

**National Federation of Municipal Analysts**  
*Recommended Best Practices in Disclosure*  
*for Water and Sewer Bonds*



*Draft dated December 11, 2017; Comments due March 15, 2018*

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Since its inception in 1983, the National Federation of Municipal Analysts (NFMA), has been at the forefront of efforts to improve disclosure of credit and market risks that have faced analysts and investors in the taxable and tax-exempt municipal bond markets. The NFMA's work in this regard has been recognized by other industry associations and by various regulatory bodies. The NFMA organization is composed of nearly 1,400 members, primarily research analysts, who evaluate credit and other risks of municipal securities. These individuals represent mutual funds, insurance companies, separately managed accounts, broker/dealers, bond insurers, and rating agencies, among other stakeholders.

One of the main initiatives of the NFMA is to promote timely and complete disclosure of financial and operating information needed to assess the credit quality and risk of a municipal debt issue. The NFMA's efforts have ranged from broad disclosure-related issues to more detailed, sector-specific work such as these Recommended Best Practices (RBPs) in Disclosure papers. For further information on the NFMA's continuing work in the area of disclosure, please see the "Disclosure Guidelines" and "Position Statements" pages of the organization's website at [www.nfma.org](http://www.nfma.org).

In order to develop RBPs in Disclosure for a specific sector, NFMA analysts work with non-analyst professionals such as municipal issuers, industry groups, bond counsel and underwriters who specialize in the particular area of the disclosure to develop best practices guidelines. RBPs are descriptions of the sector-specific financial and operating information needed to enable investors and other market participants to assess risk. The NFMA believes that the best practice in disclosure is one that provides a steady flow of timely information from borrowers to the market. Initial drafts of the RBPs in Disclosure are widely circulated, and input is then solicited from interested parties during an industry comment period. The paper is then revised to incorporate the feedback received.

This paper presents the RBP in Disclosure for Water and Sewer Bonds. This document is to be used in conjunction with, not to supplant, the guidance provided in the amendments to SEC Rule 15c2-12 (the Rule), which mandates an issuer's commitment to provide continuing disclosure of financial and operational information on an annual basis (see <http://www.sec.gov/> for further information about these amendments). The NFMA's disclosure efforts are a continuous process, and the guidelines provided in this paper will be revisited and changed as market conditions warrant. We encourage interested parties to submit comments at any time to Lisa Good at [lgood@nfma.org](mailto:lgood@nfma.org) for consideration in the development of future versions of these RBPs in Disclosure. *The NFMA understands that this RBP is not intended to be a one-size-fits-all recommendation and that all the information requested may not apply to every transaction in the sector.*

## **INTRODUCTION**

This RBP in Disclosure covers water and/or sewer systems that supply retail and/or wholesale customers. This paper also provides recommendations for information pertinent to an issuer that has its own sources for water and/or wastewater treatment facilities as well as those that contract with another municipal entity

for water supply and/or wastewater treatment service. We also touch upon stormwater, as the collection of fees to help finance projects related to flooding become more common. These guidelines are applicable to debt secured by revenues generated from the operation of the utility system(s). While our goal is to include the information analysts believe are key in evaluating the credit quality of the utility, we are aware that not all items requested will be readily available from all issuers or applicable to every system. We strongly encourage use of the Municipal Securities Rulemaking Board's (MSRB) Electronic Municipal Market Access (EMMA®) as the means to post these documents.

This RBP in Disclosure is organized in such a fashion as to provide the reader ease of finding what data elements are pertinent and where the information should be disclosed. The most detailed disclosure is generally provided in the preliminary/official statement when the bonds are being issued. Some of this information, while detailed, does not change drastically from year to year. Information that changes, both financial and operational, should be provided in the annual financial report or Comprehensive Annual Financial Report (CAFR), preferably within nine months after the fiscal year ends. Any information that may materially impact an analyst's view of the credit quality of the issuer, is requested to be provided on an interim basis once the information is public.

## **TYPE & FREQUENCY OF RBPs IN DISCLOSURE FOR WATER & SEWER BONDS**

### **Primary Market Disclosure**

At the time of a bond offering, the offering document (official statement or OS) should include summaries of the legal documents, information on the use of the funds, legal pledge of the issuer to repay the debt and current economic, financial and operating data relevant to that pledge upon which credit ratings and investment decisions are based. The OS should also include a summary of the pledge by the issuer to provide secondary market disclosure to the investing public, stating the frequency with which it will provide annual disclosure under the Rule as well as interim data.

### **Secondary Market – Annual and Interim Disclosure**

The most common annual secondary disclosure document for local governments is the CAFR, which includes audited financial statements and relevant statistical data, including updates on the types of key information provided in the OS. This information includes a description of the underlying economy and demographics of the service area – combined if both the water and sewer service areas are congruent, and separate if they are not.

The NFMA strongly urges utilities with outstanding bonds to issue secondary market updates on a more frequent basis, as financial and operating information can grow stale and inaccurately represent an issuer's profile. In general, interim financial disclosure is recommended on at least a quarterly basis, although a monthly basis is preferable for cash flow statements. Information to be included in an interim disclosure document need only include items which have changed since the last disclosure document (OS, annual report or last interim disclosure document) was prepared. It is expected that most items recommended to be included in the interim disclosure documents are already being produced, often publicly available, and may be unaudited.

**The NFMA’s general guidelines for RBPs in Secondary Market Disclosure include the following:**

1. Audited financial statements should be available to interested parties within nine months of the issuer’s fiscal year end or as early as available;
2. Any material event notices, including those required under the Rule, should be released in accordance with the Rule and referenced in the interim disclosure document either immediately preceding or following the event notice;
3. All disclosures should be made through the use of the MSRB’s EMMA website (available at <http://emma.msrb.org/Home>);
4. The NFMA strongly encourages issuers to create investor relations sections on their websites for the purpose of posting annual and interim financial and other disclosure information that is available (in addition to the use of EMMA); and,
5. The NFMA encourages issuers and/or their representatives to respond promptly to questions from the investing public about credit matters on outstanding obligations by returning calls and emails promptly.

**HOW TO USE THIS PAPER**

There are eight major categories of this RBP, each containing specific items deemed to be material in assessing credit risk. These sections are:

- I. General Description
- II. Economy of Service Area
- III. Revenue Base & Billing
- IV. Plants, Facilities & Water Supplies
- V. Environmental/Regulatory Issues
- VI. Security & Financial Metrics
- VII. Debt and Financial Obligations
- VIII. Management

*As previously stated, this RBP is not intended to be a one-size-fits-all recommendation. All the information requested may not apply to every transaction in this sector.*

**Three Columns – Description and Meaning of “X” and “\*”**

To the right of each item are three columns indicating whether the item should be disclosed in the Official Statement and updated in the Annual Disclosure and/or in the Interim Disclosure. An “X” in the column indicates that the item should be included in that disclosure document. We recommend that items marked with an asterisk (\*) be included in the Interim Disclosure Documents when the information originally disclosed has changed since it was disclosed in the Official Statement, Annual Disclosure and/or last Interim Disclosure.

**I. GENERAL DESCRIPTION**

	<b>Official Statement</b>	<b>Annual Report</b>	<b>Interim Disclosure</b>
Describe the issuer. Indicate if the issuer is an independent agency or a department with the city or county.	X		
Provide current ratings by rating agencies.	X	X	*
Provide investor contact information, including link to website where additional information may be found.	X	X	*

**II. ECONOMY OF THE SERVICE AREA**

	<b>Official Statement</b>	<b>Annual Report</b>	<b>Interim Disclosure</b>
Location, square miles covered, population, demographics, median household income, per capita income, % of population under the poverty line and income range of population served.	X	X	
% of area developed, to determine if it is mature or growing.	X	X	
Major industries, top employers.	X	X	*
Unemployment rate and trend.	X	X	

**III. REVENUE BASE & BILLING**

<b>WATER AND/OR SEWER SYSTEM Description of Service Area</b>	<b>Official Statement</b>	<b>Annual Report</b>	<b>Interim Disclosure</b>
<u>Retail:</u>			
Describe new major development in the service area that may change the composition or size of the customer base by 5% or more. (e.g., annexation).	X	X	*
Number of connections/customers.	X	X	
Customer breakdown between residential, commercial and industrial by number of connections and revenue collected.	X	X	
List top ten customers, nature of their business and % of revenue contributed.	X	X	

<b>WATER AND/OR SEWER SYSTEM Description of Service Area</b>	<b>Official Statement</b>	<b>Annual Report</b>	<b>Interim Disclosure</b>
<u>Retail, continued</u>			
Describe process for forecasting changes in customer composition over time. Include who performs the study and how often it is done.	X		
<u>Wholesale:</u>			
Provide the allocation between retail and wholesale by customer count and revenue.	X	X	
If the issuer is not the sole provider of water for this wholesale customer, state % being provided.	X	X	
List top wholesale customers and % of operating revenue contributed.	X	X	
Describe wholesale contracts – take-or-pay, length of contract, minimum water purchase requirements. Detail any recent contract changes.	X	X	*
Provide update on any litigation with wholesale customers.	X	X	*
Elaborate on risk of losing a major customer to another supplier or plan to establish an independent system.	X	X	
<u>Billing:</u>			
Average annual residential water and sewer bill including any stormwater fees. State assumption for quantity used.	X	X	
Describe how water bill is calculated. Detail volumetric and fixed charges.	X		
Describe how sewer charges are calculated, if based on water usage or fixed fee.	X		
Describe how stormwater charges are calculated.	X		
Provide frequency of billing, and state which entity is providing this function. State if charges are separately billed or included on the property tax bill.	X		

<b>WATER AND/OR SEWER SYSTEM</b>	<b>Official Statement</b>	<b>Annual Report</b>	<b>Interim Disclosure</b>
<u>Billing, continued:</u>			
Describe enforcement of bill collection (e.g., water shut-offs, lien on property).	X		
Describe assistance program and number of requests received for payment assistance.	X		
Describe procedure/approvals needed in order to raise rates.	X		
Describe rate regulation and approach to raise rates. Include information on any limitations and approximate length of time it takes to implement the rate changes.	X	X	
Describe remedies for failure or inability to raise rates to meet rate covenant.	X		
Provide history of rate increases as well as those approved for future years.	X	X	*
Include a table showing how rates compare to those in neighboring areas and assumption of quantity used.	X		

**IV. PLANTS, FACILITIES & WATER SUPPLIES**

<b>WATER SYSTEM</b>	<b>Official Statement</b>	<b>Annual Report</b>	<b>Interim Disclosure</b>
<b>Purchasing Supply</b>			
Name of provider(s).	X	X	
Amount of water being purchased by each in million gallons (mg).	X	X	
Describe key contract provisions, including limit on quantity, expiration, obligations.	X	X	
Describe key wholesaler source of water supply and water rights.	X		
Detail status if there are plans to change provider(s) or find new source of water.	X		*
If water purchased must be treated, see “WATER TREATMENT” below.	X		

<b>WATER SYSTEM Own Supply</b>	<b>Official Statement</b>	<b>Annual Report</b>	<b>Interim Disclosure</b>
Provide quantity available in mg.	X	X	
List sources and indicate % supplied by ground water, surface water, potable, reuse, recycled water and conservation.	X	X	
Water loss rates %. Please disclose using a measurement recommended by a professional organization such as the American Water Works Association's (AWWA) Water Loss Methodology.	X	X	
List restrictions or plans to change the mix of water sources, including reductions on the dependence of ground water.	X	X	*
<b>WATER SYSTEM Purchase &amp; Own Supply</b>			
Current yield utilized from each source.	X	X	
Maximum yield that can be derived from each source.	X	X	
<b>WATER SYSTEM Other Information</b>			
Estimated number of years current water supply will be sufficient.	X	X	*
Provide information on water storage capacity.	X		*
List any mandated restrictions with regard to access (e.g., reduction of groundwater usage) or allocation from purchased water sources.	X	X	*
Describe any restrictions on the retail users, such as yard watering or car washing, due to drought.	X	X	*
Provide data on current volumetric conditions of major sources (e.g., % of dependable yield in mgd or equivalent and five-year historical trend of major supply sources).	X	X	
Where relevant, disclose the relative seniority of water rights for major sources, the volume of water apportioned to them and the sensitivity of those rights to flow reductions.	X		

<b>WATER TREATMENT Own Facilities</b>	<b>Official Statement</b>	<b>Annual Report</b>	<b>Interim Disclosure</b>
Describe water treatment plant(s).	X		
Age of plant(s) and other infrastructure.	X	X	
Asset condition study (year completed and entity that completed the study).	X		
Treatment capacity by mgd.	X	X	
Average and maximum daily demand by mgd (including five-year history).	X	X	
Total water demand by mg.	X	X	
Detail plans for replacement, deferred maintenance, expansion and justification for need.	X	X	*
<b>SEWER SYSTEM Contract for Wastewater Management</b>			
Name of entity providing service.	X	X	
Provide key contract details, volume limitations, expiration and obligations.	X	X	
If there are plans to change where wastewater will be treated, detail status.	X	X	*
<b>SEWER SYSTEM Operate Wastewater Treatment Plants</b>			
Describe the wastewater treatment plant(s).	X	X	
Age of plant(s) and other infrastructure.	X	X	
Treatment plant design capacity by mgd.	X	X	
Average daily demand by mgd (dry weather flow).	X	X	
Discuss system's collection, pumping, treatment and ability to handle wet weather and peak hourly flows.	X	X	
Plans for replacement, deferred maintenance, expansion and justification for need.	X	X	*
% of the collection system that combines wastewater and stormwater.	X	X	

## V. ENVIRONMENTAL/REGULATORY ISSUES

<b>ISSUES IMPACTING WATER</b>	<b>Official Statement</b>	<b>Annual Report</b>	<b>Interim Disclosure</b>
Describe compliance with federal Safe Drinking Water Act.	X	X	*
Provide copy or summary of latest water quality report with summary of violations.	X	X	*
Describe water lines and pipe age/quality, including number of breaks, any incidences of contamination and leak monitoring program.	X	X	
In the event of contamination, describe customer outreach and resources utility is using to communicate with customers.	X		*
Describe measures being taken in the event of major natural disasters.	X	X	*
Comment on impact from any recent natural disaster and discuss strategies for future events.	X	X	*
Watershed protection – Describe strategies management is taking to protect water supply at the source and the cost of these programs.	X		*
<b>ISSUES IMPACTING SEWER</b>			
Describe compliance with federal Clean Water Act.	X	X	*
Report National Pollutant Discharge Elimination System (NPDES) permit status such as expiration and plans for renewal.	X	X	
Provide copy of the latest NPDES permit annual report and any related feedback from the state or U.S. Environmental Protection Agency (EPA).	X	X	
Describe consent decrees (what needs to be done, estimated cost, milestone and completion dates).	X	X	*
Specify if response to decrees requires implementation of large-scale infrastructure projects, and articulate potential impact on future rates.	X	X	*

<b>ISSUES IMPACTING SEWER, continued</b>	<b>Official Statement</b>	<b>Annual Report</b>	<b>Interim Disclosure</b>
New consent decrees/administrative orders that are on the horizon, and the cost of current and future compliance.	X	X	*
Describe Long Term Control Plan for managing Combined Sewer Overflow (CSOs) and any consent decrees/orders the utility is under for compliance with regulations governing CSOs. Provide cost and major milestone dates included in these plans.	X	X	
<b>CLIMATE CHANGE/NATURAL DISASTER READINESS</b>			
<b>Impact on Water &amp; Sewer Systems</b>			
Disclose the potential impact of climate change on assets, water supplies, and pledged revenues.	X		*
Based on the assessment, describe changes to planning including long-term water supply planning, operations, capital investment and risk management.	X		
Describe plans for implementing flood mitigation strategies, and other measures for system resiliency and long-term sustainability to address such things as rising sea levels and more intense and frequent storm events.	X		
Describe potential risks to facilities from seismic activity or other natural disasters, and any mitigation measures.	X		*
<b>OTHER ISSUES</b>			
Describe local, state or federal regulations including regulations related to endangered species, coastal zone management, historical preservation and air quality standards.	X		
List any pending or potential federal/state/local regulatory issues that may have a material impact on provision of service, water supply, water quality, watershed protection, such as state or regional water plans. Assess potential costs.	X	X	*
Describe efforts to assess/minimize energy footprint. Comment on items such as energy or CO2 reduction.	X		*

<b>OTHER ISSUES, continued</b>	<b>Official Statement</b>	<b>Annual Report</b>	<b>Interim Disclosure</b>
Disclose steps taken to identify and protect against cyber threats.	X		*
Disclose any security breaches or other unauthorized access or actions, regulatory actions, litigation, investigations, remediation costs, and loss of revenue or other potential liability that may arise as a result.	X	X	*

**VI. SECURITY & FINANCIAL METRICS**

	<b>Official Statement</b>	<b>Annual Report</b>	<b>Interim Disclosure</b>
Provide clear and complete description of the revenue sources pledged to the repayment of the bonds. Security should include: priority of payment from revenue stream, rate covenant, additional bonds test and explanation as to how calculation is made (e.g., includes rate stabilization fund), flow of funds, bond reserve fund requirement and how it is being satisfied (cash or surety bond).	X	X	
If connection fees/impact fees are included as part of the security package, separately provide the amount collected from this source.	X	X	
Explain how revenues of the water/sewer/stormwater system are legally protected and separate from those of the general government. Are revenues transferred to a Trustee or otherwise earmarked? If so, how often do these transfers occur?	X		
Does the utility make transfers such as Payment in Lieu of Taxes (PILOT payments) to the General Fund and if so, how is the amount calculated? Describe limitations. If not, what are the permitted uses of year end balances and at what point in the fiscal year is it determined whether a surplus exists?	X	X	
Describe state law and whether the water/sewer system can declare bankruptcy.	X		
Provide detailed listing of operating expenses.	X	X	

**SECURITY & FINANCIAL METRICS, continued**

	<b>Official Statement</b>	<b>Annual Report</b>	<b>Interim Disclosure</b>
Describe any legal protections enshrined in state statute. Is the property of the system subject to attachment or lien? What are permitted encumbrances of system facilities and under what circumstances can system property be sold, leased or mortgaged?	X		
Describe all funds and accounts to be established, including the minimum funding levels, replenishment requirements and any restrictions on use.	X		
Annual audited financial statements including notes for the current and prior year	X	X	
Provide % of total utility billed that remains delinquent.	X	X	*
In a tabular format, provide five years of historical data showing revenues, expenses, net revenue available for debt service, debt service paid, annual and maximum debt service coverage. Debt service coverage provided in the Annual Report should use the methodology consistent with the Official Statement.	X	X	
Current balances for all required funds (e.g., bond reserve fund, rate stabilization fund, replacement fund).	X	X	
Monthly cash flows showing year-to-date major revenues and expenditures versus the budgeted amounts.			X
Describe policy with regard to cash. Is there a minimum amount required to be maintained?	X		
Provide the amount of cash available for operations. Describe in which funds they are located.	X	X	

## VII. DEBT & FINANCIAL OBLIGATIONS

	Official Statement	Annual Report	Interim Disclosure
Provide detailed information on debt outstanding and the priority of payment. Include information on senior and junior lien bonds, commercial paper, bank loans and loans with state agencies. Also include any off balance sheet debt (e.g., a retail system that makes annual payments to a wholesaler for a debt-financed project.)	X	X	
For bonds issued as Build America Bonds (BABS), include the amount of subsidy currently provided by the federal government. Indicate if BAB subsidies are included as a revenue or netted from debt service, in coverage.	X	X	
Restrictions on additional bond issuances (minimum debt service coverage, priority of payment).	X		
Disclose any liens closed to new issuances.	X		
Provide full schedule showing annual principal and interest payments. If applicable, separate schedule by lien and provide separate columns for principal and interest.	X	X	
Describe issuer's restrictions, if any, on the issuance of variable rate debt. Include information on how annual debt service is calculated for purposes of the additional bonds test and rate covenant. Explain how expenses of remarketing agent and credit enhancement are paid. Elaborate on termination triggers.	X	X	*1
Describe issuer's restrictions, if any, on the issuance of swaps or other derivative instruments. Include how swap payments are treated in the flow of funds priority. Discuss thresholds for collateral posting and termination payments. Include most recent available mark-to-market valuation. For issuers with multiple swaps, provide a summary chart listing swaps and the associated bond series.	X	X	

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<sup>1</sup> Information provided should include rating downgrades that would lead to posting of collateral or other action and term-out provision for variable rate demand obligations and floating rate notes.

<b>DEBT &amp; FINANCIAL OBLIGATIONS, continued</b>	<b>Official Statement</b>	<b>Annual Report</b>	<b>Interim Disclosure</b>
Plan for future debt issuances. Detail five-year capital improvement plan, broken down by fiscal year and portion that is expected to be debt financed. Include required rate increases and projected debt service coverage.	X	X	*
Identify any existing and past monetary defaults and remedy. Describe impact on credit ratings and outline reasons for downgrade actions.	X	X	*
Describe utility’s pension and other post-employment benefits (OPEB) obligations. Information should include description of the plan, assumptions used, history of annual contributions (what % of the Annual Required Contribution is actually being paid) and the plan fiduciary net position as a % of the total pension liability. If system participates in multiple employer plan, detail how annual contribution is determined (e.g., % of payroll). Include information on any recent pension reforms.	X	X	*

**VIII. MANAGEMENT**

	<b>Official Statement</b>	<b>Annual Report</b>	<b>Interim Disclosure</b>
Describe governance and form of management.	X		
Describe inter-departmental coordination or decision making relevant to financing water or wastewater projects.	X		
Describe tenure and experience of staffing and succession planning.	X		
Disclose if there is a chief information security officer (CISO) and staff dedicated to finding cyber security vulnerabilities and risks.	X		
Disclose if there is staff dedicated to managing sustainability issues such as conservation, drought planning and Green Bond issuance reporting.	X		
Describe any labor issues including significant changes to staffing that may impact operations.	X	X	*

<b>MANAGEMENT, continued</b>	<b>Official Statement</b>	<b>Annual Report</b>	<b>Interim Disclosure</b>
Describe approach to budget forecasting, financial and capital planning.	X		
Comment on timeliness of financial reporting.	X		
Comment on adherence to regulation and approach to consent decree. Describe approach for engaging/educating community members and key stakeholder groups on compliance risks and ways to mitigate.	X		
Describe any known or pending litigation that may have a material adverse financial impact.	X	X	*

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*NFMA constituent societies, individual members or their firms may not agree with all provisions in these RBPs. The NFMA is not a regulatory agency and compliance with the RBPs advanced herein does not constitute a “safe harbor” from any State or Federal rules and regulations. Nothing in this paper is to be construed as an offer or recommendation to buy or sell any security or class of securities.*