

CREDIT OPINION

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Metro. Water Reclam. Dist. of Greater Chicago

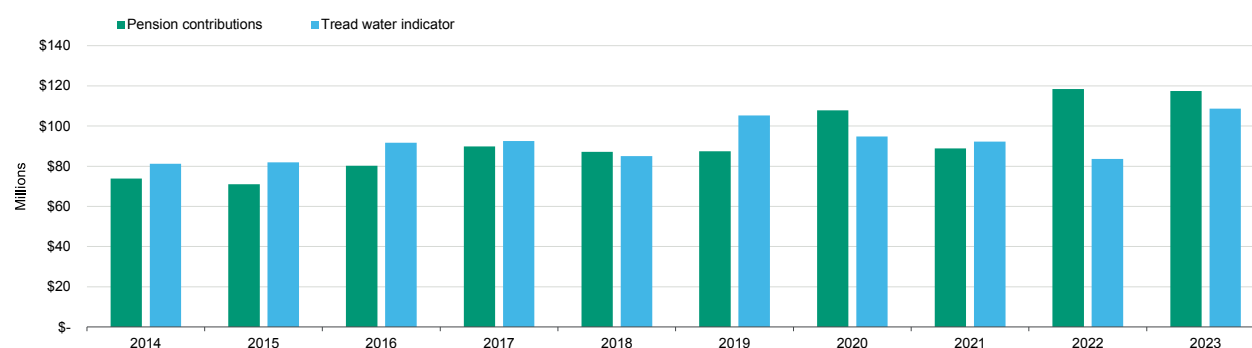
Update to credit analysis

Summary

The [Metropolitan Water Reclamation District of Greater Chicago, IL's](#) (Aa1 stable; MWRD) credit profile benefits from sound pension contribution practices and a strong financial position supported by stable revenue. MWRD is largely coterminous with Cook County, a large, diverse economic base. The district's primary credit challenge is elevated direct and overlapping leverage and high fixed costs given the capital intensive nature of district operations.

Exhibit 1

Pension contributions have improved and now consistently tread water
MWRD pension contributions relative to tread water



Source: Annual comprehensive financial reports and Moody's Rating

Credit strengths

- » Large and diverse economy anchored by Chicago
- » Healthy financial operations with ample fund balance and liquidity

Credit challenges

- » High direct and overlapping leverage relative to revenue

Rating outlook

The stable outlook reflects the strong likelihood that the district will continue to maintain solid pension contributions and strong reserves given a stable revenue base. It also incorporates a debt burden that is projected to remain near current levels based on the pace of planned debt issuance relative to amortization and revenue growth.

Factors that could lead to an upgrade

- » Moderation of combined direct debt and ANPL nearing 4x revenue while successfully executing capital plan

» Decline in overlapping leverage

Factors that could lead to a downgrade

» Decline in fund balance as percentage of revenue to well under 50% of revenue

» Substantial weakening of pension contributions, or material increase in leverage

Key indicators

Exhibit 2

Metro. Water Reclam. Dist. of Greater Chicago

| | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---------------|---------------|---------------|---------------|---------------|
| Economy/Tax Base | | | | | |
| Total Full Value (\$000) | \$609,562,341 | \$634,876,257 | \$634,876,257 | \$634,876,257 | \$634,876,257 |
| Population | 5,198,275 | 5,169,517 | 5,265,398 | 5,225,367 | N/A |
| Full Value Per Capita | \$117,262 | \$122,812 | \$120,575 | \$121,499 | N/A |
| Median Family Income (% of US Median) | 104.5% | 105.5% | 105.3% | 105.3% | N/A |
| Finances | | | | | |
| Operating Revenue (\$000) | \$695,845 | \$763,825 | \$829,503 | \$854,343 | \$987,056 |
| Fund Balance (\$000) | \$432,908 | \$447,076 | \$533,142 | \$560,184 | \$697,590 |
| Cash Balance (\$000) | \$417,152 | \$435,492 | \$504,307 | \$476,896 | \$681,014 |
| Fund Balance as a % of Revenues | 62.2% | 58.5% | 64.3% | 65.6% | 70.7% |
| Cash Balance as a % of Revenues | 59.9% | 57.0% | 60.8% | 55.8% | 69.0% |
| Debt/Pensions | | | | | |
| Net Direct Debt (\$000) | \$2,861,314 | \$2,801,370 | \$2,834,997 | \$2,680,585 | \$2,581,308 |
| 3-Year Average of Moody's ANPL (\$000) | \$2,234,710 | \$2,374,718 | \$2,572,965 | \$2,706,508 | \$2,541,816 |
| Net Direct Debt / Full Value (%) | 0.5% | 0.4% | 0.4% | 0.4% | 0.4% |
| Net Direct Debt / Operating Revenues (x) | 4.1x | 3.7x | 3.4x | 3.1x | 2.6x |
| Moody's - adjusted Net Pension Liability (3-yr average) to Full Value (%) | 0.4% | 0.4% | 0.4% | 0.4% | 0.4% |
| Moody's - adjusted Net Pension Liability (3-yr average) to Revenues (x) | 3.2x | 3.1x | 3.1x | 3.2x | 2.6x |

Source: US Census Bureau, US Bureau of Economic Analysis, Metro. Water Reclamation District of Chicago, IL's financial statements and Moody's Ratings

Profile

The Metropolitan Water Reclamation District of Greater Chicago is the sanitary district for nearly all of Cook County. The district is governed by an independently elected board. It provides collection and treatment services for approximately 5.2 million people.

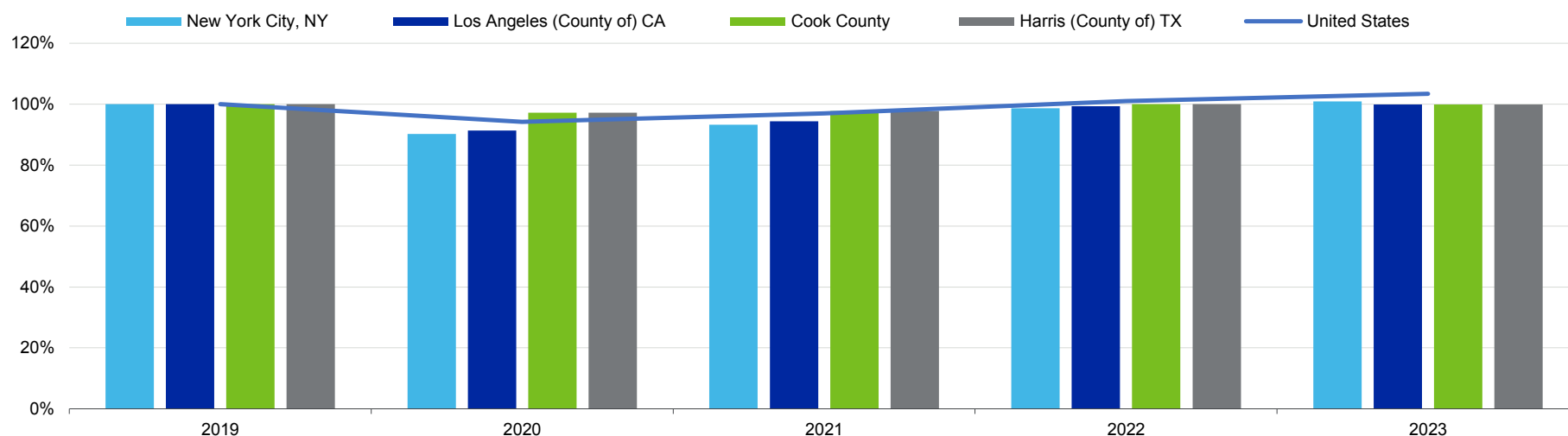
Detailed credit considerations

Economy and tax base: broad and diverse economic base

The district is nearly coterminous with Cook County, which anchors the third largest regional economy in the country. The county's population is essentially unchanged over the last decade and median household income is consistently in line with the US. The City of Chicago accounts for about half of Cook County's population and equalized assessed valuation (EAV). The employment base in Cook County is diverse. Growth in the county labor force slightly trails the US though is in line with peers (see Exhibit 3).

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moodys.com> for the most updated credit rating action information and rating history.

Exhibit 3
Cook County's labor market trends in line with peers during and after the pandemic
 Nonfarm employment indexed to 2019



Source: US Bureau of Economic Analysis and Moody's Ratings

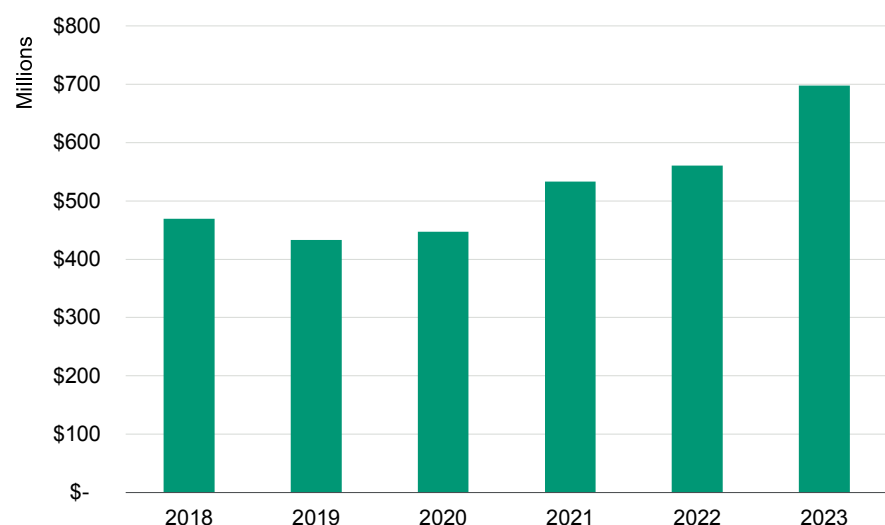
Cook County is exposed to [commercial real estate market stress](#) because it has one of the country's largest central business districts. However, the county's property system will facilitate stable property tax receipts regardless of changes in EAV. MWRD establishes its property tax levy in dollars and then the county clerk adjusts the rates accordingly to generate that sum, offsetting changes in EAV. A decline in commercial valuation would likely shift a greater share of the burden to residential taxpayers, which could impact willingness to raise the levy. Development in Chicago's West Loop and growth in other classes of commercial property may reduce the impact if older office building values decline.

Financial operations and reserves: strong financial profile expected to remain stable

The district's financial performance will remain stable supported by steady growth in its primary revenue source and constrained expenditures. Over the last several years, the district's fund balance and liquidity have remained strong, despite materially increasing pension contributions, due to steady revenue growth including personal property replacement taxes (PPRT) and ongoing expenditure control.

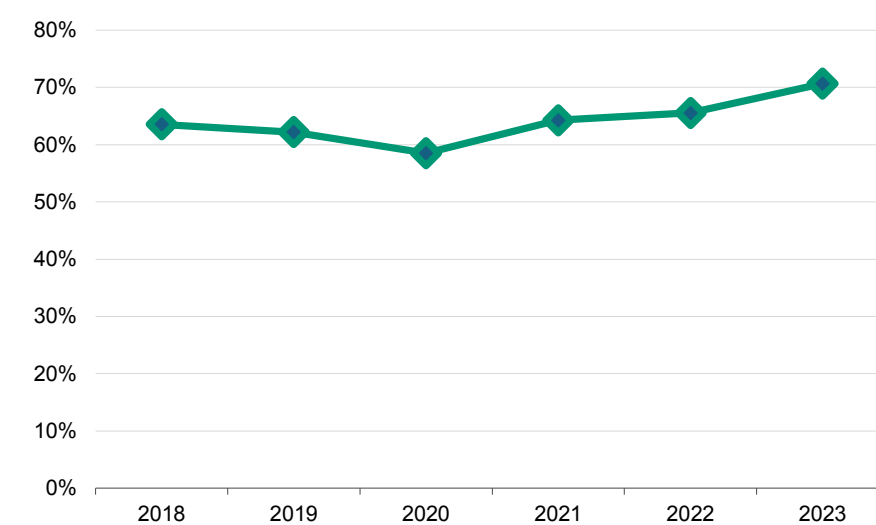
The district expects to use a portion of the fund balance built in the last several years on capital improvements or other one-time expenditures. Despite the planned use of reserves, fund balance is expected to remain robust and in line with similarly-rated credits as well as the district's own fund balance policy, which calls for the district to maintain 95% of annual Corporate Fund expenditures within the Corporate Working Cash Fund.

Exhibit 4
Available fund balance has significantly grown
 Cook County available fund balance



Source: Annual comprehensive financial reports and Moody's Rating

Exhibit 5
Ratio to revenue has also improved
 Available fund balance as a percentage of revenue



Source: Annual comprehensive financial reports and Moody's Rating

Liquidity

Cash is strong and in line with fund balance.

Debt, pensions and OPEB: above average long-term leverage and fixed costs

Debt and pension burdens are elevated compared with revenue, but are unlikely to grow materially given improved pension contributions, healthy debt amortization and steady revenue and tax base growth. While elevated relative to revenue, the debt burden is modest compared with full valuation. The district's capital program contemplates about \$1 billion in debt financed improvements through the end of the decade, but the current rate of amortization and ongoing revenue and tax base growth are expected to hold the debt burden at least level and potentially decline.

The district supplements debt issuance with pay as you go capital financing. Overall fixed costs (combined debt service, pension and other post-employment benefits) typically are equal to just under half of district revenue. There is high overlapping leverage, primarily from the debt and pension obligations of the City of Chicago and the Chicago Board of Education.

Legal security

The district's GOULT debt is supported by a dedicated property tax levy, unlimited as to rate or amount.

The district's GOLT DSEB debt is secured by a dedicated property tax levy unlimited as to rate but limited as to the amount of the district's DSEB.

Debt structure

All of the district's debt is fixed rate and long-term.

Debt-related derivatives

Not applicable.

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. The district's contributions exceed the state minimum with a funding policy that directs it to contribute an annual amount to the fund that will result in a funded ratio of 100% by 2050. As of January 1, 2022, the district is allowed to make contributions from a wider swath of operating revenue than before, providing additional flexibility.

The district's pension contributions have increased significantly in recent years. In fiscal 2023, district contributions were \$117 million or 12% of operating fund revenues, up from \$30 million and 6% revenues in fiscal 2010. Fiscal 2023 contributions were equivalent to a solid 108% of tread water.

In April 2022, the governor signed a bill that grants the district the ability to issue up to \$600 million in pension obligation bonds. The board notes it will only consider issuing bonds if the market conditions change and a lower interest cost can be achieved. We view the issuance of pension obligation bonds as [neutral at best and usually negative for a government's credit quality](#).

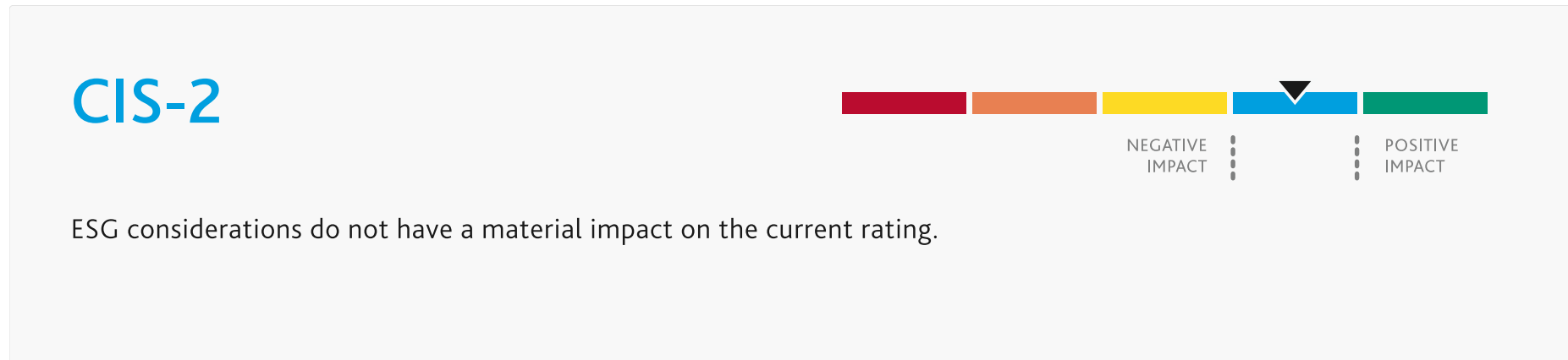
The district's OPEB burden is not material. The district recently amended its funding policy to achieve a 100% funding level by 2027, using an assumed discount rate of 6.5%.

ESG considerations

Metro. Water Reclam. Dist. of Greater Chicago's ESG credit impact score is CIS-2

Exhibit 6

ESG credit impact score



Source: Moody's Ratings

The district's **CIS-2** incorporates the district's robust governance, exposure to environmental risks similar to other wastewater credits across the country and a social profile that is line with sector peers.

Exhibit 7

ESG issuer profile scores



Source: Moody's Ratings

Environmental

The district's **E-3** reflects moderately negative exposure to water management considerations given the risk of potential regulatory violations associated with wastewater disposal, similar to other wastewater treatment facilities across the country. Wastewater operations face risks of increased operating costs or capital requirements in addressing any future violations. Environmental considerations are partially driving the system's extensive capital needs and above average debt burden. According to data of Moody's ESG Solutions, Cook County is at high risk for extreme rainfall events relative to counties nationally. The system's Tunnel and Reservoir Plan (TARP, deep tunnel) aims to reduce flooding and protect waterways by substantially increasing reservoir capacity but aerial flooding continues in certain service areas. MWRD is currently in phase two, which is expected to be completed in 2029. TARP is one of the country's largest public works projects for pollution and flood control.

Social

The district's **S-2** reflects a social profile that is in line with peers including labor and income trends, demographics and access to housing and basic services. The district has strong educational attainment including an above median percentage of the population with a post-secondary degree.

Governance

The district's **G-1** reflects sound budget management demonstrated by strong budget to actual performance and maintenance of robust reserves. The district's policy credibility and effectiveness are also strong given its improved pension funding strategy and robust fund balance policies. The district's institutional structure is sound, with the district able to achieve steady revenue growth within property tax caps. The district has legal separation of management and governance from other overlapping units of local government.

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. The district adheres to robust fund balance policies including a requirement to maintain 95% of annual Corporate Fund expenditures within the Corporate Working Cash Fund.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click [here](#) to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

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