Solomon Water

Safe water for a healthy nation

Five Year Corporate Strategic Plan 2024 to 2028

Solomon Islands Water Authority

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Abbreviations

AusAid	Australian Aid
ADB	Asian Development Bank
CAPEX	Capital Expenditure
DFAT	Department of Foreign Affairs and Trade
EU	European Union
FMIS	Financial Management Information System
GDP	Gross Domestic Product
GI	Galvanized iron pipe
HRM	Human Resource Management
IMF	International Monetary Fund
kl	kilolitres
KPIs	Key Performance Indicators
l/c/d	Litres per capita per day
ML	Megalitres
NRH	National Referral Hospital
NRW	Non-revenue Water
NWSHP	National Water Sanitation & Hygiene Policy
NWSMP	National Water & Sanitation Master Plan.
NIEP	National Integrated Environment Plan
NSDS	National Sustainability Development Plan
OH&S	Occupational Health and Safety
OPEX	Operational Expenditure
PE	Polyethylene pipe
PEM	Pacific Economic Monitor
PPE	Personal Protective Equipment
PWWA	Pacific Water & Wastewater Association
PVC	Poly vinyl chloride pipe
SCADA	Supervisory Control and Data Acquisition
SDGs	Sustainable Development Goals
SIWA	Solomon Islands Water Authority
SOE	State Owned Enterprises
SW	Solomon Water (Trading name)
STP	Sewerage Treatment Plant
SR	Storage Reservoir
SWP	Safe Work Procedures
UXO	Unexploded Ordinance
WB	World Bank
WTP	Water Treatment Plant

List of Relevant Legislation, Regulations and Codes

Solomon Islands Water Authority Act 1993
Water Supply Design and Construction Code (SIWA 2016)
Procurement & Contract Administration Manual (PCAM) 2022
Public Finance and Audit Act
Contract Administration Manual 2023

Executive Summary

Introduction

The purpose of Solomon Islands Water Authority's 5-year Corporate Strategic Plan for 2024 – 2028 is to implement and deliver on SIWA's 30 Year Strategic Plan 2047 and SIWA's Future Operating Model 2033.

The Corporate Strategic Plan 2024 - 2028 articulates SIWA's Vision, Mission, Strategic Objectives, Targets and Key Performance Indicators (KPIs). It similarly, presents the main strategic projects and operational activities of SIWA for the five-year period. Being a rolling plan, it is subject to annual reviews and updating to make it more responsive to changes in the operating environment. Our 2033 Future Operating Model is aligned with key national development frameworks particularly the Government's National Sustainability Development Strategy and Solomon Islands National Urban Policy 2020 – 2035.

Aligned with SIWA's 30 Year Strategic Plan 2017 – 2047 it outlines its long term vision and 5 year project action plan to improve and expand water and sewerage services in accordance with our mandate under the Solomon Islands Water Authority Act 1993 (the Act).

The Act sets out the functions of the SIWA with respect to proper management and development of urban water resources and sewerage services throughout the Solomon Islands.

In the case of Water & Sanitation services:
• Provide a reliable, safe, affordable, secure and sustainable water supply to meet socio-economic development needs; and
• Effective management of waste and pollution that minimizes negative impacts on public health and environment.

Furthermore, it enables SIWA to effectively and efficiently perform its core functions in line with the Solomon Islands Water Authority Act 1993.

Our Vision

SIWA's 5-Year Corporate Strategic Plan 2024 - 2028 is guided by the vision:

"Safe water for a healthy nation"

Safe water for a healthy nation appeals to the hearts of our employees, to give meaning to their work and to inspire exceptional performance.

In order to be a high performing organization, one that delivers exceptional service to our customers our vision encapsulates that our people are working for the people of Solomon Islands, for their families, especially their children, grandchildren and for future generation.

Our Mission

In line with the vision, the mission of the SIWA is:
"To provide reliable and safe water supply and sewerage systems within our area of operations in Solomon Islands, while working in partnership with the community to plan, deliver and operate infrastructure in a manner that seeks to minimize the social and environmental impacts of our activities."

Our Core Values

In pursuit of its mission, SIWA will continue to be guided by the following five (5) core values – defining its desired corporate culture:

Core Value	Description
Impartiality	SIWA staff shall treat all customers, stakeholders and each other with fairness. SIWA provides safe, reliable, affordable and sustainable water services to its customers.
Morality	SIWA staff shall ensure they uphold standards of right and good conduct.
Professionalism	SIWA staff shall perform their duties with the highest degree of competence and skills.
Accountability	SIWA staff shall perform their duties in a manner that shows readiness to take full accountability and responsibility for their actions.
Consistency	SIWA staff shall ensure uniformity, predictability and coherence in accordance with our Code of Conduct and Core Values.
Transparency	SIWA staff shall operate in a fair and open manner and without prejudice in delivering safe, reliable, affordable and sustainable water services.

Table 1: SIWA's core values

Our Motto

In line with its core values – SIWA shall use the following motto to rally employees, customers, suppliers, and stakeholders, in general, behind its vision and mission:

"Safe reliable, affordable and sustainable water services with positive IMPACT"

Strategic Objectives and Implementation Plan

Our Strategy

The 2030 United Nations Sustainable Development Goals (SDGs) were adopted by 193 countries in 2015 as a call to action to end poverty, protect the planet and improve the lives and prospects of everyone, everywhere. They aim to stimulate action in areas of critical importance for humanity and the planet by 2030. The 17 goals provide a common overarching framework to address the global challenges faced, including poverty, inequality, climate change, environmental degradation, peace and justice.

The SDGs closely align with Solomon Water's purpose in providing safe water for a healthy nation by delivering '*safe, reliable and affordable water supply and sewerage systems within our area of operations in Solomon Islands, while working in partnership with the community to plan, deliver and operate infrastructure in a manner that seeks to minimize the social and environmental impacts of our activities*.'

To do this, we are committed to understanding our customers' values and preferences to help us shape our actions to enhance sustainable economic wellbeing of our communities.
This is the first time we've reported how our strategy aligns with the SDGs, and we'll explore each link and our related actions and goals throughout the strategy.

Corporate Strategic Plan Objectives

The overarching goal of the 30-year strategic plan, 5-year action plan and the tariff reset is to achieve the four project objectives in the diagram below:

Figure 1: Solomon Water's High Level Strategic Plan Objectives

To achieve the above objectives, SIWA continues to align its plans with the long term strategic directions and service standards set by the Board, as these will drive the quality of service provided. These standards are important for the long-term sustainability and cost effectiveness of service delivery. The following service standards have been established:

a) Corporate Objectives
b) Levels of Service
c) Design Standards
d) Customer Service Standards

SIWA's corporate objectives are the specific targets and drivers in the 30 year Strategic Plan that are set by our Board and SIG to drive improvements in service delivery over time. The targets and objectives are developed based on international standards such as WHO, UN Sustainable Development Goals, as well as those set by SIG and the Board relating to health standards, environmental protection, treatment of informal settlement areas and coverage areas.

We have also established a number of service levels, which sets the benchmark for SIWA's standard of performance that it will need to achieve. These relate to the broader corporate objectives and regional benchmarks such as those set by Pacific Water and Wastewater Association (PWWA).

To drive quality in design, construction and delivery of its services, we developed and implemented our *Water Supply Design and Construction Code (SIWA 2016)*. This code is based on Australian construction and design standards, adapted to appropriate Solomon Islands conditions. SIWA continues to develop wastewater standards as part of the current detailed sewer design project.

Our strategy during the period of this Strategic Plan is to continue with the implementation of key projects captured in our existing Action Plan 2024 - 2028, and reviewed regularly as projects progress and funding is available. Any new projects or targets following the 5- Year Corporate

Strategic Plan review will be incorporated into the next 5-Year Corporate Strategic Plan.

During the five-year period, 2024 - 2028, SIWA through its Strategic Plan will pursue the following five (5) Strategic Objectives:

• **Customer Focus:** SIWA shall implement strategies to shift from an "operational" focus to a customer centric organization. SIWA is committed to improving our service delivery to benefit our customers and stakeholders. Underpinning our approach are our fundamental commitments which lay the foundation for our strategic priorities and initiatives. They are:
They are:

- Delivering Safe, Reliable, Affordable and Sustainable Water and Sanitation Services
- Communicating and Engaging with Customers and Stakeholders
- Delivering Customer Outcomes
- A High Performing Organization

• **Human Resources:** SIWA shall continue to develop and up-skill leaders and staff to ensure enhanced operational safety, improved operational performance and customer service outcomes. Through an efficient, robust and well-resourced organization, our Finance, Human Resource, Procurement and Technical Operations Teams are committed in working together to deliver safe, reliable, affordable and sustainable water and sanitation services to our customers.

• **Environment:** SIWA shall ensure sustainable use and management of the environment and natural resources for the benefit of present and future generations. SIWA's commitment to implementation of our major works program such as the Kongulai Water Treatment Plant, Honiara Network Water Supply trunk mains and large-scale trunk sewers and pump stations, outfalls and outfall pump stations, will ensure secure and safe water supplies and sanitation services reduce our carbon footprint and subsequent impact on our environment.

• **Safety:** An integral part of delivering water and sanitation services to our customers is ensuring that it is carried out in a safe and sustainable way. The health, safety and well-being of our staff and customers are paramount. SIWA shall provide all systems, equipment and Personal Protective Equipment (PPE) necessary for employees to carry out their work safely. SIWA staff continuously identify hazards, report incidents and learn from mistakes, making changes to operations to ensure safety of personnel and the public. It will become a way of life.

• **Operational Performance:** Ensuring a safe reliable, affordable and sustainable provision of water and sanitation services in Solomon Island is central objective of Government. An efficient water utility plays a primary role in ensuring this objective is met. Knowing how well SIWA is operating, and where it stands in comparison to other similar utilities helps SIWA's staff, stakeholders and Government adjust existing practices and set future targets. Information on the operation of SIWA systems, inputs and outputs helps to establish good management practices, effective oversight, and enhanced financial sustainability.

This 5-Year Corporate Strategic Plan (the Plan) has translated each strategic objective into key strategies, output targets, KPIs as well as project and operational activities. Accordingly, two detailed implementation activity schedules have been presented in the Plan including:

Appendix 1 proposed donor funded initiatives, major projects and strategic activities.

Appendix 2 proposed SIWA funded initiatives, minor projects and strategic activities.

Appendix 3 SIWA's current water and sanitation tariffs, fees and charge for 2024.

Appendix 4 operational, financial and organisational performance parameters used to monitor the overall performance of SIWA.

Appendix 5 financial projections to 2028.

Results Framework

The Results Framework is presented to facilitate the monitoring and evaluation of the 5-Year Corporate Strategic Plan 2024 – 2028.

It presents the main expected results, monitoring plan, reviews, and evaluation and reporting arrangements. This will allow timely identification of implementation challenges and hence facilitate remedial measures in goodtime during implementation.

It will also facilitate the evaluation of the Plan to ascertain the extent to which the set objectives are being realized, as well as address other issues involved in the assessment of the Plan.

Situational Analysis

Economic Assessment

In developing this 5-Year Corporate Strategic Plan 2024-2028, regard has been given to the current economic environment and its impact on our organization.

According to the latest issue of the Asian Development Bank's (ADB) Pacific Economic Monitor (PEM) economies in the Pacific are projected to grow collectively by 3.3% in 2023 and 2.8% in 2024 as the sub region continues to recover from the COVID-19 pandemic.

According to the International Monetary Fund (IMF) the recovery has been fragile, as Russia's war in Ukraine has led to a decline in the terms of trade and rising inflation. However, the large pipeline of infrastructure projects financed by concessional borrowing is expected to support medium-term growth and help reduce a large infrastructure gap In the Water Sector.

According to IMF, the current account deficit and fiscal deficit are projected to widen to 12.6 percent and 6.3 of GDP in 2023, respectively, reflecting higher global commodity prices, imports for the Pacific Games, and the significant fiscal costs of the Pacific Games and the general elections scheduled for early 2024. This has been reflected in increased electricity and fuel prices.

The IMF considers Solomon Islands' current account deficits will remain elevated, reflecting the decline in log production, slowing potential growth of China, and high imports for infrastructure projects. Foreign reserves are forecast to decline to 6.3 months of imports by 2027, although they would still be within the adequacy range at this lower level.

The public debt-to-GDP ratio according to IMF is projected to reach Solomon Islands threshold of 35 percent in 2031, driven by concessional external borrowing for infrastructure projects and increasing domestic financing.

The Pacific Private Sector Development Initiative (2021) identified a number of challenges for Solomon Islands including among other things unreliable and costly energy supply; poor waste management and sanitation services; a weak business environment that limits foreign investment; and complex landownership systems.

Therefore public investment mobilization remains a priority. Solomon Islands lags its peers in terms of access to infrastructure and public services. IMF estimates that the country would need additional spending of about 6.9 percent of 2030 GDP every year, to meet the Sustainable Development Goals (SDGs) on health, education, and infrastructure while building climate

resilience.

Therefore, mobilizing public investment in physical and human capital, in particular for enhancing climate resilience, should be an economic priority following the rebuilding of the cash balance.

Climate Change

The 5-Year Corporate Strategic Plan 2024-2028, further takes into account and has regard to the potential impacts of climate change on the organisations networks and proposed infrastructure projects.

This Plan considers the wide range of projections from the various global climate models available and develops an approach for applying projected changes to temperature, evaporation, sea level rise and rainfall intensity and depths to Honiara under long term climate change, interdecadal climate oscillations, and increased cyclone frequency.

A review of report prepared by Egis as part of the UWSSSP, funded by ADB and provided to Solomon Water, recommended that the following matters be taken into consideration when allowing for climate change effects on water and wastewater infrastructure:

- The risk of flood events - a history of flooding in the area shows that events have been driven by cyclones, but also by heavy rain events. Flash flooding and erosion can affect the infrastructure directly (via washout) but also indirectly due to blockages, overflows, and other operational issues. The report identified that up to 40km of current water supply pipes and 2.7km of current wastewater pipes are potentially exposed to flooding, and 1.7km of water supply pipes are on land at risk of landslide.
- Impact on groundwater supplies (quality and quantity) from climate change due to changes in rainfall is likely to be less significant than the impact of flooding and the impact of catchment activities.
- Impacts on water quality – turbidity issues have been reported in surface water supplies. While substantial water quality events are associated with rainfalls, this risk is likely to increase if climate change leads to more intense rainfall events.
- Effects of sea level rise – some infrastructure is at risk of being inundated, and the report recommends that Pumping Stations are installed with an allowance of a 500 mm rise in sea level.

The climate change impact assessment identifies both current infrastructure and proposed future infrastructure projects that have some sections of the infrastructure exposed to stream and river flooding. Springs and boreholes are also identified as potentially exposed to flooding.

Recommendations from this report have been taken into consideration in developing the 5-Year Corporate Strategic Plan 2024-28 with particular reference to SIWA's infrastructure development to 2047.

Catchment Management

Turbidity of river, spring and groundwater has been causing operational and water quality issues for water supplies. Completion of the Kongulai water treatment plant will mitigate the effects of some increase to turbidity but if very high levels of turbidity are received at the plant the production rate will reduce which will still have an impact on the supply available to the customers. Component 5 of the UWSSSP relates to the management of Honiara's drinking water source area under climate change, and the proposed activities incorporate monitoring, modelling, engagement, and the development of catchment management plans. This project will likely provide the information necessary to understand and mitigate water quality issues.[1]

1 Refer section 9 of the Plan for additional details and information.

1. Introduction

Background

The Solomon Islands Water Authority was established under the Solomon Islands Water Authority Act 1993 and commenced operations on 17 May 1993.

The Act sets out the functions of the SIWA with respect to proper management and development of urban water resources services and sewerage services In Solomon Islands.
In relation to water our functions are:

(a) to control, regulate, develop, manage, conserve and utilize urban water resources in the best Interests, of Solomon Islands;
(b) to formulate national policies relating to the control and use of urban water resources;
(c) to ensure that the water supplied for consumption meets the prescribed water quality standards;
(d) to provide, construct, operate, manage and maintain, buildings, works, systems and services for impounding, conserving and supplying water for domestic, industrial, commercial and other purposes;
(e) to provide, construct, operate, manage and maintain buildings, works, systems and services for the conveyance, treatment and disposal of sewage, disposal of trade and industrial waste and other connected purposes; and
(f) any other like functions.

SIWA functions and operations are conducted in a manner that complies with all relevant laws and regulations specifically those applicable requirements set out within the Constitution of Solomon Islands, Public Finance and Audit Act, and any other applicable written laws that are intended to apply to the Solomon Islands Water Authority.

SIWA's Business Plan 2025-2027 detailing the purpose and main operational activities of SIWA is also required for approval by Government.

The primary objective of SIWA, as outlined in section 4 (1) and (2) of the Act are:

(a) to ensure that water resources allocated for urban water supply are properly managed, distributed, allocated and used in ways which are consistent with proper water management practices;
(b) to provide water and related service to meet the needs for users in a commercial manner consistent with the overall policies of the Government.

In exercising its functions, the Authority may have regard to such matters as it considers would be appropriate for the attainment of its objects including, without limiting the generality of the forgoing-

(a) promotion of efficient use of urban water resources;
(b) the necessity for integrated catchment management and planning of land use and the use of urban water resources;
(c) public interest and community needs;
(d) conservation of urban water resources;
(e) pollution control and prevention; and
(f) efficient use of human, material and financial resources.

SIWA's 5-year Corporate Strategic Plan 2024 – 2028 is aligned with key national development frameworks, particularly the National Sustainability Development Plans, which aims at:

"A future where individual, community, business and government partnerships contribute to a sustainable quality of life for all people of the Solomon Islands"

For SIWA this means providing reliable, affordable, secure and sustainable water and sanitation services to Solomon Islands.

The 5-Year Corporate Strategic Plan 2024 – 2028 aims to enable SIWA to effectively and efficiently perform its functions under the Act.

Overall, the Plan embraces comprehensive planning and organizational development towards supporting the Government's efforts to enhance the quality of life for all Solomon Island through the provision of safe, reliable, affordable, secure and sustainable water supply and sanitation services.

How will we get there?

We aim to provide safe reliable water supply and municipal effluent collection services, to be profitable and sustainable, and to develop our business for the long-term interest of our customers and the people of Solomon Islands. We will do this by:

- Working closely with customers and stakeholders
- Delivering our services at reasonable cost
- Developing our people
- Investing in the right resources to provide a better service
- Educating and informing the public
- Continually improving how we do things
- Being a good employer

Purpose of the Strategic and Operational Plan

The Plan takes into account SIWA's 30-Year Strategic Plan 2017-2047. Our 10-Year Future Operating Model 2033, and revised 5-Year Action Plan 2024-2028. Thus, the Corporate Strategic Plan articulates SIWA's Vision, Mission, Strategic Objectives, Targets and Key Performance Indicators (KPIs) for 2024 – 2028. It likewise presents the main strategic projects and operational activities of the SIWA for the five-year period.

The Plan considers the current state, and maps out our journey over the next five years to achieving our objectives. The Plan is a 'living' document and will be continuously reviewed and adjusted to ensure progress towards implementing our vision, is preserved.

The Planning Process

Within the framework provided by the Corporate Strategic Plan 2024-2028, a consultative and participatory approach was followed in developing the core elements of the Plan including setting out SIWA's vision, mission, strategic objectives, strategies and targets.

A total of five strategic planning workshops including Town Hall Staff Forum were conducted, with 216 participants to introduce employees to strategic thinking tools and obtain feedback on a shared vision, mission and core values and suggestions for the improvement of SIWA's operations. A key objective of the workshops was to obtain buy-in from the employees for the implementation of this strategy.

Workshops were conducted with key stakeholders including government and non-government agencies and representatives from provincial centres where SIWA operates. Two workshops were held with approximately 50 participants attending the sessions. Valuable insight and feedback were received from stakeholders which was integrated into this Plan including our Future Operating Model 2033.

Follow up workshops were held to ascertain progress of various aspects of the Corporate Strategic Plan and changes required to update and make the plan more relevant.

Overall, the pertinent national development frameworks as mentioned above directly informed the preparation of the Corporate Strategic Plan 2024-2028. A detailed appraisal of the previous existing Strategic Action Plan 2017-2022 was undertaken to assess the level of performance, challenges and key issues to be considered when developing this new Plan.

Furthermore, an internal and external environmental scanning was systematically undertaken to assess the level of quality of the services rendered, and the perception in the contextual trends so as to establish strategic issues which needed attention when developing the strategic objectives and targets for this plan. The internal and external environment was assessed using SWOC analysis to identify the main Strengths, Weaknesses, Opportunities and Challenges and in turn the key issues for consideration.

The development of this Corporate Strategic Plan 2024-2028 was undertaken by SIWA's corporate team, comprised of members from each division, under the guidance of the Management.

Special thanks go to Mr. Donald Marahare, Chairman of the SIWA, and Board of Directors – Ms. Cynthia Wickham, Deputy Chair, Ms. Gloria Hong, Mr. John Belande, Mr. Tony Makabo, Mr. George Rausi, and Dr. William Parairato, who provided so much help and advisory throughout

the review process, as well as the development of various models and frameworks applied in this plan. Involvement of all staff was done at all levels.

Organization of the Corporate Strategic Plan

The remaining part of this document is divided into the following sections:
Section 2 - begins with a brief history of the SIWA. Then it gives details of the current findings from the Situation Analysis including results from analysis of SIWA's stakeholders, strengths and weaknesses identified during the organizational scan, opportunities and challenges considered during the trend analysis and critical issues.

Section 3 – explains the strategies and activities proposed to enhance our Corporate Governance, Corporate Culture and Ethics, Human Resource and Performance Management, Financial and Procurement Management, including Information Communication and Technology (ICT).

Section 4 – describes the strategies and activities proposed to enhance our sewerage and sanitation services.
Section 5 – describes the strategies and activities proposed to enhance our water production, storage and treatment, distribution and supply services.

Section 6 – presents the strategies and activities proposed to enhance Customer Service, Communication and Engagement Strategy.

Section 7 – details our approach to tariffs, fees and charges for water and sanitation services; Community Service Obligations and financial projections over the strategic plan period.

Section 8 – provides a list of our strategic goals and presents the most significant risks and challenges facing SIWA and their proposed controls (financial and non-financial) over the strategic plan period.

Section 9 – sets out Solomon Water investment strategy 2024-2028 and beyond.
Finally, five appendices are provided in the document:

Appendix 1 is a summary of proposed donor funded initiatives, major projects and strategic activities.

Appendix 2 is a summary of proposed SIWA funded initiatives, minor projects and strategic activities.

Appendix 3 sets out SIWA's current water and sanitation tariffs, fees and charge for 2024.
Appendix 4 are the operational, financial and organisational performance parameters used to monitor the overall performance of SIWA.

Appendix 5 is financial projections to 2028 to support the implementation of SIWA's capital and operational activities.

Appendix 6 sets out Solomon Water Strategic one-page map

2. Background

Introduction

This section provides an analysis of the internal and external operating environment of SIWA.

The analysis covers historical background; mandates of the SIWA; role and functions; governance; relevant national policy and strategic context; the framework provided by SIWA's Future Operating Model 2033; strategic performance review to 2023; recent initiatives; stakeholders' expectations; key strengths, weaknesses, opportunities and challenges and the main strategic issues to be addressed by the Corporate Strategic Plan for 2024 - 2028.

Legal Framework

SIWA was established in May 1993 as the Water Authority for Solomon Islands by the Solomon Islands Water Authority Act 1993 (the Act) with responsibility for the provision and proper management and development of urban water resources and services and sewerage services in Solomon Islands.

SIWA's functions and responsibilities are also governed by other relevant policies, legislation and regulations including, the State Owned Enterprises Act 2007, State Owned Enterprises Regulations 2010, National Sustainability Development Strategy, and SIWA's 30 Year Strategic Plan 2017-2047.

Roles and Functions of Solomon Islands Water Authority

The main roles and functions of SIWA as spelt out in the Act in relation to water and sanitation services are:

(a) to control, regulate, develop, manage, conserve and utilize urban water resources in the best Interests, of Solomon Islands;
(b) to formulate national policies relating to the control and use of urban water resources;
(c) to ensure that the water supplied for consumption meets the prescribed water quality standards;
(d) to provide, construct, operate, manage and maintain, buildings, works, systems and services for impounding, conserving and supplying water for domestic, industrial, commercial and other purposes;
(e) to provide, construct, operate, manage and maintain buildings, works, systems and services for the conveyance, treatment and disposal of sewage, disposal of trade and industrial waste and other connected purposes; and
(f) any other like functions.

SIWA functions and operations are conducted in a manner that complies with all relevant laws and regulations specifically those applicable requirements set out within the Constitution of Solomon Islands, Public Finance and Audit Act, and any other applicable written laws that are intended to apply to the Solomon Islands Water Authority.

Governance and Organisational Structure

Governance

Role of the Board

The Board is responsible for policy formulation, and general administration of the affairs of SIWA as stipulated under section 6(1) of the Solomon Islands Water Authority Act 1993. The Board reports to the Responsible Minister for SIWA - the Minister of Mines, Energy and Rural Electrification.

Board Composition

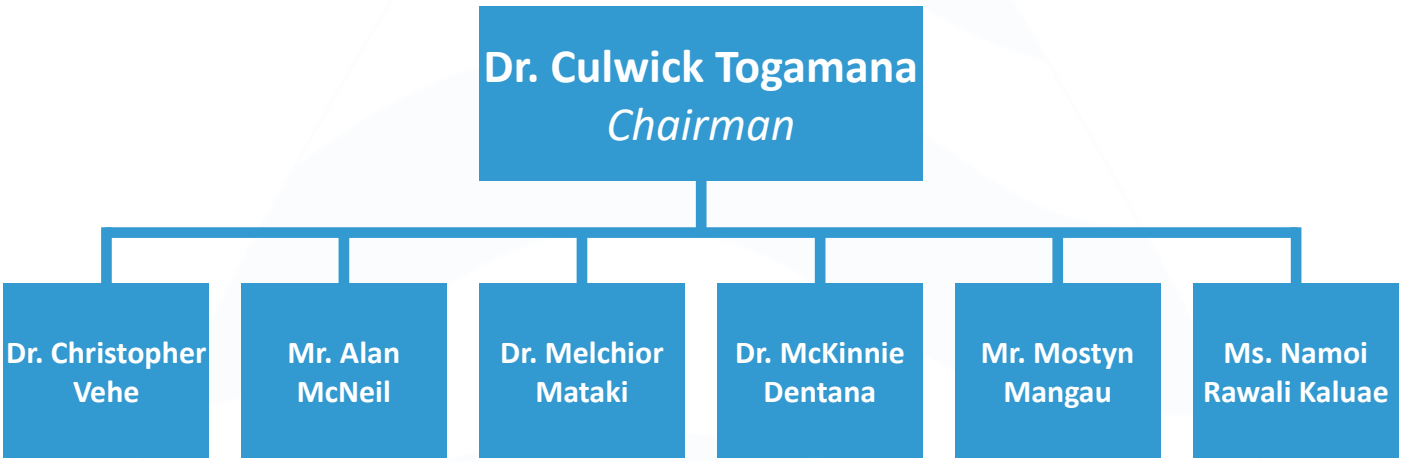


Figure 2: Board composition and membership

SIWA currently has a full Board of seven members comprising Dr. Culwick Togamana Chairperson, Dr. Christopher Vehe PS MMERE, and members Mr. Alan McNeil, Dr. Melchior Mataki, Mr. Mckinnie Dentana, Mr. Mostyn Mangau and Ms. Namoi Rawali Kaluae.

The Board further comprises of an Audit and Risk Committee which meets quarterly and comprises the following six members: Director Dr. Culwick Togamana (Chair), Director Ms. Namoi Rawali Kahuae, Chief Financial Officer, Customer Care Coordinator, Internal Auditor including Ms. Areau Hivu (Member). The committee provides oversight of SIWA governance and compliance framework and organisational risk management.

Two other committees of the Board are established and meet as required namely the Recruitment and Remuneration, and Tenders and Contracts Committees.

Organisational Structure

Under the current SIWA organizational structure, there are four executive managers comprising Chief Financial Officer, Chief Operations Officer, Head of Corporate Services and Head of the Project Management Unit who assist the Chief Executive Officer.

SIWA operates primarily from its head office at Commonwealth Ave and its Mataniko Operations site and a customer service office located at the Panatina Plaza complex in Honiara.

In addition SIWA manages its provincial service areas located at Tulagi, Auki and Noro including Gizo.

Figure 3 below provides an outline of SIWA current management organisation structure.

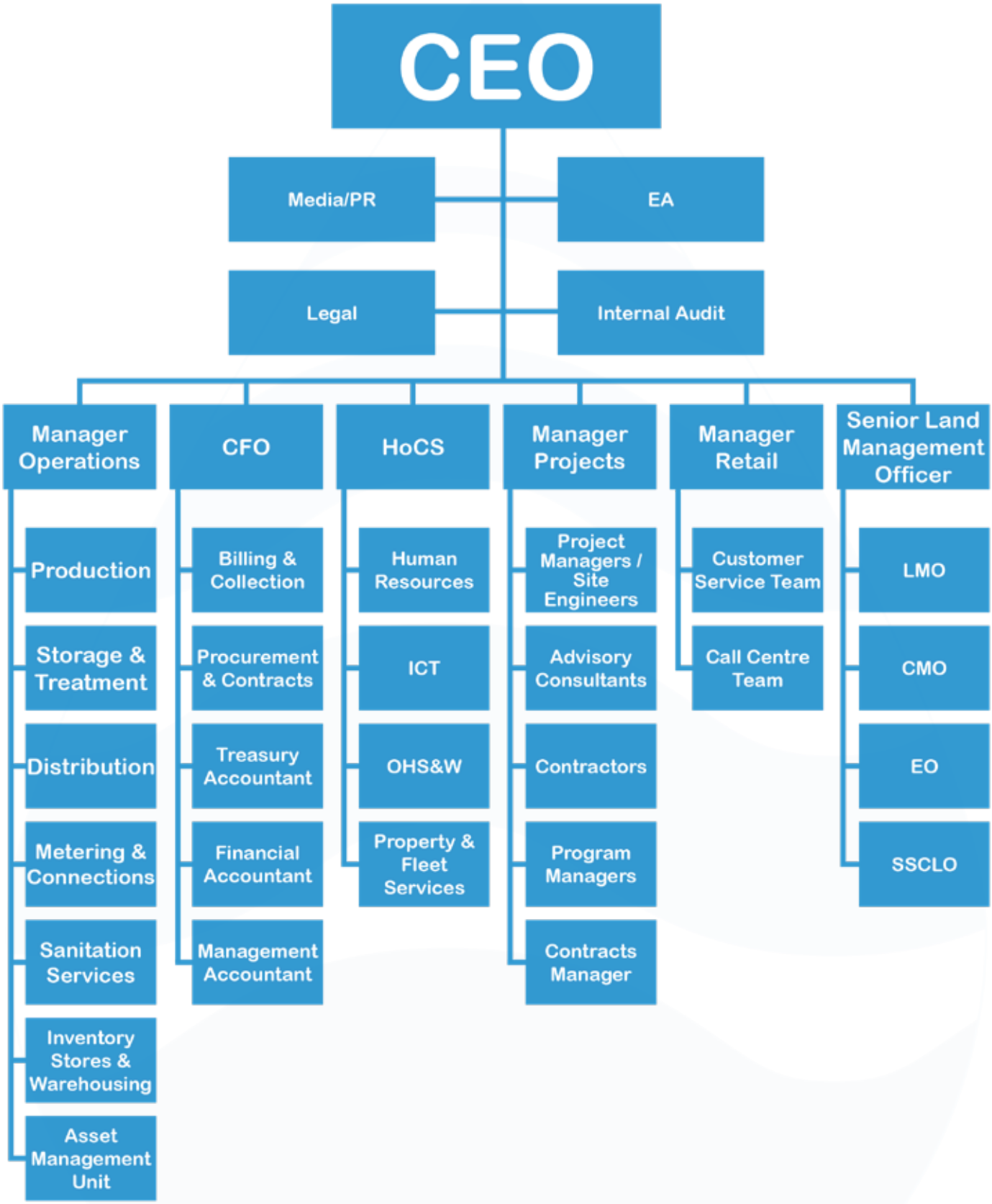


Figure 3: SIWA's Current Organization Structure.

3. Our Corporate Strategy

Corporate Governance

The *Solomon Island Water Authority Act 1993* establishes the SIWA Board of Directors as the body responsible for the policy and general administration of the affairs of the Authority.[2]

The Board reports to the Responsible Minister for SIWA - the Minister of Mines, Energy and Rural Electrification.

The Board of the Solomon Islands Water Authority must act in good faith and in what the directors believe to be in the best interest of the statutory authority and they shall act consistently with any regulations made under the Act.

There are a number of policies and procedures that require attention within the SIWA to enhance good corporate governance. These include but are not limited to, Conflict of Interest & Gifts including Declaration of Interest policies, Probity Guidelines, Contractual and Financial Delegations Policies and Procedures, and Organisational Risk Management Policy which will be reviewed and updated.

These policies, standards and guidelines are required to improve SIWA's corporate governance with respect to transparency, participation, responsiveness, accountability, equity, effectiveness and efficiency.

Transparent accounting practices have been implemented to International Financial Reporting Standards (IFRS) within SIWA.

Enabling SIWA's corporate governance framework will require adequate training and development of all staff within the organisation.

Corporate Culture and Business Ethics

Our culture is a vital and unique part of our organization. It's what makes people decide to join our team and is the biggest reason employees choose to stay or leave. It's the key to gaining (and maintaining) a truly high performing organization—one that makes work a place people want to be.

SIWA's desired corporate culture is one characterised by autonomy, where employees are empowered to innovate and work autonomously, without micro-managing or hand-holding where staff have ownership in their work.

Secondly, SIWA's corporate culture is one that values outputs (the quality of work produced) rather than inputs (the number of hours logged). Achievements are regularly celebrated in the presence of peers, who are encouraged to recognize one another for reaching important milestones.

Thirdly, SIWA's employees who are part of our strong culture are united by a common path to purpose—not profits. Where individual staff goals are aligned with the objectives of the organization.

2 Section 6(1) of the Solomon Islands Water Authority Act 1993.

The development of this culture is a key objective of this strategic plan and the foundation stone for building such a culture is the formulation of a shared vision for the organization, a clear mission and appropriate core values to govern our behaviour.

Our core values govern organizational behaviour and the way we do things. It also provides a guideline for the behaviours that are not acceptable.

The feedback from employees on the types of behaviours they desire and the behaviour they want to discourage in SIWA are:

Desired Behaviours	Undesirable Behaviours
Leadership by example	Corrupt conduct
Just and fair	Fraudulent conduct
Professionalism	Bullying
Equal rights and treatment	Harassment
Motivated	Selfishness
Communication	Dishonesty
Teamwork	Favouritism
Unity	Discrimination
Punctuality	Unethical
Awards/Rewarding	Illegal
Respectful	Nepotism
Consistency	Disrespectful
Accountable	Laziness
Responsible	Poor leadership
Transparency	Unprofessional
Integrity	
Ethical	
Safe Practices	
Moral	

Table 2: SIWA desired behaviors and culture

Human Resources

Our people are an integral part of SIWA's achievements. They are key to our successes and enabling the delivery of water and sanitation services to customers in a safe, reliable, affordable and secure way.

The management of administrative tasks like payroll and management of employee files aims to improve employee efficiency, motivating employees through rewards and incentives and is the responsibility of our Human Resource Management Team.

The development of our staff is fundamental to SIWA's objective of being a high performing organisation as a whole. Our staff development and capacity building activities are focussed on improving employee performance. Our training and development plans focus on motivating employees by making them feel valued, and is the responsibility given to all managers.

Our Human Resources Strategy focuses on, ensuring people have the right knowledge, skills and support for the work they are required to do; providing the right remuneration and incentives to motivate employee to willingly and eagerly work towards implementing the business strategy of SIWA; and ensuring our disciplinary processes are fair and just.

To meet these objectives, the following shall be undertaken:

- A review of the structure of the organization to align with the objectives and processes proposed in this strategic plan.
- Establish clear position and/or job descriptions that are valued within SIWA taking into consideration the new position requirements, accountabilities and responsibilities and taking into account external factors such as economic, financial and employment environment in Solomon Islands.
- Link the performance of all employees to the performance of the SIWA in terms of achievement, effectiveness and efficiency using the Balanced Scorecard and the leadership of the SIWA with the business culture of this strategic plan using the 360-degree appraisal system.
- Implement Performance Review, Training and Development Plans for all staff aligned with SIWA's strategic objectives and operational plans and is the responsibility of all managers.
- Implement training and development in key areas such as Occupational Health & Safety, Customer Service, Project Management, Leadership, Computer Literacy, Technical and Personal Development.
- Increase exposure of staff on technical related matters. Invest in professional development of staff specifically on modern technology and technical expertise.
- Continue to attract and retain the best employees who are customer focused and develop an integrated Human Resource Management system.
- Integrate and develop policies and procedures on cross cutting issues, such as gender equality, social inclusion and environmental awareness in line with relevant policies and standards.

Gender Equality and Social Inclusion Strategy

Solomon Islands Water Authority (SIWA) recognises that its most valuable asset is its people, and achieving its mission is dependent on the performance, commitment, professionalism and capabilities of its staff.

Aligning with the Solomon Islands Water Authority's five-year Corporate Strategic Plan 2024-2028, the Gender Equality and Action Plan demonstrates our commitment to a progressive and innovative culture.

Fostering a culture of inclusion and diversity is crucial to achieving this goal and in today's global environment, SIWA's success will depend on its effective use of the talents and capabilities of all its staff.

Research has shown the benefits of diversity and inclusion citing improved productivity, innovation and creativity in organisations that harness their diversity as an asset. Furthermore, organisations that have a higher proportion of women at Board and management levels are organisations that perform better.

SIWA recognises that building social inclusion leads to improved staff outcomes and opportunities in capacity development and service delivery within the organisation.

The Solomon Islands Water Authority Gender Equality Strategy and Action Plan 2024 seeks to drive practical and impactful action for lasting change.

SIWA has recently built a reputation as an Employer of Choice for Gender Equality. SIWA currently has women in various roles within the organisation at all levels.

While SIWA has made some progress in creating a fair, flexible and equitable workplace, our current workforce data indicates that we continue to under-utilise the talents of women particularly at senior levels and in the Science, Technology and Engineering disciplines.

Although SIWA is currently reviewing and revising its organisation and salary structure including pay grades that is applicable to all staff, there remains a significant gender pay gap due to the under representation of women at the Board and senior management levels.

To attract and retain a high-quality workforce that reflects diversity of Solomon Islands, SIWA will promote and implement an organisational culture in which all staff of all genders, diversity and backgrounds participate equally at all levels. To achieve this SIWA will challenge the beliefs, attitudes and unconscious biases that undermine our progress towards gender equality for all staff regardless of background.

SIWA leadership team is committed to gender equality and the executive management team and Board of Directors will lead the gender equity improvements by example.

Finance and Procurement Management

Established under the *Solomon Islands Water Authority Act 1993*, SIWA's principal activity is the provision of non-contestable water and sanitation services throughout its areas of operation within the Solomon Islands.

SIWA, as a statutory body is obligated to carry out its financial and procurement management in accordance with the *Public Finance and Audit Act and its relevant Act.*

Financial Reporting

Our financial management strategy ensures that all the financial aspects of the SIWA operations are managed in a transparent manner that captures all transactions and records them under the appropriate budget classification, complies with legal requirements, and produces reports appropriate for managing the utility and reporting to the relevant authorities and regulators.

CashWater Pre-Payment Technology

To improve customer relations, revenue and access to our services Solomon Water continues to introduce new metering technology to make water available more affordably and equitably to our customers.

In its effort to address billing and payment issues, Solomon Water introduced prepayment meters for all its domestic customers in 2016.

Over the next period 2024 – 2025 and onwards, Solomon Water will upgrade the prepayment meter technology to enhance its reliability, functionality and operational efficiencies. Solomon Water is procuring a technology advanced water meter (smart meter) through open tender processes.

On the basis of the evaluation methodology and criteria stated in the Tender, metering supplier, Lesira-Teq was successful in supplying new technology CashWater meters for Solomon Water in 2024 and subsequent two years.

Solomon Water considers the new technology CashWater domestic connections to help manage the risk to customers of consuming more water than they can afford, disconnection and debt and the risk to SW of bad debt.

The benefits of prepayment CashWater meters is considered twofold:

- Prepayment allows customers with their own connection to manage their consumption within limits they can afford, without risk of arrears, disconnection, or unexpected debt;
- Customer's ability to take advantage of the benefits of prepayment presupposes that the prepaid meter functions properly and that customers can buy credit readily. The new technology has substantial improvement in metering efficiency and accuracy through the SMART Meter water measuring device;
- Prepayment heightens awareness of consumption and usually results in water conservation by the customer;
- Prepayment enables SW to recover arrears;
- Assists in the reduction of Non-revenue Water (NRW); and
- Allow Solomon Water to monitor and control customer meters.

Policies and Procedures

The following policies shall be reviewed or established to manage the financial and procurement function of the SIWA:

- Review and revision SIWA's Financial and Contract Delegation Policy to assign appropriate levels of authority for approval of purchase orders, tenders and contracts.
- Review and establishment of a Financial Policy and Financial Management Manual
- Develop a Water Theft Policy and Procedures
- Develop Customer Hardship Policy

There is an opportunity for SIWA to engage an internal auditor. The function of the internal auditor is to carry out on-going auditing, provide advice to the CEO and Audit & Risk Committee on business processes and investigates incidents that may occur during the course of business. The head of the internal audit function generally provides a report to the Board of Directors on finance (while administratively the Internal Auditor reports to the CEO).

The use of external auditor(s) will continue and provides assurance to the owners of the corporation from an external perspective. These audits are conducted annually to meet SIWA's obligations under the Act.

Procurement and Contracts

The Solomon Islands Water Authority is a State Owned Enterprise and is required to perform its procurement processes in accordance with the *Public Finance and Audit Act*, including the Procurement & Contract Administration Manual (PCAM) 2022 and Contract Administration Manual 2023.

SIWA's procurement operations are conducted in accordance with Regulations and Procurement Manual enacted under the Act.

SIWA's purchasing and procurement process commences with the identification of a need and ends with the award of a contract. The specific functions include elements of inventory control, and logistics management.

The goal of SIWA's purchasing and procurement processes is to award timely and cost-effective contracts to qualified contractors, suppliers and service providers for the provision of goods, work and services to support our operations, in accordance with principles and procedures established in the purchasing and procurement rules.

SIWA's principles for purchasing and procurement ensure that management is accountable for their actions and that procurement is managed in accordance with the objectives, principles and procedures defined in our Procurement & Contract Administration Manual.

Purchasing and procurement management, requirement identification and budget allocation, procurement planning and strategy development, procurement method selection, document preparation and advertisement, bid and proposal submission, evaluation and selection, and contract award to closeout, are all addressed in the procurement manual. SIWA management are not at liberty to use a procurement method not stipulated in the procurement rules or not identified for a specific type of procurement requirement. Any deviation from procurement rules requires justification and clearance from a designated approving authority, sometimes the Board, or relevant Minister before the action is carried out.
Transparency, integrity, economy, openness, fairness, competition and accountability are some of the fundamental principles of SIWA's purchasing and procurement.

Transparency in SIWA's procurement process enables information to be made available to all stakeholders: contractors, suppliers, service providers, and the public at large, unless there are valid and legal reasons for keeping certain information confidential for example proprietary information belonging to companies or individuals.

SIWA's purchasing and procurement process integrity, including that of our procurement management staff, is vital in ensuring confidence in our dealings with stakeholders.

The need to manage SIWA budgets and finances with care and due diligence so that prices paid for goods, services and works are acceptable and represent efficient and good value for money for SIWA is paramount.

There is a need to establish a Tenders committee comprising a Board member, the Chief Financial Officer, Procurement Coordinator including the appropriate division and department head. The committee shall oversee all tenders to ensure the process is transparent and fair and produces the best outcome for SIWA.

For significant tenders involving significant contract and financial requirements the CEO may Chair the committee with the support of the Tenders Committee.

There is a need to review the procurement and payment processes to ensure the timely supply of machines, spares parts and other items. Delays in supply chain with regards to materials and equipment has a negative impact on SIWA's operations and efficiency.

Property, Buildings and Fleet Services

With SIWA's current workload and that projected for the future, increasing performance and delivering services to meet customer expectations and increased costs in providing property, building and fleet services will need to be accounted for.

Shortage of skilled labour and increasing material costs continue to rise and make it difficult to anticipate and budget future projects regardless of type or size. There are internal facilities and fleet management services that have not been able to keep abreast with increasing demand for our services.

Property management, fleet management and facilities required to house stores and materials, provide transportation and adequately deliver services need to be planned, budgeted and addressed on a continuing basis over the next 5-year period.

Fleet management needs to be enhanced and maintained to support the water production, storage and treatment, distribution and delivery services as well sanitation demands and ensuring public safety requirements are met.

Adequate budget needs to be set aside for Facilities Management which includes cleaning and waste, security, repairs and maintenance and rents/leases, rates and taxes.

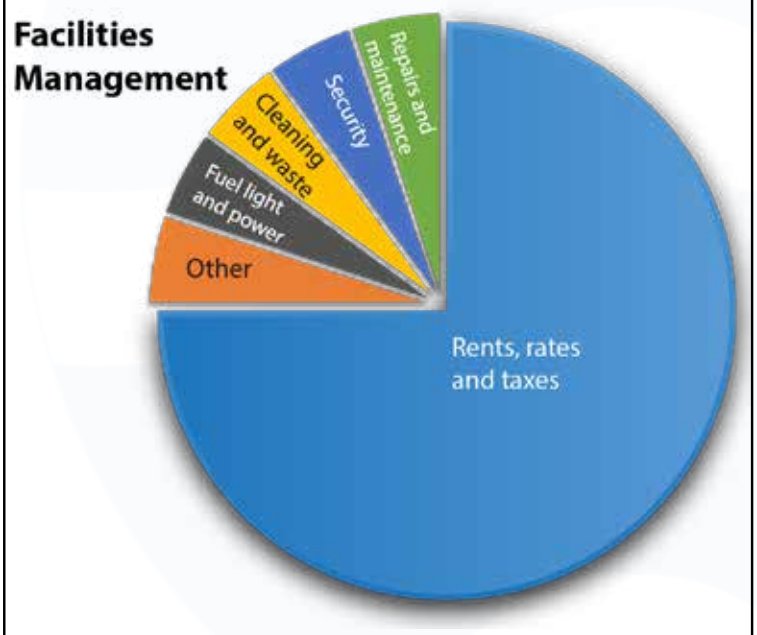


Figure 4: Facilities Management Profile

Our fleet services program needs to ensure that vehicle maintenance and replacement, fuel, repairs, vehicle acquisition, equipment disposal and maintenance services are provided in an efficient and cost-effective manner so as to minimise downtime due to breakdowns or other unscheduled maintenance.

SIWA needs to provide building maintenance services on leased properties, manage security services, manage security system installation and repairs. Provide a wide array of internal services such as cleaning, repairs, and purchases for office equipment and management of surplus plant and equipment.

Warehousing of materials, equipment and plant is critical in ensuring public safety and efficient operations within the water services divisions.

Information Management and ICT

The management of corporate information, both paper and electronic form is an important function that SIWA is required to undertake for it to meet both legal and operational requirements.

SIWA's current reporting process is tedious owing to multiple susceptible points for error and the use of Excel trackers as opposed to system statistics.

Process improvements were made to improve efficiency, revenue and activity accounting and time-to-report. To this end, the Pronto Software Platform Project commenced in March 2021 following a review and assessment of the technology and suitability for SIWA purposes.

The new ERP – Pronto replaced our MagiQ Enterprise as MagiQ could not meet our Finance requirements in terms of Reporting and Analytics. MagiQ was more a Billing System, rather than a Finance System.

Although, Pronto is predominantly a Finance System, the platform incorporates SIWA's Billing/ Customer Invoicing and Meter Reading component created and integrated into the Pronto Xi System. These 2 components were developed and customized to SIWA requirements.

The Pronto system was commissioned with the platform LIVE on 1 May 2023; after more than 2 years of development and training.

The objective of this strategy is to ensure:

- That SIWA establish an efficient and effective Information Management System that:
  - provides a platform for exchange of data and information on financial, human resource management customer billing and system analysis and reporting.
  - ensures essential paper-based records are maintained for legal or operational requirement.
  - ensures financial information is maintained for at least 7 years and contracts for as long as is necessary.
  - electronic based information is secure and can be accessed by relevant employees in SIWA to enable the efficient performance of their tasks.

The information platform will ensure:

- information needs and functions required meet the needs of the organisation and supports work performed by SIWA employees.
- effective and efficient performance of reporting, monitoring and evaluation of key business parameters.
- provides for security of data and services.

The following figure outlines the status and interface between various systems and processes within SIWA.

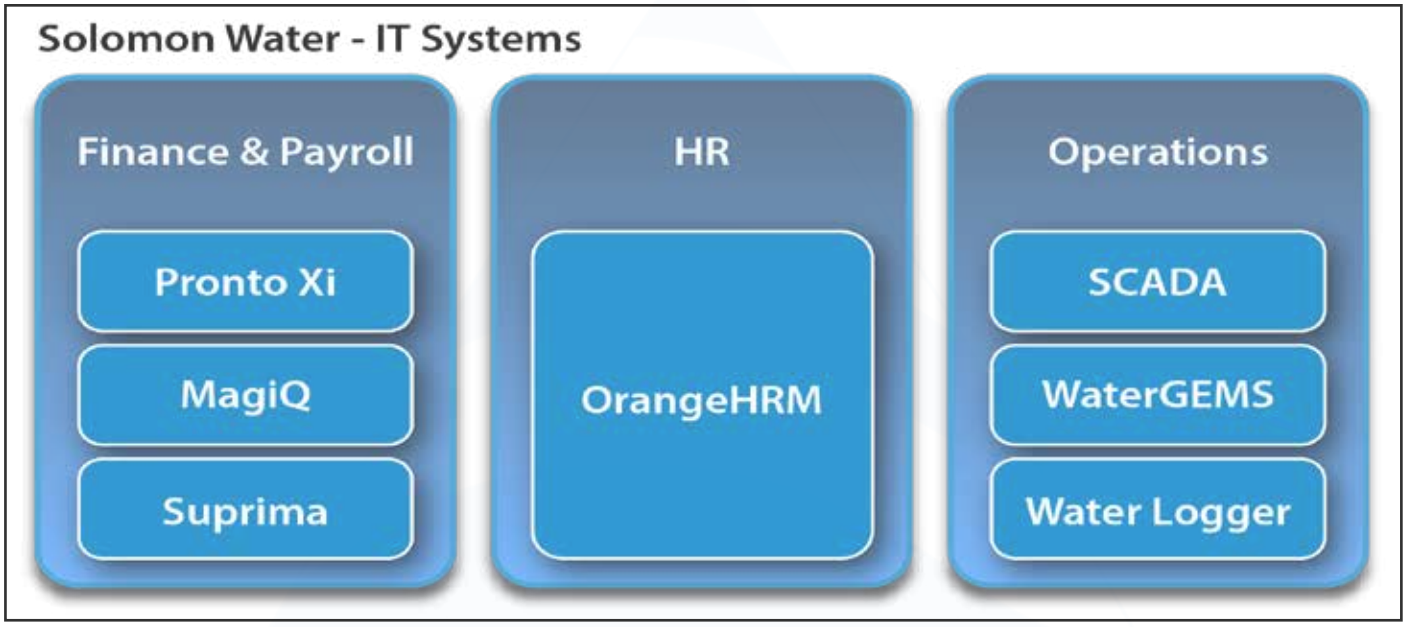


Figure 5: Enterprize IT Systems Architect (ERP)

Pronto Software has a range of ongoing developments to ensure compliance with the latest rules and standards and best practices. The current functionalities being utilized by SIWA in the Phase 1 of development are: Finance and Accounts, Inventory, Fixed Assets, Customer Relationship Management and Customer Service Calls Management, Billing and Customer Invoicing functionality as well as Meter Reading via web portal.

Pronto Software Phase 2 development and utilization of additional functionality is planned for Q4 of 2024 with the inclusion of Payroll, Plant Maintenance Management. Project Costing and Meter reading App (which is already developed and forms part of the Pronto version released in 2023.

Other IT Systems used in Solomon Water

The Orange Human Resource Management (HRM) – online HR system (developed in 2023, but yet to GO LIVE) will provide for online Leave Application and Approvals and Online Performance Appraisal.

Our Suprima system functionality is primarily a CashWater Vending System for prepaid CashWater transactions and tokens, has an Application Programming Interface (API) that enables 3rd Party Agents (6 Agents) to sell CashWater tokens as well.
SCADA – monitors our water network using Real Time Kinematics (RTKs) providing accurate real time measurements, installed at our Pump stations and Reservoirs.

WaterGEMS is a water modelling software used by our Network Operations Team to support its operations and management of water infrastructure assets. The Water Logger system is used by our Non-revenue Water team to detect leaks and to monitor our bulk meters and valves on our water network.

Over the strategic plan period Solomon Water is assessing the opportunities to develop further its use of new technology to support its operations such as a Geographical Information System (GIS) web portal where staff can access our maps on the web.

Currently SW is developing and testing a new application called “Report Water Leak App” which will be made available for use by our customers and the public to easily report any water leaks or bursts mains in real time.

The Management Reporting system shall be set up to acquire data from all the other systems and provide reports for managing the operations of SIWA.

Solomon Water will continue to review the suitability of the Pronto software to provide for all SIWA’s financial software needs. In addition, SW will seek to:

- Undertake a review of the network to determine connection needs, switch requirements and routing of cable. This exercise will scope and cost the project for upgrading the network. The Network has been upgraded in phases. We have upgraded some of our switches to cater for the dark fibre links we are using between BJS and Mataniko. With the continuous growth of Solomon Water in terms of office staff, we will need to scale up our server rooms’ network cabinets.
- Back-ups for both the Pronto and Suprima systems data have been completed and backups are running for ALL SW systems including Pronto and Suprima systems data.
- The acquisition of up-to-date AUTOCAD drawing software, computers and printers to record and maintain proper drawing records. Progressed and completed Solomon Water purchased and is renewing the annual subscription for its AutoCAD software that is being used by our Projects and Operations Teams.
- The acquisition of software to support condition-based monitoring and maintenance of ICT assets. Phase 2 of the Pronto Project includes the implementation of the Plant Maintenance module. This module includes tools that will monitor the status of our assets and schedule maintenance activities proactively and based on the monitor points specified by our Teams responsible.
- The introduction of on-line banking for CashWater top-up. This will continue to provide customers with easy access to our services and payment options. SW has 6 Third Party agents who are vending CashWater top-ups from their mobile wallets and apps.
- With the expansion and upgrades required to SIWA’s SCADA network, there is an opportunity for our staff to be trained in its operation and maintenance including providing some administrative functionality for the SCADA system. The SCADA upgrade project is yet to be implemented and training of SW staff who will be using and maintaining the SCADA system and the IT Team who will be responsible for the administrative functionality, is yet to be realised. Solomon Water plans to deliver this functionality over the 5 year period.
- Solomon Water will enhance and upgrade its Record Management System for the efficient and effective management of records within the organization throughout the records-life cycle. The activities in this management include the systematic and efficient control of the creation, maintenance, and destruction of the records along with the business transactions associated with them. This is still outstanding and needs a comprehensive study on which record management system is best suited for Solomon Water.

System availability and Uptime – IT Team will ensure that Solomon Water's critical systems are available and operational in the following manner. The target uptimes are not 100% so we can give time for upgrades of these critical systems.

System	Operational Hours	Target uptime (%)
Pronto Xi	working hours & after hours due to some of our processes running overnight	99.9%
Suprima	24 hours due to Third Party Agents need CashWater top-ups to be available at all times.	99.9%
Email client availability	Working hours & after hours due to time differences of SW's Clients and Partners overseas.	98%
MagiQ	Payroll is still on MagiQ therefore it is included here. Once Pronto Phase is complete then we will have no need for MagiQ.	99%
SCADA	Current setup is used for visibility of our plants and water networks, by the Operations' Networks Team.	98%
All other SW systems	Working hours.	98%

Network Performance – IT Team will ensure that Solomon Water's networks are 98% available. Low latency (average time for data to travel from source to destination), high bandwidth utilization efficiency at about 60 – 80%, and minimal packet loss; to ensure that all systems are available and accessible to our staff at our two Honiara offices and our offices in the Provinces. Our connections to the Provinces are susceptible to the weather therefore we have set the target to less than 100%.

IT Helpdesk Call Resolution Rate – is the percentage of IT issues resolved on the first call or email to the IT team. The IT Team's target for this KPI is 70-90% depending on the complexity of the IT issues.

IT Incident Response Time – is the average time taken to respond to and resolve ICT incidents. The IT team aims to resolve such incidents in an hour minimum if it only requires the IT Team's involvement. Minimum 24 hours, if the incident requires the involvement of external vendors or support technicians. This includes cyber security incidents.

ICT Cost Management KPIs – include the ICT Cost per User and the Budget Variance for ICT each year. ICT Cost per user measures the average cost of ICT services per user in SW. The IT team would like to target the lowest cost possible while maintaining or improving the ICT service quality. With Budget Variance, the IT team would like to keep the percentage difference between budgeted and actual ICT spending to a minimum of 5% to give room for unpredictable circumstances.

Operational Safety Water Production, Storage and Distribution Network

The safety of our employees and the general public is paramount in the design and construction of the network and must take into consideration the operational procedures for carrying out work on the network.

Currently, SIWA is developing and updating its consolidated safety manual governing work on the water and sanitation network. Safety rules, permits and programs of work are being introduced with further training and development as required to ensure compliance.

System drawings and network status tracking needs to be introduced into the Operations Division; however, staff require on-going training and development to ensure compliance with safety rules and safe work procedures.

Reporting of safety incidents, near misses and hazards requires further enhancement. Risk management processes need to be introduced and staff training and development in hazard identification, risk management and monitoring is required to ensure compliance with OH&S policies and procedures. Safety indicators shall be adopted to monitor and improve safety compliance at work.

Operational communication network needs to be provided to support field staff in performing their work safely and efficiently. Many incidents occur as a result of poor communication and the lack of information provided to field staff when required.

Personal Protective Equipment (PPE) on equipment is provided to employees to enable them to perform their work safely. PPE forms an important part of protecting employees from hazards and unsafe environment.

It is a mandatory requirement of SIWA that staff wear appropriate PPE when carrying out their work. Management is accountable for ensuring that staff are provided with suitable PPE for the tasks they perform and all staff are responsible for ensuring they maintain and use it for the purpose it is intended.

Ongoing regular training is required to be provided for technicians, operators and field staff on the preparation and use of Safe Work Procedures, Fault Reporting, Sampling and Testing Techniques and other operational safety systems.

Several initiatives to improve network operations remain to be developed and implemented, these include:

- Develop and implement a Work Safety Manual.
- Develop and implement Safe Work Procedures
- Training and development of operators and field staff to understand the Policy and Safety Manual.
- Develop and implement a schedule to ensure regular inspections and spot checks on safe work procedures.

Customer Connections and Installations

SIWA monitors and reports on its performance to ensure the quality and reliability of its services valued by customers are being provided at the lowest sustainable prices.

SIWA has established customer service and network service reliability targets as discussed in section 6 and appendix 4 below. To help provide greater transparency of these matters, SIWA reports and publishes ½ yearly and annual reports of its performance against the service standard and performance targets.

SIWA's Customer Charter places obligations on SIWA relating to customer responsiveness and complaints. These obligations include requirements for handling customer enquiries, complaints and dispute resolution processes, and compliance with customer service standards. The key customer service standards are: telephone responsiveness; complaint responsiveness; and drinking water complaint responsiveness.

SIWA shall use reasonable endeavours to keep its customer informed of the customer's obligations including:

- Not to tamper with the meter assemblies or installed sampling taps;
- To cooperate with water quality samplers and testers;
- To participate in an annual household/property water quality audit;
- To distinguish between drinking water and other sources of water and to use the respective sources for suitable purposes; and
- To boil water before drinking or using in food preparation when instructed to do so.

SIWA proposes to develop four service standards for customer connections. Of these four service standards, two standards relate to SIWA's timeliness for installation of water or sewer connections. SIWA is required to connect water sewer connections within the required timeframes.

Recognising that not all connections are of the same scale, the service standards distinguish between different types of connection, as follows:

Standard connections – where there is an existing water or sewer network adjacent to the property being connected without obstruction. SIWA is required to construct these connections within 3 business days (water) or 5 business days (sewer).

Non-standard connections – where an extension of water or sewerage mains/network or other specific construction work is required. SIWA is required to construct these connections within 7 business days (water) or 10 business days (sewer).

The remaining two service standards relate to SIWA's timeliness for processing of connections and applications. SIWA is required to process connections and applications as per the two service standards below:

Standard connections - where there is an existing water or sewer network adjacent to the property being connected without obstruction. SIWA is required to process these connections and applications within 12 business days (water) or 12 business days (sewer).

Non-standard connections – where an extension of water or sewerage mains/network or other specific construction work is required. SIWA is required to process these connections and applications within 15 business days (water) or 15business days (sewer).

Restoration of water service interruptions

SIWA has developed three sets of service standards for restoration times according to the priority given:

Category 1 – the interruption could be life threatening or otherwise have serious consequences (for example impacting critical needs customers, hospitals, schools and other care centres). SIWA is required to respond to these events within 1 hour and restore services within 8 hours.

Category 2 – the interruption causes a disruption to a customer's business activities. SIWA is required to respond to these events within 2 hours (Honiara area) or 3 hours (regional areas) and restore services within 12 hours.

Category 3 – all other cases. SIWA is required to respond to these events within 3 hours and restore services within 24 hours.
In addition, the metering of water sales is an area where further improvement is being made with the introduction of Cash Water Meter technology.

There is a need to implement additional revenue assurance monitoring on water usage to reduce the likelihood of water theft, faulty metering and other discrepancies in the sale and use of water.

SIWA currently tracks and monitors meter installations and customer usage patterns on a regular basis to reduce the incidents of water theft or non-technical losses.

Proposed initiatives include:

- Development of Regulations that govern the service connection of houses, licensing or register of plumbers, inspections of premises and approvals before connection. The regulations shall also cover the technical quality of service and other technical requirements for the safety and efficient operations of the water supply network.

- Install metering at specified nodes in the network to monitor water flow and usage. The data will be used to assess water production and distribution to customer's connections and assessments made on non-technical losses due to theft.

- Review and implement Water Theft Policy and Procedures to discourage non-technical losses.

Water service supply interruptions

As unplanned water supply interruptions can cause significant disruption and inconvenience to customers, SIWA monitors two measures relating to the impact of unplanned interruptions on customers:

The incidence (or frequency) of unplanned supply interruptions, measured by the number of customers experiencing a loss of water supply during the year (per 1,000 customers).
The average duration of customer interruptions in minutes.

Similarly, planned water supply interruptions can also cause disruptions and inconvenience to customers where planned supply interruption duration time exceed the planned notification period. SIWA will introduce standards for planned supply interruptions to minimise the outage duration and disruption to customers supply.

For water supply services, any planned should interruptions must be limited a maximum of 8 hours and customers that will be affected by the planned outage must be informed 48 hours before the actual supply interruption.

For sewer services, any planned interruptions must be limited to a maximum of 12 hours and customers that will be affected by the planned outage must be informed 48 hours before the actual supply interruption.

Water Efficiency and Demand Side Management Strategy

Demand-side water management strategies are measures designed to improve water services through inducing changes at points of use. These strategies are predicated on successful increase in end-use efficiency and reduction of waste – ensuring that customers can achieve the same or more with less.

SIWA's water efficiency and demand side management strategies will require further policy development, programming and technical support for the development and implementation of water conservation and efficiency programs.

Demand side water management strategies provide a useful approach in changing the daily peak demand patterns to reduce the pressure on network pumping energy costs during peak use times resulting in cost savings for SIWA.

SIWA aim is to develop, implement and maintain various water information programs, particularly those related to efficiency and conservation of water resources. There is a need to further develop and assess water efficiency standards and performance requirements for appliances, equipment and buildings.

To assist customers in accessing affordable water usage and supply, SIWA will support programs that encourage use of water efficient applicances; baths, taps, toilets, washers, showers and outdoor usage.

Improvements in water efficiency and water conservation will also be considered during tariff reviews and our price setting approach.

As discussed previously, reducing technical and non-technical losses associated with the production, storage and distribution and supply of water is an important factor to reducing costs and reducing our impact on the environment.

Continuing our review of SIWA's metering and connection processes, upgrading our mains distribution network of pumps, pipes and meters including monitoring of water flows and non-technical losses will ensure efficient supply and usage of water resources.

4. Sewerage and Sanitation Services

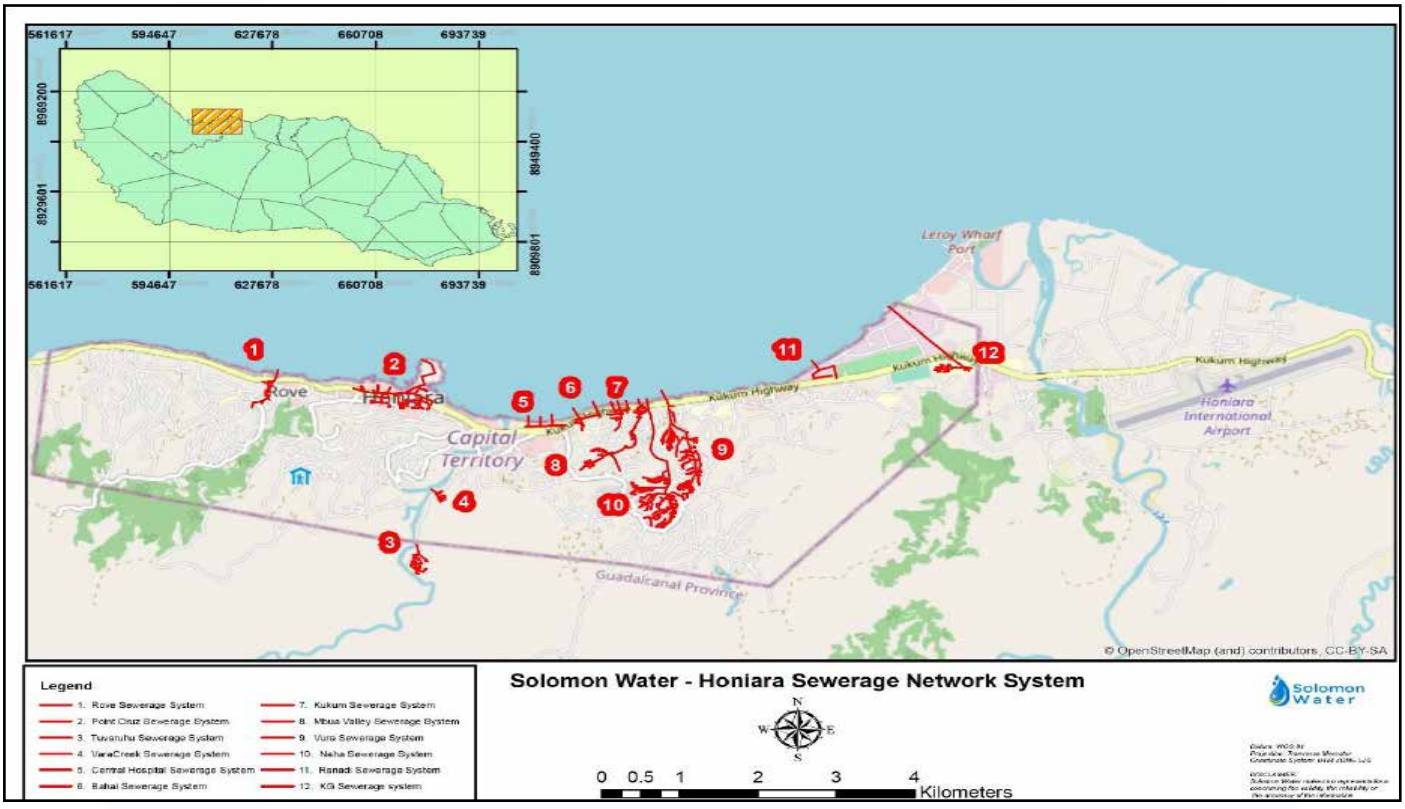
SIWA operates and manages the development of urban water and sewerage services in the Solomon Islands.

Solomon Water provides a conventional gravity sewerage system to around 30,000 people, approximately 30% of Honiara, the capital city of the Solomon Islands whilst the remaining households and businesses are connected to traditional septic tanks regulated by Honiara City Council.

All sewerage systems are gravity fed, with the exception of two sewage pumping stations, one in the Point Cruz area, serving the Central Business District (CBD) and one to the east of the city, located in the KGVI school grounds.

The current areas that are connected to SIWA sewer networks are set out below.

Rove Police married quarters (1)	**Kukum (7)**
Point Cruz area (2)	**Mbua Valley (8)**
Tuvaruhu (3)	**Vura (9)**
Vara Creek (4)	**Naha (10)**
Central Hospital (5)	**Ranadi (11)**
Bahai Centre (6)	**KG VI (12)**



The above depicts the locations within the Honiara city boundary area.

Honiara Sanitation

The following studies were commenced under the UWSSSP Program for Honiara wastewater system following the first 5-year action plan (2017-2022).

- Septage treatment Facility Feasibility Report by EGIS.

A report commissioned in 2018 reviewed the existing sanitation situation in Honiara, identified and assessed suitable sludge treatment and disposal options based on loadings calculated and presents concept designs and cost estimates for the recommended option.

- Basis of Design, Honiara Wastewater Supply by Suez in July 2019.

This report presents the preliminary design of the Honiara Wastewater Component providing a description of the proposed project, design criteria and hydraulic designs of the proposed facilities.

- Prioritisation Report – Sewer System Rehabilitation, Honiara (SP6).

As part of UWSSSP Detailed Engineering Design Phase 2, SMEC International delivered a Prioritisation Report – Sewer System Rehabilitation in October 2022. The report identified 7km of mains of sewer reticulation to be replaced as well as manhole rehabilitation to reduce blockages and surcharges.

The report noted that inferior quality Pitch Fibre (PF) pipe material is leading cause of sewer systems issues therefore replacement of PF sewer mains was recommended. The report also recommended replacement of DN100 sewer mains with DN150 sewer mains (recommended minimum sewer main size).[3]

The following Table provides a summary of works proposed for Honiara wastewater service from previous reports.

PROPOSED WORKS
Septage treatment Facility Feasibility Report
• First treatment option proposed is planted filters that comprises of 3 main treatment stages namely, Pre-treatment: removal of the coarse material (trap) and screening, Mixed control and storage tanks and Vertical filtration through reed beds. The overall footprint of the STP is approx. 1 ha therefore land availability can be a constraint. Hence, Lagoon system is proposed as an alternative option.
Basis of Design, Honiara Wastewater
• New Pump Stations with the outfalls (large): PS1_station NRH, PS2_station Naha, PS3_ station Soap • Modification of Existing PS – PS4_station Point Cruz • New Pump Stations Small with networks (small): PS5_station Mbokonavera, PS6_staion Vara Creak, PS7_station Ranadi • Sewer trunks – Approximately 13.4km of gravity sewers and 4.1km of pressure sewers • Outfalls (3) • NRH Outfall – 900 - 1000m from coast, 357mm internal diameter • Soap Outfall – 500m from coast, 312mm internal diameter

Table 3: Proposed Works for Honiara Wastewater System

3 Refer to appendix D: 5-Year Action Plan 2024-2028 for details of 7km of sewer mains selected for replacement.

5. Water Production, Storage and Distribution

The *Solomon Island Water Authority Act 1993* sets out the functions of SIWA with respect to water and sanitation services, specifically to:

- control, regulate, develop, manage, conserve and utilize urban water resources in the best Interests, of Solomon Islands;
- formulate national policies relating to the control and use of urban water resources;
- ensure that the water supplied for consumption meets the prescribed water quality standards;
- provide, construct, operate, manage and maintain, buildings, works, systems and services for impounding, conserving and supplying water for domestic, industrial, commercial and other purposes;
- provide, construct, operate, manage and maintain buildings, works, systems and services for the conveyance, treatment and disposal of sewage, disposal of trade and industrial waste and other connected purposes; and any other like functions throughout Solomon Islands.

The Millennium Development Goals (MDGs) and subsequent Sustainable Development Goals (SDGs) have focussed on the provision of safe drinking water and sanitation as targets to achieve universal and equitable access to safe and affordable drinking water, and adequate and equitable sanitation and hygiene for all by 2030.

Through our 30-Year Strategic Plan, Solomon Water has adopted target of achieving 95% coverage of properties within its service areas with access to the reticulated water supply network. SW has also adopted a target of achieving 30% coverage of properties within Honiara with access to the reticulated waste water network including the majority of non-residential properties. This requires significant investment in new and improved water and sewer infrastructure.

Furthermore, the 30 Year Strategic Plan 2017-2047 is used as a key planning document for the water sector and is therefore the basis for this 5-year Corporate Strategic Plan 2024-2028.

This strategic plan outlines the priorities in development that need to be addressed in order to achieve a reliable water supply and sewerage system to meet current and future needs.

Existing Water Production and Supply

Honiara Water Supply System comprises 24 borehole pumps, 7 bore field pump stations and 1 high lift station at Kongulai.

The high lift station at Kongulai average production rate for 2023 was 10,519 kilolitres per day. The Borehole pumps/submersible pumps at the various locations range from 4kW to 15kW capacity with between 2 and 11.6 flow rates with the average production in 2023 of between 105 kL/day to 1013 kL/day. Table 4 and 5 below set out the specific details of existing pumps and borehole pumps within the Solomon Water catchments and production areas.

Highlift Pumps							
Sites	Asset Code	TYPE/Model	Size - kW	Head - m	Flow rate - l/s	Status	2023 Average Production (KL/Day)
KONGULAI	PL KOG-01	KDN 100-250/264/B/BAQE/1/75/2	75	67.3	72.2	Running	10519
	PL KOG-02	KDN 100-250/264/B/BAQE/1/75/2	75	67.3	72.2	Running	
	PL KOG-03	KDN 100-250/264/B/BAQE/1/75/2	75	67.3	72.2	Running	
TASAHE	PL TAS-01	CRN64-5-1 A-F-G-V-HQQV	30	108.5	17.8	Running	
	PL TAS-02	CRN64-5-1 A-F-G-V-HQQV	30	108.5	17.8	Running	
	PL TAS-03	CRN64-5-1 A-F-G-V-HQQV	30	108.5	17.8	Running	
SKYLINE	PL SKY-01	CRN64-4-1 A-F-G-V-HQQV	22	83.9	17.8	Running	
	PL SKY-02	CRN64-4-1 A-F-G-V-HQQV	22	83.9	17.8	Running	
	PL SKY-03	CRN64-4-1 A-F-G-V-HQQV	22	83.9	17.8	Running	
TITINGE	PL TIT-01	CRN64-5-1 A-F-G-V-HQQV	30	108.5	17.8	Running	
	PL TIT-02	CRN64-5-1 A-F-G-V-HQQV	30	108.5	17.8	Running	
	PL TIT-03	CRN64-5-1 A-F-G-V-HQQV	30	108.5	17.8	Running	
TUVARUHU SIWA	PL TUS-01	ISO-PRO	18.5	64	20	Running	
	PL TUS-02	ISO-PRO	18.5	64	20	Running	
TUVARUHU JICA	PL TUJ-01	ISO-PRO	37	116	15	Running	
	PL TUJ-02	ISO-PRO	37	116	15	Running	
BORDERLINE	PL BRL-01	NKV 65/2 X T E1 IE3	11	37.2	17.8	Running	
	PL BRL-02	CRN64-2-1 A-F-G-V-HQQV	11	37.2	17.8	Running	
	PL BRL-03	CRN64-2-1 A-F-G-V-HQQV	11	37.2	17.8	Running	
AUKI KWAIBALA	PL AKB-01	45-05B SQQE	18.5	99.5	12.5	Running	1024
	PL AKB-02	45-05B SQQE	18.5	99.5	12.5	Running	
AUKI 1ML TANK	PL 1MT-01	Signle Stage Pump	7.5	37	12.5	Running	
	PL 1MT-02	Signle Stage Pump	7.5	37	12.5	Running	
NORO	PL NOR-1	ISO-PRO	37	74	27	Running	2572
	PL NOR-2	ISO-PRO	37	74	27	Running	
WHITE RIVER	PL WHR-01	GIS End suction	37	60	43	Running	
	PL WHR-02	GIS End suction	37	60	43	Running	
TULAGI	PL TUL-01	ISO-PRO	7.5	54	6.8	Running	

Table 4: Solomon Water High lift Pumps 2023.

Borehole Pumps/Submersible Pumps					
Site	Asset Number	Pump Model	Rated Motor Power (kW)	Designed Flow rate	2023 Average Production
TASAHE	N-1	SP46-4	7.5	11.6	1084
	N-2	SP46-8C	11	9.3	943
	N-3	SP 46-6	9.2	11.4	1008
	N-4	SP 30-11	9.2	6.6	666
TITINGE	M-1	SP46-6	9.2	11	1013
	M-2	SP46-9	15		
	M-3	SP46-8C	11	11	300
	M-4	SP30-17	15	8.3	429
SKYLINE	MB-1	SP46-9	15	11.6	740
	MB-2	SP30-12	11		
	MB-3	SP46-10	15	11.6	597
	MB-4	SP30-16	15		
BORDERLINE	KO-1	SP46-10	15	11	852
	KO-2	SP46-10	15		
	KO-3	SP46-10	15	11	745
	KO-4	SP46-10	15	11	979
MATANIKO SIWA	T-1	SP30-5	5.5	11	633
	T-2	SP46-4	7.5	8.3	1166
MATANIKO JICA	MJ-1	SP30-6	5.5	8.3	773
	MJ-2	SP30-4	4	8.3	488
	MJ-3	SP46-3	5.5	8.3	823
KOMBITO	K-1	SP 46-8	13	11.6	725
	K-2	SC30-12	9.2	8.3	617
PANATINA	P-1	SP30-8	7.5	8.3	271
	P-2	SP30-8	7.5	8.3	395
	P-3	SP46-8C	11	11.6	958
	P-4	SP46-6	9.2	11.6	677
WHITE RIVER	WR-3	SP46-3	5.5	11.6	688
	WR-4	SP46-4	4.5	11.6	558
AUKI	AK-1	SP17-12	7.5	2.0	105
	AK-2	SP17-12	7.5	3.4	285
	AK-3	SP17-12	7.5	2.8	186

Table 5: Solomon Water Borehole Pumps / Submersible Pumps 2023.

The distribution network is made up of more than 400km of pipes ranging in size from 20mm to 300mm comprising polyethylene pipes (HDPE), polyvinyl chloride PVC) pipes, and galvanised iron (GI) pipes. The majority of the network pipe system is deteriorating due to aging with some sections more than 50 years old.

Solomon Water's aging network is susceptible to burst and leakages resulting in non-revenue water of approximately 60% in 2023.

The water supply system in Honiara is vulnerable to heavy rainfall events which cause turbidity surges and require water from some sources to be reduced. Under such circumstances the current supply is insufficient for the demand of the city.

Therefore reducing Non-revenue water and enhancing community awareness are key objectives of Solomon Water. To this end the following key activities will need to be developed and implemented over the next 5 year period –

- Policy development for Catchment Protection
- Security of supply and source availability identification
- Stakeholder and Customer Awareness and Engagement
- Enhanced network digitization and data collection for effective decision making – providing system wide pressure management development and training; improved metering, record management and planning; and hydraulic modelling.
- Enhanced capacity building for Non–revenue Management - review of organisational structure to enhance accountability and responsibilities for NRW reductions and monitoring; and development of relevant manuals and standard Operating Procedures related to NRW management financial processes, customer care and billing.

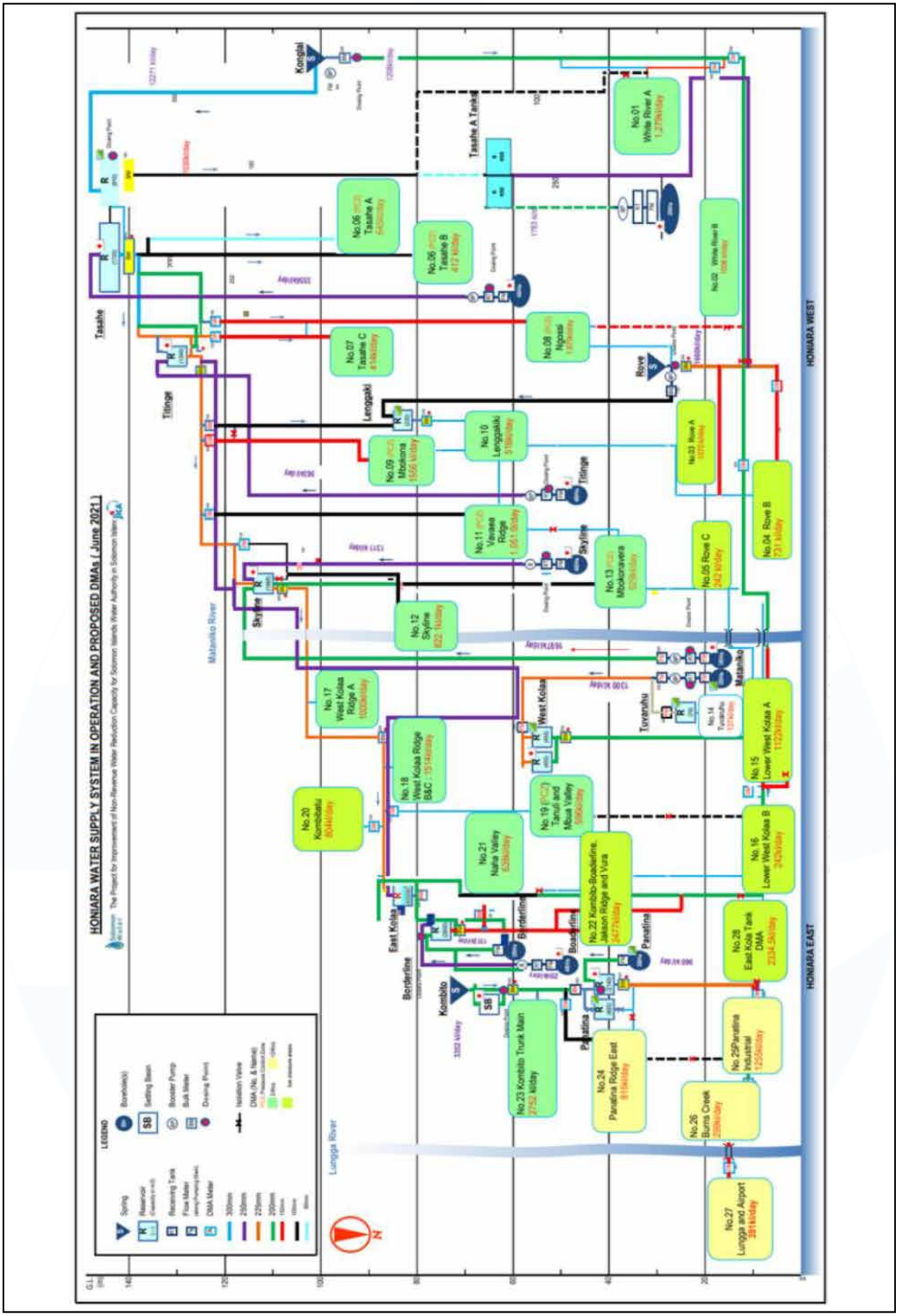
Asset Management

SIWA does not have a documented Asset Management Plan and currently does not have a designated specialized Asset Management Unit (AMU).

The establishment of the AMU will enhance the importance of asset maintenance and condition monitoring of SIWA infrastructure ascertaining the accurate level of maintenance expenditure required including asset replacement costs and life cycle management.

Capacity building in asset Management needs to be main streamed throughout SIWA to enable staff to appreciate its importance in ensuring the integrity and operating / maintenance status of the network assets to enable sustained operations.

The following figure illustrates Solomon Water, Honiara water supply network of pumps, storages and pipes.

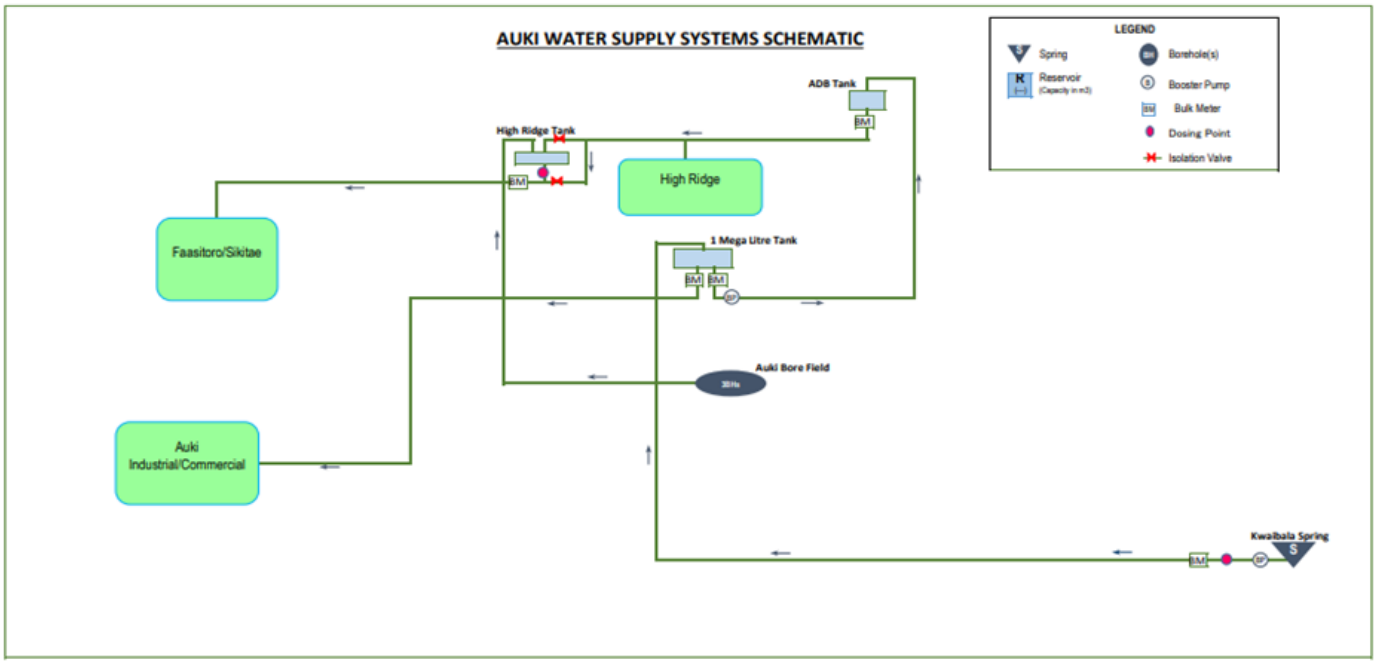


Honiara current water storage capacity is detailed below.

East Honiara			Central Honiara			West Honiara		
Tank Location	Elevation (m)	Capacity (ML)	Tank Location	Elevation (m)	Capacity (ML)	Tank Location	Elevation (m)	Capacity (ML)
East Kola	84	4	Titinge	130	1.34	Tasahe	149	1.72
Borderline	74	2.65	Skyline	111	1.86	White River	59	0.9
Panatina	43	2.140	Lower West Kola	53	0.91	Lengakiki	81	1
-	-	-	Tuvaruhu	36	.045	-	-	-
Total		8.79			4.15			3.62

The current total storage capacity for Honiara is 16.656 megalitres.
Increased storage capacity is currently being constructed in Honiara totalling 8.55ML comprising 3ML tank at Tasahe (West Honiara), 3.05ML storage at Titinge (Central Honiara) and 2.5ML tank at Panatina (East Honiara).

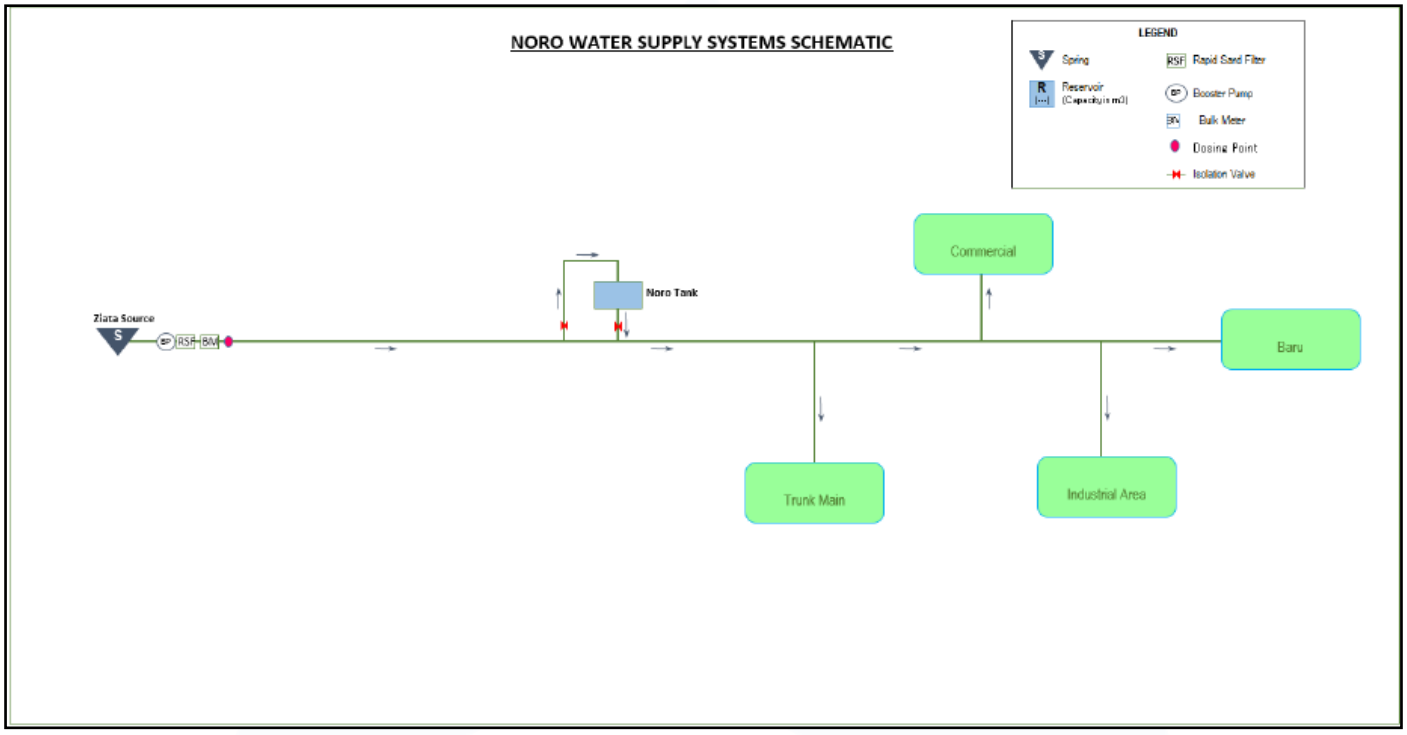
Auki water supply system is outlined in the schematic below.



Auki water storage tank capacity is provided below.

Tank Location	Elevation (m)	Capacity (ML)
One Mega Litre Tank	75	1
High Ridge Tank	87	0.2
ADB Tank	96	0.35
Total		**1.55**

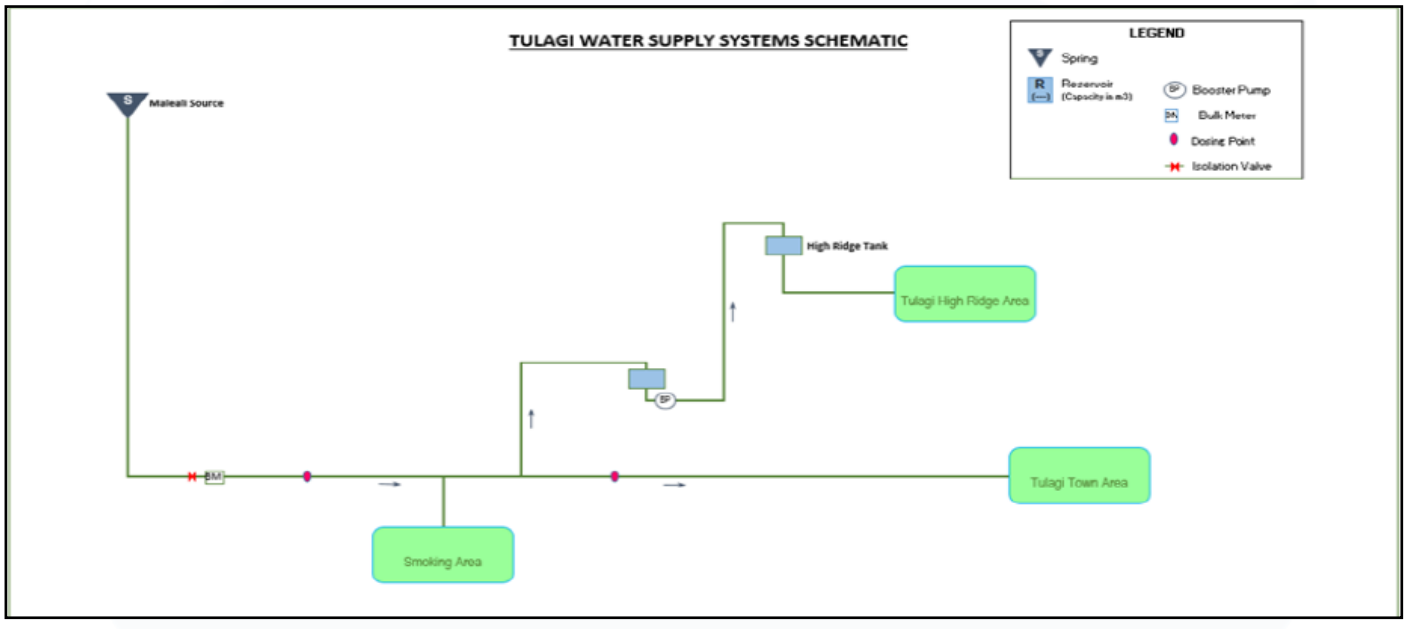
Noro water supply system is outlined in the schematic below.



Noro water storage tank capacity is provided below.

Tank Location	Elevation (m)	Capacity (ML)
Noro Tank	**50**	**0.9**

Tulagi water supply system is outlined in the schematic below.



Tulagi water storage tank capacity is provided below.

Tank Location	Elevation (m)	Capacity (ML)
High Ridge Tank	56	0.15
Middle Ridge Tank	23	0.05
Total		**0.2**

Water Demand Forecast

Solomon Water forecast future water demand for a range of purposes.

The following analysis assists SW's understanding of future water use to enable it to augment system operations, plan for future water purchases or system expansion, or for future revenue and expenditures.

SW uses several methods for estimating future demand. These include extrapolating historic trends, correlating demand with socio-economic variables, or more detailed simulation modelling. SW long-term forecasting is used for infrastructure and capital planning whereas short-term forecasts are used for setting water rates.

The simplest and most traditional means of forecasting future water demand has been to estimate current per-capita water consumption, usually measured as litres per capita per day (lpcd), and multiply this by expected future population.

Population estimates are based on simple linear growth, a percent annual increase (exponential growth), and available Census data. This simple approach has drawbacks, as it does not account for changes in technology, the economy, or culture over time. More detailed models may take into account a wide variety of factors, such as changes to population, water prices (e.g., price elasticity); the climate (e.g., weather variability is appropriate for short-term forecasts while global climate models are useful for longer-term forecasts); customer behaviour (e.g., increased conservation and efficiency); new regulations; and consideration of future land uses in the forecasts of future demand or incorporate the impacts of price elasticity on water.

Solomon Islands census data released on 16 November 2020 forms the basis for the water demand forecasts. And impacts of future revenue and expenditures in this Plan.

The Household Income and Expenditure Survey has not been updated since 2012/13 and therefore data from that survey has been carried forward into this review (where relevant). PWWA benchmarking survey data is updated annually and outcomes from 2021 (the latest available) have been adopted.

Methodologies adopted in the 30 Year Strategic Plan (prepared in June 2017) were refreshed with the updated data.[4]

4 Urban Water Supply and Sanitation Sector Project 5 Year Action Plan 2024 – 2028 prepared for Solomon Water 3 November 2023 SMEC Consultancy

Population and Customer Data

The 2019 National Population and Housing Census revealed the following:

- A moderate-high under enumeration was identified in the 2009 census data. This resulted in an approximate 8.3% undercount in the population data, with Honiara and urban Guadalcanal being adjusted from 2009 count of 80,082 to 2009 adjusted count of 86,729.

- Whilst annual growth across the whole of Solomon Islands slowed from 3.0% (1999-2009) 10 year period to 2.7% (2009-2019) period, Honiara countered this trend with the fastest annual growth rate of any province of 78% since 2009. An average of 5.8% p.a. which equates to an additional 57,033 people for the 10 year period to 2019.

- Guadalcanal also had a higher-than-average growth rate at 3.7% p.a. The province increased by 45% or 48,127 in the period 2009 to 2019.

- The combined urban population of Honiara and Guadalcanal in 2019 was 158,571.

Analysis of water customer coverage is set out below.

- There was a 68.2% increase in total customers over the last five years (2017-2022).

- The majority of that increase was generated through domestic customers (73.3% growth).

- Higher rates of customer growth have been evidenced since the pandemic (in 2019-2020) when compared to the full five-year period. Refer Table 6 below.

- Wastewater coverage presented on Pacific Water & Wastewater Association (PWWA) country profile shows wastewater coverage decreased from 6.13% in 2017 to 4.43% in 2022. This indicates that wastewater service expansion to new customers was insignificant while the population continued to grow.

Year	Domestic Customers	Increase	Commercial Customers	Increase	Total Customers	Increase	Growth p.a.
2017	9080		1135		10215		
2018	9574	494	1190	55	10764	549	5.4%
2019	9895	321	1227	37	11122	358	3.3%
2020	12628	2733	1330	103	13958	2836	25.5%
2021	13973	1345	1410	80	15383	1425	10.2%
2022	15737	1764	1448	38	17185	1802	11.7%
5-year Increase	73.3%	6657	27.6%	313	68.2%	6970	
Average p.a.	14.7%		5.5%		13.6%		

Table 6: Customer Data by Segment

Growth projections

Future population growth rates have been revised to reflect data from the 2019 provisional census. Refer Table 7 below.

Growth rate	2017	Revised
Low	3.0% p.a.	4.0% p.a.
Medium	3.5% p.a.	4.9% p.a.
High	4.0% p.a.	5.8% p.a.

Table 7: Population Growth Rate

The revised Low growth rate is the equivalent of the previous 2017 High rate, whilst the revised High growth rate reflects average annual growth experienced within the Honiara province over the 2009-2019 period.

The effects of these revised growth rates on the population of Honiara is illustrated in Figure 5 on below, The 2017 projections have been included for comparison purposes (the solid lines).

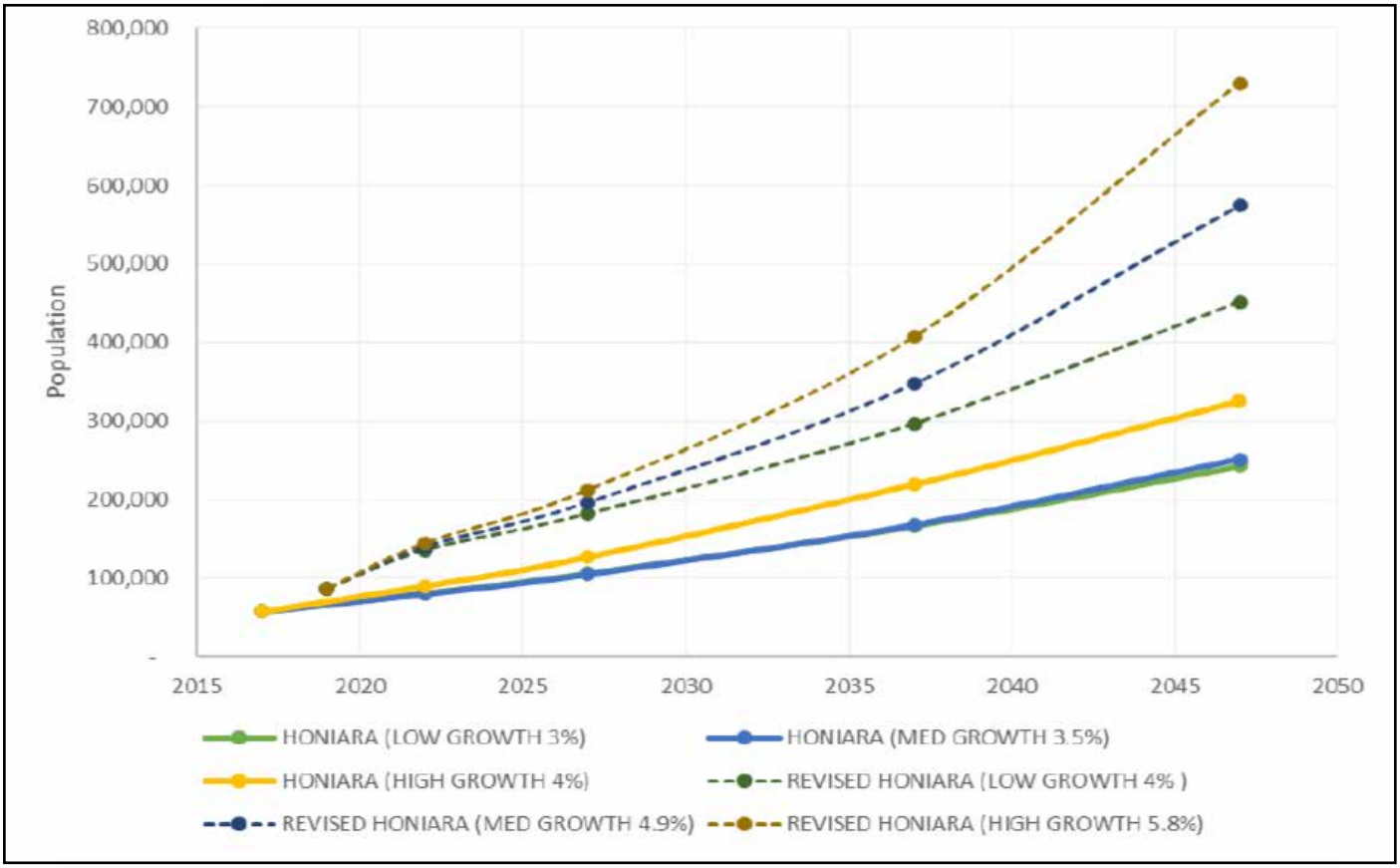


Figure 6: Revised Population Forecast

Honiara's water and wastewater coverage by 2047 is targeted to be 95% and 30% respectively in accordance with SW's 30-year strategic objective. Table 8 and 9 following present forecasted population connected to Honiara's water and wastewater systems.

Description	Units	2019	2022	2027	2037	2047
Low growth – 4.0% p.a.						
Study Area Population	No.	158,571	178,371	217,015	321,236	475,507
% Population Served	%	55%	73.9%	80%	90%	95%
Population Served	No.	87,214	135,994	182,266	296,639	451,732
Medium growth – 4.9% p.a.						
Study Area Population	No.	158,571	183,042	232,503	375,131	605,254
% Population Served	%	55%	73.9%	80%	90%	95%
Population Served	No.	87,214	140,431	196,978	347,839	574,991
High growth – 5.8% p.a.						
Study Area Population	No.	158,571	187,794	248,948	437,488	768,816
% Population Served	%	55%	73.9%	80%	90%	95%
Population Served	No.	87,214	144,945	212,602	407,078	730,375

Table 8: Forecast Population Connected to Honiara Water Supply System

Description	Units	2019	2022	2027	2037	2047
Low growth – 4.0% p.a.						
Study Area Population	No.	158,571	178,371	217,015	321,236	475,507
% Population Served	%	4.7%	4.4%	10%	20%	30%
Population Served	No.	7,488	7,902	21,702	64,247	142,652
Medium growth – 4.9% p.a.						
Study Area Population	No.	158,571	183,042	232,503	375,131	605,254
% Population Served	%	4.7%	4.4%	10%	20%	30%
Population Served	No.	7,488	8,109	23,250	75,026	181,576
High growth – 5.8% p.a.						
Study Area Population	No.	158,571	187,794	248,948	437,488	768,816
% Population Served	%	4.7%	4.4%	10%	20%	30%
Population Served	No.	7,488	8,319	24,895	87,498	230,645

Table 9: Forecast Population Connected to Honiara Wastewater Supply System

Honiara Water Demand Estimate Update and New Works Impact

The revised population projections for Honiara have been used to estimate potential peak day water demands through to 2047 and assess these demands against current and required production capacity. Figure 6 below shows the projected water demands based on the most recent census data, the previous estimates from the 2017-2047 Master Plan, current and suggested water production capacities.

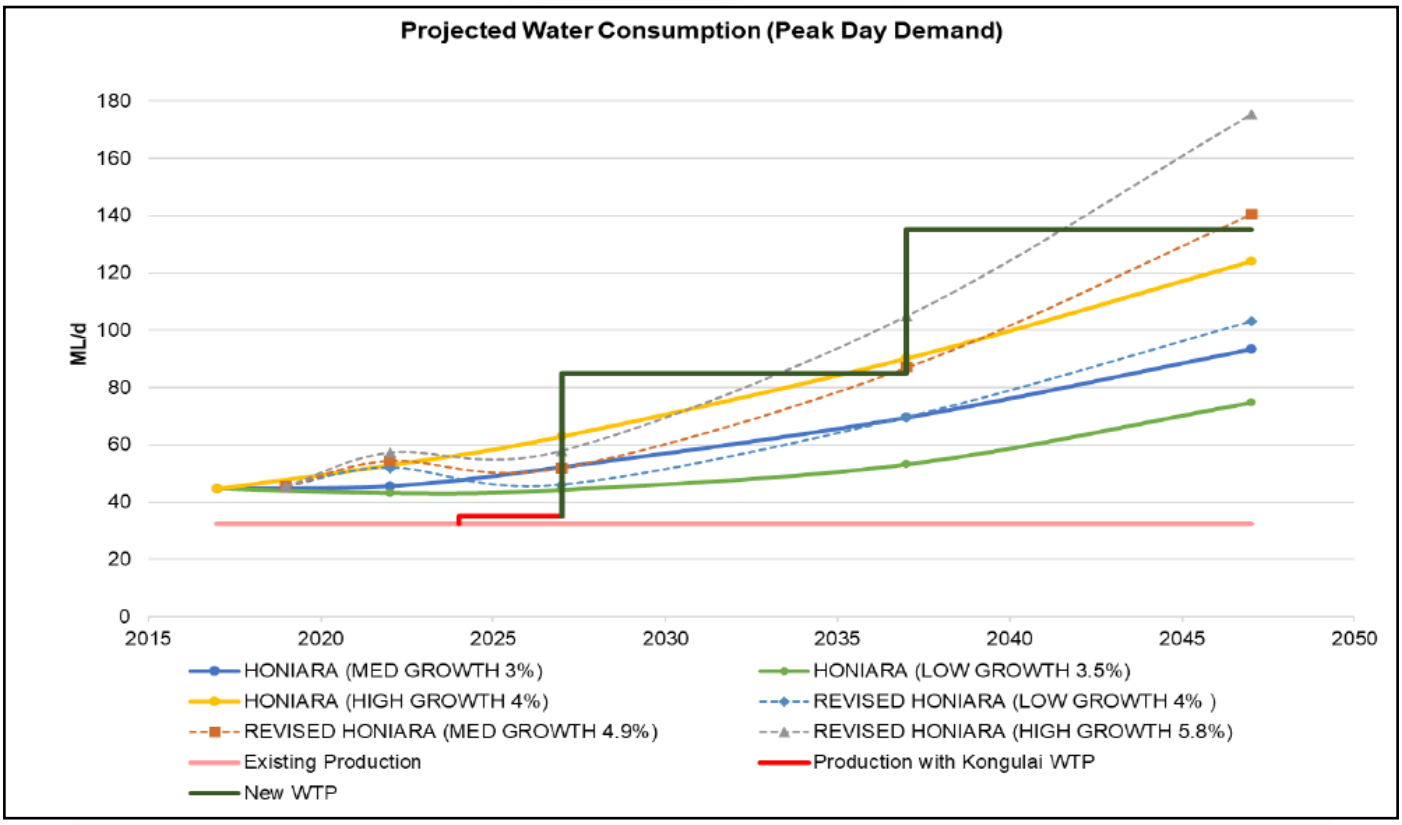


Figure 7: Projected Water Consumption for Honiara Service Area

Key Assumptions

In determining projected customer demand for water, the following assumptions have been taken into account:

- When reviewing data associated with the population connected to the water system, the 2017 analysis adopted a connection rate of 55% based on PWWA benchmark survey data. The 2021 survey data recorded a 73.9% connection rate, and a progressive increase to 95% by 2047 has been adopted for this review.[5]

- Non-revenue water projections have been revised to explain the reduction in projected demands through to 2027.

- Water consumption rates for domestic consumption estimated at 125l/c/d.

As can be seen water production does not meet the projected demands.

A new water source is urgently required. The 2017-2047 Master Plan proposed a new water treatment plant of 40MLD capacity upgradable to 80 MLD.

The revised population and demand estimates indicate that this plant should now be of 50MLD capacity upgradeable to 100MLD. This is based on meeting the medium growth projection rather than the high growth projection assuming the high growth will not be sustained. Therefore planning for this new water source should commence as a priority project.

• Demand calculations revised Honiara low growth at 4%, medium growth at 4.9% and high growth at 5.8%.
• Assume gradual reduction in Non-revenue Water (NRW) volume.
• Average daily demand is based on metered consumption plus non-revenue water.

The following demand calculations are provided based on low, med and high scenarios presented in the 5-Year Action Plan 2024-2028.[6]

5 Urban Water Supply and Sanitation Sector Project 5 Year Action Plan 2024 – 2028 prepared for Solomon Water, 3 November 2023 by SMEC.

6 Ibid 4 above.

Demand Calculations

REVISED HONIARA (LOW GROWTH 4%)			+3yr	+8yr	+18yr	+28yr	
Description	**Units**	**2019**	**2022**	**2027**	**2037**	**2047**	
Study Area Population	No.	158,571	178,371	217,015	321,236	475,507	*4.00% p.a. growth*
% Population Served	%	55%	73.9%	80%	90%	95%	*Existing population served based on 2021 PWWA benchmarking data. Target the Pacific Benchmark (PWWA) of 95% in 30 years*
Population Served	No.	87,214	135,994	182,266	296,639	451,732	*Assume all growth is serviced at 95% and existing is served based on percentage above*
Average Domestic Consumption	L/cap/d	125	125	125	125	125	*Existing consumption based on UWSSSP aid memoir February review mission nominated as 114 L/cap/d increased to 125 L/cap/d to allow for suppressed demand*
Domestic Consumption	ML/d	10.9	14.0	19.1	32.1	50.5	*Population served * average domestic consumption*
Commercial Consumption (60%)	ML/d	3.6	4.2	4.8	6.5	8.7	*Assumed Existing Non-Res is 6 ML/d & assumed growth at same rate as study area population.*
Government Consumption (40%)	ML/d	2.4	2.8	3.2	4.3	5.8	*Assumed Existing Non-Res is 6 ML/d & assumed growth at same rate as study area population.*
TOTAL METERED CONSUMPTION	**ML/d**	**16.9**	**21.0**	**27.2**	**43.0**	**65.1**	
TOTAL NRW	**ML/d**	**24.3**	**25.7**	**12.1**	**15.9**	**21.7**	Assume gradual reduction in total NRW volume
TOTAL NRW	*%*	*59%*	*55%*	*31%*	*27%*	*25%*	*Existing NRW based on Soloman Water non-revenue water presentation 2-Feb-2023 - Stretch Target (Future NRW Targeting 25%)*
AVERAGE DAY DEMAND (ADD)	**ML/d**	**41.2**	**46.7**	**39.2**	**58.9**	**86.8**	*Metered consumption + NRW*
PEAK DAY DEMAND (PDD)	**ML/d**	**45.4**	**51.9**	**46.0**	**69.6**	**103.1**	*1.25*
WTP Raw Water Demand for ADD	ML/d	43.3	49.0	41.2	61.8	91.1	*Assumed 5% of total production in raw water treatment losses*
WTP Raw Water Demand for PDD	ML/d	47.7	54.5	48.3	73.1	108.2	*Assumed 5% of total production in raw water treatment losses*
Metered Consumption per capita	L/cap/d	194	154	149	145	144	
Non-Residential Consumption per capita	L/cap/d	69	51	44	37	32	
Total Production per capita	L/cap/d	473	343	215	198	192	

Table 10: Revised Honiara Low Growth at 4%

REVISED HONIARA (MED GROWTH 4.9%)			+3yr	+8yr	+18yr	+28yr	
Description	**Units**	**2019**	**2022**	**2027**	**2037**	**2047**	
Study Area Population	No.	158,571	183,042	232,503	375,131	605,254	*4.90% p.a. growth*
% Population Served	%	55%	73.9%	80%	90%	95%	*Existing population served based on 2012/13 Household Income and Expenditure Survey. Target the Pacific Benchmark (PWWA) of 95% in 40 years*
Population Served	No.	87,214	140,431	196,978	347,839	574,991	*Assume all growth is serviced at 85% and existing is served based on percentage above*
Average Domestic Consumption	L/cap/d	125	125	125	125	125	*Existing consumption based on 2015 PWWA benchmarking data. Assuming Demand Management - targeting Pacific Benchmark (PWWA) of 150 Lpcd in 20 years*
Domestic Consumption	ML/d	10.9	15.1	22.3	41.9	71.9	*Population served * average domestic consumption*
Commercial Consumption (60%)	ML/d	3.6	4.3	5.1	7.2	10.1	*Assumed Existing Non-Res is 6 ML/d & assumed growth at same rate as study area population.*
Government Consumption (40%)	ML/d	2.4	2.9	3.4	4.8	6.7	*Assumed Existing Non-Res is 6 ML/d & assumed growth at same rate as study area population.*
TOTAL METERED CONSUMPTION	**ML/d**	**16.9**	**22.3**	**30.8**	**53.8**	**88.7**	
TOTAL NRW	**ML/d**	**24.3**	**26.5**	**13.4**	**19.6**	**29.6**	Assume gradual reduction in total NRW volume
TOTAL NRW	*%*	*59%*	*54%*	*30%*	*27%*	*25%*	*Existing NRW based on Soloman Water non-revenue water presentation 2-Feb-2023 - Stretch Target (Future NRW Targeting 25%)*
AVERAGE DAY DEMAND (ADD)	**ML/d**	**41.2**	**48.8**	**44.2**	**73.5**	**118.3**	*Metered consumption + NRW*
PEAK DAY DEMAND (PDD)	**ML/d**	**45.4**	**54.3**	**51.9**	**86.9**	**140.5**	*1.25*
WTP Raw Water Demand for ADD	ML/d	43.3	51.2	46.4	77.1	124.2	*Assumed 5% of total production in raw water treatment losses*
WTP Raw Water Demand for PDD	ML/d	47.7	57.0	54.5	91.3	147.5	*Assumed 5% of total production in raw water treatment losses*
Metered Consumption per capita	L/cap/d	194	158	156	155	154	
Non-Residential Consumption per capita	L/cap/d	69	51	43	34	29	
Total Production per capita	L/cap/d	473	347	224	211	206	

Table 11: Revised Honiara Medium Growth at 4.9%

REVISED HONIARA (HIGH GROWTH 5.8%)			+3yr	+8yr	+18yr	+28yr	
Description	**Units**	**2019**	**2022**	**2027**	**2037**	**2047**	
Study Area Population	No.	158,571	187,794	248,948	437,488	768,816	*5.80% p.a. growth*
% Population Served	%	55%	73.9%	80%	90%	95%	*Existing population served based on 2012/13 Household Income and Expenditure Survey. Target the Pacific Benchmark (PWWA) of 95% in 20 years*
Population Served	No.	87,214	144,945	212,602	407,078	730,375	*Assume all growth is serviced at 95% and existing is served based on percentage above*
Average Domestic Consumption	L/cap/d	125	125	125	125	125	*Existing consumption based on 2015 PWWA benchmarking data. Assuming No Demand Management*
Domestic Consumption	ML/d	10.9	16.4	25.6	52.0	91.3	*Population served * average domestic consumption*
Commercial Consumption (60%)	ML/d	3.6	4.4	5.3	7.9	11.7	*Assumed Existing Non-Res is 6 ML/d & assumed growth at same rate as study area population.*
Government Consumption (40%)	ML/d	2.4	2.9	3.6	5.3	7.8	*Assumed Existing Non-Res is 6 ML/d & assumed growth at same rate as study area population.*
TOTAL METERED CONSUMPTION	**ML/d**	**16.9**	**23.7**	**34.5**	**65.1**	**110.8**	
TOTAL NRW	**ML/d**	**24.3**	**27.7**	**14.8**	**23.6**	**36.9**	Assume gradual increase in total NRW volume
TOTAL NRW	*%*	*59%*	*54%*	*30%*	*27%*	*25%*	*Existing NRW based on Soloman Water non-revenue water presentation 2-Feb-2023 - Stretch Target (Future NRW Targeting 25%)*
AVERAGE DAY DEMAND (ADD)	**ML/d**	**41.2**	**51.3**	**49.3**	**88.7**	**147.7**	*Metered consumption + NRW*
PEAK DAY DEMAND (PDD)	**ML/d**	**45.4**	**57.2**	**57.9**	**104.9**	**175.4**	*1.25*
WTP Raw Water Demand for ADD	ML/d	43.3	53.9	51.8	93.1	155.1	*Assumed 5% of total production in raw water treatment losses*
WTP Raw Water Demand for PDD	ML/d	47.7	60.1	60.8	110.2	184.1	*Assumed 5% of total production in raw water treatment losses*

Table 11: Revised Honiara Medium Growth at 4.9%

6. Customer Communication and Engagement Strategy

In the future, our customers will have many new options for how they source, manage and use their water. Many customers will be very proactive and will invest in new technologies and explore the full range of options available. Others will continue to rely on the water network, and will continue to expect reliable supply for the best possible price.

The needs and expectations of our customers will be more diverse, and we will need to be more proactive in understanding the specific circumstances of individual customers and communities, and their particular types of water appliances and electrical devices.

Similarly, water customers' needs and expectations will be more diverse and we will need to be more proactive in understanding their specific circumstances. Both energy and water efficiency, reliability and security of supply will be expected.

In the future, many of our customers and communities may have:

- Rooftop Solar Hot Water Systems and Solar PV - most homes and businesses in Solomon Islands will have solar HWS and solar PV, producing hot water for the home and generating enough energy to power the appliances and electrical devices in the home. New homes will increasingly be built with solar PV integrated directly into the roofing material.

- Home and business water management systems – many homes and businesses will have Water Management Systems as standard, to control water heating, usage and smart appliances to make the best use of water and minimise water costs.

- Water efficient appliances – efficient refrigerators, dishwashers, cooking, efficient shower rose, water timers can potentially reduce water bills by up to 25 percent. Smarter use of our water resource through water saving technologies will ensure reliable water supplies today and for future generations.

- Sector water interaction - water interacts with every single sector and community. You cannot have a hotel without having water or without wastewater getting taken away. You cannot even mix cement without water. Smart meters and sensors, carbon neutral technology, leakage and anomaly detection, waste water processing and energy generation and storm water capture and flood mitigation will ensure safe reliable and affordable water supply and sanitation services today and into the future.

- Demand for water services - an important means to meet the rising demand for drinking water in urban areas is to reduce urban water loss and Non-Revenue Water (NRW). Today, 60% of all distributed water within SIWA's service areas is either lost or never invoiced. This poses both a threat to the environment – especially in areas with high water scarcity – and a threat to the financial viability of SIWA due to revenue losses and unnecessarily high operating costs. SIWA has introduced advanced non-revenue water technologies such as smart meters, valves, pumps, and pipes as well as tools and methods for planning, monitoring, and managing water loss. Together with an economic incentive for SIWA to reduce its water loss to less than 30%, to be world class we will aim to achieve one of the world's lowest levels of NRW with a consistent national average of just 10%.

- New technologies and data efficiencies - pursuing increased efficiency through data, digitalisation and innovation SIWA will operate with a high level of transparency, and make information on both water prices and water quality publicly accessible. This transparency has

migrated into development of advanced drinking water databases with information on e.g., water quality, daily operational data, distribution systems etc. Data availability sparks efficiency improvements through increased digitalisation, machine learning and data-based decision making. Furthermore, fast, and efficient exchange of data clears the way for public-private-partnerships on innovation.

Our commitment to our customers

The SIWA is committed to improving our service delivery to benefit our customers and stakeholders.

Underpinning our approach are our fundamental commitments which lay the foundation for our strategic priorities and initiatives. They are:

- Delivering Safe, Reliable, Affordable and Sustainable Water and Sanitation Services
- Communicating and Engaging with Customers and Stakeholders
- Delivering Customer Outcomes
- A High Performing Organization

Our water production, storage and treatment, and network delivery field services teams will still be delivering many of its core services – attending to water supply outages and leaks, conducting routine maintenance of water production facilities and of distribution and metering systems and managing customer expectations for water and sanitation services.

Our customer service strategy will mean that we will need to:

- Continually refresh our understanding about our customers and their changing needs.
- Introduce new capabilities to develop and deliver services that customer's value, and creating great experiences for them.
- Implement new approaches to how we market our services and engage with our customers.
- Introduce new support systems and better customer data to enable us to deliver new services efficiently and effectively.
- Create new partnerships and collaborations with manufacturers, suppliers, stakeholders and customers.
- Develop a new cultural focus not just on delivering a great service as we supply water to our customers, but on seeing new opportunities and responding in a timely and agile way.

We will strive to establish and foster positive relationships through:

- showing you courtesy and respect
- acting in an honest and fair manner
- being accessible, understanding and helpful
- listening and providing you with considered and timely responses
- taking ownership of, and dealing with, any issues that arise
- managing expectations and honouring our commitments

We will provide you with timely and accurate information.

We will make it easy for you to contact us and will use plain English in our communication with you. We will strive to provide you with reliable and timely information.

We will consult with you regularly and listen to your feedback. Your feedback is critical, as it helps us improve the way we serve you. We will not make important decisions that impact on your service without proper consultation.

We will:

- strive to understand what is important to you
- provide a range of options for how and when you can provide feedback
- consult with you regularly and include your feedback in our decision making to the extent possible
- keep you informed about changes to our services
- monitor our performance and service levels every year to ensure we continue to improve.

We will respect and protect your privacy

We will only collect the information we need to conduct our business and will strive to keep your information up to date. Private or personal information will not be released without your consent unless we are reasonably and lawfully required to do so.

We will respond to your issues and concerns.

If you contact us, or request that we resolve an issue we will ensure you receive a timely, reliable and accurate response. We will respond to your complaint or concern within 3 business days. We are accountable for delivering effective results and services for our customers in a professional manner, acting with integrity and ensuring transparency by taking ownership of issues and proactively seeking resolutions. Our customer service performance metrics is set out below.

- Cash flow – revenue

- Complaints Escalation Rates:
  - Number of complaints for this period
  - Number of complaints last period
  - % increase/decrease in number of complaints since last month
  - increase/decrease in number of complaints year to date[7].

- Employee retention / turnover rate (explain whether due to resignation, retirement or termination)

- Employee productivity

- Number of active issues, resolved issues and average resolution time.

Performance Indicator	2024	2025	2026	2027
Continually increase our online transaction capability for your convenience	80% (of the time)	85%	90%	95% (of the time)
Answer telephone calls in an average of 10 seconds	80%	85%	90%	95%
Serve you in person within 10 minutes	80%	85%	90%	95%
Respond to emails within 3 working days	80%	85%	90%	95%
Respond to written correspondence within 7 working days	80%	85%	90%	95%
Reduce waiting time at SIWA Offices	80%	85%	90%	95%
Give out accurate information	80%	85%	90%	95%
Reduce response time on complaint and referrals (external/ internal)	80%	85%	90%	95%

Table 13: Customer Service Performance Metrics

An examples of performance targets to be established within the Performance indicators above may include, but are not limited to:

Reduce waiting time at SIWA offices to within 10 minutes 80% of the time.

7 SIWA's system currently records all customer reports of faults and related communications to track turnaround times against internal performance benchmarks. These records include complaints. In the future, complaints will be separately tracked and reported.

Continually increase our online transaction capability for your convenience by establishing Payment Conversion Key Performance Indicators (KPIs) i.e. Payment conversion Rate defined as how many transactions were successful or declined where 80% conversion rate would reflect successful transactions.

Monitoring customer preferences and payment trends i.e. users of M-Selem etc.

Commercial management such as training in customer service, billing and debt collections will be enhanced to maximize the use of SIWA new Enterprise Resource planning system. Moreover, a consolidated community awareness program will strengthen SIWA's efforts to reduce illegal connections, increase water supply faults and improve water efficient behaviors.

7. Pricing of Water and Sanitation Services

Tariff Review - Water and Sanitation Services

There is a need to commission a full tariff study to enable the long-term sustainability of the SIWA and to rebalance water and sanitation tariffs and fees to remove cross subsidies between each customer segment and division.

The water tariffs will need to be reviewed within the next two years to ensure sustainability of water operations and services into the future. This will require a full cost of service study to be undertaken to assess the customer's willingness and ability to pay for the level of service expected.

A customer's willingness to pay determines the maximum price a customer is willing to pay for service. Factors affecting a customer's willingness to pay include household income, geography, weather, age, gender, brand loyalty, service level, expectations, necessity, and environmental and social impact.

An assessment of the customer's ability to pay will require an assessment of income, expenditure and property.

A review of labour timesheets to enable the capture of information of hours worked, both normal and overtime, for recurrent and capital jobs is also required, and the capture of all capital expenditure including, consultancy, materials, labour, other costs associated with the project that needs to be capitalized.

Appendix 3 sets out the current tariffs fees and charges for 2023, 2024 and 2025.

Many factors influence the price of water and sanitation services provided by SIWA.

Water supply and sanitation service prices generally reflect the cost to build, finance, maintain, and operate catchment areas, production, storage and treatment plans, reservoirs and the distribution networks and connections i.e. the complex system of pipes, pumps, values and metering.

SIWA as a statutory authority is required under the Solomon Islands Water Authority Act 1993 to act commercially and must conduct its business and operations with a view to being a successful business.

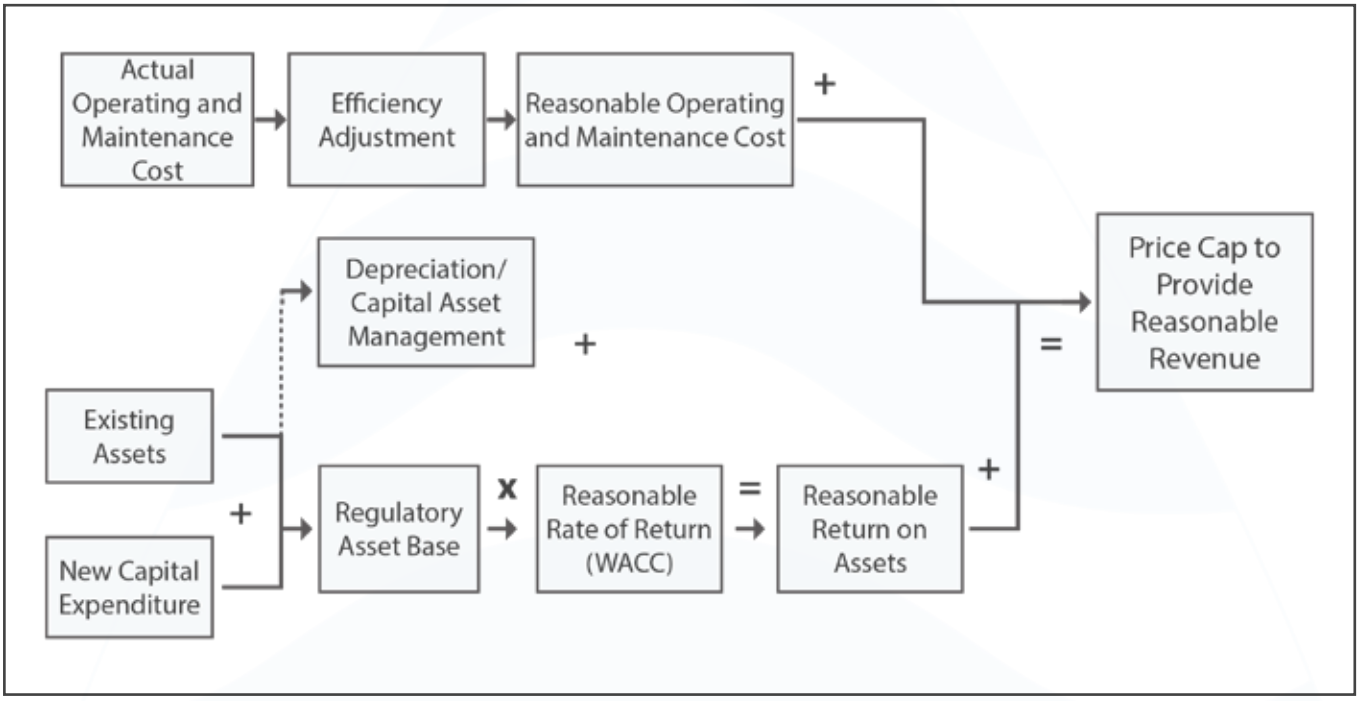
This requires SIWA to fully recover its costs of providing water and sanitation services from its customers through tariff fees and charges, in an effective and efficient manner.

The below figure demonstrates the general approach to tariff and pricing of water and sanitation services.

Several key factors influence the price of water supply and sanitation services:

Storage and Treatment Facility costs: Each storage and treatment facility has financing, construction, maintenance, and operating costs including ongoing treatment costs (chlorination).

Weather conditions: Extreme temperatures can increase demand for water services, and the resulting increases in electricity demand can push up fuel and electricity cost.



The cost of production of water and pumping costs for delivery is the largest component of our costs i.e. price of electricity. The cost of electricity is usually highest in the drier periods.

The cost of supply varies from changes in energy costs, operating and maintenance costs including transactional costs; however, most customers pay set rates as set out in Appendix 3.

Production and storage: Costs comprises construction costs, amortisation expenses and provisions for the replacement of all water collection, treatment and distribution facilities, as well as the cost of treatment, operation and maintenance, including that of the piped delivery network, administrative and customer management services, and resource preservation costs.

The cost of providing water services is dependent upon various factors. Many may consider water as a natural resource which is indispensable to everyone's life, and is of course a free commodity, however, its collection, treatment and distribution, as well as the treatment of waste water before it is returned to the environment requires significant technical, financial and human resources which are sometimes complex and have a cost which needs to be paid for one way or another.

Personnel, property and fleet services operation cost are additional expenses incurred in delivering water services to our customers. These costs are dependent on the capital costs (plant and equipment needed), fuel costs, human resource, spare parts, and operating and maintenance costs.

Other considerations include metering points, technical and non-technical losses, as well as land and property access.

Financial Projections

Our financial management strategy ensures that all the financial aspects of the SIWA operations are managed in a transparent manner and captures all transactions and records them under the appropriate budget classification, complies with legal requirements, and produces reports appropriate for managing the utility and reporting to the relevant authorities and regulators.

In 2024 we expect Solomon Water's new ERP, Pronto, to be more embedded into our processes and work practices as staff become more familiar with the system. This is expected to improve organizational efficiency. Budgeting is expected to be aided by the system.

The financial projections in this plan use existing or estimated financial data to forecast our business's future income and expenses.

The assumptions and different scenarios considered enable us to see how changes to one aspect of our finances (such as reduced or increased demand and /or lower or higher operating expenses) might affect SIWA's sustainability and ability to deliver water and sanitation services.

The financial projections over the next 5-year period are set out in Appendix 5 of this plan.

Key Assumptions

The following shows projected trend in diesel prices based on Singapore price forecast over the next 10 years to 2030.

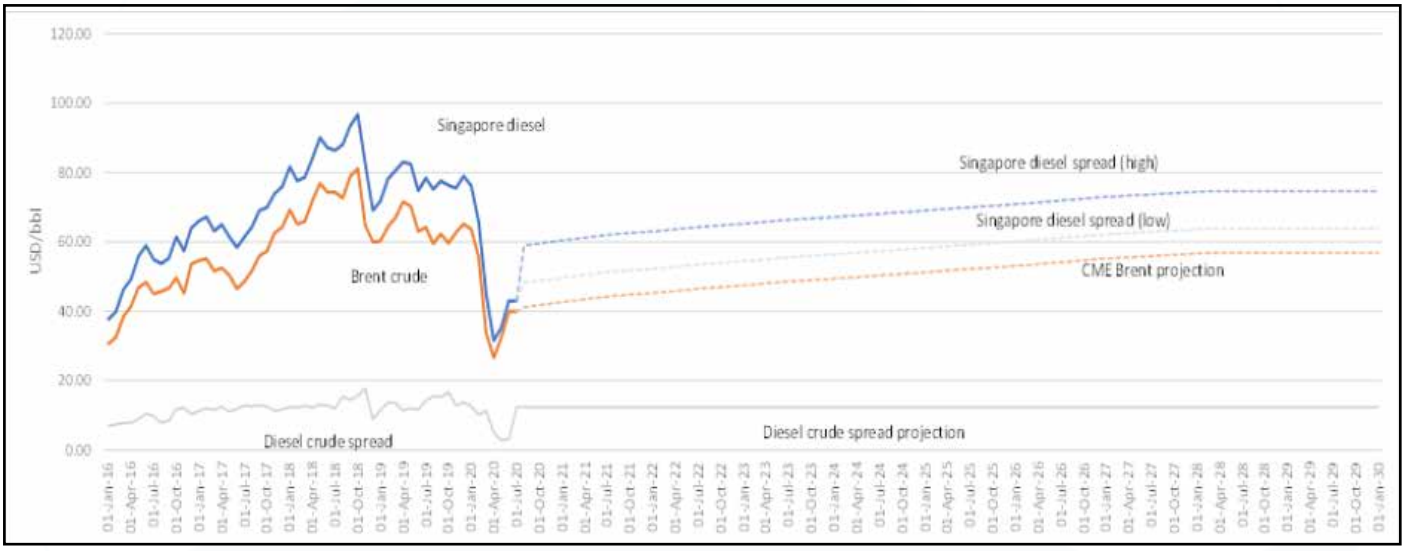


Figure 8: Diesel Price Projections to 2030.

Beyond 2030 to 2040 the International Monetary Fund (IMF) projections for crude oil price is that it will be increasing over time.

Thus, the price for diesel fuel is more likely to be increasing beyond 2030. As the price of diesel is intrinsically linked to the electricity tariff, costs for electricity used by SIWA will continue to rise over the next period.

As electricity producers in Solomon Islands reduce their dependency on diesel fuel (as part of their climate change response), the fuel price is expected to increase to cover the fixed cost of importing the fuel.

Therefore, SIWA electricity costs are forecasted to remain high comprising 30% of our operating expenses.

The following key assumptions have been made in developing the 5 Year Corporate Strategic Plan:

- Community Service Obligation payments are continued to be made when due by the SIG to SIWA.

- Sufficient donor funding to support SIWA capital expansion and upgrade works (UWSSSP) including organizational capability and capacity building will be made available.

- Non-Revenue Water (NRW) – ongoing improvements in NRW reduction will continue during 2024 (reduced physical leakage, direct unmetered connections, illegal connections and theft mitigation) and beyond leading to further reducing non-revenue water towards our target of 30% by 2028.

- Sufficient donor funding for NRW works and SIG support in securing these funds will continue to be provided.

- Customary Land and Landowner issues do not adversely impact on security of water resources and water supply.

- The Water Sources Restitution Technical Working Group continues to provide support and tangible outcomes in the various catchments where we operate.

- Global Environment Fund (GEF) approved programme continues to improve catchment management through protection schemes which may assist landowners to secure revenue from their lands without resorting to logging is effectively implemented.

- Land acquisitions for SIWA to provide new infrastructure for water services is made available so as to secure water catchment areas for the protection of water sources into the future.

- SIWA is able to secure quality and skilled staff, particularly in engineering, accounting and other specialist roles as required.

Refer to Annex 5 for the forecasted summary of financials from 2024 to 2028

The assumptions made for key items in the forecasted statements include increase in operating income primarily due to tariff increase, at 9.5%, 7% and 4% per year for 2024, 2025 and 2026 respectively.

Other income mainly comprises CSO payments of $5m, $4.5m and $4.0m for 2024, 2025 and 2026 respectively.

It is critical that SW receives these payments on time to minimize cash flow difficulties experienced in the current year.

Projected Operating Income is a function of customer growth. However, revenue on the P&L represents billed amounts. Cash collection is dependent on timely bill payments by customers. Receipts from domestic customers remains particularly problematic, as does certain Government departments. Preliminary analysis (based on a limited sample) shows that only 11% of customers in aggregate paid their bills in full within the payment date.

A surplus to cover operating and maintenance costs is projected each year in the forecast period. This is due to revenue generally being insufficient to cover the growing operating expense base owing to the increasing level of project activities. Specifically, high utility expenses (the majority of which is electricity) is forecasted to remain high, particularly due to oil producing nations curtailing production, the continuing Russia-Ukraine conflict and the recent conflict in the Middle East, all of which causes significant uncertainty in 2024 and beyond.

Other impacts on expense include forecasted impairment charges on the growing quantum of customer debt which needs to be provisioned. SW is testing a new brand of prepaid meters which, if successful, will help arrest further growth of debt. Further investment in overhauling aging pipe networks, through donor partner funding, should also help improve the stubbornly high NRW rate. Note that both these initiatives, particularly the latter, will take time, possibly beyond the forecast period.

Salaries and employee benefits, the largest operating expense item, is projected at a constant 33% of operating revenue for each year. Much needed training will be kept to a minimum. Other Operating expenses are forecasted to grow by inflation, assumed at 4% for each year.

Solomon Water's balance sheet is forecast to continue expansion with the growing project work, particularly under the UWSSSP.

While 2024 cash reflects project funds from SIG, a gradual build-up of cash is projected over the forecast period. This is, however, dependent on customer payments on water bills and timely receipt of CSO from Government.

Growth in Property, Plant & Equipment mainly reflects donor funded works. Solomon Water funded capex such as fencing and replacement vehicles, while essential, will continue to be constrained by available cash.

Finance Strategic KPI's

KPIs	Description	Target
Operating ratio	Means operating revenues divided by operating expenses. Operating revenue include: • Revenue from all sources related to SW's operations • Excludes interest income Operating expenses include: • Expenses including taxes, depreciation, maintenance • Exclude interest charge on debt directly related to SW's operations and services	Maintained at 100% or more
Billing Error	Means value of total billing errors divided by total value of billings in the period concern. Included in value of total billing errors are • incorrect rates, • duplicate charges, • or missing bills.	2% or less
Water loss percentage	Water loss due to leaks, theft, or inefficiencies impacts revenue. Monitoring this KPI helps identify areas for improvement in water distribution systems.	50% or less
Collection Efficiency	Means total collectible amount less remaining recovery amount divide by total collectible amount Total collectible amount includes • the invoices overdue at the start of the month as well as • all invoices the business accrues throughout the remainder of the month. Remaining recovery amount is the amount remaining on a specific day that the team failed to collect.	Benchmark with industry average
Accounts receivable turnover days	Net Annual Credit Sales ÷ Average Accounts Receivables x 365 days	< 90 days
Current ratio	Current Assets divide by current liabilities	2:1 or more
Debt ratios	Means total liabilities divide by total assets for the period concern	< 1
Return on Equity	Means net income divide by shareholders equity	Benchmark with industry average
Conduct Tariff review	Conduct tariff review at least once every 4 years	< 4 years
% achieved of investment plan	Actuals Capex for the year divide by budgeted Capex for the year	>50%
Capital Expenditure Ratio	Means capital expenditure divide by revenue.	Benchmark with industry average
Corporate governance compliance	Compliance to all the checklist required by the Authority in terms of the legislation and currents laws in place	100%

8. SIWA's Strategic Goals, Risks and Challenges

Strategic Goals

As already alluded to, our 5 – Year Corporate Strategic Plan 2024-2028 implements the strategic priorities in the 30 Year Strategic Plan 2017-2047[8]. The Plan includes other appropriate strategic objectives, strategies, targets and activities designed to realise the aspirations in SIWA's 2033 Future Operating Model. The following summarizes these strategic goals and priorities.

Summary of Strategic Goals and Priorities

Strategic Goal 1: Responsiveness to key Cross-cutting Agendas Enhanced

- Implement the SIWA Anti-Corruption Strategy.
- Implement the SIWA Gender Mainstreaming Strategy.
- Promote staff Health, Safety and Welfare.
- Promote Staff awareness on Environmental Issues.

Strategic Goal 2: Empowered Stakeholders through Knowledge Generation and Exchange

- Enhance internal and external stakeholders' knowledge, skills and expertise
- Enhance mechanisms to provide timely and tailored information to meet the needs of stakeholder groups.
- Enhance public knowledge, awareness and understanding of SIWA's functions.
- Track, assess and share information on water and sanitation services.
- Enhance targeted communication with key stakeholders.
- Strengthen interactions with key stakeholders.
- Strengthen international cooperation on water and sanitation matters.

Strategic Goal 3: Enhanced Customer Experience through Engagement and Communication

- Enhanced service delivery to benefit our customers and stakeholders.
- Establish and foster positive relationships with our customers.
- Establish a Customer Charter that outlines our communication to our customers and in turn how our customers can help us provide quality service.
- Establish Customer Service Standards to reflect how customers want the organization to deliver: customer service and respond to enquiries and complaints.
- Establish a Customer Management System that enhances customers experience when dealing with SIWA.
- Establish a Customer Consultation and Engagement Program.

Strategic Goal 4: Enhanced Enabling Legal and Institutional Environment for the Water Sector

- Support the review of the Solomon Islands Water Authority Act 1993 to clarify key functions and responsibilities.
- Support the review and development of Solomon Islands Water Authority Regulations 2010 to include Water System Rules and Regulations, Safety and Reliability Standards, Water Conservation and Efficiency.
- Support the review and development of Solomon Islands Water Resources and Catchment Protection Policy.
- Develop procedures and guidelines related to water supply and customer connections, to

8 30 year Strategic Plan 2017-2047 sets out SIWA Capital Infrastructure Development Plan to 2047

include procedures and guidelines for water supply and delivery.

- Implement established Regulations, Standards and Codes enacted under the Act.

Strategic Goal 5: World Class Water Utility in the Pacific Region

- Strengthen the SIWA's organizational, management and staffing framework.
- Strengthen business processes and customer services.
- Strengthen SIWA's water and sanitation operations.
- Strengthen SIWA's Project Management Systems
- Transform SIWA into an e-utility with most services delivered through ICT systems.
- Strengthen financial sustainability mechanisms of the SIWA.
- Strengthen Quality Management Systems (QMS).
- Institutionalize modern strategic management and performance management systems.
- Modern Internal auditing and risk management frameworks.

Key Risks and Challenges

SIWA is enhancing its risk management framework to ensure that regular assessments are undertaken to identify and manage significant risks of community and business significance including health and safety, hazards and security, service delivery, financial, legal and compliance, environmental and reputational risks.

The table below presents the most significant strategic and business risks and issues facing SIWA and the proposed controls (financial and non-financial) over the 5 year period.

Major capital investment in risk control primarily relates to infrastructure and system investment. Operational investment is allocated to improvements in management and administrative controls such as management systems, procedures, monitoring, communication, skills capability and operational program delivery.

Key Strategic and Business Risks	Key Investment focus 2024-2028
Health and Safety Risks to Staff, Contractors and the Community. Due to the diverse nature of SIWA's operations and multiple potential causes there are threats to the health and safety of the public, contractors and our people which could result in harm or fatality, legal consequences, reputational damage and financial loss.	• Safety culture improvement, including accountability and leadership, with the aim of achieving a proactive safety culture. • Improved Safety Management System tailored to operational needs. • Enhanced awareness of high-risk activities and alignment of controls.
Failure to meet Customer and Stakeholder Expectations There is a risk that SIWA may fail to effectively engage, understand and address the needs of its customers and stakeholders (including the Government, workforce, business and the public) which could result in loss of funding, financial loss, reputational damage and regulatory changes.	• Implementation of the SIWA Customer and Stakeholder Engagement Strategies.
Poor Water Quality Due to potential for poor water supply quality caused by poor source quality or other potential causes, there is a threat to community health and safety which could result in serious illness or fatality, legal consequences, reputational damage and financial loss.	• Improvement of the Water Quality Management System aligned with the Australian Drinking Water Guidelines including investment in procedures, monitoring and treatment.
Natural Hazards Due to potential for failure to adequately prepare and respond to natural unforeseen extreme natural events, there is a threat to infrastructure and people which could result in harm or fatality, legal consequences, reputational damage and financial loss.	• Implement Crisis Management Framework and Response Plans

Key Strategic and Business Risks	Key Investment focus 2024-2028
Security Incidents There is a risk that SIWA may not have effective processes in place to respond effectively when required which could result in cyber security attacks, financial loss, compromise of sensitive and commercial information, injury to staff and the general public, impact on service delivery and reputation.	• ICT project to improve management of cyber security risk. • Sites and building investments to maintain physical security.
Interruption to Core Services Due to multiple potential causes (such as asset failure or energy supply shortage), there is a risk of sustained interruption to core services with significant impacts for the community.	• Asset planning and investments to maintain asset performance and meet demand. • Improvement in systems to support production, storage and service delivery and outage management and control systems.
Poor Financial Performance Due to potential for failure to identify and manage potential financial risks (such as failure to manage costs to the business or unfavourable decisions by government), there is a risk to the financial sustainability of SIWA.	• Operating cost structure and financial process improvement strategies. • Capital investment in line with prudent investment strategies. • Securing further donor funds to support the Strategic Plan projects. • Reduction in Non-Revenue Water (NRW).
Major Compliance Breach There is a risk that SIWA may fail to identify and/or breach its legal and regulatory compliance obligations which could result in financial sanctions and reputational damage.	• Improved governance and compliance framework to ensure ongoing alignment with the State Owned Enterprise Act 2007.
Environmental Harm Due to multiple potential causes (such as fuel spills, cultural heritage impacts, waste), there are threats which could result in harm to the environment and people, financial legal and reputational impacts.	• Continued compliance with environmental legislation and regulation. • Continued implementation of the Environment Management System.
Poor Business Performance Due to potential for SIWA to fail to optimize its capability and people, and generate a high performing, diverse workforce there is a risk that SIWA will not achieve its strategic objectives which could result in decrease in service delivery, reputational damage, decreased staff morale and financial loss.	• Implementation of the Culture and Capability Program to support achievement of strategic objectives of the business.

Table 14: Key Strategic and Business Risks

Key challenges

Key Strategic Challenges and Issues	Key investment focus 2024-2028
Stakeholder Engagement - Enhance SIWA engagement and relationship with key stakeholders.	• Enhance key stakeholder understanding and awareness on Tariffs and Pricing; major projects; reliability, security and safety of supply, land management, organizational and financial performance. • Communication Plan Implementation - regular newsletters, media releases, awareness programs government liaison.
Financial Sustainability – SIWA objective is to be as profitable and efficient as a comparable businesses that are not owned by Government.	• Improved revenue collection. • Reduced operating costs through efficient and effective project management, financial management and operational efficiencies. • Reduced technical and commercial losses (NRW) to acceptable levels. • Investment in asset replacement, refurbishment and upgrades. • Enhancing security and reliability of water supply and services. • Community Service Obligations are continued to be paid by the SIG. • Sufficient donor funding to support SIWA capital expansion and upgrade plan (UWSSSP) will be made available.
Security of Water Supply for Honiara	• Lungga Water Treatment Plant - need for a major new water source for Honiara to accommodate the growing population. • Feasibility study completed and funding sources to be explored • Other alternate source to be considered, investigated and study / report produced.
Water Supply for Gizo and Munda	• SIG funding required to establish operations in Gizo and Munda including further Donor Funding.
Illegal and Unmanaged Logging –	• SIG affirmative action is required to stop illegal activities in the catchment. • Regeneration program. • Establishment of new Kongulai WTP. • Alternative bores holes and initiatives.
Municipal Wastewater Collection and Disposal	• Design and construction of sewer pumping stations, rising mains and ocean outfalls.
Water and Wastewater Tariff	• A comprehensive Cost of Service Study and Tariff Review to be undertaken in 2024.

9. Solomon Water Investment Strategy

Strategic Projects - Background

In 2017 Solomon Water formulated a 30-Year Strategic Plan outlining its long-term vision to improve and expand water and sewerage services in accordance with its mandate under the Solomon Islands Water Authority Act 1993. Complementing the Strategic Plan are 5-Year Action Plans, the second of which is being finalised.

In line with the 30-Year Strategic Plan and 5-Year Action Plan the Urban Water Supply and Sanitation Sector Project (UWSSSP) was approved in 2019 with funding from Asian Development Bank (ADB), World Bank (WB) and European Union (EU).

The UWSSSP aims to improve:

1. Access to and quality of water supply services in Honiara and selected provincial capitals;
2. The quality of sanitation services in Honiara; and
3. The operational performance of SW through Non-revenue water reduction, institutional strengthening, and capacity building of SW staff.

UWSSSP is broken down into four deliverable components with defined objectives:

Component 1: Water Supply

1. Expand water supply coverage to an additional 40,000 people;
2. Significantly reduce SW's non-revenue water, including through improving SW revenue collection through the implementation of prepaid meters;
3. Support SW's critical water mains replacement program;
4. Improve Honiara's water system resilience;
5. Install water treatment on the Kongulai spring source to mitigate variable water quality and interruptions to supply during heavy rainfall events.

Component 2: Sanitation

1. Stop the discharge of sewerage to the Mataniko River and Honiara foreshore and construct three sea outfalls that will discharge screened sewage effluent at suitable distance and depth;
2. Rehabilitate existing sewer pump stations;
3. Construct new sewer pump stations and sewer mains to collect sewerage and convey to the new outfalls for safe disposal;
4. Review septage management practice and support the Solomon Islands Government (SIG) and Honiara City Council (HCC) in developing septage management policy;
5. Construct a septage management treatment facility to stop uncontrolled discharge of septage waste to the environment.

Component 3: Hygiene Awareness and Education

1. Promote good sanitation and hygiene practices in order to help prevent water and sanitation related diseases;
2. Increase awareness of water supply issues such as water conservation and the cost of water delivery services; and
3. Broaden the role of SW from an infrastructure and service delivery enterprise to one with a broader focus on community well-being and quality of life.

Component 4: Institutional Development

1. Develop the capacity of SW staff to reliably deliver quality services; and
2. Strengthen SW operational and management efficiency.

Major Works Program – Capital Projects

Major capital works investment projects being prepared under the UWSSSP include:

- Honiara network storage and water mains upgrading and renewals;
- upgrade and expansion of sewer pipes and pumping stations;
- construction of 2 major new sewer outfalls and rationalization of 15 existing outfalls;
- Honiara septage disposal facility,
- upgrades to Noro and Tulagi provincial water supplies
- take-over of water supply operations for Gizo and Munda, necessitating the construction of new or upgraded facilities
- ongoing non-revenue water programme
- Lungga Water Treatment Plant (feasibility)
- Tina hydro water treatment plant (feasibility)

Four major projects commenced construction in late 2022 and are continued in 2023 and 2024, whilst others remain dependent on further donor funding before they can proceed. The financial impacts are included in the financial statements.

Summary of Delivery Objectives 2024 and beyond

Item	Project Description	Value (USD)	Completion Date	Funding Source
Urban Water Supply and Sanitation Services Project (UWSSSP) - Specific Project Component				
1	Kongulai Water treatment Plant and Pipeline Project	$15.7M Contract awarded to REAN-PCS JV	Q4 2024	Donor
2	Honiara network Water Supply - Trunk Mains Network	$7.8M Contract awarded to Pacific Engineering Projects (PEP)	Q4 2024	Donor
2.1	Kongulai to White River and Rove Trunk Main			
2.2	East Kola SR to Naha Trunk Main			
2.3	Panatina SR to Burns Creek Trunk Main			
3	Honiara Water Supply Service Reservoirs	$7.2M Contract awarded to PEP	Q4 2024	Donor
3.1	Tasahe Reservoir (3ML)			
3.2	Titinge Reservoir (3ML)			
3.3	Panatina Reservoir (2.5ML)			
4	Tulagi Water Supply Upgrade	$4.3M	Q4 2025	Donor
5	Noro Water Supply Rehabilitation and Upgrade	$3.0M	Q4 2025	Donor
6	Munda Water Supply Establishment	$6.5M	Q1 2026	Donor
7	Gizo Water Supply Establishment	$9.3M	Q2 2026	Donor
Urban Water Supply and Sanitation Services Project (UWSSSP) - Component 2				
8	Honiara Wastewater Trunk Sewers and Pump Station, Outfalls and Outfall Pump Stations			
8.1	Ranadi Road to Goodwood Outfall Sewer Works	$5.9M Contract awarded to PEP	Q4 2024	Donor
8.2	(1) NRH Sewer Works and Outfall (2) Ranadi Sewer Works and Outfall	(1) $13.2M (2) $23.8M	Q2 2027	Donor
Urban Water Supply and Sanitation Services Project (UWSSSP) - Component 3				
9	Enhanced Awareness of Hygiene and Water Issues and Sustained Improved Hygiene Behaviour			
9.1	Hygiene Awareness and Education **Package 1** - WASH Baseline Monitoring and Evaluation **Package 2** - Hygiene Promotion Project **Package 3** - WASH in Schools	$4.5M	On-going	Donor

Table 16: Summary of Project Delivery Objectives 2024 and beyond

UWSSSP Project Activities 2024-2028

The 5-Year Action Plan 2024-2028 identified works to be undertaken over the coming years. These are detailed in this section and collated and summarised for prioritisation to form the 5- Year Corporate Strategic Plan 2024-2028.

Honiara Water Supply

The following works have been identified for the Honiara water supply system following the 5-year action plan (2017-2022).

1. Lungga River Water Source Scheme feasibility report by EGIS in October 2018. The report in alignment with five-year action plan investigates the Lungga River Water source and treatment options and recommends additional investigations and additional studies to be undertaken prior to design and implementation.

Preliminary internal review by SW identified a potential feasible gravity feed from Tina Dam. It is proposed to undertake a new feasibility study into the next long-term water source for Honiara.

2. Kongulai Spring Water Treatment Plant Preliminary Design Report by Beca in August 2019. The report sets the preliminary design for the new 15ML/day water treatment plant.

3. Basis of Design, Honiara Water Supply by Suez in September 2019. This report presents the preliminary design of the Honiara Water Supply providing description of the proposed project, design criteria and hydraulic designs of the proposed facilities.

4. Prioritisation Report – Water Supply Pipeline Rehabilitation, Honiara (SP1) by SMEC in August 2022. The report aimed at identifying 10km of mains from replacement to address ongoing water mains leakage issues which contributes to high NRW. The report assessed and prioritised 28km of for replacement which was further shortlisted to 10km of mains to proceed to detailed design phase. The assessment categories adopted to prioritise the mains include pipeline age, pipeline material, history of past leak repairs on pipeline, pipeline location (in area of high/low leakage), pipeline hydraulic capacity; and SW's knowledge of future expansion or other factors for pipeline criticality (identified as a critical main for replacement internally by SW O&M team). Refer to Appendix for details of 10km of mains selected for replacement.

5. Basis of Design Report (Technical) – Water Supply Network Expansion, Honiara (SP5) by SMEC in September 2022. The study assessed water supply options to service the proposed high elevation expansion areas of Noah Hill (and surrounding areas) and Mount Austen.

PROPOSED WORKS
Basis of Design, Honiara Water Supply
Storage Upgrades: • Tasahe Reservoir: Replacement of the old steel tank (0.9ML) with a new 3ML reservoir. • Titinge: New 3ML reservoir • Panatina: New 2.5ML reservoir • White River gravity (Kongulai WTP): 2 ML Reservoir **Trunk Mains:** • White river trunk main (from Kongulai WTP site to Rove interconnection) – 400mm (Ext. dia.) 6km approx. • East Kola trunk main (from East Kola tank to Kukum Highway - 315mm (Ext. dia.) 1.8km approx. • Panatina trunk main (from Panatina Reservoir to Eastern part of city - 315mm (Ext. dia.) 3.2km approx.
Basis of Design Report (Technical) – Water Supply Network Expansion, Honiara (SP5)
Stage 1 (Year 2037 Demands) • Estimated four (minimum 3) new boreholes alongside the Mataniko River • Pumping mains from boreholes to SW Tuvaruhu Depot • New 0.3ML tank at Tuvaruhu Depot, Chlorination installation and new pump station • New DN250 pumping main from new Tuvaruhu Pump station to new 1.6ML tank at Noah Hill (SW land). • New pump station at Noah Hill alongside 1.6 ML tank • New DN100 pumping main from Noah Hill Pump Station to New 0.1ML tank at Mount Austen; and • Approximately 22km of DN100 to DN250 pipelines bulk mains and reticulation. **Stage 2 (Year 2047 Demands)** • Upgrade Pumps and Electrical at Mataniko Boreholes • Upgrade Pumps and Electrical at Tuvaruhu Depot Pump Station • Upgrade Pumps and Electrical at Noah Hill Pump Station • New 0.5 ML tank at Noah Hill

Table 17: Summary of works proposed for Honiara water supply.

Provincial Towns Water Supply

Auki

UWSSSP Detailed Engineering Design Phase 2, Basis of Design Report (Technical) – Water Supply Network Expansion, Auki (SP2) study assessed water supply options to service five proposed expansion areas namely, Kilusakwalo, Kilu'ufi, Aligegeo, Kunu and Ambu. The future Auki water demand including the proposed new supply areas was projected to reach approximately 3.6 ML/day (Average Daily Demand) by Year 2047.

PROPOSED WORKS	
5-Year Action Plan (2017-2022) & 30 Year Strategic Plan	Basis of Design Report (Technical) - Water Supply Network Expansion, Auki (SP2) (2022)
- Establish a new raw water source on the Kwaibala River, with disinfection, pumping to the gallery reservoir(s). - Recommission the existing high tank. - Install pumps (duty and standby) and pipeline to pump from the gallery reservoir to the high-level tank. Connect the high tank to the high-level distribution system. - When demand on the middle tank reaches the capacity of the bores install another pump station (duty and standby) to pump from the gallery reservoir to the middle tank.	- Kwaibala River flow found to have inadequate yield to meet the required year 2037 or 2047 flows therefore rejected as a sustainable long-term source. - Fiu River adopted as long term preferred raw water source for Auki. **Stage 1 (Year 2037 Demands): Proposed Works** • Intake on Fiu River and raw water rising main • Fiu WTP (Pressure Filters and chlorination) • 0.5ML Clear water Tank and Treated Water Pump Station • 3ML Storage Tank at Aligegeo (RL60m) • 15km of bulk mains and reticulation • 360 House Connections **Stage 2 (Year 2047 Demands): Proposed Works** • Upgrade Pumps and Electrical at Fiu Intake • Upgrade filters at Fiu WTP • Upgrade Pumps and Electrical at Fiu WTP Treated Water Pump Station • New (additional) 1ML tank at Aligegeo • Replace High Ridge Tank • 360 House connections

Table 18: Proposed Works for Auki.

Gizo

UWSSSP - Project Readiness Finance Core Sub Projects Detailed Engineering Design report reviewed the conceptual design included in the PPA Feasibility study developing further the proposed option for the Gizo water supply.

A water demand estimation has been determined assuming a high system efficiency (85%) and system coverage increase to 70% in 2030 to 95% in 2050. With these assumptions, a Peak Day Demand (PDD) of about 1ML/d by 2030 was calculated, broadly in line with the forecasted 2027 PDD estimated by the PPA consultant at 1.2ML/d; by 2050, the PDD increases to 2.65ML/d.

The following Table provides and summary of proposed works for Gizo.

PROPOSED WORKS	
5-Year Action Plan (2017-2022) & 30 Year Strategic Plan	**Basis of Design Report, Gizo in May 2020**
• Regulations are needed to better administer water supply. • Initiate an education campaign on water management and wastage in conjunction with education on the need to pay for water used. • Initiate an education campaign on the need for all residences to maintain their own storages even if water supply can be restored. • Conduct a visual survey of the pipeline from Leoko to ascertain where the current water is being used and determine if some can be made available for Gizo. Ascertain if the adjacent source could be connected to the Leoko source pipeline to provide water to Gizo. • Connect the existing unused dam to the treatment plant raw water tank. • Request Department of Mines and Energy undertake groundwater surveys to ascertain potential groundwater sources in Gizo (downstream of old dam?). • Recommission the treatment plant. • As a minimum see if supply can be restored to the low-level water distribution system which would supply the hospital. • Progressively connect the other small sources on Gizo to expand the supply area. • Recommended Works to Guaranteeing future supplies would require either: • A pipeline from Kolombangara Island (~20km) which has reliable water sources or desalination. Both these options will be extremely expensive and would require a detailed options analysis to decide on the preferred option, or • Continuing with collection of rainwater by residents and businesses as occurs now with the reticulated supply being used as a back-up during dry periods. The reticulated supply could also be used for essential supplies such as for the hospital.	Works recommend for Gizo WS include: • Creation of a new resource using Mile 6 groundwater and development of a transmission system from Mile 6 to Jar Mountain. • Rehabilitation of Mile 2 reservoir and the existing water treatment plant; development of a new transmission line for Mile 2 to the WTP and a new pumping main to Jar Mountain. • Improvement of monitoring of each storage tank and replacement of Hilltop tank with a new 0.5 ML storage • Replacement or extension of water supply network 8.4 km length.

Table 19: Proposed Works for Gizo.

Noro

UWSSSP - Project Readiness Finance Core Sub Projects Detailed Engineering Design - Note for Detailed Design Noro Water Supply system, the report reviewed the conceptual design included in the PPA Feasibility study developing further the proposed option.

A water demand estimation has been determined assuming a high system efficiency (85%) and system coverage increase to 70% in 2030 to 95% in 2050. With these assumptions, a Peak Day Demand (PDD) of about 1ML/d was calculated by 2030, broadly in line with the forecasted 2027 PDD estimated by the PPA consultant at 1.2ML/d; by 2050, the PDD increases to 2.65ML/d.

PROPOSED WORKS	
5-Year Action Plan (2017-2022) & 30 Year Strategic Plan	**Basis of Design Report, Noro in December 2021**
Increase raw water storage and operate Ziata pumps on level control. Construct a weir, pump station and delivery pipeline on the river approximately one kilometre on the Noro side of the Ziata River to supplement supply from the Ziata ideally after flows in this river have been confirmed in dry periods. Investigate capacity of the existing treatment plant and explore upgrade options if required. Investigate ground water options in the Noro area.	Improvement of existing intake and raw water pump station New water treatment plant Approx. 3.7km of Network Expansion to settlements and development areas at the outskirt of the town

Table 20: Proposed Works for Noro.

Tulagi

UWSSSP - Project Readiness Finance Core Sub Projects Detailed Engineering Design - Note for Detailed Design Tulagi Water Supply system report supported the preparation of detailed design for Tulagi Water Supply System.

The report proposed system with maximum capacity of 0.8 MLD. However, the construction of some components is recommended to be phased with a first capacity of 0.4 MLD, expendable to 0.8 MLD.

This is the case for the WTP and storage facilities.

New pipelines are recommended to be sized based on long term requirements.

The following Table provides a summary of works prosed for Tulagi.

PROPOSED WORKS	
5-Year Action Plan (2017-2022) & 30 Year Strategic Plan	**Basis of Design Report, Tulagi in January 2022**
Install a standby pump in the existing pump facility. Operate the pump on level control from the high-level storage. Install an automatic inlet valve on the low storage to prevent overflow. Preliminary discussions should be held with Department of Mines, Energy and Rural Electrification to ascertain if any groundwater sources are in the Tulagi area that could be used to supplement supply if required.	Improvement of existing intake for access and safety. New 6km transmission line. New WTP with 0.4 MLD capacity at phase 1, Expandable to 0.8 MLD at phase 2. New 0.4 ML storage tank. Space for addition 0.4 ML storage tank shall be allocated for stage 2. Improvement and extension of the distribution network

Table 21: Proposed Works for Tulagi.

Munda

UWSSSP - Project Readiness Finance Core Sub Projects Detailed Engineering Design - Note for Detailed Design Munda Water Supply system report supported the preparation of detailed design for Munda Water Supply System.

PROPOSED WORKS
Basis of Design Report, Munda in October 2021
Groundwater will be extracted from the existing Airport Borehole. Replacement of all the electromechanical equipment necessary for the rehabilitation of the Airport's well and for achieving the targeted production of 0.6MLD. Installation of a new disinfection system based on injection of sodium hypochlorite solution at the Airport site (adaptable to gas chlorination in the future). Construction of a new storage reservoir on the hill north of Munda town. Construction of new transmission pipes from the airport site to the new reservoir and from the new reservoir to the north inlet of the new distribution network. The new distribution network for Munda town.

Table 22: Proposed Works for Munda.

Bina Harbour

Bina Harbour Water and Wastewater Assessment Report outlines the initial assessment of water and wastewater options for the proposed Bina development including the Bina Harbour Tuna Processing Plant (BHTPP) and surrounding villages and provides key options to be further developed as part of feasibility study.

The report notes the water demand increases evenly from 1.154 ML/day in 2025 to 2.166 ML/day in year 2050.

The following Table provides a summary of recommendations presented in Bina Harbour Water and Wastewater Assessment Report.

PROPOSED WORKS **Bina Harbour Water and Wastewater Assessment Report**
The outcome of initial options assessment for water and wastewater is as follows: • **Water Supply** Both the Bina and Kwaleunga rivers offer good quality raw water, and it is proposed to treat the water using simple technology (pressure filters and chlorination). The project area can be serviced with two supply zones (i.e., zone 1 (northern zone) and zone 2 (southern zone) with a reservoir located in each zone. Zone 1 would service the BHTTP. • **Wastewater** Due to high Biochemical Oxygen Demand (BOD) for BHTPP, lagoon-based treatment options will not be practical. A conventional plant is proposed for BHTPP that will be capable of treating the wastewater to an acceptable standard prior to discharge to a watercourse/ocean. It is proposed that skilled operators would be engaged by the BHTPP to successfully operate the plant to produce the required effluent quality. Effluent for the BHTPP STP would discharge to a proposed ocean outfall. It is recommended for each village to have a local sewerage system draining by gravity to a centralized septic tank. The wastewater from the villages would be separately treated in a lagoon treatment plant system that would be operated by Solomon Water.
Key activities to be incorporated into the feasibility study report include: • UXO field survey of key location • Aerial survey of project area • Geotechnical investigation of key locations • Results from installed river gauges and subsequent confirmation of hydrological assessment • Assessment of power requirements • Disposal of final effluent • Ongoing environmental and social safeguards inputs • Cost estimates and economic analyses

Table 23: Proposed Works for Bina Harbour.

Choiseul Bay

UWSSSP Detailed Engineering Design Phase 2 Basis of Design Report (Technical) – New Water Supply Network/Sewerage System Choiseul Bay (SP5) study assessed the water supply and sanitation options to service the proposed new Choiseul Bay Township as well as Taro and Sipozae Islands.

The study estimated the future water demand for the project area to reach approximately 1.72 ML/day (Average Daily Demand) by Year 2047.

The following Table provides summary of works proposed for Choisel Bay

PROPOSED WORKS Basis of Design Report (Technical) – New Water Supply Network/Sewerage System Choiseul Bay (SP5) (July 2022)	
Water	**Sanitation**
<u>Stage 1 (Year 2037 Demands): Proposed Works</u> • Intake on Sorave River and raw water pump station • Choiseul Bay WTP (Pressure Filters and chlorination) in Lot 277 • 1.8 ML Clear water Tank at Lot 277 • 0.2 ML Storage Tank on Lot 9' • Bulk mains and reticulation • 500 House Connections at Choiseul Bay • DN150 Submarine Pipeline from Lot 277 (Choiseul Bay) to Sipozae Island • 0.1 ML elevated Storage Tank on Sipozae Island' • Dn100 reticulation on Sipozae Island • DN150 Submarine pipeline from Sipozae to Taro Island • 0.3 ML Elevated Storage on taro Island • DN100 Reticulation on Taro Island **<u>Stage 2 (Year 2047 Demands): Proposed Works</u>** • Upgrade Pumps and Electrical at Sorave Raw Water Pump Station • Relace and upgrade pressure filters at Choiseul Bay WTP • Provide additional 300 house connections at Choiseul Bay	**<u>Stage 1 (Year 2037 Demands): Proposed Works</u>** • Installation of Septic Tanks and house connections (approx. 500) at Choiseul Bay • Construction of gravity sewer network • Construction of sewer pump stations (4) and rising mains • Construction of STP to cater for Year 2037 flows • Construction of transfer station on Taro Island • Construction of transfer station on Sipozae Island **<u>Stage 2 (Year 2047 Demands): Proposed Works</u>** • Installation of Septic Tanks and house connections (approx. 300) at Choiseul Bay • Upgrade of STP to Year 2047 flows • Upgrade Pumps and Electrical at Sewage Pump Stations

Table 24: Proposed Works for Choisel Bay.

Appendix 1: Summary of Infrastructure Projects - UWSSSP

No	Area	Project	Detail	Origin	Criticality	Time-frame	Cost	Funding	Targeted performance Criteria
1	Solomon Water	Update 30-year masterplan	Update the 2017-2047 masterplan incorporating recent works, studies, and recent census information	5-year plan identified major adjustments due to most recent census	Continue rollout	1 year	200,000	Donor funding required	Improve drinking water quality & water supply service continuity. Wastewater effluent quality & service continuity
2	Honiara Water Supply	Kongulai water treatment plant	Augmentation and rehabilitation of Kongulai WTP. Contract awarded.	Kongulai Spring Water Treatment Plant Preliminary Design Report	Continue rollout	1 year	16,000,000	UWSSSP	Improve drinking water quality & water supply service continuity
3	Honiara Water Supply	Identification of Preferred Honiara Long Term Water Source	Feasibility study into preferred long-term source for Honiara water source. Lunga previously identified.	Solomon Water internal feasibility into gravity supply from Tina v's Lunga scheme	Continue rollout	1 year	1,000,000	Donor funding required	Water security. Water supply service continuity
4	Honiara Water Supply	Detail design of new water source	Design based on outcome of feasibility study and updated 30 years plan	Revised demands in 5 years plan and Solomon Water internal feasibility into gravity supply from Tina	Crucial for long term	2 years	10,000,000	Donor funding required	Water supply service continuity

No	Area	Project	Detail	Origin	Criticality	Time-frame	Cost	Funding	Targeted performance Criteria
5	Honiara Water Supply	Construction of new water source and transmission mains	Design based on outcome of feasibility study and updated 30-year plan	Revised demands in 5-year plan and Solomon Water internal feasibility into gravity supply from Tina	Crucial for long term	5 years	100,000,000	Donor funding required	Improve drinking water quality & water supply continuity
6	Honiara Water Supply	Additional Storages - under contract	Tasahe Reservoir (3ML), Titinge (3ML), Panatina (2.5ML reservoir)	Basis of Design, Honiara Water Supply	Continue rollout	1 year	2,500,000	UWSSSP	Water supply service continuity & Water supply system pressures
7	Honiara Water Supply	Additional storages and transmission mains to meet 20-year demands	To be determined in updated 30-year masterplan	To be determined in updated 30-year masterplan	Crucial for long term	3 years	5,000,000	Donor funding required	Water supply service continuity
8	Honiara Water Supply	Trunk Mains - under contract	White river (6km, 400mm), East Kola (1.8km, 315mm) and Panatina (3.2km, 315mm)	Basis of Design, Honiara Water Supply	Continue rollout	3 years	5,000,000	UWSSSP	Water supply service continuity
9	Honiara Water Supply	Expansion into high-level areas	Stage 1 expansion works	Basis of Design Report (Technical) – Water Supply Network Expansion, Honiara (SP5)	Crucial for long term	5 years	13,400,000	UWSSSP	Water supply service continuity

No	Area	Project	Detail	Origin	Criticality	Time-frame	Cost	Funding	Targeted performance Criteria
10	Honiara Wastewater	Point Cruz/NRH - Refurbishment of existing SPS, new pump stations, new ocean outfall, sewer trunks	Point Cruz PS refurbishment. NRH, Mbokonavera, Vara Ck SPS. NRH Outfall. Gravity sewers and pressure sewers.	Basis of Design, Honiara Wastewater	Crucial for long term	5 years	6,000,000	Not Secured	Wastewater service continuity
11	Honiara Wastewater	Ranadi to Goodwood sewer	Naha, Soap Factory and Ranadi SPS. Gravity sewers and pressure sewers.	Basis of Design, Honiara Wastewater	Continue rollout	2 years	3,000,000	UWSSSP	Wastewater service continuity
12	Honiara Wastewater	Ministry of Fisheries to Telecom sewer	Trunk sewer	Basis of Design, Honiara Wastewater	Continue rollout	2 years	9,000,000	UWSSSP	Wastewater service continuity
13	Honiara Wastewater	Ranadi outfall, SPS, trunk and sewer mains	Goodwood to Ranadi outfall	Basis of Design, Honiara Wastewater	Start immediately	2 years	6,000,000	UWSSSP	Wastewater service continuity
14	Honiara Wastewater	Septage Treatment Facility Feasibility	ADB solid waste feasibility study includes requirement to address septage treatment	Aide Memoire	Continue rollout	1 year	0	ADB	Wastewater effluent quality
15	Honiara Wastewater	Septage Treatment Facility	Design and Construction	ADB solid waste study	Crucial for long term	5 years	1,000,000	UWSSSP	Wastewater effluent quality

No	Area	Project	Detail	Origin	Criticality	Time-frame	Cost	Funding	Targeted performance Criteria
16	Provincial Towns	Feasibility studies to determine long term water sources for provincial towns considering the impacts of climate change	Identify sources of sustainable yield for Noro, Tulagi, Gizo, Auki and Munda	Discussion with SIWA	Crucial for long term	2 years	200,000	Subject to funding.	Water security
17	Provincial Towns	Auki Provincial Town - Stage 2	D&B new water source (Fiu River), WTP and associated infrastructure	Basis of Design Report (Technical) (SP2)	Crucial for long term	3 years	13,000,000	UWSSSP	Water security, Drinking water quality & Water supply service continuity
18	Provincial Towns	Gizo Provincial Town	Construction of new water source (Mile 6), refurbish/upgrade existing infrastructure	Basis of Design Report, Gizo in May 2020	Start immediately	2 years	11,000,000	Potential funding from DFAT (Australia)	Drinking water quality & Water supply service continuity
19	Provincial Towns	Noro Provincial Town	Design & Construction of: 1. Intake improvement works 2. New WTP 3. Rehabilitate existing reservoir	Suez Noro water supply review	Continue rollout	2 years	6,000,000	UWSSSP	Water security, Drinking water quality & Water supply service continuity

No	Area	Project	Detail	Origin	Criticality	Time-frame	Cost	Funding	Targeted performance Criteria
20	Provincial Towns	Munda Provincial Town	Construction of Munda WSS which will most likely include: 1. Airport Borehole system for water production, storage and transmission to Munda town 2. New distribution network for Munda town Final scope to be confirmed following redesign	SMEC Phase 2	Crucial for long term	2 years	2,000,000	Pt funded by UWSSP. Additional funding unsecured.	Water security, Drinking water quality & Water supply service continuity
21	Provincial Towns	Tulagi Provincial Town	Construction of Tulagi WSS which will most likely include: 1. Construction of New WTP 2. New storage tank 3. Improvement and extension of distribution network Final scope to be confirmed following redesign	SMEC Tulagi Water Supply Review	Start immediately	3 years	2,800,000	UWSSSP	Water security, Drinking water quality & Water supply service continuity

No	Area	Project	Detail	Origin	Criticality	Time-frame	Cost	Funding	Targeted performance Criteria
22	Provincial Towns	Bina Harbour Water & Wastewater Supply	Provision of water and wastewater services to Bina Harbour development	Bina Harbour Water and Wastewater Assessment Report	Expanding SIWA Service Area	5 years	TBD	Subject to funding.	Water security, Drinking water quality, Water supply service continuity, Wastewater effluent quality, wastewater service continuity
23	Provincial Towns	Choiseul Bay	Stage 1 D&B	Basis of Design Report (Technical) (SP5)	Expanding SIWA Service Area	10 years	TBD	Subject to funding.	Water security, Drinking water quality, Water supply service continuity, Wastewater effluent quality, wastewater service continuity
24	Lifecycle management/ Institutional improvement	Water main Pipe Replacement Phase 2	Replacement of critical water mains (10km)	Prioritisation Report (SP1)	Start immediately	3 years	10,000,000	Part funded by UWSSSP	Water loss management
25	Lifecycle management/ Institutional improvement	Water main Pipe Replacement Phase 3	Replacement of critical water mains (18km)	Prioritisation Report (SP1)	Crucial for long term	5 years	19,000,000	Subject to funding.	Water loss management

No	Area	Project	Detail	Origin	Criticality	Time-frame	Cost	Funding	Targeted performance Criteria
26	Lifecycle management/ Institutional improvement	Sewer main Pipe Replacement	Replacement of sewer mains and manholes (7km)	Prioritisation Report (SP6)	Start immediately	3 years	3,400,000	UWSSSP	Wastewater service continuity
27	Lifecycle management/ Institutional improvement	NRW Reduction	Leak Detection, PRV installation and operational improvements	Ongoing	Continue rollout	Immediate	2,500,000	UWSSSP	Water loss management
28	Lifecycle management/ Institutional improvement	Urban WASH programs	Communal standpipes, septic management program	Ongoing	Continue rollout	Ongoing	1,000,000	UWSSSP	Water supply service continuity & wastewater service continuity
29	Lifecycle management / Institutional improvement	Maintenance improvements	Bulk meters and customer meters	Ongoing	Continue rollout	Immediate	1,500,000	Part funded by UWSSSP	Water supply service continuity & Water loss management
30	Lifecycle management / Institutional improvement	Operational improvements, incl. restructure DMAs	DMA restructure	World Bank NRW Assessment Report	Start immediately	2 years	500,000	Subject to funding.	Water supply service continuity, Water loss management wastewater service continuity

No	Area	Project	Detail	Origin	Criticality	Time-frame	Cost	Funding	Targeted performance Criteria
31	Lifecycle management / Institutional improvement	Institutional reform, corporate policy and planning	Water safety plan, climate change adaption planning, design and construction standards, developer contribution policy, liquid trade waste management, asset management	Ongoing	Continue rollout	Continuous	TBD	UWSSSP	
32	Lifecycle management / Institutional improvement	Data management	FMIS, ERP integration	Ongoing	Start immediately	3 years	2,650,000	UWSSSP / SIWA	
33	Lifecycle management / Institutional improvement	SCADA development	Data and operational improvement	Ongoing	Continue rollout	1 year	2,500,000	UWSSSP	
34	Lifecycle management / Institutional improvement	Project management unit resourcing	Project Manager, environmental, financial, land, community specialists, preliminary design and planning, works supervision	Ongoing	Continue rollout	Ongoing	7,000,000	UWSSSP	

No	Area	Project	Detail	Origin	Criticality	Time-frame	Cost	Funding	Targeted performance Criteria
35	Lifecycle management / Institutional improvement	Capacity building	Additional advisors for: Institutional reform, financial sustainability, demand management, NRW, data management, maintenance	Ongoing	Continue rollout	Ongoing	1,500,000	UWSSSP	
36	Lifecycle management / Institutional improvement	Operations Facilities - Customer Care	Customer Care Centres - Munda and Gizo including fencing	CAPEX Plan (2023 to 2027)	Crucial for long term	1.5 years	1,400,000	SIWA / SIG funding	
37	Lifecycle management / Institutional improvement	Operations Facilities - Staff Housing	Staff Housing - Kongulai WTP (x1), Munda (x1), Gizo (x3), Auki (x3), Tulagi (x1)	CAPEX Plan (2023 to 2027)	Start immediately	1.5 years	1,000,000	SIWA funding	
38	Lifecycle management / Institutional improvement	Operations Facilities - SW Honiara Headquarters Building	Headquarters Office Building - Honiara. Re-design and construction.	CAPEX Plan (2023 to 2027)	Crucial for long term	5 years	10,000,000	Not Secured	
39	Lifecycle management / Institutional improvement	Miscellaneous minor works both water and wastewater and facilities	To provide funding for works identified in the 5-year period	CAPEX Plan (2023 to 2027)	Continue rollout	5 years	500,000	SIWA funding	

Appendix 2: Summary of SIWA funded Initiatives & Projects

Solomon Water Capex Plan 2023 to 2028						
SW funded Capex	**2023**	**2024**	**2025**	**2026**	**2027**	**Activity total over 5 years**
	SBD (m)	**SBD(m)**	**SBD(m)**	**SBD(m)**	**SBD(m)**	**SBD (m)**
Capex committed or carry over from 2022						
Kukum / TGA temporary sewer outfalls	.35					.35
Boreholes - Kombito/Panatina/ East Honiara (increase production as Lungga not proceeding in time)	1.30			3.00		4.30
Fencing Panatina carry over ex 2022	1.40					1.40
Tuvaruhu retaining wall storm damage repair carry over ex 2022	.50					.50
Tank Relining-West kola x 2 and White river x 2	.35					.35
Steel Tank Replacements - Lengakiki	8.10					8.10
Total Capex committed or carry over from 2022	***12.00***	***.00***	***.00***	***3.00***	***.00***	***15.00***
Capex 2023						
Vehicles- average 10 Replacements a year @ $400K each	4.00	4.00	4.00	4.00	4.00	20.00
Heavy plant new / replacements (1 extra backhoe, then 4 replacements)		1.00		1.00	1.00	3.00
PCs (increased replacements as staff numbers rise)	.50	.50	.60	.60		2.20
Mini test labs provincial centres	.60					.60
New Honiara HQ and works depot		1.00	10.00	25.00	15.00	51.00
Boreholes - White River (increase production as Lungga not proceeding in time)	3.00		3.00			6.00
Increase production Kombito (Boko)	3.00					3.00
Fencing ($50m programme over 8 or 9 years)	5.00	5.00	5.00	5.00	5.00	25.00
Standby Gen sets			.60	.60		1.20
Tank Relining- High ridge, ADB (Auki)			.85			.85
Pump renewals	.20	.20	.20	.20	.20	1.00
Steel Tank replacements -Noro			.15	5.00	3.00	8.15
Steel Tank Replacements - Borderline			.15	5.00	3.00	8.15
Sewer Renewals & Manholes (ex. Mark Waite recommendation $20m over 5 years max)	2.50	3.00	3.00	3.00	3.00	14.50
Water pipe renewals (NRW reduction)	2.00	5.00	5.00	5.00	7.00	24.00
Bulk water meter new and renewals	.25	.25	.25	.25	.25	1.25
Electrical equipment renewals (switchboards / control panel etc.)	.65	.60	.60	.60	.60	3.05

SW funded Capex	2023	2024	2025	2026	2027	Activity total over 5 years
	SBD (m)	SBD(m)	SBD(m)	SBD(m)	SBD(m)	SBD (m)
SW-Land acquisition	.50	1.00	1.50	1.50	1.50	6.00
UWSSSP - Land acquisition	4.00	2.50	1.00	.50	.50	8.50
Plant and small Tools (saws, compactors, NRW equipment / detectors etc.)	.75	.75	.75	.75	.75	3.75
SCADA (top up UWSSSP project)		2.00		1.00	1.00	4.00
Minor Projects	.20	1.00	1.00	1.00	1.00	4.20
Munda establishment (Munda Customer care centre) Dependant on UWSSSP progress				.70		.70
Staff housing - Kongulai WTP	.85					.85
Staff housing - provinces (Munda *1, Gizo * 3) dependant on UWSSSP progress		2.00	1.00		1.00	4.00
Gizo Establishment - (Fence and minor works to secure site)	3.00	3.00				6.00
Gizo Establishment - (customer care centre, depot) Dependant on UWSSSP progress		.50	2.00	2.00		4.50
Auki office (land acquisition and office building)		.20	1.00			1.20
Mataniko outside toilet (upgrade to add urinal and additional toilet)	.15					.15
Staff housing - provinces (Auki)			.75	2.25		3.00
Staff housing (include land acquisition)- provinces (Tulagi)			.75			.75
Tulagi boat ramp/seawall/storage shed/fencing	1.50					1.50
Security guard house at Tuvaruhu depot	.15					.15
Sewer vacuum truck	1.50					1.50
Total Capex 2023	*34.30*	*33.50*	*43.15*	*64.95*	*47.80*	*223.70*
Total Capex (over 5 year period)	***46.30***	***33.50***	***43.15***	***67.95***	***47.80***	***238.70***

Notes:

1. Costs are indicative only.
2. SIWA funded works forms part of SIWA's operational budget.
3. Major capital projects generally funded by donors through donor agencies.
4. High priority projects from this plan have been identified in the 5 year action plan and included in this 5-Year Strategic Plan 2024 – 2028.

Appendix 3: Current Tariffs, Fees and Charges 2024

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SUPPLEMENT **to the Solomon Islands Gazette**

Friday 8th September, 2023 S.I. No. 43

[Legal Notice No. 55]

SOLOMON ISLANDS WATER AUTHORITY ACT
(Cap. 130)

INCREASE OF TARIFF

I, Hon. Bradley Tovosia, Minister for Mines, Energy and Rural Electrification, and I, Hon, Harry Kuma, Minister for Finance and Treasury, under section 24(1) of the *Solomon Islands Water Authority Act* (Cap. 130) and with reference to section 26 of the *State Owned Enterprises Act 2007* (Act No. 7 of 2007), on the recommendation of the Authority fix the tariffs specified in the table as the tariffs for the services specified in column 2, effective on and from the following dates:

Tariffs effective from 1 September 2023 are set out in column 4

Tariffs effective from 1 January 2024 are set out in column 5

Tariffs effective from 1 January 2025 are set out in column 6

Column 1	Column 2		Column 3	Column 4	Column 5	Column 6
Consumer Category	**Service**	**Consumption (kL per month)**	**Current Tariff ($/kL)**	**Tariff Effective 1 Sep 2023 ($/kL)**	**Tariff Effective 1 Jan 2024 ($/kL)**	**Tariff Effective 1 Jan 2025 ($/kL)**
Domestic	Water	0 to 15 kL	$8.54	$8.91	$9.75	$10.43
		15 to 30 kL	$12.67	$13.23	$14.48	$15.49
		Greater than 30 kL	$14.73	$15.38	$16.84	$18.01
	Waste water	0 to 15 kL	$4.20	$4.38	$4.79	$5.12
		15 to 30 kL	$6.26	$6.53	$7.15	$7.64
		Greater than 30 kL	$7.28	$7.60	$8.31	$8.89
Commercial	Water	0 to 15 kL	$33.28	$34.77	$38.07	$40.73
		15 to 30 kL	$37.41	$39.09	$42.79	$45..79
		Greater than 30 kL	$41.54	$43.41	$47.52	$50.85
	Waste water	0 to 15 kL	$16.56	$17.30	$18.93	$20.26
		15 to 30 kL	$18.63	$19.46	$21.30	$22.79
		Greater than 30 kL	$20.69	$21.62	$23.66	$25.31

Dated this thirty-first day of August 2023.

HON. BRADLEY TOVOSIA
MINISTER FOR MINES, ENERGY AND RURAL ELECTRIFICATION

HON. HARRY KUMA
MINISTER FOR FINANCE & TREASURY

[Legal Notice No. 56]

SOLOMON ISLANDS WATER AUTHORITY ACT

(Cap. 130)

INCREASE OF SERVICE CHARGES AND OTHER FEES

The Solomon Islands Water Authority, under regulation 3(3) of the *Solomon Islands Water Authority (Finance) Regulations* (Cap. 130), makes available for its customers the following information about the charges and fees specified in the table it is imposing for the services and other matters specified in column 2, effective on and from the following dates:

Charges and fees effective from I September 2023 are set out in column 4

Charges and fees effective from I January 2024 are set out in column 5

Charges and fees effective from I January 2025 are set out in column 6

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6
Consumer category	Service	Current Charge	Charge Effective 1 Sep 2023	Charge Effective 1 Jan 2024	Charge Effective 1 Jan 2025
Domestic	Water unmetered basic monthly charge (base 40kL)	$465.00	$485.00	$530.00	$566.00
	Water and waste water unmetered basic monthly charge (base 40kL)	$695.00	$724.00	$790.00	$843.00
	Monthly service standing charge	$59.17	$61.83	$67.70	$72.43
	Monthly service charge per kL (Cash Water)	$2.57	$2.68	$2.93	$3.13
	Service installation fee	$1,370.00	$1,431.00	$1,566.00	$1,675.00
	Service disconnection fee	$104.00	$108.00	$118.00	$126.00
	Service reconnection fee	$104.00	$108.00	$118.00	$126.00
	Service connection deposit	$1,120.00	$1,170.00	$1,281.00	$1,370.00
	Survey fee	$140.00	$146.00	$159.00	$170.00
	Standard waste water installation fee	$8,590.00	$8,976.00	$9,828.00	$10,515.00
	Waste water connection with new manhole required	$12,500.00	$13,062.00	$14,302.00	$15,303.00
	Water meter testing fee	$253.00	$264.00	$289.00	$309.00
	Plumbing and investigation fee	$244.00	$254.00	$278.00	$297.00
	Interest on overdue accounts charged per month	12% pa	12% pa	12% pa	12%pa
	Dishonoured cheque fees	2 x bank charges	2 x bank charges	2 x bank charges	2 x bank charges
	Service amplified fee	Based on detailed assessment	Based on detailed assessment	Based on detailed assessment	Based on detailed assessment

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	Water and sewer service extension and relocation	Based on detailed assessment	Based on detailed assessment	Based on detailed assessment	Based on detailed assessment
Commercial	Water unmetered basic monthly charge (base 46kL)	$1,597.00	$1,668.00	$1,824.00	$1,951.0
	Water and waste water unmetered basic monthly charge (base 46kL)	$2,391.00	$2,497.00	$2,731.00	$2,920.00
	Monthly service standing charge	$76.02	$79.44	$86.98	$93.06
	Service installation fee	$2,120.00	$2,215.40	$2,425.86	$2,595.67
	Service disconnection fee	$208.00	$217.00	$237.00	$253.00
	Service reconnection fee	$208.00	$217.00	$237.00	$253.00
	Service connection deposit	$4,710.00	$4,921.00	$5,388.00	$5,765.00
	Survey fee	$208.00	$217.00	$237.00	$253.00
	Waste water installation/new connection fee (may include new manhole)	Based on detailed assessment	Based on detailed assessment	Based on detailed assessment	Based on detailed assessment
	Water meter testing fee	Based on detailed assessment	Based on detailed assessment	Based on detailed assessment	Based on detailed assessment
	Plumbing and investigation fee	Based on detailed assessment	Based on detailed assessment	Based on detailed assessment	Based on detailed assessment
	Interest on overdue accounts charged per month	12% pa	12% pa	12% pa	12% pa
	Dishonoured cheque fees	2 x bank charges	2 x bank charges	2 x bank charges	2 x bank charges
	Service amplified fee	Based on detailed assessment	Based on detailed assessment	Based on detailed assessment	Based on detailed assessment
	Water and sewer service extension and relocation	Based on detailed assessment	Based on detailed assessment	Based on detailed assessment	Based on detailed assessment

This category applies to a property used exclusively for residential living purposes by a single family or for shared living up to a maximum of 8 bedrooms. Fees are based on total monthly consumption.

CONSUMER CATEGORY COMMERCIAL

This category applies to any consumer other than a Domestic consumer, including any of the following:

(a) government agencies;

(b) regional organisations;

(c) health facilities, including hospitals and clinics;

(d) educational or training institutions;

(e) businesses;

(f) religious organisations and churches;

(g) non-governmental organisations;

(h) any property used wholly or partly to run a business or generate revenue through trade;

(i) any commercial property that incorporate a small residential dwelling (for example, dwelling above shop);

(j) any apartment block or other residential housing complex where a single water supply is provided for entire property; and

(k) metered standpipe or commercial water tanker operators.

OTHER

Cash water monthly charge per kL is based on average monthly consumption of 23 kL

Domestic and Commercial water charges include a catchment levy as follows:

Catchment levy from I July 2023 is 40 c/kL

Catchment levy from I January 2024 is 40 c/kL

Catchment levy from I January 2025 is 40 c/kL

Date this thirty-first day August 2023.

DONALD MARAHARE
CHAIRPERSON OF BOARD OF DIRECTORS
SOLOMON ISLANDS WATER AUTHORITY

Appendix 4: Operational Performance Indicators

Corporate Objectives

Service Area	Performance Measure	2024	2025	2026	2027	2028
Coverage of Water Supply Systems (%)	% of total population within service area	70	75	77.5	80	82.5
Drinking Water Quality (%)	WHO Drinking Water Guidelines - % of compliant samples	E-Coli - 98 Coliform - 95 Maintain WHO Targets	E-Coli - 98 Coliform - 95 Maintain WHO Targets	E-Coli - 98 Coliform - 95 Maintain WHO Targets	E-Coli - 98 Coliform - 95 Maintain WHO Targets	E-Coli - 98 Coliform - 95 Maintain WHO Targets
Water Supply to informal settlements/Peri-Urban (%)	% of households connected within a year	5	5	5	5	5
Coverage of wastewater systems (%)	% of total population within service area	5	5	5	5	5
Sewerage treatment standard (%)	% of samples complying with treatment standards	95	95	95	95	95
Energy Consumption (kWh)	Reduction in energy consumption per year	2.5% reduction in consumption	2.5% reduction in consumption	2.5% reduction in consumption	2.5% reduction in consumption	2.5% reduction in consumption

Service Area	Performance Measure	2024	2025	2026	2027	2028
Emergency Management	Crisis Management Plans, Business Continuity Plans and Disaster Recovery Plans in place.	Review, update and test Crisis Management Plan, Business Continuity Plans, Disaster recovery plans.	Review, update and test Crisis Management Plan, Business Continuity Plans, Disaster recovery plans.	Review, update and test Crisis Management Plan, Business Continuity Plans, Disaster recovery plans.	Review, update and test Crisis Management Plan, Business Continuity Plans, Disaster recovery plans.	Review, update and test Crisis Management Plan, Business Continuity Plans, Disaster recovery plans.
Financial Sustainability	Liquidity ratio (Current Assets – Inventory)/Current Liabilities (1 or greater)	1:1	1.1:1	1.2:1	1.2:1	1.2:1
Lifecycle management	Asset Management System and Data.	Conduct Climate Change impact risk assessment. Develop SW climate change resilience framework and climate change risk mitigation and adaptation plan	Implement SW climate change risk mitigation and adaptation plan and accomplishment.	Review and update SW climate change resilience framework, implementing SW climate change risk mitigation and adaptation plan and accomplishment.	Review and update SW climate change resilience framework, implementing SW climate change risk mitigation and adaptation plan and accomplishment.	Review and update SW climate change resilience framework, implementing SW climate change risk mitigation and adaptation plan and accomplishment.
Climate Change/ Resilience	SW's ability to anticipate, prepare and respond to events, trends, or disturbances related to climate change	Conduct Climate Change impact risk assessment. Develop SW climate change resilience framework, risk mitigation and adaptation plan.	Implement SW climate change risk mitigation and adaptation plan and accomplishment.	Review SW climate change resilience framework, implement SW climate change risk mitigation & adaptation plan.	Review SW climate change resilience framework, implement SW climate change risk mitigation & adaptation plan.	Review SW climate change resilience framework, implement SW climate change risk mitigation & adaptation plan.

Service Area	Performance Measure	2024	2025	2026	2027	2028
Strategic Planning	Corporate Strategic Plan. Statement of Corporate Objectives 2024-2026.	Review and update 30-Year Strategic Plan. Implementation of 5-Year action plan. Develop 5-Year Corporate Plan	Implement 5-Yeat action plan and Corporate Plan	Implement 5-Yeat action plan and Corporate Plan	Implement 5-Yeat action plan and Corporate Plan	Implement 5-Yeat action plan and Corporate Plan

Levels of Service (quality, reliability and security of supply)

The levels of service are the standard of performance established as the benchmark for us to achieve. These relate to the broader corporate objectives and regional benchmarks. As noted above these will be reviewed following completion of Solomon waters next 5 year plan during 2023. Refer table below: Level of Service.

Service Area	Indicator	2018 baseline	5 Year Target (2017 -2022)	2023	2024	5-Year Target 2024 - 2028
Drinking Water Quality (%)	Compliance with drinking water guidelines (% of samples complying)	48	95	E-Coli – 99.6 Coliform – 97.5	E-Coli = 98 Coliform = 95	E-Coli = 98 Coliform = 95
Water Supply Service Continuity	Continuity of service (Hrs./day) at minimum pressure	22	24	22.3	23	24
	Customers with continuous supply (%)	93	95	95	95	100
	Frequency of Water main breaks (breaks/km/yr.)	2.6	2.2	2.2	2.2	1
Water Loss Management	Non-Revenue Water –NRW (%)	62	45	59	56	45
	Extent of water metering (%)	88	95	97.6	98	100
Water Supply Systems Pressures	Minimum pressure at water meter (m)	Unknown	10	8	10	10
	Maximum pressure at water meter (m)	Unknown	70	100	70	40
Demand Management	Residential water consumption (L/person/d)	177	170	150	140	130
Water Security	Frequency of water restrictions and/or rationing due to raw water capacity limitations	Unknown	1 month per year	43	35	20 days
Wastewater Service Continuity	Frequency of sewer main blockages (blockages/ km/yr.)	6.7	5.0	5.0	5.0	5.0
Wastewater Effluent Quality	Compliance with required effluent quality targets (% of samples complying)	Unknown	Develop targets	No monitoring	No monitoring	Develop targets

Financial	Collection period (average days for collection)	146	90	59	55	TBC
	Collection ratio (income as % of billed revenue)	84	90	93	90	TBC
	Staff per 1,000 water & wastewater connections	18	12	6	5	TBC
Customer Complaints	Customer complaints /1,000 connections	Unknown	200	Footnote	Footnote	Footnote[9]

9 SIWA's system currently records all customer reports of faults and related communications to track turnaround times against internal performance benchmarks. These records include complaints. In the future, complaints will be separately tracked and reported.

Appendix 5: Financial Projections to 2028

FORECASTED FINANCIAL STATEMENTS

SOLOMON ISLANDS WATER AUTHORITY
FORECASTED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME
FOR THE YEAR ENDING 2024-2028

	FORECASTS				
	2024 SBD	2025 SBD	2026 SBD	2027 SBD	2028 SBD
Continuing operations					
Revenue from Contracts with Customers	146,611,700	153,102,809	156,471,070	159,913,434	163,431,529
Other Income	10,569,905	10,656,145	10,302,982	10,357,406	10,401,860
	157,181,606	**163,758,954**	**166,774,052**	**170,270,840**	**173,833,389**
Expenses					
Corporate expenses	(19,107,496)	(19,623,398)	(20,153,230)	(20,697,367)	(21,256,196)
Depreciation and amortisation	(17,793,964)	(18,580,584)	(19,358,514)	(20,208,514)	(21,108,514)
Salaries and employee benefits	(50,142,149)	(51,495,987)	(52,886,379)	(54,314,311)	(55,780,798)
Impairment of financial assets	(2,750,000)	(4,776,914)	(4,905,891)	(5,038,350)	(5,174,385)
Repairs and maintenance	(13,219,952)	(13,576,890)	(13,943,466)	(14,319,940)	(14,706,578)
Tools and uniforms	(757,701)	(778,159)	(799,170)	(820,747)	(842,907)
Utilities	(38,648,487)	(39,691,996)	(40,763,680)	(41,864,300)	(42,994,636)
Water treatment	(2,332,276)	(2,395,248)	(2,459,919)	(2,526,337)	(2,594,548)
	(144,752,026)	**(150,919,177)**	**(155,270,250)**	**(159,789,866)**	**(164,458,563)**
Finance Income	87,219	54,649	55,196	55,748	56,305
Finance Cost	(7,928,365)	(3,956,912)	(3,898,626)	(3,837,400)	(3,772,807)
Net (loss) / profit for the year	**4,588,434**	**8,937,514**	**7,660,372**	**6,699,322**	**5,658,325**
Revaluation of property, plant and equipment	0	0	0	0	0
Other comprehensive income	**0**	**0**	**0**	**0**	**0**
Total comprehensive (loss) / income for the year	**4,588,434**	**8,937,514**	**7,660,372**	**6,699,322**	**5,658,325**

Statement of Financial Performance Forecasts

In determining the operating revenue and expenditure forecasts for 2024-2028 the following assumptions were made:

• Gross Domestic Product is assumed to be 2.2% based on Asian Development Bank projections for SI. Revenue from contracts growth is assumed to follow this trend from 2026 onwards to 2028.

• Other Income includes the SIG's Community Service Obligations which is expected to be around $4.5m for the 1st two years and reduce to $4m from 2026 onwards to 2028

• Inflation is set at 2.7% based on Asian Development Bank projections for SI. Operating expenditures is assumed to follow this trend.

• Electricity charges are assumed to increase by 2.7% based on CPI and projected fuel price increases.

• No revaluation of property plant and equipment taken into consideration. The last valuation was carried out in 2022.

SOLOMON ISLANDS WATER AUTHORITY
STATEMENT OF FINANCIAL POSITION
FOR THE PERIOD 2024-2028

	FORECASTS				
	2024 SBD	2025 SBD	2026 SBD	2027 SBD	2028 SBD
Assets					
Current assets					
Cash and cash equivalents	48,300,895	41,531,025	37,705,527	37,046,225	39,832,070
Trade receivables	39,500,406	47,669,905	51,426,694	50,933,051	45,891,971
Contract assets	3,785,497	3,864,524	3,887,103	3,909,682	3,932,261
Debt securities	5,551,154	5,605,803	5,660,999	5,716,746	5,773,052
Inventories	19,662,181	20,266,933	20,807,014	21,280,677	21,686,129
Other receivables and prepayments	30,150,238	29,150,238	28,150,238	27,150,238	26,150,238
	146,950,372	**148,088,429**	**147,637,576**	**146,036,621**	**143,265,720**
Non-current assets					
Property, plant and equipment	918,490,731	1,064,153,161	1,228,369,406	1,411,089,466	1,593,909,527
Intangible assets	8,779,180	8,595,441	8,411,702	8,227,963	8,044,224
Right-Of-Use Assets	1,592,153	5,157,306	3,950,621	2,743,935	1,537,250
	928,862,063	**1,077,905,908**	**1,240,731,729**	**1,422,061,365**	**1,603,491,001**
Total assets	**1,075,812,435**	**1,225,994,337**	**1,388,369,305**	**1,568,097,986**	**1,746,756,721**
Liabilities					
Current liabilities					
Trade and other payables	44,520,148	45,263,108	46,022,831	46,802,983	47,604,114
Employee benefits liability	501,421	514,960	528,864	543,143	557,808
Contract liabilities	69,250	62,994	59,866	56,738	53,611
Lease liabilities	1,189,545	1,092,660	1,111,877	1,174,708	1,239,301
Deferred revenue	4,176,992	4,221,588	4,325,864	4,336,792	4,336,792
Payable to related parties	1,711,129	1,985,608	2,260,087	2,534,567	2,809,046
	52,168,485	**53,140,919**	**54,309,390**	**55,448,931**	**56,600,671**
Non-current liabilities					
Lease liabilities	824,377	4,622,510	3,491,416	2,253,876	949,982
Employee benefits liability	3,900,281	4,401,703	4,916,663	5,445,526	5,988,670
Deferred revenue	482,360,286	624,924,622	785,678,816	964,869,247	1,144,070,605
Payable to related parties	93,050,725	86,458,789	79,866,853	73,274,917	66,682,980
	580,135,669	**720,407,623**	**873,953,747**	**1,045,843,566**	**1,217,692,237**
Total liabilities	**632,304,154**	**773,548,542**	**928,263,138**	**1,101,292,497**	**1,274,292,908**
Equity					
Capital contribution	59,625,874	59,625,874	59,625,874	59,625,874	59,625,874
Asset revaluation reserve	312,995,690	312,995,690	312,995,690	312,995,690	312,995,690
Retained earnings	70,886,716	79,824,230	87,484,603	94,183,924	99,842,249
Total equity	**443,508,280**	**452,445,795**	**460,106,167**	**466,805,489**	**472,463,813**
Total equity and liabilities	**1,075,812,435**	**1,225,994,337**	**1,388,369,305**	**1,568,097,986**	**1,746,756,721**

Statement of Financial Position

Solomon Water's balance sheet is forecast to continue expansion with the growing project work, particularly under the UWSSSP. The project - UWSSSP is assumed to continue past 2028, with about 7% to complete and commission in 2029.

While 2024 cash reflects project funds from SIG, a gradual build-up of cash is projected over the forecast period. This is, however, dependent on customer payments on water bills and timely receipt of CSO from Government.

Growth in Property, Plant & Equipment mainly reflects donor funded works. Solomon Water funded capex such as fencing and replacement vehicles, while essential, will continue to be constrained by available cash.

Statement of Financial Position

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Appendix 6: Solomon Water Strategic Map