

Green Evaluation

# Washington Suburban Sanitary District Series 2020 Public Improvement Green Bonds

## Transaction Overview

The district was created in 1918 and operates as a public corporation of the state of Maryland under the Public Utilities Article. The district includes water and sewerage systems and provides water supply and sewage disposal facilities for Montgomery and Prince George’s counties in Maryland. The net proceeds of the green bonds will be used to finance the (i) planning, design, and construction of improvements to a water filtration plant in order to reduce solids discharges, and the planning, design, and construction of replacement prefilter chlorination and filter air scour systems of such water filtration plant; (ii) planning, design, and construction or rehabilitation of large-diameter water transmission mains and large system valves and small water mains and other appurtenances including meter and pressure regulating vaults; and (iii) costs of issuance of the green bonds. The bonds will be labeled green bonds, and all project costs fall within the scope of our Green Evaluation.

**Entity:** Washington Suburban Sanitary District  
**Subsector:** Utilities  
**Location (HQ):** U.S.  
**Financing value:** \$51.06 million  
**Amount evaluated:** 100%  
**Evaluation date:** Sept. 1, 2020  
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## Green Evaluation Overview

### Transaction's transparency

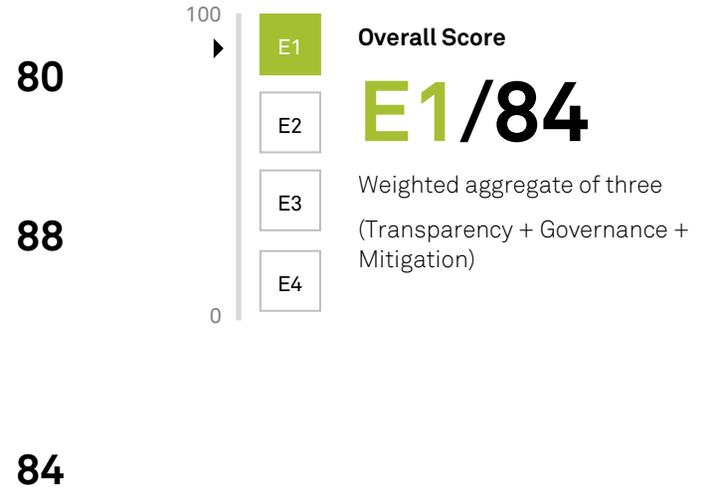
- Use of proceeds reporting
- Reporting comprehensiveness

### Transaction's governance

- Management of proceeds
- Impact assessment structure

### Mitigation

Sector	→ Net benefit ranking	→ Hierarchy adjustments
Water	Reducing water losses in water distribution network  Wastewater treatment with no energy recovery	Improving delivery of freshwater supplies System enhancements to increase freshwater availability and quality



## Project Description

The district will use bond proceeds to improve the water system throughout the service area. The projects were necessitated by aging infrastructure, a consent decree, and the desire to improve water sustainability and reduce pollution. In addition, the projects are expected to improve efficiencies in operations. These series 2020 green bonds are continuing the work initiated in our green evaluation covering the district's 2019 green bonds.

The first identified project is a component of the Potomac Water Filtration Plant (WFP) Consent Decree Program. The district is required to undertake short-term operational changes and capital improvements at the Potomac WFP to reduce solids discharged into the river and achieve quality requirements established by the Maryland Department of the Environment and incorporated into a new discharge permit. This project will address water quality and pollution prevention and conservation of terrestrial and aquatic biodiversity.

The second project is the Potomac WFP prefilter chlorination and air scour improvements. Between 2006 and 2017, the Potomac WFP experienced 14 separate incidents of catastrophic filter underdrain failure. The improvements to the system will support more reliable water supply and treatment, contributing to sustainable water management. The third project identified for green funding is the water pipe and valve rehabilitation program, which is expected to reduce water loss and support sustainable water management. Our Green Evaluation includes the positive environmental impact from the increase in available water (reduction in water loss). Other positive environmental impacts of the projects include reducing water pollution.

The projects funded were designed to be resilient over their expected lifetime to a range of climate-related hazards, including flooding, storms (or storm surge), and extreme heat. Resilience to the most severe events (for all hazards projected to occur on an annual basis) and long-term changes (change in mean precipitation and temperature) have been factored into the projects' designs. The district had identified vulnerabilities and risks, accounted for the impacts of climate change on local systems, and identified resiliency and mitigation strategies on all riverine coastal treatment and pumping facilities. For example, it used flood modeling to estimate the chance of a 100-year storm affecting the pipe system in 2065, assuming rainfall depth of 9.7 inches at a 15% probability; additional projections range from 2020 to 2100. The district has done such modeling for the most at-risk plant and pump stations. In fiscal 2021, it will be doing the same vulnerability assessment and mitigation for linear assets as well as updating its greenhouse gas (GHG) inventory and action plan. A range of climate projections were used including Representative Concentration Pathway (RCP) RCP8.5, which align to a mean global temperature increase of 4° C or more, by 2100. An RCP is a GHG concentration trajectory adopted by the Intergovernmental Panel on Climate Change that describes different future climates.

## Scoring summary

This transaction achieves an overall Green Evaluation score of E1/84, which is the strongest Green Evaluation score on our scale of E1 (highest) to E4 (lowest). We determined this score by taking a weighted average of the transaction's very strong Governance (88) and robust Transparency (80) assessments and its excellent Mitigation score (84). In our view, the projects' expected reductions in water loss and solids reductions compared to baseline will have a significant environmental impact, while the district's green bond framework provides for a high level of disclosure surrounding these environmental impacts.

## Rationale

The Mitigation score (84) reflects our view that the projects improve water reliability and quality while reducing solids and operational inefficiencies. The financing receives a strong net benefit ranking due to the relatively high water stress in the DC/Maryland area.

The very strong Governance score (88) reflects the fact that the district will demonstrate--with required external verification--that all proceeds of the series 2020 bonds were spent on environmentally beneficial projects as prioritized in the green bond framework. The district has retained Clifton Larsen Allen to provide the third-party verification of the use of the green bond proceeds on the selected projects, including the disclosed key performance indicators (KPIs).

The district has a defined green bond framework to determine project eligibility. The framework requires that the projects meet criteria in one or more of the following areas: green buildings, pollution prevention and control, renewable energy, water quality, and climate change adaption. The district has a formal process that also identifies how projects align with its 30-year asset management plan. Management assesses the business case studies that prioritize need, options, and preferred solution. Finally, the proposed projects then go through a formal vetting process for review and final approval. The district's chief financial officer is responsible for certifying that proceeds of the green bond issuance are used according to established procedures. Green bond proceeds will be held in a segregated account and used exclusively to fund new projects or refinance a portion of a prior bond issuances that funded eligible green projects.

The robust Transparency score (80) reflects the district's commitment to produce an annual report detailing how the green bond proceeds were used to finance the selected projects, describing the selected projects, and detailing the environmental benefits resulting from the project. KPIs the district intends to measure and disclose to the bondholders include the percentage of river solids removed from the Potomac for the WFP project, a reduction in the amount of water used for the filter backwash process for the system improvement project, and miles of large-diameter water mains replaced annually and water loss reduction for the pipe and value replacement project. Annual disclosure for projects receiving green bond proceeds will be at the project level, and expenditures will be reported at the project level.

Such information will be posted to the Electronic Municipal Market Access (EMMA) website of the Municipal Securities Rulemaking Board, accessible at [www.emma.msrb.org](http://www.emma.msrb.org). This report will be posted along with other district filings, which will be made on or before the date eight months after the close of the fiscal year. Many of the environmental KPIs and other performance metrics are associated with the consent decree with the Maryland Department of Environment and the district must measure and report to demonstrate its progress on the consent decree and compliance with regulations. The district commits to provide reporting on KPIs in the "Sustainability" section of its website as well, which we view positively. The district has engaged in green bond reporting before, and has a history of successfully tracking capital and construction milestones associated with its implementation of the Potomac Consent Decree program.

## Key Strengths And Weaknesses

In our view, water-related mitigation projects focus on using water resources and networks more efficiently and improving the quality of water treatment for various end uses and the environment. The district's explicitly prioritized investments in reducing water loss, improving operational efficiencies to reduce water use in treatment, and reducing solids to improve quality and reduce pollution. These priorities were chosen commensurate with environmental principles and the district's asset and climate management plans, which is an important factor in our evaluation. Importantly, most projects in this sector address regional water stress, which is a relative measure of supply and demand for potable water uses that contributes to our high mitigation score.

We view the financing's governance framework, assessed at 88, as very strong. The district will demonstrate--with external verification--that all proceeds of the series 2020 bonds will be spent on environmentally beneficial projects as prioritized in the district's green bond framework. The district has a defined green bond framework to determine project eligibility. Green bond proceeds will be held in a segregated account and used exclusively to fund new projects or refinance a portion of a prior bond issuances that funded eligible green projects.

We view the transparency score as robust, assessed at 80. The district commits to measure performance and adherence to the district's green bond framework on an ongoing annual basis for the life of the projects. Management will produce an annual report detailing how the green bond proceeds were used to finance the selected projects, describing the selected projects, and detailing the environmental benefits resulting from the projects. The annual disclosure for projects receiving green bond proceeds will be at the project level, and expenditures will be reported at the project level. However, the performance indicators, such as solids reductions and water used in filtration, do not directly map to the metrics tracked by many investors, and therefore are more difficult to compare to similar investments made in other systems.

A Green Evaluation is a point-in-time assessment and is not monitored.

## Sector-Level Scores

Sector	Location	Technology	Use of proceeds (mil. \$51.060)	Use of proceeds treatment	Net benefit ranking
Water	Prince George's County, Maryland	Water Distribution Network Improvements	35.000	Estimated	87
Water	Prince George's County, Maryland	Wastewater Treatment Potable Water No Energy Recovery	16.060	Estimated	85
			<b>\$51.060</b>		

# Water

## Green Evaluation Process

80

Transparency

88

Governance

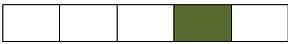
84

Mitigation

Weighted aggregate of three:  
(Transparency + Governance + Mitigation)

**E1/84**

Overall Score

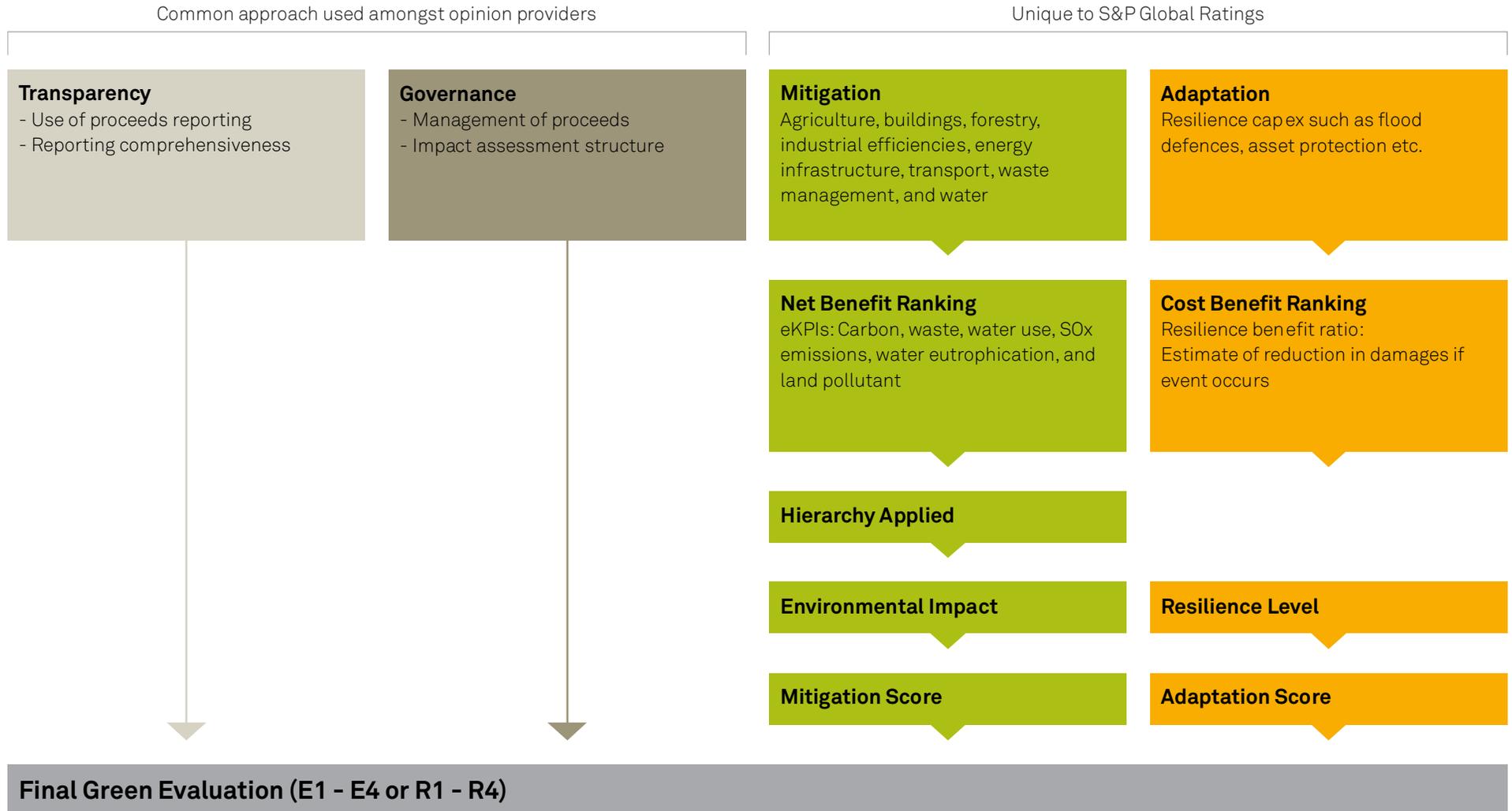
Technology	Baseline water stress	Net benefit ranking	→ Water stress and hierarchy adjustment	Environmental impact score	Proceeds (mil. \$51.060)
	<p>High</p>  <p>Maryland, USA</p>				
Recycling wastewater for water (agricultural uses)					
Recycling wastewater for water (other uses)					
<b>Wastewater treatment with no energy recovery</b>		<b>85</b>	<b>Increasing freshwater availability through system enhancements</b>	<b>96</b>	<b>16.060</b>
Wastewater treatment with energy recovery					
Unspecified					
<b>Reducing water losses in water distribution network</b>		<b>87</b>	<b>Improving delivery of existing freshwater supplies</b>	<b>79</b>	<b>35.000</b>
Unspecified					
Water desalination to supply municipal water			Increasing freshwater availability with significant negative environmental impact		
Unspecified					
Conservation measure in residential buildings					
Conservation measure in commercial buildings					
Conservation measure in industrial buildings					
Smart metering in residential buildings					
Unspecified			Reducing demand on potable water supplies		

Increasing water sustainability

# Our Green Evaluation Approach

Weighted aggregate of three:

Transparency + Governance + Mitigation or Adaptation = Green Evaluation



eKPI--Environmental Key Performance Indicator.

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