MEMORANDUM

Date: April 23, 2019

To: The Honorable Chairman and Members
Pima County Board of Supervisors

From: C.H. Huckelberry
County Administrator

Re: **Recent Debt Sales**

The County was rated by Fitch Ratings and S&P Global Ratings (Standard & Poors) for recently issued Street and Highway Revenue bonds (HURF), Sewer Obligations and Certificates of Participation (COPs). In their ratings reports (Attachment 1 & 2), the two firms spoke highly of the County's fiscal and overall debt management. Here are some of the comments from the ratings reports released in March 2019.

- "Strong management, with good financial policies and practices...." *(S&P, GO & COPs)*
- "Very strong liquidity... *(S&P, GO & COPs)*
- "Coverage and liquidity: Very Strong" *(S&P HURF)*
- "Conservative budgeting allows the county to take advantage of economic recovery to
  replenish reserves promptly if necessary." *(Fitch. HURF and COPs)*
- "Financial Performance is good, characterized by robust liquidity and sound debt service coverage..." *(Fitch, Sewer)*
- Strong financial management policies and practices...." *(S&P Sewer)*

These high quality ratings resulted in low interest rates for HURF bonds at a rate of 2.482 percent, for Sewer Obligations a rate of 2.245 percent and for Certificates of Participation 2.593 percent.

CHH/anc

Attachments

c: Tom Burke, Deputy County Administrator for Administration
Michelle Campagne, Director, Finance and Risk Management

ATTACHMENT 1

S&P Global Ratings

One California Street,
31st Floor
San Francisco, CA
94111-5432
tel 415 371-5000
reference no.: 1558703

March 7, 2019

Pima County
130 West Congress, 6th Floor
Tucson, AZ 85701
Attention: Ms. Michelle Campagne, Director, Finance and Risk Management

Re: ***US$28,510,000 Pima County, Arizona, Certificates Of Participation, Series 2019, dated: March 27, 2019, due: December 01, 2033***

Ms. Campagne:

Pursuant to your request for an S&P Global Ratings rating on the above-referenced obligations, S&P Global Ratings has assigned a rating of "AA-" . S&P Global Ratings views the outlook for this rating as stable. A copy of the rationale supporting the rating is enclosed.

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Please send hard copies to:
S&P Global Ratings
Public Finance Department
55 Water Street
New York, NY 10041-0003

The rating is subject to the Terms and Conditions, if any, attached to the Engagement Letter applicable to the rating. In the absence of such Engagement Letter and Terms and Conditions, the rating is subject to the attached Terms and Conditions. The applicable Terms and Conditions are incorporated herein by reference.

S&P Global Ratings is pleased to have the opportunity to provide its rating opinion. For more information please visit our website at www.standardandpoors.com. If you have any questions, please contact us. Thank you for choosing S&P Global Ratings.

Sincerely yours,

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a division of Standard & Poor's Financial Services LLC

sc
enclosures

cc: ***Ms. Kathryn C. Pong, Vice President***
RBC Capital Markets

S&P Global Ratings

S&P Global Ratings
Terms and Conditions Applicable To Public Finance Credit Ratings

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S&P Global Ratings

RatingsDirect®

Summary:

Pima County, Arizona; Gas Tax

Primary Credit Analyst:
Michael Parker, Centennial + 1 (303) 721 4701; michael.parker@spglobal.com

Secondary Contact:
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Summary:

Pima County, Arizona; Gas Tax

Credit Profile		
US$25.0 mil street and highway rev bnds ser 2019 dtd 03/27/2019 due 07/01/2033		
Long Term Rating	AA/Stable	New
Pima Cnty GASTAX		
Long Term Rating	AA/Stable	Affirmed

Rationale

S&P Global Ratings assigned its 'AA' long-term rating to Pima County, Ariz.'s series 2019 street and highway revenue (HURF) bonds (par amount: $25 million). At the same time, S&P Global Ratings affirmed its 'AA' long-term rating on the county's street and highway revenue debt outstanding. The outlook is stable.

The rating reflects the application of our "Priority-Lien" criteria, published Oct. 22, 2018, on RatingsDirect, which factor in both the strength and stability of the pledged revenue, as well as the general credit quality of the county as obligor (the obligor's creditworthiness, or OC). Good pledged revenue growth, coupled with maintenance of very strong coverage for the last several years, supports our view of the rating. Moreover, the rating reflects the large and diverse economy, in addition to good incomes and an employment base made up of government, defense, tourism, higher education, and services.

Security and purpose

The HURF bonds are secured by a first lien on revenue received by the county from taxes, fees, charges, and other money collected by the state and returned to the county for street and highway purposes pursuant to Arizona law. Pledged street and highway revenue includes revenue from state-shared fuel taxes, vehicle registration fees, and license fees. Street and highway revenue is collected by the state and distributed monthly to local agencies based on a statutory formula, with approximately 19% allocated to counties. Of the 19%, 72% is allocated based on point of sale, with the remainder based on population in unincorporated areas of the county relative to population in unincorporated areas of the state. Therefore, pledged revenue may vary as a function of statewide sales and collections, local sale volume, and county population relative to the state. The state may also alter the distribution formula or intercept revenue to the detriment of local agencies, as it has done in the past. Proceeds of the 2019 bonds will be used to fund various street and highway improvements within the county. Following the issuance of the series 2019 bonds, the county will have approximately $105.3 million in HURF debt outstanding.

Credit fundamentals

Key credit considerations include:

- A very strong local economic population base at the state and local level, along with good incomes within the broad and diverse Tucson metropolitan statistical area;
- Our view that nationwide gas taxes have historically demonstrated low volatility, in addition to our view of

moderate to weak volatility at the local level; and

- The county's very strong coverage, with 3.6x maximum annual debt service (MADS) coverage based on audited fiscal 2018 pledged revenue.

Economic fundamentals: Very strong

Pima County encompasses 9,184 square miles of southern Arizona, and roughly half of its population resides in Tucson. Education and health care, defense, and government are the county's primary employment sectors. The University of Arizona is the leading employer (12,500 estimated employees), followed by Davis-Monthan Air Force Base (11,800) and Raytheon Missile Systems (11,500). Davis-Monthan Air Force Base supports a variety of missions; one of the largest plane groups at the base is the A-10. The Pentagon extended funding for the A-10, which had previously been at risk for near-term retirement. Retirement has since been extended until 2022. Management reports that the F-35 is a probable replacement, and the base benefits from the competitive advantages provided by the airspace availability and weather. At this time, we understand that there are no consolidation concerns for the base.

While we consider the regional economic base to be diverse, its reliance on the aerospace, defense, and government sectors contributed to a weaker recovery relative to that of areas that depend less on federal, state, and local government spending. According to management, residential and commercial development has been quite strong recently, which we believe will lead to tax base growth and higher sales tax collections in the next several years. The county's unemployment rate was 4.4% in 2018, and income indicators are good, in our view, with per capita effective buying income measuring 91% of the national level.

The county's population grew at an average annual rate of 1.6% between 2000 and 2010, and has since slowed to an average rate of about 0.7% from 2010 to 2018. A slower rate of population growth relative to the state could adversely affect the county's share of street and highway revenue, although the majority of funds (72%) are distributed according to the proportion of local sales and consumption. According to the Arizona Department of Transportation, total gallons of fuel taxed in Pima County has increased an aggregate 8.7% since 2014, totaling roughly 530 million gallons taxed within the county in fiscal 2018. Motor fuel tax revenue makes up roughly half of pledged revenue received by the state, while vehicle registration and in-lieu fees, which are based upon local registrations, make up another 43% of pledged revenue.

Volatility: Moderate

We assess the volatility of revenue in order to determine the likelihood of the availability of revenue during different economic cycles. We have two levels of volatility assessment: macro and micro. We consider the macro volatility to be low and micro volatility to be moderate to weak.

Our macro volatility assessment begins with an assessment of the historical volatility of the economic activity being taxed, and includes an analysis of societal, demographic, political, and other factors that could affect these activities. We base our expectation of future volatility on the variance of national economic activity that we believe most closely represents the taxing base over multiple economic cycles. To determine our view of the volatility of gas taxes, we used motor fuel consumption data from the U.S. Department of Energy, for the period 1993–2014.

On a micro level, combined pledged revenue showed moderate to weak volatility during the recession, declining by a cumulative 23% between 2008 and 2012. Since the low in 2012, pledged revenue has increased by an average annual rate of 5.4% to $61.5 million in 2018, surpassing the prerecession peak of $58.6 million. We understand that the state has not increased the amount diverted since fiscal 2012, although some uncertainty remains regarding future state interception of HURF revenue upstream from counties. We note that a portion of the pledged revenue declines during the recession were associated with state diversions away from the Arizona Highway User Revenue Fund, which is distributed to cities, towns, and counties. Management projects HURF revenue will continue to grow in fiscal 2019, and according to a year-to-date financial report put out by the state, HURF revenue at the state level is coming in 3.2% above forecasts for fiscal 2019 (through Jan. 31).

Coverage and liquidity: Very strong

In fiscal 2018, available pledged revenue totaled $61.5 million, 76% ($46.5 million) of which came from highway user revenue (mostly fuel taxes), with the remaining 24% ($15 million) coming from vehicle license taxes. Based on fiscal 2018 audited revenue, we calculate MADS coverage on all HURF bonds at 3.6x, which we consider very strong. Bond documents require MADS coverage of at least 2x by the preceding year's pledged revenue in order for the county to issue additional parity debt. Additionally, Arizona statutes require annual debt service coverage of at least 1.5x for additional parity bonds. Management is expecting collections in 2019 to grow by roughly 7%, which could raise MADS coverage above 3.9x if actual collections are close to projected estimates. Much of the HURF debt outstanding, including the series 2019 issuance, is amortized at a rapid pace, which helps to improve MADS coverage as early debt service payments are made. There is no debt service reserve fund held for the series 2019 bonds, or for any of the HURF bonds outstanding. With the current coverage levels and a low to moderate volatility assessment, there is no downward adjustment that would indicate potential liquidity pressures. The county indicated that it will likely issue approximately $21 million in additional HURF debt within the next three years; however, we expect coverage to remain at or above a level we consider strong.

Obligor linkage: Close

We believe the priority-lien of pledged revenue provides some protection from operating risk; however, because taxes are largely collected by the state and distributed monthly to the county, which then is responsible for transferring the money to the bond fund, we consider the flow of pledged revenue to be within the county's direct control. Under our criteria, this narrows the linkage between the priority-lien pledge and the OC, as we believe pledged revenue has some degree of exposure to operating risk.

We assess the county's general operations, because we view overall creditworthiness as a key determinant of an obligor's ability to pay all of its obligations, including bonds secured by a special tax. In our view, the county's creditworthiness is enhanced by its strong underlying economy and the maintenance of a strong financial position, supported by what we consider good financial management policies and practices. For more information on the county's creditworthiness, please see our report published March 7, 2019.

Outlook

The stable outlook reflects the continued growth in pledged revenue over the previous six years, with year-to-date trends supporting another potential year of growth in fiscal 2019. The stable outlook also reflects our anticipation that the county will maintain very strong MADS coverage over the two-year outlook horizon. We do not expect to change the rating within the two-year outlook time frame.

Upside scenario

Should HURF bonds bond coverage increase to extraordinarily high levels on a sustained basis, we could raise the rating.

Downside scenario

Should pledged MADS coverage fall below a level we consider strong as a result of declining motor fuel sales activity or state interference with pledged HURF revenue, we could lower the rating.

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

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S&P Global
Ratings

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Summary:
Pima County, Arizona; Water/Sewer

Primary Credit Analyst:
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Secondary Contact:
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Summary:

Pima County, Arizona; Water/Sewer

Credit Profile		
US$21.915 mil swr sys rev oblig ser 2019 dtd 03/27/2019 due 07/01/2033		
Long Term Rating	AA/Stable	New
Pima Cnty swr		
Long Term Rating	AA/Stable	Affirmed

Rationale

S&P Global Ratings assigned its 'AA' long-term rating to Pima County, Ariz.'s subordinate-lien sewer system revenue obligations, series 2019. At the same time, we affirmed our 'AA' long-term rating and underlying rating (SPUR) on Pima County's prior-lien (senior) sewer improvement and refunding revenue bonds and outstanding subordinate revenue obligations. The remaining principal on the closed senior lien as a percentage of total principal outstanding is minimal (estimated at less than 5%), so we are not applying a one-notch adjustor below the senior lien. The outlook is stable.

The ratings reflect the system's extremely strong enterprise risk profile and strong financial risk profile.

The enterprise risk profile reflects our view of the system's:

- Service area participation in the strong Tucson metropolitan statistical area (MSA), in southern Arizona;
- Affordable service rates in the context of the service area's good income metrics;
- Very low industry risk as a monopolistic service provider of an essential public utility; and
- Strong operational management practices and policies, as reflected in management's maintenance of the integrity of the system and consistent reviews of rates throughout the fiscal year.

The financial risk profile reflects our view of the system's:

- Projected good all-in coverage metrics, which we expect to stay consistent given management's debt plans, planned cash defeasance of prior bond obligations, and review and implementation of rate increases as needed;
- Extremely strong liquidity position that we believe is sustainable even with planned drawdowns to defease outstanding debt;
- Moderate leverage based on a pro forma debt-to-capitalization of about 44%, which includes management's expected future debt issuances in 2020, 2021, 2022, 2023, and 2024; and
- Strong financial management policies and practices, which are formalized and meaningful.

The series 2019 obligations will pay a portion of the costs of the construction, expansion, and improvement of sewer treatment facilities and conveyance systems for the system.

After the proposed obligations issue, Pima County will have approximately $3.5 million of senior-lien obligations and approximately $500 million of total parity obligations. Of the $500 million of parity obligations, $42 million is bank-placed debt, which the county entered into in 2017.

We view the bond provisions as somewhat permissive given that cash on hand may be used to comply with the rate covenant requirements. The bonds are payable from installment payments secured by the net revenues and unrestricted cash balances of the county's sewer system. Pima County's obligation to make the installment payments is absolute and unconditional. Key provisions include a 1.2x rate covenant and a 1.2x additional bonds test. Furthermore, the series 2019 obligations will have a debt service reserve fund, funded at one-half of maximum annual debt service on the series 2019 obligations.

Enterprise risk

The Pima County Regional Wastewater Reclamation Department provides wastewater collection and treatment services to 278,000 customers in the Tucson MSA and outlying service areas. We believe that customers in the service area benefit from residing in the strong Tucson MSA. Major employers include the University of Arizona (12,500 employees), Davis-Monthan Air Force Base (11,700 employees), and Raytheon Missiles (11,400 employees). We view the service area's income levels to be good, based on the county's median household effective buying income (MHHEBI), which was 89% of the national median for 2017. For December 2018, the county's unemployment rate was about 4.8%, which was higher than the nation's, at 3.7%, and lower than the state's, at 5.1%.

The system's customer base is primarily residential and diverse, with about 67% of user fee revenue deriving from residential customers. During the past 10 years, customer growth has been modest, averaging about 1% each year. The county uses the University of Arizona's economic projections, which project growth between 0.5% and 1.0% annually. We consider the customer base to be very diverse based on the leading 10 customers contributing less than 5% of total operating revenues for fiscal year 2017. The largest customers consist of the Arizona State Prison in Tucson and University of Arizona, followed by Davis-Monthan Air Force Base. Management does not expect any material changes to leading customers that would result in a material decline in system flows in the future.

We view the system's market position as good given the affordable service rates in the context of the service area's good income metrics. However, we understand rates may be less affordable to a portion of the customer base given the high county poverty rate. The present schedule of user fees includes a monthly service charge and a monthly commodity usage charge. The most recent rate increase was in 2017 by 3% to the user fee. For a typical residential customer using our benchmark of 6,000 gallons of water usage per month, the monthly-equivalent bill is affordable, at about 1.2% of the county's MHHEBI. The county's poverty rate as reported by the U.S. Department of Agriculture is 18.7%, which we view as higher than average. The last rate study was performed in 2017, and the board's subcommittee reviews rates eight times a year and has a record of supporting rate increases when needed. At this point in time, management does not have future rate increases planned.

Based on our operational management assessment, we view the system to be a '1' on a scale of 1-6, with '1' being the strongest. We view the operational management of the system as strong. In our view, the system has sufficient operational capacity to meet demand during the medium-term horizon. The Agua Nueva Wastewater Reclamation Facility (which replaced the Roger Road facility) and the Tres Rios Wastewater Reclamation Facility (formerly known as the Ina Road facility) serve metropolitan Pima County. Combined, the two metropolitan facilities have a current treatment capacity of approximately 85.2 million gallons per day (mgd). The nonmetropolitan Pima County areas are served by separate wastewater reclamation facilities: Green Valley, Avra Valley, Corona de Tucson, Arivaca Junction, Mt. Lemmon, and the Pima County Fairgrounds. These nonmetropolitan facilities have a current treatment capacity of approximately 9.6 mgd, for a total capacity for all facilities of about 94.8 mgd. The sewer system's average daily flow is about 57 mgd, which allows for sufficient capacity of the overall system. The county has a 15-year contract with CH2M to operate the Agua Nueva Wastewater Reclamation Facility with five-year renewals. Although we see potential for future financial adjustments based on contractual changes, we do not see any significant financial pressure from CH2M in the near term.

Financial risk

Pro forma all-in coverage will be good beginning in fiscal year 2020 after the system's portion of the county's certificates of participation (COPs) mature. We have calculated coverage two ways, the first based on pledged revenues and the indenture's definition of bonded coverage. The second way is based on our all-in coverage calculation. All-in coverage is our internally adjusted debt service coverage metric that we believe best tracks the use of every dollar of utility operating revenues, regardless of lien position, accounting treatment, or ultimate purpose. It also incorporates recognition of fixed charges or costs, which we define as certain long-term recurring items that are debt like in nature, even if legally treated as an operating expense. For the system, we historically included the system's payments to support the county's COPs.

We calculate bonded coverage during the past three fiscal years at 1.28x (2016), 1.26x (2017), and 1.46x (2018), respectively, which we consider to be good. Historically, the system supported its allocable share of the county's COP debt service. When we consider this additional obligation, we calculate all-in coverage at 0.97x (2016), 0.95x (2017), and 1.10x (2018), figures we consider to be adequate. Although no sewer revenues are pledged for the repayment of these COPs, the county intends to repay its portion of the COP issue from the sewer system's available unrestricted cash reserves. The last COP payment is in 2021, and management does not expect the sewer system to support future COP obligations. Based on our analysis of management-provided projections, we expect all-in coverage to rise from about 1.10x in fiscal 2018 to above 1.46x in 2020, which we consider to be good. Furthermore, we expect all-in coverage to stay above 1.40x through 2023 because management plans to defease a portion of prior obligations with cash. Projections assume debt issuances of $45 million in fiscal years 2020, 2021, and 2022, and $30 million in fiscal years 2023 and 2024.

Liquidity is a credit strength for the system despite planned drawdowns to defease debt; we expect liquidity will stay extremely strong in the future. When calculating total cash, we include the operations and maintenance and emergency reserve funds because these funds are designated but can be legally available upon board approval. At the end of fiscal 2018, cash totaled $117 million including available reserves, equivalent to 357 days of operating expenses. Based on management's cash projections, unrestricted cash is expected to decline to $87 million in fiscal 2020 from $117 million in 2018. Despite the drawdown, we consider cash to be extremely strong, and we do not expect cash to drop below $87 million during the next five years. Management targets cash levels at an estimated $50 million-$60 million in the long term.

The system is moderately leveraged based on a pro forma debt-to-capitalization of about 44%, which includes management's expected future debt issuances in 2020, 2021, 2022, 2023, and 2024. In 2019, management plans to spend about $41 million on system improvements. The projects in 2019 are focused on facility modifications and minor rehabilitation projects. The five-year capital improvement plan (CIP) is about $188 million (including the $41 million for 2019) and consists of mainly repair and replacement projects and system expansions to meet wastewater treatment requirements. Management expects to fund future capital projects with debt and cash on hand as needed.

Based on our financial management assessment, we view the system to be a '2' on a scale of 1-6, with '1' being the strongest. In our view, management is transparent in regards to the system's policies and practices. The department has meaningful debt and investment policies with meaningful cash targets to maintain about $40 million to $50 million of unrestricted cash for the Regional Wastewater Reclamation fund not including the reserve fund. In addition, long-term financial planning is detailed and reasonable and is updated monthly. Furthermore, management presents financials to the Regional Wastewater Reclamation Committee and to county administration monthly and annually updates a detailed 10-year CIP and complies with generally accepted accounting principles (GAAP).

Outlook

The stable outlook reflects our expectation that management will adjust sewer rates and fees as needed to maintain good all-in coverage. During the two-year outlook horizon, we expect the system to leverage up and draw down on unrestricted cash to defease debt while maintaining good all-in coverage and an extremely strong cash position.

Upside scenario

In our opinion, upward mobility for the ratings will be predicated on sustained maintenance of all-in coverage metrics that we consider good or better, which is possible, but unlikely, during the two-year outlook horizon.

Downside scenario

We could lower the ratings if cash is unexpectedly spent down more than what was presented in management-provided projections. We could additionally lower the ratings if all-in coverage declines to a level that we believe is consistent with a lower rating.

Ratings Detail (As Of March 4, 2019)		
Pima Cnty swr subord (AGM)		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed
Pima Cnty swr sys rev oblig ser 2018 due 07/01/2033		
Long Term Rating	AA/Stable	Affirmed
Pima Cnty swr (AGM)		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed
Pima Cnty swr (ASSURED GTY)		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed

Many issues are enhanced by bond insurance.

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

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ATTACHMENT 2

Pima County, Arizona

New Issue Report

Ratings

Long-Term Issuer Default Rating	AA+

New Issues

$21,275,000 Certificates of Participation, Series 2019	AA
$25,000,000 Street and Highway Revenue Bonds, Series 2019	AA

Outstanding Debt

Certificates of Participation	AA
General Obligation Bonds	AAA
Street and Highway Revenue Bonds	AA

Rating Outlook

Stable

Analysts

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New Issue Summary

Sale Date: Week of April 1.

Series: $21,275,000 Certificates of Participation, Series 2019 and $25,000,000 Street and Highway Revenue Bonds, Series 2019.

Purpose: COPs — improvements to a Pima County (the county) sports complex; street and highway revenue bonds — various road and street improvements.

Security: COPs — payments from the county under a master lease agreement, subject to annual appropriation; street and highway revenue bonds — first lien on pledged street and highway taxes, fees and charges, and state motor vehicle license taxes collected by the state and returned to the county.

Analytical Conclusion

The 'AA+' Issuer Default Rating (IDR) and 'AAA' ULTGO bond rating are supported primarily by solid expenditure flexibility, a high level of financial flexibility and a low long-term debt liability burden. The 'AA' COPs rating, one notch off the IDR, reflects the optionality inherent in an appropriation security structure. The 'AA' street and highway revenue bond rating reflects a solid coverage cushion, strong additional bonds test of 2.0x, and Fitch Ratings' expectation for continued solid growth in the pledged revenue stream.

The Arizona legislature in its 2016 and 2017 sessions (52nd and 53rd legislatures) approved amendments to various sections of the Arizona Revised Statutes that provide ULTGO bondholders with a statutory lien on ad valorem taxes of cities, towns, counties, school districts, community college districts and various special districts in the state. Fitch believes the statute provides bondholders with a substantial preferential right in a bankruptcy proceeding, warranting an ULTGO bond rating two notches higher than the entity's IDR. The statutory lien applies only to ad valorem tax revenues and applies both to ULTGO bonds previously issued and to be issued in the future. The legislation does not affect the county's IDR.

Economic Resource Base: Pima County has a population of roughly 1 million and is home to Tucson, Arizona's second largest city. The county's diverse economy features higher education, healthcare, government, technology, tourism and manufacturing as primary anchors. The top 10 taxpayers represent retail, healthcare, utility and mining sectors and comprise a modest 7% of total fiscal 2019 taxable values.

Key Rating Drivers

Revenue Framework: 'aa'
Pima County revenue growth prospects are solid, benefitting from a diverse and growing regional economy. Pima County has few legal revenue-raising capabilities for operating purposes but retains unused property tax levy that the state allows to be banked and carried forward.

Expenditure Framework: 'aa'
Fitch expects the county's pace of spending to remain generally in line with revenue growth. The county's ability and willingness to adjust spending levels provides the capacity to manage

Rating History (IDR)

Rating	Action	Outlook/ Watch	Date
AA+	Affirmed	Stable	3/6/19
AA+	Upgraded	Stable	3/9/18
AA	Assigned	Stable	4/25/16

Related Research
Fitch Rates Pima County, AZ COPs & Hwy Revs 'AA', Affirms IDR at 'AA+'; Outlook Stable (March 2019)

Related Criteria
U.S. Public Finance Tax-Supported Rating Criteria (April 2018)

specific cost pressures, including pension contributions. Carrying costs are a moderate burden on resources.

Long-Term Liability Burden: 'aaa'
The combined burden of debt and unfunded pension liabilities in relation to personal income is low at just under 6%. The assessment reflects the county's rapid debt amortization rate (more than 90% retired in 10 years), moderate capital needs, and an elevated unfunded net pension liability over the medium term.

Operating Performance: 'aaa'
Fitch expects Pima County to retain the highest gap-closing capacity during a typical economic downturn. The combination of bolstered reserves and solid expenditure flexibility give the county very strong gap-closing capacity. Conservative budgeting allows the county to take advantage of economic recovery to replenish reserves promptly if necessary.

Dedicated Tax
Solid Growth Prospects for Pledged Revenues: The pledged revenues that back the street and highway revenue bonds are expected to increase over the near term given healthy economic prospects for the regional economy.

Sound Resiliency: The pledged revenues generate a sufficiently strong debt service cushion to handily withstand even a severe decline scenario matching the Great Recession.

Rating Sensitivities

Financial Resilience: The IDR, GO and COPs ratings are sensitive to Pima County's ability to maintain its overall financial flexibility and manage any pressures associated with anticipated near-term growth.

Street and Highway Revenue Bond Financial Cushion: Future strengthening of the resilience assessment, through continued positive pledged revenue performance, could lead to positive rating action. Conversely, material erosion of the current solid coverage cushion below expectations could apply downward pressure to the current rating.

Credit Profile

Pima County's economy by several measures is firmly in growth mode. Expansion is evidenced by five consecutive years of gains in countywide market values, including a solid 6.5% increase in fiscal 2019 to $78.3 billion. Countywide retail sales have averaged 4% annual increases since 2013, including a 5.5% gain in 2018 to $9.3 billion. Fitch anticipates additional near-term tax base growth based on current reported construction activity, new development and appreciation of existing properties. Climbing employment and corresponding declines in the local unemployment rate further support the expectation for additional economic expansion.

Major southern Arizona employers include the University of Arizona, Raytheon Missile Systems, Davis-Monthan Air Force Base, state and local government, Wal-Mart Stores Inc., Tucson Unified School District and Banner Healthcare.

Revenue Framework

The county's operating revenues are a mix of local-generated and state-shared revenues. Property tax revenues contribute about 60% of general fund revenues annually, and intergovernmental revenues are the next largest revenue component at nearly 30% of the total.

The 10-year CAGR of Pima County general fund revenues (adjusted for tax rate changes) was essentially flat through fiscal 2018. Fitch's assessment of solid revenue growth prospects is based on Pima County's diverse economy, recent solid tax base and retail sales gains, and the expectation for continued economic expansion in the area. Fitch expects the county's revenue gains to exceed the modest growth rate over the past 10 years, which was muted due to the disproportionately large impact of the Great Recession throughout Arizona.

State law limits the county's ability to make changes to certain revenues. Primary property tax levies, used for operations, are limited to a 2% per annum increase over the maximum allowable levy in the prior year plus taxes on any new construction. Additionally, the state allows banking and carry forward of the 2% maximum levy increase, to the extent not fully used. Pima County has approximately $95 million of annual unused capacity in this regard.

Fitch notes that there is no limitation on annual secondary property tax levies, used for voter-approved bonded indebtedness; such levies are not available to support operations.

Expenditure Framework

The county's largest general fund expenditure areas are general government (45% of fiscal 2018 outlays), public safety (29%), and health and social services (20%).

Fitch expects the county's pace of spending to generally align with revenue growth over time as continued population gains increase service demands. Annual general fund spending over the past several fiscal years has been modest; the slow rate of growth allowed management to both transfer increasing amounts for capital spending and boost operating reserves.

Sound expenditure flexibility is derived primarily from management's strong control over workforce costs. Carrying costs (debt service and retiree benefit outlays) are at the high end of moderate (19.3% of fiscal 2018 governmental spending). The carrying cost incorporates an aggressive debt amortization schedule (more than 90% repaid in 10 years) and recently climbing pension contributions.

Fitch does not anticipate carrying costs to shift materially over the near term due to moderate borrowing plans and the amortization schedule that will accommodate additional debt issues; this combination should offset expected further increases in pension contributions. The county has demonstrated the ability and willingness to make spending cuts when necessary to retain satisfactory budgetary flexibility.

Long-Term Liability Burden

Pima County's long-term liability burden, comprised of overall debt and Fitch-adjusted net pension liabilities, is low at around 6% of total personal income. Fitch expects the county's burden to remain affordable based on the rapid debt amortization schedule and moderate near-term borrowing plans. Management reports plans to issue roughly $50 million in COPs and another $21 million in highway user revenue bonds over the next two years.

The county and its employees participate in six separate pension programs administered by four state-sponsored systems. The three most significant of these are the Arizona State Retirement System (ASRS), a cost-sharing multiple-employer plan; the Public Safety Personnel Retirement System (PSPRS), an agent multiple-employer (AME) plan; and the Corrections Officer Retirement Plan (CORP), also an AME plan.

Under GASB 67 and 68, the county reports a fiscal 2018 combined net pension liability (NPL) for all plans of $822 million, with fiduciary assets covering 58% of total pension liabilities. Investment return assumptions for the plans range from 7.5% to 8%. Using a more conservative standard 6% investment return assumption, the combined NPL increases to $1.17 billion with assets covering 49.5% of total liabilities.

Operating Performance

Fitch anticipates that Pima County will demonstrate the highest gap-closing capacity through a typical economic downturn based on its ability and willingness to cut spending and raise tax rates. For details, see Scenario Analysis, page 6.

Fiscal 2018 general fund results were positive and represented the fourth consecutive year of net gains and additions to fund balance. A net operating surplus after transfers of $11.5 million boosted unrestricted reserves to nearly $109 million or 20% of spending, comfortably above the county's minimum reserve target of 5%. The recent gains are due primarily to better than expected revenue performance and sound expenditure control.

County officials report fiscal 2019 operating revenues and spending are both outperforming budget. They currently project positive year-end general fund results with a further addition to reserves.

Dedicated Tax Credit Profile

Highway user tax revenues include motor vehicle fuel taxes, motor vehicle registration fees, motor vehicle licenses taxes, motor carrier fees, motor vehicle operator's license fees, and other miscellaneous fees and revenues. Highway user tax revenues are collected by the state and deposited into the state highway user fund until distributed. Arizona counties currently receive 19% of the monthly revenue distributions, and the state Department of Transportation, the cities and towns and other state users receive the remaining 81%. Of the money distributed to counties in the state, 72% is distributed in proportion to the sale and consumption of fuel within each county, and the remainder is distributed on the basis of the proportionate population within the unincorporated areas of each county.

The state legislature retains the authority to alter the rate of fees that are constitutionally required to be deposited into the state highway user fund, as well as the allocation of such monies between state purposes and the distribution to local governments. However, the Arizona Supreme Court has indicated that these revenues cannot be reduced in a manner which impairs an issuer's ability to meet debt service requirements on the bonds.

After this sale the county will have $37.4 million in authorized but unissued street and highway revenue bonds. Borrowings over the next several years will exhaust the remaining authorization but are not expected to add materially to annual debt service given the currently declining debt service schedule. The planned additional leveraging is not expected to reduce coverage to the 2x ABT.

The 10-year CAGR of pledged revenues through fiscal 2018 is essentially flat, but these results were materially affected by the Great Recession. Annual gains since fiscal 2012 have been solid, and the expectation is that this growth trend will continue given current and planned economic development activity in the county. Fiscal 2018 pledged revenues of $61.6 million are up for the sixth consecutive year and are up 3.5% from fiscal 2017.

Revenue Stream Sensitivity

To evaluate the sensitivity of the dedicated revenue stream to cyclical decline, Fitch considers both revenue sensitivity results (using the same 1% decline in national GDP scenario that supports assessments in the IDR framework) and the largest decline in revenues over the period covered by the revenue sensitivity analysis. Based on the county's 2000-2016 pledged revenue history, Fitch's analytical sensitivity tool (FAST) generates a 6% decline in pledged revenues in a 1% GDP decline scenario. The largest actual cumulative decline in this period was a steep 23.4% decline from fiscal 2008-2012.

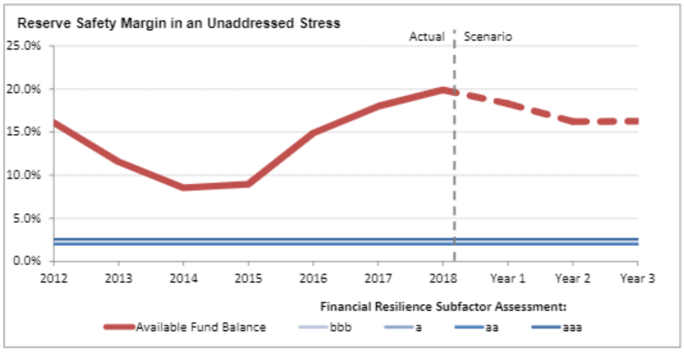
Assuming issuance up to the 2x ABT, well below actual current coverage, the structure could tolerate a 50% drop in revenues, 8.3x the scenario results and 2.1x the largest actual revenue decline in the review period. Leveraging to 2.75x MADS is more likely given current borrowing plans and the use of surplus revenues for various transportation projects. This scenario would generate a cushion roughly 10.7x the scenario results and 2.7x the largest historical decline. Fitch believes that these results are consistent with an 'AA' rating (noting that the fiscal 2008-2012 revenue performance reflected the disproportionately severe impact of the Great Recession on Arizona which Fitch believes is unlikely to be repeated).

Exposure to Issuer Operations

The revenues pledged to the street and highway revenue bonds meet the requirements set out in Fitch criteria for treatment as "pledged special revenues" under section 902(2)(D) of the U.S. bankruptcy code. Fitch treats the debt as insulated from the operating risk of the county. Therefore the rating on the dedicated tax bonds is distinct from the county's IDR.

Pima County (AZ)

Scenario Analysis



Analyst Interpretation of Scenario Results:

Fitch anticipates that Pima County will demonstrate the highest gap-closing capacity through a typical economic downturn based on its ability and willingness to cut spending and raise tax rates. Conservative budgeting, solid expenditure flexibility and a commitment to healthy reserves position the county to promptly close any budgetary gaps and maintain a high level of financial flexibility.

Scenario Parameters:	Year 1	Year 2	Year 3
GDP Assumption (% Change)	(1.0%)	0.5%	2.0%
Expenditure Assumption (% Change)	2.0%	2.0%	2.0%
Revenue Output (% Change)	(1.3%)	1.4%	4.2%
Inherent Budget Flexibility		Superior	

Revenues, Expenditures, and Fund Balance	Actuals							Scenario Output		
	2012	2013	2014	2015	2016	2017	2018	Year 1	Year 2	Year 3
Total Revenues	478,982	464,835	467,337	521,722	540,711	557,990	554,810	547,675	555,611	578,858
% Change in Revenues	-	(3.0%)	0.5%	11.6%	3.6%	3.2%	(0.6%)	(1.3%)	1.4%	4.2%
Total Expenditures	445,798	451,858	469,984	497,425	488,730	505,024	501,674	511,707	521,942	532,380
% Change in Expenditures	-	1.4%	4.0%	5.8%	(1.7%)	3.3%	(0.7%)	2.0%	2.0%	2.0%
Transfers In and Other Sources	6,798	6,556	24,192	21,048	10,172	6,411	4,404	4,347	4,410	4,595
Transfers Out and Other Uses	36,770	39,768	33,887	41,410	33,596	38,023	46,084	47,006	47,946	48,905
Net Transfers	(29,972)	(33,212)	(9,695)	(20,362)	(23,424)	(31,612)	(41,680)	(42,658)	(43,535)	(44,310)
Bond Proceeds and Other One-Time Uses	-	-	-	-	-	-	-	-	-	-
Net Operating Surplus(+)/Deficit(-) After Transfers	3,212	(20,235)	(12,342)	3,935	28,557	21,354	11,456	(6,691)	(9,866)	2,167
Net Operating Surplus(+)/Deficit(-) (% of Expend. and Transfers Out)	0.7%	(4.1%)	(2.4%)	0.7%	5.5%	3.9%	2.1%	(1.2%)	(1.7%)	0.4%
Unrestricted/Unreserved Fund Balance (General Fund)	77,714	56,684	42,912	48,072	77,751	97,718	108,926	102,235	92,369	94,537
Other Available Funds (GF + Non-GF)	-	-	-	-	-	-	-	-	-	-
Combined Available Funds Balance (GF + Other Available Funds)	77,714	56,684	42,912	48,072	77,751	97,718	108,926	102,235	92,369	94,537
Combined Available Fund Bal. (% of Expend. and Transfers Out)	16.1%	11.5%	8.5%	8.9%	14.9%	18.0%	19.9%	18.3%	16.2%	16.3%

Reserve Safety Margins	Inherent Budget Flexibility				
	Minimal	Limited	Midrange	High	Superior
Reserve Safety Margin (aaa)	20.6%	10.3%	6.4%	3.9%	2.6%
Reserve Safety Margin (aa)	15.4%	7.7%	5.1%	3.2%	2.0%
Reserve Safety Margin (a)	10.3%	5.1%	3.2%	2.0%	2.0%
Reserve Safety Margin (bbb)	3.9%	2.6%	2.0%	2.0%	2.0%

Notes: Scenario analysis represents an unaddressed stress on issuer finances. Fitch's downturn scenario assumes a -1.0% GDP decline in the first year, followed by 0.5% and 2.0% GDP growth in Years 2 and 3, respectively. Expenditures are assumed to grow at a 2.0% rate of inflation. Inherent budget flexibility is the analyst's assessment of the issuer's ability to deal with fiscal stress through tax and spending policy choices, and determines the multiples used to calculate the reserve safety margin. For further details, please see Fitch's US Tax-Supported Rating Criteria.

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FITCH RATES PIMA COUNTY, AZ'S REVENUE OBLIGATIONS 'AA-'; OUTLOOK STABLE

Fitch Ratings-Austin-06 March 2019: Fitch Ratings has assigned a 'AA-' rating on the following Pima County, AZ (the county) revenue obligations:

--Approximately $21.9 million sewer system revenue obligations, series 2019.

The bonds are scheduled for a negotiated sale the week of April 7. Bond proceeds will be used for capital improvement projects and to pay issuance costs.

Fitch has also affirmed the 'AA-' rating on approximately $457.7 million in outstanding sewer system revenue obligations.

The Rating Outlook is Stable.

Additionally, Fitch has withdrawn the ratings for the following bonds due to prerefunding activity:

--Pima County (AZ) sewer revenue bonds series 2009 (prerefunded maturities only - 721876PJ3, 721876PK0, 721876PL8, 721876PM6, 721876PN4, 721876PP9) previous rating: 'AA'/Outlook Stable.

The updated rating history for the above maturities is now reflected on Fitch's website at www.fitchratings.com.

SECURITY

The county's obligation to make payments is secured by net revenues of the county's sewer system (the system) and is additionally secured by the system's unrestricted cash balances.

KEY RATING DRIVERS

SOUND FINANCIAL PROFILE: Financial performance is good, characterized by robust liquidity and sound debt service coverage (DSC), exclusive of pledged unrestricted cash balances. The system's very strong cash balances, combined with a very rapid maturity schedule, somewhat offset below-average DSC levels.

ELEVATED DEBT AND MODERATING CAPITAL PRESSURES: Debt levels are high, but are declining rapidly in the forecast due to declining capital needs and very rapid amortization of existing debt.

LIMITED RATE FLEXIBILITY: Upon embarking on its large capital plan in 2010, the county prudently adopted a series of automatic annual rate increases to counter the rise in fixed costs. However, user charges at 1.1% of median household income (MHI) now slightly exceed Fitch's affordability threshold, which could limit future rate flexibility.

STABLE ECONOMY: The service area is anchored by the presence of the military and defense industry that provide some stability. County unemployment rates are below state but above national levels.

RATING SENSITIVITIES

STRONG CASH BALANCES KEY: The rating is sensitive to preservation of the Pima County sewer system's strong liquidity given the below-average debt service coverage.

DECLINING DEBT LEVELS: Declining debt levels could lead to improvement in credit quality over time.

CREDIT PROFILE

The system provides wastewater service to a population of more than one million through about 278,000 connections in the Tucson metropolitan area and separate outlying areas in eastern Pima County (General Government IDR AA+/Stable). Tucson (General Government IDR AA-/Stable) is the county seat and Arizona's second largest city. The system wastewater facilities have ample combined capacity of 94.7 million gallons per day (MGD), with sewer flows averaging about 56.9 MGD.

MIXED SYSTEM FINANCIAL METRICS

The county embarked on a massive capital program to replace much of its obsolete infrastructure beginning about 10 years ago. The rapid pace of debt issuance over a relatively short time span (between 2010 and 2014) resulted in debt service requirements that more than doubled from previous levels. The county prudently adopted large service rate increases to cover the rise in fixed costs associated with the new debt.

Despite multiple large rate increases, Fitch-calculated all-in DSC (exclusive of the pledged unrestricted cash balance) typically falls below Fitch's 'AA' category median of 2.5x. For fiscal 2018, Fitch-calculated DSC at 1.6x was better than expected but remained below the median. Including repayment of certificates of participation (COPs) issued by the county, but supported by the system, coverage was 1.3x. The county's forecast including issuance of another $146 million in debt results in similar coverage over the ensuing five years. Mitigating this lower level of DSC is the county's very rapid amortization of debt and robust liquidity.

Large rate increases enabled the county to build up high reserve levels. Unrestricted cash and investments totaled $78.2 million at the close of fiscal 2018. The county also maintained an additional $39 million in available restricted emergency and operating reserves, which combined with unrestricted cash, equaled 555 days cash on hand for the year.

Unrestricted cash balances are legally pledged to the sewer system revenue obligations and can only be used to pay debt service, defease debt or provide rate relief. The emergency and operating reserves, combined with the unrestricted cash spending limitations, should help maintain strong liquidity levels and/or facilitate the continued acceleration of debt payments. The county cash defeased prior to maturity about $10.3 million in debt that was callable during fiscal 2017, another $16.9 million during fiscal 2018, and most recently, cash defeased another $12 million in the current year.

CAPITAL IMPROVEMENT PLAN RAMPING DOWN

The county recently completed a major overhaul of its entire wastewater reclamation facilities that was projected to cost just under $1 billion. The massive capital undertaking was necessary to address aging infrastructure and comply with regulatory requirements. Some of the major projects included the demolition and replacement of one of the county's wastewater reclamation facilities that was more than 50 years old as well as major rehab and expansion of another wastewater treatment plant. These projects were completed ahead of schedule and below budget.

Capital needs over the next five years are expected to cost an estimated $188 million (including the current year) and are primarily for conveyance system upgrades and replacements. The county has substantially met future permitting requirements for environmental compliance and has ample capacity in its existing treatment facilities. Ongoing repair and replacement to maintain system assets in good condition are projected at about $40 million annually going forward.

DEBT LEVELS TEMPERED BY RAPID AMORTIZATION

Pima County, like all counties and cities in Arizona, is subject to limitations on expenditures from local revenues in excess of the established constitutional limits. Not subject to the limitations are items such as bond proceeds and related debt service. Given these constitutional limitations, the county plans to debt-fund its entire CIP over the next five years.

The recent massive CIP undertaking resulted in a spike in debt levels. Debt per customer, including the COPs, peaked at $2,814 in fiscal 2013 and has gradually declined 27% to $2,058 in fiscal 2018. While this currently remains above Fitch's 'AA' category median of $1,731, projected debt per customer in fiscal 2023 drops to about $1,811. This is due to scheduled amortization of debt and decline in capital needs. The county's scheduled amortization is very rapid, with principal payout at about 90% in 10 years, which compares very favorably to Fitch's 'AA' category median rate of 45%. The county's leverage, measured by total debt to funds available for debt service totaling a manageable 4.1x in 2018, has declined over the past several years with the improved margins and declining debt.

GROWING DEBT SERVICE REQUIREMENTS PRESSURE RATES

To cover the anticipated rise in debt service costs, the county enacted annual rate hikes that more than doubled the service rates between 2008 and 2014. Rates remained unchanged in fiscal years 2015 and 2016 and a modest 3% rate increase was implemented in fiscal 2017.

Management regularly performs a comprehensive review of rate adequacy and has indicated it would recommend additional rate increases if deemed necessary. The current monthly bill at $42.11 (assuming sewer flows of 6,000 gallons per month) is at 1.1% of MHI, slightly above Fitch's 1.0% affordability threshold. Favorably, the fixed component of the county's service rate comprises 31% of the standard monthly bill, reducing volumetric revenue variability.

SERVICE AREA BENEFITS FROM STABLE ECONOMY

The area's economy is diverse, featuring military and defense, higher education, healthcare, government, and manufacturing as primary anchors. County unemployment levels at 4.8% as of December 2018 are in line with 4.9% for the state but above the 3.7% national average. County wealth levels are slightly below state and national levels.

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In addition to the sources of information identified in Fitch's Revenue-Supported Rating Criteria, this action was additionally informed by information from Lumesis.

A January 2018 district court ruling that dismissed claims regarding payment of Puerto Rico Highways and Transportation Authority debt has raised questions about the scope of protections provided by Chapter 9 of the U.S. bankruptcy code to bonds secured by pledged special revenues. Fitch's rating criteria treat special revenue obligations as independent from the related municipality's general credit quality. The outcome of the litigation could result in modifications to Fitch's approach. For more information, see "What Investors Want to Know: The Impact of the Puerto Rico Ruling on Special Revenue Debt" available at www.fitchratings.com.

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Applicable Criteria
Rating Criteria for Public-Sector, Revenue-Supported Debt (pub. 26 Feb 2018)
https://www.fitchratings.com/site/re/10020113
U.S. Water and Sewer Rating Criteria (pub. 29 Nov 2018)
https://www.fitchratings.com/site/re/10049877

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