

## Narragansett Bay Commission, Rhode Island

Assigned	Rating	Outlook
Combined Sewer Overflow (CSO) Phase III Facilities WIFIA Loan	AA	Stable

**Methodology:**

[U.S. Municipal Water and Sewer Revenue Bond Rating Methodology](#)

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**Rating Summary:** The Narragansett Bay Commission (NBC) provides wastewater treatment and collection service to the greater Providence metropolitan area. It is a public corporation incorporated in 1980 pursuant to state statute and provides services to over 360,000 residents and about 7,700 commercial users.

NBC owns and operates the two largest wastewater treatment facilities in the state, Field’s Point and Bucklin Point, as well as a substantial wastewater transmission network.

To comply with a consent decree with the Rhode Island Department of Environmental Management (RIDEM), NBC is in the third and final phase of a Combined Sewer Overflow (CSO) Abatement Program. Each phase involves the construction of CSO capture and storage system. CSO’s are stored and then subsequently treated over time when system capacity is able to accommodate the flow. Phases I and II,

completed in 2008 and 2014, respectively, are CSO capture, transport and storage systems that feed into the Field’s Point Treatment Facility. Phase III will feed into the Bucklin Point Treatment Facility. Phase III has four components, Phases IIIA-IIID, with Phase IIIA the largest component. NBC reports significant water quality improvements in the Narragansett Bay to date from Phases I and II with beach closures reduced by 85% and improved shell-fishing conditions. Further environmental improvements are expected upon completion of Phase IIIA when up to 95% of the CSO within the Bucklin Point service area will be treated.

KBRA’s rating applies to a \$268.7 million WIFIA Loan to partially finance Phase IIIA that has a total capital cost of \$584 million. The balance of the capital costs will be financed with revenue bonds and SRF Loans of approximately \$224 million expected to be issued in 2024-27, and \$59 million of PAYGO funded over the construction period. Design for Phase IIIA is about 25% complete, and construction is expected to be completed in December 2026. Phases B, C and D are expected to commence in 2027, 2032, and 2037, respectively and have a total cost of about \$276 million.

The financial operations of NBC are well positioned to accommodate the capital and borrowing plan. Capital funding to date has been supported by PAYGO and timely rate adjustment actions and this pattern is expected to continue. Although debt service costs will increase about 16% from \$45.5 million (2018) to \$52.6 million (2025), rate levels are expected to be reasonable following the 14% increase through the same period. Debt financing will be incurred in a measured pattern over the construction period and the amortization of outstanding debt is conservative. These factors help position NBC to incur additional debt to finance the current project without undue strain.

The demographics of the service are generally good. Wealth levels are below state averages within the defined geography of NBC reflecting its older manufacturing and urban base. However, the service area represents an important economic area, including the city of Providence, the largest city in Rhode Island and the state capitol. As such it has been benefitting from the more favorable economic growth the state has experienced in recent years. Employment growth has nearly equaled the overall U.S. experience since 2012 and the unemployment rate is now slightly less than the U.S.

NBC’s rates are regulated by the Rhode Island Public Utility Commission (PUC). KBRA’s rating and outlook reflect the expectation that rate setting will continue to be constructive and respect the rate covenant provisions.

The Stable Outlook reflects the historically demonstrated record of strong financial management and willingness and ability to increase rates.

**Key Rating Strengths**

- Experienced management team that has a good background completing projects that are very similar to the current undertaking.
- Favorable history of rate setting and financial management.
- Comprehensive capital planning process.

**Key Rating Concerns**

- Rate increases are subject to the review of the Rhode Island Public Utilities Commission. However, NBC has proactively kept the PUC informed of capital projects and rate requirements and the history of rate review and approval has been constructive.
- Debt levels are above average.

**Drivers for Rating Change**

• Transitioning to an environment where future capital needs are more moderate.	+
• Improving wealth levels within the service area.	
• Less favorable rate review environment.	-

**Key Ratios**

Service Area Population	539,649
Change in Population 2010-2017	1.1%
Service Area Income per Capita	\$ 29,898
Service Area Income per Capita % of State	86.6%
Debt Service Coverage, 2018	1.3x
Expected Rate Increase Through 2025 (user fees)	14.1%
Annual Debt Service Requirements, 2018	\$ 45,524
Annual Debt Service Requirements, 2025	\$ 52,650
% Chg. From 2018 Annual Debt Service Requirements	15.7%
Annual Debt Service Requirements, 2040	\$ 64,752
% Chg. From 2018 Annual Debt Service Requirements	23.0%

*Note: Debt service figures in thousands; projected for 2025 and 2040.*

Rating Determinants (RD)	
1. Management	AA+
2. Legal Mechanics and Security Provisions	AA+
3. Service Area and Economy	AA-
4. System Characteristics	AA
5. Financial Metrics	AA-
6. Debt Structure and Capital Plan Requirements	A+

**RD 1: Management**

The Rhode Island General Assembly in 1980 established by statute the commission to correct and minimize pollution discharges into the Narragansett Upper Bay. On January 1, 1992, the former Blackstone Valley District Commission was merged into NBC, expanding the service area.

NBC is governed by a nineteen-member Board of Commissioners (Board) appointed for three-year terms. Ten public members are appointed by the Governor, two by the Mayor of the City of Providence, one each by the Mayors of the Towns of North Providence, Johnston and Cumberland, one each by the Mayors of the Cities of East Providence, Central Falls and Pawtucket and one by the Town Administrator of Lincoln. The Board’s Chairperson, Vice-Chairperson, and Treasurer are elected annually by the Board. The Board-appointed Executive Director, who also serves as Secretary to the Board, administers, manages and directs the affairs and business of NBC subject to the policies, control and direction of the Board.

Laurie Horridge, Executive Director appointed in January 2019. Ms. Horridge first joined NBC in 1992 as Chief of Enforcement, and later served as General Counsel and Director of Executive Affairs and Director of Administration.

**Rate Setting Authority and Process**

NBC’s rates are regulated by the Rhode Island Public Utilities Commission (PUC). Two types of applications for rate relief are available to NBC. The first is a general rate relief application. The second is a debt service compliance filing for rate relief related to debt service (DS) and debt service coverage (DSC). The latter type involves a simpler process. NBC reports that there have been no adjustments by the PUC to rate requests for debt service compliance.

Usually a general rate case takes approximately 9 months, while a debt service compliance filing takes approximately 60 days. Once authorized by NBC’s Board of Commissioners, rate applications are prepared by NBC staff and filed with the PUC. Copies are also served to the Rhode Island Division of Public Utilities and Carriers (DPUC) and the Rhode Island Attorney General’s Office. Notification of rate applications are provided in billing inserts and posted publicly on the PUC’s website. As part of the budget process, which begins in July and August (in the prior fiscal year), if it’s determined that user charges must be adjusted, after the Board approval, the rate application will be submitted to the PUC on or about September 30 in order to ensure new rates are in effect by the following July 1 (start of the fiscal year).

A general rate relief application includes pre-filed testimony and schedules from NBC employees, outside experts, etc. the Commission must respond to data requests from the PUC and DPUC. A written Report and Order is issued which notes the effective date of the new rates.

A rate relief for DS and DSC is generally more expeditious as the scope is limited.

The most recent rate increases were 2.98%, effective January 1, 2019, and 5.88% effective July 1, 2019.

**Managerial Experience**

The Commission’s senior leadership team has considerable experience and have worked together for an extended period. While Ms. Horridge was just appointed Executive Director of NBC in January 2019, she has been with NBC for 27 years. Karen Giebink, CFO, has been with NBC for 30 years. In addition, all the respective directors of Administration, Construction & Engineering, Operations & Maintenance, and Environmental Science & Compliance have been with NBC for at least 25 years. Gregory Waugh, the construction manager, and David Bowen, the engineering manager, were brought on in 2018, however, both have over 30 years of experience. Kathryn Kelly, the CSO Program Manager, has been at NBC for 19 years.

**Capital Plan Management**

NBC is required to have a Fiscal Sustainability Plan (FSP) in order to borrow funds through the Rhode Island Infrastructure Bank (RIIB). The FSP must comply with the Water Resources Reform and Development Plan Act under the Federal Water Pollution Control Act. Under the FSP, the Asset Management Program, Capital Improvement Program (CIP), Annual Operating Budget and Operating Capital Program are integrated.

The Asset Management Program identifies short-term capital needs and provides inputs for the development of a long-term (five year) asset replacement program which are incorporated into NBC’s operating Capital Program. The CIP identifies investments necessary to comply with current and future regulatory requirements, as well as other improvements to increase efficiency and maintain system integrity. The components of the FSP are shown in Figure 1.

**Figure 1**



NBC is under a consent decree to implement a federally mandated CSO program. Phases I and II of the project were completed in 2008 and 2014, respectively. NBC reports they have contributed to significant water quality improvement in Narragansett Bay and urban rivers, decreasing bathing closures by 85% and expanding shell fishing. Upon completion of Phase III, approximately 95% of the annual CSO volume will receive treatment. NBC’s Consent Agreement was renegotiated and signed in January 2019. As a result of this revaluation, Phase III was divided into four phases (A-D) to be completed by 2041.

**Project**

The project financed by the WIFIA loan is Phase IIIA. It consists of the construction of a 11,700-foot long, 59 million gallon capacity deep rock tunnel along the Seekonk and Blackstone rivers to store combined sewer overflows and 13 other construction contracts. The project will allow CSO’s to be stored and treated gradually over time consistent with available capacity at the Bucklin Point treatment facility. Project design is underway and about 25% complete, design completion is expected in December 2021. CSO construction completion for all contracts is expected in December 2026.

The WIFIA loan will finance nearly one-half of Phase IIIA with the balance from revenue bonds, SFR loans (through the Rhode Island Infrastructure Bank), and PAYGO.

NBC has completed two similar stormwater storage tunnels that feed into the Fields Point treatment facility.

**Environmental Compliance**

NBC is regulated by the Rhode Island Department of Environmental Management (RIDEM) and the U.S. Environmental Protection Agency (USEPA) to ensure compliance with the Federal Clean Air and Clean Water Acts. New Rhode Island Pollutant Discharge Elimination System (RIPDES) permits were issued for each of NBC’s wastewater treatment plants in 2017. The new permits include more stringent limits for certain parameters and require various studies and evaluations to be undertaken by NBC. NBC appealed several permit requirements and the final Consent Agreement was signed in January 2019, resolving all challenged permit issues. NBC is also under a Consent Agreement with RIDEM to implement a federally mandated Combined Sewer Overflow (CSO) Program that will address the Field’s Point and Bucklin Point service areas.

**Financial Management Policies and Procedures**

NBC’s revenue policies ensure net revenue is equal to at least 125% of annual debt service in accordance with the rate covenants as set forth in the Trust Indenture securing NBC’s revenue bonds. NBC will update and modify the Strategic Plan as needed, to accurately reflect priorities and goals and its long-term financial model, in order to assess the impacts of current and future operating and capital requirements.

**Debt Policy**

In accordance with Rhode Island General Law (RIGL) 39-3-15, the Division of Public Utilities and Carriers must approve NBC’s issuance of long-term debt. However, there are no statutory limits on debt issuances. NBC maintains a long-term financing model which is used as a basis for determining debt issuance needs. NBC’s lowest cost capital financing traditionally has been through subsidized SRF loans from the RIIB. NBC will use SRF funds to the extent they are available and may issue short- or long-term debt in fixed or variable rate modes to finance its capital program.

## **RD 2: Legal Mechanics and Security Provisions**

Debt service on NBC's bonds are payable from net system revenues, which are on parity with outstanding revenue bonds and Rhode Island Infrastructure Bank (RIIB) loans. The legal mechanics and security provisions provide a strong level of bondholder/WIFIA loan lender protection.

### **Rate Covenant**

The Commission shall fix, charge, and collect rates, fees and charges for the wastewater system at levels sufficient so that total net revenues during each fiscal year are equal to at least one hundred twenty-five percent (125%) of annual debt service with respect to all outstanding revenue bonds (including WIFIA loan) and one hundred thirty-five percent (135%) of annual debt service when RIIB loans are included.

### **Additional Bonds Test**

The additional bonds test requires estimated annual net revenues for the three fiscal years following issuance of bonds to be 1.25x the debt service requirement for revenues bond and 1.35x the debt service requirement for all RIIB loans.

### **Required Reserves**

There is no reserve requirement for the WIFIA Loan. There is a debt service reserve requirement for NBC's outstanding revenue bonds that is set on a series basis, as provided in each supplemental indenture. Generally, the debt service reserve is the lesser 10% of original principal amount, 125% average annual debt service, maximum annual debt service (MADS), or the maximum amount permitted by federal tax law without requiring yield restriction.

### **Flow of Funds**

Per the Master Indenture, all revenues are deposited into the Revenue Fund as promptly as practicable. On the third day prior to the last business day of each month, available revenues in the Revenue Fund are transferred per the flow of funds. After payment of operating expenses through the Operation and Maintenance Fund, net revenues are applied to accounts in the Debt Service Fund. Debt service deposits are 1/6<sup>th</sup> of interest and 1/12<sup>th</sup> of principal. Generally, in practice, after meeting the Indenture's debt service coverage requirement, excess amounts in the Debt Service Fund's Stabilization Account are transferred to various accounts in the Project Fund in subsequent months to pay for capital projects and operating capital.

Based on the foregoing, KBRA views the legal mechanics and the security provisions of the Commission's outstanding wastewater system revenue bonds, including the WIFIA loan, as being consistent with an AA+ rating determinant rating.

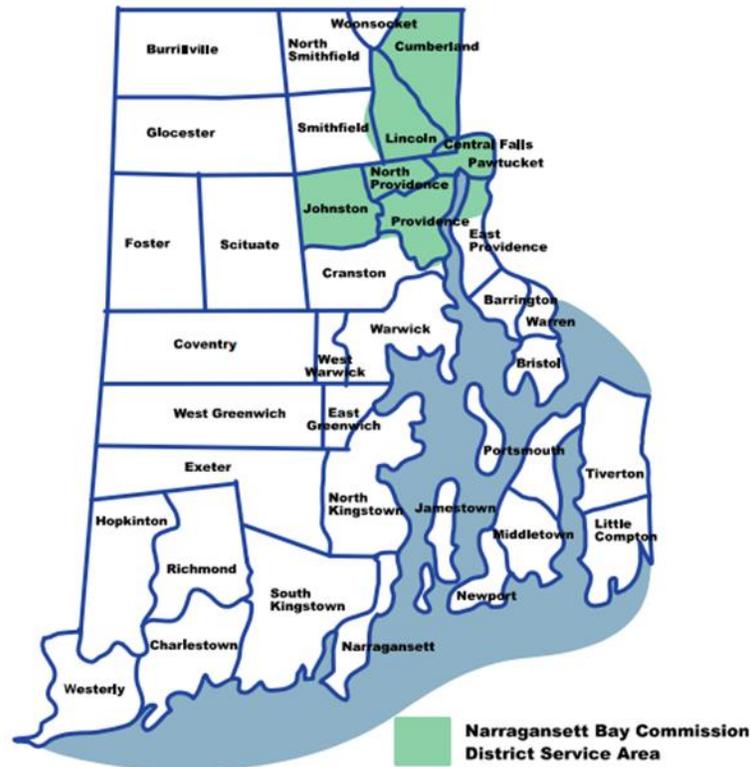
## **Bankruptcy Assessment**

KBRA has consulted outside counsel and the following represents our understanding of the material bankruptcy issues. To be a debtor under the municipal bankruptcy provisions of the U.S. Bankruptcy Code (Chapter 9), a local governmental entity must, among other things, qualify under the definition of "municipality" in the Bankruptcy Code, and must also be specifically authorized to file a bankruptcy petition by the state in which it is located. The Commission is a public corporation of the State of Rhode Island performing a traditional government function, with a distinct legal existence from the State (and not constituting a department of State government), and thus is a "municipality" as defined under the Bankruptcy Code. As to specific authorization, Rhode Island has several layers of potential supervision for fiscally challenged cities, towns, and fire districts, the implementation of which may ultimately lead to the appointment of a Receiver to act for the public entity. Rhode Island state law specifically authorizes such a Receiver to file a Chapter 9 petition for the relevant city, town or fire district. It is unclear, however, whether the Commission is subject to these supervisory procedures. In any case, regardless of whether the latter are applicable to the Commission, if the Commission were to become financially distressed the State could enact specific legislation permitting it to commence a Chapter 9 case.

## **RD 3: Service Area and Economy**

NBC's serve area encompasses the metropolitan Providence and Blackstone Valley areas, which include Providence, North Providence, Johnston, Pawtucket, Central Falls, Cumberland, Lincoln, the northern portion of East Providence, and small sections of Cranston and Smithfield. Of the eight major communities served by NBC, Providence, Pawtucket, and North Providence account for approximately 70% of the Commission's total accounts. Roughly 91% of accounts are residential.

**Figure 2**



**Demographics**

The populations of the ten cities and towns which are in whole or in part in NBC’s service area total approximately 540,000, which represents just over 50% of the state’s population. Since 2010, the service area’s population has grown at an average annual rate of 0.2%, which outpaces the state (0.1%) but trails the growth of the U.S. (0.7%) across the same period. As defined below, NBC’s service area’s per capita income represents approximately 87% of the state.

**Figure 3**

	2017 Population	Chg. From 2010	2017 Age Dependency Ratio <sup>1 2</sup>	Chg. From 2010	2017 Population with B.A. Degree or Higher <sup>2</sup>	Chg. From 2010	2017 Poverty Level <sup>2</sup>	Chg. From 2010	2017 Income per Capita	Chg. From 2010
Service Area <sup>3</sup>	539,649	1.1%	64.6%	4.4	28.7%	3.0	14.9%	-3.4	29,898	23.5%
Rhode Island	1,059,639	0.6%	56.7%	1.1	33.5%	3.2	11.6%	-2.4	34,511	24.7%
United States	325,719,178	5.3%	61.8%	3.0	32.0%	3.8	13.4%	-1.9	32,397	24.3%
Service Area as % of Rhode Island	NA		113.9%		85.7%		128.6%		86.6%	
Service Area as % of United States	NA		104.5%		89.6%		111.3%		92.3%	

Source: Source: U.S. Census Bureau is used as the source in order to provide a consistent comparison among different units of government.

<sup>1</sup> Age dependency ratio is the sum of the population under 18 yrs and over 65 yrs divided by persons age 18 to 64 yrs.

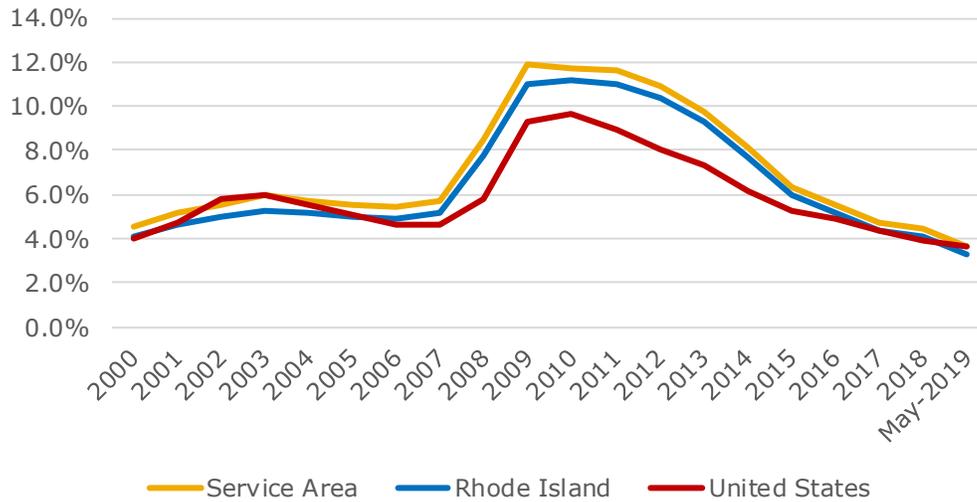
<sup>2</sup> Year over year change shown as nominal change in percentage points.

<sup>3</sup> Service area is comprised of Providence, North Providence, Johnston, Pawtucket, Central Falls, Cumberland, Lincoln, East Providence, Cranston, and Smithfield.

**Unemployment and Employment**

The service area’s unemployment rate has historically exceeded the state’s average. However, like the region and the state, the service area’s unemployment rate has been lower than pre-financial crisis levels. It has decreased in each year since 2009. Employment growth in the service area has been strong. Average annual growth from 2010 through 2018 was 0.9% compared with 0.7% for the state across the same period.

**Figure 4**  
Annual Unemployment



Source: Bureau of Labor Statistics.

Overall employment in Rhode Island has shifted from the manufacturing sector towards employment in the services sector. In 2000, the manufacturing sector represented over 12% of employment in the state; in 2017 it represented nearly 7%. The professional and business services, and the education and health services sectors now represent greater component of the state’s employment. Employment sectors in the state remain diverse with no sector representing more than 20% of employment.

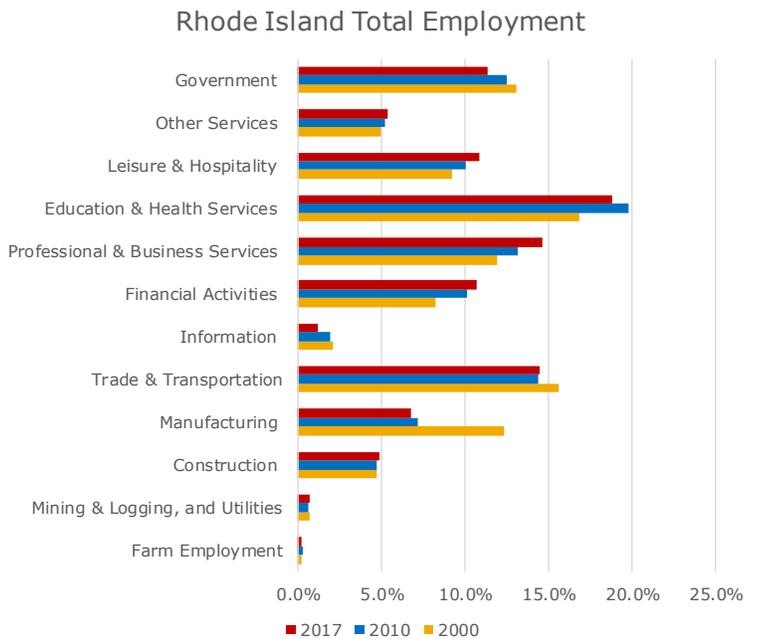
**Figure 5**

Employment						
Year	Service Area <sup>1</sup>	Rhode Island	United States			
2000	247,480	1.0%	521,313	1.1%	136,901	2.5%
2001	246,432	-0.4%	519,044	-0.4%	136,939	0.0%
2002	248,133	0.7%	522,832	0.7%	136,481	-0.3%
2003	251,788	1.5%	530,567	1.5%	137,729	0.9%
2004	251,715	0.0%	529,893	-0.1%	139,240	1.1%
2005	254,924	1.3%	537,194	1.4%	141,710	1.8%
2006	258,627	1.5%	544,357	1.3%	144,418	1.9%
2007	257,946	-0.3%	543,401	-0.2%	146,050	1.1%
2008	249,706	-3.2%	525,941	-3.2%	145,373	-0.5%
2009	239,676	-4.0%	504,951	-4.0%	139,894	-3.8%
2010	245,768	2.5%	503,216	-0.3%	139,077	-0.6%
2011	244,196	-0.6%	498,248	-1.0%	139,885	0.6%
2012	245,695	0.6%	500,434	0.4%	142,475	1.9%
2013	247,999	0.9%	505,370	1.0%	143,941	1.0%
2014	252,702	1.9%	513,753	1.7%	146,319	1.7%
2015	256,687	1.6%	521,373	1.5%	148,847	1.7%
2016	258,363	0.7%	524,702	0.6%	151,443	1.7%
2017	261,087	1.1%	529,252	0.9%	153,338	1.3%
2018	263,069	0.8%	533,171	0.7%	155,764	1.6%
May-2019	261,353	-0.4%	529,360	-0.4%	156,758	0.8%
2010-2018 CAGR	0.9%	0.7%	1.4%			

<sup>1</sup> Service area is comprised of Providence, North Providence, Johnston, Pawtucket, Central Falls, Cumberland, Lincoln, East Providence, Cranston, and Smithfield.

Note: May 2019 is preliminary for the Service Area. United States employment figures are in thousands.

Source: Bureau of Labor Statistics.



Source: Bureau of Economic Analysis

The principal employers in the region are Lifespan, CVS Corp. and Care New England. The top ten employers account for nearly 10% of total employment in the state, down from nearly 12% in 2008.

**Figure 6**

<b>Principal Employers - 2017</b>		
<b>Company</b>	<b>Number of Employees</b>	<b>Percentage of Total State Employment</b>
Lifespan	12,377	2.24%
CVS Corp	7,600	1.37%
Care New England	6,580	1.19%
Citizens Bank	5,123	0.93%
Fidelity Investments	4,029	0.73%
Brown University	4,000	0.72%
General Dynamics Electric Boat	3,723	0.67%
Naval Undersea Warfare Center	3,135	0.57%
Diocese of Providence	3,100	0.56%
Bank of America (Fleet Financial Group)	3,002	0.54%
	<u>52,669</u>	<u>9.52%</u>

Source: Narragansett Bay Commission CAFR.

**Historical Rates and Affordability**

NBC has been granted multiple rate adjustments since 2005 (see Figure 7). Even with future anticipated rate increases, KBRA expects wastewater rates to remain affordable as compared to other systems in the state.

**Figure 7**

<b>Historical Rate Increases</b>			
<b>Effective Date</b>	<b>Revenue Increase (%)</b>	<b>User Fee Increase (%)<sup>(1)</sup></b>	<b>Average Annual Residential Fee (150 gpd)</b>
1-Jul-05	12.05	12.76	NA
1-Jul-06	3.85	4.06	NA
1-Jul-07	9.50	9.99	NA
1-Jul-07	3.78 <sup>(2)</sup>	4.01	NA
1-Jul-08	10.67 <sup>(3)</sup>	11.24	NA
1-Jul-09	10.29 <sup>(4)</sup>	10.73	NA
1-Jul-10	2.17	2.25	NA
1-Jul-11	3.21	3.33	NA
1-Jul-12	2.17	2.25	\$375
1-Jan-13	7.09	7.35	\$403
1-Jul-13	9.32 <sup>(5)</sup>	9.67	\$442
19-Sep-14	3.83 <sup>(6)</sup>	3.97	\$459
1-Jul-15	2.29	2.40	\$470
1-Jul-16	1.48	1.53	\$477
1-Jan-19	2.88	2.98	\$491
1-Jul-19	5.88	5.05	\$516

<sup>(1)</sup> Increases vary by customer class. Values shown are aggregated across all classes.

<sup>(2)</sup> 16% for rate base adjustment for decline in consumption.

<sup>(3)</sup> 51% for rate base adjustment for decline in consumption.

<sup>(4)</sup> 73% for rate base adjustment for decline in consumption.

<sup>(5)</sup> 30% for rate base adjustment.

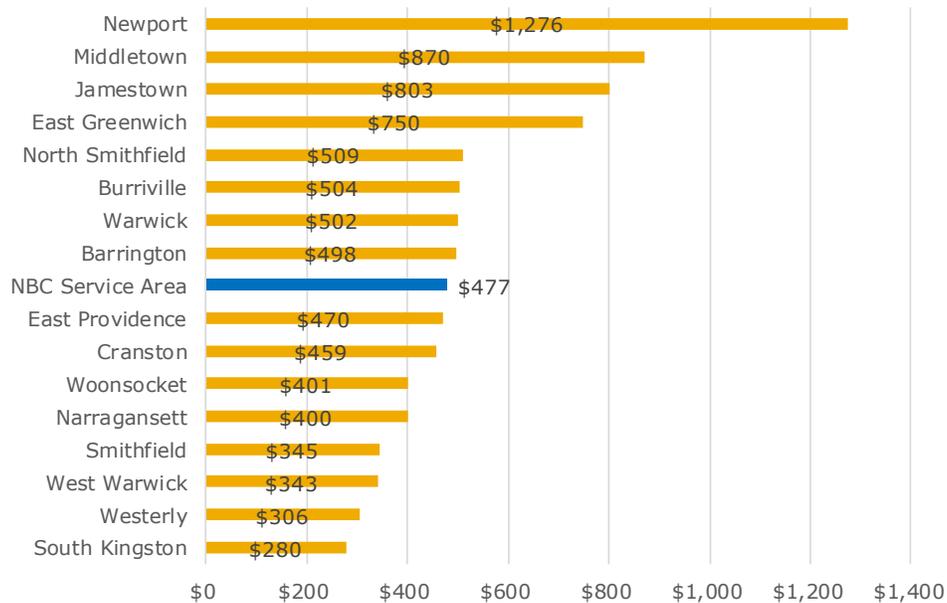
<sup>(6)</sup> 55% for rate base adjustment.

Source: Narragansett Bay Commission.

In its 2018 NBC rate survey, the average annual residential charge of \$477 places NBC’s rates midrange within the state (the 9<sup>th</sup> lowest out of 17 cities/towns). The highest was Newport at \$1,276 and the lowest was South Kingston at \$280.

**Figure 8**

**2018 Annual Rhode Island Residential Sewer Charges**



Note: In this survey, all Annual Residential Sewer Charges are based on 73.2 hcf (150 GPD). The average 2017 Annual Residential User Fee for participating Rhode Island Cities & Town is \$540.81.  
 Source: 2018 Narragansett Bay Commission Residential Sewer User Survey

Throughout FY 2018, the residential rate was a fixed charge of \$218.80 plus \$3.531 per HCF. In addition to the January 1, 2019, rate compliance increase, as a result of the Commission’s October 2018 rate application, effective July 1, 2019, the residential fixed charge increased to \$237.41 plus \$3.810 HCF. As indicated in the settlement regarding the Commission’s recent rating filing, the rates effective July 1, 2019, would increase the bill of the average residential customer by \$24.83 (from \$491.48 per year to \$516.30). With projected rate increases to support the future borrowing needs of the project, NBC’s average bill is expected to reach approximately \$613 by 2030. However, that is a 10-year CAGR of less than 2%.

As a state, Rhode Island’s growth in median household income has historically exceeded the national level. Since 2010, it has grown at an average annual rate of 2.9% compared with 2.7% for the U.S. across the same period. NBC’s service area’s median household income, weighted by population, was \$55,319 in 2017; it has increased at an average annual rate of 2.2% since 2010. The average residential sewer bill, effective July 1, 2019, would account for less than 1% of the state’s, or the service areas’, median household income, which KBRA views as affordable.

**Figure 9**

Median Household Income				
Year	Rhode Island	% chg.	United States	% chg.
2017	\$ 63,870	5.4%	\$ 60,336	4.7%
2016	\$ 60,596	4.3%	\$ 57,617	3.3%
2015	\$ 58,073	5.8%	\$ 55,775	3.9%
2014	\$ 54,891	-1.8%	\$ 53,657	2.7%
2013	\$ 55,902	2.5%	\$ 52,250	1.7%
2012	\$ 54,554	1.7%	\$ 51,371	1.7%
2011	\$ 53,636	2.6%	\$ 50,502	0.9%
2010	\$ 52,254	-3.4%	\$ 50,046	-0.3%
2009	\$ 54,119	-2.8%	\$ 50,221	-3.5%
2008	\$ 55,701	4.0%	\$ 52,029	2.5%
2007	\$ 53,568	3.4%	\$ 50,740	4.7%
2006	\$ 51,814	0.7%	\$ 48,451	4.8%
2005	\$ 51,458		\$ 46,242	

Source: U.S. Census Bureau

**RD 4: System Characteristics**

The System consists of two treatment plants, which are the largest wastewater treatment facilities in the state (Field’s Point is the largest followed by Bucklin Point). The system includes a combined 7 pump stations and 110 miles of interceptors.

**Figure 10**

NBC Treatment Facilities		
	Field's Point	Bucklin Point
Avg daily treatment	44.18	20.45
Wet weather capacity, mgd	200	116
Number of pump stations	4	3
Number of active CSOs	35	26
Miles of interceptor	80	30

Source: NBC disclosure

**Customer Base and User Fees**

For FY 2018, the Commission’s customer base was comprised of 76,725 residential accounts and 7,730 commercial/industrial accounts. Over the past three years, total accounts have increased at an average annual rate of 0.3%.

NBC’s user fees represent substantially all operating revenue. NBC’s user fee structure classifies users as residential, commercial, or industrial. Residential structures up to and including six dwelling units are classified as residential customers; as are all residential condominiums regardless of the number of dwelling units. Commercial and industrial users, or non-residential accounts, include residential structures containing more than six dwelling units, commercial, mixed-use and industrial properties.

NBC’s customers are billed a flat fee and a consumption-based fee. For the consumption-based fees, NBC receives a water meter reading for substantially all customers from each of the water supply boards within the service area, and then calculates a sewer charge for each customer based upon this water meter reading. Substantially all customers receive a sewer bill from NBC and make payments directly to NBC.

For residential customers, flat fees are charged based upon the number of dwelling units. Non-residential customers are charged flat fees based upon meter size. While residential accounts make up over 90% of total accounts, they account for nearly 60% of total user fee revenue; with non-residential accounts comprising approximately 40% of user fee revenues.

**Customer Concentration**

The system’s largest customers are largely institutions of higher education, municipal customers, and healthcare providers, thereby limiting exposure to economic volatility. Moreover, the top ten customers account for less the 9% of the revenue base, which KBRA views as low.

**Figure 11**

Principal Commercial Users		
Company	FY 2018 Annual Billing	Percentage of Total Billing
Rhode Island Hospital	\$ 1,663,452	1.74%
Providence Housing Authority	1,628,527	1.70%
Brown University	1,241,906	1.30%
City of Pawtucket	663,778	0.69%
City of Providence	657,568	0.69%
Johnson & Wales University	551,497	0.58%
Rhode Island Resource Recovery	484,038	0.51%
Providence School Department	426,562	0.45%
Providence College	416,746	0.43%
State of Rhode Island	369,523	0.39%
	<u>\$ 8,103,597</u>	<u>8.48%</u>

Source: Narragansett Bay Commission CAFR.

## Performance Measures

NBC is substantially in compliance with RIPDES permit limits regarding discharge quality. The RIPDES permit sets forth daily and monthly limits for both levels.

## System Condition

The Commission has been investing in capital assets in recent years. Net fixed assets stood at just over \$1 billion at year end 2018, up 8.3% since 2014.

## Capacity and Usage Constraints

Completion of the CSO projects Phases I, II, and III are designed to address much of NBC's capacity limitations.

## RD 5: Financial Metrics

Debt service coverage has been above the minimum requirements of the rate covenant.

### Debt Service Coverage

Historically, with the support of rate increases, debt service coverage has remained above the 1.25x rate covenant. Coverage has average nearly 1.40x since 2010. Project coverage for FY 2019 is approximately 1.3x.

**Figure 12**

Debt Service Coverage (\$ in thousands)						
FY	Gross Revenues <sup>(1)</sup>	Operating Expenses <sup>(2)</sup>	Net Revenues Available for Debt Service	Total Debt Service	Coverage	
2009	\$ 71,184	\$ 33,677	\$ 37,507	\$ 29,439	1.3x	
2010	72,382	34,305	38,077	28,770	1.3x	
2011	76,254	33,589	42,665	29,052	1.5x	
2012	78,807	34,977	43,830	31,312	1.4x	
2013	80,578	35,571	45,007	33,893	1.3x	
2014	92,336	37,966	54,369	39,984	1.4x	
2015	95,190	37,172	58,018	40,217	1.4x	
2016	99,326	38,114	61,212	43,019	1.4x	
2017	100,269	38,148	62,121	43,683	1.4x	
2018	99,390	39,500	59,891	45,524	1.3x	
2019	102,224	41,370	60,854	46,576	1.3x	

<sup>(1)</sup> Total revenues including interest income.

<sup>(2)</sup> Total operating expenses exclusive of depreciation and amortization.

Note: FY 2019 is projected.

Source: Narragansett Bay Commission CAFR.

## FY 2019

The FY 2019 budget is approximately \$3.1 million, or 3.1% higher than the FY 2018 budget and included a \$1.6 million transfer from the revenue fund balance. The FY 2019 budget includes a 2.98% across-the-board increase on sewer user rates for debt service and debt service coverage effective February 1, 2019.

## FY 2020 Budget

Operations and Maintenance (O&M) expenses are budgeted to increase 3.8% over the prior year. Personnel expense represents 56.8% of total O&M expense and is 0.9% higher on a year-to-year basis. The budget includes contracted step increases for union employees and merit increases for nonunion employees. The FY 2020 budget reflects the second year of a three-year Collective Bargaining Agreement (CBA). Pension expense to ERSRI reflects a .2% increase, and union retirement health expense increased 11.4%. Employee health insurance premiums increased 3.8%. Supplies and expense is 10% higher (\$1.6 million) due to increased biosolids dry ton production and increased disposal rates as well as chemicals, utilities, maintenance contracts and other items.

On the revenue side, the FY 2020 budget includes a 2.98% across-the-board rate increase effective January 1, 2019 and a projected 6.17% revenue increase in revenue effective July 1, 2019. FY 2020 budgeted user fees are \$104.6 million.

## System Liquidity

The Commission has demonstrated a history of maintaining sufficient and improving liquidity. Generally, cash balances held within Ocean State Investment Pool. The OSIP Cash Portfolio is a portfolio of the Ocean State Investment Pool Trust, which is an investment pool established by the General Treasurer of the State of RI. The OSIP is not rated and the weighted average maturity of investments held in the pool is not to exceed 60 days. Unrestricted cash and cash equivalents totaled approximately \$24 million in FY 2018. NBC's days cash on hand has increased from 134 in FY 2014 to 219 in FY 2018, equating to over 7 months.

**Figure 13**

<b>Statement of Net Position</b>					
\$ in thousands					
	<b>2018</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>
Cash	\$ 23,736	\$ 16,811	\$ 16,967	\$ 16,000	\$ 13,897
Accounts Receivable	14,256	13,823	14,637	15,350	15,067
Due from RIIB	16,409	42,258	52,112	6,713	43,978
Prepaid expenses	<u>569</u>	<u>1,241</u>	<u>1,506</u>	<u>1,433</u>	<u>1,061</u>
Total current assets	54,969	74,134	85,222	39,496	74,003
Restricted cash	62,770	71,732	84,500	74,974	66,880
Net capital assets	1,009,027	988,409	965,858	952,447	931,851
Other assets	184	-	-	-	213
Total assets	1,126,951	1,134,275	1,135,579	1,066,916	1,072,947
Deferred outflows	8,477	5,070	5,286	5,559	488
Payables and accrued expenses	13,820	13,195	15,414	14,147	24,060
Current portion of loans and leases payable	<u>28,802</u>	<u>27,530</u>	<u>25,783</u>	<u>25,427</u>	<u>23,221</u>
Total current liabilities	42,622	40,725	41,197	39,574	47,281
Long term accrued expenses	6,656	2,780	2,991	2,978	2,796
Net pension liability	19,377	19,566	20,952	20,418	-
Long term loans, leases and debt	<u>565,579</u>	<u>594,381</u>	<u>621,910</u>	<u>583,452</u>	<u>607,302</u>
Total non-current liabilities	591,612	616,727	645,853	606,848	610,099
Total liabilities	634,234	657,452	687,051	646,422	657,380
Total deferred inflows	3,077	590	1,030	2,344	272
Net position	\$ 498,118	\$ 481,303	\$ 452,784	\$ 423,709	\$ 415,784

Source: Narragansett Bay Commission

### Revenue / Expense Management

As with wastewater systems generally, user fees are NBC's primary source of revenue, representing nearly 97% of total revenues in FY 2018. Year over year, user fee revenue was down nearly 1.0 percent primarily as a result of a decline in residential consumption-based user fees. However, over the last ten years (2018 through 2008), user fee revenue has increased at an average annual rate of 4.0% which incorporates ten rate increases across the same period.

Total operating expenses in FY 2018 increased \$1.8 million, or 3.4%, year over year. This was primarily a result of increased personnel services, depreciation expense, and contractual service.

Historically, total revenues have grown at an average annual rate of 3.7% from \$69.3 million in FY 2008 to \$99.4 million in FY 2018. NBC notes that revenues have increased to support debt service and coverage covenants with NBC's expanding capital programs. Over the same period, total expenses have grown at an average annual rate of 4.2%, from \$52.3 million in FY 2008 to \$78.6 million in FY 2018.

**Figure 14**

<b>Statement of Revenues &amp; Expenses</b>											
\$ in thousands											
	<b>2019 (proj)</b>	<b>% chg.</b>	<b>2018</b>	<b>% chg.</b>	<b>2017</b>	<b>% chg.</b>	<b>2016</b>	<b>% chg.</b>	<b>2015</b>	<b>% chg.</b>	<b>2014</b>
Operating revenues	\$ 100,189	1.9%	\$98,336	-1.3%	\$99,656	0.7%	\$99,005	4.2%	\$95,016	3.1%	\$92,148
Non-operating revenues	<u>2,035</u>	93.1%	<u>1,054</u>	72.0%	<u>613</u>	91.0%	<u>321</u>	84.0%	<u>174</u>	-7.0%	<u>188</u>
Total revenues	102,224	2.9%	99,390	-0.9%	100,269	0.9%	99,326	4.3%	95,190	3.1%	92,336
Personnel services	24,383	5.3%	23,157	1.9%	22,720	-0.8%	22,904	9.3%	20,947	-0.7%	21,091
Depreciation	16,401	1.9%	16,091	3.2%	15,594	10.7%	14,091	8.5%	12,984	9.9%	11,812
O&M	7,247	-4.0%	7,548	4.6%	7,220	-4.8%	7,582	9.4%	6,931	-2.1%	7,081
Other operating expenses	10,120	15.1%	8,795	7.2%	8,208	7.6%	7,628	-17.9%	9,295	-5.1%	9,794
Non-operating expenses	<u>17,327</u>	-24.7%	<u>23,018</u>	27.8%	<u>18,009</u>	-3.0%	<u>18,558</u>	7.9%	<u>17,196</u>	-2.2%	<u>17,576</u>
Total expenses	75,479	-4.0%	78,609	9.6%	71,750	1.4%	70,763	5.1%	67,352	0.0%	67,354
Net Income, net of depreciation	\$ 43,147	17.0%	\$36,872	-16.4%	\$44,112	3.4%	\$42,654	4.5%	\$40,822	10.9%	\$36,793
Gross Revenues	102,224		99,390		100,269		99,326		95,190		92,336
Operating Expenses (excl. dep.)	41,750		39,500		38,148		38,114		37,172		37,966
Net Revenues available for DS	60,475		59,890		62,121		61,212		58,018		54,370
Debt Service	46,576		45,524		43,683		43,019		40,217		39,984
Debt Service Coverage	1.3x		1.3x		1.4x		1.4x		1.4x		1.4x

Source: Narragansett Bay Commission

## Employee Cost & Labor Pressure

Union employees participate in a cost-sharing multiple employer defined benefit pension plan, the Employees' Retirement System Plan (ERS), administered by the Employees' Retirement System of the State of Rhode Island (ERSRI). For those hired after June 30, 2012, the benefit accrual rate is 1% per year with a maximum benefit accrual of 40%. Cost of living adjustments (COLA) are provided but are currently suspended until the collective plans reach a funded status of 80%. Until the plans reach an 80% funded status, interim COLAs are provided at four-year intervals. At June 30, 2018, the fiduciary net position of the ERS plan covering state employees and teachers was equal to 52.5% and 54.3% respectively of the total pension liability measure for each of those employee groups.

The funding policy, as set forth in the General Laws, Section 36-10-2, provides for actuarially determined periodic contributions. In FY 2018, NBC contributed \$1.44 million, 100% of the required contribution. At June 30, 2018, NBC reported a modest liability of \$19.4 million for its proportionate share of the net pension liability related to its participation in ERSRI. The discount rate used to measure the total pension liability was 7.0%. Certain union employees participate in a defined contribution plan, NBC contributed \$50,183 in FY2018 for the defined contribution plan.

NBC contributed \$478,604 (5% of salary) to a non-union defined contribution plan in FY 2018. NBC maintains a defined benefit plan for nonunion employees. The annual required NBC contribution for the fiscal year ending June 30, 2018 was \$212,581, the employee and employer contributions made were \$1.62 million. The plan is fully funded.

Union employees participate in a cost-sharing multiple-employer defined benefit other post-employment benefits (OPEB) plan included within the Rhode Island State Employees' and Electing Teachers OPEB System which generally provides healthcare coverage to pre-Medicare eligible retirees or Medicare supplemental coverage for members who are Medicare eligible. Dental and vision coverage may be purchased by these groups with no state subsidy. NBC is required to contribute at an actuarially determined rate, which was 5.98% of payroll in FY 2018 or \$345,990. At June 30, 2018, NBC reported a liability of \$4.27 million for its proportionate share of the plan's net OPEB liability. The discount rate used to calculate the liability was 5%.

## Collection Levels and Trends

Residential consumption has been declining.

## Trends in Accounts Receivable

In January 2019, the Commission completed the initiative of switching from its old legacy system to a new third-party customer service application. The implementation began in May 2018. Late charges historically represent around 1.0% of user fees; 0.83% in FY 2018.

## KBRA Stress Case

KBRA performed a stress case analysis to assess the NBC's ability to withstand a less favorable rate review environment. In this stress case assumed that rate increases would be limited to those forecast for debt service compliance only, i.e. 1% in FY 2022 and 1.8% in 2025. There were no assumed rate base or operations adjustments to rates. O&M expenses

were forecast to increase at the rate of inflation or 2%. Debt service costs were assumed to increase reflecting NBC's borrowing plan to fund Phase IIIA.

Under these assumptions, debt service coverage gradually declined until it was less than 1.0X in 2030. This analysis underscores the need for timely and adequate rate adjustment to implement NBC's capital and financing plan.

## RD 6: Debt Structure and Capital Plan Requirements

As of June 30, 2018, NBC has approximately \$594.4 million in debt outstanding. Debt levels are above average but the amortization structure is conservative which provides capacity for the additional planned borrowing.

### Capital Improvement Plan

The most significant component of the CIP is the CSO Phase III A Facilities. Expenditures on this project are expected to significantly increase as construction begins in FY 2022. Phase III A of the project includes design and construction of a deep rock tunnel in Pawtucket approximately 11,700 feet in length along the Seekonk and Blackstone Rivers, a pump station to convey flow to the Bucklin Point WWTF, drop shafts and consolidation conduits. Additionally, the project includes the design of several initiatives which will be completed in Phase III B, C and D. Figure 15 shows the components of the Phase IIIA capital program.

Figure 15

FY 2021 - 2025 CIP							
Programmed Capital Improvements (\$ thousands)	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Total FY 2021-2025
CSO Phase III A Facilities	\$34,981	\$41,879	\$94,086	\$143,803	\$110,546	\$55,989	\$446,303
Bucklin Point	1,367	4,694	15,301	3,126	-	-	23,121
Other CIP	14,344	8,483	5,904	5,942	5,117	2,500	27,946
Unfunded Capital Improvements/Contingency	1,714	747	3,933	1,616	970	2,482	9,748
<b>Total Original CIP</b>	<b>\$52,406</b>	<b>\$55,803</b>	<b>\$119,224</b>	<b>\$154,487</b>	<b>\$116,633</b>	<b>\$60,971</b>	<b>\$507,118</b>
<b>CIP Adjustments</b>							
CSO Phase III A Facilities Inflation Adjustment	\$355	\$2,396	\$8,353	\$13,593	\$12,197	\$7,818	\$44,357
Bucklin Point Resiliency Change in Scope/Schedule	285	14,070	(4,289)	(2,328)	-	-	7,453
<b>Total Adjusted CIP</b>	<b>\$53,046</b>	<b>\$72,269</b>	<b>\$123,288</b>	<b>\$165,752</b>	<b>\$128,830</b>	<b>\$68,789</b>	<b>\$558,928</b>

Source: Narragansett Bay Commission

Figure 16

Funding Source	Amount	Year
WIFIA Loan	\$268,721,668	2021
Revenue Bonds	175,611,339	2021-2025
Pay-go Cash	59,333,337	2020-2026
SFR Loans	48,227,777	2020-2026
	<u>\$551,894,121</u>	

Source: NBC presentation

### Variable Rate Debt and Other Products

As of FY 2018, NBC had approximately \$56.5 million in variable rate debt outstanding (maturing in 2034), or less than 9% of total debt outstanding.

### Leverage Ratio and Planned Increase in Debt Load

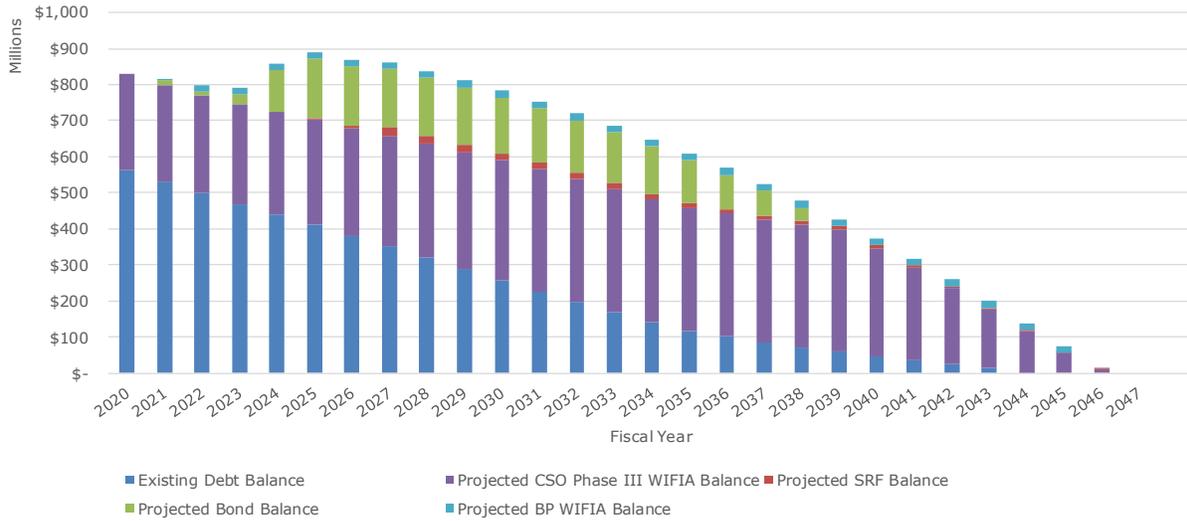
System leverage ratios are high as evidenced by the Commission's debt-to-plant ratio of nearly 60% in FY 2018.

### Debt Service Requirement

As of FY 2018, NBC has approximately \$591 million of debt outstanding, consisting entirely of outstanding SRF loans and revenue bonds. With the anticipated WIFIA loan transaction, NBC's outstanding debt will be approximately \$830 million in FY 2020. That figure is projected to increase to around \$890 million by FY 2025 with the inclusion of additional debt issuances to support the remaining capital expenditures of the CSO Phase IIIA project. The additional debt includes a second WIFIA loan (approximately \$15.8 million), revenue bonds (approximately \$175.9 million), and SRF loans (approximately \$58.7 million).

**Figure 17**

**Existing and Projected Outstanding Debt**

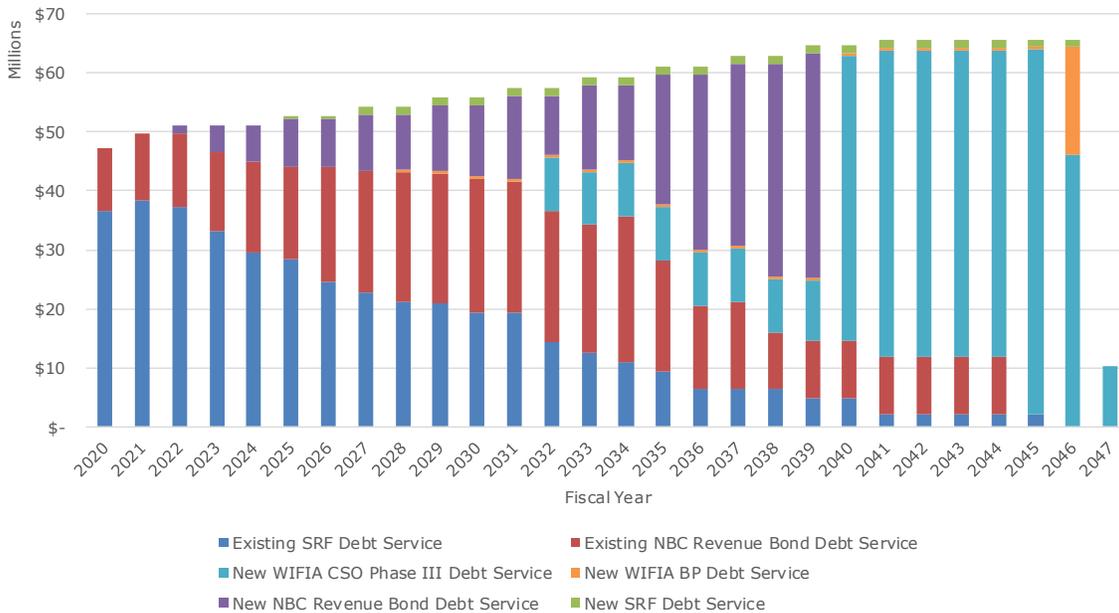


Source: Narragansett Bay Commission

The WIFIA loan includes a capitalized interest account. Projected debt service increases gradually from approximately \$47.3 million in 2020 to \$65.0 million in 2041. This approximately an average annual growth rate of debt service of 1.0% through 2046.

**Figure 18**

**Projected Annual Debt Service**



Source: Narragansett Bay Commission

**Conclusion**

NBC’s experienced management, long term capital planning and the expectation of continued rate increases support the AA rating and Stable Outlook.

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