Metro. Water Reclam. Dist. of Greater Chicago

Update to credit analysis

Summary
The Metropolitan Water Reclamation District of Greater Chicago, IL's (Aa2 stable) credit profile benefits from a large and diverse tax base and a healthy financial position. These credit strengths are balanced against several credit challenges, including elevated debt and pension burdens of the district and overlapping local governments.

Credit strengths
» Tax base anchored by one of the largest and most diverse economies in the US
» Healthy financial operations with ample fund balance and liquidity
» Governance structure is independent from other governments

Credit challenges
» Property taxes, the district's key revenue source, are subject to caps on rates and annual levy increases
» Elevated direct and overall debt and pension burdens
» Fixed costs comprise a high percentage of the operating budget

Rating outlook
The stable outlook reflects our expectation that the tax base will continue to grow and the financial position will remain sound despite rising fixed costs associated with high debt and pension leverage.

Factors that could lead to an upgrade
» Moderation of the direct and overlapping debt and pension burdens

Factors that could lead to a downgrade
» Weakening of tax base valuation or resident income indices
» Declines in operating reserves or liquidity
» Growth in the direct or overlapping debt or pension burdens
Key indicators

Exhibit 1

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<tbody>
<tr>
<td>Economy/Tax Base</td>
<td>$414,382,389</td>
<td>$459,860,597</td>
<td>$499,336,554</td>
<td>$528,843,259</td>
<td>$559,685,160</td>
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<tr>
<td>Total Full Value ($000)</td>
<td>5,212,372</td>
<td>5,227,827</td>
<td>5,236,393</td>
<td>5,227,575</td>
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<tr>
<td>Population</td>
<td>$79,500</td>
<td>$87,964</td>
<td>$95,521</td>
<td>$101,164</td>
<td>$107,064</td>
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<tr>
<td>Full Value Per Capita</td>
<td>102.3%</td>
<td>101.9%</td>
<td>102.0%</td>
<td>102.2%</td>
<td>102.2%</td>
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<tr>
<td>Median Family Income (% of US Median)</td>
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% Finances

| Operating Revenue ($000)                      | $586,881 | $661,921 | $655,831 | $713,250 | $675,381 |
| Fund Balance ($000)                           | $501,691 | $455,982 | $440,990 | $471,809 | $469,531 |
| Cash Balance ($000)                           | $487,039 | $433,379 | $405,039 | $389,200 | $412,433 |
| Fund Balance as a % of Revenues               | 85.5%    | 68.9%    | 67.2%    | 66.1%    | 69.5%    |
| Cash Balance as a % of Revenues               | 83.0%    | 65.5%    | 61.6%    | 54.6%    | 61.1%    |

Debt/Pensions

| Net Direct Debt ($000)                        | $2,665,577 | $2,558,733 | $2,860,467 | $2,968,045 | $3,032,770 |
| 3-Year Average of Moody’s ANPL ($000)         | $2,066,594 | $1,944,343 | $1,869,250 | $1,921,929 | $2,095,119 |
| Net Direct Debt / Full Value (%)              | 0.6%       | 0.8%       | 0.6%       | 0.6%       | 0.5%       |
| Net Direct Debt / Operating Revenues (x)      | 4.4x       | 3.9x       | 4.4x       | 4.2x       | 4.5x       |
| Moody’s - adjusted Net Pension Liability (3-yr average) to Full Value (%) | 0.5% | 0.4% | 0.4% | 0.4% | 0.4% |
| Moody’s - adjusted Net Pension Liability (3-yr average) to Revenues (x) | 3.6x | 2.9x | 2.9x | 2.7x | 3.1x |

Full valuation is presented on an estimated fiscal year basis. Source: Audited financial statements; US Census; Moody’s Investors Service

Profile

The Metropolitan Water Reclamation District of Greater Chicago is the sanitary district for nearly all of Cook County (A2 stable). It provides collection and treatment services for approximately 5.2 million people over 884 square miles, including residents of the City of Chicago (Ba1 stable) and 128 suburban communities.

Detailed credit considerations

Economy and tax base: tax base anchored by large, diverse economy

The district’s large and diverse tax base, which is essentially coterminous with Cook County, is expected to remain a key credit strength. The district gains tax base stability from its role as the business, finance, transportation and tourism hub for the Midwest. The district’s large $560 billion tax base grew at an average annual rate of 4.8% over the last five years. Principal employers within the district include a diverse mix of commercial, health care and governmental entities including Cook County, Advocate Health Care (Aa3), Northwestern Memorial Health Care (Aa2 stable), and J.P. Morgan Chase & Company (Aa2 stable).

The City of Chicago comprises roughly one half of the district’s substantial $560 billion tax base. The remainder includes a mix of municipalities that include some of the most affluent cities in the nation. The base also includes pockets of distressed and impoverished communities that are facing steady tax base valuation declines. Overall, wealth and resident income levels mirror those of the nation. The district’s population has remained largely unchanged over the last several decades. Cook County’s unemployment rate was 3.8% as of September 2018, which was down significantly from its peak of 10.5% in 2010. Over the same period the number of employed individuals grew by 7%.

Financial operations and reserves: stable financial operations with sound reserves; limited revenue raising ability

The district’s financial position is expected to remain a credit strength supported by ample reserves and predictable revenue streams. However, limited revenue raising ability and high fixed costs are ongoing challenges. At the close of fiscal 2017, available reserves across district operating funds (combined general debt service, construction, retirement, and stormwater management funds) totaled $469.5
million, equal to an ample 70% of operating revenues. For fiscal 2018, the district has budgeted for largely balanced operations. Similar financial results are expected for fiscal 2019.

The district’s stable financial operations are supported by predictability of operating revenue. At 84% in fiscal 2017, property taxes account for the district’s largest revenue source, followed by charges for services at 11% of revenue. Property tax revenues are expected to remain stable, given substantial margin under statutory rate caps across district operating funds. However, in addition to rate caps, the district is also subject to Illinois’ Property Tax Extension Limitation Law (PTELL), which limits annual growth in the district’s property tax levy to the lesser of 5% or the consumer price index (CPI). The district levied to capture the maximum amounts allowable under PTELL for fiscal 2018.

LIQUIDITY
Net cash across district operating funds is expected to remain strong. At the close of fiscal 2017, net cash totaled $412 million, equal to a healthy 61% of operating revenue.

Debt and pensions: elevated direct and overlapping debt and pension burdens
Long-term leverage related to debt and pensions will remain a primary credit challenge. As of fiscal 2017, the district’s direct debt burden was low relative to tax base valuation at 0.5%. However, the direct debt burden was elevated when compared to operating revenue at 4.5x. Debt service accounted for a high 34% of operating revenue in fiscal 2017. The district’s high debt service costs are largely attributable to the capital intensive nature of the district. The capital program calls for approximately $1 billion in system improvements over the next five years. The district’s debt burden will remain high, but the use of pay-go capital financing should prevent material growth in the debt burden.

Overall fixed costs (combined debt service, pension and other post-employment benefits) equaled a very high 50% of operating revenue. Pension liabilities are elevated. As of fiscal 2017, the district’s three year average Moody’s adjusted net pension liability (ANPL) totaled $2.1 billion, equal to a substantial 3.1x operating revenue and 0.4% of full valuation. Recently enacted pension reforms call for continued growth in pension contributions by the district. These contribution hikes will likely slow the growth in unfunded liabilities, but they will require the district to absorb growing fixed costs in its operating budget.

The district’s tax base is further leveraged from the substantial debt and pension obligations of overlapping local governments. As of fiscal 2017, the district’s overall debt burden equaled 4.5% of full valuation, which largely reflects the tax-supported debt of Cook County, the City of Chicago and Chicago Public Schools (B2 stable). This figure does not include the unfunded pension liabilities for those local governments.

DEBT STRUCTURE
All of the district’s debt is fixed rate and long-term. Amortization of debt is slow, with 41% of principal is set to be retired over the next ten years. The district’s $3 billion in debt includes state revolving fund (SRF) loans, general obligation unlimited tax (GOULT) bonds, general obligation limited tax (GOLT) debt service extension base (DSEB) bonds, bond anticipation notes (BANs) and capital leases. GOLT DSEB debt is paid from the district’s DSEB, which totaled $166 million in fiscal 2018. The DSEB base provides sufficient coverage on outstanding GOLT debt, assuming no growth in the DSEB base.

DEBT-RELATED DERIVATIVES
The district is not a party to any derivative agreements.

PENSIONS AND OPEB
Eligible district employees participate in the Metropolitan Water Reclamation District Retirement Fund, a single-employer defined benefit pension plan. Employee and employer contribution levels are defined by state statute and have historically been insufficient to reduce unfunded liabilities. In August 2012, the Illinois General Assembly passed Public Act 97-0894, which provides for additional pension funding through increased employer and employee contributions. As a result, the district’s statutory employer multiplier was increased to 4.19 times from 2.19 times. The reform increased employee contributions by 1% annually for three years, going from 9% to its current 12%. The reform requires the district to contribute the lesser of 4.19 times the employee contribution or the actuarially determined amount. However, Section 5.9 of 70 ILCS 2605 also allows the district, by a vote of two-thirds of its board members, to contribute interest earnings from some of the district’s operating funds to the Retirement Fund. In addition to its legislated pension
reform, in September 2014, the district adopted a new funding policy that directs it to contribute an annual amount to the fund that will result in a funded ratio of 100% by 2050.

Due to these changes, the district’s pension contributions have increased significantly in recent years. In fiscal 2017, district contributions were $90 million and 13% of operating fund revenues, up from $30 million and 6% revenues in fiscal 2010. Still, the district’s fiscal 2017 contributions were $2.6 million short of the “tread water”\(^1\) amount. However, the shortfall equaled just 0.4% of operating revenue.

The district’s reported unfunded other post employment benefit (OPEB) liability as of December 31, 2017, the most recent actuarial valuation date, was $113 million or a manageable 0.2 times operating revenue. The district recently amended its advance funding policy to achieve a 100% funding level by 2027, using an assumed discount rate of 6.5%.

**Management and governance: independent governance remains a key credit strength**

The district maintains legal separation of management and governance from other overlapping units of local government. The district’s legal separation reduces the risk that financial pressures experienced by the other Chicago area local governments will directly impact the district’s financial position. Cook County residents elect the district’s Board of Commissioners, a board of nine members who serve six-year terms. The executive director, who is appointed by the Board of Commissioners, manages and controls district operations. Management has demonstrated a willingness to control operating expenditures.

Illinois utility districts have an institutional framework score of “Aa” or strong. We expect property tax revenues to remain largely stable given significant margin under rate limits to adjust for fluctuations in the tax base. However, in addition to rate caps, the district is subject to the PTELL, which limits growth in property tax extensions to the lesser of 5% or the CPI.

**Endnotes**

1 Our “tread water” indicator measures the annual government contribution required to prevent reported net pension liabilities from growing, given the entity’s actuarial assumptions. An annual government contribution that treads water equals the sum of employer service cost and interest on the reported net pension liability at the start of the fiscal year. A pension plan that receives an employer contribution equal to tread water will end the year with an unchanged net pension liability relative to the beginning of the year if all plan assumptions hold. Net liabilities may decrease or increase in a given year due to factors other than the contribution amount, such as investment performance that exceeds or falls short of a plan’s assumed rate of return. Still, higher contributions will always reduce unfunded liabilities faster, or will allow unfunded liabilities to grow more slowly than lower contributions.
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