97-6 Milwaukee Metropolitan Sewerage District

Summary

The Milwaukee Metropolitan Sewerage District is a special-purpose municipal corporation established under state statutes, which provides sewer services to most communities in Milwaukee County and ten communities in surrounding counties that it serves by mutual agreement. Since 1982, the District has been governed by the Milwaukee Metropolitan Sewerage Commission, which consists of 11 members: 7 are appointed by the Mayor of the City of Milwaukee, and 4 are appointed by a committee of the chief elected officials of municipalities within the District other than the City of Milwaukee.

In 1977, the District initiated the Water Pollution Abatement Program to reduce the frequency with which untreated sewage is discharged into Lake Michigan during periods of heavy precipitation. This $2.3 billion program, the largest public works project in the State's history, included upgrading sewage treatment plants; improving and replacing sewer lines; constructing several deep tunnels to store sewage during peak periods; and constructing a new facility for the production of Milorganite, a fertilizer made from heat-dried sludge. To finance capital improvements under the program, the District assessed taxes on municipalities within its boundaries, as well as charges on communities outside of its boundaries that it serves by mutual agreement.

In 1985, the District began charging all municipalities for capital improvements based on property value. Prior to this time, capital recovery charges for municipalities outside of the District had been calculated based on the volume of sewage that each contributed. Believing the change in the District's policy to be unfair, nine suburban communities organized to challenge it. The dispute was finally resolved in October 1996; however, additional concerns were raised about the District's implementation of the Water Pollution Abatement Program, including questions about large capital fund balances and the cost and safety of the process used to produce Milorganite. Therefore, at the direction of the Joint Legislative Audit Committee, we reviewed a variety of the District's financial, budgetary, and management practices.

Since 1982, the District has pursued financing strategies that permit it to maintain stable tax rates for the recovery of capital costs. We found that through 1991, the cash balance maintained by the District was necessary to ensure sufficient cash was available to meet the District's obligations. However, beginning in 1992, the District began to maintain a cash balance that has consistently exceeded its cash reserve needs by an average of $114 million. Two factors were responsible for the excess balance. Since 1992, the District:

- issued bonds worth $64.5 million more than needed to cover its costs in the following several years, to take advantage of low interest rates; and
- received grants worth an additional $79.4 million more than originally expected.

Although officials issued more bonds than necessary to cover projected capital expenditures between 1992 and 1995, they saw an opportunity to take advantage of interest rates that were at a five-year low. The District also received more grant revenue than expected because it became eligible for additional reimbursement to fund cost increases in excess of original contract amounts. These increases resulted from project modifications.

When we reviewed the District's 1992 financing assumptions to determine whether it could have set a tax rate lower than the $3.00 per $1,000 of equalized property value projected, we found that costs were lower under the plan implemented by the District than they would have been under alternative plans that could have been implemented. Nevertheless, the District could have lowered tax rates by $0.35 per $1,000 of equalized property value in 1995, one year sooner than it did, when information on the extent of additional unanticipated grant revenue became available.

Although the District's financial planning efforts do not appear to have increased costs for taxpayers, current capital

spending projections may not be accurate because the District has not, since 1980, completed a facilities plan to guide its capital budgeting process. Under the conditions of a 1994 judicial ruling in a dispute between the District and the Department of Natural Resources (DNR), the District is required to complete a new facilities plan that includes an evaluation of additional facilities and improvements needed through 2010 for all the municipalities it serves. Although the District will have completed a facilities plan describing proposed construction needs over the next several years by December 1997, it continues to budget for capital projects on an annual basis. There are several benefits associated with longer-term capital budgeting, including a better ability to estimate changes in future tax rates; therefore, we include a recommendation that the District implement a multi-year plan to budget for capital improvements.

Since 1925, the District has produced Milorganite, a fertilizer made from the organic sludge that remains after wastewater has been treated. When the original facility constructed to produce Milorganite was nearing the end of its useful life, officials studied the District's sludge disposal alternatives and chose to construct a new Milorganite processing facility as part of the Water Pollution Abatement Program. As a result, the District currently has four options for disposing of its sludge. It can:

- produce Milorganite, which it sells through retail and wholesale markets;
- apply sludge as a fertilizer to farm fields, a product the District has termed Agri-life;
- provide sludge to the Wisconsin Electric Power Company for an experimental process in which it is combined with ash and made into a material that can be used in concrete, asphalt, and other building materials; or
- send the sludge to a landfill for disposal.

However, only the production of Milorganite and landfilling have the capacity to permit the District to dispose of more than a small portion of its sludge.

Currently, the production of Milorganite is the least-costly alternative on the basis of the fixed and variable costs associated with each disposal option. However, some believe that the District could have reduced disposal costs if it had chosen not to construct a new Milorganite processing facility, because when each disposal option is required to account for its related capital costs, the production of Milorganite is the most costly.

The production of Milorganite was originally estimated to be within 15 percent of the lowest-cost alternative reviewed, and construction of the new facility appears justified based on initial cost projections; however, since the District finalized its decision to proceed with construction of a new plant in April 1987, costs increased by $81.8 million, or 72.5 percent above their projected level. A number of factors contributed to this increase, including a redesign of the facility to reflect a return to existing technology, rather than newer, less-expensive technology that may not be dependable, and a substantial increase in the price of construction materials. Although some of these circumstances were beyond the District's control, if staff had more closely evaluated wastewater trends'which showed a substantial decline since the 1970s in the amount of sludge the District needed to dispose of'we believe the District could have revised its facility plans and saved approximately $12 million in construction costs.

Although the District may not have taken the most cost-effective approach in designing and constructing its new Milorganite plant, capital costs have already been incurred. Therefore, these costs must be considered in choosing the most cost-effective sludge disposal method. Because the production of Milorganite is by far the most cost-effective disposal approach currently available, the District must find ways to produce and sell as much Milorganite as possible.

In February 1996, an explosion in the new Milorganite plant seriously injured a worker, damaged the facility, and together with an earlier explosion resulted in $4.5 million in costs associated with repairing damage, landfilling sludge while the plant was shut down, and making modifications to prevent future explosions. Since the explosion, the District has made modifications to prevent future incidents, based on the recommendations made by consultants. It appears that these modifications adequately address design problems and that the plant does not pose an ongoing threat to worker safety.

The new facility has, however, been in violation of its DNR air permit for the discharge of volatile organic compounds,

which are compounds released into the atmosphere, where they react with light and other substances and can lead to depletion of the ozone layer and cause illness. Officials of the District believe the reason may be that initial permit limits, which were based on estimates of the emissions from the old facility, were set inappropriately low. Direct comparison is impossible because the old facility was not required to obtain a permit, and no monitoring was conducted. However, officials of the District believe that with the modifications instituted, such as drying Milorganite at a lower temperature, it is unlikely the new facility generates more pollutants than the old facility did. Although DNR officials have made no decision about the District's permit, they believe it is likely a regular operating permit will be issued, and the District will be required to perform additional monitoring of plant emissions rather than make costly facility modifications.

In addition to its ongoing responsibilities related to wastewater treatment, the District is also responsible for administering the Minority Business Development and Training Program. The program was created by 1985 Wisconsin Act 29, the 1985-87 Biennial Budget Act, in which the Legislature recognized the unique opportunities presented by the Water Pollution Abatement Program, as the largest public works project in Wisconsin's history, to develop the capability of minority business and individuals to participate in construction and construction-related projects funded through state grant and loan programs. Funding for the Minority Business Development and Training Program has totaled $31.2 million to date, of which one-half is contributed by the State's Clean Water Fund, and one-half by the District.

Through 1992, all training was provided through three construction projects that provided pre-apprenticeship training to individual workers, and management and technical training to minority subcontractors. Beginning in 1993, the District expanded the training provided by the program, which currently has four separate components:

- a pre-apprenticeship and apprenticeship training component that is intended to increase the number of minority individuals who become certified to work in the construction trades;

- a superintendent and project manager training component that is intended to train minority individuals to become construction managers or construction site superintendents;

- a management and technical assistance component that is intended to provide minority construction and construction-related firms with management services, technical assistance, and other services that increase their ability to participate in the construction industry; and

- a construction participation component that is intended to provide contracting opportunities to minority businesses for the purpose of enhancing their management and technical capabilities.

Although the program appears to have met some of its contracting goals, only a fraction of program expenditures have been for training. Most program funds, approximately $15.1 million, were spent for construction of District facilities by minority contractors, while only $2.8 million, or 13.3 percent of program expenditures, has been spent on training provided to program participants. In addition, at least $2.3 million, or 11.0 percent, has been spent on program management. Moreover, we found that per capita costs related to the training provided to participating individuals and firms have been excessive. These costs include:

- $27,890 for each of 38 individuals receiving pre-apprenticeship services who became indentured, that is, entered into an agreement for employment after having been certified to work in a specific construction trade;

- $65,062 for each of 8 persons receiving project manager or superintendent training; and

- $49,630 for each of 21 firms receiving financial, management or technical assistance.

We include options that the Legislature may wish to consider in reviewing the future of the Minority Business Development and Training Program, including establishing training programs that are not directly tied to specific construction projects. In addition, we have included several recommendations for the District to improve its administration of the program if it is continued.

We also reviewed actions taken by the District in response to concerns raised in our 1991 review (report 91-18). Since 1991, the District has revised its general purchasing policies to increase the Commission's oversight and reduce the likelihood of inappropriate contract and purchasing activities. However, the District did not follow through on suggestions to improve its oversight of the consulting engineer chosen to manage the Water Pollution Abatement Program. This program is now complete, and the District assumed primary responsibility for the direct oversight of all construction-related projects in November 1996. We include a recommendation for the District to implement quality-assurance procedures, such as performance evaluations, to ensure the use of quality consulting engineers and enhance contractor performance.

Finally, although the District's staffing levels have decreased by 18.5 percent since 1990, and by 9.4 percent from 1996 to 1997, there are at least three areas that may provide opportunities for additional savings: records management, legal services, and vehicle maintenance. The District is also analyzing options to contract for performance of some of its operations. In March 1997, the Executive Director approached the Commission with the intention of reviewing options for contracting plant operations and maintenance, as well as some functions associated with field operations, such as the maintenance of the District's interceptor sewers. However, before the Commission will consider such proposals, it has directed staff to determine:

- how the District's assets will be safeguarded from deterioration;
- how the District will ensure compliance with its wastewater and air pollution permits;
- how the District can ensure the fair treatment of its employes;
- whether qualified firms are interested in contracting for the performance of the District's functions; and
- the extent to which contracting is likely to result in cost reductions.

As the Commission considers alternatives for increased contracting for the District's operations, it will need to weigh the benefits of such contracting with the potential risks that may be associated with some of the proposed options.

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