAS** These are areas the District must excel at to fulfill its strategic purpose and meet owner expectations. They are high-level and broad categories of effort. They are also a management tool to support executive-level monitoring and work prioritization. Our seven performance areas are:

**ADAPTATION**

**FINANCIAL SUSTAINABILITY**

**INFRASTRUCTURE RELIABILITY**

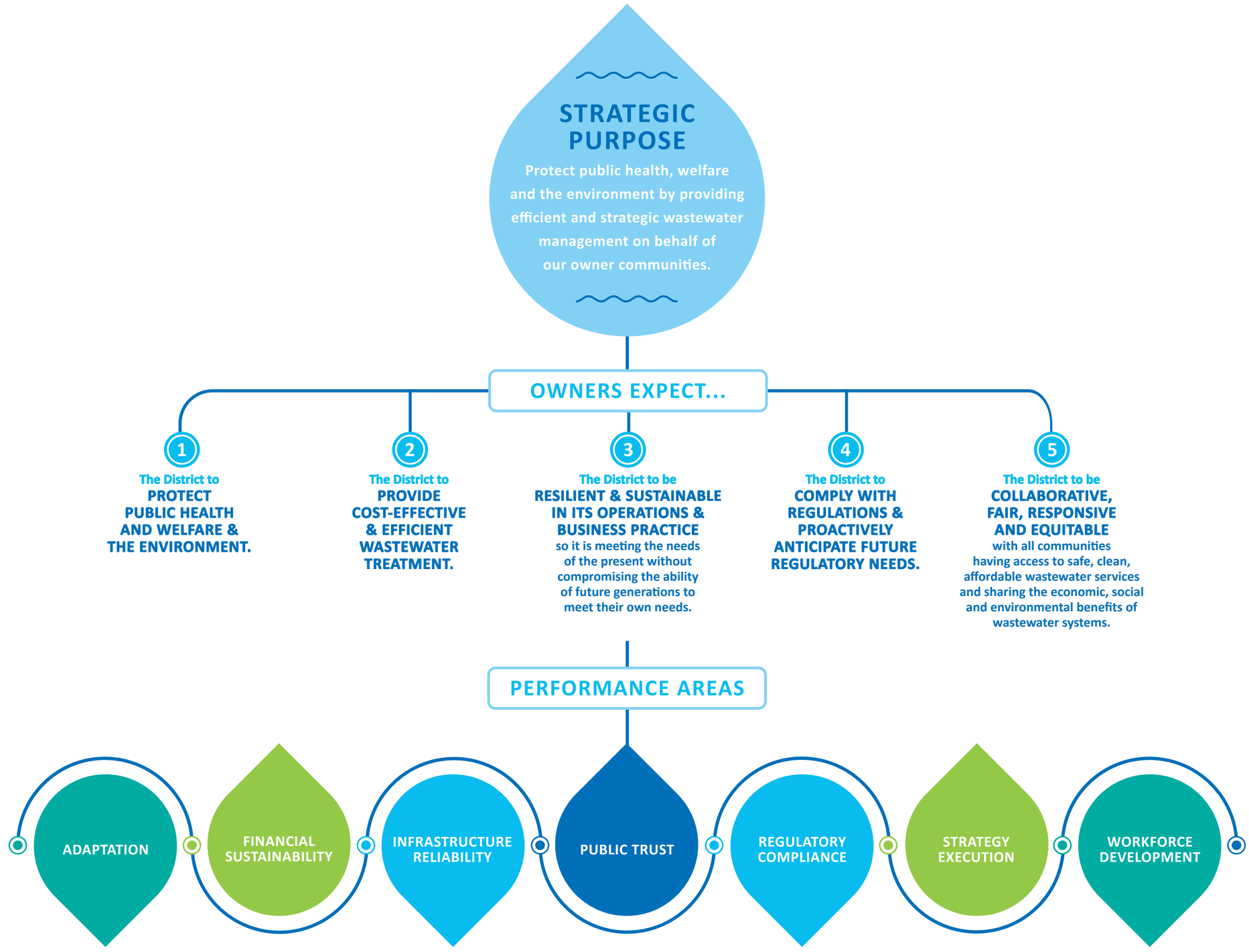
**PUBLIC TRUST**

**REGULATORY COMPLIANCE**

**STRATEGY EXECUTION**

**WORKFORCE DEVELOPMENT**

Figure 5: **District Strategic Plan**



# 2025 SELECTED KEY INITIATIVES

The District pursues a variety of initiatives. The Capital Improvements Plan, detailed in this budget, is a significant amount of work for the District. The day-to-day work of the District is also critical and time-consuming. The following initiatives are highlighted here because of their additional or heightened importance to District performance at this time, but District employees provide a full complement of valuable services and complete critical work.

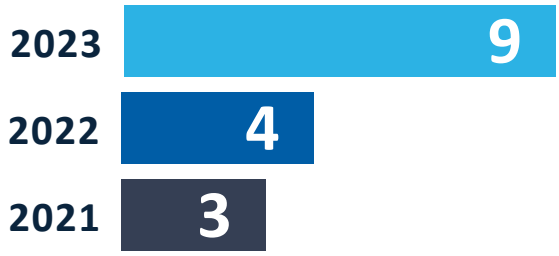
## Table 6: **Selected Key Initiatives**

| KEY INITIATIVE | OBJECTIVE(S) | IMMEDIATE PLANS |
|---|---|---|
| Wisconsin Pollution Discharge Elimination System (WPDES) Permit Reissuance | Get WDNR approval of phosphorus compliance approach for Badger Mill Creek and implement necessary changes. Badger Mill Creek phosphorus compliance deadline in 2028, which is tied to forthcoming permit renewal. | Permit application in September 2024 in anticipation of May 2025 renewal. |
| Enterprise Resource Planning (ERP) Implementation | Select and implement new system. | Needs assessment and market research in 2024. |
| Employee Engagement | Support employee engagement through regular surveys, team-level action planning and executive-level support. | Prepare and implement action plans. |
| Reliability Centered Maintenance | Improve procedures, tools and skills to increase maintenance throughput and reduce risk of failure. | Address acceptable equipment out-of-service measures and work order management improvements. |
| Community & Stakeholder Engagement | Increase engagement with communities and stakeholders through media, meetings and direct interaction. | Use results from recent stakeholder focus groups and the 2023 Community Values Survey to develop an updated communications plan for the District. |
| District Strategy & Governance Work | Develop monitoring reports for strategic performance areas.<br><br>Improve prioritization of critical work at the Executive Office and director level. | Develop a roadmaps management approach. Creating a roadmap for continuing to develop a robust asset management program that builds on previous efforts. |

# PERFORMANCE INDICATORS

To ensure needed performance in the areas identified in the strategic plan, the District develops and revises performance indicators on an ongoing basis. Many of these indicators are technical and pertinent only to the workgroups that use them. The indicators reported here are intended to reflect overall District performance in key areas. Data is provided for the last three years where applicable to provide a better snapshot of performance over time.

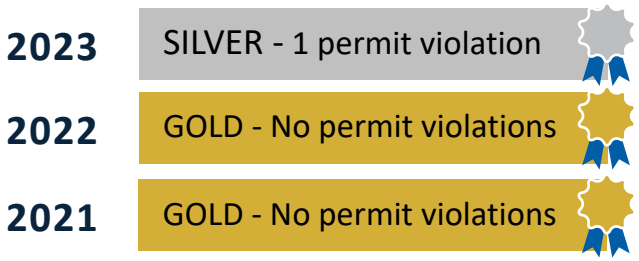
## RECORDABLE INJURIES




**Performance areas this indicator supports:**

- Workforce Development
- Infrastructure Reliability

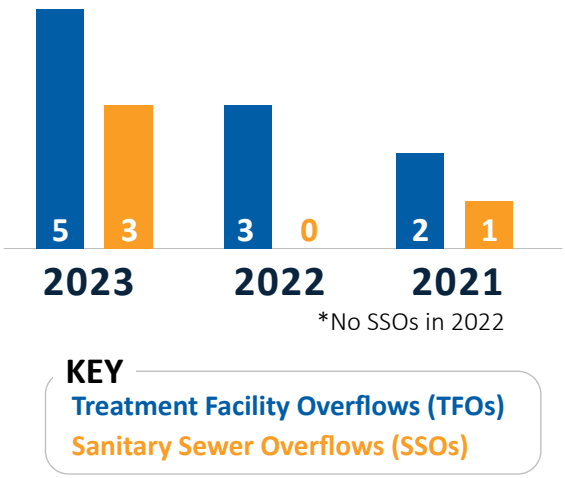
## NACWA PEAK PERFORMANCE AWARD




**Performance areas this indicator supports:**

- Regulatory Compliance
- Infrastructure Reliability

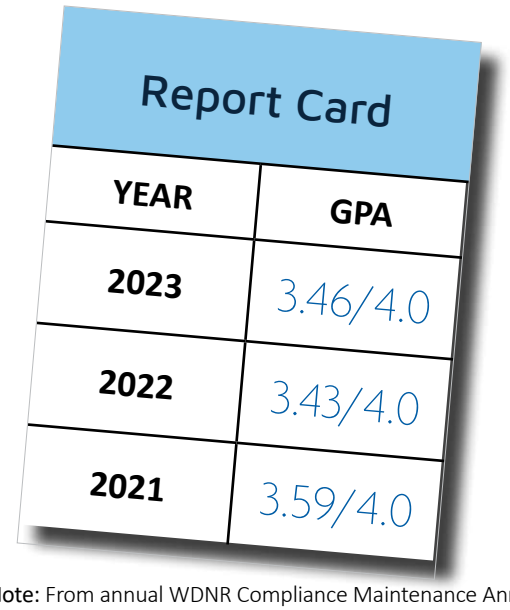
## OVERFLOWS




**Performance areas this indicator supports:**

- Regulatory Compliance
- Infrastructure Reliability

## WPDES PERMIT COMPLIANCE

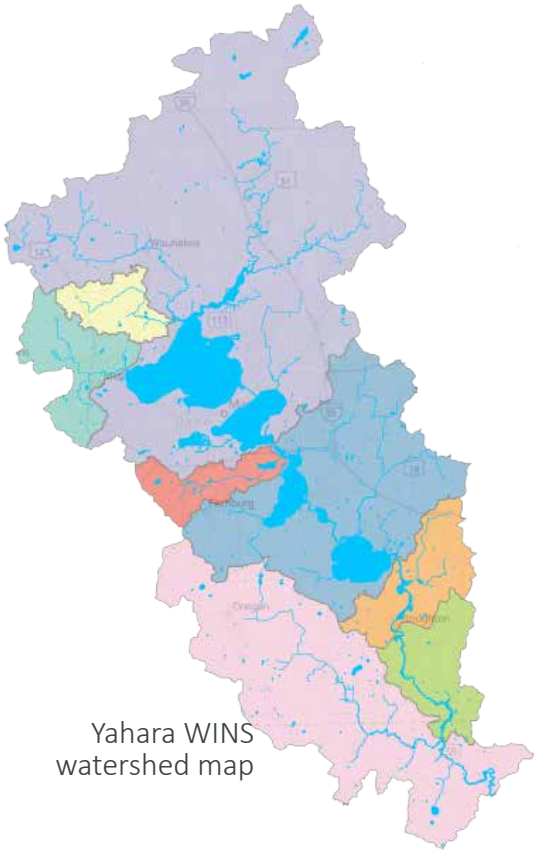



Note: From annual WDNR Compliance Maintenance Annual Report (CMAR), which is graded on a 4.0 scale

**Performance areas this indicator supports:**

- Regulatory Compliance
- Infrastructure Reliability

## YAHARA WINS PHOSPHORUS COMPLIANCE



Yahara WINS watershed map

| Year | Conservation practices implemented, in acres | Phosphorus kept on the land, in pounds |
|---|---|---|
| **2023** | 49,885 | 54,541 |
| **2022** | 28,646 | 50,563* |
| **2021** | 36,120 | 88,854 |

**Notes:** Numbers shown are for reporting year, not total of project to date.

*A new phosphorus reduction accounting method was adopted by all WINS partners in 2022.

Yahara WINS

### Performance areas this indicator supports:

- Regulatory Compliance
- Adaptation
- Public Trust

## ANNUAL AUDIT RESULTS

**2023** ✓ UNQUALIFIED OPINION - CLEAN AUDIT

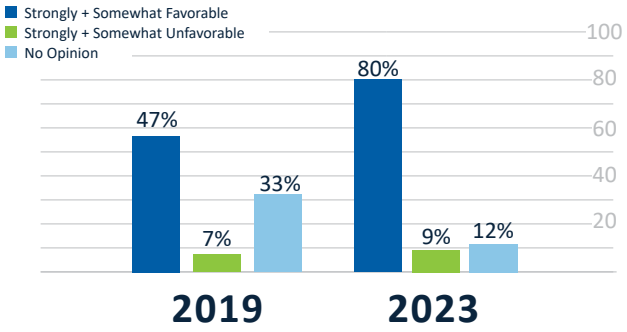
**2022** ✓ UNQUALIFIED OPINION - CLEAN AUDIT

**2021** ✓ UNQUALIFIED OPINION - CLEAN AUDIT

### Performance areas this indicator supports:

- Financial Sustainability
- Public Trust

## IMPRESSION OF THE DISTRICT

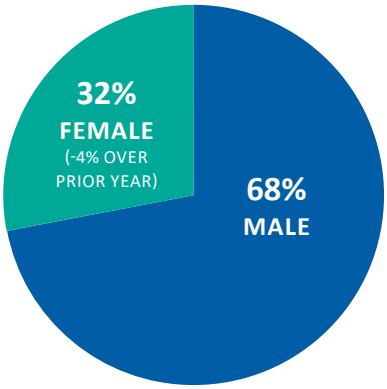



From Community Values Survey; n=500 for both surveys

### Performance areas this indicator supports:

- Public Trust

# EMPLOYEE DEMOGRAPHICS & TURNOVER




Note: As of December 31, 2023. 128 total employees. Data self-reported by staff.

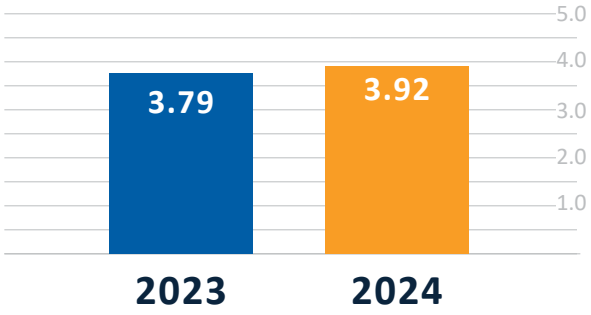
EMPLOYEE CENSUS

| Race | 2021 | 2022 | 2023 |
|---|---|---|---|
| Asian | 2 | 3 | 2 |
| American Indian or Alaskan Native | 1 | 1 | 1 |
| Black | 4 | 3 | 3 |
| Hispanic or Latino | 3 | 3 | 6 |
| Native Hawaiian or Other Pacific Islander | 0 | 0 | 0 |
| White | 106 | 115 | 115 |
| Two or more races | 3 | 3 | 3 |

## EMPLOYEE TURNOVER

| | 2021 | 2022 | 2023 |
|---|---|---|---|
| **New Hires** | 10 | 17 | 14 |
| **Resignations** | 5 | 6 | 6 |
| **Retirements** | 5 | 3 | 2 |
| **Internal Promotions** | 12 | 21 | 25 |
| **Other** | 0 | 0 | 3 |

## EMPLOYEE ENGAGEMENT




From annual Gallup Employee Engagement Survey; first conducted in 2023

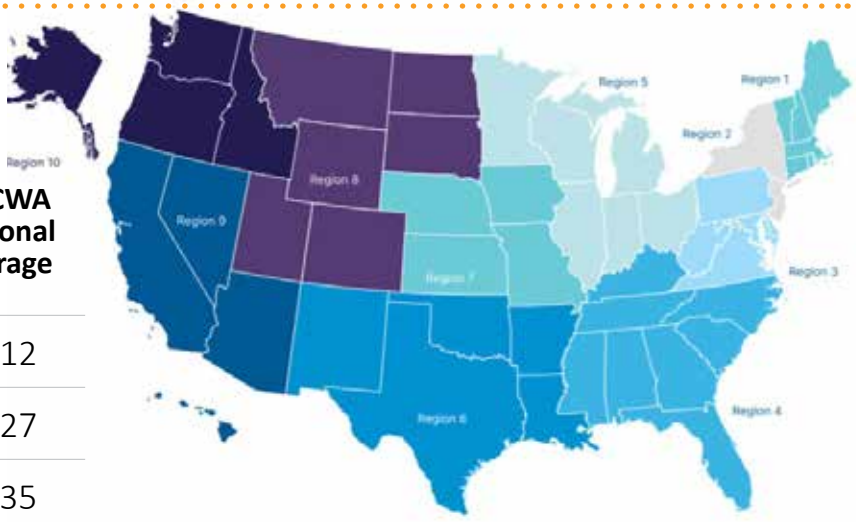
**Performance area indicators on this page support:**

- Workforce Development

**Apprentice mechanic Rigo Ramon-Solis, initially hired as a trainee in the Facilities Maintenance section, and Chad Petersen, recently promoted to facilities maintenance supervisor, meet with staff from the Reliability Process section.**

## DISTRICT HOUSEHOLD BURDEN COMPARED TO NACWA AVERAGES

| Year | Average Household Charge, City of Madison + District | NACWA Region 5 Average | NACWA National Average |
|---|---|---|---|
| 2019 | $343 | $477 | $512 |
| 2020 | $361 | $502 | $527 |
| 2021 | $385 | $518 | $535 |
| 2022 | $409 | $535 | $569 |
| 2023 | $417 | $547 | $588 |



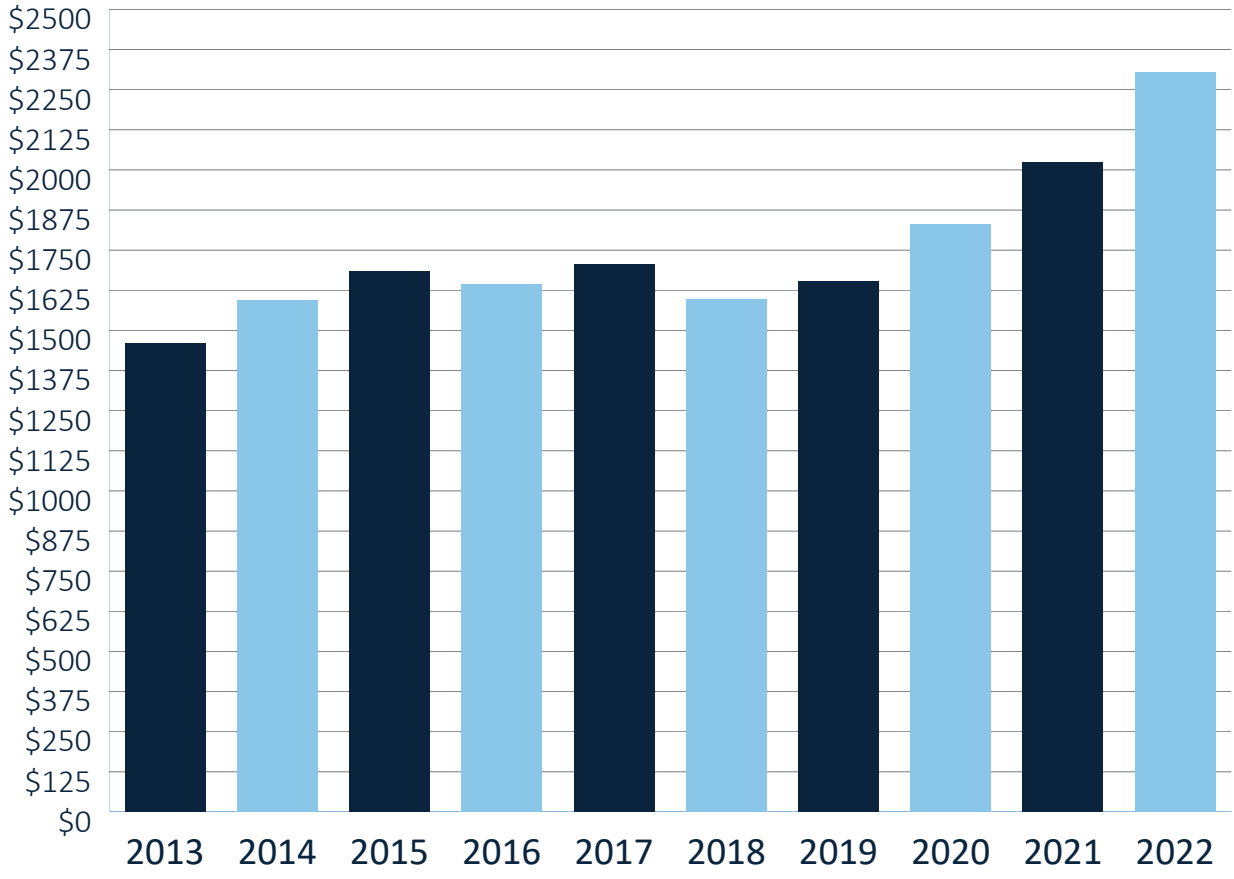

**Performance areas this indicator supports:**

- Financial Sustainability
- Public Trust

## COST TO TREAT WASTEWATER

**Non-capital spending per million gallons treated, 2013-2022**

*In 2023 dollars




**Performance area this indicator supports:**

- Financial Sustainability

# Appendices

A man fishes from a Lake Mendota pier at Marshall Park in Middleton.

APPENDIX A

# Project Summaries

This section contains summaries for projects in the 2025 Capital Improvements Plan. These summaries are intended to provide a broad overview of each project, including general location, scope of work, history, schedule and a summary of cost.

Total project costs are adjusted for inflation on an annual basis, unless otherwise noted.

Please note that project summaries are provided only for those projects that are anticipated to occur within the planning horzion of this document (2025-2030).

CIP ID# A01.1

# East Primary Influent Channel Air Piping Replacement

## START
2022

## COMPLETION
2027

## PROJECT TYPE
Plant Improvements – Primary Treatment

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
This project will replace the air piping in the influent channels to the primary tanks on the east side of the treatment plant. Several air leaks were discovered in the air piping in April 2021 and it has been determined that the system can no longer be repaired cost-effectively. It is anticipated that this project will be funded through cash in the capital projects fund.

## BACKGROUND
The air piping in the influent channels to the primary tanks supplies pressurized air to the wastewater so that the solids remain suspended until they reach the primary settling basins. Without the proper amount of air in these channels, the solids will settle over time, reducing the channel capacity and increasing maintenance costs to clear the settled material. The air piping in the primary influent channels on the west side of the plant was replaced as part of the Liquid Processing Improvements (Phase 1) in 2020. The piping for the east plant is older than that on the west side prior to its replacement. It requires replacement to ensure that the primary treatment process continues to operate effectively.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $191,000 | $4,000,000 |

CIP ID# A01.2

# Low Dissolved Oxygen (Partial Plant)

## START
2022

## COMPLETION
N/A

## PROJECT TYPE
Plant Improvements – Aeration System

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
The purposes of this project are to replace aging assets associated with the secondary treatment system and test the use of low dissolved oxygen (DO) at full scale on a portion of the biological nutrient removal process. During the preliminary engineering phase of the project, the decision was made to not proceed with a partial plant full scale test of low DO to reduce the total project schedule.

## BACKGROUND
The existing activated sludge facilities operate an enhanced biological phosphorus removal process. Many of the aeration supply and control equipment assets need replacement due to age, condition or obsolescence. As part of the 2016 Liquid Processing Facilities Plan, changes to the existing processes were evaluated as part of asset replacement, including a process called nitrite shunt, which could result in more effective nutrient removal while using less energy and potentially positioning the District for future total nitrogen regulations. While bench-scale testing of the nitrite shunt process did not yield satisfactory results, it did identify low DO as a promising alternative that could remove the necessary nutrients with less energy.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $150,000 |

CIP ID# A01.3

# Low Dissolved Oxygen (Full Plant)

## START
2022

## COMPLETION
2028

## PROJECT TYPE
Condition – Aeration System

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
This project involves the implementation of a low dissolved oxygen (DO) biological nutrient removal process on a plant-wide basis. It is anticipated that costs associated with the project will be funded through the Clean Water Fund or general obligation bonds.

## BACKGROUND
The existing activated sludge facilities operate an enhanced biological phosphorus removal process. Many of the aeration supply and control equipment assets need replacement due to age, condition or obsolescence. As part of the 2016 Liquid Processing Facilities Plan, changes to the existing processes were evaluated as part of asset replacement, including a process called nitrite shunt that could result in more effective nutrient removal while using less energy and potentially positioning the District for future total nitrogen regulations. While bench-scale testing of the nitrite shunt process did not yield satisfactory results, it did identify low DO as a promising alternative that could remove the necessary nutrients with less energy. The low DO improvements will be implemented in all plants of the biological nutrient removal process.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $1,869,000 | $45,000,000 |

CIP ID# A01.4

# West Blowers and Switchgear Replacement

## START
2022

## COMPLETION
2028

## PROJECT TYPE
Condition – Aeration System

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
This project will replace the west blowers and associated medium-voltage switchgear. These facilities have been in operation for more than 35 years and are currently operating beyond their expected lifespan. This project was included in the 2016 Liquid Processing Facilities Plan. It is anticipated that the costs of the project will be funded through the Clean Water Fund or general obligation bonds.

## BACKGROUND
The 2016 Liquid Processing Facilities Plan recommended the replacement of the west blowers using a phased approach. The plan called for two blowers to be replaced between 2020 and 2025, and the remaining blower and blower switchgear to be replaced shortly after 2024. Since the plan was developed, the condition of the blowers has deteriorated significantly, and one of the units is inoperable and requires costly repairs. Given the condition and criticality of this equipment, District operations staff recommend that all three blowers and associated switchgear be replaced as soon as possible to ensure that this critical process continues to operate satisfactorily.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $405,000 | $10,000,000 |

CIP ID# A01.5

# East Blowers and Switchgear Replacement

## START
2022

## COMPLETION
2028

## PROJECT TYPE
Condition – Aeration System

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
This project will replace the east blowers and associated medium-voltage switchgear. This equipment is of varying ages, with some more than 50 years old. This infrastructure is a crucial component of the activated sludge process and needs to be replaced to ensure compliance with the District's discharge permit. It is anticipated that the costs of this project will be funded through the Clean Water Fund or general obligation bonds.

## BACKGROUND
The east blower system is older than the west blower system, with some of the facilities dating back to the 1960s. The system includes four electric blowers and one engine-driven blower that operates on biogas to reduce electricity demands in the east plants.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $411,000 | $10,000,000 |

CIP ID# A01.6

# East Plant Primary Tank Rehabilitation (LPI)

## START
2025

## COMPLETION
2028

## PROJECT TYPE
Condition

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
The purpose of the project is to replace the longitudinal and cross-collector mechanisms and other vital tank components for primary tanks. Primary Tanks 5 through 16, excluding Primary Tank 6, are operable but require rehabilitation due to age, condition and component standardization. Drive chains, sprockets, headshafts and bearings have exceeded their useful life, with some components dating back as far as 1948. Recent tank inspections revealed some components have become severely corroded as well. Nine of the primary tanks will be rehabilitated as part of this project, while the remaining tanks will be completed under the East Plant Primary Tank Rehabilitation (CIP ID# A19) project. It is anticipated that project costs will be funded through the Clean Water Fund or general obligation bonds.

## BACKGROUND
Primary clarification is the first step in removing solids, fats, oils and grease from wastewater, and is therefore critical to treatment plant function. Having even one primary tank out of service impacts treatment performance during high flow events and limits staff's ability to conduct maintenance on other tanks. Tank rehabilitation for Primary Tanks 05 and 07 through 16 has not occurred since construction between 40 and 75 years ago. Complete replacement of the collector system in each primary tank is needed to keep them in reliable operating condition.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $114,000 | $7,000,000 |

CIP ID# A02

# Sludge Thickeners No. 1 and No. 2 Drive and Mechanism Replacements

## START
2022

## COMPLETION
2025

## PROJECT TYPE
Condition – Sludge Thickening

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
The purpose of this project is to replace the gravity thickener tank drives and mechanisms on Gravity Thickener Tanks No. 1 and No. 2. This equipment is used to thicken the sludge which is removed in the primary clarifiers. Due to the age, condition and safety concerns associated with maintaining this equipment, it is recommended that the drives and mechanisms be replaced rather than rebuilt. This project will be financed through cash in the capital projects fund.

## BACKGROUND
Both gravity thickener tanks were constructed in 1961 as part of the Fourth Addition to the Nine Springs Wastewater Treatment Plant. Each tank is equipped with a mechanical drive that turns a collection mechanism. This mechanism pushes settled sludge into the bottom of the tank for removal and further processing. The drives and mechanisms undergo routine preventative maintenance and have been rebuilt several times over the last 60 years. Due to the age and condition of the equipment, replacement materials are difficult to obtain and continuing to rebuild the units is not recommended.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $360,000 | $550,000 |

CIP ID# A03

# NSWWTP Electrical Service Equipment Replacement

## START
2022

## COMPLETION
2027

## PROJECT TYPE
Condition – Electrical Distribution

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
This project proposes to replace the outdoor service switchgear, transformers, busway system and indoor distribution switchgear for the incoming electrical service to the treatment plant. This system is responsible for transforming the incoming voltage so that it can be utilized by plant equipment and for isolating and protecting that equipment. It is anticipated that future equipment replacement will be funded through a loan from the Clean Water Fund.

## BACKGROUND
Electrical power from the utility is routed to the treatment plant through two sets of switchgear. The first set, known as switchgear H1, is located outside of the Effluent Building. This system operates at 13.8 kV and steps down the voltage to 4.16 kV for use in downstream plant processes. The second system, known as switchgear S1, is located inside the Effluent Building. All equipment was installed in 1984-1985 and is approaching the end of its useful life (40-50 years). An inspection of the H1 equipment was conducted by an electrical engineering company in the fall of 2020. While the equipment was determined to be in good operating condition overall, it is beginning to show signs of deterioration. Replacement parts for the S1 switchgear are increasingly difficult to obtain and it is recommended that this equipment be replaced in conjunction with the H1 switchgear.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $2,155,000 | $12,000,000 |

CIP ID# A04

# Heat and Power Improvements

## START
2024

## COMPLETION
2025

## PROJECT TYPE
Energy-Related Projects – Use Reduction/Generation

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
The purpose of this project is to complete the facility planning phase to determine the direction for replacing aging assets associated with the District's energy-producing infrastructure and to optimize the use of energy going forward. The facility plan will access whether the District will use its biogas to generate electricity on site at greater efficiency or produce a biogas of pipeline quality that can be sold to others. This project was evaluated as part of the 2020 Energy Management Master Plan. It is anticipated that all project costs will be financed through a loan from the Clean Water Fund or general obligation bonds.

## BACKGROUND
An energy study was conducted in 2014 by Strand and Brown and Caldwell to provide a roadmap for how the District might achieve energy independence. Areas of focus included ways to reduce energy usage, improve utilization of digester gas and produce more energy. The 2020 master planning study expanded on all these areas and examined the most energy-efficient way to handle and dispose of biosolids.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $507,000 | $50,914,000 |

CIP ID# A05

# Lagoon Dikes Improvements

## START
2020

## COMPLETION
2027

## PROJECT TYPE
Regulatory – Lagoon Management

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
The purpose of this project is to conduct a geotechnical study of the dikes in the District's lagoons and implement measures to stabilize them, especially in periods of high-water levels. The project is being conducted in several phases between 2020 and 2027, and any recommended repairs will be prioritized and implemented as needed. It is anticipated that the geotechnical study will be funded through cash in the capital projects fund, while any necessary improvements will be funded through a loan from the Clean Water Fund or general obligation bonds.

## BACKGROUND
The District's lagoons, located east of Moorland Road, were used to store biosolids until the early 1980s, at which time application on agricultural lands commenced. Some of the biosolids in the lagoons were found to have levels of polychlorinated biphenyls, or PCBs. The District worked with the Environmental Protection Agency (EPA) to clean up the lagoons in the late 1990s through the addition of soil, a fabric cover and a new dike. The lagoons now provide wildlife habitat and recreational opportunities for the public and act as storage reservoirs for excess plant inflow. During the extreme rainfall event in August of 2018, the water level in Nine Springs Creek reached historic levels, causing a leak that allowed water from the creek to move into the lagoon area. To protect the integrity of the dikes and prevent any migration of contaminated biosolids to the environment, it is desired to fully evaluate the dikes and repair any defective sections.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $233,000 | $4,000,000 |

CIP ID# A06

# Maintenance, Financial and HR Systems


## START
2020

## COMPLETION
2028

## PROJECT TYPE
Plant Improvements – Computerized Maintenance Management System (CMMS)

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
The purpose of this project is to replace the District's existing CMMS and address needs in the related financial and human resources systems. Each system will operate independently, but their functions and design must be closely integrated. The cost of this project will be funded through cash in the capital projects fund.

## BACKGROUND
The District installed its initial CMMS in 1997 for a cost of approximately $1.0 million (roughly $2.3 million in 2023 dollars). The company that developed the system eventually was purchased by Oracle. While the system has generally served the District well since 1997, Oracle is now planning to upgrade its system to a new version that is more complex and targets large users with different needs than the District. As such, the District has a need to obtain a new CMMS and financial system that better supports the District's approach to asset management and reliability-centered maintenance. The project will also identify processes within the Human Resources department that need to be incorporated in the new financial system or in a new dedicated system.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $1,515,000 | $6,150,000 |

CIP ID# A07

# Metrogro Applicators & Equipment

## START
2015

## COMPLETION
2028

## PROJECT TYPE
Condition – Metrogro Applicators and Equipment

## LOCATION
Metrogro Program

## DESCRIPTION
This line item is included in the Capital Improvements Plan to fund the periodic replacement of the District's biosolids applicators, tankers and low-disturbance toolbars. It is anticipated that these replacements will be funded through cash in the capital projects fund.

## BACKGROUND
While the District's Biosolids Management Plan recommended a possible transition from a liquid biosolid to a cake product, that transition will take several years to complete. It is probable that a cake product will not be produced on a consistent basis until 2035 at the earliest. The District's Metrogro Program will remain the backbone of the Biosolids Reuse Program for the foreseeable future. The District's standard is to replace an applicator when it reaches 10,000 hours of service. Using that standard, new applicators were purchased in 2019, 2021 and 2022. Two more applicators are scheduled to be purchased in 2024 and 2025. Acquisition of new equipment will also allow for enhanced GPS capability and low-disturbance soil injection. These features are lacking in the older equipment.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $1,056,000 | $5,300,000 |

CIP ID# A08

# Flow Splitter Improvements

## START
2022

## COMPLETION
2026

## PROJECT TYPE
Condition – Headworks

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
This project will rehabilitate, modify or possibly replace the existing flow splitter structure located immediately downstream of the grit removal tanks at the Headworks Facility. The structure's concrete and metal components have deteriorated significantly since the structure was put into operation as part of the Tenth Addition, likely due to the high levels of hydrogen sulfide and turbulent flow in this structure. It is anticipated that this project will be funded through a loan from the Clean Water Fund or general obligation bonds.

## BACKGROUND
The flow splitter structure was built in 2005 as part of the Tenth Addition and allows for the controlled distribution of flow to the west and east plants. Flow from the grit removal basins enters the splitter structure from the west. The flow rises within the structure and spills over weirs that empty into five channels that connect to discharge pipes to the west and east sides of the plant. Flow to each side of the plant can be controlled by the placement of stop logs in the effluent channels. Corrosion of the structure has made it difficult to remove the stop logs in recent years. A thorough video inspection of the structure in February 2021 revealed that the concrete walls supporting the effluent channels are also in very poor condition. It is desired to rehabilitate or rebuild the damaged sections of concrete before the steel reinforcing is further compromised and leads to failure of the structure.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $4,976,000 | $7,600,000 |

CIP ID# A09

# Treatment Plant HVAC Improvements – Group 1 Projects

## START
2027

## COMPLETION
2029

## PROJECT TYPE
Condition – HVAC

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
The purpose of this project is to upgrade and replace aging HVAC systems in various buildings at the treatment plant. HVAC systems need to be in good working order to meet applicable building codes, provide a safe environment for staff and protect equipment from damage caused by changing environmental conditions. Due to the harsh environments that these systems treat, they have deteriorated beyond reasonable repair and need to be replaced. It is anticipated that this project will be funded through a loan from the Clean Water Fund or general obligation bonds.

## BACKGROUND
A consultant performed a comprehensive condition assessment of existing HVAC systems in 2020-2021 and compiled a prioritized list of improvements for the most deficient systems. The improvement projects were broken down into three priority areas, or groups, with the first group containing items that need to be addressed in the near term to satisfy code requirements, worker safety and/or equipment condition. The most critical projects in Group 1 are included in a separate project scheduled for construction in 2023-2024. This project will address other projects identified in the Group 1 category.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $4,000,000 |

CIP ID# A10.1

# Headworks Screening

## START
2027

## COMPLETION
2030

## PROJECT TYPE
Condition – Screening at Headworks Facility

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
This project includes the replacement or modification of the fine-screening equipment and related screening handling system at the Headworks Facility. One possible solution is to replace the existing band screens with new step screens and wash presses to dewater the captured material. This project was included in the 2016 Liquid Processing Facilities Plan. It is anticipated that the project will be funded through the Clean Water Fund or general obligation bonds.

## BACKGROUND
Three fine-screening units were installed at the Headworks Facility as part of the Tenth Addition to the treatment plant. The screens have openings of one-quarter inch and are designed to remove rags and other large material from the raw wastewater to keep it out of the biosolids and to protect downstream process equipment. Several problems have been experienced with the existing screening system, particularly with the processing of the material captured on the screens. The existing screening handling system requires frequent operator attention to keep it running. Further, the equipment for the screening handling system is prone to plugging and wear and tear, and it is difficult to obtain replacement parts in a cost-effective and timely manner.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $5,500,000 |

CIP ID# A10.2

# Grit Processing Improvements


## START
2028

## COMPLETION
2030

## PROJECT TYPE
Condition – Grit Handling

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
This project will improve the performance of the grit-handling equipment in the Headworks Facility. It is expected that several pieces of equipment will be replaced due to age and wear, including grit pumps, concentrators, classifiers and appurtenances. It is anticipated that project costs will be funded through the Clean Water Fund or general obligation bonds.

## BACKGROUND
The existing grit system was installed as part of the Tenth Addition to the Nine Springs Treatment Plant in 2005. The system consists of three vortex grit basins, six recessed impeller grit pumps and three grit concentrators/classifiers located on the mezzanine level of the Headworks Facility. This system was evaluated as part of the 2016 Liquid Processing Facilities Plan. While the equipment works reasonably well and requires little operator attention, it is now reaching the end of its useful life and will require replacement in the next five to 10 years, especially the grit concentrators.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $2,800,000 |

CIP ID# A11.1

# Dryer & Seeding Modifications

## START
2025

## COMPLETION
2027

## PROJECT TYPE
Capacity – Struvite Harvesting

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
This project is one of several projects tol optimize and improve the performance of the District's phosphorus recovery system, also known as the Ostara system. Proposed improvements include modifications to struvite dryers to optimize performance and enhancing the method of seeding the struvite reactors. It is anticipated that these improvements will be funded through the Clean Water Fund or general obligation bonds.

## BACKGROUND
The Ostara system was installed as part of the Eleventh Addition to the Nine Springs Treatment Plant in 2013. The system removes phosphorus from the various treatment streams resulting from solids processing. The phosphorus is precipitated and then reused as a chemical fertilizer due to its nutrient content and slow-release properties. Since the process was brought online in 2013, numerous operational challenges have been observed such as product size, dust and quantity of material.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $47,000 | $1,100,000 |

CIP ID# A11.2

# DAF Rehabilitation

## START
2026

## COMPLETION
2029

## PROJECT TYPE
Condition – Struvite Harvesting

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
This project is one of several projects to optimize and improve the performance of the District's phosphorus recovery system, also known as the Ostara system. Proposed improvements include rehabilitating a dissolved air flotation tank to allow for pre-thickening of waste activated sludge prior to struvite recovery. It is anticipated that these improvements will be funded through the Clean Water Fund or general obligation bonds.

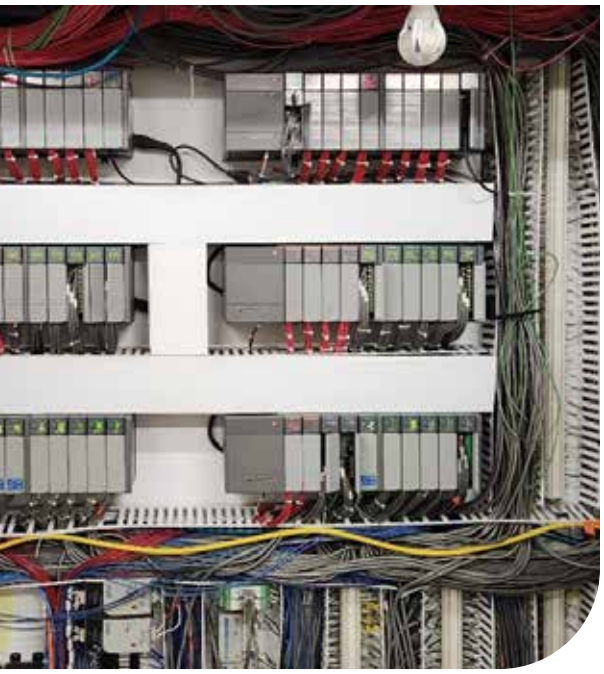
## BACKGROUND
The Ostara system was installed as part of the Eleventh Addition to the Nine Springs Treatment Plant in 2013. The system removes phosphorus from the various treatment streams resulting from solids processing. The phosphorus is precipitated and then reused as a chemical fertilizer due to its nutrient content and slow-release properties. Since the process was brought online in 2013, numerous operational challenges have been observed such as product size, dust and quantity of material.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $3,200,000 |

CIP ID# A12.1 & A12.2

# Miscellaneous Treatment Plant Projects 2025 & Future



## START
Ongoing

## COMPLETION
Ongoing

## PROJECT TYPE
Variable

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
The purpose of these projects is to make modifications or minor improvements to capital assets at the treatment plant on an annual basis to ensure that they remain in good working condition and to ensure the safety of the District's workers. These projects will be funded from revenue sources other than loans in the capital projects fund.

## BACKGROUND
As the District's assets at the treatment plant continue to age and process complexity increases, operations staff have noted a need to make a number of minor improvements to assets to ensure they remain in good working order. In many cases, the projects are relatively small in scope, yet they are too large and time-consuming to be addressed by the District's maintenance staff. The intent of this item in the capital projects budget is to provide an annual allowance for the identification and completion of these smaller improvement projects at the treatment plant. The projects will be administered through the Operations or Engineering department and completed by a contractor in accordance with the District's procurement code.

## FINANCIAL ANALYSIS

| | 2025 Expenditure ($2025) | Total Project Cost |
|---|---|---|
| A12.1 | $173,000 | $175,000 |
| A12.2 | $0 | $960,000 |

CIP ID# A13.1 & A13.2

# Minor Capital Improvements 2025 & Future

## START
Ongoing

## COMPLETION
Ongoing

## PROJECT TYPE
Variable

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
Work under this item includes minor improvements or repairs to miscellaneous assets located at the Nine Springs Wastewater Treatment Plant. Costs of the work are financed through cash in the capital projects fund.

## BACKGROUND
While the work included in this item is minor from a budgetary perspective, it usually is unplanned and urgent. As such, it is not possible for the District's maintenance crews to readily perform the work in most cases. Providing this line item in the capital projects budget allows District staff to have flexibility in prioritizing and implementing small projects on an annual basis to ensure that assets continue to operate and function reliably.

## FINANCIAL ANALYSIS

| | 2025 Expenditure ($2025) | Total Project Cost |
|---|---|---|
| A13.1 | $129,000 | $130,000 |
| A13.2 | $0 | $725,000 |

CIP ID# A14.1 & A14.2

# Annual Paving Improvements 2025 & Future

## START
Ongoing

## COMPLETION
Ongoing

## PROJECT TYPE
Facilities Maintenance – Roads

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
Work under this item includes rehabilitating paved surfaces on the plant grounds on an annual or semi-annual basis. Paving costs are funded through cash in the capital projects fund.

## BACKGROUND
The District annually or semi-annually includes funds in its capital projects budget for resurfacing of roads. Since these improvements are not necessary in every budget year and the cost can vary from year to year, it is generally more efficient to fund them in the capital projects budget rather than the operating budget

## FINANCIAL ANALYSIS

| | 2025 Expenditure ($2025) | Total Project Cost |
|---|---|---|
| A14.1 | $78,000 | $80,000 |
| A14.2 | $0 | $265,000 |

CIP ID# A15.1

# Biosolids Facilities Plan

## START
2025

## COMPLETION
2026

## PROJECT TYPE
Capacity Biosolids Disposal

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
Under the District's current biosolids management program, the District will not be able to maintain the legally required amount of liquid storage in coming years, given current market, environmental and demographic pressures. Since the completion of the biosolids management plan in 2021, it has become clear that more fundamental issues need to be addressed regarding the long-term viability of landspreading of biosolids. The District needs a strategy that considers additional alternatives other than landspreading. In addition, it has become clear that class B cake is not a viable product option. A long-term facility plan for biosolids is needed to review a broader set of options and recommend a path going forward. Facility planning costs will be paid from cash reserves in the Capital Projects Fund, with potential financing from the Clean Water Fund if infrastructure improvements are implemented in the future.

## BACKGROUND
The 2021 Biosolids Management Plan reviewed the District's existing biosolids program and its future needs. The 2021 Biosolids Management Plan noted that operations are currently hampered by a lack of load-out stations, sludge transfer inefficiencies between storage and load-out facilities, and inadequate facilities to maintain and store equipment.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $350,000 | $750,000 |

CIP ID# A15.2

# Biosolids Infrastructure

## START
2027

## COMPLETION
2030

## PROJECT TYPE
Capacity Biosolids Disposal

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
The primary purpose of this project is to construct the infrastructure needed to support the biosolids program. The scope of the project is unknown until the Biosolids Facility Plan is completed in 2026. This project will be financed through loan proceeds from the Clean Water Fund or general obligation bonds.

## BACKGROUND
Under the District's current biosolids management program, the District will not be able to maintain the legally required amount of liquid storage in coming years, given current market, environmental and demographic pressures. Since the completion of the biosolids management plan in 2021 it has become clear that more fundamental issues need to be addressed regarding the long-term viability of landspreading of biosolids. The District needs a strategy that considers additional alternatives other than landspreading. In addition, it has become clear that class B cake is not a viable product option. A long-term facility plan for biosolids is planned to review a broader set of options and recommend a path going forward.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $50,000,000 |

CIP ID# A16

# W4 System Improvements

## START
2024

## COMPLETION
2026

## PROJECT TYPE
Condition – Non-Potable Water System

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
The purpose of this project is to replace various components of the District's non-potable water (W4) system and make related improvements to optimize its use. The W4 system reuses treated effluent for a number of plant processes including polymer dilution, wash water for screening at the Headworks Facility and pump seal water. Use of this system avoids the purchase of approximately 200 million gallons of potable water each year. This project will be financed through loan proceeds from the Clean Water Fund or general obligation bonds.

## BACKGROUND
The W4 system was installed in the Tenth Addition to the treatment plant in 2006 and includes a pre-packaged pump and disinfection system in the Headworks Building. Expansion of the system was performed as part of the Eleventh Addition in 2014, with additional facilities installed in the Struvite Harvesting Building. As the original system approaches a service life of 20 years, the pumps and controls are in need of rehabilitation or replacement. Preliminary work will include an evaluation of the existing systems and recommendations for improvements.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $523,000 | $1,500,000 |

CIP ID# A17.1& A17.2

# Annual Solids Processing Tank Cleaning 2025 & Future

## START
Ongoing

## COMPLETION
Ongoing

## PROJECT TYPE
Plant Improvements – Process Tank Maintenance

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
The purpose of this line item in the capital projects budget is to provide for the annual cleaning of solids processing tanks, specifically digesters, sludge storage tanks and wells. Periodic cleaning of these facilities is an important component of reliability centered maintenance and infrastructure reliability. Routine cleaning allows tanks to better utilize capacity, reduces wear on equipment due to sediment accumulation and allows for more frequent inspection of equipment. Costs of the work will be financed through cash in the capital projects fund.

## BACKGROUND
Work of this type has been funded through the District's operating budget in the past. This is often problematic due to the nature of the work (i.e., variable quantities, variable costs and project delays). The capital projects budget is better suited to accommodate the challenges associated with annual tank cleaning.

## FINANCIAL ANALYSIS

| | 2025 Expenditure ($2025) | Total Project Cost |
|---|---|---|
| A17.1 | $932,000 | $935,000 |
| A17.2 | $0 | $4,650,000 |

CIP ID# A18

# Septage Receiving Modifications


## START
2027

## COMPLETION
2030

## PROJECT TYPE
Condition – Septage Receiving

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
This project will correct problems encountered with operation of the existing Septage Receiving Facility. Work will include reconfiguration of the existing facility to allow improved traffic flow, better screening equipment upstream of the Headworks Facility and implementation of more security and tracking measures to reduce the potential for unauthorized discharges. This project was included in the 2016 Liquid Processing Facilities Plan. It is anticipated that project costs will be funded through the Clean Water Fund or general obligation bonds.

## BACKGROUND
The Septage Receiving Facility was constructed as part of the Tenth Addition to the treatment plant and has experienced a number of operational difficulties since it was placed into operation. Trucks discharging at the facility have to back up to empty their contents, resulting in congestion during periods of heavy traffic and icy and unsafe conditions in winter. Further, sand and grit accumulate in the discharge trough, which requires manual cleaning by District staff on a frequent basis. Improvements will allow for one-way traffic for haulers and an improved screening system to keep unwanted material out of the screening channel. A space needs study for the treatment plant completed in 2023 provided recommendations for a location of the future facility.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $8,000,000 |

CIP ID# A19

# East Plant Primary Tank Rehabilitation - Future

## START
2028

## COMPLETION
2030

## PROJECT TYPE
Condition

## LOCATION
Nine Springs Wastewater Treatment Plant

## DESCRIPTION
The purpose of the project is to replace the longitudinal and cross-collector mechanisms, and other vital tank components for primary tanks. Primary Tanks 5 through 16, excluding Primary Tank 6, are operable but require rehabilitation due to age, condition and component standardization. Drive chains, sprockets, headshafts and bearings have exceeded their useful life, with some components dating back as far as 1948. Recent tank inspections revealed some components have become severely corroded as well. Nine of the tanks will be rehabilitated during the East Plant Primary Tank Rehabilitation (LPI) project (CIP ID# A1.06). This project will complete rehabilitation on the remaining tanks. It is anticipated that project costs will be funded through the Clean Water Fund or general obligation bonds.

## BACKGROUND
Primary clarification is the first step in removing solids, fats, oils, and grease from wastewater, and is therefore critical to treatment plant function. Having even one primary tank out of service impacts treatment performance during high flow events and limits staff's ability to conduct maintenance on other tanks. Tank rehabilitation for Primary Tanks 05 and 07 through 16 has not occurred since construction between 40 and 75 years ago. Complete replacement of the collector system in each primary tank is needed to keep them in reliable operating condition.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $3,010,000 |

CIP ID# B01

# Manhole Rehabilitation on Old West Interceptor

## START
2024

## COMPLETION
2028

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
West Interceptor

University Avenue, Ridge St to Paunack Pl; Randall Ave, Dayton St to Regent St; Regent St, Randall Ave to East Campus Mall; Easement, Regent St to West Washington Ave; City of Madison

## DESCRIPTION
This project will correct condition defects to manholes on the West Interceptor System in the City of Madison. A structural review of 32 manholes will be completed in 2024-2025 to provide recommendations for rehabilitation or replacement. Construction or rehabilitation of some of the manholes will be coordinated with other planned projects as appropriate. The structural study will use operating budget. This project will be financed with cash reserves in the Capital Projects Fund.

## BACKGROUND
The West Interceptor was constructed in 1916 and it is the District's oldest conveyance facility. It was originally constructed by the City of Madison and transferred to the District in June of 1933. The manholes installed in 1916 have reached the end of their useful life and are in need of rehabilitation or replacement to address structural concerns.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $67,000 | $850,000 |

CIP ID# B02

# Lower Badger Mill Creek Interceptor (Phase 6)

## START
2022

## COMPLETION
2026

## PROJECT TYPE
New Capacity – Conveyance System

## LOCATION
Lower Badger Mill Creek Interceptor

Shady Oak Lane to Midtown Road, City of Verona, Town of Verona and City of Madison

## DESCRIPTION
This project will extend the District's Lower Badger Mill Creek Interceptor from Shady Oak Lane to Midtown Road to provide service for new development. This project will be funded through revenue sources other than loan proceeds in the capital projects fund. Project costs will be recovered from connection charges from new users upon connection to the interceptor improvements.

## BACKGROUND
District policy allows for the construction of District interceptors only when that interceptor shall serve at least two municipalities. Sanitary sewer service options for the Lower Badger Mill Creek drainage basin were studied by District staff in 2005. At that time, it was decided that a regional interceptor sewer would be constructed in several phases as development needs dictated to serve the cities of Verona and Madison and the towns of Verona and Middleton.

Phases 1 through 4 of the interceptor project were constructed between 2006 and 2018. Phase 5 will extend the sewer approximately 3,500 feet to the north to Shady Oak Lane in 2024. The sewer is scheduled to be completed in 2026 when it is extended 5,500 feet to Midtown Road.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $2,665,000 | $5,100,000 |

CIP ID# B03

# West Interceptor Rehab – Segoe Rd to Shorewood Blvd

## START
2024

## COMPLETION
2025

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
West Interceptor: University Avenue, Segoe Road to Shorewood Boulevard, City of Madison and Village of Shorewood Hills

## DESCRIPTION
The purpose of this project is to rehabilitate a portion of the West Interceptor, which is located between Segoe Road and Shorewood Boulevard in the City of Madison and the Village of Shorewood Hills. This pipeline has been in service for over 90 years and several sections of cracked pipe have been identified by video inspection. Inserting a cured-in-place liner in the existing sewer will extend its service life 50 years or more. It is anticipated that this project will be financed through cash in the capital projects fund.

## BACKGROUND
This portion of the West Interceptor was constructed in 1931 and represents the first interceptor constructed by the District after it was created in 1930. This section of the Old West Interceptor consists of 4,700 feet of vitrified clay pipe and is a mixture of 12-inch, 15-inch and 18-inch diameter sewers. As is common with sewers of this era, the pipe lengths are three feet in length and thus are susceptible to inflow and infiltration. Additionally, an inspection of the Old West Interceptor in 2022 showed cracked sections along Locust Drive and Burbank Drive. Rehabilitating the pipe with a new liner is a cost-effective way to address these problems.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $921,000 | $1,100,000 |

CIP ID# B04

# NEI-Waunakee Extension Capacity Improvements (Phase 1)

## START
2021

## COMPLETION
2026

## PROJECT TYPE
Capacity Relief – Conveyance System

## LOCATION
Northeast Interceptor – Waunakee Extension
Yahara River to Village of Waunakee, Town of Westport and Village of Waunakee

## DESCRIPTION
This project will provide additional capacity to the Northeast Interceptor system in order to convey projected flows from the villages of Dane and Waunakee and the Town of Westport. The improvements consist of the installation of approximately 18,600 feet of new relief or replacement sewer that will be installed parallel to the District's existing sewer that extends from the Yahara River to the Village of Waunakee. At this time, it is proposed that construction will occur in three phases, with construction of the first phase scheduled for 2024-2026. It is anticipated that this project will be financed through the Clean Water Fund.

## BACKGROUND
Continued high growth rates in this part of the collection system have created a need for the District to add capacity to the Waunakee Extension of the Northeast Interceptor. The Capital Area Regional Planning Commission (CARPC) projected that capacity will be reached in several segments of the Waunakee Extension by or about 2022, based on population forecasts. Periodic flow monitoring performed by District staff as part of the billing program validates these projections.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $6,238,000 | $11,000,000 |

CIP ID# B05

# NEI-Truax Extension Rehab

## START
2021

## COMPLETION
2026

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
Northeast Interceptor – Truax Extension: USH 51 Corridor, Rieder Road to Lien Road, City of Madison

## DESCRIPTION
This project will correct condition defects in the Northeast Interceptor between Lien Road and the end of the Pumping Station 13 force main at Rieder Road. Approximately 11,000 feet of existing 48-inch concrete pipe will be rehabilitated through the installation of a new cured-in-place liner within the existing pipe. Bypassing of flows during lining will be through the NEI-Truax Extension Relief Sewer, which was completed in the fall of 2020. It is anticipated that this project will be financed through a Clean Water Fund loan or general obligation bonds.

## BACKGROUND
This section of the Northeast Interceptor was installed in 1969 and suffers from internal corrosion due to the presence of elevated levels of hydrogen sulfide in the wastewater. Approximately one-half of the Northeast Interceptor System between Pumping Station 18 and Pumping Station 14 has either been rehabilitated or replaced due to corrosion. Corrosion of the pipe reduces the capacity by increasing surface roughness and may eventually cause the pipe to fail. Installation of a cured-in-place liner can extend the service life of the interceptor if installed before the corrosion progresses too far.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $4,238,000 | $8,600,000 |

CIP ID# B06

# NEI-FEI to SEI Rehab

## START
2025

## COMPLETION
2027

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
Northeast Interceptor (NEI): Femrite Drive/Copps Avenue to Progress Road, City of Monona and City of Madison

## DESCRIPTION
This project will correct condition defects in the Northeast Interceptor between its junction with the Far East Interceptor (FEI) and its junction with the Southeast Interceptor (SEI). Approximately 3,300 feet of existing 48-inch concrete pipe will be rehabilitated through the installation of a new cured-in-place liner within the existing pipe. It is anticipated that financing of the project will be through a loan from the Clean Water Fund.

## BACKGROUND
This section of the Northeast Interceptor was installed in 1964 and suffers from internal corrosion due to the presence of elevated levels of hydrogen sulfide in the wastewater. Approximately 2,250 feet of the Northeast Interceptor between the Far East Interceptor and the Southeast Interceptor was abandoned in 2013 and replaced with a new sewer due to the condition of the pipe. This project will rehabilitate and extend the service lives of the remaining sewer segments that were not replaced in the 2013 project.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $2,600,000 |

CIP ID# B07.1

# Southeast Interceptor Rehabilitation on USH 51 (Phase 1)

## START
2023

## COMPLETION
2025

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
Southeast Interceptor

Along U.S. Highway 51 from Pumping Station 9 to approximately one-half mile south of Terminal Drive, Village of McFarland

## DESCRIPTION
This project will correct condition defects in the Southeast Interceptor between the District's Pumping Station 9 in the Village of McFarland and U.S. Highway 12/18. Numerous cracks and missing pipe material in the asbestos cement sewer will be rehabilitated through the insertion of a cured-in-place lining. Phase 1 of the project will rehabilitate the 12-inch portion of the Southeast Interceptor from structure MH07-823 to structure MH07-810. The project will be completed in conjunction with a highway reconstruction project. It is anticipated that this project will be financed through the Clean Water Fund.

## BACKGROUND
This section of the Southeast Interceptor was constructed in 1961 and consists of approximately 8,300 lineal feet of 12-inch and 15-inch asbestos cement pipe. A routine inspection by closed-circuit television in 2014 revealed numerous defects, including surface corrosion, cracks and missing pipe material.

The Wisconsin Department of Transportation (WisDOT) is planning to make improvements to U.S. Highway 51 from I-39/90 to about one-half mile south of Terminal Drive starting in early 2025. Phase 1 of the work must be completed in conjunction with the highway project due to the widening of U.S. Highway 51.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $905,000 | $1,300,000 |

CIP ID# B07.2

# Southeast Interceptor Rehabilitation on USH 51 (Phase 2)

## START
2031

## COMPLETION
2035

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
Southeast Interceptor and Pumping Station 9

Along U.S. Highway 51 from approximately one-half mile south of Terminal Drive to U.S. Highway 12/18, Village of McFarland

## DESCRIPTION
This project will correct condition defects in the Southeast Interceptor between the District's Pumping Station 9, in the Village of McFarland, and U.S. Highway 12/18. Numerous cracks and missing pipe material in the asbestos cement sewer will be rehabilitated through the insertion of a cured-in-place lining. Phase 2 of the project will rehabilitate the 15-inch portion of the Southeast Interceptor from MH07-810 to MH07-218. It is anticipated that this project will be financed through the Clean Water Fund or general obligation bonds.

## BACKGROUND
This section of the Southeast Interceptor was constructed in 1961 and consists of approximately 8,300 lineal feet of 12-inch and 15-inch asbestos cement pipe. A routine inspection by closed-circuit television in 2014 revealed numerous defects, including surface corrosion, cracks and missing pipe material.

The Wisconsin Department of Transportation (WisDOT) is in the process of studying the corridor for improvements along U.S. Highway 51 from approximately one-half mile south of Terminal Drive to U.S. Highway 12/18. It is anticipated that rehabilitation or relocation of the Southeast Interceptor along this corridor will be required due to the impacts of the highway improvements.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $2,600,000 |

CIP ID# B08.1

# NSVI Capacity Improvements (Phase 1)

## START
2024

## COMPLETION
2028

## PROJECT TYPE
Additional Capacity – Conveyance System

## LOCATION
Nine Springs Valley Interceptor (NSVI): Lewis Springs E-Way from Pumping Station 11 to Syene Road, City of Fitchburg

## DESCRIPTION
This project will provide additional capacity to the Nine Springs Valley Interceptor system between the District's Pumping Station 11 and Syene Road. It is expected that approximately 8,700 feet of relief or replacement sewer will be installed along the Lewis Springs E-Way in order to serve new development in the southwest and western portions of the District's service area. This project will be funded through a loan from the Clean Water Fund or general obligation bonds.

## BACKGROUND
The Nine Springs Valley Interceptor system between Pumping Station 11 and Pumping Station 12 was constructed in 1965 and includes 33,000 feet of sewer, ranging in diameter from 30 inches to 54 inches. The NSVI's service area includes some of the fastest-growing lands in Dane County and Wisconsin.

Population and wastewater forecasts performed by the Capital Area Regional Planning Commission (CARPC) indicate that most of the NSVI system and approximately 3,600 feet of sewer upstream of Pumping Station 12 will require additional capacity between 2025 and 2040. This project is the first phase of a multi-phase project that will address capacity needs in the remainder of the NSVI system.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $217,000 | $10,125,000 |

CIP ID# B08.2

# NSVI Capacity Improvements (Phase 2)

## START
2024

## COMPLETION
2027

## PROJECT TYPE
Condition and Capacity – Conveyance System

## LOCATION
Nine Springs Valley Interceptor (NSVI) – Mineral Point Extension

From Pumping Station 12 along the south side of USH 18/151, Town of Verona

## DESCRIPTION
This project will provide additional capacity and address condition defects on the Nine Springs Valley Interceptor system from the District's Pumping Station 12 along the south side of USH 18/151. This project phase was moved up due to severe condition defects that required repair in 2024. It is expected that approximately 3,500 feet of replacement sewer will be installed in order to serve new development in the southwest and western portions of the District's service area. This project will be financed through cash reserves from the capital projects fund.

## BACKGROUND
The Nine Springs Valley Interceptor system between Pumping Station 11 and Pumping Station 12 was constructed in 1965 and includes 35,000 feet of sewer, ranging in diameter from 30 inches to 54 inches. The NSVI's service area includes some of the fastest-growing lands in Dane County and Wisconsin.

Population and wastewater forecasts performed by the Capital Area Regional Planning Commission (CARPC) indicate that most of the NSVI system and approximately 3,500 feet of sewer upstream of Pumping Station 12 will require additional capacity between 2025 and 2040. This project is the second phase of a multi-phase project that will address capacity needs in the remainder of the NSVI system.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $365,000 | $9,650,000 |

CIP ID# B09.1

# West Interceptor Rehab – Babcock Hall to Dayton Street

## START
2025

## COMPLETION
2027

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
West Interceptor
Along Babcock Drive, University Avenue and North Randall Avenue, City of Madison

## DESCRIPTION
The purpose of this project is to rehabilitate a portion of the West Interceptor, which is located on the University of Wisconsin campus. The sections to be rehabilitated have been in service for over 100 years and are suffering from internal corrosion. Inserting a cured-in-place liner in the existing sewer will extend its service life by 50 years or more. It is anticipated that this project will be financed through the Clean Water Fund or general obligation bonds.

## BACKGROUND
These sections of the West Interceptor are the oldest assets in the District's collection system. The 24-inch cast iron sewer was originally constructed by the City of Madison in 1916 and then transferred to the District in 1933. Like other sewers of similar age and construction materials, this sewer suffers from tuberculation, or the buildup of deposits on the inside walls of the pipe. These deposits reduce the capacity of the sewer over time and may compromise the structural integrity of the pipe if left unchecked. Rehabilitating the pipe with a new liner is a cost-effective way to address these problems.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $5,000 | $1,540,000 |

CIP ID# B09.2

# West Interceptor Rehab – Farley Avenue to Marshall Court

## START
2025

## COMPLETION
2027

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
West Interceptor

Along Babcock Drive, University Avenue and North Randall Avenue, City of Madison

## DESCRIPTION
The purpose of this project is to rehabilitate a portion of the West Interceptor. The sections to be rehabilitated have been in service for over 100 years and are suffering from internal corrosion. Inserting a cured-in-place liner in the existing sewer will extend its service life by 50 years or more. It is anticipated that this project will be financed through the Clean Water Fund or general obligation bonds.

## BACKGROUND
This portion of the West Interceptor was constructed in 1931 and represents the first interceptor constructed by the District after it was created in 1930. The 18-inch vitrified clay sewer was originally constructed in 1932. As is common with this type of pipe of its era, the pipe lengths are three feet and plugged wyes were installed at periodic intervals for future use. As a result, this pipe has a number of points that are susceptible to inflow and infiltration. Rehabilitating the pipe with a new liner is a cost-effective way to address these problems.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $5,000 | $825,000 |

CIP ID# B10

# District Flow Monitoring Stations

## START
2025

## COMPLETION
2026

## PROJECT TYPE
Capacity – Conveyance System

## LOCATION
Various

## DESCRIPTION
This project supports the District's inflow and infiltration (I&I) monitoring program through the installation of flow monitoring stations. These monitoring stations will be installed at strategic locations in the collection system to provide accurate flow measurements from District customers. It is anticipated that this project will be funded through the Clean Water Fund or general obligation bonds.

## BACKGROUND
Owner community meetings held in 2019 identified inflow and infiltration reduction as a top priority for the District. With that in mind, the District hired a consultant in 2020 to develop an I&I reduction plan. One of the recommendations from that plan is to use the District's hydraulic model of its collection system to identify areas of excessive (&I. The construction of long-term monitoring sites in the collection system is needed to properly calibrate the model and validate its results. The installation of monitoring sites that are well constructed, provide accurate data and are safe for District staff will ensure the integrity of the flow data and the I&I Reduction Program.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $295,000 | $1,250,000 |

CIP ID# B11

# Southeast Interceptor Relocation at Yahara River

## START
2024

## COMPLETION
2027

## PROJECT TYPE
Regulatory – Conveyance System

## LOCATION
Southest Interceptor
U.S. Highway 51 north of the Yahara River Bridge, Village of McFarland

## DESCRIPTION
The purpose of this project is to relocate District structure MH09-108 and parts of the Southeast Interceptor that conflict with a proposed retaining wall that will be installed for the Wisconsin Department of Transportation's (WisDOT) U.S. Highway 51 Yahara River Bridge project. It is anticipated that this project will be paid for through cash in the capital projects fund.

## BACKGROUND
The Southeast Interceptor from structure MH09-108 to structure MH09-107 was installed in 1961 and consists of 72 lineal feet of 27-inch reinforced concrete pipe that was rehabilitated with a cured-in-place liner in 2018. MH09-108 is a large junction chamber that receives flow from three District owner communities: Town of Dunn Sanitary District #3, Kegonsa Sanitary District and the Village of McFarland.

WisDOT is planning a project for U.S. Highway 51 from I-39/90 (east of Stoughton) to U.S. 12/18 (Beltline). Part of this project involves improvements to the Yahara River bridge. The bridge will widen, and the grade elevation will rise to construct a new pedestrian walkway under the bridge. Due to poor soils, the retaining wall proposed will require deep pile supports that will be in direct conflict with MH09-108. Utility relocations need to be completed prior to October 2026.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $52,000 | $850,000 |

CIP ID# B12

# Access to Interceptors

## START
2027

## COMPLETION
2031

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
Various

## DESCRIPTION
The purpose of this project is to provide solutions for accessing interceptors to complete maintenance or emergency repairs. It is anticipated that this project will be financed through cash in the capital projects fund.

## BACKGROUND
Like many regional wastewater utilities, a significant portion of the District's conveyance system is located in low-lying areas that are extremely difficult, if not impossible, to access at various times of the year. Common problems involve issues related to surface water, soils with low bearing capacity, uneven terrain, dense vegetation, uncertain or restrictive easement rights, and permits. There are 237 pipe segments for a total of 96,300 lineal feet that can only be accessed by ATV and cannot be cleaned. Based on total lineal feet of pipe, that equates to 19% of the gravity pipes in the District's system. In addition, there are 18 pipes, totaling 9,100 lineal feet or 1.8% of the system, that have no accessibility for inspection, maintenance, or emergency repair.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $3,900,000 |

CIP ID# B13

# NEI-Waunakee Extension Rehab (MH14-358 to MH14-362)

## START
2025

## COMPLETION
2027

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
Northeast Interceptor – Waunakee Extension

Along the southwest edge of Kearny Pond, Village of Waunakee

## DESCRIPTION
The purpose of this project is to rehabilitate a portion of the Northeast Interceptor-Waunakee Extension along the southwest edge of Kearny Pond. The sections to be rehabilitated have been in service for over 50 years and are suffering from deterioration and significant infiltration. The recommendation is for pipe replacement to correct condition defects and extend the service life of the interceptor by increasing capacity. It is anticipated that this project will be financed through cash in the capital projects fund.

## BACKGROUND
The Northeast Interceptor-Waunakee Extension from structure MH14-358 to structure MH14-362 was installed in 1970 and consists of 775 lineal feet of 10-inch vitrified clay pipe. The pipe segments were televised in 2019 and show signs of deterioration and significant infiltration. While additional capacity is not needed until at least 2040, pipe replacement is recommended to address both current condition and future capacity needs. Pipe bursting is the recommended installation method over open-cut excavation due to the creek crossing and anticipated problems with groundwater.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $700,000 |

CIP ID# B14

# West Interceptor on Regent Street (Park Street to East Campus Mall)

## START
2024

## COMPLETION
2028

## PROJECT TYPE
Capacity and Condition – Conveyance System

## LOCATION
West Interceptor

Along Regent Street between Mills Street and East Campus Mall, City of Madison

## DESCRIPTION
This project will rehabilitate manholes and increase sewer capacity along the West Interceptor along Regent Street between Mills Street and East Campus Mall in the City of Madison. The improvements consist of replacing structures that are more than 100 years old and adding capacity either with a relief sewer or a replacement sewer. It is anticipated that this project will be funded through cash in the capital projects fund.

## BACKGROUND
The West Interceptor along Regent Street consists of 24-inch cast iron sewer that was installed in 1916 and was rehabilitated with a cured-in-place liner in 2017. However, the structures were not rehabilitated as part of the lining project. These structures are deteriorating and need replacement. Additionally, projected increases in flow for this area indicates a need to add capacity to this section of the West Interceptor. The City of Madison is planning a street and utility reconstruction project along Regent Street between Mills Street and East Campus Mall anticipated to occur in 2027-2028. The rehabilitation of the structures should be completed in conjunction with the City of Madison project.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $31,000 | $1,300,000 |

CIP ID# B15

# NEI-Rehab West of Airport (Phase 2)

## START
2028

## COMPLETION
2030

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
Northeast Interceptor

West of the Dane County Regional Airport and east of Pumping Station 14, City of Madison

## DESCRIPTION
The purpose of this project is to rehabilitate a portion of the Northeast Interceptor-Waunakee/DeForest Extension located to the west of the Dane County Regional Airport and east of Pumping Station 14. The concrete sewer segments in this area are showing evidence of corrosion and need to be rehabilitated or replaced to ensure reliable service. Inserting a cured-in-place liner in the existing sewer will extend its service life by 50 years or more. It is anticipated that this project will be financed through the Clean Water Fund.

## BACKGROUND
Approximately 50,000 feet of concrete pipe was installed in the Northeast Interceptor between 1964 and 1971. Of that total, approximately half of the pipe that was originally installed is in service. The remaining 22,000 feet has either been replaced or rehabilitated with a cured-in-place liner due to issues of corrosion and/or capacity. Approximately 2,100 feet of 48-inch sewer was lined in 2014 between Dennis Drive and the Dane County Regional Airport during Phase 1 of this project. The remainder of the 48-inch sewer within the project limits, approximately 4,500 feet, remains unlined. Based on the varying degrees of corrosion present and the likelihood that the corrosion will continue to progress over time, it is recommended that the remaining pipe be replaced or rehabilitated.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $4,125,000 |

CIP ID# C01

# Pumping Station 10 Force Main Leak

## START
2024

## COMPLETION
2025

## PROJECT TYPE
Condition-– Conveyance System

## LOCATION
Pumping Station 10
110 Regas Road, City of Madison

## DESCRIPTION
The purpose of this project is to investigate and repair a leak in the force main exiting Pumping Station 10. The full extent of repair work that needs to be completed is unknown. Excavation at the site of the leak will be conducted to determine the nature of the problem. Work under this item will include bypassing the flows around the station, repair of the leak and replacement of valves in the dry well during leak repair. Funding for the improvements will be from revenue sources other than loan proceeds in the capital projects fund.

## BACKGROUND
The Pumping Station 10 force main is part of the Northeast Interceptor system that provides service to the northerly and easterly areas of the collection system, including the City of Madison, villages of Cottage Grove, DeForest and Waunakee, and other municipalities. This pumping station conveys the second-largest average daily flow of all the District's 18 pumping stations. Raw wastewater is currently leaking back into the pumping station where the force main leaves the station. Identifying the source of this wastewater and repairing any associated problems is essential to ensure that this critical facility remains in operation.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $890,000 | $1,500,000 |

CIP ID# C02

# Emergency Power Generation at District Pumping Stations

## START
2020

## COMPLETION
2036

## PROJECT TYPE
Resilience – Conveyance System

## LOCATION
Various Pumping Stations

## DESCRIPTION
This project will improve the District's ability to sustain its collection system operations in the event of a local or regional power outage. Improvements will include the addition of on-site diesel generators for emergency use and associated switching equipment that will be installed at District pumping stations which currently lack such standby facilities. It is anticipated that this project will be funded through a loan from the Clean Water Fund or general obligation bonds.

## BACKGROUND
District Administrative Guideline #11 provides guidance on how to sustain operations during a loss of power from the electrical grid. More specifically, the guideline specifies a desired level of service such that wastewater collection and treatment can continue to operate at peak design capacity for at least 72 hours after a loss of power. Applying this standard to District pumping stations, one method of achieving this level of service is by providing standby generators at each station. District staff have prioritized each pumping station's needs for standby generation and developed an implementation schedule that runs through 2036.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $16,000,000 |

CIP ID# C03.1

# Pumping Station 16 Rehabilitation


## START
2026

## COMPLETION
2030

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
Pumping Station 16

1303 Gammon Road, City of Middleton

## DESCRIPTION
The purpose of this project is to rehabilitate mechanical and electrical equipment at Pumping Station 16. The rehabilitation is expected to include the following elements: replacement of cast iron fittings and valves in the dry well piping; new electrical generator, switchgear and motor control centers; variable frequency drives; HVAC system replacement; and modifications to the odor control system. It is anticipated that this program will be funded through a Clean Water Fund loan or general obligation bonds.

## BACKGROUND
Pumping Station 16 was placed into service in 1981. No major rehabilitation projects have been completed in the 42 years since the station was installed. All the pumps are new within the last five years, but much of the remaining equipment has reached the end of its useful life. Of special note, the cast iron fittings in the dry well need to be replaced. In 2017, a cast iron tee developed a crack and subsequent leak, which required immediate replacement. Due to odor concerns both at the station and the downstream force main, a comprehensive odor control evaluation will be conducted as part of this project and the related force main rehabilitation project (Project ID# C03.2).

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $8,200,000 |

CIP ID# C03.2

# Pumping Station 16 Force Main Rehabilitation

## START
2021

## COMPLETION
2029

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
Pumping Station 16

North Gammon Road, Colony Drive to Mineral Point Road, City of Madison

## DESCRIPTION
The purpose of this project is to correct condition defects in the Pumping Station 16 force main on North Gammon Road between Colony Drive and Mineral Point Road. Approximately 400 feet of interceptor sewer downstream of the interceptor will also be rehabilitated as part of this project. It is anticipated that this project will be funded through a loan from the Clean Water Fund or general obligation bonds.

## BACKGROUND
The Pumping Station 16 force main was installed in 1979-1980 on Gammon Road, from Pumping Station 16 in the City of Middleton to just north of Mineral Point Road in the City of Madison. The system consists of approximately 6,900 feet of 36-inch diameter ductile iron pressure sewer and 2,900 feet of 30-inch diameter ductile iron sewer that is not pressurized. The majority of the pressurized sewer is fully submerged at all times and is believed to be in good condition. Approximately 1,600 feet of the non-pressurized sewer is not fully submerged with wastewater and thus is showing evidence of corrosion via inspection by closed circuit television. The project proposes to either rehabilitate the corroded force main sections with a cured-in-place liner or replace those sections with new pipe. This work will be coordinated with the proposed rehabilitation of Pumping Station 16 (Project ID# C03.1).

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $2,700,000 |

CIP ID# C04

# Crosstown Force Main Air Release Saddle Tap Replacement

## START
2024

## COMPLETION
2026

## PROJECT TYPE
Capacity Improvement – Conveyance System

## LOCATION
Between Pumping Stations 1 and 2

City of Madison

## DESCRIPTION
This project will replace air release valve saddle taps on the Crosstown force main to ensure staff can operate and maintain the valves safely and to reduce the risk of a sanitary sewer overflow. Five of the saddle taps are being replaced in 2024, leaving 16 remaining for replacement as part of this project. This project will be paid for from revenue sources other than loan proceeds in the capital projects fund.

## BACKGROUND
The Crosstown force main was constructed in 2002 and conveys flow from Pumping Station 1 to Pumping Station 2. The force main also has the capability of pumping in the reverse direction. Due to the varying depth of the force main resulting in intermittent high points, 21 air release manholes were installed as part of the project. Each of these manholes contains a flanged outlet tapping sleeve (saddle tap) on the force main that provides a connection point for the air release valve. The current saddle taps are constructed of painted steel and are in fair to poor condition due to the environmental conditions of the manholes that house the connection points.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $50,000 | $625,000 |

CIP ID# C05.1 & C05.2

# Force Main Condition Assessment – Pumping Station 10
# Force Main & Force Main Condition Assessment – Future

## START
2024

## COMPLETION
2030

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
Various

## DESCRIPTION
The purpose of this project is to provide support for the annual inspection of the District's force mains. These assets are extremely difficult to inspect by traditional methods as they are difficult to access, are under pressure and cannot be taken out of service for long periods of time. Technology has been developed that can address these challenges, but the inspections require careful planning and can be costly to perform. It is expected that these annual or semi-annual inspections will be paid for from revenue sources other than loan proceeds in the capital projects fund.

## BACKGROUND
Black & Veatch developed a Force Main Condition Assessment Plan for the District in 2017. The primary goals of this work were to develop a plan for the District to use to evaluate the condition of its force mains and to recommend when and how the condition assessments should be performed. The Collection System Facilities Plan Update will make further recommendations on the timing and location of projects when it is completed in 2024. Specifically, the implementation plan will focus on steps and costs that are needed to conduct an inspection of the Pumping Station 10 force main in 2024-2025. In the interim, an annual placeholder is being included in the six-year Capital Improvements Plan beginning in 2024.

## FINANCIAL ANALYSIS

| | 2025 Expenditure ($2025) | Total Project Cost |
|---|---|---|
| C05.1 | $425,000 | $525,000 |
| C05.2 | $0 | $3,000,000 |

CIP ID# C06

# Pumping Station Bar Screens

## START
2025

## COMPLETION
2027

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
Pumping Stations 2, 7, 8 and 11

## DESCRIPTION
The purpose of this project is to reduce damage to equipment at the Nine Springs Treatment Plant by installing bar screens at Pumping Stations 2, 7, 8, and 11. It is anticipated that this program will be funded through a Clean Water Fund loan or general obligation bonds.

## BACKGROUND
The District operates 18 regional pumping stations; five of these pumping stations discharge to force mains that flow directly to the Nine Springs Wastewater Treatment Plant. The most recently constructed of these pumping stations, PS 18, is equipped with mechanical screening. There have been an increase in the frequency of pump plugging issues at the stations. Additionally, there are concerns with potential damage to equipment at the treatment plant. There is currently no coarse screening installed upstream of three perforated plate screens at the plant nor is there space in the channels to effectively install coarse screens. Installing bar screens at Pumping Stations 2, 7, 8, and 11 will help remove the large debris before it is pumped to plant.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $279,000 | $4,000,000 |

CIP ID# C07

# Pumping Stations 11 & 12 Surge Valve Access Platforms

## START
2026

## COMPLETION
2026

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
Pumping Station 11 and Pumping Station 12

## DESCRIPTION
The purpose of this project is to install access platforms at PS11 and PS12 to safely access, operate and maintain each forcemain surge valve. It is expected this project will be paid for from revenue sources other than loan proceeds in the capital projects fund.

## BACKGROUND
Pumping Stations 11 and 12 convey wastewater from the west side of Madison, Middleton, Verona and Fitchburg to the Nine Springs Wastewater Treatment Plant. Both pump stations were rehabilitated in 2012 with new pumping equipment, piping and electrical equipment. As part of the rehabilitation project, a new forcemain surge valve was placed on the forcemain header piping in each station to protect the pipe against pressure waves and surges. While the surge valves require access and periodic maintenance, no provisions were designed into the project to provide safe access to these valves. Staff agree that a method of safe access needs to be installed in order to maintain these assets.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $225,000 |

CIP ID# C08

# Pumping Stations 5 & 15 Force Main Isolation Valve Replacements

## START
2028

## COMPLETION
2029

## PROJECT TYPE
Condition – Conveyance System

## LOCATION
Conveyance System

## DESCRIPTION
The purpose of this project is to replace the force main isolation valves that serve the Pumping Station 5 and Pumping Station 15 force mains where the two pipelines converge into one pipeline. It is expected this project will be paid for from revenue sources other than loan proceeds in the capital projects fund.

## BACKGROUND
Pumping Stations 5 and 15 convey wastewater from the west side of Madison and Middleton to the West Interceptor system where flow travels to Pumping Station 8 before arriving at the Nine Springs Wastewater Treatment Plant. Both pump stations have existing force mains that were constructed in 1959 and 1972, respectively. The individual pumping station force mains converge into a single forecmain in Spring Harbor Park. Upstream of the convergence point each force main has a gate valve that allows for the isolation of flow from each pumping station while keeping the common force main active. The valves are inoperable and in poor condition, creating an additional point of failure in the force main. Replacement of the valves is necessary for both the integrity of the force main and to provide operational flexibility for maintenance and emergency events.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $0 | $850,000 |

CIP ID# C09.1 & C09.2

# Miscellaneous Collection System Improvements 2025 & Future

## START
Ongoing

## COMPLETION
Ongoing

## PROJECT TYPE
Variable

## LOCATION
Conveyance System

## DESCRIPTION
The purpose of these projects is to make modifications or minor improvements to capital assets in the collection system on an annual basis to ensure that they remain in good working condition and enhance the safety of the District's workers. These projects will be funded through cash in the capital projects fund.

## BACKGROUND
As the District's assets in the collection system age, operations staff have noted a need to make a number of minor improvements to ensure that the assets remain in good working order. In many cases, the projects are relatively small in scope, yet they are too large and time-consuming to be addressed by the District's maintenance staff. The intent of this item in the capital projects budget is to provide an annual allowance for the identification and completion of these smaller improvement projects. The projects will be administered through the Operations or Engineering department and completed by a contractor in accordance with the District's procurement code.

## FINANCIAL ANALYSIS

| | 2025 Expenditure ($2025) | Total Project Cost |
|---|---|---|
| C09.1 | $109,000 | $110,000 |
| C09.2 | $0 | $1,130,000 |

CIP ID# D01

# Capital Budget Expenses


## START
Ongoing

## COMPLETION
Ongoing

## PROJECT TYPE
Capital Budget Expenses

## LOCATION
District-wide

## DESCRIPTION
These are general capital budget expenses. More specifically, they are annual funds used for smaller planning, study and related expenses that are required to update and implement the Capital Improvements Plan (CIP).

## BACKGROUND
Development of the District's CIP and capital budget requires almost continual study and planning. Often, internal resources are not available to conduct studies or planning in desirable time frames, and external resources are necessary. This budget item provides funds to cover expenditures for smaller studies or planning efforts.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $52,000 | $53,000 |

CIP ID# D02

# Collection System Facilities Plan Update

**Madison Metropolitan Sewerage District**
**Collection System Facilities Plan Update**

Prepared by the Staff of the
Madison Metropolitan Sewerage District

December 2011

## START
2018

## COMPLETION
2025

## PROJECT TYPE
Capital Budget Expenses

## LOCATION
Collection Systems

## DESCRIPTION
The District's Collection System Facilities Plan is a key planning document that is periodically updated based on projections from the Capital Area Regional Planning Commission (CARPC). Funding for this study will be through cash in the capital projects fund.

## BACKGROUND
The purpose of the Collection System Facilities Plan is to update and revise the previous plan conducted in 2011. As with the original 2002 plan, the 2011 update reviewed and assessed the adequacy and condition of the District's collection system to identify and recommend future collection system projects. Since plan adoption, the District has completed many of the recommended projects. Following CARPC's update of the District's collection system evaluation in 2018, it is time to review those projects remaining on the list and identify additional future projects that may be required to sustain and/or enhance the integrity of the District's collection system. In the past, the facility plans have been completed solely with District staff at considerable levels of time and effort. An engineering consultant was retained to complete a portion of this update.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $35,000 | $390,000 |

CIP ID# D03

# Badger Mill Creek Phosphorus Compliance

## START
2019

## COMPLETION
Ongoing

## PROJECT TYPE
Effluent

## LOCATION
Badger Mill Creek - Town of Verona and City of Verona

## DESCRIPTION
The purpose of this project is to allow for evaluation, plan development and implementation of a solution to address new phosphorus water quality criterion for Badger Mill Creek. New water quality standards for this waterway are part of the District's Wisconsin Pollution Discharge Elimination System (WPDES) permit that was issued in May 2020. The District began preliminary planning for the new standards in 2019, assuming a nine-year compliance schedule. It is anticipated that costs related to this effort will be funded through cash in the capital projects fund.

## BACKGROUND
The District currently pumps up to 3.6 million gallons per day (MGD) of effluent to Badger Mill Creek. The majority of the District's effluent, up to 75.5 MGD, is pumped to Badfish Creek. Historically, all of the District's effluent was returned to Badfish Creek but in 1998 after the City of Verona discontinued operation of their wastewater treatment plant and joined the District, the District began returning up to 3.6 MGD flow to Badger Mill to maintain historic flows.

The District's new WPDES permit requires a phosphorus water quality criterion for Badger Mill Creek, which is significantly less than the existing standard. The selected alternative for compliance is diversion of effluent flow to Badfish Creek and providing funding for stream improvement projects for Badger Mill Creek.

## FINANCIAL ANALYSIS

| 2025 Expenditure ($2025) | Total Project Cost |
|---|---|
| $282,000 | $1,750,000 |

APPENDIX B

# Completed Projects & Retainers

## 2023 PROJECT COMPLETIONS

### NINE SPRINGS VALLEY INTERCEPTOR - MCKEE ROAD TO DUNN'S MARSH

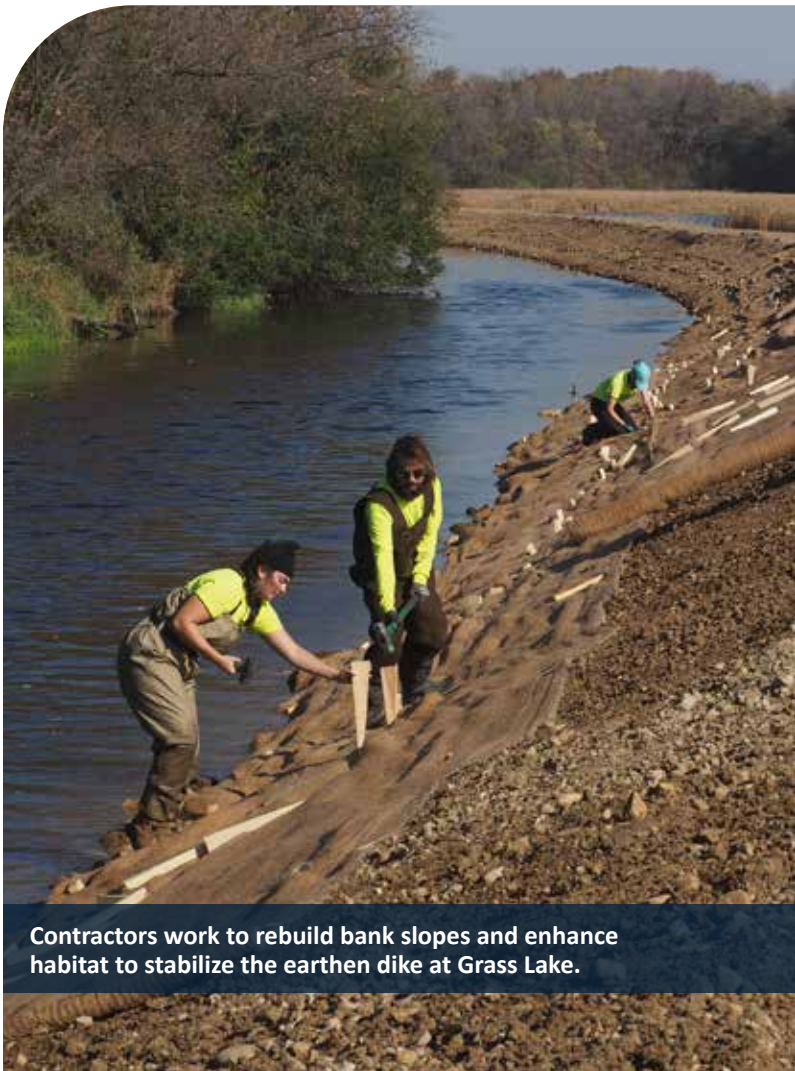
This portion of the Nine Springs Valley Interceptor (NSVI) was installed in 1965 and consisted of reinforced concrete pipe ranging in diameter from 30 inches to 42 inches, except for a 1,170-foot stretch that was replaced in 2000. Due to its proximity to the end of the Pumping Station 12 force main, significant corrosion occurred in portions of this section. In addition, upstream flows have increased at a rapid pace due to development, and updated population forecasts suggest that capacity in much of this section will be reached in the next 10 years. For these reasons, a new replacement sewer was installed along the recreational trail between McKee Road and Dunn's Marsh. R.G. Huston, Inc. began work on the project in December 2020. The work was substantially completed in October 2021, and the Commission accepted the project on January 26, 2023. The total project cost of $3.8 million was funded through a loan from the Clean Water Fund.

### ENGINE GENERATOR CONTROL PANEL REPLACEMENTS

These gas-driven engines and generators were installed in 1991 as part of the sludge gas utilization facilities for the Sixth Addition. The generator control panels use relays to control the engines and have not been significantly modified since first installed. The panels also have high-voltage cabling that requires special safety equipment and expertise for staff to work on them. The purpose of this project was to replace the relay-based panels with modern programmable logic controllers (PLC) and to reconfigure the panels to eliminate the electric hazard for routine maintenance. Pieper Electric began work on the project in June 2021. Work on the project was completed in the Summer 2023, and the Commission accepted the project on August 17, 2023. The total project cost of $710,000 was paid with cash in the capital projects fund.

### GRASS LAKE DIKE STABILIZATION

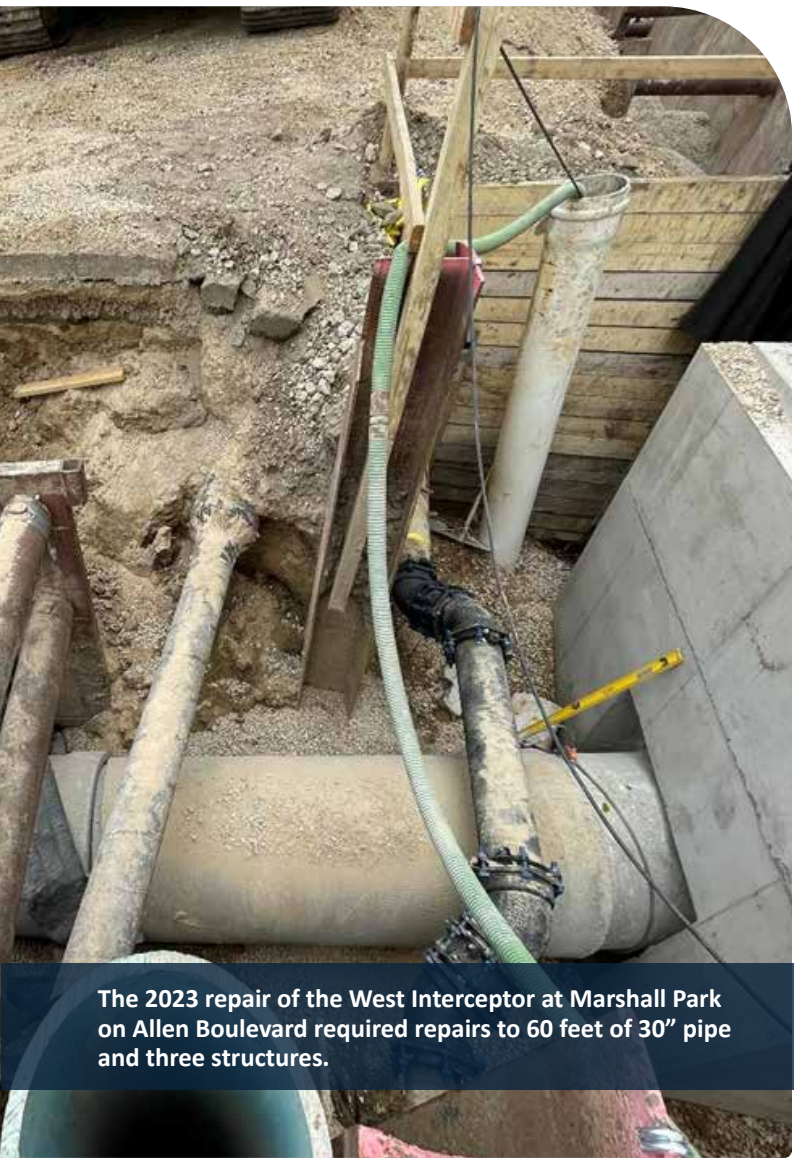
The District constructed facilities to discharge treated effluent to the Badfish Creek waterway in 1958. These improvements included an earthen dike along the western edge of Grass Lake to create a barrier between the lake and the effluent discharge waterway. Over the years, the bank slopes have eroded significantly in some locations, and animals have burrowed into the dike, making seepage through the barrier a concern if not addressed. This project repaired the dike using a combination of methods, including rebuilding the bank slopes, redirecting the channel and enhancing habitat by inserting vegetation into the channel at strategic locations. Work on the project was completed in the Fall 2022, and the Commission accepted the project on January 12, 2023. The total project cost of $785,000 was paid with cash in the capital projects fund.



**Contractors work to rebuild bank slopes and enhance habitat to stabilize the earthen dike at Grass Lake.**

## NSVI-MORSE POND EXTENSION

This project included the construction of approximately 3,200 feet of new sanitary sewer from the existing Nine Springs Valley Interceptor (Midtown Extension) to the southwest corner of Highway PD and Highway M. The new sewer is located along Raymond Road and will provide service for lands in the City of Madison and south of Highway PD in the City of Verona. The sewer construction was coordinated with the Wisconsin Department of Transportation's (WisDOT) reconstruction of Highway M from Cross Country Road in the City of Verona to Flagstone Drive in the City of Madison. Construction began in October 2017 and was substantially completed in September 2018. Due to the size of the project and the number of stakeholders involved, the project's closeout has been a lengthy process, and the District's share of the costs for the contractor's retainage release and other administrative costs was made in April 2023. The total project cost of $2.2 million was financed through cash in the capital projects fund.



**The 2023 repair of the West Interceptor at Marshall Park on Allen Boulevard required repairs to 60 feet of 30" pipe and three structures.**

## PLANT ASSET MANAGEMENT PLAN IMPLEMENTATION

This project generally refers to a series of initiatives to develop the District's Asset Management Plan. As part of this effort, the District retained a vendor in November 2020 to implement a program for Reliability Centered Maintenance (RCM). RCM is a strategy to optimize a maintenance program by considering the various assets of a facility and maintaining them in such a way that system reliability is emphasized. Vendor work to implement RCM in District practices was completed prior to the end of 2023. The total project costs of approximately $320,000 were paid in cash from the capital projects fund.

## REPAIR TO WEST INTERCEPTOR EXTENSION ON ALLEN BOULEVARD

The District's West Interceptor Extension was constructed in 1957 and extends from Marshall Park in the City of Madison to Baskerville Harbor in the City of Middleton. A routine sewer inspection by closed-circuit television in December 2021 revealed that several 30-inch diameter pipe segments had settled along Allen Boulevard, just west of the District's Pumping Station 15. This settlement has caused the joints to separate and partial obstructions such as grease, rags and sediment to form in the pipe. Given the urgent need to fix the pipe and prevent a complete blockage of flow, the District's 2022 capital projects dudget was amended in August 2022 to include this project. Repair work by Terra Engineering & Construction Corporation began in April 2023 and was completed in July 2023. The Commission accepted the project on September 28, 2023. The total cost of the project was $718,000, with about $640,000 of this total paid for with cash in the capital projects fund.

## CAPITAL PROJECT INFRASTRUCTURE PLACEMENT PLAN

The purpose of this project is to support the District in sustainable planning of its current and future needs related to the District's Capital Improvements Plan. Current and future capital projects require a holistic approach to planning so that treatment facilities optimize the limited area available on the Nine Springs site. Specific focus areas for the study were the siting of facilities for biosolids processing, heat and power generation and administrative spaces. TKDA Consultants began work on the plan in the Fall 2022. Delivery of the final plan occurred in the second half of 2023. The total project cost of $252,000 was paid with cash in the capital projects fund.

## LOWER BADGER MILL CREEK INTERCEPTOR (PHASE 5A)

This was a small project at the south end of the Lower Badger Mill Creek Interceptor Phase 5 project area. The 5A work was originally intended to be completed with the rest of the Phase 5 project, but due to necessary coordination with a fast-tracked City of Verona project, the 5A work was expedited. The Commission accepted this project on September 28, 2023, for $100,000. These costs will be included in the overall Lower Badger Mill Creek Phase 5 project.

**A tanker truck fills up with Metrogro at the filling station in front of the biosolids storage tanks at the treatment plant.**

# 2024 FINAL/SUBSTANTIAL PROJECT COMPLETIONS

## PUMPING STATIONS 13 AND 14 REHABILITATION

The District has determined that many of its pumping facilities require rehabilitation and improvements to meet the proper standards. The rehabilitations were prioritized in the District's Collection System Facilities Plan Update (approved by the WDNR in July 2012). At each station, the rehabilitation work includes replacing all three pumping units, replacing all major electrical and control equipment and installing HVAC equipment. Construction for Pumping Stations 12 and 14 began in September 2020, and the Commission accepted the project on January 11, 2024. A Clean Water Fund loan financed the total project cost of $10.7 million.

## NSWWTP MAINTENANCE FACILITY ROOFTOP SOLAR EXPANSION

The Maintenance Facility building, designed in 2013, was planned for a larger rooftop solar system than was originally installed. The expansion of the rooftop solar capacity of the Maintenance Facility was identified in the 2020 Energy Management Master Plan as a project that aligned with the District's goal to pursue sustainable energy sources. District staff designed a new 101.3kW DC (80kWAC) solar system, and the construction contract was awarded to Pieper Electric in May 2023. The project work was accepted by the Commission on April 11, 2024. The total project cost of $300,000 was paid for with cash in the capital projects fund. Note that the District will receive $93,000 from Wisconsin Focus on Energy and federal solar credits to partly offset the project cost.

## WEST INTERCEPTOR REHAB – SEGOE ROAD TO SHOREWOOD BLVD (2023 EMERGENCY PROJECT)

On November 30, 2023, the Commission authorized this emergency project to rehabilitate three segments of the West Interceptor where fracture defects were structurally concerning. The West Interceptor was constructed in 1932 of vitrified clay pipe and has developed various fracture defects through the decades. Two segments were located on Locust Drive, and the third was on Burbank Place. Hoerr Construction, Inc. installed a cured-in-place-pipe (CIPP) to complete the rehabilitation work in December 2023. The Commission accepted the emergency project on January 11, 2024, for a total project cost of $90,000.

**Electrical project engineer Mark Brunner stands in the solar panel expansion on the roof of the Maintenance Facility.**

# 2024 ANTICIPATED PROJECT COMPLETIONS

## WEST INTERCEPTOR-SHOREWOOD RELIEF (PHASES 1 & 2)

These projects include the first two phases of a three-phased project to provide additional capacity to the West Interceptor system between Whitney Way and Walnut Street in the City of Madison and the Village of Shorewood Hills. Additional capacity is needed in the system to serve future development, primarily in the Pumping Station 15 service area. Approximately 5,600 feet of 30-inch and 36-inch diameter replacement sewer was installed during the first phase of this project between Whitney Way and Shorewood Boulevard. Construction of Phase 2 includes approximately 1,400 feet of 30-inch diameter relief sewer that is being installed in conjunction with the WisDOT's reconstruction of University Avenue between Marshall Court and University Bay Drive. The Phase 3 segment is scheduled for construction in 2024-2025.

Work on the Phase 1 project began in February 2021 and substantially completed it in the first half of 2022. The contract is expected to close out in the second half of 2024. Advance Construction, Inc. was the contractor on this project phase. The anticipated total project cost of $4.7 million will be financed with Clean Water Fund loan.

Integrity Grading & Excavating began work on Phase 2 of the project in 2022 as part of a larger contract with WisDOT. The portion of Integrity's work relating to the District's facilities was completed in September 2023. The closeout of WisDOT's contract will likely take a long time due to DOT's overall process. The anticipated total project cost of $1.6 million is being paid for with cash in the capital projects fund.

Facilities maintenance staff Bart Nelson and Chris Lothe work on a primary tank drive chain in the cold of winter.

## LOWER BADGER MILL CREEK INTERCEPTOR (PHASE 5)

The Phase 5 project extends the Lower Badger Mill Creek Interceptor north from the expanded Highway PD through the new Ardent Glen neighborhood and ends at Shady Oak Lane. Integrity Grading & Excavating began work on the Phase 5 segment of the project in the Fall 2023 and is scheduled to complete the work in 2024. The anticipated total project cost of $1.9 million is being paid for with cash in the capital projects fund.

## 2021 TREATMENT PLANT IMPROVEMENT PROJECT

This project upgrades aging HVAC equipment in four plant buildings: Metrogro Pumping Station, Headworks Building, GBT Building and DAF facility. Illingworth-Kilgust Mechanical, Inc., was awarded the project in January 2023. Due to lead times for air handling units and other equipment, the project has been delayed. Substantial completion of the project is expected in October 2024.

## PRIMARY TANK 6 REHABILITATION

Repairs to the Primary Tank 6 collector chain were set to begin in April 2023. However, a complete tank inspection conducted at that time revealed significantly worse conditions than recorded in previous assessments. A project was developed, bid and will be completed in September 2024.

## 2024 CROSS TOWN FORCE MAIN TAPPING SLEEVE REPLACEMENT

This project replaces five tapping sleeves on the Cross Town force main between Pumping Station 1 and Pumping Station 2. This force main has a combination of air release/vacuum valves, which increase the efficiency of the force main and reduce the risk of damage to the piping and equipment in the system. To replace these valves, the 30-inch force main required installing tapping sleeves and isolation valves inside manhole structures. The current condition of five of the tapping sleeves and valves requires immediate replacement. This work will be completed in 2024 with an awarded contract of approximately $150,000. The remaining tapping sleeves will also be replaced in a future CIP project.

# 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 released in the past year or is presently withholding.

## LIQUID PROCESSING IMPROVEMENTS (PHASE 1)

The District withheld a $15,000 one-year maintenance retainer upon final completion and acceptance of the work in January 2022. In May 2023, a partial release of $10,000 was made to C.D. Smith Construction, Inc. The remaining $5,000 is being withheld until January 2025, pending completion of warranty work.

## OPERATIONS BUILDING FIRST-FLOOR REMODEL

The District withheld a $10,000 one-year maintenance retainer upon final completion and acceptance of the work on July 28, 2022. The retainer was paid to Kenneth F. Sullivan Co. in November 2023.

## NORTHEAST INTERCEPTOR JOINT GROUTING MH10-101 TO MH10-106

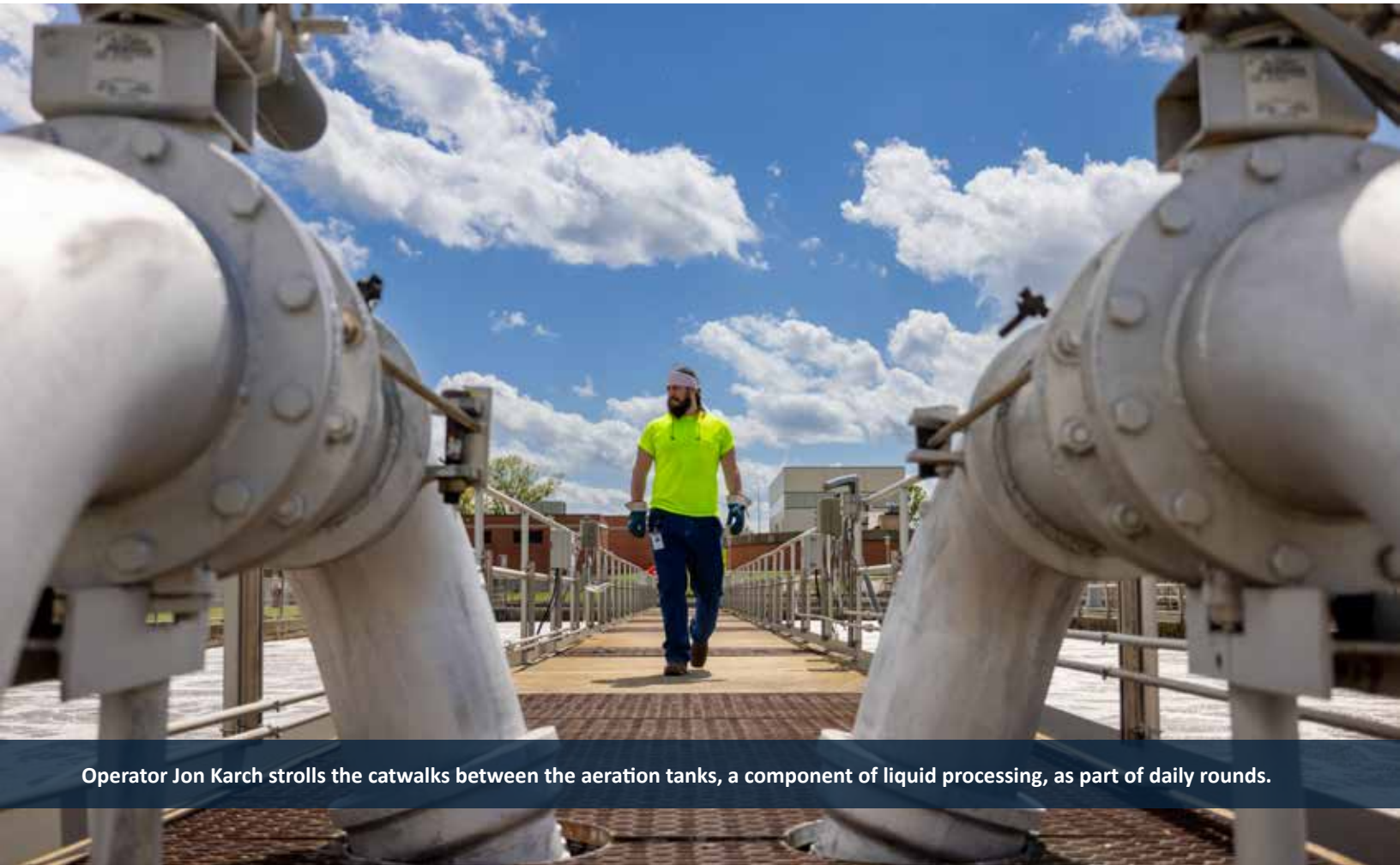
The District withheld a $5,000 one-year maintenance retainer upon final completion and acceptance of the work on July 28, 2022. The District also withheld an additional $5,000 one-year maintenance retainer as a guarantee that the contractor shall provide post-grouting digital video of pipe sections that were tested, sealed and verified. The retained amounts are anticipated to be released to Visu-Sewer, Inc. in late 2024.

## GRASS LAKE DIKE STABILIZATION

The District withheld a $10,000 one-year maintenance retainer upon final completion and acceptance of the work on January 12, 2023. The retainer was released to Resource Environmental Solutions, LLC in January 2024.

## NSVI-MCKEE ROAD TO DUNN'S MARSH

The District withheld a $25,000 one-year maintenance retainer upon final completion and acceptance of the work on January 26, 2023. The retainer was released to R.G. Huston Co., Inc. in February 2024.



**Operator Jon Karch strolls the catwalks between the aeration tanks, a component of liquid processing, as part of daily rounds.**

## ENGINE GENERATOR CONTROL PANEL REPLACEMENTS

The District withheld a $7,000 three-year maintenance retainer upon final completion and acceptance of the work on August 17, 2023. Pending satisfactory performance, the retainer will be released to Pieper Electric, Inc. three years after project acceptance.

## LOWER BADGER MILL CREEK INTERCEPTOR (PHASE 5A)

The District withheld a $5,000 six-month maintenance retainer upon final completion and acceptance of the work on September 28, 2023. The retainer will be released to 1901 Inc. six months after project closeout, pending satisfactory performance.

## PUMPING STATIONS 13 AND 14 REHABILITATION

The District withheld a $20,000 three-year maintenance retainer upon final completion and acceptance of the work on January 11, 2024. The retainer will be released to C.D. Smith Construction, Inc. three years after project closeout, pending satisfactory performance.

**Process and research engineer Carly Amstadt and process and project specialist Aaron Dose talk about power and flow logistics for a large project planned at the treatment plant.**

## WEST INTERCEPTOR REHAB – SEGOE ROAD TO SHOREWOOD BLVD (2023 EMERGENCY PROJECT)

The Commission accepted the emergency project on January 11, 2024, for a total project cost of $90,000. Pending satisfactory performance after the one-year warranty period, a $2,000 maintenance retainer will be released to Hoerr Construction, Inc.

## NSWWTP MAINTENANCE FACILITY ROOFTOP SOLAR EXPANSION

The District withheld a $5,000 one-year maintenance retainer upon final completion and acceptance of the work on April 11, 2024. Pending satisfactory performance, the retainer will be released to Pieper Electric, Inc. one year after project closeout.

## WEST INTERCEPTOR – SHOREWOOD RELIEF (PHASE 1)

The District will withhold a $20,000 one-year maintenance retainer upon final completion and acceptance of the work. Pending satisfactory performance, the retainer will be released to Advance Construction, Inc. one year after project closeout.

## WEST INTERCEPTOR – SHOREWOOD RELIEF (PHASE 2)

The District's interceptor is being constructed under a contract administered by the Wisconsin Department of Transportation (WisDOT). Under WisDOT's contracting provisions, the District will withhold a maintenance retainer upon final project closeout.

## PUMPING STATION 4 REHABILITATION

The District will withhold a $25,000 one-year maintenance retainer upon final completion and acceptance of the work. Pending satisfactory performance, the retainer will be released to J.F. Ahern Co. one year after project closeout.

## 2021 TREATMENT PLANT HVAC IMPROVEMENT PROJECT

The District will withhold a $10,000 one-year maintenance retainer upon final completion and acceptance of the work. Pending satisfactory performance, the retainer will be released to Illingworth-Kilgust Mechanical, Inc. one year after project closeout.

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## LOWER BADGER MILL CREEK INTERCEPTOR (PHASE 5)

The District will withhold a $10,000 one-year maintenance retainer upon final completion and acceptance of the work. Pending satisfactory performance, the retainer will be released to Integrity Grading & Excavating, Inc. one year after project closeout.

## PUMPING STATION 17 FORCE MAIN RELIEF (PHASE 2)

The District will withhold a $26,000 one-year maintenance retainer upon final completion and acceptance of the work. The retainer will be released to Minger Construction Companies, Inc. one year after project closeout, pending satisfactory performance.

## PUMPING STATION 17 FIRM CAPACITY IMPROVEMENTS

The District will withhold a $25,000 one-year maintenance retainer upon final completion and acceptance of the work. The retainer will be released to August Winter and Sons, Inc. one year after project closeout, pending satisfactory performance.

## WEST INTERCEPTOR - SHOREWOOD RELIEF (PHASE 3)

The District will withhold a $25,000 one-year maintenance retainer upon final completion and acceptance of the work. Pending satisfactory performance, the retainer will be released to Speedway Sand and Gravel Inc. one year after project closeout.

## NEI – WAUNAKEE EXTENSION CAPACITY IMPROVEMENTS (PHASE 1)

The District will withhold a $25,000 one-year maintenance retainer upon final completion and acceptance of the work. The retainer will be released to R.G. Huston Co., Inc. one year after project closeout, pending satisfactory performance.

## FLOW SPLITTER IMPROVEMENTS

The District will withhold a $25,000 one-year maintenance retainer upon final completion and acceptance of the work. The retainer will be released to August Winter and Sons, Inc. one year after project closeout, pending satisfactory performance.

## NSWWTP ELECTRICAL SERVICE EQUIPMENT REPLACEMENT

The District will withhold a $25,000 one-year maintenance retainer upon final completion and acceptance of the work. The retainer will be released to Wil-Surge Electric one year after project closeout, pending satisfactory performance.

**Each year, newly hired staff tour pumping stations in the service area to gain understanding of the District's regional operations.**

APPENDIX C

# Budget Summaries

## 2025 Operating Budget Summary

| | 2023 Actual | 2024 Budget | 2024 Through June Actual | 2024 Total Estimated | Proposed 2025 Budget |
|---|---|---|---|---|---|
| **OPENING BALANCE** | **$18,792,900** | **$18,465,700** | **N/A** | **$17,893,000** | **$24,261,200** |
| Debt and Operating Funds Adjustment | - | - | - | 5,216,800 | - |
| **Revenues** | | | | | |
| Sewer Service Charges | 49,946,400 | 55,063,000 | 28,504,600 | 56,036,100 | 58,641,500 |
| Servicing Pumping Stations | 584,200 | 517,500 | 311,500 | 611,200 | 638,200 |
| Rent | 90,000 | 92,300 | 63,200 | 93,300 | 96,600 |
| Interest Earnings | 630,300 | 242,500 | 680,100 | 638,200 | 646,100 |
| Annexation and Plan Review Fees | 86,900 | 69,100 | 55,600 | 69,100 | 69,100 |
| Miscellaneous Income | 130,100 | 172,400 | 185,500 | 133,700 | 137,300 |
| Septage Disposal Revenue | 1,093,300 | 1,272,300 | 589,600 | 1,190,500 | 1,287,700 |
| Pretreatment Monitoring | 41,100 | 39,100 | 41,100 | 43,400 | 45,700 |
| Struvite Fertilizer Sales | 253,500 | 231,900 | 117,000 | 231,900 | 231,900 |
| **TOTAL REVENUES** | **$52,855,800** | **$57,700,100** | **$30,548,200** | **$59,047,400** | **$61,794,100** |
| **Expenditures** | | | | | |
| Budget and Planning | 1,062,300 | 2,001,500 | 660,800 | 2,001,500 | 1,964,100 |
| Ecosystems Services | 2,923,600 | 3,986,900 | 1,757,600 | 3,986,900 | 4,118,500 |
| Engineering | 2,076,600 | 1,843,500 | 8,844,700 | 1,843,500 | 1,881,300 |
| Enterprise Services | 3,826,800 | 3,935,900 | 2,099,800 | 3,935,900 | 4,342,900 |
| Executive Director, Communications & Business Services | 1,674,100 | 1,734,400 | 774,500 | 1,734,400 | 1,879,100 |
| Human Resources | 469,000 | 932,200 | 258,500 | 932,200 | 1,003,600 |
| Operations and Maintenance | 20,906,300 | 21,401,600 | 10,765,400 | 21,401,600 | 24,350,600 |
| Interfund Transfer, Capital | 4,791,000 | 15,521,000 | - | 15,521,000 | 9,417,000 |
| Interfund Transfer, Debt | 16,026,000 | 6,539,000 | - | 6,539,000 | 14,346,000 |
| **TOTAL EXPENDITURES** | **$53,755,700** | **$57,896,000** | **$25,161,300** | **$57,896,000** | **$63,302,600** |
| **CLOSING BALANCE** | **$17,893,000** | **$18,269,800** | **N/A** | **$24,261,200** | **$22,752,700** |
| Reserve Requirement | 20,340,700 | 17,756,300 | N/A | 20,876,178 | 22,752,700 |
| Closing Balance Net of Reserves | (2,447,700) | 513,500 | N/A | 3,385,022 | - |

(continued)

# 2025 Capital Projects Budget Summary

| | 2023 Actual | 2024 Budget | 2024 Through June Actual | 2024 Total Estimated | Proposed 2025 Budget |
|---|---|---|---|---|---|
| **OPENING BALANCE** | **$8,010,900** | **$16,048,000** | **N/A** | **$21,110,000** | **$27,759,000** |
| **Revenues** | | | | | |
| Clean Water Fund Loans | 800,300 | 36,651,000 | 1,329,200 | 12,022,000 | 26,689,000 |
| General Obligation Bonds | - | - | - | - | 12,559,000 |
| Connection Charges | 4,433,000 | 2,450,000 | 2,826,200 | 3,880,000 | 3,996,000 |
| Interest Earnings | 765,100 | 80,000 | 428,400 | 528,000 | 420,000 |
| Transfers From Operating Fund | 4,791,000 | 15,521,000 | - | 15,521,000 | 9,417,000 |
| **TOTAL REVENUES** | **$10,789,400** | **$54,702,000** | **$4,583,800** | **$31,951,000** | **$53,077,000** |
| **Expenditures** | | | | | |
| Treatment Plant | 1,961,500 | 11,963,000 | 3,034,200 | 8,208,000 | 16,346,000 |
| Interceptors | 4,104,400 | 19,304,000 | 1,430,000 | 7,380,000 | 19,109,00 |
| Pumping Stations and Force Mains | 3,786,600 | 13,745,000 | 5,801,900 | 9,351,000 | 8,109,000 |
| Capital Budget Expenses | 571,500 | 533,000 | 116,300 | 363,000 | 369,000 |
| **TOTAL EXPENDITURES** | **$10,424,000** | **$45,545,000** | **$10,382,400** | **$25,302,000** | **$43,933,000** |
| **CLOSING BALANCE** | **$8,376,300** | **$25,205,000** | **N/A** | **$27,759,000** | **$36,903,000** |
| *Reserve Requirement* | *4,210,000* | *19,073,000* | *N/A* | *9,581,000* | *19,559,000* |
| *Closing Balance Net of Reserves* | *4,166,300* | *6,132,000* | *N/A* | *18,178,000* | *17,344,000* |

# 2025 Debt Service Budget Summary

| | 2023 Actual | 2024 Budget | 2024 Through June Actual | 2024 Total Estimated | Proposed 2025 Budget |
|---|---|---|---|---|---|
| **OPENING BALANCE** | **$31,368,100** | **$31,076,000** | **N/A** | **$32,362,800** | **$20,662,000** |
| Debt and Operating Funds Adjustment | - | - | - | (5,216,800) | - |
| Revenues | | | | | |
| Transfer from Operating Fund | 16,026,000 | 6,539,000 | - | 6,539,000 | 14,346,000 |
| Interest Earnings | 916,700 | 155,000 | 630,500 | 679,000 | 310,000 |
| **TOTAL REVENUES** | **$16,942,700** | **$6,694,000** | **$630,500** | **$7,218,000** | **$14,656,000** |
| **Expenditures** | | | | | |
| Principal Payments | 13,038,000 | 11,762,000 | 10,304,500 | 10,781,000 | 12,468,000 |
| Interest Payments | 2,910,000 | 3,578,000 | 1,380,600 | 2,921,000 | 3,930,000 |
| **TOTAL EXPENDITURES** | **$15,948,000** | **$15,340,000** | **$11,685,100** | **$13,702,000** | **$16,398,000** |
| **CLOSING BALANCE** | **$32,362,800** | **$22,430,000** | **N/A** | **$20,662,000** | **$18,920,000** |
| *Reserve Requirement* | *13,702,000* | *17,666,000* | *N/A* | *16,008,000* | *18,626,000* |
| *Closing Balance Net of Reserves* | *18,660,800* | *4,764,000* | *N/A* | *4,654,000* | *294,000* |

# 2023-2025 Expenditures by Project

| | | 2023 Actual | 2024 Through June | 2024 Estimated | 2025 Anticipated |
|---|---|---|---|---|---|
| **TREATMENT PLANT** | | **$1,961,000** | **$3,034,235** | **$8,208,000** | **$16,346,000** |
| A01 | Liquid Processing Improvements (Phase 2) | - | - | - | - |
| A01.1 | East Primary Influent Channel Air Piping Replacement | 39,000 | 40,996 | 60,000 | 191,000 |
| A01.2 | Low Dissolved Oxygen (Partial Plant) | 2,000 | 59,001 | 70,000 | - |
| A01.3 | Low Dissolved Oxygen (Full Plant) | 422,000 | 113,413 | 510,000 | 1,869,000 |
| A01.4 | West Blowers and Switchgear Replacement | 54,000 | 40,405 | 133,000 | 405,000 |
| A01.5 | East Blowers and Switchgear Replacement | 37,000 | 82,793 | 134,000 | 411,000 |
| A01.6 | East Plant Primary Tank Rehabilitation (LPI) | - | - | - | 114,000 |
| A02 | Sludge Thickeners No. 1 and No. 2 Drive and Mechanism Replacements | - | 387 | 170,000 | 360,000 |
| A03 | NSWWTP Electrical Service Equipment Replacement | 336,000 | 356,834 | 935,000 | 2,155,000 |
| A04 | Heat and Power Improvements | 29,000 | 36,569 | 395,000 | 507,000 |
| A05 | Lagoon Dikes Improvements | 87,000 | 50,071 | 243,000 | 233,000 |
| A06 | Maintenance, Financial and HR Systems | 214,000 | 36,981 | 265,000 | 1,515,000 |
| A07 | Metrogro Applicators & Equipment | 19,000 | 863,002 | 870,000 | 1,056,000 |
| A08 | Flow Splitter Improvements | 184,000 | 206,051 | 956,000 | 4,976,000 |
| A09 | Treatment Plant HVAC Improvements - Group 1 Projects | - | - | - | - |
| A10 | Liquid Processing Improvements (Phase 3) | - | - | - | - |
| A10.1 | Headworks Screening | - | - | - | - |
| A10.2 | Grit Processing Improvements | - | - | - | - |
| A11 | Phosphorus Recovery Improvement Projects | - | - | - | - |
| A11.1 | Dryer & Seeding Modifications | - | - | - | 47,000 |
| A11.2 | DAF Rehabilitation | - | - | - | - |
| A12.1 | Miscellaneous Treatment Plant Projects 2025 | - | - | - | 173,000 |
| A12.2 | Miscellaneous Treatment Plant Projects - Future | - | - | - | - |
| A13.1 | Minor Capital Improvements 2025 | - | - | - | 129,000 |
| A13.2 | Minor Capital Improvements - Future | - | - | - | - |
| A14.1 | Annual Pavement Improvements 2025 | - | - | - | 78,000 |
| A14.2 | Annual Pavement Improvements- Future | - | - | - | - |
| A15 | Biosolids Processing Improvements | - | - | - | - |
| A15.1 | Biosolids Facilities Plan | - | - | 25,000 | 350,000 |
| A15.2 | Biosolids Infrastructure | - | - | | |
| A16 | W4 System Improvements | - | 59,761 | 75,000 | 523,000 |
| A17.1 | Annual Solids Processing Tank Cleaning 2025 | - | - | - | 932,000 |
| A17.2 | Annual Solids Processing Tank Cleaning - Future | - | - | - | - |
| A18 | Septage Receiving Modifications | - | - | - | - |
| A19 | East Plant Primary Tank Rehabilitation Future | - | - | - | - |
| N/A | 2021 Treatment Plant HVAC Improvement Project | 33,000 | 802,536 | 1,867,000 | 323,000 |
| N/A | Annual Pavement Improvements 2023 | 89,000 | - | - | - |
| N/A | Annual Solids Processing Tank Cleaning 2024 | - | 2,686 | 600,000 | - |
| N/A | Engine Generator and Blower Control Panel Replacements | 39,000 | - | - | - |
| N/A | Headworks Flow Metering | 5,000 | - | - | - |
| N/A | Liquid Processing Improvements (Phase 1) | 10,000 | - | - | - |
| N/A | Maintenance Facility Rooftop Solar Panels | 280,000 | 8,471 | 25,000 | - |
| N/A | Minor Capital Improvements 2023 | - | - | - | - |
| N/A | Minor Capital Improvements 2024 | - | 147,717 | 200,000 | - |
| N/A | Miscellaneous Treatment Plant Projects 2022 | 7,000 | - | - | - |
| N/A | Miscellaneous Treatment Plant Projects 2023 | 60,000 | - | - | - |
| N/A | Miscellaneous Treatment Plant Projects 2024 | - | 86,881 | 115,000 | - |
| N/A | Operations Building First Floor Remodel | 10,000 | - | - | - |
| N/A | Primary Tank 6 Rehabilitation | 7,000 | 39,679 | 560,000 | - |
| **INTERCEPTORS** | | **$4,104,000** | **$1,430,003** | **$7,380,000** | **$19,109,000** |
| B01 | Manhole Rehabilitation on Old West Interceptor | - | - | - | 67,000 |
| B02 | Lower Badger Mill Creek Interceptor (Phase 6) | 157,000 | 103,033 | 280,000 | 4,652,000 |
| B03 | West Interceptor Rehab- Segoe Road to Shorewood Boulevard | 91,000 | 31,617 | 50,000 | 921,000 |

(continued)

## 2023-2025 Expenditures by Project (continued)

| | | 2023 Actual | 2024 Through June | 2024 Estimated | 2025 Anticipated |
|---|---|---|---|---|---|
| B04 | NEI- Waunakee Extension Capacity Improvements (Phase 1) | 459,000 | 293,834 | 2,376,000 | 6,328,000 |
| B05 | NEI-Truax Extension Rehab | - | 15,077 | 20,000 | 5,000 |
| B06 | NEI-FEI to SEI Rehab | - | - | - | - |
| B07.1 | Southeast Interceptor Rehabilitation on USH 51 (Phase 1) | 13,000 | 43,616 | 238,000 | 905,000 |
| B07.2 | Southeast Interceptor Rehabilitation on USH 51 (Phase 2) | - | - | - | - |
| B08.1 | NSVI Capacity Improvements (Phase 1) | | 4,254 | 30,000 | 217,000 |
| B08.2 | NSVI Capacity Improvements (Phase 2) | | | 365,000 | 1,335,000 |
| B09.1 | West Interceptor Rehab- Babcock Hall to Dayton Street | - | - | - | 5,000 |
| B09.2 | West Interceptor Rehab- Farley Avenue to Marshall Court | - | - | - | 5,000 |
| B10 | District Flow Monitoring Stations | - | - | - | 295,000 |
| B11 | Southeast Interceptor Relocation at Yahara River | 20,000 | 30,587 | 50,000 | 52,000 |
| B12 | Access to Interceptors | - | - | - | - |
| B13 | NEI- Waunakee Extension Rehab (MH14-358 to MH14-362) | - | - | - | - |
| B14 | West Interceptor on Regent Street (Park Street to East Campus Mall) | - | - | 5,000 | 31,000 |
| B15 | NEI- Rehab West of Airport (Phase 2) | - | - | - | - |
| N/A | Lower Badger Mill Creek Interceptor (Phase 5) | 937,000 | 452,191 | 615,000 | - |
| N/A | Northeast Interceptor Joint Grouting MH10-101 to MH10-106 | - | 128 | - | - |
| N/A | NSVI Improvements-McKee Road to Dunn's Marsh | 11,000 | 28,157 | 30,000 | - |
| N/A | NSVI-Morse Pond Extension | 1,000 | - | 1,000 | - |
| N/A | Pump Station 6 to Pump Station 10 Connector | 21,000 | - | - | - |
| N/A | Repair to West Interceptor Extension on Allen Boulevard | 632,000 | - | - | - |
| N/A | West Interceptor- Shorewood Relief (Phase 1) | 305,000 | 2,960 | 30,000 | - |
| N/A | West Interceptor- Shorewood Relief (Phase 2) | 1,263,000 | 1,866 | 110,000 | - |
| N/A | West Interceptor- Shorewood Relief (Phase 3) | 193,000 | 422,682 | 3,180,000 | 4,290,000 |
| **PUMPING STATIONS AND FORCE MAINS** | | **$3,787,000** | **$5,801,914** | **$9,351,000** | **$8,109,000** |
| C01 | Pumping Station 10 Force Main Leak | - | 1,080 | 140,000 | 890,000 |
| C02 | Emergency Power Generation at District Pumping Stations | 1,000 | 5,049 | 10,000 | - |
| C03 | Pumping Station 16 Projects | - | - | - | - |
| C03.1 | Pumping Station 16 Rehabilitation | - | - | - | - |
| C03.2 | Pumping Station 16 Force Main Rehabilitation | - | 1,198 | 2,000 | - |
| C04 | Crosstown Force Main Air Release Valve Saddle Tap Replacements | - | - | - | 50,000 |
| C05.1 | Force Main Condition Assessment - PS 10 Force Main | - | - | 100,000 | 425,000 |
| C05.2 | Force Main Condition Assessment - Future | - | - | | |
| C06 | Pumping Station Bar Screens | - | - | 20,000 | 279,000 |
| C07 | PS 11 & PS 12 Surge Valve Access Platforms | - | - | - | - |
| C08 | PS 5 & PS 15 Force Main Isolation Valve Replacements | - | - | - | - |
| C09.1 | Miscellaneous Collection System Projects 2025 | - | - | - | 109,000 |
| C09.2 | Miscellaneous Collection System Projects- Future | - | - | - | - |
| N/A | Grass Lake Dike Stabilization | 10,000 | 10,000 | 10,000 | - |
| N/A | Miscellaneous Collection System Projects 2023 | - | - | - | - |
| N/A | Miscellaneous Collection System Projects 2024 | - | 10,000 | 105,000 | - |
| N/A | PS 13 & PS 14 Rehabilitation | 536,000 | 2,474 | 5,000 | - |
| N/A | Pumping Station 17 Firm Capacity Improvements | 245,000 | 52,760 | 805,000 | 3,144,000 |
| N/A | Pumping Station 17 Force Main Relief (Phase 1) | 46,000 | - | - | - |
| N/A | Pumping Station 17 Force Main Relief (Phase 2) | 1,847,000 | 4,848,656 | 5,425,000 | 2,366,000 |
| N/A | Pumping Station 4 Rehabilitation | 1,102,000 | 870,696 | 2,729,000 | 846,000 |
| **CAPITAL BUDGET EXPENSES** | | **$571,000** | **$116,275** | **$363,000** | **$369,000** |
| D01 | Capital Budget Expenses | - | - | 50,000 | 52,000 |
| D02 | Collection System Facilities Plan Update | 66,000 | 53,293 | 130,000 | 35,000 |
| D03 | Badger Mill Creek Phosphorus Compliance | 240,000 | 62,982 | 183,000 | 282,000 |
| N/A | Capital Project Infrastructure Placement Plan | 162,000 | - | - | - |
| N/A | Plant Asset Management Plan Implementation | 104,000 | - | - | - |
| **GRAND TOTAL** | | **$10,424,000** | **$10,382,427** | **$25,036,000** | **$44,994,000** |

# 2025 All-Funds Budget Summary, Omitting Interfund Transfers

| | 2023 Actual | 2024 Budget | 2024 Through June Actual | 2024 Total Estimated | Proposed 2025 Budget |
|---|---|---|---|---|---|
| **OPENING BALANCE** | **$58,171,900** | **$65,589,700** | **N/A** | **$71,365,800** | **$72,682,200** |
| Total Revenues Omitting Transfers | 59,770,900 | 97,036,100 | 35,762,500 | 76,156,400 | 106,318,500 |
| Total Expenditures Omitting Transfers | 59,310,700 | 96,721,000 | 47,228,800 | 74,575,000 | 99,870,600 |
| **CLOSING BALANCE** | **$58,632,100** | **$65,904,800** | **N/A** | **$72,947,200** | **$78,575,700** |
| *Reserve Requirement* | *38,252,700* | *54,495,300* | *N/A* | *47,454,178* | *60,937,700* |
| *Closing Balance Net of Reserves* | *20,379,400* | *11,409,500* | *N/A* | *25,493,022* | *17,638,000* |

# Schedule of Principal Amount of Indebtedness

| **Sewerage System Improvement Bonds** | **January 2025** |
|---|---|
| Series 2005 PSs 1, 2 and 10 Rehabilitation | $18,000 |
| Series 2006 Effluent Equalization Projects and ATs 1-6 | 212,000 |
| Series 2007 West In Ext and PS 13-14 Projects | 503,000 |
| Series 2008 PSs 6-8 Rehabilitation and NEI Truax Ext Liner | 2,185,000 |
| Series 2010A NEI-PS 10 to Lien Rd | 3,116,000 |
| Series 2012A Nine Springs Eleventh Addition | 22,033,000 |
| Series 2012B Operations Building HVAC Rehab | 1,400,000 |
| Series 2013A NEI-SEI to FEI- Replacement Project | 4,159,000 |
| Series 2013B Pumping Station No. 18 | 7,736,000 |
| Series 2013C Process Control System Upgrade | 2,386,000 |
| Series 2014A Pumping Station No. 18 Force Main | 6,222,000 |
| Series 2015A PS 11 & 12 Rehabilitation | 5,905,000 |
| Series 2015B Maintenance Facility Expansion | 7,127,000 |
| Series 2016A PS 15 Rehabilitation, PS 12 FM Relocation, Rimrock Int. Lining | 4,664,000 |
| Series 2017A West Interceptor-Randall St. to Near PS2 | 944,000 |
| Series 2019A PS10 FM/WI- PS5 to Gammon Ext. | 1,417,000 |
| Series 2020A NEI Truax Ext Relief/SWI-Haywood Ext. Replacement | 8,117,000 |
| Series 2020B NLSPI- Phase 1A/PS7 Improvements/Headwords Flow Metering | 19,702,000 |
| Series 2021A Pump Station 13 & 14 Rehabilitation/Operations Bldg 1st Floor Remodel/9 Springs Hot Water & W1 Piping Improvements/WI Spring Street Relief Lining | 12,174,000 |
| Series 2022A WI Shorewood Relief Sewer PH1/ NSVI McKee Rd to Dunns Marsh | 7,027,000 |
| Series 2024A PS4 Rehabilitation/Plant HVAC Improvements | 704,000 |
| **TOTAL INDEBTEDNESS** | **$117,751,000** |

APPENDIX D

# Statistical & Supplemental Information

## GOVERNANCE

Madison Metropolitan Sewerage District is a body corporate with the powers of a municipal corporation for the purpose of carrying out the provisions of Sections 200.01 to 200.15 of the State of Wisconsin statutes. It was created by judgment of the County Court for Dane County, entered on the eighth day of February 1930. Its existence was validated and confirmed by Chapter 132 of the Laws of 1969, effective Aug. 2, 1969. The constitutionality of that law was sustained by the Wisconsin Supreme Court in Madison Metropolitan Sewerage District vs. Stein, 47 Wis. 2nd 349, 177 N.W. 2nd 131 (1969).

The District is governed by a Commission of nine Commissioners serving staggered terms. Five Commissioners are appointed by the mayor of the City of Madison. Three Commissioners who reside outside the City of Madison are appointed by an executive council made up of elected officials from District cities (except for Madison) and villages. One Commissioner is appointed by an executive council comprised of town-elected officials. Commissioners meet once or twice each month at the District. Special meetings are held as required upon call of any member of the Commission.

## SERVICE AREA

The District services approximately 15.3% of the entire county by area and approximately 72% of the county population. Areas served include the cities of Madison, Fitchburg, Middleton, Monona and Verona; the villages of Cottage Grove, Dane, DeForest, Maple Bluff, McFarland, Shorewood Hills, Waunakee, and Windsor; and portions of the towns of Dunn, Pleasant Springs, Verona, Vienna and Westport.

Additional information regarding Dane County can be found at countyofdane.com; more information about the City of Madison is available at cityofmadison.com.

## Dane County Principal Employers

| | Type of Business | Number of Employees, 2022 |
|---|---|---|
| State of Wisconsin | State Government | 35,877 |
| UW-Madison | Higher Education | 24,398 |
| UW Hospitals and Clinics | Hospital/Healthcare | 18,000 |
| Epic Systems | Software Services | 10,000 |
| Madison Metropolitan School District | Elementary & Secondary Education | 3,715 |
| WPS Insurance | Insurance | 3,500 |
| UnityPoint Health – Meriter | Hospital/Healthcare | 3,500 |
| American Family Insurance | Insurance | 3,400 |
| Dane County | County Government | 2,832 |
| TruStage (formerly CUNA Mutual) | Insurance | 4,200 |

Source: Madison Area Technical College Wisconsin, Annual Comprehensive Financial Report for Fiscal Years Ending June 30, 2022 and 2021
https://madisoncollege.edu/files/media-document/2022-12/2022%20ACFR%20-%20Final.pdf

# Dane County & District Data

Madison Metropolitan Sewerage District

## DISTRICT FAST FACTS

**424,000**
DISTRICT SERVICE POPULATION

**189.8** SQUARE MILES SERVED
AUGUST 2024

**37M** AVERAGE DAILY INFLUENT FLOW (MILLIONS OF GALLONS)

## DANE COUNTY FAST FACTS

**575,347**
EST. COUNTY POPULATION
2024

**1,238** TOTAL SQUARE MILES

**$84K** MEDIAN HOUSEHOULD INCOME

## Population Growth Change, 2020-2024, District Owner Communities + Large Dane County Municipalities Outside Service Area

| | 2020 Census | 2024 Estimate | % Change |
|---|---|---|---|
| Cottage Grove, Village | 7,303.0 | 9,345 | 28.0% |
| Dane, Village | 1,117.0 | 1,126 | 0.8% |
| DeForest, Village | 10,811.0 | 12,164 | 12.5% |
| Fitchburg, City | 29,609.0 | 35,125 | 13.1% |
| Madison, City | 269,840.0 | 291,037 | 5.9% |
| Maple Bluff, Village | 10,811.0 | 1,415 | 3.4% |
| McFarland, Village | 8,991.0 | 9,676 | 7.6% |
| Middleton, City | 21,827.0 | 23,868 | 9.3% |
| Monona, City | 8,624.0 | 8,867 | 2.8% |
| Oregon, Village* | 11,179 | 12,066 | 7.90% |
| Shorewood Hills, Village | 2,169.0 | 2,139 | -1.4% |
| Stoughton, City* | 13,173 | 13,292 | 0.90% |
| Sun Prairie, City* | 35,967 | 39,419 | 9.60% |
| Verona, City | 14,030.0 | 16,357 | 17.4% |
| Waunakee, Village | 14,879.0 | 16,587 | 11.4% |
| Windsor, Village | 8,754.0 | 10,089 | 15.3% |
| **Dane County** | **561,504** | **599,926** | **6.8%** |

**Denotes communities not served by the District*

Table Source: State of Wisconsin Department of Administration Population and Housing Unit Estimates, doa.wi.gov/Pages/LocalGovtsGrants/Population_Estimates.aspx

## County Industry Employment and Future Projections

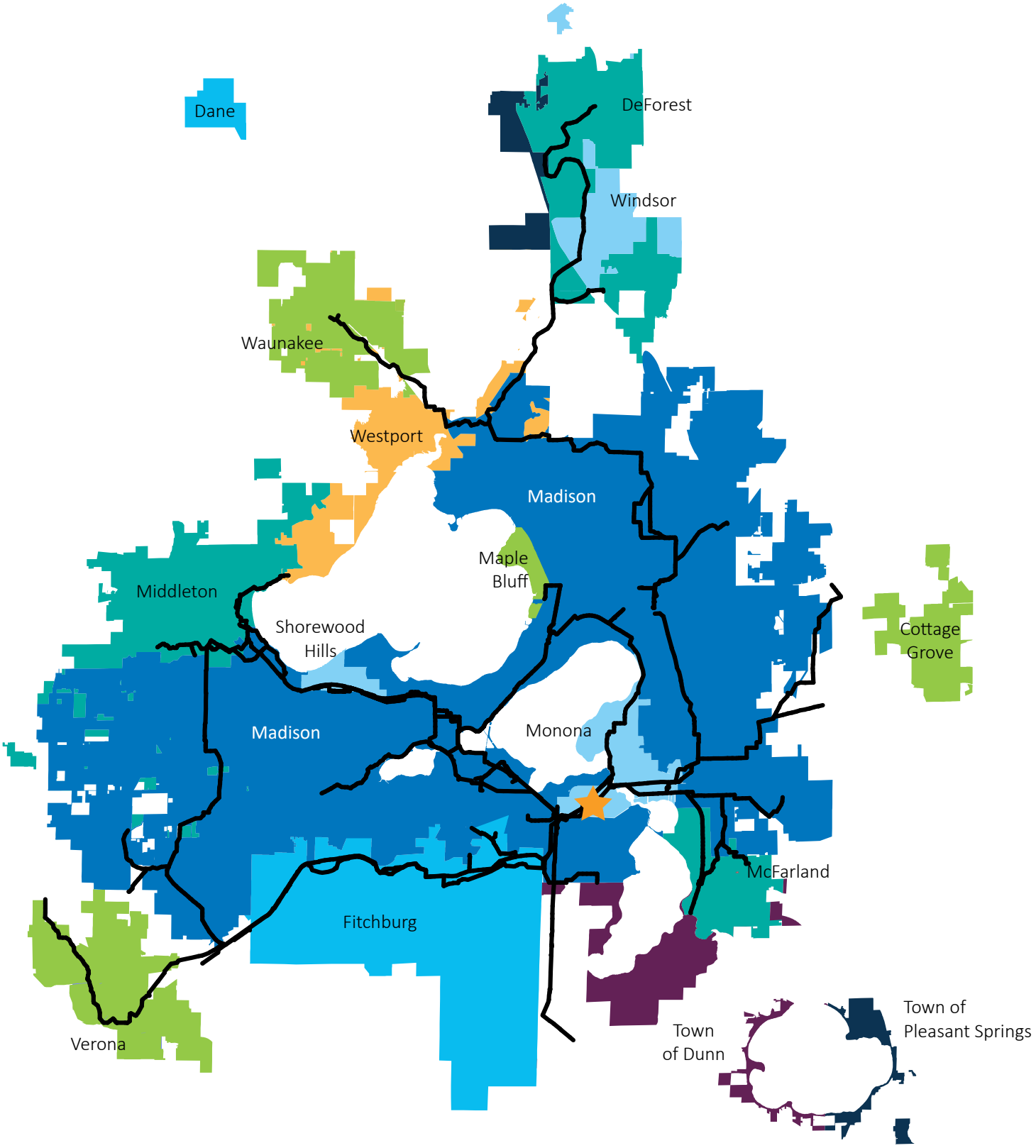
| | 2020 Employment | 2030 Projection | % Change 2020-2030 |
|---|---|---|---|
| Natural Resources & Mining | 5,120 | 5,714 | 11.6% |
| Construction | 21,828 | 24,116 | 10.5% |
| Trade, Transportation & Utilities | 74,318 | 79,221 | 6.6% |
| Information | 17,045 | 20,865 | 22.4% |
| Financial Activities | 27,323 | 28,485 | 4.3% |
| Professional & Business Services | 56,958 | 64,097 | 12.5% |
| Education & Health Services | 112,033 | 128,729 | 14.9% |
| Leisure & Hospitality | 37,990 | 49,464 | 30.2% |
| Other Services (not Govt) | 30,679 | 32,945 | 7.4% |
| Public Administration | 37,053 | 38,867 | 4.9% |
| Self Employed & Unpaid Family Workers | 23,228 | 23,410 | 0.8% |
| **Total all industries** | **499,791** | **555,692** | **11.2%** |

Table Source: Dane County 2023 Workforce Profile; jobcenterofwisconsin.com/wisconomy/wits_info/downloads/CP/dane_profile.pdf

# Estimated Wastewater Contributions for 2024

| | Community | Volume (gpd) | CBOD (lbs/day) | Suspended Solids (lbs/day) | Nitrogen (lbs/day) | Phosphorus (lbs/day) | Equivalent Meters | Actual Customers |
|---|---|---|---|---|---|---|---|---|
| CITIES | Fitchburg | 2,049,782 | 4,521 | 3,889 | 857 | 112 | 10,369 | 7,203 |
| | Madison | 24,528,382 | 56,630 | 58,694 | 10,677 | 1,332 | 96,484 | 72,450 |
| | Middleton | 2,042,180 | 3,895 | 3,568 | 837 | 102 | 9,040 | 5,929 |
| | Monona | 708,337 | 1,079 | 991 | 227 | 28 | 4,154 | 2,992 |
| | Verona | 1,018,640 | 2,702 | 2,438 | 541 | 68 | 6,478 | 4,792 |
| VILLAGES | Cottage Grove | 712,106 | 1,238 | 1,479 | 258 | 31 | 2,944 | 2,404 |
| | Dane | 56,296 | 109 | 113 | 29 | 3.4 | 455 | 412 |
| | DeForest | 997,381 | 4,351 | 3,251 | 533 | 75 | 5,251 | 4,212 |
| | Maple Bluff | 158,988 | 154 | 134 | 41 | 4.6 | 756 | 595 |
| | McFarland | 650,219 | 1,137 | 1,315 | 273 | 32 | 4,079 | 3,539 |
| | Shorewood Hills | 126,244 | 241 | 285 | 55 | 6.3 | 1,315 | 704 |
| | Waunakee | 1,716,768 | 7,121 | 3,200 | 739 | 103 | 6,384 | 5,286 |
| | Windsor | 558,141 | 4,913 | 889 | 973 | 71 | 2,566 | 2,225 |
| TOWN SANITARY AND UTILITY DISTRICTS | Dunn - Lake Kegonsa | 133,239 | 238 | 232 | 55 | 6 | 675 | 564 |
| | Dunn S.D. #1 | 135,450 | 62 | 99 | 16 | 2 | 191 | 191 |
| | Dunn S.D. #3 | 70,503 | 120 | 125 | 26 | 3 | 493 | 492 |
| | Dunn S.D. #4 | 11,378 | 16 | 18 | 4 | 0.5 | 68 | 68 |
| | Pleasant Springs #1 | 72,114 | 107 | 120 | 26 | 3 | 516 | 509 |
| | Verona - Marty Farms | 504 | 0.9 | 0.9 | 0.2 | 0.03 | 3 | 3 |
| | Verona #1 | 25,881 | 45 | 51 | 10 | 1.1 | 128 | 116 |
| | Vienna - Wyst59 LLC | 100 | 0.2 | 0.2 | 0.03 | 0.004 | 1 | 1 |
| | Vienna #1 | 66,062 | 178 | 217 | 26 | 3 | 105 | 47 |
| | Vienna #2 | 33,139 | 55 | 61 | 14 | 2 | 207 | 211 |
| | Westport - Cherokee | 1,635 | 4.4 | 1.5 | 0.2 | 0.02 | 8 | 1 |
| | Westport Sewer Utility District | 508,969 | 588 | 578 | 133 | 16 | 2,042 | 1,769 |
| | Interceptor Infiltration | 1,980,836 | | | | | | |
| **Totals** | | **38,365,671** | **89,361** | **81,693** | **16,335** | **2,004** | **154,717** | **116,722** |

# District Service Area Map




**View our interactive collection system map at madsewer.org/interactive-map**

GRAVITY & FORCE MAINS

NINE SPRINGS TREATMENT PLANT

APPENDIX E

# Five-Year Vehicle Replacement Schedule

The District fleet management plan details the procedure to evaluate existing vehicles for replacement. A fleet replacement fund using a five-year vehicle replacement schedule is used to smooth funding requirements.

| Five-Year Vehicle Replacement Schedule, 2025-2029 | | |
|---|---|---|
| **Year** | **Vehicle** | **Estimated Cost** |
| **2025** | CSS Cargo Van | $60,000 |
| | Mechanical Service Truck | $120,000 |
| | Operations Pickup-Four Wheel Drive | $40,000 |
| | Electrical Cargo Van | $50,000 |
| | **2025 Anticipated Fleet Fund Contribution** | **$300,000*** |
| **2026** | HVAC Cargo Van | $55,000 |
| | Admin Pool Van | $55,000 |
| | Electrical Cargo Van or Truck | $50,000 |
| | Locator Truck | $50,000 |
| | Facilities Maintenance Flat Bed Truck | $90,000 |
| | **2026 Anticipated Fleet Fund Contribution** | **$300,000*** |
| **2027** | Electrical Cargo Van or Truck | $50,000 |
| | Locator Truck | $50,000 |
| | Mechanical Service Truck | $125,000 |
| | Metrogro Service Truck | $125,000 |
| | **2027 Anticipated Fleet Fund Contribution** | **$350,000*** |
| **2028** | Mechanical Route Truck | $50,000 |
| | HVAC Cargo Van | $50,000 |
| | Operations Pool Vehicle | $45,000 |
| | Facilities Maintenance Pickup-Four Wheel Drive | $60,000 |
| | Facilities Maintenance Small Dump Truck | $85,000 |
| | **2028 Anticipated Fleet Fund Contribution** | **$300,000*** |
| **2029** | Electrical Cargo Van or Truck | $50,000 |
| | CSS Pickup Truck | $50,000 |
| | Mechanical Service Truck | $125,000 |
| | Metrogro Service Truck | $125,000 |
| | 2029 Anticipated Fleet Fund Contribution | $350,000* |

**Budget balancing of fund contribution.*

APPENDIX F

# Position Needs

The District's 2025 budget includes four positions. The overall driver for these positions is the need for additional front-line support in key areas. The organizational chart in **Appendix H** represents the District's hierarchy.

## Daytime Operator

**Requestor:** Eric Dundee, District Principal Engineer, and Alan Grooms, Operations Manager

**Department:** Operations & Maintenance

### SUMMARY

Add 1.0 FTE 8-hour Daytime Operator regular position within the Operations workgroup in the Operations & Maintenance department. The position would allow for two-person coverage at all times and qualified coverage to permit operators to use paid time off, build in time for training and absorb the impact of normal staff turnover. The position is also expected to allow for better support of continuing reliability-centered maintenance (RCM) initiatives within the Operations department during the day shift.

### WORK NEEDS

The Operator workgroup currently includes 11 shift operators, one lead operator and one operator supervisor. The supervisor works a shift to bridge staff interaction from 11 p.m. to 9:30 a.m. The permanent 12-hour operators work 6:30 p.m. to 6:30 a.m. shifts.

It is difficult for two 12-hour operators on the same (day or night) shift rotation to be allowed paid leave or training hours during the same week without leaving a lone operator on shift with no in-person safety or duty support. This is especially true when qualified coverage for other factors (parental leave, medical leave or vacancies) is necessary. For this reason, adding an 8-hour operator to the daytime shift allows the two-person shift coverage to be maintained while allowing absences.

Adding an operator on the day shift also allows for greater capability within the operator workgroup (when that operator is not assigned a shift fill-in role) to execute preventative maintenance and perform minor repairs in support of the District's RCM program, which would allow District maintenance staff to focus more on tasks in areas requiring their technical skills and knowledge, thus further leveraging their capabilities to maintain and support District assets.

### PRIORITY AND URGENCY

Department leadership has identified this Operator position as a top priority. Maintaining two-person coverage is vital from a worker safety and security standpoint. Unlike many District roles, the operator role has tasks that cannot be shifted due to worker shortage. In addition, a high workload increases the likelihood of turnover, further worsening the coverage problem.

### REJECTED ALTERNATIVES

Two main alternatives were considered while reviewing this staffing issue. Neither proved to be acceptable.

One alternative was to consider an option for rotating staff between night and day shifts based on need. This alternative was disregarded due to work-life balance and planning for staff, along with safety issues associated with acclimating to different shifts on short notice.

A second alternative was to hire hourly operators for flexible shift coverage or contract operator coverage with a private company. After review, this alternative did not provide an effective solution without people or companies with extensive knowledge of the operation of the Nine Springs treatment plant. Inadequate knowledge would put the District at risk of permit noncompliance.

# Collection System Engineer/Specialist

**Requestor:** Erik Rehr, Maintenance and Reliability Manager

**Department:** Operations & Maintenance

## SUMMARY

Add a 1.0 FTE Collection System Engineer/Specialist regular position in the Operations & Maintenance Department's Maintenance workgroup. The position will take the lead on routine collection system duties, utility coordination and maintenance projects. Many of these tasks are currently completed by Project Engineers in the Engineering Department. The creation of this position will allow those Project Engineers instead to use more of their time on critical capital projects, better ensuring the District can complete planned projects. The position reflects the recommendation of the District Principal Engineer and Director of Engineering, who determined the need for the position and the duties that would be required.

## WORK NEEDS

This position would continuously evaluate the District's collection system to ensure that it operates efficiently and that needed maintenance projects are identified and completed. Other duties would include managing the sewer maintenance program, including locating services, annual televising/cleaning and utility coordination.

This position is needed because the above duties and responsibilities are currently spread across numerous individuals in the Engineering and Budget & Planning Departments, which is inefficient, disperses accountability and takes time away from higher-priority capital project management. Also, the work performed by this position is associated with routine collection system maintenance activities and fits better within the Maintenance & Reliability Workgroup.

## PRIORITY AND URGENCY

This position is the top priority for the Maintenance & Reliability Workgroup in 2025. Due to the amount of upcoming capital projects in the capital improvement plan, the duties associated with this position must move from the engineering group to the maintenance group to free up project engineer time. Delaying this position would result in continued inefficiencies within the engineering group if they maintained the duties or reduced efficiency in the maintenance group if the tasks were spread among current maintenance staff. This concern is significant given the high level of effort required to implement the Capital Improvements Plan.

## REJECTED ALTERNATIVES

Alternatives considered included assigning new work and on-going collection system duties that are currently spread across numerous individuals to an existing maintenance group staff member dedicated to this, such as the Maintenance Project Specialist or the Maintenance & Reliability Manager. Due to the current workload of these staff members, transfer of the collection system duties would require other tasks and programs/projects managed by this person to remain undone.

Another option would be to contract these services to an external firm. However, this will take time to manage, and an external firm may not be as dedicated, accountable and responsive, especially to emergency events.

# Pretreatment and Waste Acceptance Coordinator

**Requestor:** Martin Griffin, Ecosystems Services Director

**Department:** Ecosystems Services

## SUMMARY

Add 1.0 FTE Waste Acceptance Coordinator regular position in the Pretreatment and Waste Acceptance Program within the Ecosystems Services Department. The position will accommodate the increased workload in the program, which is driven by the growing number of businesses in the region with waste acceptance and pretreatment needs and increasing regulatory requirements. This will further reduce the number of program audit deficiencies and lower the risk of future program non-compliance.

## WORK NEEDS

The District is required to operate a pretreatment program under state and federal regulations to prevent the introduction of pollutants that interfere with treatment operations or that are passed through the treatment process. There are currently 18 significant industrial users (SIUs) in the District's pretreatment program, with seven more facilities identified as SIUs needing a permit to enter the program. We expect the number of SIUs to continue growing as the region grows. The position would help the District meet this growing workload and do the following:

- Identify potential SIUs in the region;
- Issue permits to SIUs;
- Inventory, review, update and maintain existing lower-tier wastewater permits issued by the District;
- Investigate reported or suspected violations and initiate appropriate enforcement when violations or compliance issues occur with permittees or non-permitted industrial users;
- Develop and administer general permits for certain industries, including non-categorical biotech and microbreweries;
- Review and act on requests for waste acceptance at the plant and related inquiries.
- Administer the hauled waste program, including monitoring and managing different waste types.

In addition, the position would support the planning and implementation of a potential new industrial billing program. The position would also support the District's PFAS action plan as it relates to industrial sources. Finally, the position would also work to improve process and system efficiencies. Areas needing improvement include site inspections, permit issuance, submissions under the U.S. Environmental Protection Agency's Cross-Media Electronic Reporting Rule, rate setting, invoicing, hauled waste data and reporting, industrial waste acceptance reviews and semi-annual pretreatment monitoring.

## PRIORITY AND URGENCY

In addition to meeting the service needs of SIUs, the position is needed to maintain regulatory compliance for the program. The industrial permit program is evaluated via an audit process conducted by the Wisconsin Department of Natural Resources. The District must receive clean audits with no significant deficiencies to be in permit compliance. Non-compliance may result in the District losing the ability to manage its own industrial program.

## REJECTED ALTERNATIVES

The primary alternative is to continue operating with existing staff. The drawbacks of this approach are described above. Outside contracting is likely to be more expensive overall and would not provide the degree of customer service desired.

# Facilities Maintenance Worker

**Requestor:** Erik Rehr, Maintenance and Reliability Manager

**Department:** Operations & Maintenance

## SUMMARY

Add a 1.0 FTE Facilities Maintenance Worker regular position to the Facilities Maintenance Workgroup in the Operations & Maintenance Department. This position will take over custodial duties that are currently fulfilled by a contracted cleaning service and would support other Facilities Maintenance work. The goal is to achieve higher custodial performance than can be obtained through a contract, at comparable or lower cost and with less contract-management burden.

The costs of the position will be absorbed in the existing budget, because the cost of current contracted services is roughly equivalent to the cost of a new position.

## WORK NEEDS

This position will perform custodial duties for staff-occupied buildings. Currently, this work is performed on a contract basis. Contracted services have had significant drawbacks over the last several years. Employee satisfaction with the services is low, contract management is time-consuming for the Facilities Maintenance Supervisor, service is not available during the work day, and there is limited ability to control and monitor performance.

The position would also be able to support Facilities Maintenance work, including building maintenance, tank and well cleaning, general construction, lawn care, snow removal and painting.

## PRIORITY AND URGENCY

This position is the second priority for the maintenance group in 2025. Due to the cost and repeated poor performance by the contracted cleaning service, poor customer satisfaction by internal staff and the excessive amount of time spent by the Facilities Maintenance Supervisor managing the contractor, it is in the best interest of the District to bring these duties in house by hiring an additional staff member.

Delaying this position would force the District to either contract with a cleaning service for 2025 or take on these duties internally with existing staff. Contracting with a cleaning service could lead to the same result as in past years with poor performance, high cost and extensive management by District staff. Taking on the duties internally with existing staff would result in other priority work not being completed, going against Reliability Centered Maintenance principles.

## REJECTED ALTERNATIVES

One alternative considered for this work was contracting with a different cleaning company. This was deemed unviable because the District has had poor performance by multiple cleaning contractors in the past and due to procurement policies, the District must bid the cleaning contract. Bidding of the contract is expected to result in another poor-performing contractor at a cost that is higher than hiring an internal staff member.

District staff also considered scaling back other routine and custodial duties at the treatment plant so that existing staff could absorb the cleaning of the occupied buildings. After an internal review by Facilities Maintenance staff members and the Maintenance & Reliability Manager, it was determined that routine and custodial duties could not be scaled back any further, and the group could not absorb the additional cleaning duties as staff without affecting the completion of higher-priority work.

APPENDIX G

# Glossary

## COMMON ACRONYMS

CARPC: Capital Area Regional Planning Commission

CIP: Capital Improvements Plan

CMAR: Comprehensive Maintenance Annual Report

CMMS: Computerized Maintenance Management System

CWF: Clean Water Fund (loan program for wastewater facilities)

DNR: Department of Natural Resources (also WDNR)

ERP: Enterprise Resource Planning

FEI: Far East Interceptor

FOG: Fats, Oils and Grease

I&I: Inflow and infiltration

MH: Manhole or maintenance hole

MMSD: Madison Metropolitan Sewerage District

NACWA: National Association of Clean Water Agencies

NEI: Northeast Interceptor

NSWWTP: Nine Springs Wastewater Treatment Plant

NSVI: Nine Springs Valley Interceptor

O&M: Operations and Maintenance

PCS: Process Control System

PS: Pumping Station

SEI: Southeast Interceptor

WAM: Work and Asset Management (District's CMMS software)

WDNR: Wisconsin Department of Natural Resources

WPDES: Wisconsin Pollutant Discharge Elimination System (District permit)

WisDOT: Wisconsin Department of Transportation

## DISTRICT DEFINITIONS

Adaptive management: Watershed approach developed to comply with stringent phosphorus limits.

Additions: 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., District) expands its boundaries to include a specific geographic area.

Asset management: Comprehensive management of parts and physical infrastructure to provide needed levels of service with tolerable risk at an acceptable lifecycle cost.

Billing parameters: District 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. The budget for this fund is often referred to as the capital projects budget or capital budget.

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; the District has nine appointed Commissioners.

Connection charges: Charges related to connecting with District sewers.

Conveyance system: Synonymous with collection system.

Conveyance facility connection charge (CFCC): CFCC represents the user’s fair share of collection system investments the District has made to install interceptor sewers and pumping stations.

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. The District transfers a portion of its collected service charges to this fund to pay for its debt service.

Directors: Department directors, who function as a coordination and support team.

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 Office: Three-person overall leadership team. Executive Director, Deputy Executive Director and District Principal Engineer.

Force main: The discharge pipeline of a pumping station.

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 in which a coating material is introduced to extend the life of the existing sewer.

Master Plan: The District’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 the District 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 (NSWWTP):** Wastewater treatment plant originally entered into service in 1930 in Madison, Wis. Since then, the plant has experienced numerous changes and additions. The plant presently serves 24 owner communities in the greater Madison area.

**Nutrient removal:** The removal of phosphorus and nitrogen from wastewater. The District 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, a fund used to account for all assets and liabilities of a non-profit 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:** Owner communities pay sewer plan review fees for the District'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 (PS):** Also called lift stations, pumping 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.

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

**Service charges:** Annual amounts collected through customer rates that are used to fund the District's ongoing operations and debt service.

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

**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.

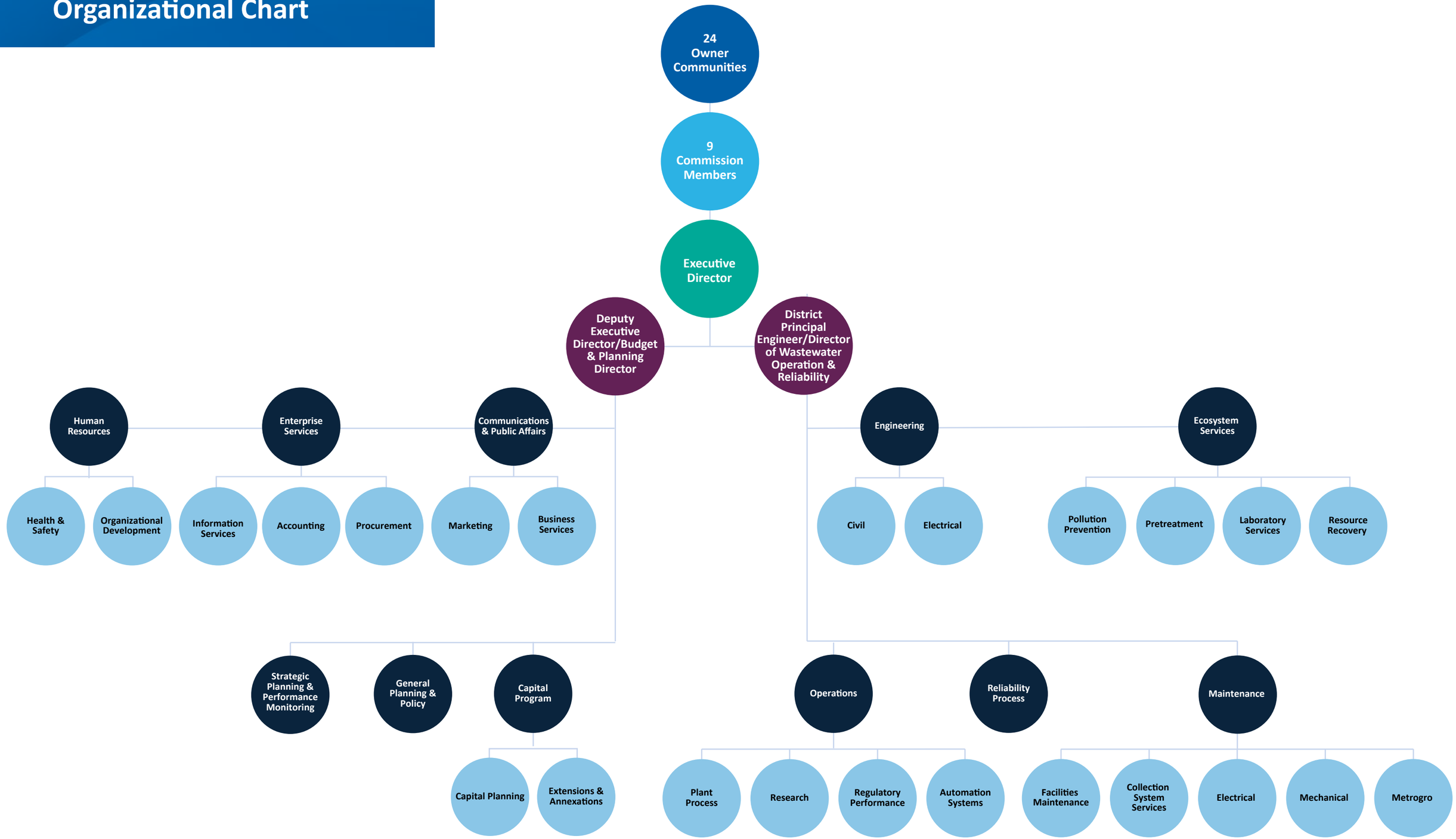
**Thermal requirements:** Potential regulatory requirements to meet particular thermal temperatures in effluent receiving streams.

**Treatment plant connection charge (TPCC):** Represents a new users' fair-share of the total cost of 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).

APPENDIX H

# Organizational Chart



**An aerial view of the Nine Springs Wastewater Treatment Plant.**

Madison Metropolitan Sewerage District

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