STANDARD
& POOR'S
RATINGS SERVICES

Financing Resilient Clean Water Utilities and the Municipal Bond Market

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July 17, 2013

The Basics of Credit Ratings

What Credit Ratings Are and Aren't

- **Credit ratings are opinions about credit risk, intended to be forward looking**
- **They express our opinion about the ability and willingness of an issuer to meet its financial obligations in full and on time**
- **Ratings are not a prognosis or recommendation, but intended to provide market participants with information about relative credit risk of issuers and individual debt issues that we rate**
- **They express relative opinions about creditworthiness of an issuer or credit quality of a debt issue, from strongest to weakest, within a universe of credit risk**
- **Credit ratings do not constitute investment advice nor do they opine on suitability for an investment**
- **Credit ratings are not indications of market liquidity of a debt security or its price in the secondary market**
- **Credit ratings are not guarantees of credit quality or future credit risk; assignment of a credit rating is not an exact science**
- **Credit ratings are not absolute measures of default probability**

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Credit Ratings Scale

AAA	Extremely Strong	Investment Grade
AA+		
AA	Very Strong	
AA-		
A+		
A	Strong	
A-		
BBB+		
BBB	Adequate	
BBB-		
BB+		Speculative Grade
BB	Vulnerable	
BB-		
B+		
B	More Vulnerable	
B-		
CCC+		
CCC	Imminent Vulnerability	
CCC-		
CC	Highly Imminent Vulnerability	
D	Default	

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Investment Grade Rating Categories

AAA

An obligation rated 'AAA' has the highest rating assigned by Standard & Poor's. The obligor's capacity to meet its financial commitment on the obligation is extremely strong.

AA

An obligation rated 'AA' differs from the highest-rated obligations only to a small degree. The obligor's capacity to meet its financial commitment on the obligation is very strong.

A

An obligation rated 'A' is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than obligations in higher-rated categories. However, the obligor's capacity to meet its financial commitment on the obligation is still strong.

BBB

An obligation rated 'BBB' exhibits adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation.

Plus (+) or minus (-)

The ratings from 'AA' to 'CCC' may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within the major rating categories.

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Outlooks and CreditWatch

Rating Outlook Definitions

- **A Standard & Poor's rating outlook assesses the potential direction of a long-term credit rating over the intermediate term (typically six months to two years). In determining a rating outlook, consideration is given to any changes in the economic and/or fundamental business conditions. An outlook is not necessarily a precursor of a rating change or future CreditWatch action.**
  - "Positive" means that a rating may be raised.
  - "Negative" means that a rating may be lowered.
  - "Stable" means that a rating is not likely to change.
  - "Developing" means a rating may be raised or lowered.

Outlooks and CreditWatch

CreditWatch

- **CreditWatch highlights the potential direction of a short- or long-term rating. It focuses on identifiable events and short-term trends that cause ratings to be placed under special surveillance by Standard & Poor's analytical staff. These may include mergers, recapitalizations, voter referendums, regulatory action, or anticipated operating developments. Ratings appear on CreditWatch when such an event or a deviation from an expected trend occurs and additional information is necessary to evaluate the current rating. A listing, however, does not mean a rating change is inevitable, and whenever possible, a range of alternative ratings will be shown. CreditWatch is not intended to include all ratings under review, and rating changes may occur without the ratings having first appeared on CreditWatch.**
  - "positive" designation means that a rating may be raised
  - "negative" means a rating may be lowered
  - "developing" means that a rating may be raised, lowered, or even affirmed.

Water & Sewer Overview

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Revenue-Secured Debt: Key Rating Criteria

- **In September 2008, Standard & Poor's revised the criteria for water, sewer and drainage utility revenue bonds, citing:**
  - Monopolistic service provision
  - Price inelasticity
  - Rate competitiveness
  - Rate autonomy
  - Regulatory realities
- **We continue to provide our opinion on the key criteria points**
  - Economic considerations
  - Financial data/capital improvement plan
  - Rate-setting philosophy and practices
  - Operational characteristics
  - Management
  - Legal provisions

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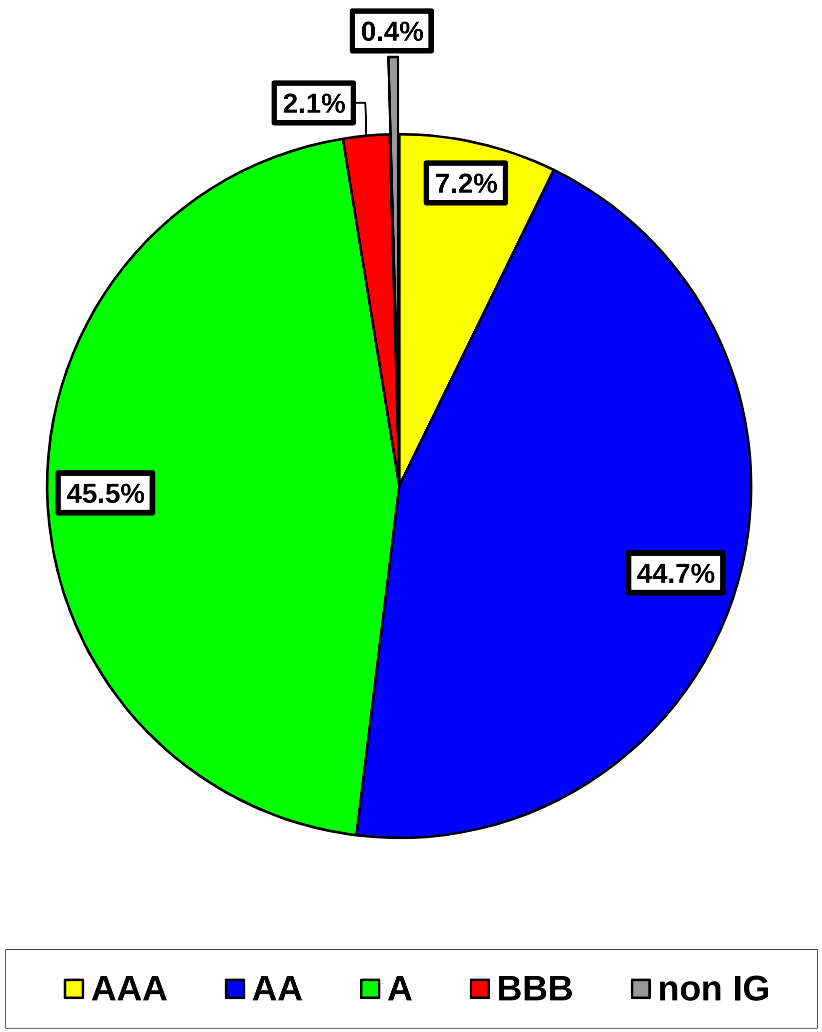
Current Ratings Distribution for USPF W-S Revenue Bonds

- **S&P maintains underlying ratings on about 1,400 municipal waterworks, sanitary sewer and/or drainage utilities**
  - In the U.S., there are about 53,000 systems, although the 4,000 largest serve over 80% of the population
- **Upgrades still outpace downgrades, but at a lesser rate**
- **Modal rating is A+**
- **Nearly all outlooks are stable**
  - 12 negative (or CW-Neg) outlooks
  - 12 positive outlooks



As of December 31, 2012

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Recessionary Recovery Observations

- Demand and O&M patterns are more often driven by weather than by economy, but not always
- Slower growth can actually help provide relief on parts of the capital budget, freeing up dollars to spend elsewhere
- S&P/Case-Shiller 20-City Home Price Index remains down 31% from its July 2006 peak and better than its recent low of negative 33.4% in March.

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Climatology, Hydrology and Long-Term Water Supply

- **In the U.S., most utilities make most of their revenues (often half or more) from Memorial Day to Labor Day**
- **Most common reason to miss budgeted DSC: temperate, rainy summertime**
- **Conversely, a hot, dry summertime can be great for net revenues, assuming adequacy of long-term water supply**
- **Standard & Poor’s has always factored water supply into the rating**
  - New supplies can take decades to become operational

No Shortage of Utility Infrastructure Needs

- **Every four years (on a staggered basis) the U.S. Environmental Protection Agency, the federal regulatory entity, conducts a questionnaire survey of utilities to try to estimate funding needs for the sector**
- **The 2011 survey for drinking water, results of which released in June 2013, reported needs of $384.2 billion**
- **The 2008 survey for sanitary sewer reported needs of $298 billion**
  - The results of the 2012 survey are expected to be publicly available sometime in mid 2014
- **The EPA surveys are used to determine the allocation of state revolving fund money the EPA appropriates to each state**
- **Other professional organizations associated with the U.S. utility sector have estimated the needs of the sector to be much greater**

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S&P Water-Sewer Medians

U.S. Water and Sewer Credit Ratios: Medians By Rating Category

	AAA	AA	A	BBB
Population	258,439	83,421	25,016	17,590
Total customers	81,568	26,230	8,120	4,552
Median household effective buying income as % of U.S.	125	103	88	87
Unemployment rate (%)	8.0	8.6	9.0	9.4
Concentration (%)	5.1	8.1	10.1	22.1
Water rate ($)	29.22	30.88	37.29	33.77
Sewer rate ($)	34.05	37.97	38.28	40.05
Days' cash	448	376	269	240
Debt to plant (%)	23.3	32.2	49.5	47.8
Total debt service coverage (DSC) (x)	2.28	1.92	1.52	1.06
Senior-lien DSC (x)	3.11	2.25	1.73	1.48

Source: "U.S. Municipal Water And Sewer System Metrics and Ratios: The Numbers are Just One Piece of The Puzzle" Published May 8, 2013

Hallmarks of Highly Rated Water Credits; Mostly Controllable

- Willingness to adjust rates in a timely manner, especially as connection fees have dried up
- Competitive rates, although in many cases hard to control
- Long-term financial planning
- Long-term capital planning
- Strategic planning
- Formal financial policies, including reserve policies, and historically adhering to such policies
- Prudent risk management policies and procedures
- Bond provisions (additional bonds test, rate covenant, reserve fund)

Hallmarks of Highly Rated Water Agencies; Mostly <u>Un</u>controllable

- **Full ratemaking autonomy**
- **Strong employment trends and/or opportunities and low unemployment**
- **High income and wealth indicators (median household income)**
- **Diversity in one's customer base (lack of concentration in revenues from leading 10 customers)**
- **Reliable and diverse water resource portfolio, although there is some room for control here**
- **Debt burden, although, an ability and willingness to raise rates and strong financial and strategic planning could, in many cases, ease debt needs**
- **Ample, diverse water supply**
- **Regulatory pressures**

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Why might cause a Downgrade?

Well, that depends……..

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Where to Find Out More Information

- **www.globalcreditportal.com/ratingsdirect/**
- **ratings.standardandpoors.com/**
- **www.infrastructureviews.com/**

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