DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

#### THE BAHAMAS

# CONDITIONAL CREDIT LINE FOR INVESTMENT PROJECTS (CCLIP) (BH-O0014)

# FIRST INDIVIDUAL OPERATION: THE BAHAMAS WATER SUPPLY AND SANITATION SYSTEMS UPGRADE PROGRAM (BH-L1061)

LOAN PROPOSAL

This document was prepared by the project team consisting of: Project Team Leader; Gilroy Lewis, Team Leader (INE/WSA); Keisuke Sasaki, Alternate Team Leader (INE/WSA); Maria Eduarda Gouvea Berto, Alternate Team Leader (INE/WSA); Kambiri Cox, Alternate Team Leader (INE/WSA); Gerard Alleng, Alternate Team Leader (CSD/CCS); Liliana Lopez, Kleber Machado, Rodrigo Riquelme, Melissa Barandiaran, Sergio Lee and Leticia Ortega (INE/WSA); Carlos Rodrigues (WSA/CSU); Wazir Browne (CCB/CCB); Jose Luis Saboin and Syreta Roberts (CCB/CBH); Janelle Natasha Christian (CSD/CCS); Horacio Mendoza Benavente and Arturo Bonilla Merino (LEG/SGO); Alessandro Farinaccio and Laura Romero (VPS/ESG); Nalda Orfilia Morales Vasquez and Derise Avione Williams (VPC/FMP).

In accordance with the Access to Information Policy, this document is being released to the public and distributed to the Bank's Board of Executive Directors simultaneously. This document has not been approved by the Board. Should the Board approve the document with amendments, a revised version will be made available to the public, thus superseding, and replacing the original version.

#### **CONTENTS**

PRC	GRAM	SUMMARY	1
I.	Pro	GRAM DESCRIPTION AND RESULTS MONITORING	2
	Α.	Background, Problem Addressed, and Justification	
	В.	Objective, Components, and Cost	
	C.	Key Results Indicators	
	D.	Strategic Alignment	11
	E.	Feasibility Analysis	13
II.	FINA	NCING STRUCTURE AND MAIN RISKS	14
	Α.	Financing Instruments	14
	B.	Environmental and Social Safeguard Risks ESG	15
	C.	Fiduciary Risks	
	D.	Other Risks and Key Issues	17
III.	IMPL	EMENTATION AND MANAGEMENT PLAN	18
	Α.	Summary of Implementation Arrangements	18
	B.	Summary of Arrangements for Monitoring Results	
IV.	Eug	SIBILITY CRITERIA	21
			· · · · · · · · · · · · · · · · · · ·

	Annexes								
Annex I	Summary Development Effectiveness Matrix (DEM)								
Annex II	Annex II Results Framework								
Annex III	Fiduciary Arrangements								

	REQUIRED ELECTRONIC LINKS (REL)								
REL#1	Pluriannual Execution Plan (PEP) / Annual Operational Plan (AOP)								
REL#2 Monitoring and Evaluation Arrangements									
REL#3	Procurement Plan (PP)								
REL#4	Environmental and Social Review Summary (ESRS)								

	OPTIONAL ELECTRONIC LINKS (OEL)							
OEL#1	Analysis of Program Cost and Economic Viability							
OEL#2	Technical Options and Design Analysis							
OEL#3	Financial Analysis of WSC							
OEL#4	Institutional Capacity Analysis Platform (ICAP)							
OEL#5	Public Utilities Policy Analysis (PUP)							
OEL#6	Gender and Diversity Analysis							
OEL#7	Climate Change and Sustainability Analysis							
OEL#8	Strategic Environmental and Social Assessment (SESA) and Strategic Environmental and Social Management Plan (SESMP)							
OEL#9	Program Operations Manual (POM)							
OEL#10	Change Theory Mapping							
OEL#11	Bibliographic References							

**A**BBREVIATIONS

CBP Corporate Business Plan

CCLIP Conditional Credit Line for Investment Projects

DEPP Department of Environmental Planning and Protection

EA Executing Agency

EBITDA Earnings Before Interest, Taxes, Depreciation, and Amortization

EOP End of Project

ESMP Environmental and Social Management Plan ESRS Environmental and Social Review Summary

ESRR Environmental and Social Risk Rating

E&S Environmental and Social
GHG Greenhouse Gases
GDP Gross Domestic Product

FI Family Islands

ICAP Institutional Capacity Assessment Platform

IDB Inter-American Development Bank

IRR Internal Rate of Return

NDC Nationally Determined Contribution

NP New Providence
NRW Non-Revenue Water
OC Ordinary Capital

O&M Operation and Maintenance
PCR Program Completion Report
PEP Pluriannual Execution Plan
PMU Program Management Unit
POM Program Operations Manual

PP Procurement Plan

PSC Program Steering Committee
PWD Persons with Disabilities

RO Reverse Osmosis

SCADA Supervisory Control and Data Acquisition

SESA Strategic Environmental and Social Assessment

SESMP Strategic Environmental and Social Management Plan

SIDS Small Island Developing States

URCA Utilities Regulation and Competition Authority

WASH Water, Sanitation and Hygiene

W&S Water and Sanitation WTP Willingness to Pay

WSC Water and Sewerage Corporation

# PROGRAM SUMMARY THE BAHAMAS

# CONDITIONAL CREDIT LINE FOR INVESTMENT PROJECTS (CCLIP) (BH-O0014)

FIRST INDIVIDUAL OPERATION: THE BAHAMAS WATER SUPPLY AND SANITATION SYSTEMS UPGRADE PROGRAM (BH-L1061)

		Financia	al Terms and Co	nditions		
Borrower		Flexible Financing Facility <sup>(a)</sup>				
Water and Sewerage Cor	poration (WSC)	Amortization Period:	25 years			
Executing Agency				Disbursement Period:	5 years	
Water and Sewerage Co	rporation (WSC)				Grace Period:	5.5 years <sup>(b)</sup>
Guarantor					Interest rate:	Based on SOFR
The Commonwealth of th	e Bahamas				Credit Fee:	(c)
Financing	CCLIP L	Line First Operation		Inspection and		
Source	Amount (US\$)	%	Amount (US\$)	%	supervision fee:	(c)
IDB (Ordinary Capital):	100,000,000	100	50,000,000	100	Weighted Average Life (WAL):	15.25 years
<b>Total:</b> 100,000,000 10		100	50,000,000	100	Currency of Approval:	Dollars of the United States of America
		Pr	ogram at a Glar	ice		
Objective. The general of potable water supply and				n is to co	ntribute to improving the	sustainability of WSC's

**Specific Objectives.** The specific objectives of the operation are to: (i) improve coverage of potable water supply services in Family Islands (FI) and New Providence (NP), and reliability of wastewater services in NP; (ii) improve WSC's operational and financial performance; and (iii) improve the governance of WSC and the water and sanitation sector.

**Special Contractual Conditions prior to the first disbursement:** (a) The establishment of a PMU within the Executing Agency, and the appointment of its key personnel, including a Program coordinator, a financial specialist, a procurement specialist, an environmental specialist and a social specialist in accordance with the terms of reference agreed upon with the Bank; (b) The establishment of a separate operative bank account for the exclusive use of the Program; and (c) The approval and entry into force of the POM, in accordance with the terms and conditions agreed upon with the Bank (¶3.4).

**Special Contractual Conditions of execution:** See special contractual clauses of execution included in Annex B of the Environmental and Social Review Summary (<u>ESRS</u>).

Exceptions to Bank Policies: None

Strategic Alignment									
Objectives <sup>(d)</sup> :	0	1 ⊠	O	2 🛛	O3 🗆				
Operational Focus Areas <sup>(e)</sup> :	OF1 ⊠	OF2-G ⊠ OF2-D ⊠	OF3 ⊠	OF4 □	OF5 □	OF6 ⊠	OF7 □		

- (a) Under the Flexible Financing Facility (document FN-655-1), the borrower has the option to request modifications to the amortization schedule, as well as currency, interest rate, commodity, and catastrophe protection conversions. In considering such requests, the Bank will take into account operational and risk management considerations.
- (b) Under the flexible repayment options of the Flexible Financing Facility (FFF), changes in the grace period are possible as long the Original Weighted Average Life (WAL) and the last payment date, as documented in the loan agreement, are not exceeded.
- (c) The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors during its review of the Bank's lending charges, in accordance with the relevant policies.
- (d) O1 (Reduce poverty and inequality); O2 (Address climate change); and O3 (Bolster sustainable regional growth).
- (e) OF1 (Biodiversity, natural capital and climate action); OF2-G (Gender equality); OF2-D (Inclusion of diverse population groups); OF3 (Institutional capacity, rule of law, and citizen security); OF4 (Social protection and human capital development); OF5 (Productive development and innovation through the private sector); OF6 (Sustainable, resilient, and inclusive infrastructure); and OF7 (Regional integration).

#### I. PROGRAM DESCRIPTION AND RESULTS MONITORING

#### A. Background, Problem Addressed, and Justification

- 1.1 **Country Profile.** The Bahamas is an archipelagic nation. Its geographic characteristics result in challenges that other island nations do not face as the country is managing several islands rather than a single land mass. The 2022 Census Preliminary results show the Total Population of The Bahamas to be 399,314. NP with 296,522 persons accounted for 74.26% of the population.
- 1.2 **Macroeconomic context.** The Bahamas is a small, open, and service-based economy, concentrated in few sectors such as tourism (38.2%), real estate (13%), and financial services (7.7%), all of which accounted for 60% of the Gross Domestic Product (GDP) in 2019. In terms of Central Government accounts, the deficit was cut to 5.7% of GDP for FY2021/22 and to 4.0% in FY2022/23, with the Central Government debt to GDP ratio declining to 82% in December 2023 (from above 100% in 2021).
- 1.3 Water resources within the country consist of limited groundwater and abundant access to sea water. There is also variation across the islands in terms availability, therefore management of water resources must involve management at not only the national level, but also at the local or individual island level. Groundwater resources are vulnerable in most islands as increased rainfall intensity reduces infiltration and increases wave surges, which inundates recharge areas and drive the saltwater wedge further into the fresh groundwater lens which is amplified by climate change (CC). [1]1, [2]2. In the area of influence of this operation. Abaco is known to have moderate to large quantities of fresh groundwater, while the islands of New Providence (NP), Bimini, Eleuthera and Exuma do not have adequate groundwater supplies and are reliant on Reverse Osmosis (RO)<sup>3</sup>. For this reason, there is a heavy dependence on sea water treated by RO which accounts for 90% of the water supplied 4. RO technology is expensive and energy intensive (with a high carbon footprint given current energy matrix)<sup>5</sup>. The water supply demand for the permanent population throughout The Bahamas is high<sup>6</sup>. Record levels of international visitors exacerbate the pressure on water resources<sup>7</sup>. CC, rising sea levels and increased demand for drinking water due to population growth will increase water supply reliance on RO water. For this reason, ensuring operational efficiency of potable water services would significantly reduce

<sup>&</sup>lt;sup>1</sup> <u>OEL#11</u> [1]

<sup>&</sup>lt;sup>2</sup> OEL#11 [2]

Reverse Osmosis is a water purification process that removes ions, unwanted molecules and larger particles from drinking water using a partially permeable membrane.

<sup>&</sup>lt;sup>4</sup> OEL#11 [5]

<sup>&</sup>lt;sup>5</sup> Published values for energy consumption per unit volume in RO systems range between 3.71 to 4.66 kWH/m³ (OEL#11 [25]).

<sup>6 &</sup>lt;u>OEL#11</u> [4].

Tourists consume an estimated 400-1,000 liters of water per person per day (Lcd) versus residential consumption of 150-200 Lcd (Bowleg, 2004).

production costs and carbon footprint, improving the financial, operational, and environmental sustainability of water and sanitation (W&S) service provision [5]<sup>8</sup>.

- 1.4 Water and sanitation services. The WSC owns, operates, and manages approximately 83% of the country's water systems while the remaining 17% fall under private companies, [6]9. WSC provides water for NP and 14 of the Family Islands (FI), serving 215,450 persons. 90% of the water in NP and 46% in FI is produced by RO, [7]<sup>10</sup>. In 2023 water supply coverage for NP was estimated at 61% and 70% for the FI<sup>11</sup> and in unserved areas, residents rely on water tankers to deliver and store in tanks, private underground wells, rainwater harvesting and bottled water purchases. In WSC's service area, piped wastewater collection and treatment coverage is around 10% while 90% of the population has individual wastewater solutions (septic tanks). In 2023, WSC tested the water from approximately 400 private wells in NP. Approximately 85% of the wells tested were found to be contaminated with e-coli. In NP there are 130 wastewater lift stations of which 19 require urgent rehabilitation/upgrade due to frequent outages leading to disruptions in the service. These disruptions occur at an average rate of 3.5 incidents per month for each station considered for upgrade under the program (¶1.26).
- 1.5 WSC's low coverage of W&S services is the result of low investments in infrastructure. WSC's structural financial situation, low operational efficiency, and increasing reliance on expensive desalinated water have hindered its ability to generate positive cash flows and invest in infrastructure to increase coverage, as well as improve quality of W&S services. Aging infrastructure (pipelines, lift stations, Wastewater Treatment Plants, etc.) that has deteriorated significantly over the years, due to poor maintenance and lack of replacement infrastructure investments has resulted in quality-of-service issues such as reliability, pressure and continuity. While WSC has made significant improvements to its quality of service, low pressure (less than 20 psi) is the most common problem, impacting 51% of respondents in the last six months <sup>12</sup> as well wastewater backflows due to outages of sewerage lift stations causing backflow and point source pollution <sup>13</sup>.
- 1.6 Water and Sanitation institutional framework in Bahamas. WSC is a stateowned utility overseen by the Office of the Prime Minister established by the WSC
  Act 1976 with the mandate to provide adequate supplies of water for domestic use,
  agricultural purposes, and urban and industrial use and to provide adequate
  facilities for drainage, the safe disposal of sewage and industrial effluents. The Act
  also establishes WSC as sector regulator, for which it is not fully equipped. There
  are ten separate acts that govern the water and sewerage sector in The Bahamas.
  The acts in place are not consistent with a modern water and sewerage sector.

<sup>8</sup> OEL#11 [5].

<sup>9 &</sup>lt;u>OEL#11</u> [6].

<sup>10</sup> OEL#11 [7].

WSC CBP 2023-2028. It refers only to households in WSC service area.

WSC launched an online survey to assess customer's perception of WSC's quality of service.

Between 2021-2023, WSC spent around US\$2.05M on emergency repairs for pump failures that led to sewer overflows.

The process for setting tariffs for the multiple service providers in the water and sewerage sector is unclear and ad hoc.

- 1.7 According to the Roadmap for Implementing the CBP the strengthening of the Department of Environmental Planning and Protection (DEPP) capacity as environmental regulator of the W&S sector is planned for 2028. The URCA Act, 2009 established the Utilities Regulation and Competition Authority (URCA) as the independent regulatory authority. The URCA Act does not authorize URCA to engage in economic regulation of the W&S sector. According to the Roadmap for Implementing the CBP, the establishment of URCA as the economic regulator is planned for 2028.
- 1.8 **The Main Problem and Determinants.** The main problem facing WSC is achieving operational, financial and environmental sustainability (¶1.15) of W&S service provision (¶1.41). The lack of sustainability of the service provision manifests in: High dependency on expensive, energy intensive RO to meet demand, which represents the highest expenditure for WSC (¶1.10); relatively low potable water coverage (¶1.4); low reliability of wastewater collection and treatment services (¶1.5); and financial constraints to invest in new and replacement infrastructure (¶1.9). The main determinants are: (i) low operational and financial performance of WSC (¶1.9); (ii) high levels of non-revenue water (NRW) (¶1.10); and (iii) weak governance of the sector, (OEL#10).
- 1.9 **Low Operational and Financial Performance**. Main factors affecting WSC's operational and financial performance are its low operating efficiency that results in high costs of service provision, and low tariffs levels that remain unchanged since 1999 that do not cover operating costs. In 2022, WSC presented a negative B\$31 million Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA) and margin of 61%. According to WSC, staff efficiency is low compared to the standard staffing efficiency indicator (7.7 versus 3 employees per 1,000 water connections in 2024)<sup>14</sup>. In 2022, WSC presented a negative B\$31 million Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA) and margin of 61%. Because of its poor operating and financial performance, WSC is limited in its capacity to finance the investments needed to increase coverage and quality of W&S services.
- 1.10 High Non-Revenue Water levels. Another factor that is negatively affecting the long-term sustainability of the provision of W&S services in The Bahamas is the high level of NRW. In 2022 NRW was estimated at 35% in NP and 55% in the FI, including Abaco (82%), Eleuthera (37%), and Exuma (23%). Since for WSC's service area, 81% of water supplied comes from RO, the cost of purchasing water accounts for 49% of WSC's overall operating expenses 15. Using RO is a high energy-intensive process and decreasing NRW will reduce energy costs resulting

According to the benchmark established in <u>AquaRating</u>, below 3 employees per 1,000 connections is considered efficient.

Eleuthera, Exuma, and Bimini have the highest dependence on RO and thus, the highest cost of RO purchases (in 2022, USD 5.7 MM, 2.2 MM, and 0.97 MM, respectively), which represents 65.4, 67.4 and 74.1% of operating expenses, respectively. In contrast, Abaco, that relies only on 2% of RO water to meet current demand, has expenditures of US\$ 152,000 which represents only 3.3% of operating expenses.

in a reduction in carbon emissions (¶1.3). Lowering NRW also improves operating efficiency, contributes to improved financial performance as well as improved resilience and quality of service since recovered water can be distributed to new customers or production can be decreased. In NP, NRW decreased from 6.6 migd (60%) in 2011 to 2.17 migd (24%) in 2019 before increasing to 3.85 migd in 2022. In the FI, NRW increased from 1.66 migd (41%) in 2019 to 2.67 migd (55%) in 2022. It is commonly accepted that a well performing utility should have an NRW below 30%, [8]<sup>16</sup>. Given the high levels of NRW, WSC depends on higher than necessary RO water volumes to meet demand, thus keeping costs high and limiting WSC's financial capacity to invest in infrastructure, close coverage gaps and operate and maintain existing infrastructure affecting service reliability.

- 1.11 Weak Governance framework. The existing governance framework for the W&S sector lacks provisions for adequate accountability and autonomy of the WSC as well as a clear incentive framework to promote operational and financial efficiency, environmental stewardship, and improve resilience of WSC's services. This is attributed to multiple factors, including <sup>17</sup>: (i) The Bahamas does not have a water and sewerage sector policy that clearly states objectives and plans for the sector; (ii) WSC's corporate governance practices limit autonomy to make the decisions needed to improve the service, making it essential to clarify and strengthen WSC's governance to improve the utility's operational and financial performance; (iii) The lack of an independent economic regulatory authority implies that there is no mechanism for regularly adjusting tariffs; and (iv) lack of an effective environmental regulator. WSC is a service provider and holds regulatory functions, a clear conflict of interest. Furthermore, the regulatory framework on extraction and use of water from private wells and the discharge of wastewater is outdated. A weak governance framework does not provide the correct incentives needed to improve WSC's performance and efficiency, makes it difficult to establish tariffs to cover the cost-of-service provision, thus perpetuating WSC's dependency on government subsidies to cover expenses and limiting its capacity to invest in new and replacement infrastructure.
- 1.12 **Gender and Persons with Disabilities (PWD) Considerations.** Women's participation in WSC is 39% and men's 61%. Combining leadership and decision-making spaces, 53% are occupied by women. Unlike other utilities in the Region, the participation of women and men in WSC tends to be equal in senior management positions. However, a detailed look shows that female participation on the Board is 20% and in executive positions is 33%. Therefore, the gender strategy will include activities to enhance women's leadership skills <sup>18,19</sup>. The lack of access to WASH increases the workload of women and girls and restricts their engagement in education and productive activities. Having secure and stable access to W&S services reduces these gender inequalities. Therefore, awareness campaigns with gender focus will be conducted (¶1.36). Regarding PWD according to Census 2010, there are 2.6% PWD in the Bahamas; within WSC, no statistics are available, for now. In LAC, the unemployment rate for PWD is

<sup>17</sup> WSC's CBP 2023-2028

<sup>&</sup>lt;sup>16</sup> OEL#11 [8].

<sup>&</sup>lt;sup>18</sup> OEL#11 [9].

<sup>&</sup>lt;sup>19</sup> OEL#11 [10].

20% higher than persons without disabilities. The primary legislation in The Bahamas concerning the rights of PWD (Act of 2014) estates that every employer having more than 100 employees shall employ not less than 1%<sup>20</sup>.

- 1.13 Climate Change and natural disasters vulnerability. The Bahamas is one of the most water-scarce SIDS in the world (OPM, 2018). Annual rainfall ranges from 1,000 mm (eq. to 39.0 inches) in the northwestern islands to 600 mm (eq. to 23.4 inches) in the dry, southeastern islands, [11]<sup>21</sup>.
- 1.14 The Bahamas is particularly vulnerable to the impacts of CC as expected reduction in rainfall could reach 20% in some islands like NP by 2050, and saltwater intrusion from sea level rise and storm surge affecting the quality and quantity of groundwater <sup>22</sup>. It is also one of the most vulnerable countries in the region to natural hazards, considering its location in the Atlantic hurricane belt. The Bahamas is projected to experience an increase in the frequency and intensity of tropical cyclones and hurricanes as a result of CC. Between 2015 and 2019 recorded four high intensity events, the last of which was Dorian (Category 5, 2019), with cumulative damages of nearly US\$4.4 billion, equivalent to 30 to 40% of Gross Domestic Product (Macro-Economic Effects of Hurricanes in The Bahamas, IDB 2021).
- 1.15 The Bahamas has articulated its CC mitigation and adaptation ambitions in its Updated Nationally Determined Contribution (NDC) (2022) setting specific actions to achieve its 2030 target. The Biennial Update Report of The Bahamas (2022) to UNFCCC estimates the emissions by sector with energy as the main contributor (47.09%) of GHG emissions in 2018<sup>23</sup> and waste sector being the third (5.11%). Within waste sector, wastewater and discharge contribute 14.9%. As highlighted in the report, the Government of Bahamas intends to reduce NRW rates in recognition of the fact that this constitutes an effective way to reduce GHG emissions and possible water shortages in the future. It has committed to introduce and pilot appropriate technology for improved access to water, identification of hazards and assessment of risks to water resources and systems, and the prioritization of investments for improved and affordable access to potable water to adapt and increase the resilience of the water sector. In keeping with mitigation targets to transition to 30% renewable energy and reduce greenhouse gas emissions by 30% by 2030, The Bahamas will promote and pursue energy efficiency measures in water production. Moreover, the NDC specifically includes a mitigation action (#12) – Promotion of Energy Efficiency in Water Production.
- 1.16 Loan 2624/OC-BH (BH-L1028) was approved in 2011. The general objectives of the operation were to improve the efficiency and quality of service provision of potable water, address immediate problems of sanitation in the island of NP, prepare implementation of economic and environmental regulation, and create and support the corresponding regulatory entities. The specific objectives were to: reduce water losses; strengthen WSC; upgrade and rehabilitate selected

<sup>21</sup> OEL#11 [11].

<sup>20</sup> Act of 2014

<sup>&</sup>lt;sup>22</sup> OEL#11 [12]

<sup>&</sup>lt;sup>23</sup> Followed by Agriculture, Forestry and Other Land Use (47.78%)

sewerage infrastructure; and improve the legal and regulatory framework of the sector. According to the Project Completion Report (PCR), the NRW reduction levels achieved between 2012 and 2017 were significant, from 6.87 to 2.0 MIG, and constitute the most important accomplishment of the program. At the end of 2018, the cost savings due to NRW reductions totaled US\$68.7 million. On the other hand, the main challenge the program faced was inability to achieve the creation/activation of independent economic and environmental regulators. This was due to institutional constraints. To ensure a programmatic approach, the PCR recommendation to continue strengthening sector institutions, as well as to promote autonomy and accountability of WSC, will be implemented under the Program through the inclusion of institutional strengthening activities for URCA and DEPP. Complementarily, in its CBP, WSC commits to strengthening internal corporate governance. A Wastewater Master Plan was also prepared with an implementation period from 2015 to 2035 and estimated costs of US\$638 million. In the long-term the CCLIP BH-O0014, and its first operation BH-L1061, will complement and continue the activities under 2624/OC-BH (BH-L1028).

WSC's Strategy for addressing water and sanitation service sustainability. 1.17 The Board of Directors of WSC approved the WSC's CBP 2023 – 2028 in 2023. The CBP will serve as a guide for driving transformational change to provide sustainable water and sewerage services to Bahamians. The CBP includes capital investments (CAPEX) in the amount of US\$239.4 MM to achieve this transformation and to undertake long-term infrastructural improvements to reduce NRW (physical and commercial losses)<sup>24</sup>, improve access to quality water supply and sanitation services, improve operational and financial efficiency, modernize the policy, legal and regulatory framework and strengthen sector institutions <sup>25</sup>. To implement the CBP, WSC through its Program Management Unit (PMU) has a prioritized CAPEX plan that is used to coordinate with other donors to close gaps and secure financing for the various projects, this mechanism ensures that the efforts are not duplicated, but complementary. WSC has proposed a financing strategy that addresses access and coverage, and includes financial resources from IDB (40%), the Caribbean Development Bank (13%), Government funds (10%), own funds (10%), and the remaining (27%) through Private-Public Partnerships (PPPs). Under the CCLIP, consideration will be given to supporting WSC in implementing PPPs in the W&S sector, as discussions are underway with IDB Invest on a prospective PPP for the FI, particularly in Abaco for which initial discussions have been held to finance new water and a wastewater treatment plants, as well as exploring with IDB Invest financing a renewable energy plant to replace the fossil fuel energy used in desalinization processes. Additionally, there has been discussions between IDB Invest and the developers for the Treasure Cay for PPPs in utility services (energy, water and sanitation). WSC will develop a medium-term strategy based on the Wastewater Master Plan for improving wastewater collection and treatment. The Bank will partially support the implementation of the 2024-2028 CBP as well as the post 2028 wastewater strategy through the CCLIP (¶2.2).

Quantitative studies show that NRW can be reduced through sectorization and pressure control OEL#11 [13]. Leak detection reduces water loss OEL#11 [14]. Additionally, monitoring and control systems has a direct effect on the reduction of NRW, OEL#11 [15]. Also, the incorporation of digital meters will contribute to reducing NRW. OEL#11 [16].

As highlighted in <u>DIA 2020</u>, the sustainability of services is not only based on infrastructure, but also on the way in which these services are managed and regulated.

- 1.18 Programmatic approach and value added. The program is consistent with the long-term vision of the Bank for the sector considering that Component 3 improves Service Quality and Access to water supply. While the institutional strengthening Component 2 improves Governance of the Sector and regulatory institutions. In terms of Financial Sustainability, the WSC intends to improve its operational efficiency, staff productivity and tariff review to reflect the cost-of-service provision. Furthermore, the interventions financed by the Bank in The Bahamas supported its vision for the sector providing a programmatic approach. In 2004 the WSC/Ministry of Works completed the implementation of Loan 1112/OC-BH under which objective 3 was to improve the quality of public water service for several small settlements in the FI. Between 2009 and 2010 the Bank financed a Technical Cooperation (TC) ATN/WP-11596-BH (BH-T1017) to address the legal and policy impediments affecting WSC and the W&S sector to support sector modernization. Also, the design and preparation of this operation is supported by TC ATN/OC-20523-BH (BH-T1109) which finances the preparation of studies and tender documents required for planning and implementation of the NRW Reduction Program for priority areas in the FI. Additionally, the Bank also provides technical expertise and know-how in NRW reduction projects and implementation of smart water infrastructure technologies (SWIT) as well as technical exchange visits among water utilities to achieve sustainable outcomes.
- 1.19 The program will also synergize with other sector operations in preparation to implement a multisector solution to maximize impact on the local population such as the Clean and Resilient Power Infrastructure in The Bahamas (BH-L1057) operation, which will invest in the strengthening of the electricity grid with resilience mechanisms in the FI to enable the incorporation of RE generation and a comprehensive diagnostic and roadmap to the installation of AMI as well as linking to the blue economy (5866/OC-BH) sectors.
- 1.20 Lessons learned. Lessons learned under Loan 2624/OC-BH (BH L1028) through the NRW Performance Based Contract will inform the design of the NRW program in the FI: (a) the NRW contractor shall start the necessary training and capacity building of the WSC staff at the beginning of the contract (¶1.23); (b) designated WSC staff will understudy and shadow the key staff of the contractor (¶1.23); (c) an assessment of NRW levels, causes and components will be conducted prior to procuring the NRW contractor (¶1.18); and (d) WSC shall ensure that sufficient trained human resources, systems, and financial resources are in place to take over the maintenance phase of NRW with a view to maintaining the gains made in NRW reduction since most of the PMU staff are new (¶3.10).
- 1.21 Alignment with the Public Utilities Policy (GN-2716-6). The proposed operation is aligned with the Public Utilities Policy and its objectives: (i) Promote access: the program will contribute to increase access to service by the population including underserved communities; (ii) Deliver a reliable quality of service: improved levels including quantity, service, water quality, and reliability; (iii) Deliver a service efficiently: through the reduction of physical losses and smart metering to increase its efficiency in managing and conserving water supply; improved governance, legal and regulatory framework, accountability and transparency; (iv) Create suitable incentives and programs to manage customer demand: regulate user demands and conservation of water resources; and (v) Promote sustainability of public utilities through: financial, environmental and social sustainability. The 15-year projection model indicates financial sustainability as of 2030 (¶1.41). The Program also presents economic viability (¶1.39).

#### B. Objective, Components, and Cost

- 1.22 **Objectives.** The general objective of the CCLIP and the first loan operation is to contribute to improving the sustainability of WSC's potable water supply and wastewater services in The Bahamas. The specific objectives of the first operation are to: (i) improve coverage of potable water supply services in FI and NP, and reliability of wastewater services in NP; (ii) improve WSC's operational and financial performance; and (iii) improve the governance of WSC and the W&S sector.
- 1.23 Component 1: Non-Revenue Water Reduction and Advanced Metering Infrastructure (AMI) US\$33.0 Million. This component will finance: (i) an NRW Reduction Contract to address physical and commercial losses in the FI initially focusing on Abaco, Eleuthera, and Exuma which were selected on account of their dependence of RO (Eleuthera and Exuma) and high levels of NRW (Abaco). The activities will include setting up District Metered Areas and Pressure Management Areas (DMAs/PMAs), leakage and pressure management and other activities. The NRW contractor will also build the capacity of WSC to maintain the target level of NRW. (ii) the procurement of approximately 65,000 ultrasonic smart meters to install new and replace existing mechanical meters by more efficient AMI in the project area. A digital transformation evaluation and roadmap will be prepared to define the technological, human capacity, network, connectivity, software, systems and supervision requirements to effectively implement WSC's digital infrastructure.
- 1.24 Component 2: Institutional Strengthening - US\$3.5 Million. This component will finance the following activities: (i) Institutional strengthening of URCA, which includes funding for two staff members at URCA responsible for W&S regulation for one year and hiring a consulting firm to: (a) Develop processes and regulations for W&S sector (including first round of tariff setting); (b) provide training to support URCA with regulation of W&S sector; (c) support URCA with review of first tariff request from WSC; (ii) Support WSC with first submission of tariff request to URCA; (iii) Institutional strengthening of WSC and the DEPP for new framework for environmental regulation of the W&S sector; and (iv) Improve corporate governance of WSC; (v) implement actions to strength the internal control system weaknesses identified in the Institutional Capacity Assessment (ICAP) of WSC; (vi) Develop and implement strategy to improve human capital of WSC;(vii) Develop national policy for W&S sector; (viii) policy to encourage the employment of PWD within WSC; (ix) awareness campaigns with a gender focus; and (x) training in leadership skills and techniques with a gender focus, aimed at WSC staff (¶1.36). These activities would also include providing support to improve the management and conservation of water resources and include considerations of climate resilience planning in line with instruments included in the NDC 2022 as well as Integrated Water Resources Management.
- 1.25 Component 3: Access to Potable Water Supply U\$\$8.0 Million. This component will finance increased coverage to piped, potable water to unserved communities in NP and the FI including considerations for resilience to CC and natural hazards. These projects were selected from WSC's prioritized CAPEX plan to implement the CBP and complements the efforts by the CDB and the government to close the financing gaps. WSC's CAPEX prioritization methodology evaluates and weighs several parameters that includes government priority, expected financial impact, CC mitigation or adaptation, main objectives among others: (i) The Abaco new water mains installation at Sweeting's Tract; (ii) The

South Bimini Port Royal Water Main Extension; (iii) The South Bimini mains extension to Airport; and (iv) The NP distribution mains extension. This will contribute to addressing the critical need for water infrastructure in The Bahamas Country Development Challenges (CDC)<sup>26</sup>.

- 1.26 Wastewater Collection Component 4: Infrastructure Upgrade US\$3.0 million. This component will finance urgent investments in the sewerage system in NP. These were identified in WSC's prioritized CAPEX plan and have been prioritized based on the impacts the pump failures were having on WSC's sewered customers, impacts to public health, environmental and groundwater pollution, the age and condition of the infrastructure, and any regulatory requirements or compliance obligations. These investments include replacement and upgrade of nineteen (19) existing lift stations with a view to increasing reliability, energy efficiency, procuring spare inventory, and installing remote monitoring technology.
- 1.27 **Program Administration and Other Costs US\$2.5 Million.** This component will finance administrative expenses, support for additional PMU's consultants, external audits, monitoring, and evaluation, communication, and implementation of an Environmental and Social Management Plan (ESMP).

#### C. Key Results Indicators

1.28 The Results Matrix (Annex II) includes the products and results of the Program Table I-1 presents some key Impact and Outcome Indicators.

Baseline\* Unit of Target **Impact Indicators** Measure (year) **EOP** Greenhouse gas (GHG) emissions avoided tCO<sub>2</sub>eq 0 3,569 73.8 Million US\$ 38.7 Subsidies received by WSC from Central Government (2023)Unit of Baseline\* Target **Outcome Indicators** Measure (year) EOP HH with new connections to potable water services in FI Household 573 0 HH with new connections to potable water services in NP Household 645 HH with improved access to potable water services in FI Household 0 65.000 and NP Household 0 10.493 HH with improved access to sewerage services in NP 2.7 Million Average daily volume of NRW in FI 1.5 IG/day (2022)Average service disruptions per month in sewer lift occurrences 3.5 1.5 stations in NP upgraded with the Program / month WSC's operating expenses covered with WSC's 61 % 100 operating revenues (2023)Internal policy aimed at promoting the participation of Policy 0 1 PwD within WSC approved by the Board WSC's staff who are women and have completed training % 0 35 in leadership skills and techniques.

Table I-1 – Key Impact and Outcome Indicators

1.29 **Benefits and Expected Beneficiaries.** About 65,000 households (some 235,000 people) in NP (48,103 households) and the FI (16,897 households) are

<sup>(\*)</sup> Unless otherwise noted, the year of the base line is 2024.

<sup>&</sup>lt;sup>26</sup> IDB Country Development Challenges (CDC) Update. April 2022. pp. 31. section 2.30.

expected to directly benefit with access to, or improved provision of, drinking water services while some 10,493 households in NP will benefit from improved access to reliable sewerage collection services. Some 573 households (1,530 people) in the FI and some 645 households (2,400 people) in NP are expected to benefit from the expansion of potable water supply coverage from 61% to 62% in NP and from 71% to 72.5% in FI. WSC will also benefit from institutional strengthening and improvements in operational efficiency. Indirectly, the entire Bahamian population will benefit due to the strengthening of policy-making capacities and the legal and regulatory framework of the sector and improved governance and operational efficiency of WSC and having greater resilience to access to drinking water by improving water use efficiency by reducing NRW. Likewise, the project also contributes to a transition to low-carbon economy by reducing GHG emissions in the wastewater collection <sup>27</sup> and in the treatment and distribution stages of potable water through the reduction of NRW, as it reduces associated energy consumption in water production. Access to potable water services, combined with improvements in service management, generate benefits that have a positive impact on the living conditions and well-being of the population, manifested in improvements in health conditions, as well as financial benefits for WSC. This is particularly relevant since there is a positive link [17] 28 between environmental quality, health [18], [19]<sup>29</sup> and availability of quality water services<sup>30</sup>. The probability of contracting water-borne diseases decreases when there are quality W&S services [19], [20]<sup>31</sup> which has a direct effect in reducing infant mortality and morbidity [21], [22], [23] 32. Access to sewer services which is expected to increase with investments during the second operation under de CCLIP, will magnify these long-term developmental impacts.

#### D. Strategic Alignment

- 1.30 **Bank's strategy with the country.** This operation is aligned to the IDBG Country Strategy 2024-2028 (GN-3198-1) with the Commonwealth of The Bahamas, under the Strategic Objective 1.1 Strengthen the country's resilience to disaster and CC.
- Strategic Alignment. The project is consistent with the IDB Group Institutional Strategy: Transforming for Scale and Impact (CA-631) and is aligned with the development challenges of: (i) reducing poverty and inequality by improving access to potable water service in underserved communities in FI and NP (¶1.26); and (ii) addressing CC by including measures to increase the climate resilience of the infrastructure and, decreasing water stress through NRW; it also reduces GHG emissions from less potable water losses (through actions in NRW) and contributes to reduce the dependency on fossil fuels for water production (¶1.23, ¶1.26, ¶1.27). Furthermore, the Program also aligns with the operational focus areas of: (i) biodiversity, natural capital, and climate action (¶1.24, ¶1.27);

<sup>29</sup> OEL#11 [18], [19].

<sup>27</sup> Refurbished wastewater collection facilities in NP will improve energy efficiency leading to a reduction in the carbon footprint.

<sup>&</sup>lt;sup>28</sup> OEL#11 [17].

To close access gaps, reduce inequalities and make the benefits materialize, it is necessary to ensure quality of the services, in addition to investing in infrastructure, according to the Bank's flagship publication DIA 2020.

<sup>31 &</sup>lt;u>OEL#11</u> [20].

<sup>&</sup>lt;sup>32</sup> OEL#11 [21], [22], [23].

- (ii) gender and diversity equality; (iii) institutional capacity, rule of law, and citizen security; and (iv) sustainable, resilient, and inclusive infrastructure.
- 1.32 **Alignment with the Paris Agreement.** This operation has been analyzed using the <u>Joint MDB Assessment Framework</u> for Paris Alignment and the <u>IDB Group PAIA</u> (GN-3142-1); it has been determined: i.) aligned to the adaptation goal of the Paris Agreement (PA); and ii.) universally aligned to the mitigation goal of the PA.
- 1.33 **Climate Finance**: According to the MDB methodology for Climate Finance, 88.42% of the resources provided by the IDB are invested in mitigation and adaptation activities (for more information, see (OEL#7).
- 1.34 CC Actions: In the context of mitigation, the operation will contribute to the reduction of GHG emissions by reducing emissions resulting from NRW activities, therefore contributing directly to the implementation of its NDC actions for the promotion of energy efficiency measures in potable water production. On the adaptation side, the Program includes considerations in the design of infrastructure to address hurricanes, storm surges and flooding, and institutional strengthening of national agencies for adaptation planning and resilience building through scientific research and information for policy development and decision making. At the same time through NRW, the Program contributes to reduce the stress on the available water resources, thereby allowing more people to be served by the same water source.
- 1.35 Other strategies and sector frameworks. The operation is aligned with the Sustainable Infrastructure Strategy for Competitiveness and Inclusive Development (GN-2710-5), particularly with the priority area of "Supporting the construction and maintenance of social and environmentally sustainable infrastructure to contribute to increasing the quality of life", and consistent with the W&S Sector Framework's Dimensions of Success (GN-2781-13) to promote universal access to quality W&S services with equity, inclusion, and affordability and also, with the action line "The design of policies and programs incorporates disaster and climate change risk management and promotes water security". The operation is also consistent with the Climate Change Action Plan (GN-2835-13) in the topic of increase of climate resilience and decarbonization. The operation is included in the 2024 Operational Program Report (GN-3207). Further, the operation is aligned with ONE Caribbean (Partnering for Caribbean Development Framework) (GN-3201-5), to the cross-cutting area of strengthening institutions. Specifically, the objective of the first loan operation to improve WSC's efficiency, quality, sustainability, and resilience of potable water supply and wastewater services in The Bahamas will support the realization of ONE Caribbean's thrust towards increasing the number of beneficiaries and the value of public investments of enhanced resilient infrastructure.
- 1.36 **Gender and Diversity strategy**. It is necessary to promote the importance of staying connected and using the service efficiently, particularly in topics such as hygiene, and personal and family health. Due to this, information and awareness campaigns will be conducted with a gender focus, highlighting: (i) benefits of stable access to clean water for health and gender equality (more time for women and girls to work and study); (ii) saving and efficient use of water at home; (iii) benefits of keeping service payments up to date; and (iv) encouraging women and PWD to participate in local water committees, where applicable. With support from community leaders, these campaigns can ensure women's participation as primary

household water managers. Regarding WSC, training will be provided to enhance women's leadership skills. Also, with respect to PWD in WSC, any assistance provided to others should also extend to PWD, with additional special support. Thus, developing an internal policy to encourage their employment participation within the company is proposed.

1.37 Innovation and Digitalization strategy. The NRW component considers the use of AMI and other SWIT that will permit remote meter reading and monitoring. This digital transformation will promote conservation of water as customers will have real time access to data on their consumption and enable seamless two-way communication of information between customer and utility. This will also improve operating efficiency through improved and regular billing cycles as well as minimizing the need for physical meter reading. Refurbished sewerage lift stations will be outfitted with premium efficiency motors and controls to improve energy efficiency and reliability.

#### E. Feasibility Analysis

- 1.38 **Technical feasibility**. The proposed solutions fully meet the needs of WSC's to improve water services through NRW reduction and system expansion, in addition to increasing operational reliability and disposal efficiency of wastewater. The proposed solutions include site specific engineering to reduce vulnerability and risk due to CC. Reduction in NRW will directly impact costs since less water has to be produced and distributed especially from RO plants, reducing energy consumption as well. Preliminary hydraulic models prepared under the study show that the activities planned under Component 3 are feasible and upgrading of sewer lift stations will increase operational reliability and disposal efficiency, More information is outlined in the Technical Options and Design Analysis (OEL#2).
- 1.39 **Socioeconomic feasibility.** A cost-benefit analysis was carried out for all the infrastructure works financed by the Program. The costs analyzed were the incremental investments and O&M costs expressed in social prices. The economic benefits were quantified using willingness to pay (WTP) estimates (updated to 2024 prices) for improved sewerage service, consumer surplus for increased access to potable water services, net savings (economic cost) on water treatment due to reduction in NRW (physical loses) and smart meters installation. The results of the analysis show that the Program is socioeconomically feasible with IRR of 20.4%. The evaluation was supplemented with a sensitivity analysis of the IRR to changes in costs, WTP, net savings and levels of NRW reduction (OEL#1).
- 1.40 Institutional feasibility. The results of the ICAP assessment indicate that WSC has a high capacity to undertake the implementation of the proposed Program. WSC has demonstrated considerable experience and strengths in the areas of project management, technical quality management, human resource management and management, procurement financial management. Notwithstanding the experience in these areas, gaps exist in the institutional arrangements centered around insufficient formalized documented project execution-related policies, deficient project governance and management arrangements, limited experience in the application of IDB policies in managing projects and use of project management tools. In order to address these weaknesses, and to strengthen other areas, the following recommendations are presented: (i) Increase the number of staff in WSC's PMU; (ii) Training/Orientation in Bank Related Policies & Procedures; (iii) Establishment of a Project Governance

Arrangement; (iv) Development of a POM; (v) Utilization of Project Management Technology Tools; (vi) Incorporating Resources for Project Communication, and Monitoring and Evaluation; (vii) Creation of a Strategic Communication Management Strategy; (viii) Strengthen the Environmental, Social and Health and Safety Policy Knowledge-Base of Key Stakeholders; (ix) include resources in the institutional capacity strengthening component with measures to enhance the Internal Control system; and (x) Creation of a Partnership Agreement Between WSC and other Key Entities.

1.41 Financial sustainability. The financial assessment indicates that WSC has relied on subsidies to cover its operating costs and all its capital investments. In 2023, WSC's EBITDA was a negative B\$36 million. The 15-year financial projections model (until 2039) shows that based on the assumptions of the WSC's CBP of transitional tariffs implementation as of 2024 and on the reduction curve of NRW, WSC will reduce its dependency on subsidies, and consequently reach financial sustainability by 2030, presenting a positive EBITDA of B\$3.5 million, no longer depending on operating subsidies. WSC will improve its commercial and operational efficiency supported by the institutional strengthening plan WSC has already begun implementing, by reducing NRW in NP and the FI through contracts with specialized firms (from 5.9 migd in 2023 to 3.4 migd in 2028), procuring and installing AMI, moving from quarterly to monthly billing (reducing its net accounts receivable from 148 days in 2023 to 87 days in 2028), and improving water supply contracts. Currently the average percentage of the combined W&S service relative to the average monthly household income is 1% and will keep below 2% after the increase in tariffs 2025-2026, not posing a risk in the acceptability of the tariff increase and thus in financial sustainability of the Program.

#### II. FINANCING STRUCTURE AND MAIN RISKS

#### A. Financing Instruments

- 2.1 **Modality and financial structure.** The Bank is proposing to provide financing to support WSC in the implementation of its CBP (¶1.17) through A Single Sector Modality CCLIP as significant investments over an extended period will be required to achieve wider water sector transformation and undertake long-term investments to improve the sustainability of WSC's W&S service provision. The CCLIP will allow WSC to access financing through phased loan operations that provide greater flexibility to define the individual loan operations. In addition, the CCLIP will allow the Bank to support the development of W&S services in the medium and long-term.
- 2.2 **Strategy and program design.** The CCLIP is proposed for an amount up to US\$100 million from the Ordinary Capital resources to be implemented through two individual loan operations. The period of the CCLIP will be 8 years. This period is consistent with the Bank's experience in implementing CCLIP operations. Additionally, the two loan operations are expected to overlap during execution. The WSC is targeting investments funded by the IDB of US\$100 million out of \$239.4 million from its initial prioritized capital investment plan 2023-2028. The first operation is designed as a Specific Investment Loan for a total amount of US\$50 million with disbursement period of 5 years to allow sufficient time to establish a baseline, procure and implement a performance-based co-management NRW contract in the FI. The design of the second loan operation is expected to begin in

the fourth quarter of 2025 with the objective of presenting the loan proposal for consideration for approval by end-2026. The second operation under de CLIPP will primarily focus on expansion of wastewater collection and treatment in NP to reduce cross-contamination of water wells (¶1.4) as well as diffused pollution (¶1.5), expansion of potable water service (mainly in FI) (¶1.4) and additional sector strengthening.

2.3 **Cost and financing.** The first operation will be for an amount of up to \$50,000,000 from the OC of the Bank. See detailed budget in Table II-1.

Components IDB Total % Component 1: Non-Revenue Water Reduction and 33,000,000 33,000,000 66.0% Establishing Advanced Metering Infrastructure 3.500.000 **Component 2:** Institutional Strengthening 3.500.000 7.0% Component 3: Access to Potable Water Supply 8,000,000 8,000,000 16.0% Component 4: Wastewater Collection Infrastructure 3,000,000 3,000,000 6.0% Upgrade **Program Administration and Other Costs** 2.500.000 2.500.000 5.0% 50,000,000 50,000,000 100% Total

Table II-1. Summary of Program costs

2.4 **Disbursement schedule.** The disbursement schedule for the operation is presented in Table II.2.

Components	2025	2026	2027	2028	2029	Total
IDB	\$17,028,513	\$16,768,021	\$6,031,166	\$4,599,300	\$5,573,000	50,000,000
%	34.06%	33.54%	12.06%	9.2%	11.15%	100.0%

**Table II.2 Disbursement Schedule** 

#### B. Environmental and Social Safeguard Risks ESG

- 2.5 In accordance with the IDB's Environmental and Social Policy Framework (ESPF) and the environmental and social due diligence, the operation has been classified as Category B due to potential Environmental and Social (E&S) impacts of small-scale interventions to enhance potable water supply and wastewater treatment services. These impacts are expected to be temporary and localized and related to pollution of water, marine resources, soil and air, solid and liquid waste and health and safety of workers and communities resulting from construction works. Mitigation measures are readily available to address these potential impacts. The operation will not finance the use of non-organic fertilizers or pesticides, however small quantities of hazardous waste may have to be disposed of adequately.
- 2.6 The Environmental and Social Risk Rating (ESRR) for the operation is Substantial driven by cause and contribution risks regarding potential direct, indirect, and cumulative impacts associated with accidents, injury, and disease arising from, associated with, or occurring during construction activities, as well as soil, water and air pollution resulting from construction. Moreover, the operation will generate minor indirect and cumulative impacts from solid waste (both hazardous and non-hazardous). Expected greenhouse gas emissions are under 25,000 tons of CO2 equivalent annually. Additionally, there is a potential minor indirect cumulative impact on modified habitats with significant biodiversity value. Considering that the exact location of the works is still to be defined, particularly for Component 3 related to construction of potable water pipelines, analysis of potential economic

displacement will need to be conducted once the exact location of Program infrastructure is defined and once engineering designs are completed. WSC has a limited operational capacity and does not have experience implementing IADB's ESPF. Regarding contextual risks, the disparity between NP Island and the FI in terms of infrastructure and social services may result in differentiated impacts for the interventions on each of these islands.

- 2.7 The Disaster Risk and Climate Change Risk of the operation has been classified as moderate due to the risk of hurricanes, drought, sea level rise, water supply scarcity, precipitation, or others, including those caused or exacerbated by CC, which may moderately impact the Program, and/or the Program may moderately exacerbate the risk from natural hazards to human life, property, and/or the environment. Due to the characteristics of the works, the existing risks are not expected to be exacerbated. A disaster risk narrative has been presented within the Strategic Environmental and Social Assessment (SESA) and has a Disaster Risk Management Plan (DMRP).
- 2.8 To meet the requirements established by the ESPF, and those outlined in the ten Environmental and Social Performance Standards (ESPS), the EA shall implement an Environmental and Social Management System (ESMS), in accordance with ESPS 1. During due diligence of this proposed operation, a SESA for the operation was developed, as well as a Strategic Environmental and Social Management Plan (SESMP). These documents were released on July 15, 2024, before the Analysis Mission. A final version of the SESA and SESMP, reviewed and adjusted based on the results from the stakeholder consultations, was published on September 6, 2024.
- 2.9 Stakeholder consultations took place on August 27, 2024, and were attended by representatives of several government agencies. The stakeholder consultations report was published on September 18th. Questions raised by attendees spanned the selection criteria for the beneficiary islands, water quality issues related to pumping and reverse osmosis processes, the timeline for project components (particularly the water supply expansion and lift station upgrades), potential vandalism of pumps, the need of environmental monitors, and information disclosure for users new to the piped network. No major changes were required on the SESA after public consultations. As part of the Environmental and Social Action Plan (ESAP) to be implemented by the executing agency during project implementation, additional stakeholder consultations, with participation of neighboring communities and relevant civil society organizations, will be conducted once specific locations and design proposals are finalized, and before the start of any construction work. These consultations must be documented and must inform the specific ESIA and ESMP that will be prepared for each project component.

#### C. Fiduciary Risks

2.10 Based on the ICAP analysis and WSA's prior experience with IDB operations, as well as the presence of an established PMU, the fiduciary risk is assessed as Medium-Low. However, there is a need to have staff dedicated towards the execution of this Program as such the unit will be reinforced with a team including Financial, Procurement and Monitoring Specialists, as well as a Coordinator and Technical Consultants. To avoid delays in preparing financial statements, reports, and disbursements, the PMU will utilize the WSA's Enterprise Resource Planning

(ERP) System to manage Program accounting and the preparation of financial statements and reports; and will dedicate a separate bank account in a commercial Bank to manage the operation resources. The IDB's Client Portal will be used to process Disbursement Requests, manage the Procurement Plan, and request non-objections related to the procurement of goods, works, and services. The threshold for justifying expenses and requesting a new advance of funds will be set at 70%.

#### D. Other Risks and Key Issues

2.11 A risk management analysis was conducted, and the following medium high and high risks were identified:

Table II.3 Other risks (Medium-high and high category)

RISK DESCRIPTION	RISK	Risk	MITIGATION
If there are delays in contracting/procurement activities, then the Program may experience slow disbursement rates, which can affect the achievement of the Program's objectives.	System	Medium- High	Ensure adequate staff members are recruited in the PMU and orientation sessions on the procurement rules, regulations and procedures are conducted.
If natural disasters occur during the construction and operation phases of the Program, then potential damage to infrastructure and equipment can be realized.	Natural	Medium- High	Execute all the necessary due diligence activities on the proposed construction sites and put in place all environmental management safeguards to prevent events such as flooding, among others.  Designs of infrastructure aspects of the project will incorporate climate resilience technologies, and the construction methodologies will include strategies to reduce noise, cyclic loads, and vibration.  Before project completion and hand-over, an operations, maintenance and disaster plan will be developed as part of the project sustainability arrangements.
If legislative and regulatory reform for the W&S sector does not occur on a timely basis during Program execution, the regulated entities and their customers will not benefit from a properly functioning sector, including high quality of service, increase W&S coverage, and more financially viable utilities.	and Legal	High	Develop a legislation reform plan, inclusive of independent assessments of relevant legislation and proposed bills, and the drafting of proposed legislation.  Ensure proper and timely execution of the TC for the legal and regulatory framework and broad and effective engagement with stakeholders.  Engage in ongoing policy dialogue with the government to emphasize the importance of timely reform and its impact on the success of the project and continuous monitoring and evaluation of the program's progress, with particular attention to legislative reform timeline, allowing the bank and the government to take corrective actions, as soon as delays are detected.

- 2.12 Integrity risk. Based on publicly available information, the Office of Institutional Integrity (OII) identified the existence of allegations/investigations related to potential prohibited practices that involved processes managed by the EA and involving EA officials. WSC confirmed that judicial processes against the former WSC General Manager and the former Chairman of the Board are still active and ongoing. The integrity risk is assessed as Medium-Low since these officials are no longer part of WSC, and there were no other officials/employees involved in the judicial process. WSC has appointed a new Board of Directors and WSC's Internal Audit Committee is conducting a review of policies and procedures related to internal controls to ensure that the misconduct does not happen again.
- 2.13 With support from OII, a gap analysis against best practices is being conducted, that will inform the integrity risk management strategy for the Program as well as the current review of WSC's internal controls policies and procedures. The gap analysis will identify potential vulnerabilities that could facilitate the materialization of integrity risks that could impact the development objectives of the Program and affect the reputation of the Bank and the WSC. If vulnerabilities are identified, OII will work with the EA in providing advice and recommendations to strengthen integrity safeguards in their governance structure and key processes, which will be reflected in the POM (¶3.3). The IDB and WSC will agree on an action plan and establish deadlines to implement the required changes.

#### III. IMPLEMENTATION AND MANAGEMENT PLAN

#### A. Summary of Implementation Arrangements

- 3.1 **Borrower and Executing Agency.** The WSC will be the Borrower and EA for the first operation and CCLIP. The Commonwealth of the Bahamas will be the Guarantor. The PMU within WSC will implement the Program and maintain staff proficient in Bank procedures as well as hire additional staff with exclusive dedication to the Program, as necessary. Specialized external consulting services could be contracted by the PMU for specific infrastructure plans and supervision of construction, including environmental and social aspects, and development of technical specifications. Technical and fiduciary staff from the WSC will work closely with PMU specialists so that WSC benefits from knowledge transfer and capacity strengthening.
- 3.2 **Program Management Unit.** The EA will be responsible for all management and reporting of the loan. The PMU will report to the General Manager of WSC, and it will be responsible for the overall technical and administration of the Program, including inter-agency coordination, planning/coordinating, budgeting, execution, and monitoring and evaluation of all financial and procurement activities. The PMU will be responsible for the overall execution of all components of the Program. In general terms, the PMU will be responsible for conducting all the operational and fiduciary, financial management and procurement obligations, including social and environmental safeguards necessary for Program execution and for maintaining all formal communication with the Bank.
- 3.3 **Program Operations Manual (POM).** To ensure that there are appropriate and central guidelines that support internal governance controls in relation to the independency of specific functions and corresponding separation and delegation of authority and responsibilities, a POM will be developed. The POM will define the

administrative, institutional, technical, operational, monitoring, evaluation and risk frameworks of the Project. The POM will outline the level of responsibilities of the EA, PMU, and other participating institutions, and individuals involved in the implementation of the project to achieve the project's objectives. A Project Steering Committee (PSC) that has already been established within WSC will provide strategic advice, governance oversight, and technical support to the PMU. The members of the PSC will be defined in the POM. Additionally, the POM will incorporate integrity safeguards, based on the gap analysis, including but not limited to assigning responsibilities to the PIU to follow up and monitor on the implementation of integrity recommendations, the establishment of due diligence procedures, guidance on addressing conflicts of interest and analysis of beneficial ownership forms. OII will also support WSC staff with training on integrity risk management best practices (¶2.12).

- 3.4 Special Contractual Conditions Precedent to the First Disbursement. (a) The establishment of a PMU within the Executing Agency, and the appointment of its key personnel, including a Program coordinator, a financial specialist, a procurement specialist, an environmental specialist and a social specialist in accordance with the terms of reference agreed upon with the Bank; (b) The establishment of a separate bank account for the exclusive use of the Program; and (c) The approval and entry into force of the POM, in accordance with the terms and conditions agreed upon with the Bank. These conditions are essential to guarantee that the rules of operation and an adequate team will be in place to initiate and conduct Program execution.
- 3.5 **Special Contractual Conditions for Execution.** See special contractual clauses of execution included in Annex B of the ESRS.
- 3.6 Advance Procurement. The Borrower requested the Bank to proceed with the initial steps of procurement before signing the loan. As such, the Borrower has agreed that the procurement procedures, including advertising, will be in accordance with the Bank's Core Procurement Principles for the eventual contracts to be eligible for Bank financing, and the Bank will review the process used by the Borrower. Borrower undertakes such advance contracting at its own risk, and any concurrence by the Bank with the procedures, documentation, or proposal for award does not commit the Bank to make and/or approve a loan for the Program in question (See Section 1.11, of GN-2349-15).
- 3.7 **Retroactive Financing.** The Bank may Retroactively Finance (RF)<sup>33</sup> from the resources of the loan, up to US\$10 million eligible expenses incurred prior to the date of approval of the loan. The RF would enable WSC to procure meters and pumps in advance to prevent delays in the project execution schedule and to hire PEU staff through a competitive process, facilitating an early project start-up. The requirements shall be in accordance with those set out in the loan agreement.
- 3.8 **Procurement Execution.** Procurement activities will be conducted in accordance with the Policies for the Procurement of Goods and Works financed by the IDB (GN-2349-15), and the Policies for the Selection and Contracting of Consultants Financed by the IDB (GN-2350-15). All procurement processes must be included in the procurement plan (REL#3) approved by the Bank through Client Portal and will be conducted in accordance with the methods, supervision modalities, and

Technical Directive for the Recognition of Expenditure, Retroactive Financing and Advance Contracting. IDB, August 2023.

thresholds established therein. The EA and the Bank have agreed on a procurement plan for the first 18 months of execution. The bidding documents may include additional sustainability requirements in the procurement process, as well as requirements for the Contractor to employ a primarily local labor force during execution of infrastructural works. The contracting of firms for the supply of water meters and sewer pumps will be done through direct contracting (DC) The direct contracting is justified since the required goods are being sourced from the manufacturers and hence it is proprietary and obtainable only from one source (GN-2349-15 clause 3.7 (c)). Further the DC will allow for standardization of goods and spare parts, to be compatible with existing goods and parts being used by WSC (GN-2349-15) 3.7 (b).

- Auditing. During the loan disbursement period, the EA will submit to the Bank the Program's annual audited financial statements within 120 days of the close of the fiscal year, and a final audited financial statement report 120 days, after the last disbursement date. The audit is to be performed by a Bank-eligible independent audit firm. The determination of the scope and other related aspects will be Governed by the Financial Management Guidelines for IDB-financed Projects (OP-273-12) and the Audited Financial Reports and External Audit Management Handbook. Audits may be financed with Program funds, (¶I.1.27). The period for the Financial Statement preparation will be January 1st to December 31st.
- 3.10 **Sustainability**. To ensure sustainability of the works financed with this operation and the long-term development goals, WSC shall ensure that sufficient trained human resources, systems, and financial resources are in place to take over the maintenance phase of all the infrastructure, including NRW interventions with a view to ensuring the correct operation of the works and maintaining the gains made in NRW reduction. WSC will present an annual maintenance plan up to three years after completion of works.

#### B. Summary of Arrangements for Monitoring Results.

- 3.11 **Monitoring.** A monitoring and evaluation plan was agreed for the Program, which establishes the use of the PP, PEP, AOP, Financial Plan, and the RM and Progress Monitoring Report. The PMU will submit to the Bank a revised PEP and AOP annually as well as a progress report within the following 60 days at the end of each semester, which will include, among others, the results obtained and an action plan for the following semester, (REL#2).
- 3.12 **Evaluation.** A mid-term and a final evaluation following PCR Guidelines are planned. A mid-term evaluation will be conducted when the operation reaches 50% disbursement or 30 months of execution, whichever occurs first. At this time, the availability of the means of verification of all outcome indicators will be validated, report on progress as well adjustments/updates in the RM at the level of indicators as needed. A final evaluation will be conducted when the operation reaches 90% disbursement. The methodology to assess effectiveness at the end of the Program will be a "before and after" analysis. Attribution of the results to the Program will be based on a revision of the Program's vertical logic and evidence that supports the links between the results and the products in similar contexts. An ex post economic evaluation will also be conducted as part of the final evaluation, and it will also be part of the PCR, which will be conducted up to 24 months after the end of execution of the Program, (REL#2).

#### IV. ELIGIBILITY CRITERIA

- 4.1 Eligibility Criteria for the CCLIP. The proposed CCLIP complies with the requirements established in the paragraph 3.2 of Annex III of document GN-2246-13, "Proposed Amendments to the Conditional Credit Line for Investment Projects (CCLIP) and the Multi-Phase Program Loans", and paragraph 3.6 of the Operational Guideline for CCLIP (GN-2246-15), since the objectives of the credit line are within the priorities defined in the Country Strategy with the IDB Group 2024-2028 (GN-3198-1) with the Commonwealth of The Bahamas, under the Strategic Objective 1.1 Strengthen the country's resilience to disaster and CC.
- 4.2 Eligibility Criterion for the First Individual Operation. The first operation is also in compliance with the eligibility criteria of paragraphs 3.5 (i) through (iv) of Annex III of document GN-2246-13 and in paragraph 3.9 of the CCLIP Operational Guidelines (GN-2246-15), considering that: (i) the objective of the first operation contributes to the achievement of the CCLIP sectoral objective (¶1.23); (ii) the use of the ICAP indicated that WSC has a satisfactory institutional capacity (¶1.40); and (iii) the operation is included in the sector and components of the CCLIP (¶1.24-¶1.27).

Development Effectiveness Matrix										
Summary										
I. Corporate and Country Priorities										
Section 1. IDB Group Institutional Strategy Alignment										
Operational Focus Areas	-Biodiversity, natural capital, and climate action -Gender equality and inclusion of diverse population groups -Institutional capacity, rule of law, citizen security -Sustainable, resilient, and inclusive infrastructure									
[Space-Holder: Impact framework indicators]										
2. Country Development Objectives										
Country Strategy Results Matrix	GN-3198-1	Strategic Objective – 1.1 Strengthen the country's resilience to disaster and climate change.								
Country Program Results Matrix	GN-3207	The intervention is included in the 2024 Operational Program.								
Relevance of this project to country development challenges (if not aligned to country strategy or country program)										
II. Development Outcomes - Evaluability		Evaluable								
3. Evidence-based Assessment & Solution	9.7									
3.1 Program Diagnosis	2.5									
3.2 Proposed Interventions or Solutions 3.3 Results Matrix Quality		3.2 4.0								
4. Ex ante Economic Analysis		10.0								
4.1 Program has an ERR/NPV, or key outcomes identified for CEA		1.5								
4.2 Identified and Quantified Benefits and Costs		3.0								
4.3 Reasonable Assumptions	2.5									
4.4 Sensitivity Analysis	2.0 1.0									
4.5 Consistency with results matrix 5. Monitoring and Evaluation	9.5									
5.1 Monitoring Mechanisms	4.0									
5.2 Evaluation Plan	5.5									
III. Risks & Mitigation Monitoring Matrix										
Overall risks rate = magnitude of risks*likelihood		Medium High								
Environmental & social risk classification  IV. IDB's Role - Additionality		В								
The project relies on the use of country systems										
Fiduciary (VPC/FMP Criteria		Budget, Treasury, Accounting and Reporting, Internal Audit.								
Non-Fiduciary										
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:										
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project	Yes	BH-T1109								

This operation is the first of two individual operations of a Conditional Credit Line for Investment Projects (CCLIP). The general objective of the CCLIP and of its first individual operation is to contribute to improving the sustainability of the Water and Sewerage Corporation (WSC)'s potable water supply and wastewater services in the Bahamas. The specific objectives of the first individual operation are: (i) to improve coverage of potable water supply in Family Islands and New Providence, and reliability of wastewater services in New Providence; (ii) to improve WSC's operational and financial performance; and (iii) to improve the governance of WSC and the water and sanitation sector.

The project has a complete diagnosis for the three specific objectives. The indicators associated with the general objective and the specific objectives included in the results matrix have means of verification, established baseline and target values, and are SMART.

The economic analysis of the operation was carried out through a cost-benefit analysis of each of the proposed infrastructure works, and an aggregate analysis. Benefits were quantified through household willingness to pay for improved sewerage service, consumer surplus for increased access to potable water services, net savings on water treatment due to reduction in non-revenue water and the installation of smart meters. Costs included investment and incremental operation and maintenance costs. Using a 12% discount rate, the net present value of the aggregate analysis is B\$20,818,689, and the internal rate of return is 20.4%. The sensitivity analysis shows that if benefits decrease by 37.3%, or if investment and operation and maintenance costs increase by 50%, the operation will no longer be economically viable.

The project includes a monitoring and evaluation plan in accordance with the Bank's standards. The effectiveness of the proposed intervention will be measured through a beforeafter evaluation (without attribution) of results matrix indicators. Additionally, the ex-post efficiency of the operation will be evaluated with an updated cost-benefit analysis using the same methodology used for the ex-ante analysis for each infrastructure work.

#### **Results Matrix**

Project
Objective

The specific objectives of the first operation are to: (i) improve coverage of potable water supply in Family Islands and New Providence, and reliability of wastewater services in New Providence; (ii) improve WSC's operational and financial performance; and (iii) improve the governance of WSC and the water and sanitation sector. Achieving these objectives will contribute to the general objective of the CCLIP and the first operation is to contribute to improving the sustainability of WSC's potable water supply and wastewater services in The Bahamas.

**General Development Objective** 

Indicators	Unit of measurem ent	Baseline value	Baseline year	Expected year for achievement	Target	Means of verification	Comments			
General development objective: to contribute to improving the sustainability of WSC's potable water supply and wastewater services in The Bahamas.										
I.1 Greenhouse gas (GHG) emissions avoided.	tCO2eq	0	2024	2030	3,569.3	Reports from WSC's Operational Reporting system.  Calculation based on energy consumption reduction (MW) by decreasing the use fossil fuels due to energy efficiency improvements in WSC's operations (sewer) and reduction of production of portable water (NRW).	Impact indicators associated to the development objective will be observed during the life of the Program. In this case sustainability is defined in broader terms and includes operational, financial and environmental (climate action and pollution).  For details, refer to the Monitoring and Evaluation Plan.			
I.2 Subsidies received by WSC from Central Government	MM US\$	73.8	2023	2030	38.7	Financial Audits approved by WSC's Board	The impact indicator associated to the development objective will be observed during the life of the project.  BL for 2023, last audited financial statements.  Annual targets will be monitored during the life of the project.  For details, refer to the Financial Feasibility Analysis.			

# **Specific Development Objectives**

Indicators	Unit of measure- ment	Baseline (BL) value	BL year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project (EOP)	Means of verification	Comments
Specific development objective 1: to improve coverage of potable water supply in Family Islands and New Providence, and reliability of wastewater services in New Providence											
O.1.1 HH with new connections to potable water services in Family Islands (FI)	# households	0	2024			220	470	573	573		Number of households come from information provided by WSC and the pre-feasibility studies.  1,530 beneficiaries (2024)
O.1.2 HH with new connections to potable water services in New Providence (NP)	# households	0	2024				350	645	645	WSC commercial and operational reports	Number of households come from information provided by WSC and the pre-feasibility studies.  2,400 beneficiaries (2024)
O.1.3 HH with improved access to water service in NP and FI	# households	0	2024		40,950	24,050			65,000		"Improved access" is defined as achieving the target of reducing NRW FI to 1.5 MIGD (million imperial gallons per day) at an average annual system pressure of 20 psi, and having a smart meter installed in NP and FI. Assessed at the household level.  Total of 48,103 HH in NP and 16,897 HH in FI  Number of households come from information provided by the operations unit at WSC and the pre-feasibility studies and Technical Options and Design

Indicators	Unit of measure- ment	Baseline (BL) value	BL year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project (EOP)	Means of verification	Comments
O.1.4 HH with improved access to sewerage services in NP	# households	0	2024		2,623	2,624	5,246		10,493		"Improved sewerage services" means that the upgrade of the lift stations will create redundancies that will reduce the probability of down time, reducing the risk backups, and stoppages, in the system, increasing reliability.
											Number of households come from information provided by the operations unit at WSC and the pre-feasibility studies.
Specific developr	nent objective	2: to improv	e WSC's	s operat	ional and	financial	perform	ance			
O.2.1 Average daily volume of NRW in FI	Millions of Imperial Gallons per Day (MIGD) (%)	2.7 (55)	2024		2.5 (51)	2.0 (40)	1.7 (35)	1.5 (32)	1.5 (32%)	Operational reports from WSC	Reported reductions in NRW are the result of reductions of: (i) apparent losses attributable to the replacement of existing meters with smart meters and (ii) real losses attributable to interventions in the network (DMA, PMA, leak control, pressure control, among others). The corresponding '%' stands for the coefficient between the expected volume billed and the volume of water produced, expressed in percentage.
O.2.2 Average service disruptions per month in sewer lift stations in NP upgraded with the Program	occurrences / month	3.4	2024					1.5	1.5	Operational reports from WSC	It refers to the 19 lift station being upgraded/refurbished by the Program

Indicators	Unit of measure- ment	Baseline (BL) value	BL year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project (EOP)	Means of verification	Comments
O.2.3 Percentage of operating expenses covered with WSC's operating revenues	%	61%	2024	82	87	92	100	100	100%	Financial reports from WSC	Operating revenues and operating expenses based on WSC's audited financial statements. Operating expenses do not include depreciation and amortization.  It is expected that WSC will increase its current level by implementing efficiency improvement measures such as NRW interventions, increasing smart metering, and capacity building, despite the expected cost increases owing to the project as well as inflation.
O.2.4 Employees per 1,000 active water connections	Employees/ 1,000 connections	7.5	2023				7.1	6.9	6.9	Operational reports from WSC	Data from WSC's CBP 2023- 2028

Indicators	Unit of measure- ment	Baseline (BL) value	BL year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project (EOP)	Means of verification	Comments
Specific develop	ment objective	3: to impro	ve the g	overnan	ce of WS	C and the	water a	nd sanit	ation sect	or	
O.3.1 Water and sanitation sector policy, legal and regulatory framework for the Water and Sanitation sector in The Bahamas approved and in force.	Framework	0	2024				1		1	Draft National Policy Document approved by Cabinet / Cabinet Papers for submission of Acts to Parliament	For the framework to be in place. at least two of the following conditions must have been met:  [1] National policy for the water and sewerage sector approved by Parliament  [2] Updated Water and Sewerage Corporation Act approved by Parliament  [3] Updated Environmental Planning and Protection Act approved by Parliament  [4] Updated Utilities Regulation and Competition Authority
O.3.2 WSC's Corporate governance structure strengthened	Structure	0	2024					1	1	Execution reports by WSC	approved by Parliament  For WSC's corporate governance structure to be considered strengthened the following conditions must be met:  [1] WSC's operational policies are aligned with the updated legal, regulatory and institutional sector framework.  [2] At least one activity identified in the Plan is implemented and has budget allocated.

Indicators	Unit of measure- ment	Baseline (BL) value	BL year	Year 1	Year 2	Year 3	Year 4	Year 5	End of Project (EOP)	Means of verification	Comments
O.3.3 Internal policy aimed at promoting the participation of PwD within WSC approved by the Board	Policy	0	2024					1	1	Final Report, including draft PWD Policy Proposal approved by WSC's Board	It is focused on an internal policy to promote the labour participation of PWD.
O.3.4 Awareness campaigns with a gender focus targeting beneficiary communities implemented.	%	0	2024				50	100	100	Reports from campaigns produced by consulting firm and validated by WSC	The indicator measures the share of awareness campaigns (a specified number out of the total number of campaigns) that incorporate messages exclusively dedicated to women. There will be in total 4 campaigns (2 yearly).
O.3.5 WSC's staff who are women and have completed training in leadership skills and techniques.	%	0	2024			15	20		35	Plan approved by WSC manage- ment / Training reports by WSC	The target correspond accordingly to 60 women (since currently there are 189 staff in WSC who are women).  Completed means that the trainee has received a certificate of completion.

# Outputs<sup>1</sup>

Indicators	Associated Outcomes	Unit of measure- ment	BL value	BL year	Year 1	Year 2	Year 3	Year 4	Year 5	ЕОР	Means of verification	Comments		
Component 1: No	Component 1: Non-Revenue Water Reduction and Establishing Advanced Metering Infrastructure													
I.1 Non Revenue Water Reduction Plan for Family Islands developed and implemented	O.1.1, O.1.2, O.1.3, O.2.1, O.2.3	Plan	0	2024					1	1	Operational Reports by WSC	The Plan will include the design and execution of interventions to reduce NRW, including: (1) DMAs/PMAs, (2) Leak detection and repair, (3) Asset management system, (4) main replacement, and (5) training		
I.2 Advanced Metering Infrastructure Installed	O.1.3, O.2.1, O.2.3	# Smart Meters	0	2024	40,950	24,050				65,000		Includes installing ultrasonic smart meters in NP (48,103) and FI (16,897).		

<sup>&</sup>lt;sup>1</sup> For a breakdown on the milestones associated with each output, refer to the Monitoring and Evaluation Plan (<u>REL#4</u>).

Indicators	Associated Outcomes	Unit of measure- ment	BL value	BL year	Year 1	Year 2	Year 3	Year 4	Year 5	EOP	Means of verification	Comments
Component 2: In	stitutional Str	engthening						•			•	
II.1 WSC's first tariff request to URCA submitted	O.2.3. O.3.1	Proposal	0	2024			1			1	Tariff request proposal submission to URCA documentati on	WSC has not received an increase in tariffs since 1999. Since that time, it has significantly improved the water service it provides to its customers in NP and FI. WSC has also met rising demand by increasing its reliance on desalination plants which costs more than groundwater.
II.2 Plan to strengthen the institutional capacity of the Utilities Regulation & Competition Authority (URCA) implemented	O.3.1	Framework	0	2024			1			1	Consulting Reports approved by WSC's Board	Institutional capacity means that URCA has the human resources to comply with its new functions within the new framework for the economic regulation of WSC.
II.3 Plan to strengthen the institutional capacity of the Department of Environmental Planning and Protection (DEPP)	O.3.1	Framework	0	2024			1			1	Consulting Reports approved by WSC's Board	The legal and regulatory framework should eliminate any overlaps between WSC's regulation of water resources and the regulation of water resources by the DEPP.

Indicators	Associated Outcomes	Unit of measure- ment	BL value	BL year	Year 1	Year 2	Year 3	Year 4	Year 5	EOP	Means of verification	Comments
developed and implemented												
II.4 Plan to strengthen WSC's compliance capacity with the new legal and regulatory framework in the water and sanitation sector developed and implemented	O.3.1	Plan	0	2024			1			1	Reports from consulting firms approved by WSC's Manage- ment	Implementation of the plan will support (1) compliance of new legal and regulatory framework in the water and sanitation sector; (2) provide training on environmental regulation of the water and sanitation sector
II.5 Corporate governance strategy developed and implemented	O.3.2	Strategy	0	2024	1					1	WSC's Board Memo approving the implementa -tion of Corporate Governance Strategy	The strategy will be considered implemented when at least two activities identified in the approved strategy have been implemented and budget allocated.\

Indicators	Associated Outcomes	Unit of measure- ment	BL value	BL year	Year 1	Year 2	Year 3	Year 4	Year 5	EOP	Means of verification	Comments
II.6 WSC's human capital strategy developed and implemented	O.2.3, O.2.4	Strategy	0	2024				1		1	Strategy approved by WSC's Board / Reports from consulting firms approved by WSC's manage- ment	The human capital strategy will allow WSC to increase the efficiency of its staff and to provide its staff incentives for individual growth and development.  The strategy includes (1) a needs assessment, (2) a workforce development plan, (3) technological infrastructure, (4) a performance-based contracting strategy, (5) a recruitment and talent acquisition strategy and (6) an evaluation and monitoring system.

Indicators	Associated Outcomes	Unit of measure- ment	BL value	BL year	Year 1	Year 2	Year 3	Year 4	Year 5	ЕОР	Means of verification	Comments
II.7 National policy for the water and sanitation sector developed	O.3.1	Policy	0	2024		1				1	Draft National Policy Document approved by Cabinet	The existing legal and regulatory framework does not provide for any policy or establish any objectives in the sector.
II.8 Policy to encourage the employment participation of people with disabilities (PWD) within WSC developed.	O.3.3	Policy	0	2024					1	1	Draft policy approved by WSC's manage- ment	

Indicators	Associated Outcomes	Unit of measure- ment	BL value	BL year	Year 1	Year 2	Year 3	Year 4	Year 5	EOP	Means of verification	Comments
II. 9 Plan for information and awareness campaigns with a gender focus targeting beneficiary communities, developed and implemented	O.3.4	Plan	0	2024				1		1	Plan approved by WSC manage- ment / Semi- annual reports by WSC	This indicator will be considered achieved if the campaign design includes a G&D specialist who ensures that the emphasis is placed on how continuous and safe water access contributes to gender equality by: (i) reducing domestic and caregiving time for women and girls; (ii) improving family health, which women primarily manage; and (iii) encouraging women and people with disabilities (PWD) to join local water committees.
II.10 Plan for training in leadership techniques with a gender focus, aimed at WSC female staff developed and implemented	O.3.5	Plan	0	2024				1		1	Plan approved by WSC manage- ment / Semi- annual reports by WSC	The training plan will be considered implemented once it all training activities are completed.

Indicators	Associated Outcomes	Unit of measure- ment	BL value	BL year	Year 1	Year 2	Year 3	Year 4	Year 5	EOP	Means of verification	Comments
Component 3: A	ccess to Potal	ole Water Sup	ply									
III.1 Sweeting's Tract New Water Main in Abaco installed	O.1.1, O.2.1, O.2.3	Feet	0	2024		20,000	8,000	1,400		29,400		
IIII.2 South Bimini Port Royal Water Main Extension installed	O.1.1, O.2.1, O.2.3	Feet	0	2024		8,100	1,200			9,300	Works	
III.3 South Bimini Water Main Extension To Airport installed	O.1.1, O.2.1, O.2.23	Feet	0	2024		6,600	3,400			10,000	supervision Reports approved by WSC	
III.4 New Providence distribution mains installed	O.1.2, O.2.1, O.2.3	Feet	0	2024		30,000	14,000	3,000		47,000		
Component 4: W	astewater Col	lection Infras	tructure U	pgrade								
IV.1 Sewer lift pumps in New Providence upgraded and operating	O.1.4, O.2.2, O.2.3,	Lift stations	0	2024		4	9	6		19	Works supervision Reports approved by WSC	Updates include replacement and upgrade existing lift pumps, control panels, electrical and Supervisory Control and Data Acquisition (SCADA) components.

**+Country**: Bahamas **Division**: WSA **Operation No.:** BH-L1061 **Year**:2024

## **Fiduciary Agreements and Requirements**

Executing Agency (EA): Water and Sewerage Corporation												
Operation Name: The Bahamas Water Supply and Sanitation Systems Upgrade Program												
I. Fiduciary Conte	ext of Executing Agen	су										
1. Use of country	Use of country system in the operation <sup>1</sup> .											
☐ Budget ☐ Reports ☐ Information System ☐ National Competitive Bidding (No												
Treasury	Internal audit	Shopping	Others									
Accounting	External Control	Individual Consultants	Others									
2. Fiduciary execu												
Particularitie execution	es of the fiduciary	a Program Manager, Financia (PS), and Monitoring & Evaluation will conduct training in IDB powersee the execution based for the calendar of January 1s independent auditors eligible justify 70% to request a new preview will be ex-post, and the Account in a commercial Bankfunds.  The Accounts and Reports De Financial Officer in collaboration financial management of the financial management process assigned part-time to the programment will be managed Strategic Coordination Office.	ement Unit (PMU) will be reinforced with a Specialist (FS), Procurement Specialist ation Specialist. The IDB fiduciary team olicies, procedures, and systems and will on a supervision plan. The audit will be at to December 31st conducted by to the Bank. The project will need to Advance of Funds. The disbursements are funds will be managed in a Bank at for the exclusive use of the project partment which reports to the Chief ion with the PMU will be responsible for IDB project. The tasks associated with the ses may be performed by existing staff ject.  If by the PMU in collaboration with the The PS will be responsible for all ct and will be supervised by the Project									

<sup>&</sup>lt;sup>1</sup> Any system or subsystem that is subsequently approved may be applicable to the operation, in accordance with the terms of the Bank's validation.

#### 3. Fiduciary Capacity

Fiduciary Capacity of the EA	WSC has previous experience in the execution of an IDB financed project, BH-L1028 and currently has a PMU in place for the execution of an operation financed by the Caribbean Development Bank (CDB).
	Based the ICAP, the assessment of the EA's fiduciary capacity is classified as Medium.

#### 4. Fiduciary risks and risk response

Risk Taxonomy	Risk	Risk level	Risk response
Human Resources	Insufficient skilled staff to undertake financial management and procurement functions for the project to lead to delays	Medium- High	Hire a dedicated FS and PS
Institutional	The departments responsible for project financial management and procurement has no recent experience with IDB policies	Medium- low	Hire a dedicated FS and PS

5. Policies and Guides applicable to operation: Financial Management Guidelines for IDB-financed Projects (OP-273-12); Audited Financial Reports and External Audit Management Handbook; and Disbursement Handbook. The procurement of goods works and services, and the selection of consultants financed by the Bank will be carried out in accordance with the Policies for the Procurement of Goods and Works financed by the IDB (document GN-2349-15) and the Policies for the Selection and Contracting of Consultants Financed by the IDB (document GN-2350-15), respectively. The Procurement Plan (PP) includes all the details on program procurement. The PMU will follow procurement processes of the program as described in the PP to be approved by the Bank, which will cover the entire duration of the program starting on the date that this program enters into effect. The PP will be updated at least quarterly or as required through the Client Portal.

6. Exceptions to Policies and Rules: not applicable

#### II. Aspects to be considered in the Special Conditions of the Loan Agreement

Pre-first disbursement conditions: N/A

Exchange Rate: For purposes of Article 4.10 of the General Conditions, the Parties agree that the applicable exchange rate shall be that indicated in paragraph (b)(ii) of said Article. For purposes of determining the equivalency of expenditures incurred in Local Currency chargeable to the Additional Resources or of the reimbursement of expenditures chargeable to the Loan, the agreed exchange rate shall be the exchange rate on the effective date on/in which the Executing Agency or any other person or legal entity in whom the power to incur expenditures has been vested makes the related payments to the contractor, supplier, or beneficiary.

Type of Audit: Annual Special Purpose Audited Financial Statements (AFS)

To roll out a Filing System of documents produced by the project to have them available for the Bank or audit purposes review, and preserve them three years after the project's Last Disbursement Date.

# III. Agreements and Requirements for Procurement Execution

Bidding Documents	For the procurement of Works, Goods and Non-Consulting Services executed in accordance with the Procurement Policies (document GN-2349-15), subject to ICB, the Bank's Standard Bidding Documents (SBDs) or those agreed between EA and the Bank will be used for the particular procurement. Likewise, the selection and contracting of Consulting Services will be carried out in accordance with the Policies for the Selection and Contracting of Consultants (document GN-2350-15) and the Standard Request for Proposals (SRP) issued by the Bank or agreed between the EA and the Bank will be used for the particular selection. The revision of the technical specifications, as well as the terms of reference (ToR) of the procurements during the preparation of selection processes, is the responsibility of the sectorial specialist of the project. This technical review can be ex-ante and is independent of the procurement review method.
Use of Country Systems	The country's e-bidding platform, Bonfire will be used for issuing bidding documents, receipt of clarifications, issuing of amendments and the submission and opening of bids. The Bank will conduct an assessment of WSC e-procurement software, Procureware to determine if it can be used in the procurement of activities under the project.
Direct Contracting and Single Source Selection	The following direct contracting (DC) have been identified: There are two DC planned for this operation:  1) Saint Louis Cedex of France is being proposed for the supply of the Diehl brand meters to the value of US\$12,000,000. WSC under the project will commence the installation of smart meters for NRW reduction and the Diehl brand is the choice of WSC after careful review of suitability and due diligence of the satisfactory use of the smart meters in other parts of the Bahamas and the Caribbean. The required good is being sourced from the manufacturer and hence it is proprietary and obtainable only from one source; therefore, according to GN-2349-15 clause 3.7 (c), the DC of Saint Louis Cedex is justified.
	2. Xylem Water Solutions is being proposed for the supply of their manufactured Flygt sewer pumps to the value of US\$3,000,000. The Flygt sewer pumps have been used by WSC for a number of years and is specified to meet the technical engineering standards followed by WSC and is established as the WSC standard. The procurement through DC is justified under, GN2349-15 clause 3.7 (c), the required good is being sourced from the manufacturer and hence it is proprietary and obtainable only from one source and GN-2349-15 3.7 (b), standardization of goods or spare parts, to be compatible with existing goods, may justify additional purchases from the original supplier.
Recurrent Expenses	The recurrent expenses required to put the project into operation approved by the Project Team Leader, which are financed, will be made following the EA's administrative procedures. Such procedures would have been reviewed and accepted by the Bank, provided that they do not violate the principles of value for money, economy, efficiency, equality, transparency and integrity: (See Guidelines for the treatment of recurring expenses and GN 2331-5 Expense Eligibility Policy

	and updates)			
Advanced Contracting Retroactive financing	The Bank may retroactively finance from the resources of the loan, up to the sum of US\$10 million (20% of the proposed loan amount), eligible expenses incurred by the Borrower prior to the date of approval of the loan. These expenses may include hiring of consulting services and the purchasing of pumps and meters provided that requirements shall be in accordance with those set out in the loan agreement. Such expenses must have been incurred from the Project Profile Approval Date (May 31, 2024), but under no circumstances will expenses incurred more than 18 months before the loan approval date be included. (See GN-2349-15, GN-2350-15 Policy on Retroactive Financing and Advance Contracting).			
Procurement supervision	The method of supervision shall be ex ante. The supervision method must be determined for each selection process. All procurement processes will be launched once all technical specifications and/or ToR are validated by the Bank's Sector Specialist; and will be documented in accordance with the Bank's general filing guidelines.  All modifications to the present arrangement are subject to a prior written agreement between the EA and the Bank. The evaluation of capacity and the level of risk may vary during the project's execution depending on the findings of the regular supervision activities that will be conducted during the project's lifespan. As such, supervision modalities may vary as capacity increases.			
	Executing Agency	Works	Goods/Services	Consulting Services
	WSC	12,000,000	15,309,000	19,621,000 Firms 3,070,000 Singles
Records and Archives	best practices and to must be kept for thre	the general guideli ee (3) years beyond	by the Borrower accornes provided by the E the end of the opera EA develop electroni	Bank. All records

## **Main Acquisitions**

Description of the procurement	Selection Method	New Procedures/Tools	Estimated Date	Estimated Amount 000'US\$
Goods				
Procurement of Sewer	DC		[01/01/2025]	3,000

Pumps			
Procurement of AMI- Ultrasonic (Smart) Water Meters	DC	[01/01//2025]	12,000
Works			
Installation of Water Meters	International Competitive Bidding (ICB)	[10/01/2024]	4,000
Extension of distribution mains throughout New Providence	International Competitive Bidding (ICB)	[10/01/2024]	4,100
Non-consulting services			
Professional Development Courses	Price comparison with open invitation	[12/01//2024]	200
Consulting Firms			
Assessment for the Reduction of NRW using industry best practices	Quality- and Cost- Based Selection (QCBS)	[06/01/2025]	17,000
Individuals			
Staffing of URCA to cover the specialties for water sector regulation	Selection of individual consultant (by open invitation)	[07/01/2025]	125
Staffing of the DEPP to cover the specialties for water sector regulation	Selection of individual consultant (by open invitation)	[02/01/2025]	250

To access, PP

## IV. Agreements and Requirements for Financial Management

Programming and	The Ministry of Finance and the delegated executing agencies are responsible for
Budget	the corresponding programming and budgeting procedures including the provision of adequate fiscal space required for execution. This project however will not use
	this system, given that the Utility companies use different systems.
	WSC has documented procedures in the area of budgeting. The Accounts and
	Reports Department which reports to the Chief Financial Officer in collaboration with the PMU will be responsible for financial management of the IDB project. The
	Accounts and Reports Department has specific authority to conduct financial
	management for the entity's projects and general authority in the areas of budget, accounting, and treasury.
	,

Treasury and Disbursement Management	Designated Account: As a prior condition the Bank, and the Borrower shall agree on the designation of a special account in The Bahamas Central Bank, and an operative bank account in a Commercial Bank to make payments in local and foreign currencies. The Project Cash Flow is characterized by a Financial Plan of six months period base on a projection of payments based on commitments. The disbursement mechanism shall be Electronic through the IDB Portal Client Connectivity. The currency to manage the operation is United States Dollar (US\$), the exchange rate to be used in the transaction will be the effective exchange rate on the date of the expenses payment, and any exchange rate will be covered with the loan resources. The preferential Disbursement Method will be Advance of Funds and to request a new advance of funds is necessary to reduce the percentage (%) of justification of balances pending justification from 80 to 70% in line with OP-273-12, 3.3. To prevent systemic bottlenecks in processing payments, it is recommended to designate a dedicated financial officer to process payments for the project.
Accounting, information systems and reporting	WSC utilizes NaviLine as its auxiliary accounting software to record and report transactions on public investment projects. This system will be customized with a chart of account specific for the project and with specific reports to provide information to the government, IDB and auditors.
Internal Control and Internal Audit	There is an internal audit function, and the functional reporting line is the Board of Director's Internal Audit Committee.
External control: external financial audit and project reports	The Borrower and/or EA shall select and contract external audit services in accordance with the ToR previously agreed with the Bank. According to the nature and risk of the operation the audit is performed by eligible audit firms, which may be adjusted over the life of the project depending on the Bank's supervision results. The type of Audited Financial Report that will be prepared in Accordance with Special Purpose Frameworks also known as Audited Financial Statement (AFS), whose cut-off date and filing deadline will be 120 days after each calendar year end or 120 days after the last disbursement date.
Project Financial Supervision	The operation requires financial supervision based on the project risk and according to financial clauses, plans, and audit findings. Under the responsibility of the FS's or fiduciary consultants, "on-site" and desktop reviews and meetings will also be carried out at least quarterly, subject to adjustments during execution. The disbursement supporting documents review will be performed ex-post by external eligible auditors auditing the project financial statements.

#### DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

# PROPOSED RESOLUTION DE-\_\_/24

Bahamas. Loan/OC-BH to the Water and Sewerage Corporation. The Bahamas Water Supply and Sanitation Systems Upgrade Program. First Individual Operation under the Conditional Credit Line for Investment Projects (CCLIP) BH-O0014
The Board of Executive Directors
RESOLVES:
That the President of the Bank, or such representative as he shall designate, is authorized in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the Water and Sewerage Corporation, as borrower, and with The Commonwealth of the Bahamas, as guarantor, for the purpose of granting the former a financing aimed at cooperating in the execution of The Bahamas Water Supply and Sanitation Systems Upgrade Program, which constitutes the first individual operation under the Conditional Credit Line for Investment Projects (CCLIP) BH-O0014, approved by Resolution DE/24 or2024. Such financing will be for the amount of up to US\$50,000,000, from the resources of the Bank's Ordinary Capital, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.
Conditions and the opecial Contraction Conditions of the Project Summary of the Loan Proposal.
(Adopted on 2024)

LEG/SGO/CCB/EZIDB0000366-2030403020-5101

BH-L1061

#### DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

#### PROPOSED RESOLUTION DE- /24

Bahamas. Conditional Credit Line for Investment Projects (CCLIP). The Bahamas Water Supply and Sanitation Systems Upgrade Program (BH-O0014)

The Board of Executive Directors

#### **RESOLVES:**

- 1. To authorize the President of the Bank, or such representative as he shall designate, to enter into such agreement or agreements as may be necessary with the Water and Sewerage Corporation, to establish the Conditional Credit Line for Investment Projects (CCLIP) for The Bahamas Water Supply and Sanitation Systems Upgrade Program (BH-O0014) (the "Line") for an amount of up to US\$100,000,000 chargeable to the resources of the Ordinary Capital of the Bank.
- 2. To establish that the resources allocated to the Line shall be used to finance individual operations under the Line, in accordance with: (a) the objectives and regulations of the Conditional Credit Line for Investment Projects approved by Resolution DE-58/03, as amended by Resolutions DE-10/07, DE-164/07, DE-86/16 and DE-98/19; (b) the provisions set forth in documents GN-2564-3 and GN-2246-13; and (c) the terms and conditions included in the proposal for the corresponding individual operation.

/A 1 ( 1	0004)
(Adopted on	2024)

LEG/SGO/CCB/EZIDB0000366-2030403020-5100 BH-O0014