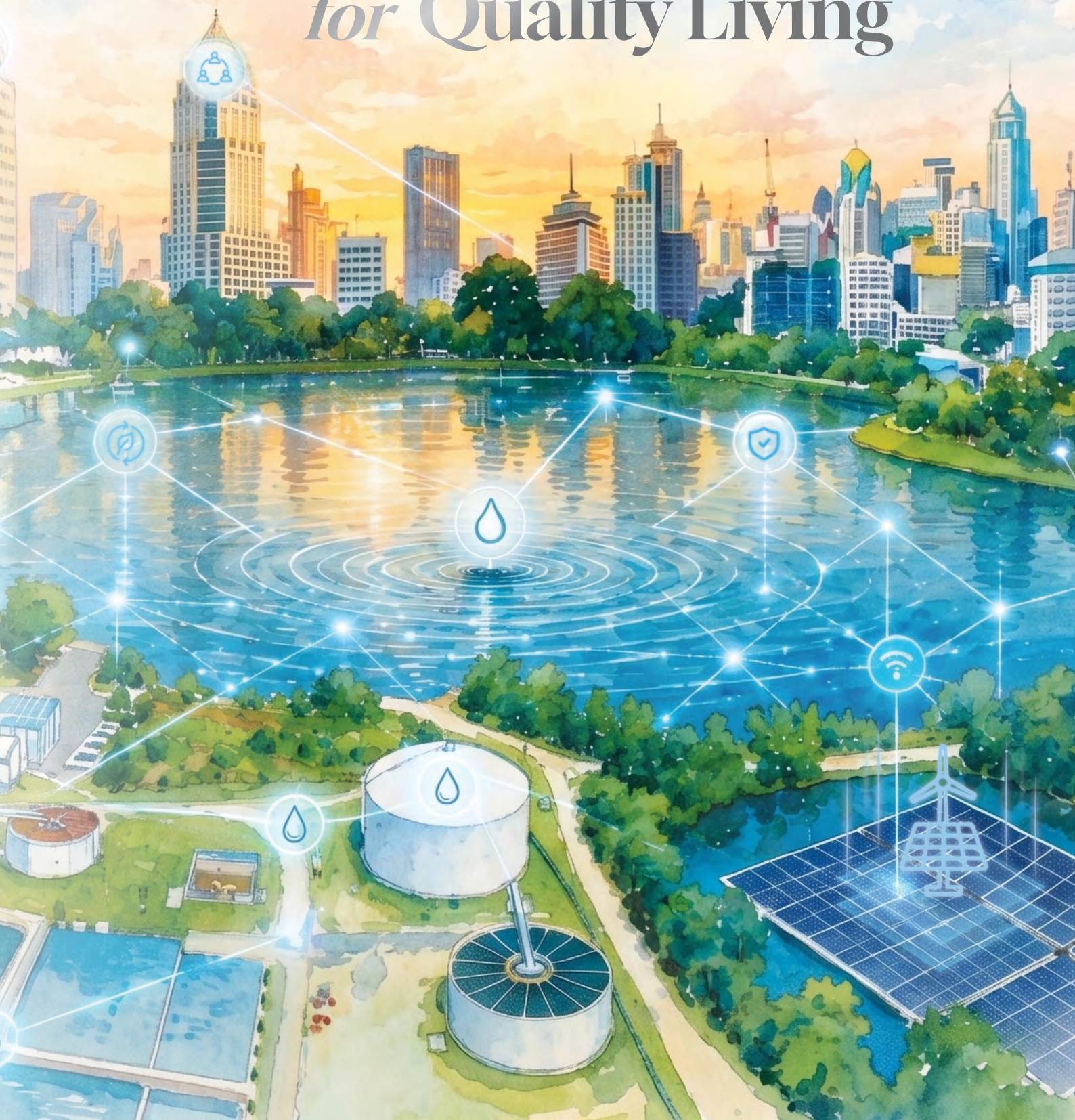




Sustainability Report 2025
Metropolitan Waterworks Authority

Quality Water *for* Quality Living







Quality Water
for Quality Living

Vision

Quality Water for Quality Living

Missions



1
To provide integrated water supply services that meet water quality standards and enhance people's quality of life.



2
To become a resilient organization capable of effectively responding to crises.

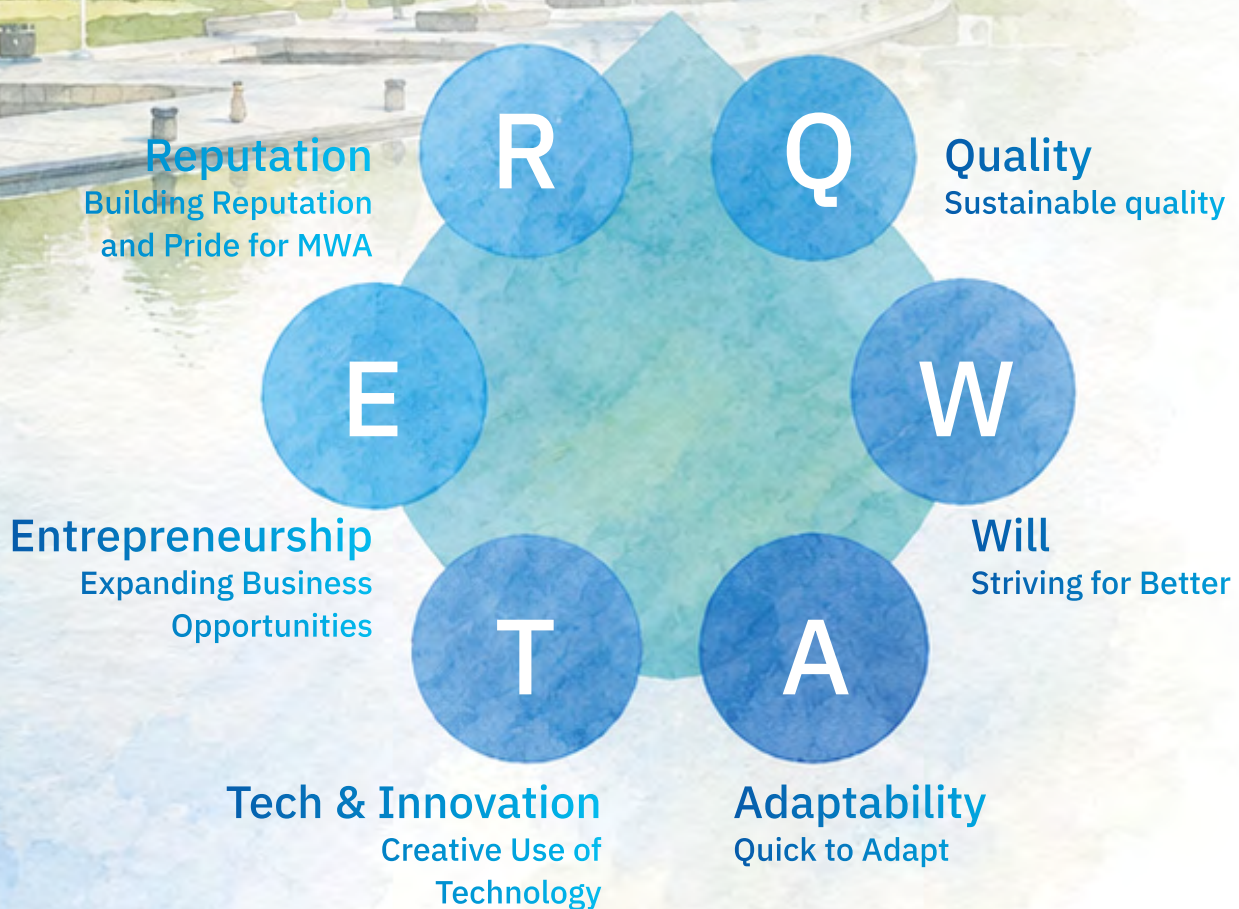


3
To develop related businesses that create value for stakeholders while ensuring sustainable organizational growth.

Values

“Sustainable quality, will to improve, adaptability, technology competence, entrepreneurship, and reputation for the MWA.”

(QWATER)



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Message from the MWA's Governor⁽²⁻²²⁾



The MWA is driving its transformation into a Smart Enterprise to create Smart Value. Through digital integration across operations, network management, and service delivery, we fortify water security, optimize energy efficiency, and advance sustainable infrastructure.

For over 58 years, the MWA has remained dedicated to its core mission: producing and delivering clean, safe, and high-quality tap water to enhance the lives of more than 12 million people across Bangkok, Nonthaburi, and Samut Prakan. Regardless of the challenges, crises, or risks we face—whether climate change impacting raw water quality and quantity, aging infrastructure, extreme disasters, or global uncertainties—we proactively plan and prepare our systems to effectively address every situation.

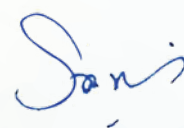
In the fiscal year 2025, the MWA focused on enhancing work efficiency in all areas. This includes improving and expanding the capacity of the existing tap water treatment, transmission and distribution systems, and the installation of new pipes and pipe upgrades in the MWA's area of responsibility across all 18 service branches to support urban expansion and increased water demand. Furthermore, we integrated innovative digital technologies to optimize system operations and effectively reduce water loss.

Moreover, the MWA prioritized sustainable enterprise management and has integrated the ESG (Environmental, Social, and Governance) into its core mission, conserving water resources, reducing greenhouse gas emissions, improving public services via accessible online channels, and promoting governance and transparency in every work process, in order to ensure true tap water security for Thai society. The MWA has also promoted community engagement to improve quality

of life through various projects, such as professional plumbing training for the general public in the MWA Plumber for People as well as projects to upgrade/install water supply systems and drinking water filtration systems for temples and schools to promote good health in communities.

On behalf of the MWA, I affirm our unwavering commitment to driving the organization toward becoming a smart enterprise that delivers sustainable value. By adopting advanced digital technologies and innovations across our entire value chain—from upstream to downstream operations, as well as network and service management—we continuously enhance water security, boost energy efficiency, and strengthen core infrastructure.

The MWA stands ready to serve as a foundational pillar for promoting the quality of life, society, economy, and environment in Thailand. We are driven to fulfill our mission with environmental consciousness, delivering clean, reliable tap water with complete transparency. Key initiatives, such as adopting solar energy to reduce greenhouse gas emissions, directly support this goal, in line with our vision: "Quality Water for Quality Living."



(Miss Suwara Thawitchasri)

The MWA's Governor

Sustainability Reporting (2-3, 2-4, 3-1)

The Metropolitan Waterworks Authority (MWA) Sustainability Development Report for the fiscal year 2025 discloses operational information for the period from 1 October 2024 to 30 September 2025. The report has been prepared in accordance with the Global Reporting Initiative Standards 2021 (GRI Standards 2021) and reports on the organization's material topics. It also includes other significant operational performance and information relevant to the organization.

In the fiscal year 2025, the MWA reviewed the enterprise's material sustainability topics to respond to

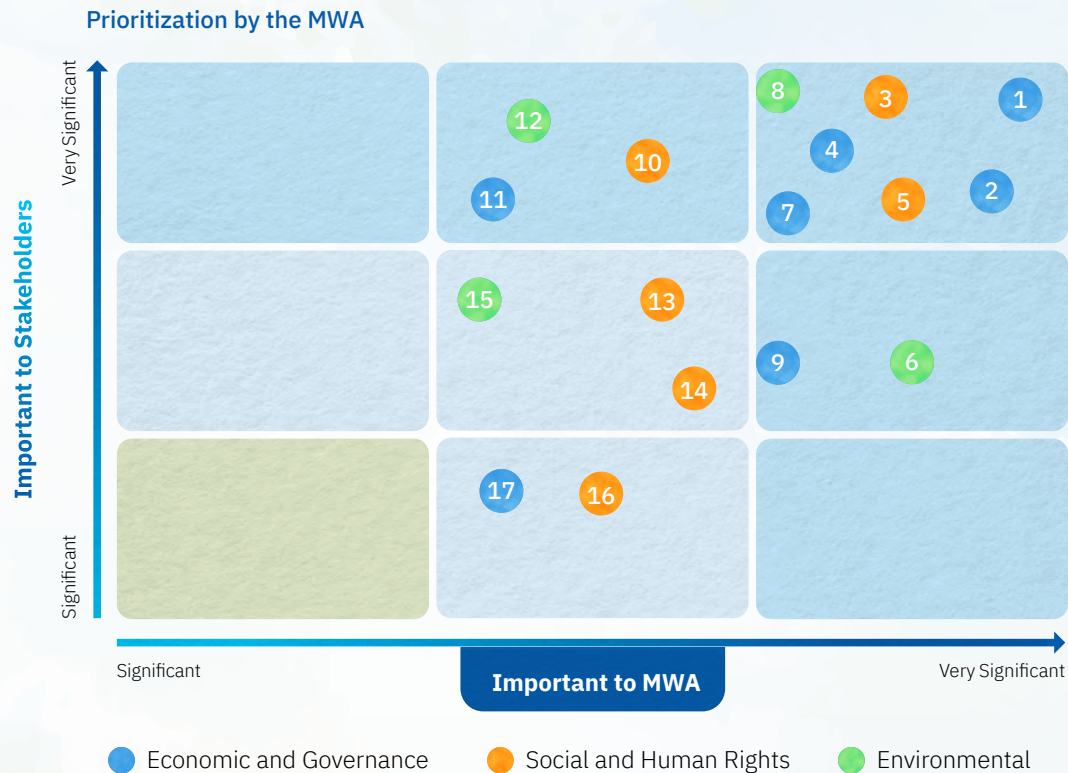
changes in the economic, social, and environmental context that may affect its operations, productivity, core services, and stakeholder expectations.

(2-4) This Sustainability Development Report includes a correction to the information previously disclosed in the Sustainability Development Report for the fiscal year 2024 regarding female employees who took parental leave following maternity leave. The number of employees taking such leave in the fiscal year 2024 has been revised from 3 employees to 2 employees, as presented in the table on page 95.

MWA Materiality Assessment Process



The MWA Materiality Matrix 2025



Lists of MWA Materialities 2025⁽³⁻²⁾

Economic and Governance

- 1 Transparency and Integrity
- 2 Effective Communication
- 4 Business Continuity Management
- 7 Innovation and Digitalization
- 9 Partnership and Collaboration
- 11 Efficiency of Internal Management Processes
- 17 Accessible and Affordable Services and Product

Social and Human Rights

- 3 Human Resource Potential Development
- 5 Quality of Tap Water
- 10 Occupational Health and Safety
- 13 Non-Discrimination and Equal Opportunities
- 14 Employee Welfare and Stability
- 16 Local Communities

Environmental

- 6 Water and Effluents
- 8 Energy
- 12 Effluent and Waste
- 15 Greenhouse Gas Emissions Management



For more information, please contact:

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Tel: +66 2504 0123 ext. 1614-1615

E-mail: csr@mwa.co.th

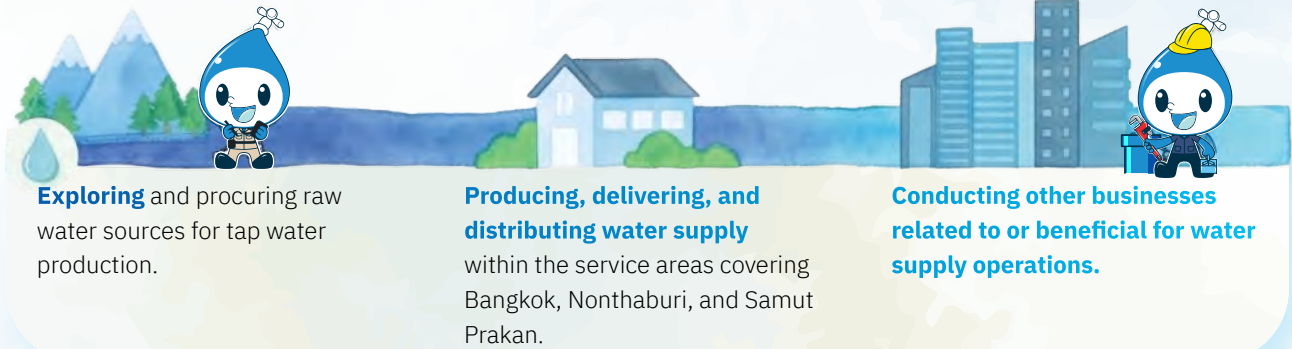
About the Metropolitan Waterworks Authority





About the Metropolitan Waterworks Authority (2-1, 2-2, 2-6)

On 14 November 1914, His Majesty King Vajiravudh (Rama VI) officially inaugurated the water supply operations, initially known as the “Metropolitan Waterworks.” Later, in 1967, in response to the rapid urban expansion, the government consolidated the water supply operations of the Department of Municipal Engineering, Nonthaburi Waterworks, Thon Buri Municipal Waterworks, and Samut Prakan Municipal Waterworks into a single entity known as the Metropolitan Waterworks Authority (MWA) on 16 August 1967. MWA operates as a state enterprise under the Ministry of Interior and in accordance with the objectives of the MWA Act, which include:



MWA has managed water supply based on the World Health Organization’s water-quality standard. It has paid attention to water quality from upstream to downstream so as to comprehensively and adequately provide people with safe and clean water. MWA has integrated innovations and technologies to continuously improve waterworks. Water Safety Plan (WSP) has been drawn

up to assure our water supply safety and quality by launching new water pipe replacement projects in various areas while promoting positive relations with communities on the western and eastern sides of the river basin as part of the effort to conserve water resources to enhance the effectiveness of basic water supply infrastructure for sustainability.



Major Operating Sites

1. Headquarters
2. Control Buildings of Water Transmission and Distribution Systems
3. 18 MWA Branches
4. Training Center
5. 4 Water Pumping Stations
6. 12 Transmission Stations
7. 4 Water Treatment Plants
8. The Water Quality Department and the Water Treatment Plants
9. Control Room of Water Treatment Plants
10. Eastern Waterworks Canal and Western Waterworks Canal

Service Areas

The water distribution areas of MWA cover the Bangkok Metropolis, Nonthaburi, and Samut Prakan region, totaling 3,195 square kilometers. Raw water is obtained from 2 sources, i.e. the Chao Phraya River and Mae Klong River, for treatment, transmission, and distribution.

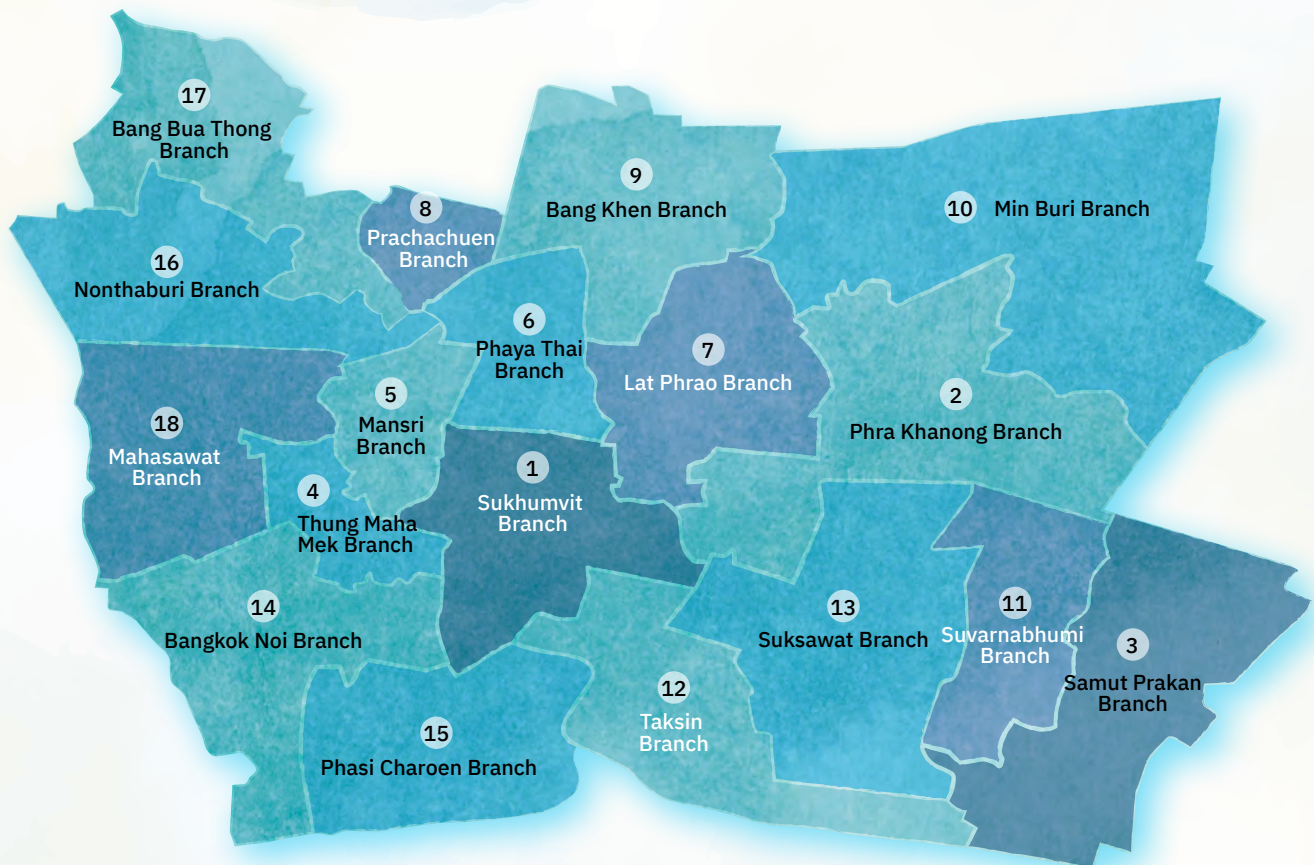
Currently, MWA has delivered tap water to all urban zones in the three provinces, providing residents with access to clean and safe tap water, which enhances their quality of life. MWA services align with the UN Sustainable Development Goal 6 (SDG 6) and the “Ease Sufferings, Nurture Happiness of People” policy of the Ministry of Interior, which supervises MWA.

18 Branches, 4 Water Treatment Plants in 3 Provinces in Every Service Area

Regarding service provision, the MWA has 18 branch offices located in 3 different provinces and 4 water treatment plants in total.

Water Supply Branch Offices

- | | |
|--------------------------|---------------------------|
| 1. Sukhumvit Branch | 10. Min Buri Branch |
| 2. Phra Khanong Branch | 11. Suvarnabhumi Branch |
| 3. Samut Prakan Branch | 12. Taksin Branch |
| 4. Thung Maha Mek Branch | 13. Suksawat Branch |
| 5. Mansri Branch | 14. Bangkok Noi Branch |
| 6. Phaya Thai Branch | 15. Phasi Charoen Branch |
| 7. Lat Phrao Branch | 16. Nonthaburi Branch |
| 8. Prachachuen Branch | 17. Bang Bua Thong Branch |
| 9. Bang Khen Branch | 18. Mahasawat Branch |



Water Treatment Plants

1. Bang Khen Water Treatment Plant
2. Mahasawat Water Treatment Plant
3. Sam Sen Water Treatment Plant
4. Thon Buri Water Treatment Plant

Metropolitan Waterworks Authority (Head Office)

400 Prachachuen Road, Thung Song Hong
Sub-district, Lak Si District, Bangkok 10210
Phone: +66 2504 0123



Water Treatment Plants and Annual Water Production Capacity

Total Annual Water Production Capacity of All 4 Treatment Plants

2,452.9 million m³

1 Bang Khen Water Treatment Plant
1,606.0 million m³

65.47%

2 Mahasawat Water Treatment Plant
584.0 million m³

23.81%

3 Sam Sen Water Treatment Plant
200.8 million m³

8.19%

4 Thon Buri Water Treatment Plant
62.1 million m³

2.53%

Water Production and Distribution of All 4 Water Treatment Plants

Water Production Plant	Fiscal Year (million m ³)					
	2020	2021	2022	2023	2024	2025
Total Water Distribution	2,121.1	2,116.5	2,080.3	2,042.4	2,038.1	2,008.8
Bang Khen Water Treatment Plant	1,410.0	1,427.6	1,394.0	1,386.4	1,381.5	1,359.1
Mahasawat Water Treatment Plant	572.3	556.6	560.0	528.3	529.3	524.7
Sam Sen Water Treatment Plant	102.4	92.2	86.4	87.3	88.8	88.0
Thon Buri Water Treatment Plant	36.4	40.1	39.9	40.4	38.5	37.0
Total Water Distribution (million m³)	1,458.3	1,416.2	1,422.2	1,488.6	1,514.8	1,515.8



Personnel (Fiscal Year 2025) ^(2-7, 2-8)



Female employees

1,649



Male employees

2,329



Contract workers

1,055

Data as of 30 September 2025

Customer

The MWA reviewed the customer groups for its core business—water supply services covering the entire customer life cycle for both existing and future customers. The review was conducted to support planning and establish marketing goals and directions that effectively address the diverse needs and

expectations of different customer groups. It also aims to deliver a positive customer experience throughout the customer life cycle through the continuous development and innovation of products and services, as well as effective customer relationship management.



Current Customer

The current customers of MWA are water consumers in the areas under MWA's responsibility (Bangkok, Nonthaburi, and Samut Prakan) classified by water usage behaviors, business type or size (firmographics),

and needs and expectations. The details of the customer groups, together with their definitions, are summarized as follows:



Potential Customer

The analysis of strategic opportunities has identified potential customers, such as those from pipe installations to expand water distribution areas and water sales to people living in fringe areas. This aligns with the government's policy to give the public equal chance to access clean water. For future market growth targets, customers can be divided into 2 groups as follows:



Customers in the areas under the MWA's responsibility (Bangkok, Nonthaburi, and Samut Prakan) who lack access to water supply, such as water consumers in local administrative organization areas, including consumers of groundwater and other natural water sources.



Customers in areas that should have access to water in line with the Ministry of Interior's policy, especially in fringe areas.



In addition, key accounts that are customers with a high average monthly water consumption of over 10,000 cubic meters per month have been identified for customer relationship management (CRM).

Number of Customers Fiscal Years 2023-2025

(Unit: Customers)

	2023	2024	2025
R Customers	2,115,868	2,191,636	2,210,458
C Customers	444,771	451,295	453,837
I Customers	4,460	5,002	5,005
All Customers	2,565,099	2,647,933	2,669,300

Data as of 30 September 2025

Note: Number of customers categorized by water usage behaviors, business type or size, and customer needs and expectations



Diagram of Water Treatment (2-6)



Remarks



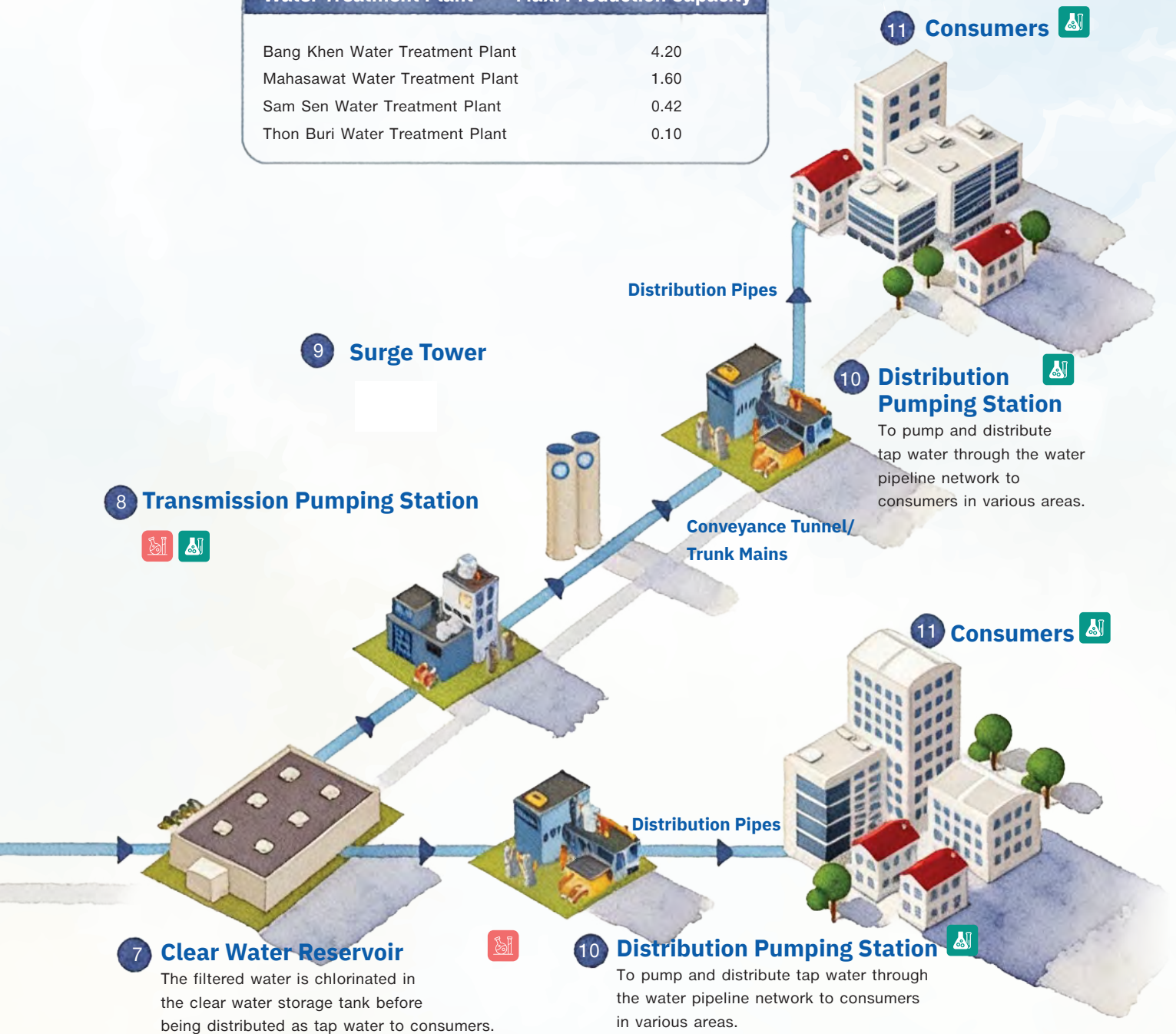
- The monitoring and analysis of water quality within the water production system are carried out by the laboratory of the water treatment plants, which is accredited in accordance with recognized standards, ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, ISO 22301:2019, GHP, and HACCP.



- Water quality inspection and monitoring are conducted in accordance with the 2022 guidelines of the World Health Organization. Analyses are performed by the Water Quality Department's laboratory, which is accredited under ISO/IEC 17025:2017 and complies with ESPReL safety standards.

Unit: million m³/day

Water Treatment Plant	Max. Production Capacity
Bang Khen Water Treatment Plant	4.20
Mahasawat Water Treatment Plant	1.60
Sam Sen Water Treatment Plant	0.42
Thon Buri Water Treatment Plant	0.10





MWA's Operating Direction and Policy



Industry Outlook and Future Trends

The International Monetary Fund (IMF) forecasts a continued global economic recovery, with growth projected at 3.0% in 2025 and 3.1% in 2026. This momentum is driven primarily by easing inflation—which has strengthened consumer purchasing power—and gradual interest rate cuts by major central banks. However, downside risks persist, including US tariffs, geopolitical tensions, and high budget deficits in several regions. The US economy is expected to expand by 1.9% and 2.0%, respectively, while emerging and developing economies have seen upward revisions to their growth forecasts. China, in particular, is supported by government stimulus measures and is projected to grow by 4.8% in 2025, despite the threat of slowing exports in subsequent years due to ongoing trade conflicts.

Global Economic Growth Rate (GDP)

2025
3.0%

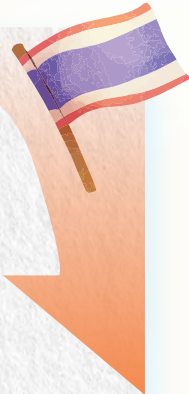
2026
3.1%



Gross Domestic Product (GDP) Growth Rate

2025
3.0%

2026
3.1%



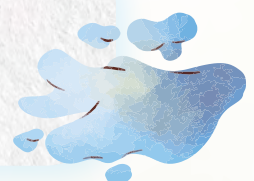
Regarding the Thai economy, the World Bank estimates that GDP growth may decline to 1.8% in 2025 and 1.7% in 2026. This is due to changes in global trade policy creating uncertainty in exports, coupled with stagnant domestic consumption and a sluggish tourism sector. In particular, Chinese tourist arrivals have dropped due to safety concerns. However, if the government implements targeted economic stimulus measures and encourages private sector investment, the Thai economy could grow faster than expected. Currently, total investment continues to expand steadily, driven by capital expenditure on machinery. Meanwhile, the manufacturing sector shows diverse signs of growth, with the agricultural sector experiencing outstanding development, while the service and some industrial sectors are beginning to slow down in line with market mechanisms.



As for water demand trends, the MWA forecasts a slight increase in water sales volume in the fiscal year 2026 compared to the previous year. This is mainly due to the expected increase in the number of foreign tourists to 36 million people, coupled with rising temperatures and a period of drought due to the El Niño phenomenon. In addition, government measures focused on attracting foreigners to invest and reside in Thailand long-term are also contributing factors that will increase water demand as communities expand and economic activities occur.

Water demand is expected to increase slightly

Driven primarily by the increase in the number of international tourists.





Roadmap of the Sixth MWA Strategic Management Plan

**Fiscal Year
2027**

Smart Enterprise for Smart Value

- New related business models to exponentially accelerate related revenue
- One-Stop Water Services by digital technology via MWA onMobile
- Achieving Management Excellence Organization by leading accreditation bodies

**Fiscal Year
2032**

Smart Water for Smart City

- Cross-basin water diversion between the western and eastern regions
- Smart Water Grid Framework
- Full-Scale Water Business Solutions

**Fiscal Year
2037**

Smart Life for Smart Living

- The entire systemic distribution overhaul
- Business diversification outside the MWA's core business



The MWA divides strategic goals into 3 phases as follows:

Short-term goals (Fiscal year 2027)

Focus on transforming the MWA into a technology-driven organization.

Critical initiatives include securing secondary raw water reserves and developing advanced digital services and utilities to enhance public service delivery and operational efficiency. Furthermore, the MWA will expand its related businesses through proactive communication and accessible platforms, tailor products and services to meet evolving consumer expectations, and establish an affiliated company.

Medium-term goals (Fiscal year 2032)

Focus on providing integrated, end-to-end water solutions tailored to diverse regional needs, the MWA leverages technology to optimize eco-friendly products and services.

Key initiatives include implementing cross-basin water diversion between the western and eastern regions, deploying an automated smart water grid framework, and full-scale water business solutions.

Long-term goals (Fiscal year 2037)

Our focus is on driving corporate social responsibility and ensuring sustainable public welfare by supporting key environmental, social, and economic frameworks nationwide.

Key initiatives include a comprehensive overhaul of the national water distribution network and strategic diversification to expand operations beyond our core business.

MWA's Value Chain ⁽²⁻⁶⁾

The MWA's core mission is to distribute quality tap water and provide services in response to customers' needs, with operations that are in compliance with guidelines, standards, and good corporate governance, which are divided into three main categories:

Management Process

It is related to executions that require the engagement of all executives to drive processes in order to meet requirements and targets. It also includes the determination of the future direction, which focuses on creating growth and sustainability of the organization.



Core Process

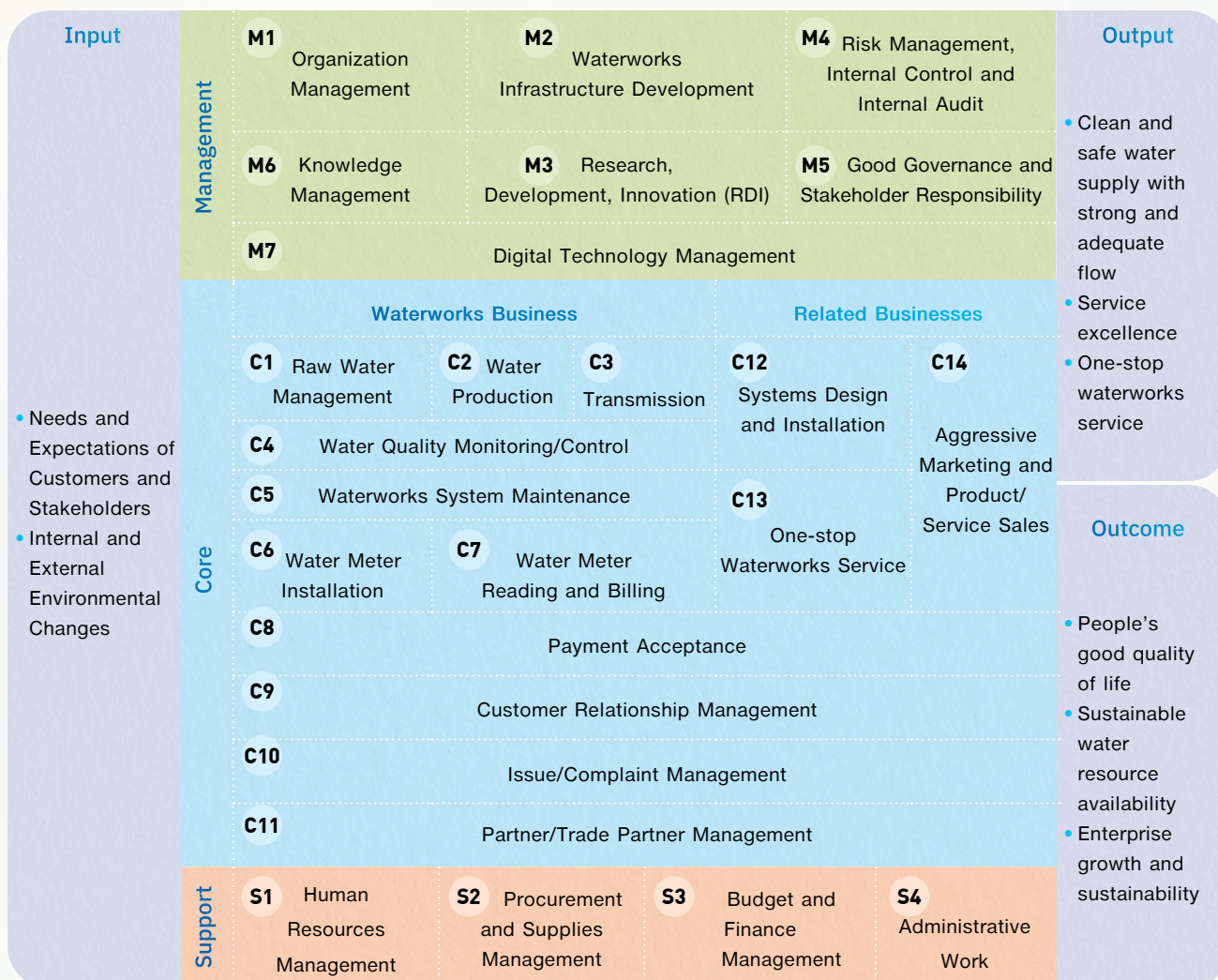
The core process is vital and directly affects corporate achievement. It is a process that delivers value to customers and stakeholders. It consists of:

- Operations: Encompasses processes related to product and water supply delivery, with a strong focus on quality and efficiency.
- Customer: Encompasses processes related to customer service, emphasizing service delivery in line with commitments.



Support Process

It is a process that supports and encourages the achievement of core processes, which facilitate smooth corporate management, focusing on its efficiency and effectiveness. Each support process is aimed at delivering valuable products and services to customers and stakeholders sufficiently and comprehensively in every service area, in addition to supporting the sustainable economic and social development of the country.





Supply Chain Management and Sourcing

The MWA's business management process is essential to procure raw materials and resources, operational structures, and related technologies to enable the enterprise to deliver products and services efficiently to customers in accordance with their quality and time specifications. This includes having procurement guidelines for materials and services.

In addition to procurement under the Public Procurement and Supplies Administration Act, B.E. 2560 (2017), the MWA has established the **MWA's Code of Conduct** as a guideline for best practices in carrying out the MWA's core mission and related businesses within a framework of ethics and integrity in order to treat all stakeholders equitably to all stakeholders, enhance the organization's reputation, and protect the interests of the MWA.

Furthermore, the MWA's Code of Conduct outlines responsibilities towards business partners as follows:

- 1) Promote fair competition by opposing monopolies and discriminatory trade practices. In doing so, treat business partners equally, fairly, and equitably, while strictly adhering to competition laws and refraining from any actions that result in unfairness, including in the drafting of relevant contracts, monopolies, trade barriers, and price collusion (bid rigging).
- 2) Strictly comply with all terms and conditions with business partners. In cases where compliance is not possible, the business partner must be notified in advance to jointly consider and find solutions on the basis of reason.
- 3) Maintain the confidentiality of business partners and do not use business partners' information for personal gain or the benefit of related parties.



Guidelines for Contractor's Selection and Evaluation

We have established procurement standards with a systematic process to select contractors and evaluate their performance. This is to ensure efficiency and effectiveness toward all actions as defined. Moreover, we have applied various rules and regulations into practice so as to develop the organization in all aspects, alongside operating its business based on good corporate governance principles.

As processes of water production and distribution require contractors to complete the construction of various projects. Therefore, contractors' selection and evaluation are considered one of our core missions

under the MWA's regulations on registration and evaluation of contractors' performance to obtain contractors who hold quality and potential to operate construction works of various projects to be completed within the specified time and with orderliness.

The purpose of this procedure is to ensure water supply meets safety standards as defined and create satisfaction for users to consume water that meets quality and is sufficient for consumption, and minimizes negative impacts on local communities. The details of these processes are described below:



1
Contractors submit application forms for registration of contractors.



2
The MWA selects the contractors.



3
The MWA proceeds with the registration of contractors and categorizes them by types of work as defined by the MWA.



4
Contractors who have already registered and have been completely qualified will be invited to submit a proposal for bidding on each project.



5
The successful contractor commences the construction work.



6
The MWA will evaluate contractors during the project construction work and after the project completion. The results will be used to rank those contractors and determine whether they should be promoted or demoted with a penalty.

MWA Sustainable Development Policy

Policy

- ☒ _____
- ☒ _____
- ☒ _____
- ☒ _____





MWA Sustainable Development Policy (2-23, 2-24, 2-27)



Criteria, Regulation, and Authority That the MWA Deploys as a Framework for Economic, Social, and Environmental Development

The MWA is a state-owned enterprise under the supervision of the Ministry of Interior, established under the Metropolitan Waterworks Authority Act, B.E. 2510. Thus, our roles and duties are following the laws, regulations, and standards, which are summarized as follows:

Laws/Rules/Regulations

Details of Relevant Laws and Regulations



Occupational Health and Safety

- Occupational Safety, Health, and Workplace Environment Act, B.E. 2554 (2011)
- A total of 17 Ministerial regulations under the Occupational Safety, Health, and Workplace Environment Act, B.E. 2554 (2011) that are already in effect, as well as announcements from the Department of Labour Protection and Welfare, all of which are laws issued under the 17 Ministerial regulations, such as the following:
 - The Ministerial Regulation on the Appointment of Occupational Safety Officers, Personnel, Agencies, or Committees to Implement Occupational Safety in Business Establishments, B.E. 2565 (2022) and 11 announcements from the Department of Labour Protection and Welfare, such as the Announcement on Training or Knowledge Development for Technical, Advanced Technical, and Professional Levels of Occupational Safety Officers regarding additional occupational safety; and the Announcement on Notification of Registration of Termination of Position or Resignation of Occupational Safety Officers and Safety Unit Managers
 - The Ministerial Regulation on Standards for Health Examinations of Employees Working with Risk Factors, B.E. 2563 (2020) and 3 announcements from the Department of Labour Protection and Welfare, such as the Announcement on Specifying Jobs Performed by Employees Involving Hazardous Chemicals Requiring Employers to Arrange Health Examinations for Employees, etc.
- Announcement of the State Enterprise Labour Relations Commission on Minimum Standards of Employment Conditions in State Enterprises
- Announcement of the Ministry of Public Health on Notification and Reporting in Cases of Discovery or Reasonable Suspicion of an Occupational Disease or Environmental Disease, B.E. 2565 (2022)
- State Enterprise Labour Relations Act, B.E. 2543 (2000)
- Labour Protection Act, B.E. 2541 (1998)



Certification or Registration for License to Operate

- Metropolitan Waterworks Authority Act, B.E. 2510 (1967)
- Code of Conduct
- Royal Decree on Criteria and Procedures for Good Country Administration (No. 2), B.E. 2562 (2019)
- World Health Organization (WHO)
- Electronic Transactions Act, B.E. 2544 (2001)
- Electronic Transactions Act (Amendment), B.E. 2562 (2019)
- Factory Act, B.E. 2535 (1992)
- Arms Control Act, B.E. 2530 (1987)
- Hazardous Substance Act (No. 3), B.E. 2551 (2008)
- Government Administration and Services through Digitalization Act, B.E. 2562 (2019)

Laws/Rules/Regulations	Details of Relevant Laws and Regulations
 ISO Industry Standards	• WHO's Guidelines for Drinking-water Quality, 4th Edition, Incorporating the 1st Addendum • Good Manufacturing Practice: GMP • Hazard Analysis and Critical Control Points: HACCP • ISO 9001:2015 Quality Management System • ISO/IEC 17025:2005 Operating Noise Quality Assurance System • ISO/IEC 27001:2013 Information Security Management System • ISO/IEC 29110 Diagnosis and Recommendation System to Guide in Enhancing the Software Development • ISO 26000 Social Responsibility Guidance Standard • Notification of the Department of Health on Criteria for Drinking Water Quality, Department of Health, B.E. 2563, dated 13 July 2020 • Notification of the Department of Health on Recommendation Criteria for Drinking Water Quality for Surveillance, Department of Health, B.E. 2563, dated 13 July 2020 • Notification of the Metropolitan Waterworks Authority on the Criteria for Determining the Water Quality of the Metropolitan Waterworks
 Environmental, Financial, and Product Management	• Budget Procedures Act, B.E. 2502 (1959) • Rule of the Office of the Prime Minister on Investment Budget of State Enterprises, B.E. 2550 (2007) • Rule of the Ministry of Finance on Accounting and Finance of State Enterprises, B.E. 2548 (2005) • Government Procurement and Supplies Management Act, B.E. 2560 (2017) • State Fiscal Discipline Act, B.E. 2561 (2018) • ISO 140001:2015 Environmental Management System • WHO's Guidelines for Drinking-water Quality, 4th Edition, Incorporating the 1st Addendum • Groundwater Resources Act (No. 3), B.E. 2546 (2003) • Facilitation of Government Authorization Act, B.E. 2558 (2015) • Public-Private Partnership Act, B.E. 2562 (2019) • National Environmental Quality Promotion and Conservation Act, B.E. 2535 (1992) • Energy Conservation Promotion Act, B.E. 2535 (1992) • Ministerial Regulation prescribing rules, methods, and forms for collecting statistics and data, preparation of detailed records and a performance report of the wastewater treatment system, B.E. 2555 (2012) • Notification of the Ministry of Natural Resources and Environment on Determination of Wastewater from Factory, Industrial Estate, and Industrial Zone • Notification of the Ministry of Industry, Subject: Determination of Standards for Controlling Wastewater Discharge from Factory, B.E. 2560 (2017) • Notification of the Ministry of Industry on Disposal of Sewage or Disused Material, B.E. 2548 (2005) • Announcement of the Ministry of Industry on the Management of Waste or Scrap Materials, B.E. 2566 (2023)
 Others	• Government News and Information Act, B.E. 2540 (1997) • Computer Crime Act, B.E. 2550 (2007) • Personal Data Protection Act, B.E. 2562 (2019) • Cyber Security Act, B.E. 2562 (2019) • Criteria for assessing the work processes and management (enablers) of the state enterprise • Government shareholder policy guidelines (state of direction: SOD) on the state enterprise • Announcement of the State Enterprise Policy Office on the State Enterprise • Development Plan, B.E. 2566-2570 (2023-2027)



MWA Sustainable Development Policy

Beyond its primary mission of the extensive treatment, transmission, and service provision of water supply to consumers in service areas, the MWA is committed to operating according to sustainable development guidelines. These guidelines are consistent with the Sufficiency Economy Philosophy and the Sustainable Development Goals, which form the framework for global development set by the United Nations (UN) and the action plans for driving the development of Thailand. We aim to achieve this aligned with the BCG economic model (2021-2027) and the MWA's Enterprise

Roadmap. This involves enhancing management effectiveness and basic water supply infrastructure from upstream to downstream to create value and support the government's policies while meeting the needs and expectations of stakeholders in a balanced way. We also strive to build confidence by adhering to good corporate governance principles with fairness, transparency, responsibility, and continuous innovation. The MWA Board of Directors has established the MWA Sustainable Development Policy as a guideline for the organization's operations as follows:

1

Strictly comply with relevant laws and regulations while respecting international practice guidelines.

2

Maintain economic, social, and environmental balance and promote the development of the Bio-Circular-Green Economy (BCG Model) for all stakeholders to achieve sustainable growth for the organization.

3

Raise awareness about the value of water resources, energy conservation, and greenhouse gas emission reduction among MWA personnel and effectively communicate and disseminate this awareness to external parties.

4

Raise awareness among MWA personnel regarding the value of water resources, energy conservation, and greenhouse gas emission reduction, and communicate this effectively to external parties.

5

Promote the continuous development of work innovations and technologies and develop the enterprise's personnel to possess sufficient skills to keep up with technological changes for the benefit of society and the environment.

6

Ensure that executives, employees, and staff members actively support and execute their duties in alignment with the Sustainable Development Policy, embedding it into the organizational culture.

7

Emphasize that executives, employees, and staff members are responsible for supporting, promoting, and carrying out their duties in alignment with the Sustainable Development Policy until it becomes part of the organizational culture.

8

Disclose policies, management practice guidelines, work performance, and impact from various activities that positively and negatively reflect the organization to stakeholders on the economic, social, and environmental dimensions, and do so transparently in order to promote understanding about the direction and corporate social responsibility processes of the enterprise with the aim of achieving sustainable development.

Therefore, the executives, employees, and workers of the MWA are responsible for supporting, driving, and acting in alignment with the enterprise's Sustainable Development Policy in order to lay the essential foundation for the sustainable development of the enterprise. Furthermore, the MWA has established the MWA Good Governance Policy and the MWA CSR Policy to provide an operational framework that guides personnel in integrating social and environmental considerations into their work, grounded in good governance and transparency. We have also announced the Stakeholder Management Policy to establish a standard for the equitable treatment of all stakeholders.



Scan QR Code to view the **Stakeholder Management Policy**.



Scan QR Code to view the **MWA Good Governance Policy**.

MWA Stakeholder Engagement





MWA Stakeholder Engagement



MWA Stakeholder Identification

The Metropolitan Waterworks Authority (MWA) reviews and identifies its stakeholders annually in accordance with the **AA1000 Stakeholder Engagement Standard (AA1000SES) 2015**. The review is conducted comprehensively by considering the Authority's work processes throughout its value chain. The stakeholder review for the fiscal year 2025 identified **eight stakeholder groups**, which remain unchanged, as follows:



Policy Agencies and Government Shareholders

refer to agencies responsible for governing and supervising state enterprises, including the Metropolitan Waterworks Authority (MWA), as well as various subcommittees appointed by the MWA.



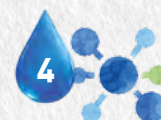
Mission-Based Related Agencies

refer to government agencies that share operational tasks or mandates with the MWA.



Suppliers

refer to entities, juristic persons, or individuals who receive remuneration for providing products, services, leases, or personnel to the MWA.



Alliances

refer to agencies, organizations, or groups that agree to work with the MWA to achieve mutual objectives. Alliances are subdivided into two groups as follows:

- **Business Alliances:** Entities involved in payment processing agreements, for example.
- **Academic Alliances:** Agencies or individuals receiving research funding from the MWA, for example.



Customers

The MWA classifies customers based on water products that across the customer life cycle, including current and potential customers, as follows:

Current Customers

Current Customers are water supply consumers within the MWA service areas (Bangkok, Nonthaburi, and Samut Prakan) divided by behavior, firmographics, and needs into three main groups as follows:

- **Residential (R):** Customers who use water for domestic and general consumption in residential areas, with peak usage typically occurring during morning and evening hours.
- **Commercial (C):** Customers who use water for commercial or corporate activities, with usage schedules aligned with regular business operating hours.
- **Industrial (I):** Customers who use water for industrial applications, such as manufacturing and production processes that require continuous supply, with some operating 24 hours a day.

Potential customers

Potential customers are identified in alignment with government policy to provide the public with equitable access to clean water, as well as strategic opportunities to expand water sales in fringe areas. They are divided into two groups as follows:

- **Potential Customer:** These customers are in the areas under the MWA's responsibility (Bangkok, Nonthaburi, and Samut Prakan) who lack access to water supply, such as water consumers in local administrative organization (LAO) areas, including consumers of groundwater and other natural water sources.
- **Potential Area:** These customers are in areas that should have access to water in line with the Ministry of Interior's policy, especially in fringe areas.



Employees and Workers

Employees

refer to personnel working under permanent contract employment with MWA who perform their duties according to each job description.

Workers

refer to personnel working under temporary contract employment who perform their duties as prescribed in employment contracts and supervised by the MWA, namely workers of private companies and agents.

- **Subcontracted workers** refer to personnel hired by the MWA through MWA's contractors on an annual basis. It is divided into four groups:
 - Administrative;
 - Mechanic;
 - Automotive; and
 - Other groups-workers and welders.
- **Representatives** refer to personnel hired by the MWA to provide service to water consumers under the rules and practices prescribed by the MWA. Each contract renewal shall not be more than three years, namely
 - Billing and payment services;
 - Wiring binding; and
 - Flow meter reading.



Community and Society

Community refers to

- Communities along the Waterworks Canal (west) located in Kanchanaburi, Ratchaburi, Nakhon Pathom, and Nonthaburi with a total distance of 107 kilometers, and communities along the Waterworks Canal (East) located in Pathum Thani, with a distance of approximately 30 kilometers.
- Communities in the service areas.
- Downstream communities along the Mae Klong and the Chao Phraya basins.

Society

refers to people who are not directly affected by MWA's operations, but live in areas with potential for quality-of-life improvements.



Media

refers to a media professional, or an individual or entity—whether legally incorporated or not—operating a media business. It serves as a medium for conveying all types of content to the public through print, radio, television, digital, or any other platforms capable of public communication.



Engagement Channels and Expectations of Stakeholders (2-29)

In order to understand and know about the needs and expectations of all stakeholders of the MWA, engagement has been built with stakeholders via various channels as follows:

Stakeholder	Engagement Channel	Frequency	Stakeholder Expectations	MWA's Materiality Topics	Response to Stakeholder Expectations
 Policy Agencies and Government Shareholders	- Meetings - Platform for expressing opinions - Participation in MWA's activities - Satisfaction surveys	- More than once per year - Once per year - More than once per year - Once per year	- The MWA is expected to urgently reduce water loss. - The MWA should proactively solve problems by reducing energy use by at least 20 percent according to the Cabinet resolution by considering the use of electric vehicles in the MWA's agencies. - The MWA's activities should be consistent with acts and laws related to factory business operations.	- Water and Effluents - Energy - Greenhouse gas emissions - MWA business sustainability policies - Quality of Tap Water - Effluent and Waste - Efficiency of Internal Management Processes - Occupational Health and Safety	- Water-saving efficiency project (water-saving labels) - Water loss management in the water distribution system - Reuse of water from the treatment process - Floating solar and solar rooftop electricity generation system installation projects - Energy conservation measures - Water quality management systems such as GHP, HACCP, ISO 9001, ISO 14001
	 Mission-Based Related Agencies	2-4 times/month - Year-round - Once per year	- It is expected that the MWA and the Department of Groundwater Resources will exchange data in real time. - Problems were found with repairs to return areas by the MWA, which failed to restore original conditions through repairs. - Management of raw water sources during crises to mitigate water quality impacts.	- Partnership and Collaboration - Water and Effluents - Innovation and Digitalization	- Promotion and enhancement of relationships with related agencies in task-based activities to reduce problems in water pipe installation areas - A project to develop a salinity prediction system and a model for managing water in advance

Stakeholder	Engagement Channel	Frequency	Stakeholder Expectations	MWA's Materiality Topics	Response to Stakeholder Expectations
 Customers	- Channels like Touch Point, MWA branch offices, 1125 Call Center, CRM activities (MWA Meets the People/Top-Tier/consumer satisfaction surveys (surveys/in-depth interviews/focus groups), etc. - Social media such as Facebook/X/LINE@/social monitoring, etc. - Applications such as MWA onMobile	At all times	- It is necessary to install and repair pipes according to standards throughout the entire process from start to finish, whether in terms of public relations, construction standards, and access and contacts with related parties. - The MWA needs to proactively engage in public relations and inform consumers to reserve water in advance.	- Business Continuity Management - Quality of Tap Water - Effective Communication	Water Safety Plan
 Employees and Workers	- Progress performance announcements and opportunities for Q&A - Enterprise engagement surveys	- Twice per year - Once per year	- Management to increase knowledge and skills to ensure strategic performance and effective performance of assigned missions. - Improvement of medical treatment welfare. - A performance evaluation system is needed to reduce use of discretion by supervisors.	- Human Resource Potential Development - Employee Benefits and Welfare - Non-Discrimination and Equal Opportunities	- Project to upgrade planning, workforce planning, and organizational structure for increased productivity and efficiency - Project to enhance the effectiveness of employee potential assessment (MWA Career Assessment) - Project to enhance personnel capabilities towards operational excellence - Successor & Talent Management Program for Key Strategic Positions and Talents (Successor & Talent Management) - Personnel performance evaluations - Employee benefits and welfare

Stakeholder	Engagement Channel	Frequency	Stakeholder Expectations	MWA's Materiality Topics	Response to Stakeholder Expectations
 Suppliers	- Platform for expressing opinions - Satisfaction surveys	- Once per year - Once per year	- The MWA is expected to invite suppliers to participate in meetings for communication and to hear problems/shared opinions of suppliers. - The MWA needs to participate in setting a central price that reflects the actual operating costs. - The MWA needs to undertake procurement by e-bidding via a transparent process.	- Transparency and Integrity - Supply Chain Management and Sourcing	- Anti-Corruption Prevention and Suppression Project - Fair market competition policies and practice guidelines - MWA contractor selection and evaluation process - Joint trade partner training for potential development
	Satisfaction surveys	Once per year	- The communication system of the internal agencies of the MWA must be developed to swiftly respond to collaboration with payment service providers. - Hold activities to discuss public sector debt work management involving 5 state enterprises (MWA, PWA, MEA, PEA, NT).	Partnership and Collaboration	Coordination and collaboration with partners to enhance services
 Community and Society	- Platform for expressing opinions - CSR activities - Satisfaction surveys - MWA Meets the People activities - Social media of the MWA	- Year-round - More than once per year - Once per year 72 times per year (18 MWA branch offices hold 4 activities per year per branch.) - Year-round	- The MWA is expected to hold activities continuously with communities to reduce relationship gaps and promote understanding about the MWA's operations. - The MWA needs to proactively organize activities to build relations and increasingly meet with the communities.	- Local Communities - Occupational Health and Safety - Accessible and Affordable Services and Product	- Project to participate in major community development activities - Emergency plan rehearsal at all 4 water treatment plants - Water Supply Pipeline Planning and Construction Project for Service Expansion

Stakeholder	Engagement Channel	Frequency	Stakeholder Expectations	MWA's Materiality Topics	Response to Stakeholder Expectations
 Media	- Performance announcements - Opening ceremonies for important events - Sponsorship and participation in media activities such as founding anniversary events and media events - Giving interviews and information to the media - The MWA's social media - News for the media - Unofficial meetings with the media (individual outlets) - Opinion surveys	- Once per year - More than 6 times per year - Year-round - Year-round - Year-round - Weekly - Year-round - Once per year	Accurate, fast, and timely access to news and information	- Transparency and Integrity - Effective Communication	MWA Office Information Center

Annual Action Plan for Stakeholder Engagement Promotion in 2025

To manage stakeholders effectively and address their needs and expectations, the MWA has established the Annual Stakeholder Engagement Action Plan under the Revised MWA Stakeholder Master Plan (2023-2027).

All departments implement this plan based on their specific key stakeholder issues. The Action Plan focuses on 5 key themes:

Theme 1:

Proactive Communication:
Enhancing the image of a sustainable enterprise



Theme 2:

Enhancing Stakeholder Engagement:
Strengthening connections with stakeholders



Theme 3:

Disseminating Knowledge:
Sharing information to improve work efficiency



Theme 4:

Exchanging Knowledge: Facilitating the exchange of knowledge in management, innovation, and digital technology



Theme 5:

Building Strong Relationships: Fostering positive relationships to enhance services



The implementation of this plan has led to improved relations and stakeholder satisfaction. In the fiscal year 2025, the stakeholder satisfaction survey on activities carried out under the plan achieved a score of 4.61 out of 5, up from 4.43 in the previous fiscal year.

The stakeholder satisfaction survey on activities carried out under the plan achieved a score of

4.61 out of 5



Scan the QR code to see our performance in the Stakeholder Engagement Promotion plan in 2025

Governance and Economic Performance



Transparency and Integrity 36

Effective Communication 51

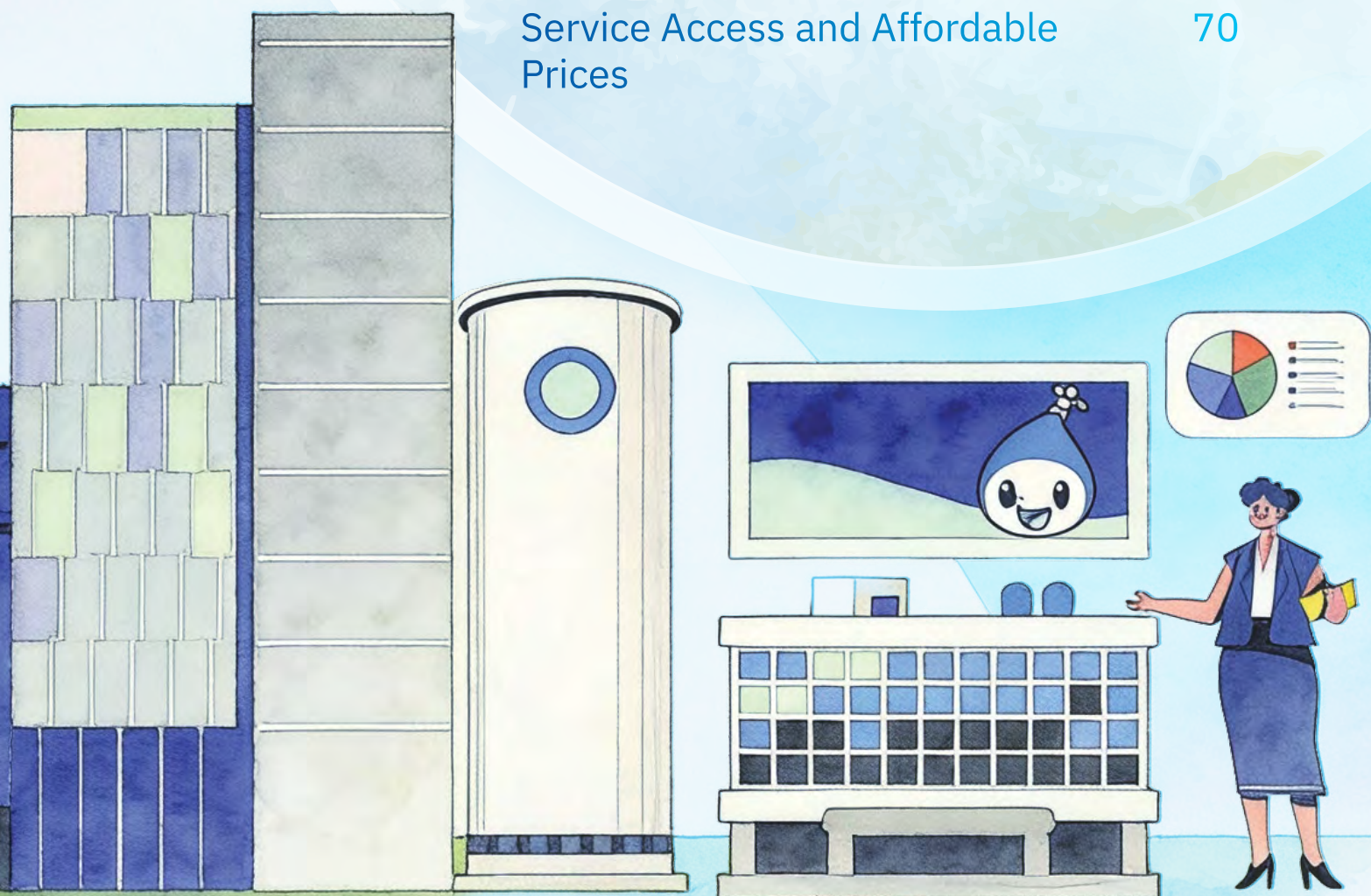
Business Continuity Management 55

Innovation and Digitalization:
Mechanisms for Driving Future
Sustainability 57

Partnership and Collaboration 63

Effectiveness of Internal
Management Processes 66

Service Access and Affordable
Prices 70





Transparency and Integrity

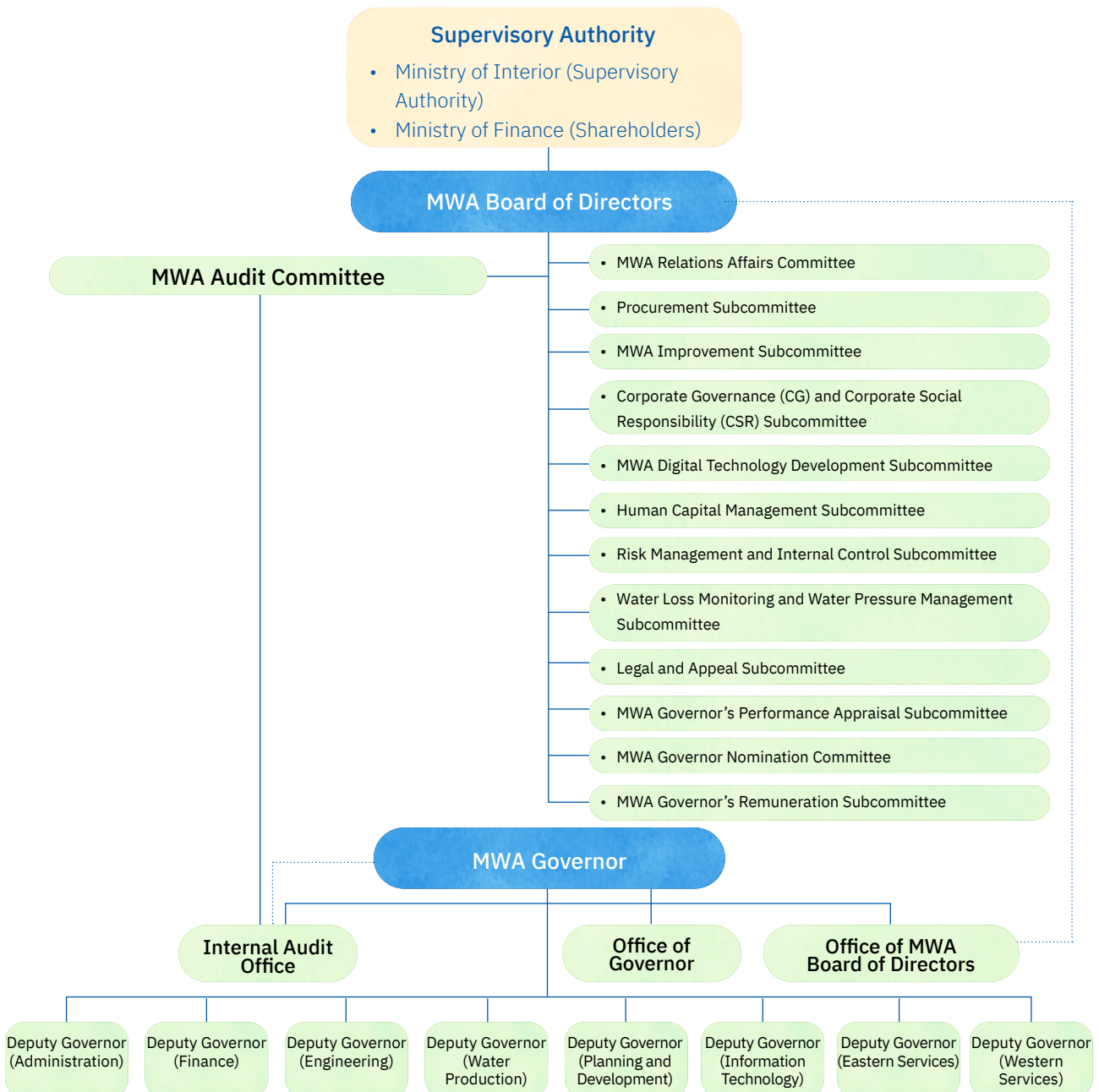


Corporate Governance

To create sustainable business values, the MWA Board of Directors has placed great importance on good corporate governance principles by overseeing and monitoring executive performance to effectively achieve the MWA's missions, objectives, and goals efficiently. Moreover, this requires it to be in response to government policies and to conduct its business ethically, apparently, and transparently, along with the environmental and social responsibilities, upholding respect for the rights of all stakeholders.

Structure, Roles, and Duties of the Board of Directors ⁽²⁻¹¹⁾

Structure of the MWA Board of Directors ^(2-9, 2-11)





According to the Standard Qualifications of Directors and State Enterprise Employees Act, B.E. 2518 (1975), and amendments, state enterprises shall consist of no more than 11 directors total, and if any state enterprise has provisions for fewer than 11 directors, then the number of directors will follow the relevant statutory provisions. In addition, if any state enterprise has a need for more than 11 directors, the relevant minister will be required to make a proposal to request for approval from the Cabinet on a case-by-case basis, the total number of directors shall not exceed 15.

The Metropolitan Waterworks Authority Act, B.E. 2510 (1967), and its amendments stipulate that the MWA

Board of Directors shall consist of the Governor and at least nine other directors, but no more than 13 directors in total. The Governor shall serve as a director ex officio. The MWA Board of Directors may appoint various committees and subcommittees to assist in reviewing and screening matters covering economic, social, environmental, and other relevant issues. Members of the committees, subcommittees, and the secretary are appointed from among senior officials and executives of the MWA to support the Board, review relevant matters, and report on progress in various areas. Details of the MWA's subcommittees are provided in the 2025 Annual Report.

Selection Process for the MWA Board of Directors ⁽²⁻¹⁰⁾

The directors of the MWA Board are appointed by the Cabinet. Each director must possess the required qualifications and must not have any of the prohibited characteristics specified in the Metropolitan Waterworks Authority Act, B.E. 2510 (1967), the Standard Qualifications of Directors and State Enterprise Employees Act, B.E. 2518 (1975), as amended, and other relevant laws and regulations. For example, directors are required to be Thai nationals, under 65 years of age, and possess knowledge and

experience that are beneficial to the MWA. The selection process also considers knowledge, skills, experience, competencies, and diversity in terms of age and gender, in accordance with the guidelines for the appointment of state enterprise directors under the State Enterprise Policy and Governance Act, B.E. 2562 (2019), and the announcements of the State Enterprise Director Screening Committee.

- Chairman of the board and other directors shall serve for a three-year term,



and they are eligible for reappointment. If any director is removed from the office, another director may be appointed as replacement, whose term of office is equal to the remaining term of the director whom he or she replaces.



- The MWA Board's skill matrix is established in line with the enterprise's strategy, covering five core competencies, namely,



financial competency



accounting competency



legal competency



information technology competency



other competencies based on the requirements of the MWA



All of these skills are reviewed regularly every year, and, in specifying the knowledge and expertise for all five core competencies, shall not exceed the number of Board positions in the MWA Board of Directors.

such as



engineering [civil/water resource/environmental (sanitation), and others]



business administration/economics



human resource management



organization management



project management



innovations, etc.

• Directors



may hold directorships in no more than three state enterprises simultaneously, and if they hold other directorships in companies and/or government agencies, such positions must not interfere with the performance of their duties.

• At least one representative who is a full-time civil servant from the Ministry of Finance



is appointed to the MWA Board member to represent the interests of the government as the shareholder.

• One representative from the Ministry of Interior (MOI), who is a full-time civil servant



and who is not affiliated with the authority responsible for regulating the MWA's operations, has been appointed to the MWA Board of Directors to facilitate policy coordination with its supervising ministry. If necessary, up to one additional representative may be appointed.

• At least one-third of other directors, who are not directors by position,



are appointed and selected from the list of the Directors' Pool prepared by the Ministry of Finance.

• At least one-third of other directors, who are not directors by position,



are nominated from among qualified persons with experience.

• At least one-third of the total directors are independent directors



in accordance with the principles and guidelines of good corporate governance for state enterprises.

Roles and Responsibilities of the MWA Board of Directors (2-12)



Enterprise Direction Setting:

The MWA Board of Directors works with management to set and approve strategic plans, and goals, and oversees and approves the preparation and review of the MWA's enterprise plans, annual operational plans, and budgets, along with providing observations and suggestions to provide a clear operational framework for the enterprise. Management also communicates policies and goals to employees at all levels and monitors compliance with the established plans.

system work plans. The MWA Board of Directors considers and approves important operational plans prior to the beginning of the fiscal year or assigns a subcommittee to review and approve them and present them to the MWA Board of Directors for the Board's acknowledgment before the beginning of the fiscal year. This includes monitoring the important management system plans of the enterprise at least quarterly, along with providing observations and suggestions.



Supervision of the Implementation of Work Plans:

The MWA Board of Directors participates in determining the operational direction and supervises the implementation of the enterprise's key management



Enterprise Management Policy Setting:

Establish enterprise management policies and supervise the state enterprise to operate in accordance with the law, relevant regulations, and established operational policies.

**Public Sector Accountability:**

Monitor and ensure that the MWA reports its performance in accordance with policies and good governance guidelines to the Ministry of Finance, which represents the government as the shareholder, covering important issues, including reporting financial and non-financial performance, reporting compliance with good governance practices, and reporting compliance with laws, regulations, and rules related to the MWA.

**Strengthening Good Governance:**

Establish good governance policy a manual and appoint a subcommittee to oversee corporate governance completely and appropriately, with the MWA Board of Directors considering and approving long-term good governance plans and action plans before the start of the fiscal year or assigning the subcommittee to consider, approve, and present to the MWA Board of Directors for acknowledgment before the start of the fiscal year. This includes monitoring the good corporate governance plan at least quarterly, along with providing observations and suggestions.

**Ethics:**

Supervise the MWA to develop and maintain that complies with international standards for directors, executives, and employees, and to disseminate it to all levels of personnel to promote awareness and compliance.

**Fair Competition:**

Supervise the MWA to develop and implement policies and practices for fair competition systematically and comprehensively.

**Shareholders' Rights and Equality:**

Establish policies and procedures for preventing conflicts of interest, use or disclosure of inside information, and related-party transaction, which are part of the code of conduct for the Board of Directors, executives, and employees of the MWA, and in accordance with the principles of good corporate governance.

**Stakeholder Engagement and Management:**

Supervise and monitor the MWA's development of policies and guidelines for stakeholder management. The MWA Board of Directors considers and approves long-term stakeholder management strategic plans and action plans before the start of the fiscal year, or assigns a subcommittee to consider, approve, and present them to the MWA Board of Directors for acknowledgment before the start of the fiscal year, including monitoring of stakeholder-focused strategic plans at least quarterly in addition to providing observations and suggestions.

**Risk Management and Internal Control:**

Establish guidelines for supervision and monitoring of risk management and internal control systems. The MWA Board of Directors considers and approves risk management and internal control plans before the beginning of the fiscal year or assigns a subcommittee to consider, approve, and present them to the MWA Board of Directors for acknowledgment before the beginning of the fiscal year, including monitoring of the risk management and internal control plans and integrates good corporate governance, risk management, and compliance with relevant laws, rules, regulations, and regulations (GRC), in addition to providing observations and suggestions.

**Sustainability and Innovation: (2-13, 2-14)**

Establish a clear and systematic policy and guidelines for innovation management and policies and guidelines for strategic sustainability development of the MWA. The MWA Board of Directors approves the long-term and annual innovation management plans before the start of the fiscal year, or assigns a subcommittee to consider, approve, and present them to the MWA Board of Directors for acknowledgment before the start of the fiscal year. The Board monitors the implementation of the innovation management plans at least quarterly, provides observations and recommendations, and oversees the MWA's enterprise innovation system that aligns with the enterprise's business direction and operations. The MWA also prepares and disseminates sustainability reports in accordance with applicable reporting standards to the stakeholders for acknowledgment.



Disclosure of Information:

Supervise the MWA to disclose both financial and non-financial information and data through the annual report and the MWA website as follows:

Information Disclosed in the MWA's Annual Report

At least the following:

- 1) Organization structure/shareholder structure
- 2) History of the MWA Board of Directors
- 3) Background information of executives
- 4) Financial analysis reports, performance, and significant changes
- 5) Auditor-certified financial statements
- 6) Report of the board of director's responsibilities/the Audit Committee's responsibilities concerning financial statements
- 7) Key business risks
- 8) Remuneration policy and pay information of the board of directors
- 9) Remuneration policy and pay information of high-ranking executives
- 10) Number of meetings attended by the board of directors and subcommittees by individual directors
- 11) Good corporate governance activities
- 12) Corporate social and environmental responsibility activities
- 13) Policies and performance in the management of connected transactions
- 14) Nature of business, business plans, and strategies



Information Disclosed on the MWA's Website

At least the following:

- 1) Policy direction of the MWA
- 2) Good corporate governance policy
- 3) Activities in line with government policies
- 4) Important work plans
- 5) Significant investment information
- 6) Procurement
- 7) Important financial and non-financial performance
- 8) Annual reports



Monitoring of Performance:

Monitor financial and non-financial performance during monthly Board of Directors meetings and provide comments and recommendations to improve efficiency and effectiveness of operations to achieve targets.



Activities Related to the Highest-Ranking Executives and High-Ranking Executives:

- 1) Establishment of the Metropolitan Waterworks Authority (MWA) Governor Nomination Committee to evaluate the criteria and methods for recruiting suitably qualified candidates to serve as the Governor of the MWA.
- 2) Supervise and ensure that the MWA has a suitable structure for high-ranking executives, roles and responsibilities, and qualifications.
- 3) Assess the performance of the Governor and high-ranking executives with clearly specified criteria,

indicators, weights, and goals from the start of each year and performance evaluation taking place semi-annually, and link performance evaluation results to the incentive system.

- 4) Oversee the development and implementation of a succession plan for the Governor, high-ranking executives, and key positions within the MWA.
- 5) Encourage and support management and employees to participate in training and development programs to gain useful work knowledge and experience.
- 6) Oversee to ensure that the Governor manages human resources in alignment with the missions and objectives of the state enterprise while retaining competent state enterprise employees.



Appointment of the Committees and Subcommittees

To ensure oversight and review of matters before submission to the MWA Board of Directors.



Communication with the MWA Board of Directors ⁽²⁻¹⁶⁾

The MWA communicates important issues or concerns to the MWA Board of Directors at meetings of the MWA Board of Directors, which are held monthly, after screening by related committees and subcommittees.

Performance Assessment and Skill and Knowledge Development ^(2-17, 2-18)

The MWA requires an assessment to be conducted the MWA Board of Directors annually in line with the good corporate governance principles for the state enterprise, by which a performance evaluation of the entire board of directors of the state enterprise and individual directors has to take place at least once

annually every year to allow the board of directors to review work performance and issues and obstacles encountered in the past year and to enhance the board of director's work performance. In the fiscal year 2025, the MWA Board of Directors completed evaluation forms and approved 3 types of evaluation forms as follows: the director self-assessment form, the board evaluation form, and the MWA director's cross-evaluation form. After completing the evaluations, the evaluation results were brought together for mutual consideration in order to seek ways to improve the different work activities of the board of directors and create plans to enhance the corporate governance effectiveness of the MWA Board of Directors in the fiscal year 2026 to improve performance effectiveness.

Board of Directors' Performance Evaluation in the Fiscal Year 2025



Accordingly, the MWA Board of Directors plan to enhance corporate governance effectiveness in the fiscal year 2025 requires monitoring and acknowledging the performance of risk management/internal control and internal auditing every quarter, as well as monitoring situations affecting the MWA's operations, and providing solutions whenever situations arise that affect operations or cause performance to not meet targets. In addition, the MWA considers the key missions of the board and

the framework for evaluating the performance of the state enterprise in the areas of good governance and organizational leadership, based on the enterprise's evaluation criteria, along with issues involving evaluation scores that fall below the overall average score, and make recommendations based on evaluation results, using analysis to develop plans to increase the effectiveness of the MWA Board of Directors governance in the fiscal year 2026.

The MWA has a policy to support the board of directors to receive training and professional development to enhance their knowledge and experience through training/seminars in related courses in order to promote the performance of duties to effectively oversee operations according to the MWA's strategies in a structured and continuous manner. These courses include the "Director Certification Program" (DCP), the "ESG in the Boardroom: A Practical Guide for Board", organized by the Thai Institute of Directors (IOD), along with other appropriate courses. In addition, site visits are arranged for reviewing the management of waterworks systems and other related work systems, and AI technology has been adopted for pipe inspections, as well as innovation and sustainability initiatives to enable the MWA to effectively apply the knowledge gained

to develop a secure water management system that sustainably improves the quality of life of the public. Furthermore, subcommittees appointed by the MWA Board of Directors conduct related work studies based on their powers and duties. For example, the Water Loss Monitoring and Water Pressure Management Subcommittee conducted a study visit to observe the inspection and repair of the broken main water pipe at the Crystal SB Ratchaphruek shopping mall on Ratchaphruek Road and engaged in exchanges to answer inquiries on such topics as main pipe water loss management, water loss monitoring with the aid of the Smart Trunk system, water balancing, use of leak inspection tools (field work), etc. In addition to work studies, the MWA Board of Directors also made visits to review the performance of work units at operational sites.

Compensation for MWA's Committee ^(2-19, 2-20)



As a state enterprise under the supervision of the Ministry of Interior, Board members are entitled to receive compensation according to criteria approved by the Cabinet. Compensation is paid during the period that the Committee members are still in term of office, if in the case of retirement/out of office, no further compensation is paid to such members. However, each Committee's member holds the right to receive monthly compensation of up to 10,000 baht, prorated based on the length of their tenure. The Chairman of the Board is entitled to receive compensation twice the amount of monthly compensation paid to each member of the Committee or 20,000 baht per month.

The payment of meeting allowances for Board members are paid in accordance with the criteria monthly compensation and meeting allowance for State Enterprise Committee and other Committee's members in Subcommittees, Subcommittees, or other working groups in accordance with the Cabinet resolution

dated 24 April 2019. The Committee's member holds the right to receive a meeting allowance of not more than 20,000 baht per month, and the Chairman of the meeting holds the right to receive at a rate of 25 percent of the meeting allowance paid to each member of the Committee as a surplus.

- 1) In the case of MWA's Committee meetings, the meeting allowance is paid once a month. In this regard, it shall consider paying more than once per month, but not more than fifteen times per year, when it is reasonable.
- 2) In case of a specific Subcommittee meeting, other Committee members or working groups who are appointed by law or regulations which are the central criterion, or the Cabinet resolution, the State Enterprise Board, MWA's Committee members, and other Committee members who attend the meeting and are not the member of MWA's Committee, hold the right to receive an equal meeting allowance at the rate of 0.5 times of the amount paid to the



MWA Committee members. But it is not more than two different Committees, and each Committee is paid only once a month.

MWA is required to pay bonuses to Committee members remitting the net profit allocated as state revenue to the Ministry of Finance. The bonus allocation is determined base on to performance evaluation results and the limit under the criteria approved by the Cabinet Resolution

dated 2 July 2013, which has approved the improvement of the incentive program in the monetary compensation in accordance with the state enterprise performance evaluation system, according to the meeting resolution of the State Enterprise Policy Committee Meeting No. 4/2013, dated 17 June 2013.



Anti-Corruption

The Metropolitan Waterworks Authority (MWA) is committed to managing work while conducting its operations in accordance with good governance principles with emphasis on becoming a transparent enterprise that combats corruption while ethical and moral standards with consideration to every group of stakeholders. In doing so, the MWA have specified policies and practice guidelines for promoting ethics and integrity and established an MWA Anti-Corruption and Misconduct Plan and reported performance according to the plan to the Anti-Corruption Command Center, Ministry of Interior (ACCC, MI) according to set timeframes.

Anti-Corruption Policy

The MWA has set in place guidelines and measures according to the National Strategy on Anti-Corruption and Anti-Corruption Action Plans in State Enterprises (2023-2027) for use as our operating framework by promoting participation in monitoring and instilling conscience and promoting understanding about anti-corruption in addition to reporting wrongdoings to prevent corruption to duties. Furthermore, in cases where corruption is discovered, investigations are conducted to prosecute and administer disciplinary punishments to create examples to deter others.

In 2025, the MWA published a report on the ethical acceptance of assets or other benefits for agencies in accordance with Section 128 of the Organic Act on Prevention and Suppression of Corruption B.E. 2561 (2018). A campaign was also held to encourage personnel to refrain from giving or receiving gifts and presents of any kind while, before, or after performing their duties that could lead to corruption and misconduct (No Gift Policy).



Declaration of Intention

The MWA is committed to operating in a transparent, accountable, and effective manner free of corruption. In doing so, sign a declaration of intent of the intention of the MWA Board of Directors, executives, and employees every year to demonstrate our commitment and obligation to perform our duties with honesty, integrity, transparency, and governance according to the principles of good governance with the intention to achieve work effectiveness and efficiency to drive the MWA's work toward sustainable growth while building confidence among stakeholders about our transparent work operations, which will lead us to become a quality organization.

Conflict-of-Interest Prevention Policy and Guideline ⁽²⁻¹⁵⁾

The MWA places great importance on conflict-of-interest prevention and has issued the Board of Directors of the Metropolitan Waterworks Authority's Announcement on the Policies and Guidelines for Prevention of Conflicts of Interest, Use of Internal Information, and Connected Transactions and issued orders, criteria, and work procedures about reporting of conflicts of interest, use of internal information, and connected transactions in order to have the board of directors, Governor, executives, and employees along with other contract workers such as subcommittees, directors, consultants, and work

committees established by the MWA Board of Directors that are not members of the MWA Board of Directors, the Governor or employees of the MWA to use as clear criteria and practice guidelines in order to raise awareness about conflict-of-interest prevention, which is the duty and responsibility that everyone must understand and practice. Moreover, we have instructed the Internal Audit Office to summarize reports on conflicts of interest, use of internal information, and connected transactions that take place throughout the year to report to the Governor in order to present to the MWA Board of Directors.

Enhancing Governance and Sustainability with the Conflict-of-Interest Reporting System (R-COI)

The MWA is committed to operate according to the principles of good governance and transparency and has transitioned away from the paper-based conflict-of-interest (COI) reporting system to a **digital conflict-of-interest reporting system (R-COI)** in order to reduce delays, eliminate human error, and improve

the audit trail through system-based logging to log information changes more safely and accurately. The implementation of R-COI innovation resulted from the mutually-supportive efforts of all three sustainability dimensions (ESG) as follows:



Environmental:

Reduce the use of paper, printer ink, toner and hazardous chemical waste, as well as carbon footprint, resulting from the transport of documents and energy use in production.



Economic & Operational:

Reduce long-term hidden costs and increase flexibility to allow operators and executives to access the system at any place and time to promote business continuity and enable the enterprise to operate and make decisions in a timely fashion even during crises.



Social & Governance:

Promote transparent, verifiable, and equitable work standards and reduce corruption, while maintaining information confidentiality to boost employee confidence and the trust of stakeholders and regulatory agencies in a sustainable manner.

In the fiscal year 2025, a total of **3,978 operators** of the MWA, namely, the MWA Board of Directors (including the Governor), employees, and other contractors **reported that they had no conflict of interest.**

In the MWA's procurement process, the direct and indirect interests of natural person bidders and other juristic persons are reviewed, particularly in the

administrative and capital aspects or the crossing over of the administrative and capital aspects. The MWA firmly adheres to and operates strictly in accordance with the Public Procurement and Supplies Administration Act, B.E. 2560 (2017), the Ministry of Finance Regulation on Government Procurement and Supply Administration, B.E. 2560 (2017), and other related laws and regulations.



Assessment of Enterprise Corruption Risks and Criteria Used (205-1)

The MWA creates a corruption risk management plan annually. In the fiscal year 2025, actions were taken as follows:

1. The MWA took part in an activity to drive assessment of corruption risks in agencies under the Ministry of Interior for the fiscal year 2025, where lecturers from the Office of the Public Sector Anti-Corruption Commission (PACC) participated in a discussion under the topic “Corruption Risk Assessment Guideline for the Fiscal Year 2025” through the government agency corruption risk assessment system (CRA), as well as workshop group activities under the topic “Corruption Risk Assessments by Agencies under the Ministry of Interior.” Their objectives were to enable government agencies to conduct corruption risk assessments and set measures to control, prevent, obstruct, reduce, and eliminate risks of corruption that might occur from work activities, with correct adoption as a guideline in the preparation of corruption risk management plans in accordance with objectives.
2. The MWA developed a corruption risk management plan for the organization. In the fiscal year 2025, the Office of the Public Sector Anti-Corruption Commission (PACC) required state enterprises to conduct a corruption risk assessment for one procurement project with the highest contract value. Accordingly, the MWA selected the following project for the assessment: Construction of an 80,000-cubic-meter clear water storage tank at the Bang Phli Water Distribution Pumping Station under Contract G-BP-9, with a contract value of 932,240,000 baht, including related works.

The assessment results are reported as follows:

- Agency corruption risk report form.
- Corruption risk issues report form.
- Corruption management risk report form.
- Project procurement estimate report form.



3-Step Corruption Risk Assessment Method



These were an analysis of corruption risk factors according to the Fraud Triangle theory, namely as follows:



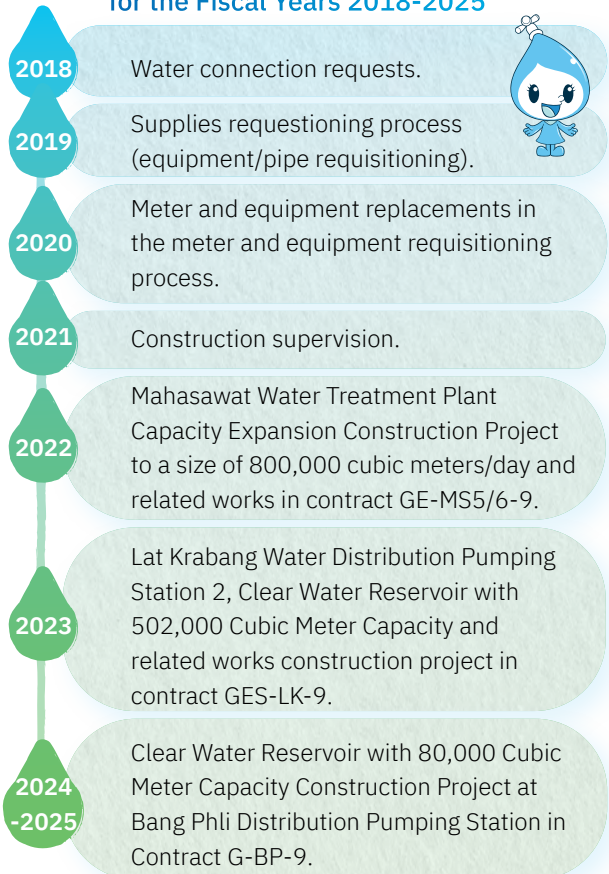
- **Pressure/incentive** to act.
- **Opportunity** arising from vulnerabilities in various systems, quality of governance, and weaknesses in the internal control of the enterprise.
- **Rationalization** to support actions.

Project risk assessment found
no complaints
related to corruption risks.



The aforementioned project was implemented through the Metropolitan Waterworks Authority Anti-Corruption Operation Center (MWA AOC). Because the MWA has corruption risk control measures and observers in every process, procurement processes occur in a proper manner.

Enterprise Corruption Risk Management Plan for the Fiscal Years 2018-2025



The MWA reported the implementation results of its organizational corruption risk management plan to the Anti-Corruption Operation Center of the Ministry of Interior (ACOC, MOI) for submission to the Office of the Public Sector Anti-Corruption Commission (PACC). In the fiscal year 2025, the MWA also conducted a corruption risk assessment on bribery-related issues covering its operations and duties in accordance with its organizational mission, including the following:

- (1) Authorizations and approvals occurred in accordance with the Facilitation of Official License Consideration Act, B.E. 2558 (2015) for the "Prevention of Bribery in the Water Meter Inspection Certificate Issuance Process."
- (2) Use of legal authority/mission-based service provision occurred according to the regulation on the "Prevention of Bribery in Requests for Rent for Use of Multipurpose Buildings."

(3) Procurement occurred according to the regulation on the "Prevention of Bribery in the Construction of a Clear Water Reservoir Sized 80,000 Cubic Meters at Bang Phli Water Distribution Station in Contract G-BP-9."

(4) Human resources management occurred under the topic "Prevention of Use of Discretion in the Probationary Work Evaluations of Probationary Employees."

Communication and Education about Anti-Corruption ⁽²⁰⁵⁻²⁾

The MWA issued public announcements to the board of directors, executives, employees, and stakeholders to raise awareness and instill conscience about promoting virtue, ethics, and anti-corruption through interviews, training, creation of various public relations media, and integration of participation in agency activities as follows:

(1) Education in Governance, Integrity, Ethics, and Anti-Corruption

1.1 On 21 May 2025, two training courses were launched on anti-corruption as follows:

- 1) Anti-corruption course under the title "Preventing Corruption in the Enterprise."
- 2) Training under the title "Anti-Corruption through the Sufficiency Economy."

1.2 On 8 August 2025, a lecture was held under the title "Governance and Ethical Standards" as part of the training project "Orientation for New Employees."

(2) Preparation and Dissemination of Public Relations Media via Communication Channels, such as Circular Letters, Intranet, Internet, and Facebook: MWA CG Club

2.1 Posters were prepared to communicate the following matters:

- Criteria for ethical acceptance of assets and other benefits of government employees.
- Executives and personnel of the MWA jointly promote an organizational culture based on the No Gift Policy to prevent the acceptance of gifts or other benefit from stakeholders in the performance of duties.
- Guidelines for appropriate conduct by MWA personnel in accordance with ethical standards and the MWA Regulation on the Code of Ethics for MWA Executives and



Employees, B.E. 2566 (2023) (Dos and Don'ts).

- Information on the Integrity and Transparency Assessment (ITA) for government agencies.
- Good practices and review of agency ethics.
- Channels for submitting complaints and reporting corruption and misconduct, including the Metropolitan Waterworks Authority Anti-Corruption Operation Center (MWA AOC).

2.2 Video clips were produced to communicate the following:

- No Gift Policy campaign of the Corporate Governance department to communicate knowledge and understanding related to the acceptance of assets or other benefits under Section 128 of the Anti-Corruption Organic Act, B.E. 2561 (2018).
- Interviews of award recipients of the “Phet Phatsadu Project” (distinguished executives and supply operators) in year 2024.
- “Record of Good Deeds” Project.

(3) Projects and Activities for Promoting an Organizational Culture of Good Governance

- The MWA Board of Directors, executives, and employees signed the declaration “Effective, Transparent, and Verifiable MWA without Corruption” for the fiscal year 2025.
- The MWA Governor presented certificates of recognition to personnel who demonstrated good deeds and exemplary conduct under the “Record of Good Deeds Project.”
- The MWA participated in the Integrity and Transparency Assessment (ITA).
- The MWA reviewed the ethics of department-level agencies.
- Members of the MWA Governance Council communicated information about governance, integrity, and ethics to agency personnel.
- The MWA campaigned for the “No Gift Policy” in the fiscal year 2025.
- The MWA organized the MWA Governance Council Day 2024 under the concept “Knowing Enough Is Enough”.
- The MWA donated old desktop calendars and essential consumer goods to the Foundation for the Blind in Thailand under the Royal Patronage of H.M. The Queen.

- The MWA organized an exhibition to promote governance knowledge during the MWA Open House 2025 event.
- The MWA Governance Council participated in the “MWA Meets the People” activity to promote good governance and communicate governance-related information to stakeholders.

MWA Anti-Corruption Operations Center (MWA AOC)

The MWA has established the MWA Anti-Corruption Operations Center (MWA AOC) with two areas of authority: 1) promoting ethics and good conduct; and 2) anti-corruption operations. The MWA AOC has channels for reporting complaints about corruption and misconduct by MWA personnel. If any person witnesses any corruption or misconduct, it is possible to file a complaint under the Whistle Blowing Policy, which will protect the whistleblowers information and keep their personal information confidential. This is to build confidence in whistleblowers that they will not face repercussions. Complaints can be filed through the MWA’s complaint channels or through the Damrongtham Center, with five channels in total as follows:

1. Secretary of the MWA Anti-Corruption Operations Center, Suthi Uthakakon Building, 8th Floor, MWA Head Office, No. 400 Pracha Chuen Road, Thung Song Hong Sub-district, Lak Si District, Bangkok 10210, Telephone: 0 2500 2518 or 0 2504 0123 ext. 2518.
2. Justice Box (Complaint Box) at the Information Center, Suthi Tharakon Building, 1st Floor, MWA Head Office, No. 400 Pracha Chuen Road, Thung Song Hong Sub-district, Lak Si District, Bangkok.
3. E-mail: anticor@mwa.co.th.
4. Internet: Click the link under the heading “MWA Services,” and select the “MWA Anti-Corruption Operations Center” and then go to the banner “Complaints” and the banner “Report Corruption and Misconduct (MWA Anti-Corruption Operations Center)”.
5. Intranet: Complainants can click on the banner “Complaint Handling” on the main page <http://intra.mwa.co.th>

In the fiscal year 2025, the MWA AOC implemented the Ministry of Interior’s Action Plan for the Prevention of Corruption and Misconduct for the fiscal year 2025. The MWA already completed the following tasks according to the plan:

1. Updated the MWA AOC complaint handling manual.
2. Prepared media to publicize the updated complaint channels of the MWA AOC.
3. Managed complaints that reached the MWA AOC in accordance with established procedures.

Governance Council

The MWA established the MWA Governance Council in accordance with MWA Regulation No. 138 Re: MWA Governance Council, B.E. 2559 (2016) to encourage personnel to participate in the anti-corruption mission of the enterprise. Opportunities are given for all employees to take part by becoming members of the MWA Governance Council, which consists of representatives from departments, MWA experts, independent sections, and the secretarial sections of each line of work. The number of members representing each agency is based on the number of employees at the ratio of one council member per 50 employees. Council members are appointed based on applications and elections from among agency employees, and the highest scorers are appointed by the Governor to become members of the Governance Council for a term of 2 years per time. During each selection, 98 members are selected from 74 agencies total.

The members of the Governance Council has the duty to attend meetings, cooperate and assist in the work of the Governance Council in a manner that benefits the enterprise, in addition to acknowledging and monitoring news information in order to contribute to monitoring, surveilling, and preventing corruption from taking place in the enterprise, without disclosing information received from performing their duties as council members in any manner that might impact or damage other parties. Their duties also include hearing opinions and disseminating news and information to the enterprise's personnel to ensure awareness of the importance of virtues, morals, integrity, and ethics in work, as well as to receive the recommendations of agency personnel to improve the work of the Governance Council and achieve the shared goal of jointly driving anti-corruption and prevention of conflicts of interest of the enterprise toward achieving sustainability for the enterprise.



Overview of Anti-Corruption Performance for the Fiscal Year 2025 ^(205-2, 205-3)

Item	Unit	Total
Total Number of Departments in the Organization	Department	65
Number of Departments Assessed for Corruption Risk	Department	4
Percentage of Departments Assessed for Corruption Risk	Percent	6.15

The Board of Directors (BOD), Executives, and Employees of the MWA Who Received Training in the Anti-Corruption Policy and Processes

Members of the MWA Board of Directors	People	13
Members of the MWA Board of Directors who received training	People	5
Percentage of members of the MWA Board of Directors who received training	Percent	38.46
Number of Executives (section supervisor or equivalent and above)	People	1,407
Number of Executives (section supervisor or equivalent and above) who received training ⁽⁶⁻¹⁰⁾	People	312
Percentage of Executives who received training	Percent	22.17



Item	Unit	Total
Number of employees (excluding contract workers)	People	2,430
Number of employees who received training (excluding contract workers) ⁽¹⁻⁵⁾	People	664
Percentage of employees who received training	Percent	27.33

The Board of Directors (BOD), Executives, Employees, and Trade Partners of the MWA Who Received Communication Media in the Anti-Corruption Policy and Processes

Number of members of the MWA Board of Directors who received communication	People	13
Percentage of members of the MWA Board of Directors who received communication	Percent	100
Number of Executives (section supervisor or equivalent and above) who received communication	People	1,407
Percentage of Executives (section supervisor or equivalent and above) who received communication	Percent	100
Number of employees (excluding contract workers) who received communication	People	2,430
Percentage of employees who received communication	Percent	100
Number of trade partners (suppliers and contractors) ^a	People	181 ^a
Number of trade partners (suppliers and contractors) who received communication	People	181 ^b
Percentage of trade partners (suppliers and contractors) who received communication	Percent	100
Corruption Incidents (If any by employees and trade partners) ⁽²⁰⁵⁻³⁾	case	1
No. of Legal Cases Related to Corruption in the Enterprise or Employees during the Reporting Cycle ⁽²⁰⁵⁻³⁾	case	0

a. Trade partners who made contracts with the MWA valuing five hundred thousand baht and up for 3 consecutive years.

b. In the fiscal year 2025, guidelines for operations were communicated with transparency through the procurement process by MWA personnel responsible for procurement, as well as those appointed as procurement officers, in accordance with the organization's ethics and code of conduct.

Survey Results on Perceived Governance and Transparency by Stakeholders (5 points total)

Fiscal Year	 Policy Agencies	 Mission-based Agencies	 Media	 Community and Society	 Trade Partners	 Allies	 Customers	 Employees and Contract Workers	Total Average
2024	4.13	4.09	4.73	4.92	4.93	4.23	4.06	4.41	4.44
2025	4.67	4.67	4.45	4.57	4.61	4.40	4.07	4.10	4.44

ITA AWARDS: Awards for Ethics and Transparency in Public Sector Operations

The MWA received ITA Awards 2025, achieving an “Excellent” rating with a score of 98.66 in the assessment of ethics and transparency in the operations of public sector agencies for the fiscal year 2025. This ranked MWA 5th out of 51 state enterprises and 1st among state enterprises under the Ministry of Interior.

Over the past 58 years, MWA has remained committed to developing into an efficient organization that recognizes the importance of managing the enterprise according to the principles of corporate governance, while promoting ethics and morality, and developing transparent services. This includes disclosing information to the public, providing opportunities for public participation in monitoring and auditing operations, and continuously building an enterprise culture to combat corruption, all to align with the national strategic plan on combating corruption and misconduct (2018-2037).





Effective Communication (2-16, 2-25, 2-26)

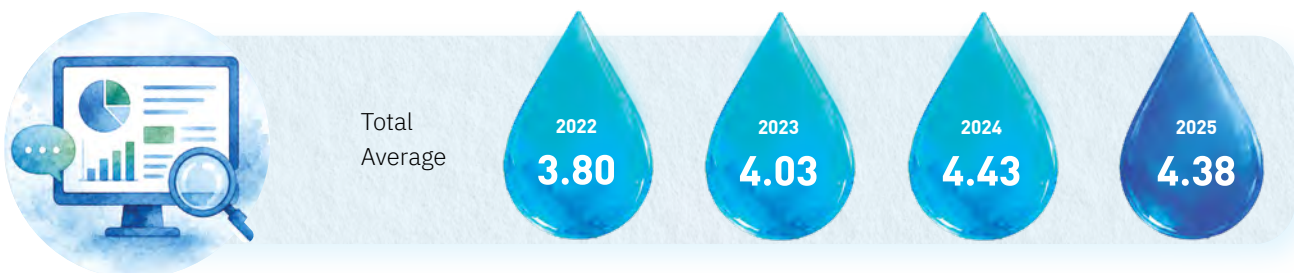
The MWA is a state-owned enterprise that plays a crucial role in providing high-quality tap water and delivering excellent services to the citizens of Bangkok, Nonthaburi, and Samut Prakan. Effective communication is therefore a key factor in efficiently plays a crucial role in providing high-quality tap water and delivering excellent services while meeting the needs and expectations of stakeholders. In view of this, the MWA has developed a public relations plan to communicate with both internal and external stakeholders, and in the fiscal year 2025 the MWA adopted the theme of “Quality Water for Quality Living”, focusing on three

key areas, namely, public relations communication related to quality water supply systems, public relations communication related to service excellence, and public relations communication related to sustainable management. Furthermore, the MWA plans the public relations topics that the Enterprise Communications department must carries out each year, such as mission-based public relations communications to ensure complete and comprehensive communication through various channels and projects/activities of the enterprise.

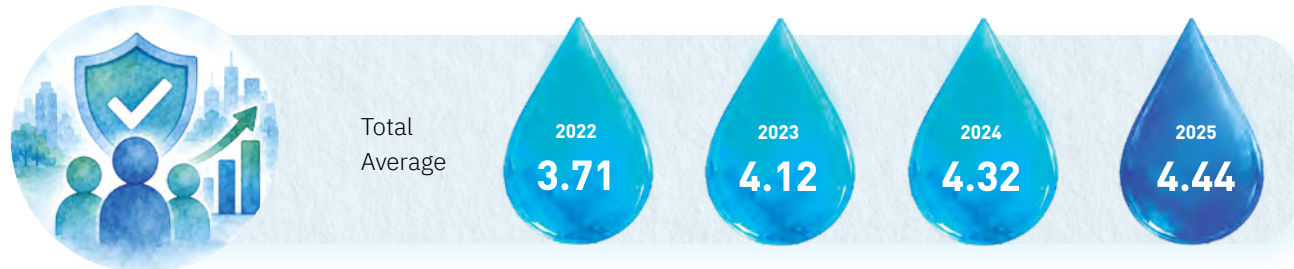


Survey results on stakeholder perception and confidence in the MWA

MWA’s stakeholders’ level of information awareness (full score: 5)



MWA’s stakeholder confidence level (full score: 5)



Stakeholder Engagement in Enterprise Operations

Promoting stakeholder engagement in the enterprise’s operations is a key component of the MWA’s communication process that helps the MWA develop quality services and effectively respond to stakeholder needs, as well as provide opportunities for stakeholders to participate in fostering good relationships while enhancing operational transparency.

The MWA has established engagement channels for reviewing and developing enterprise plans in

collaboration with stakeholders, including communicating the directions outlined in the Enterprise Plan to inform all stakeholders every year. These include meeting to review and discuss the MWA Enterprise Plan; organizing events to communicate the enterprise’s activities to explain the enterprise’s direction, master plans, action plans, and risk management plans; and providing opportunities for receiving opinions and exchanging suggestions in order to improve service delivery consistently with the enterprise’s objectives

and stakeholders' expectations in an effective and sustainable manner.

Additionally, the MWA Meets the People Project is implemented annually across all 18 MWA branch offices with the aim to proactively strengthen relationships with residential consumers and local communities.

The project also disseminates MWA news and useful information on waterworks and tap water systems to the public and compiles the needs and expectations of target consumers to improve service plans. In the fiscal year 2025, the MWA branch offices conducted four project activities.



Thereby achieving **a residential consumer satisfaction score of 4.88**

and **a community consumer satisfaction score of 4.92 (out of 5 total).**



Complaint Management 2-16

In addition to reviewing and preparing the enterprise's public relations communication plans every year, the MWA improves and develops in response to changing circumstances with situational changes, such as changing consumer expectations, technological developments, emergency management or strategic adjustments in alignment with potential policy changes.

Accordingly, the MWA has guidelines for suggestions and complaints on water supply services and other related services through the establishment of the Complaint Management Policy and an enterprise Complaint Management Manual. These documents

cover management of complaints received from consumers and stakeholders affected by the MWA's products (tap water) and services, such as tap water quality, water pressure/volume, pipe laying/repair works, personnel services, water bills, etc. The complaint management process begins with the receipt of the complaint, followed by assessment of the situation, and corrective actions leading to effective resolution which is accompanied by follow-up evaluations, data collection, summary and analysis to inform executives and related parties for service improvement and development.

Complaint Channels for the MWA's Products and Services:



Telephone

1125 hotline and telephone calls to all MWA branch offices



Online channels

- MWA onMobile application
- Social Media: Facebook, X
- Line OA: @MWAThailand
- www.mwa.co.th
- MWA eService
- E-mail: mwa1125@mwa.co.th
- Web Chat



Office contact channels

18 MWA branch offices and 4 mall service centers



Mail

Addressed to the Metropolitan Waterworks Authority at 400 Pracha Chuen Road, Thung Song Hong Sub-district, Lak Si District, Bangkok 10210



Other channels

such as the Government Contact Center for the People (GCC 1111) and the Damrongtham Center, Ministry of Interior



Customer Complaint Handling Satisfaction Survey Results



Total
Average

2023
4.016

2024
4.283

2025
4.364

The MWA has established the criteria, measures, and guidelines for handling complaints related to corruption and misconduct by MWA officials and has established the Metropolitan Waterworks Authority Anti-Corruption Operations Center (MWAAC) as a channel for stakeholders to report corruption. Furthermore, measures are in place to protect whistleblowers who provide information to the MWA through the

implementation of the MWA Whistleblowing Policy as a guideline for reporting corruption and protecting whistleblowers. It is the MWAAC's responsibility to forward such matters to the relevant agencies for legal action according to the law and the requirements, regulations, criteria, and procedures of the MWA. In the fiscal year 2025, no complaints regarding corruption were reported through the MWAAC.



MWA Official Information Centers

The MWA Official Information Centers are located on the 1st floor of Sutthitharakon Building and the 1st floor of Sutthiutthakakon Building at the MWA Head Office. They were established with the goal to provide information services to the public with accuracy, transparency, and governance in line with the Official Information Act, B.E. 2540 (1997) under the concept “Disclose first; only withhold if necessary”. The public can examine official information on their own via the electronic channels of the information centers, which are available for 24-hour

access, via the website www.mwa.co.th, or the website <https://infocenter.oic.go.th/การประปานครหลวง>

The commitment to improve the information disclosures of the MWA has allowed the MWA to maintain its operational quality, leading to national recognition and for the MWA to receive the Outstanding Official Information Center Award from the Office of the Permanent Secretary, the Prime Minister's Office, for the 7th consecutive year (2019-2025).





In 2024, the MWA's Official Information Centers received a high evaluation score of 98 out of 100 points (a rating of "Very Good", or "Silver Shield", reflecting effective, transparent, and publicly accessible information management capabilities), and in 2025 the MWA received an Outstanding Official Information Center Award on the rating of "Excellent" or "Golden Shield" (which is the highest level of assessment that an official information center can receive and is awarded only to agencies that can maintain their operational standards and earn an award consecutively for at least five years), along with the maximum achievable assessment score of 100 points. The MWA is the only state enterprise under the Ministry of Interior to have ever been granted the Golden Shield award.

In 2025, MWA received the Outstanding Official Information Center Award,

"Excellent Level" (Golden Shield)

which is considered the highest award in the evaluation of outstanding official information centers.





Business Continuity Management

In addition to providing waterworks services under the Water Safety Plan (WSP), which follows the WHO guidelines, the MWA ensures water quality throughout the entire water supply process, from source to consumer. In doing so, the MWA relies on the principle of “Protect, Remove, Prevent” to reduce and control contaminants for people living within its service area of Bangkok, Nonthaburi, and Samut Prakan, ensuring that the public has comprehensive and sufficient around-the-clock access to water for use and consumption.

The MWA also recognizes the importance of enhancing the operational efficiency for greater resilience when in responding to crises or threats from various causes, including human-related incidents and natural disasters such as floods, earthquakes, fires, sabotage, etc. The MWA's goal is to reduce severity and minimize potential damage to ensure that the MWA's main mission and critical operations successfully fulfill their mission of delivering continuous water supply to consumers and effectively respond to crises and reduce impacts on stakeholders to boost confidence in the enterprise. The Business Continuity Management System (BCMS) has been adopted in support of this effort and to set strategies and guidelines for continued business continuity during disruptions. Furthermore, a manual has been created to serve as a guideline and a tool for ensuring that activities under the BCMS meet their specifications and contribute to effective system development.

The MWA also recognizes the importance of enhancing the operational efficiency for greater resilience when in responding to crises or threats from various causes.

The Business Continuity Management System (BCMS)

has been adopted in support of this effort and to set strategies and guidelines for continued business continuity during disruptions.



The MWA has established a Business Continuity Policy applicable to the MWA Governor, executives, employees, and contractors to serve as an operating guideline and has appointed the Business Continuity Management System Committee (BCMS Committee) to supervise, oversee, monitor, and promote operations in accordance with the policy, and established work plans, with the Business Continuity Management System Working Team (BCMS Working Team) and supporting work committees helping to drive implementation effectively according to BCMS standards.

The Business Continuity Management System Committee (BCMS Committee)

is responsible for overseeing, supervising, monitoring, and promoting the implementation of activities in accordance with the established policies and plans.

The Business Continuity Management System Working Teams (BCMS Working Teams) for each process

are responsible for providing support and implementing the Business Continuity Management System standards to ensure their effective implementation.



Accordingly, the MWA was able to maintain its BCMS system according to the ISO 22301:2019 standard with its scope covering raw water management, tap water treatment, transmission-distribution pumping, MWA branch office services (supplying water to consumers), and support functions ranging from raw water systems to supplying water to consumers within the service area of the MWA. In addition, emergency response plans and the Business Continuity Plan (BCP) were conducted to boost confidence in stakeholders that the MWA can continuously produce high-quality tap water for consumers even if the enterprise faces crises in the future.

Case Study: Burst Water Main in Front of Vajira Hospital

The MWA is determined to deliver clean, safe, and high-quality water continuously, even during crises caused by external factors beyond its control. The MWA has adopted the Business Continuity Management System (BCMS) as a key mechanism for effective emergency response to minimize impacts on society and communities.



The landslide disaster at the subway tunnel construction site on 24 September 2025 in front of Vajira Hospital caused widespread impacts on the surrounding structures and utility systems, including the collapse and rupture of the MWA's 1,200-millimeter water main. In response, the MWA took swift actions to minimize impacts in accordance with the enterprise business continuity plan as follows:



Incident Command and Mitigation

The MWA temporarily shut off water supply to the aforementioned area to prevent tap water from flowing into the collapse site, which could have posed risks to life and property of the surrounding populace, and then the MWA rerouted the water supply by urgently diverting water from nearby areas to provide support and minimize inconvenience experienced by water consumers in the vicinity.



Service Continuity for Critical Infrastructure

Because the incident occurred near Vajira Hospital, a major hospital that required a continuous water supply in its medical and public health missions, the MWA urgently needed to install temporary water pipes to supply water to the hospital, as well as dispatch drinking water trucks around the clock to support the operation of the hospital and the surrounding community, ensuring that critical activities continued without disruption.



Stakeholder Integration & Crisis Communication

The MWA coordinated closely and supported efforts, worked closely with related sectors, such as the Mass Rapid Transit Authority of Thailand (MRTA), the Metropolitan Electricity Authority, and Dusit District Office, in order to assess the situation, plan emergency maintenance, and restore the area to normalcy and safety, while providing regular updates on water pipe system repairs to inform the public through all communication channels, with the MWA Call Center 1125 serving as a 24/7 open channel to receive public complaints and coordinate timely assistance to disaster victims.

The aforementioned incident response reflects the MWA's readiness to serve as a resilient utility enterprise that earns the public's trust in delivering secure and sustainable water supply services to society.



Innovation and Digitalization: Mechanisms for Driving Future Sustainability

“Innovation” and “Digital Transformation” are not words that refer only to modern technology. They are also essential tools and mechanisms for driving enterprise sustainability, whether in terms of increasing income, reducing expenses, enhancing management efficiency, or reducing environmental impacts, as well as improving public services. **The Research, Development and Innovation Master Plan and the Digital Technology Master Plan** serve as the enterprise’s strategic roadmap for operational enhancement through innovation and digital technology.

Building on Knowledge and Innovating for Sustainability

The MWA has clearly defined its vision to build upon knowledge and innovate for sustainability. This vision lies at the heart of the enterprise’s R&D initiatives. To translate this vision into tangible results, the MWA Board of Directors has established the Policy on Creative Thinking and Innovation Management to serve as a guideline for all executives, employees, and contractors. It is a framework that governs key practices as follows:



The aforementioned policy reflects the MWA’s structured framework, driven by a long-term R&D&I Master Plan and the 2025 Action Plan in support of the 6th MWA Enterprise Plan. Moreover, target innovation outcomes are closely aligned with the enterprise’s mandate to drive commercial value and revenue growth through innovative solutions.

MWA Innovation System (MWAIS) and Implementation Mechanisms

The MWA Innovation System (MWAIS) drives innovation systematically. The MWA’s board of directors and senior executives jointly created a policy to communicate with the MWA’s stakeholders inside and outside the enterprise, and the **Knowledge Management and Innovation Management Committee** (KM & IM Committee) performs duties to manage the enterprise’s knowledge and innovations together with the **Research, Development and Innovation Working Group** in order to jointly consider, screen, and monitor projects funded by the MWA and oversee intellectual property rights protection to closely manage and supervise innovation work.

Furthermore, the MWA has specified an innovation theme to serve as a guideline for organizing various innovation activities, such as research funding support to MWA employees and academic institutions, the One Department, One Innovation or One Process Development project, etc., including smart utility/digital transformation, such as intelligent water system management that uses AI and big data for predicting water and service requirements as well as cost and water loss reduction, and enhancing enterprise productivity. Another theme also followed is “Smart and Sustainable Organization”, aimed at enhancing enterprise management for greater efficiency and sustainability.

Process Innovation Development Projects

Process innovation development projects are core initiatives under the MWA R&D&I Master Plan and its annual action plan. They share the strategic objective of strengthening organizational capacity through innovation. These projects integrate knowledge management to streamline internal processes. Two supporting projects have been implemented as follows:

1) Innovation Research Grant Project

Under this project, the MWA provides financial support for innovation research conducted by internal employees as well as external entities. In the fiscal year 2025, the MWA awarded grants to five internal projects and five external third-party projects.

Examples of MWA-Funded Research, Development, and Innovation Projects:

Automatic Chlorine Refilling System for Hospitals/Commercial Establishments (Chlorine Care): This project received funding under the MWA Regulation on Research and Innovation Funding and Promotion, B.E. 2562 (2019), to procure equipment for developing an innovative prototype named “Chlorine Care.” Additionally, Iwaki (Thailand) Co., Ltd. supported the initiative by providing technical guidance on free chlorine measurement devices.

The Automatic Chlorine Refilling System for Hospitals and Commercial Establishments (Chlorine Care) was designed to automate chlorine replenishment in water storage reservoirs. The system automatically and continuously regulates free residual chlorine levels in accordance with WHO guidelines and water demand,

thereby ensuring the delivery of safe, high-quality water to consumers.

The outcome from the research funding is an automatic chlorine refilling system for hospitals/business establishments (Chlorine Care) that enables the MWA to manage cost in a worthwhile manner. As a result, the MWA intends to install this system as a supplementary business going forward in line with the enterprise’s sustainability effort in the area of enhancing financial security.



Automatic Chlorine Refilling System Innovation for Hospitals/Business Establishment (Chlorine Care)

2) Scale Up Innovation Project

This initiative applies knowledge and innovation management to optimize internal processes. The Innovation Department identifies operational needs through the Knowledge and Innovation Management Subcommittees across various lines of work (Line KM-IM Committees). Promising innovative solutions are subsequently evaluated for their efficiency and effectiveness before being scaled up enterprise-wide. In the fiscal year 2025, the MWA successfully scaled up eight innovation projects.



Scale Up Innovation Project Examples:

Level Up Pumping Plus Water Distribution Pumping Management Model (LVP+)

The Level Up Pumping Plus Water Distribution Pumping Management model (LVP+) is an innovation developed by the MWA's employees for use as a tool for analysis and providing recommendations on how to improve the operation of water pumps at water transmission pumping stations and water distribution pumping stations for maximum suitability and efficiency. The system can be implemented to achieve multiple objectives to provide both direct and indirect benefits, such as enhancing water pump effectiveness, reducing energy consumption, reducing the operating costs of the MWA, and helping to control the operation of water pumps to remain within a suitable range to help extend the service life of these machines.

Furthermore, the LVP+ model can also be used as a tool to aid in analysis for sizing water pumps appropriately to meet water consumer needs, and it can also model the operation of fixed-speed water pumps together with variable-speed drives (VSD) for choosing an appropriate quantity of VSDs for use. Presently, the enterprise innovation department has provided training and delivered the model to 15 water distribution pumping stations for trial operation.



Pumping Management Model (LVP+)

Electric Data Center (EDC)



The Electric Data Center, or “EDC”, is a center for the overall electrical data of the MWA that allows contractors to access electrical data easily, conveniently, and swiftly in one place. It connects and integrates the MWA’s electrical usage data from various work systems and presents data comparisons via a simple dashboard consisting

of graphs and charts. It is a tool meant to facilitate quick and effective creation of analysis reports on the electrical fee component of water costs, in addition to reducing data preparation errors and enhancing operational speed. Furthermore, the center also gathers data on electrical meter ratings and displays useful maps for planning future utilization of renewable energy, such as solar panel installations, via the dashboard, and the enterprise innovation department has already provided training and scaled up the project for delivery to department-level agencies for trial implementation.

Key projects under the Scale Up Innovation initiative—such as the Level Up Pumping Plus (LVP+) Water Distribution Model and the Electrical Data Center—demonstrate the MWA's commitment to integrating sustainability with corporate governance and economic growth. This alignment is reflected in executive leadership as well as active innovation from employees and contractors, ultimately reducing operating expenses and optimizing organizational workflows.

Driving the Enterprise with Digital Technology and Data

To deliver clean, safe, and high-quality tap water, the MWA has adopted digital technologies, AI systems, and real-time data monitoring for use in management covering from water treatment to quality control, along with pipe network inspection, water pressure monitoring, and convenient and fast online service accessible at any place and time, with the aim of delivering one-stop service to the public by use of digital systems.

Tap Water Quality Monitoring System

The MWA has developed a “Tap Water Quality Monitoring System” to provide information services and report tap water quality monitoring results in real time with 24/7 availability in the Bangkok, Nonthaburi, and Samut Prakan area via the website <https://twqonline.mwa.co.th/> and the MWA onMobile application. Data are processed and displayed online for 62 water quality monitoring stations, with data ranging from treatment at water treatment plants to the tap water distribution network supplying water to consumers. Six important parameters are monitored and displayed as follows:

- Free residual chlorine (mg/L)
- Turbidity (NTU)
- Electrical conductivity ($\mu\text{S}/\text{cm}$)
- pH (acidity/alkalinity)
- Chloride (mg/L)
- Salinity (g/L).

This system is designed to enhance public confidence, promote health, and ensure tap water safety by providing transparent, accurate, and reliable water quality data. Furthermore, it enables the enterprise to monitor risks proactively and respond to water quality crises—such as saltwater intrusion—in a timely manner.



Tap Water Quality Monitoring System
ระบบตรวจสอบคุณภาพน้ำประปา ONLINE
รูปแบบใหม่ของ กปน. พร้อมให้บริการแล้ว!

สามารถใช้งานผ่านช่องทาง
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 • แอปพลิเคชัน MWA onMobile เลือกฟีเจอร์ 'คุณภาพน้ำประปา'

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MWA onMobile Upgrades Digital Tap Water Service for One-Stop Service

The MWA is driving toward operating as a virtual branch to respond to the one-stop service policy of the Ministry of Interior for the benefit of the public by adopting digital technology to enhance the basic infrastructure access of the public. The MWA onMobile has been continuously developed since its initial

launch in 2014, and in the fiscal year 2025, it was updated to Version 3, which transforms the entire system with faster processing speed and better user experience (UX/UI) to keep up with consumer behaviors today. The key details about the development are shown as follows:

- 1. Real-Time 24/7 Data Access:** Enables continuous monitoring of water consumption, bill payments, and water quality, alongside real-time status tracking for low-flow or non-flow areas.
- 2. Payment and Security System Innovation:** Features the “MWA Prepaid Wallet” for advance payments and integrates digital identity verification with the ThaiD system to ensure robust data security.
- 3. Expansion of Service Scopes and Related Businesses:** Provides digital channels for booking value-added services—such as water tank cleaning, pipe leak detection, and pipe installation—with real-time operational tracking.



Service Upgrade via the Development of the Customer Information System (CIS)

The MWA prioritizes improving its information systems to enhance service experience and provision for customers in the enterprise’s service area. In doing so, the Customer Information System (CIS) serves as the primary system for delivering customer care to over 2.8 million households and supporting the work of over 2,000 employees. The system undergoes continuous enhancements to remain up to date, thereby elevating customer service, optimizing data management, and ensuring secure data handling. Furthermore, it supports seamless integration with future digital services and streamlines internal workflows, ultimately driving the MWA toward becoming a digital enterprise capable of delivering swift, accurate, and efficient services.





The MWA won the ASOCIO Awards 2025 in Outstanding Digital Transformation Organization for developing digital public services, such as CIS Gen 5, MWA eService, and MWA onMobile.



Partnership and Collaboration (2-28)



Collaboration for Effective Operation

Water resource and supply sustainability requires collective effort. The MWA actively partners with external organizations to enhance operational efficiency, value chain sustainability, and stakeholder value—aligning directly with SDG Goal 17: Partnerships for the Goals.

17 PARTNERSHIPS
FOR THE GOALS



1. Enhancing Water Security through Strategic Collaboration (Upstream Collaboration)

The MWA prioritizes water management from the source to ensure sufficient quality and quantity of raw water.

- Integrated river basin management: The MWA holds meetings with Office of the National Water Resources (ONWR) and Royal Irrigation Department regularly every year with the main objectives as follows:
 - Assessing and preparing for drought.
 - Preventing and addressing saltwater intrusion problems.
 - Coping with the rainy season and floods.
 - Driving the implementation of the 20-Year Master Plan for Water Resource Management to align with the National Strategy.

The MWA participates in various committees and working groups under the supervision of Office of the National Water Resources (ONWR) and Royal Irrigation Department to ensure that water management aligns with the current situation each year, such as preparing for the El Niño phenomenon or regularly monitoring water levels in various river basins.

2. Coordination and Collaboration to Enhance the Operational Capabilities of the Enterprise and Setting Standards

Water Pipe Installation/Water Pipe Installation Permit Application

The MWA uses land belonging to other agencies to lay water pipes to distribute water from water treatment plants to households. Therefore, coordination was made to request permission to lay water pipes in specific areas. This includes collaborating on construction projects alongside road and sidewalk renovation projects undertaken by other agencies, such as the following:

- Ministry of Interior: Bangkok, Nonthaburi, Samut Prakan provinces, and local administrative agencies (provincial administrative organizations, municipalities, and sub-district administrative organizations), and the Metropolitan Electricity Authority.
- Ministry of Transport: Department of Highways, Department of Rural Roads, Marine Department, State Railway of Thailand, Mass Rapid Transit Authority of Thailand, Airports of Thailand Public Company Limited, and Expressway Authority of Thailand.
- Ministry of Agriculture and Cooperatives: Royal Irrigation Department.

Academic and Technological Collaboration and Setting of Standards

- The World Health Organization (WHO): Water Safety Plan.
- Ministry of Public Health: Department of Health in the fields of health academia, water quality, and Water Safety Plan.
- Ministry of Industry: Thai Industrial Standards Institute in pipe engineering and pipe accessory standards.

- Ministry of Defence: The Royal Thai Navy, The Hydrographic Department in the areas of sea level and tidal data.
- Thai Waterworks Association.

3. Coordination and Collaboration with Partners to Enhance Service Quality

Collaboration in Providing Public Service

To enhance service speed and convenience, the MWA has partnered with banks and payment agents—including Counter Service at 7-Eleven, Big C, Lotus's, and CenPay—offering customers greater flexibility in paying their water bills.

In addition, the MWA is also collaborating with department stores to operate one-stop government service centers at Central Westgate, Central Chaeng wattana, The Mall Lifestore Ngamwongwan, and BMA Express Service at The Mall Lifestore Bangkai in order to receive water bill payments and accept water service requests.

4. Exchanging Knowledge with External Organizations to Create Shared Value

The MWA has integrated cooperation with the Provincial Waterworks Authority (PWA) through a workshop held on 10 March 2025 to exchange knowledge on active leakage control (ALC) and related technologies. The acquired knowledge has been applied to real-world work situations as follows:

- 1. Improving water loss management efficiency –** Satellite-based leak detection techniques and artificial intelligence have been adopted for more accurate and faster identification of leak areas compared to traditional systems. This data is also being used to review the draft terms of reference (TOR) for the project-based water loss reduction contracts in the target areas for the Fiscal Year 2026.
- 2. Enhancing governance in water quantity measurement –** The criteria for replacing water meters that are still accurate but are at the end of their service life have been improved, and electronic meters (smart meters) have been

installed in 150 pilot locations to accurately measure water volume at low flow periods based on actual usage.

The application of knowledge gained from the exchange program has generated public benefits in various aspects as follows:

- **Security and continuity in water supply (Service Reliability)** – The use of technology to quickly identify leak points has enabled the MWA to swiftly repair broken pipes in a timely manner, reducing both time and the area affected by water supply disruptions while ensuring that the public has a consistent supply of water.
- **Fairness & Accuracy** – The use of smart meters and AI systems to predict water meter inaccuracies has helped to assure the public that billing is accurate and based on actual water usage, thereby reducing complaints about abnormal water bills.
- **Conservation of natural resources and the environment (Water Stewardship)** – Proactive water loss reduction is helping to decrease the amount of clean water that is wasted, leading to sufficient water resources to meet the long-term needs of the population, as well as reduced losses of energy and chemicals used in the water treatment and leak repair processes.





5. Collaboration to Promote Mindful Use of Water and Conservation of Water Resources for Sufficient and Sustainable Use

The MWA implements Demand Side Management (DSM) with the primary objective of promoting responsible water consumption across society. This is achieved through campaigns aimed at driving behavioral change among youth and the general public, as well as encouraging the adoption of water-saving devices and innovations, ultimately conserving the nation's water resources.

Meanwhile, the “Water Saving Label” project began issuing water-saving labels to certify manufacturers since the fiscal year 2018 to promote and support manufacturers and business operators in developing innovations and equipment for conserving water that still deliver satisfaction without reducing product effectiveness, provided they apply to register their certification label with the Trademark Office, Department of Intellectual Property, Ministry of Commerce, under the name **“Water Efficiency Label”**. This label divides water efficiency into three levels, namely, Levels 5, 4, and 3.



The MWA has expanded its efforts to promote products certified with its Water Efficiency Label by inviting government agencies, private companies, and real estate developers to participate in water and environmental conservation. This is achieved through Memorandums of Understanding (MOUs) encouraging the adoption of or transition to MWA-certified water-saving devices. In the fiscal year 2025, the MWA signed MOUs with Britania Public Company Limited and Prukso Real Estate Public Company Limited, covering 34 development projects. In any case, the MWA has already issued nearly 300 batches of Water Efficiency Labels, and real estate business operators have opted to use water-saving devices in nearly 15,000 locations at

real estate development projects, and the MWA plans to expand the initiative to promote wider adoption.





Effectiveness of Internal Management Processes



Enterprise Management

Risk Management



The MWA places importance on risk management to ensure efficient and effective operations, in accordance with the principles of good corporate governance and the enterprise's strategy. A summary of the operations is as follows:

- **Stability in the Raw Water System and Tap Water Treatment, Pumping Transmission, and Pumping Distribution Systems**

At the beginning of Fiscal Year 2025, the influence of the southwest monsoon, low-pressure areas, and several tropical storms brought heavy rainfall, flash floods, and overflowing riverbanks. This resulted in high raw water turbidity over multiple periods. However, the MWA closely monitored and managed the treatment system promptly and efficiently, ensuring an uninterrupted supply of high-quality tap water. Additionally, coordination meetings were held with public and private sector agencies to jointly manage water resources effectively. For long-term security, the MWA is implementing projects to expand production capacity, maintain machinery and equipment, and construct clear water storage reservoirs, as well as improve water canals for greater raw water holding capacity. Accordingly, the MWA has monitored and surveilled major risks and has key risk indices on the enterprise level and operational level in order to control the monitoring of the quantity and quality of raw water used in tap water production. Furthermore, the MWA has preventive maintenance plans (PM) for machinery and equipment used in the water treatment, transmission pumping and distribution pumping systems, and aims to renovate the waterworks infrastructure and enhance the tap water network within the MWA's area of responsibility to support future water usage requirements. This includes

maintaining the stability of the water treatment, transmission pumping, and distribution pumping systems of the MWA to ensure both security and durability.

- **Stakeholder Accountability**

The MWA held a communication meeting regarding its stakeholder relationship building plan for the fiscal year 2025 to ensure that agencies have a clear understanding of the operational plan and procedures. In addition, the MWA has managed its operations to be flexible and prepared for disasters and emergencies in order to effectively respond to crises, and the Business Continuity Management System (BCMS) has been adopted in line with ISO 22301:2019 standard, with a scope covering raw water management, tap water production, transmission pumping and distribution pumping, service provision, and support activities. Furthermore, emergency response plans and business continuity plans are rehearsed to ensure confidence in stakeholders that the MWA has the capability to produce quality tap water continuously, even in times of crisis, such as the road collapse in front of Vajira Hospital along Sam Sen Road, which damaged a main water pipe. As a result of the incident, it was necessary to suspend water supply to carry out repairs and shut the water gates of the main water pipe, as well as divert water inside the main pipe and distribution pipes to swiftly restore water supply to the public for use. Moreover, the MWA dispatched water trucks and distributed drinking water cups and bottles to the people living in affected communities in order to alleviate the people's suffering.

- **Finances**

The MWA is facing challenges in organizational management, particularly in finance, as expenses are continuously increasing while revenue is not keeping pace. This is resulting in a declining net



cash flow. Currently, the MWA utilizes various developed tools to facilitate appropriate financial planning and management. These include the “SAP Analytics Cloud (SAC)” tool, which presents data through a modern dashboard, allowing management to track actual cash receipts and disbursements and projected data over a specific period. This information is then used to manage liquidity and ensure the MWA has sufficient cash reserves for operations. The “Term I can Model” and “Bond Model” tools also enable the MWA to estimate financing more quickly and accurately, covering all repayment terms appropriately according to the MWA’s current financial status.

Furthermore, the MWA recognizes the importance of managing financial liquidity efficiently. It has established financial policies and operational plans, as well as key risk indicators (KRIs), in the fiscal year 2025 to serve as early warning systems and effectively manage financial risks. The MWA continuously monitors its cash receipts and disbursements to prepare contingency plans and secure timely funding so that the MWA can maintain sufficient financial liquidity within the enterprise’s financial policy framework, for the benefit of sustainable operations in fulfilling its mission.

- **Improvement of Water Loss Reduction Efficiency**

The MWA has implemented a water loss management efficiency improvement plan, which is divided into five work categories: reducing water loss in the distribution pipe system, reducing water loss in the main pipe system, maintenance of pipes and related equipment, reducing water loss resulting from management, and managing water pressure. Category 1, reducing water loss in the distribution pipe system, includes key projects such as contracting for area-based water loss management (performance-based contract: PBC) to reduce water loss to meet set targets, as a continuation of operations from the previous year. Meanwhile, Category 3, maintenance of pipes and related equipment, includes pipe improvement work to reduce water loss, which is being carried out according to the established plan.

Furthermore, the MWA places importance on water loss management and has therefore developed a related risk management plan, namely the active leakage control plan (ALC), with the objective of managing water loss to meet the enterprise’s targets. For the results of the risk management plan, activities have been fully implemented according to the plan, such as monitoring surveys/repairs in specific areas according to the operational plan of the waterworks branch offices, which is useful in helping to monitor and track performance to ensure alignment with the planned guidelines and budget. In addition, other activities were carried out concurrently, such as monitoring of the management and control of water pressure in the area of operation through adjustment of water transmission pumping and distribution pumping to ensure that the enterprise’s goal of reducing water loss is appropriately achieved.

- **Information Technology**

To provide efficient services to the public, the MWA recognizes cybersecurity threats and the importance of preventive measures and impact mitigation to control the risk of being targeted for attacks. Therefore, the MWA has developed the NIST Cybersecurity Framework to improve cybersecurity effectiveness. Key activities include PENTEST Vulnerability Assessment to test system vulnerabilities, prevent attacks and data leaks; controlling data access and preventing attacks and data leaks; regularly auditing systems and assessing risks arising from information system vulnerabilities; and educating employees on protecting data from being leaked outside the enterprise; not to mention raising awareness of AI. Furthermore, the MWA has prepared a business continuity plan (BCP) to address the threats to the MWA’s information systems.

Internal Controls



The MWA complies with the Ministry of Finance's guidelines on internal control standards and operational guidelines for government agencies, B.E. 2561 (2018), and activities occur in accordance with all five components of internal control as follows:

- **Control Environment**

The MWA maintains a sound and appropriate control environment, supported by established codes of conduct, operational guidelines, and strict compliance with relevant laws, regulations, and standards. By actively upholding and promoting corporate reputation, this framework ensures that the Board of Directors, subcommittees, the Governor, executives, and employees at all levels adhere to high moral and ethical standards.

- **Risk Assessment**

Management at all levels is required to participate in risk identification and assessment. Each operational unit must establish an internal control system and perform a self-assessment at least once a year, or whenever significant changes occur in its operating environment. Assessment results must be submitted for approval to top management within their respective reporting lines.

- **Control Activities**

Control activities are defined according to objectives and risk assessment results. A climate conducive to creating new innovations beneficial to the organization is fostered, and management is required to communicate policies and goals to all levels of employees.

- **Information and Communication Technology**

The risk management and internal control systems are established, and internal audit (Governance, Risk, and Compliance: GRC) that supports and integrates internal controls, risk management, and internal audits, have been developed into an internal control dashboard to monitor internal control performance. Additionally, an information system is in place for internal and external communication to foster understanding and support enterprise operations, and convey policies, news, and important information from management to employees and stakeholders.

- **Monitoring Activities**

Key enterprise performance monitoring activities are established, including ongoing monitoring, separate evaluations, and independent assessments of controls by the Audit Office and the Office of the Auditor General.

In the fiscal year 2026, the MWA remains committed to developing information technology to integrate various operational aspects, such as implementing a Dashboard and the MWA Enterprise Performance Management (MEPM) system to monitor performance in good governance, strategic planning, risk management, internal control, internal audit, and business continuity management. This ensures the stability and reliability of the MWA's operations, providing clean, safe, sufficient, and continuous water supply using modern technology, while considering the principles of good governance, as well as social, and environmental responsibility in order to achieve the vision of "Quality Water for Quality Living."





Internal Audit



Internal audit is a crucial tool for creating value for an organization and driving systematic, transparent, and cost-effective operations. The Audit Office thus plays a vital role in providing fair and independent assurance and consulting services, assisting the Audit Committee and management in monitoring risk management, internal control, corporate governance, and other operations to promote the achievement of enterprise objectives and goals. Accordingly, its roles and responsibilities are defined in the Audit Office Charter, which is reviewed/updated at least annually. In addition, roles and responsibilities are communicated to management and the staff of audited units, and a policy has been established to emphasize honesty, integrity, fairness, and independence according to professional and ethical standards, and auditors receive development in the use of digital technology to support auditing.

- **Auditing and Reporting Procedures**

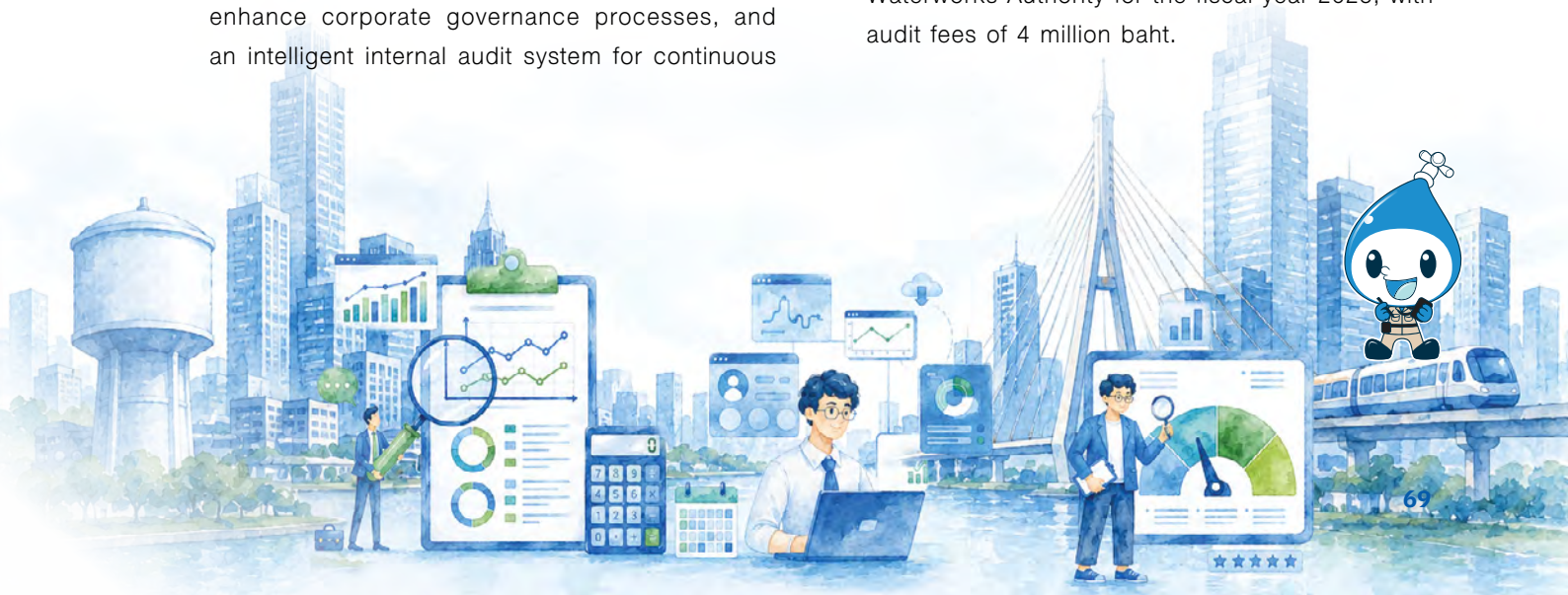
A 5-year long-term audit plan (2022-2026) and an annual audit plan for 2025 have been developed according to the principle of risk-based auditing. Audit activities focus on risks and cover the key missions of the MWA in line with the business plan, vision, and operational processes based on key policies and criteria. This includes addressing third-party risk, sustainability policies (ESG), personal data risk (PDPA), cybersecurity risk, and Business Continuity Management (BCM). In addition, digital technologies have been developed to support operations, such as the MWA Enterprise Performance Management system to integrate and enhance corporate governance processes, and an intelligent internal audit system for continuous

auditing and monitoring. Furthermore, the use of the “Warikunchorn” robotic canal surveying system, developed by the internal audit team in collaboration with the water production, distribution, and service divisions, supports surveying and recording of depth data to assess sediment accumulation in water supply canals. In the fiscal year 2025, the annual audit plan was fully implemented, with audit results reported to the management of the audited units, the Governor, the Audit Committee, the MWA Board of Directors, and regulatory agencies. Lessons learned were incorporated into the knowledge management process, and knowledge was shared for continuous improvement. The Internal Audit Office operates independently, and there are no conflicts of interest between the audited units and the Internal Audit Office.

- **Maintaining the Quality of Work of Internal Auditors**

Internal Audit executives oversee auditors to uphold the standards set in the Internal Audit Charter and Manual. Quality is maintained through peer reviews and performance evaluations by auditees, senior management, and the Audit Committee, with feedback actively used to drive operational improvements. Furthermore, the office encourages and supports auditors to undergo training with key internal and external organizations/institutions for at least 40 hours per person per year. One internal auditor holds a Certified Information Systems Security Professional (CISSP) certification.

Auditor Fees: The State Audit Office of the Kingdom of Thailand is the auditor for the Metropolitan Waterworks Authority for the fiscal year 2025, with audit fees of 4 million baht.





Service Access and Affordable Prices

In the midst of challenges stemming from the climate change crisis and rapid urbanization, the MWA recognizes that water is not only a fundamental necessity for life, but also a key driver of quality of life and the country's economic development primary mechanisms for improving the quality of life and economy of the country. The MWA, as a state enterprise under the Ministry of Interior, therefore does not restrict its role to only the production and provision of water supply services. Instead, the MWA also strives to provide secure fundamental welfare with extensive and equitable access for a better future for Thai society. As one of the key mechanisms for driving the United Nations 6th Sustainable Development Goal: Clean Water and Sanitation (SDG 6: Clean Water and Sanitation), the MWA delivers clean and safe water supply in accordance with the standards of the World Health Organization (WHO) in the Bangkok, Nonthaburi, and Samut Prakan. The MWA also strives to develop appropriate and fair water pricing structures to promote sustainable access to essential water supply services for all segments of society.



1. Network Expansion for Universal Access

The MWA recognizes that the heart of driving the SDG 6 is creating guarantees that water and sanitation are sustainably provided to everyone. Therefore, the MWA strives to expand its infrastructure network to cover the entire area of responsibility and comprehensively provide the foundation for good health to the population.

- **Service Area Expansion:** The MWA continuously expands its water supply coverage in partnership with government agencies, including Local Administrative Organizations (LAOs) and the National Housing Authority. This project ensures equitable access to standard-compliant tap water in newly serviced areas, enhancing public health, sanitation, and quality of life.
- **Enhancing Water Distribution Efficiency:** The MWA is renovating its pipe network to reduce water loss and improve overall system efficiency. Pumping and distribution capacities are also being boosted through pipe upgrades across all 18 branch offices within the MWA's service territory. These efforts conserve vital water resources and maintain consistent water pressure, delivering a reliable water supply to all users.

2. Trustworthy Quality: A Single Standard for Equitable Quality of Life

People in all sectors, whether living in economic districts in the city center or in surrounding communities, must receive water supply services of the same standard quality (standardization).

- **Health Safety:** The MWA boosts confidence through a tap water treatment process that is inspected and controlled around the clock in accordance with the **Water Safety Plan** of the World Health Organization (WHO) in order to proactively monitor and guarantee water quality in the entire supply chain from raw water source management to plant treatment processes and delivery at the water meters in front of the homes of consumers, thus allowing the public to confidently have water for both use and consumption.

3. Fair & Affordable Pricing

- **Progressive Tariff:** The MWA has set its water fee structure appropriately and fairly based on water consumption as follows:
 - **Ordinary Households:** A step-ladder rate is charged. The less water used, the lower the unit rate.
 - **Schools, Hospitals, and Public Benefit Organizations:** Special rates are granted to ease their expenses.



- Business Operators and Industrial Factories:

A rate is charged consistently with water production costs.



• Measures to Assist the Public in Times of Crisis:

The MWA has a measure to reduce water fees or delay collection at times of economic downturns or disasters, such as during COVID-19 outbreaks or droughts, along with measures to lower expenses, such as “Water Price Fixing Project” to reduce economic impacts.

4. Digital Accessibility

- **Citizen Service Centers:** Established at various locations, they facilitate water service applications, information requests, and problem reports.
- **MWA 1125 Hotline:** The hotline provides 24-hour information and complaint handling service.
- **Online Channels:** The MWA has adopted technology to upgrade online services to for public convenience such as the MWA onMobile application, which allows the public to:
 - Check water fees and make payment at any place and time.
 - Swiftly report pipe bursts and leaks.
 - Monitor local water quality in real-time.
 - Furthermore, it reduces official steps and increases information access convenience, thereby facilitating sustainable and seamless interactions between the MWA and the public.

The MWA is committed to improving the quality of life for residents across Bangkok, Nonthaburi, and Samut Prakan by ensuring equitable access to “clean, safe, and sufficient” tap water at affordable prices under all circumstances. This is because access to water is a fundamental driver for guiding Thai society toward sustainable growth.



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Human Resource Potential Development

Developing workforce capabilities is a crucial mechanism for building a ready workforce with diverse skills and potential (multi-skills). This enables organizations to adapt to rapidly changing economic and technological environments while meeting stakeholder expectations. In the fiscal Year 2025, MWA systematically implemented human resource development projects under the Human Capital Master Plan: "Quality Personnel for Quality Service." These initiatives encompassed both

Human Resource Management (HRM) and Human Resource Development (HRD), focusing on new leader preparation, future skill upgrades, digital capabilities, innovation, customer service, and pre-retirement preparation. This comprehensive approach aims to develop well-rounded individuals aligned with the vision of "Quality Water for Quality Living" and reinforce the enterprise's long-term sustainable growth. (404-3)

Successor & Talent Management Program for Key Strategic Positions and Talents

The Successor & Talent Management program is a key mechanism for enhancing the sustainability of the enterprise's human resources and aims to develop personnel capabilities to support strategic positioning and efficiently drive long-term growth.

In the fiscal year 2025, the MWA reviewed the criteria and guidelines for the Succession & Talent Management program, including those in the inclusive talent group, encompassing both long-term and short-term human resource development plans to enhance leadership

readiness and the necessary skills to drive the enterprise's operations.

Participant development took place in various forms, including external training, internal training, and digital self-learning via e-learning lessons on an online learning management system (LMS), as well as study tours, categorized based on the level of potential to maximize development effectiveness, coupled with communication to build understanding of career paths and advancement opportunities.

The enterprise continuously monitored and evaluated the program across four key dimensions:

- 1 **Participant development outcomes**
- 2 **KPI and Core Competency (CC) assessments**
- 3 **360-degree Leadership Competency (LC) evaluations**
- 4 **Practical data utilization supporting core operations**

Overall, project execution was fully aligned with the initial plan, achieving a KPI score of
83.33%



This outcome reflects highly effective project execution and enhanced workforce readiness for sustainable future growth.



Performance Results Based on Plan Indicators

Indicators		Target	Result
1	Percentage of executives at the director level and equivalent and above who are successors to strategically important positions (key positions)	95	97.01
2	Percentage of personnel in the talent pool	≥ 5	8.10
3	Level of employee satisfaction in the “growth opportunity” factor	more than last year (3.98 points)	3.9191 points
4	Success in reviewing the project implementation plan and practice guidelines in the short-, medium-, and long-term as part of the workforce readiness program for strategic succession planning and talent management, including candidates in the inclusive talent group	By Jan. 2025	24 Dec. 2024
5	Percentage of participants in the Successor & Talent Management program, including inclusive talents, who are developed according to established development guidelines	90%	100%
6	Number of projects/innovations created by project participants to create added value and generate revenue for the enterprise	≥ 5 projects	21 projects
Success Percentage According to Plan Indicators			83.33%

Human Resource Potential Building Project for Operational Excellence

Future Skill and Competency Development Plan (Future Skills)

The MWA has continuously focused on developing future skills since 2013. In the fiscal year 2025, the development framework was revised to emphasize reskilling and upskilling to enhance existing competencies. This framework encompasses four key skill areas: marketing and business strategy, critical thinking and problem solving, self-development and learning, and communication and interpersonal skills. A blended learning approach—combining classroom instruction and e-learning—was adopted to deliver diverse knowledge. The program targets all job families across the MWA.

The MWA organized three training courses, as follows:

- Future Skills for Driving Change, Group 2;
- Future Skills for Driving Change, Group 3;
- Future Skills for BU.

Water Loss Management Knowledge Development and Enhancement Plan:

A total of 7 courses were created, including training on the following topics:

- System implementation and selection of pipeline upgrade routes by use of asset management;
- Efficient use of water meters;
- Use of the EPANET program.

Water Safety Plan Knowledge Development and Enhancement Plan:

One course was offered, namely “Water Safety Plans: Theory to Implementation, Phase 2.”

Personnel Digital Competency Development and Enhancement Plan:

There were 16 courses encompassing the following topics:

- Getting Started with Generative AI and ChatGPT;
- Data + AI for Communication: Chatbot without programming;
- Raising awareness to prevent violations of the Personal Data Protection Act (PDPA) and cyber laws;
- etc.

Personnel Innovation and Knowledge Management

Enhancement Plan: There were 9 courses total encompassing the following topics:

- Capacity building to expand the reach of knowledge managers;
- Regulations related to innovation;
- How to create an innovative organization;
- etc.

Customer Experience Plan

The Human Resource Development Plan for the fiscal year 2025 mandates training courses to develop personnel with the appropriate knowledge, skills, and competencies aligned with the enterprise's training needs and the needs of various departments. This plan follows the Master Plan for Customer, Marketing, Finance, Connected Product and Service Business Development (2023-2027), and the action plans and risk management plans at the departmental and management levels for the fiscal year 2025, under the Human Resource Capacity Building Work Plan aimed at achieving excellence in operations under the "Customer Experience" initiative. A total of 12 training courses were planned, covering the following:

- Improving customer service;
- Using social media for government agencies to effectively and securely communicate and provide services to the public;
- Enhancing customer experience through customer journeys and customer insights;
- etc.

Pre-retirement Preparation and Development Program for Employees

Retirement Development Program

The MWA has organized training courses to prepare employees before their retirement. These courses, consisting of two modules, cover finance, health care, maintaining a happy daily life, and guidance on supplementary careers after retirement.

1. The course **"Financial Literacy for Retirees"** was organized for MWA employees who were retiring in the fiscal year 2025. A total of 125 people participated in the training, receiving a satisfaction score of 4.8.
2. The course **"Program for Creating Value and Pride for Employees Before Retirement (Training Group)"**

Competency Development Program for Line Managers to Become People Managers

The MWA has developed training courses under a strategic program to transition line managers into effective people managers. This initiative aims to deepen the understanding of modern leadership roles, build essential people management skills, and empower managers to lead their teams toward organizational goals. The program comprises 5 courses, including:

- New Gen Leader Development for Reskilling: Target Group: Section managers and equivalent positions;
- Super Leader Development for Booster Skills: Target Group: Division directors and equivalent positions;
- Leadership in Motion: Cultivating Organizational Resilience: Target Group: Department-level executives and above;
- etc.

Performance According to Target

A total of **100%** of project participants were able to apply their knowledge in their work.



was organized for a total of 65 qualified employees, as defined by the enterprise, participated in the training, with a satisfaction score of 4.5.

Employee Development Program (for employees retiring in 3 years)

This course enhances the skills and capabilities required for specific job responsibilities, fostering professional development among staff. It facilitates the transfer and retention of work-related knowledge across the organization as organizational knowledge. Specifically, 15 qualified employees who met internal criteria participated in the training.



Summary Report of Training Hours ⁽⁴⁰⁴⁻¹⁾

Average employee performance by gender and position in the fiscal year 2025

Level	Average Number of Training Hours					
	Total Employees			Average No. of Training Hours per Person		
	Male	Female	Total	Male	Female	Total Average
10	5	7	12	89.70	54.64	69.25
9	18	15	33	111.31	74.10	94.39
8	55	36	91	124.67	43.03	92.38
7	217	244	461	41.20	43.22	42.27
6	433	443	876	35.81	35.35	35.58
5	773	618	1,391	22.51	19.54	21.19
4	484	155	639	28.23	46.34	32.63
3	238	98	336	52.18	45.78	50.31
2	114	39	153	28.36	20.67	26.40
1	-	-	-	-	-	-
Total	2,337	1,655	3,992	34.43	32.51	33.64

Note: The number of employees used in the calculation is based on data as of 30 September 2025.



Personnel Competency Assessments ⁽⁴⁰⁴⁻³⁾

Personnel Competency Assessments

The MWA assesses the competencies of its employees in various areas. The results are then studied, reviewed, and analyzed to develop plans for enhancing employee knowledge and skills, thereby improving the potential of both employees and the organization. Assessments are divided into three categories as follows:



Personnel Competency Assessments for MWA Personnel in the Fiscal Year 2025

Percentage of total employees who completed Core Competency (CC) Assessment

No. 1/2025

Level	Male		Female		Total	
	People	Percentage	People	Percentage	People	Percentage
Levels 6-10 holding supervisory positions	451	50.33	445	49.67	896	100.00
Levels 6-10 holding equivalent positions	276	48.25	296	51.75	572	100.00
Levels 1-5	1,587	63.76	902	36.24	2,489	100.00
Total	2,314	58.48	1,643	41.52	3,957	100.00

Note: The number of employees used in the calculation is based on data as of 7 January 2025.



Total employees who completed Core Competency
3,957



Percentage
100.00

No. 2/2025

Level	Male		Female		Total	
	People	Percentage	People	Percentage	People	Percentage
Levels 6-10 holding supervisory positions	451	50.33	445	49.67	896	100.00
Levels 6-10 holding equivalent positions	302	49.75	305	50.25	607	100.00
Levels 1-5	1,573	63.63	899	36.37	2,472	100.00
Total	2,326	58.52	1,649	41.48	3,975	100.00

Note: The number of employees used in the calculation is based on data as of 1 July 2025.



Total employees who completed Core Competency
3,975



Percentage
100.00

Percentage of Total Employees Who Completed Functional Competency (FC) Assessments

In 2025

Level	Male		Female		Total	
	People	Percentage	People	Percentage	People	Percentage
Levels 6-10 holding supervisory positions	451	50.33	445	49.67	896	100.00
Levels 6-10 holding equivalent positions	276	48.25	296	51.75	572	100.00
Levels 1-5	1,587	63.76	902	36.24	2,489	100.00
Total	2,314	58.48	1,643	41.52	3,957	100.00

Remarks: 1. The number of employees used in the calculation is based on data as of 7 January 2025.
2. MWA conducts Core Competency (CC) assessments twice a year, while Functional Competencies (FC) and Leadership Competencies (LC) are assessed once a year.



Total employees who completed Functional Competency
3,957



Percentage
100.00



Percentage of Total Employees Who Completed Leadership Competency (LC) Assessment for the Fiscal Year 2025

Level	Male		Female		Total	
	People	Percentage	People	Percentage	People	Percentage
Levels 6-10 holding supervisory positions	451	50.33	445	49.67	896	100.00
Levels 6-10 holding equivalent positions	276	48.08	298	51.92	574	100.00
Total	727	49.46	743	50.54	1,470	100.00

Overview of Employee Assessment Results Meeting or Exceeding Expectations in 2025

List	2023	2024	High-Low %	2025	High-Low %
1 st CC assessment	99.69	99.73	0.04	99.85	0.12
2 nd CC assessment	99.54	99.83	0.29	99.90	0.07
Annual FC assessment	98.63	98.08	-0.55	97.95	-0.13
Annual LC assessment	98.05	99.79	1.74	99.32	-0.47





Quality of Tap Water

To ensure tap water safety, the MWA stringently controls every step in the tap water treatment process throughout the entire system, encompassing raw water sourcing, treatment, transmission, distribution, and consumer service. The MWA has implemented the Water Safety Plan, or WSP, according to the guidelines of the World Health Organization (WHO) across its operations since 2012, along with quality management systems such as GHP, HACCP, ISO 9001, and ISO 14001.

WSP is a risk management plan for the quality of water in the entire tap water treatment system from catchment to consumers, and it is based on three key principles as follows:



PROTECT Prevent contamination at the source.

The MWA protects raw water sources from contamination according to the Water Safety Plan through various preventive measures, including installation of fences and walls along water canals to prevent unauthorized access by household and activities that may lead to canal water contamination, and prevention of contamination by livestock grazing along canals. Furthermore, the MWA assigns inspectors to patrol canals in order to prevent people from violating the Maintenance of Water Supply Canal Act, B.E. 2526 (1983) and has launched a project to restore the quality of water in the Bang Luang-Chiang Rak Canal, which is located near the Sam Lae Raw Water Pumping Station where water is collected into the tap water canal. Additionally, the MWA has adopted an online raw water quality monitoring system and a biomonitoring system for use at the sources of raw water for tap water production, allowing the MWA to take timely action in the event of water quality changes.



REMOVE Remove contamination through clean water treatment.

All four MWA treatment plants comply with the Water Safety Plan guidelines to deliver clean water. Once raw water enters the plant, coarse and fine screens trap large debris like leaves and trash. Alum is then introduced to settle finer suspended solids through coagulation and sedimentation. Next, layers of anthracite and sand filter out remaining impurities. As a final step, chlorine is added for disinfection prior to distribution to consumers.



PREVENT Prevent water from recontamination during distribution to consumers.

The MWA prevents tap water from recontamination during the process of distributing water to consumers. In doing so, the MWA has launched a project to replace water pipes in the distribution system according to their service life, in addition to washing closed DMA connections where dead ends occur by using UDF or unidirectional flushing, which is a system for swiftly removing pipe sediments in one single direction. Furthermore, the MWA inspects the physical condition of the clear water storage reservoirs of the water distribution pumping stations and washes these clear water storage reservoirs annually.



Water Quality Testing

The MWA closely monitors and inspects the quality of tap water to ensure that no contamination re-enters the water supply process for consumers. Over 3,000 water samples are collected annually from the distribution system throughout its service area in accordance with the guidelines of the WHO. These samples are tested for physical, chemical, bacterial, and toxic substances that could be harmful to health, such as heavy metals, agricultural toxins, carcinogens (trihalomethanes), radioactive substances, and various pathogens including bacteria, protozoa, and viruses—more than 100 items in total—in a laboratory certified according to ISO/IEC 17025 standards. The MWA also operates 62 remote water quality monitoring stations that comprehensively cover the service area of Bangkok, Nonthaburi, and Samut Prakan. The stations display results for six water quality parameters: residual free chlorine, turbidity, pH, electrical conductivity, salinity, and chloride. The monitoring stations represent a diverse range of consumers, including health-sensitive groups such as hospitals and nursing homes, government offices, educational institutions, industries, and disadvantaged individuals in correctional facilities. Consumers can access water quality information online 24/7 via the website <https://twqonline.mwa.co.th/> or the MWA onMobile application.



Scan to view the
online tap water
quality testing
system.

Raw water quality testing compares the water quality to Type 3 surface water standards, as per the National Environmental Board Announcement No. 8 (1994). Parameters that have failed to meet the criteria include dissolved oxygen (DO) and fecal coliform bacteria. This is due to contamination of the Chao Phraya River raw water used for water production by low-quality water from communities and agricultural areas along the river. Therefore, raw water must be treated through the water treatment process, and the principles of the WSP must be applied at every stage to ensure that tap water meets the specified quality requirements.

Table Showing Average Tap Water Quality Testing Results for Fiscal Years 2023-2025

Key Tap Water Quality Parameters	Fiscal Year			Tap Water Quality Requirements
	2023	2024	2025	
Turbidity (NTU)	0.25	0.34	0.36	No more than 1.0 NTU
Residual Chlorine (mg/L)	0.68	0.67	0.74	0.20-2.00 mg/L
<i>E. coli</i>	None	None	None	None/100 mL
No. of Collected Samples (Samples)	3,061	3,570	3,465	

As for information on complaints related to tap water quality in the fiscal year 2025, there were 2,894 consumers who filed complaints about water turbidity/odors (non-chlorine) via the MWA Call Center.



Drinkable Tap Water Quality Certification Project

In 2024, the Minister of Interior (Mr. Anutin Charnvirakul) issued the policy of “Clean Drinking Water, Reduced Public Expenses.” In support of this policy and to assure the public that the tap water delivered to their homes is clean, safe, and potable, the MWA collaborated with the Department of Health to launch the **“Drinkable Tap Water Quality Certification Project.”** The Water Quality Division, together with officials from the Food and Water Sanitation Bureau of the Department of Health, randomly collected tap water samples in the MWA’s service area, covering Bangkok, Nonthaburi, and Samut Prakan, according to the guidelines for drinking water quality certification. Water samples were collected from the source at four water treatment plants: Bang Khen, Mahasawat, Sam Sen, and Thon Buri water treatment plants; mid-stream at ten water distribution pumping stations: Lat Phrao, Lumphini, Khlong Toei, Samrong, Bang Phli, Lat Krabang, Min Buri, Phet Kasem, Tha Phra, and Rat Burana stations; and at the end of the water distribution pipeline of all 18 branches (water consumers’ locations), totaling 217 locations.

The water samples were sent to the Public Health Laboratory Division, Department of Health, for testing according to the Department of Health's Announcement on Drinking Water Quality Standards, B.E. 2563 (2020), covering 21 items, including turbidity, apparent color, pH, total soluble solids, hardness, sulfate, chloride, nitrate, nitrite, fluoride, iron, manganese, copper, zinc, lead, total chromium, cadmium, arsenic, mercury, coliform bacteria, and E. coli.

Tap water quality testing was conducted twice: once on 25-29 November 2024, and again on 11 February to 7 March 2025. Both analyses were conducted by the Public Health Laboratory Division, Department of Health, and the results showed that all samples met the Department of Health's 2020 drinking water standards. Therefore, the Department of Health awarded a certificate to the MWA on 16 June 2025, certifying that the MWA had complied with the requirements for drinking water certification and that the tap water quality met the Department of Health's drinking water quality standards.





Occupational Health and Safety

(403-1) The MWA's occupational health and safety management is carried out in accordance with various laws, such as the Occupational Safety, Health, and Working Environment Act, B.E. 2554 (2011), ministerial regulations regarding standards for the administration and management of safety, health, and the working environment, and the State Enterprise Labor Relations Committee's Announcement Re: Minimum Standards for Employment Conditions in State Enterprises, B.E. 2549 (2006), using them as the framework for setting **the Safety, Security, Health, and Environment (SSHE) Policy**, announced on 31 March 2025, covering all departments, employees, and operators at all levels, (Covering a total of 3,978 employees and 1,055 workers, representing 100%) (403-8) to support social and environmental responsibility within the production and service delivery processes, which are core processes in the MWA's value chain, and other operations. The MWA requires departments to comply with applicable laws and policies.

The MWA has a process to systematically create and promote safety, security, health, and environment (SSHE model), which is implemented under the Human Capital Master Plan along with a project to enhance security, safety, health, and environmental management (SSHE-excellence) under the Hygiene, Safety, Welfare, Occupational Health, and Work Environment committee.

The Committee, which is responsible for policy-setting and plan implementation, operates in conjunction with the Safety, Security, and Health Division, functioning as the central agency for planning the enterprise's safety management system.

Occupational Safety, Health, and Working Environment Committee

The MWA has appointed qualified employees to serve as Professional Safety Officers at all 22 establishments. In addition, employees who have completed professional safety officer training at various levels and obtained certificates from the Safety and Health at Work Promotion Association (Thailand), under the Patronage of Her Royal Highness Princess Maha Chakri Sirindhorn, have been appointed as Professional Safety Officers (PSOs) at the management and supervisory levels, with appointments endorsed by the Governor. The Occupational Safety, Health, and Environment Committee and the PSOs work together to implement occupational health and safety measures covering all areas that may affect employees and surrounding communities. These measures include fire drills, disease prevention programs, workplace landscaping and environmental improvements, workplace exercises and health promotion activities, annual health check-ups, and other initiatives to enhance employee well-being and emergency preparedness.



The Metropolitan Waterworks Authority (MWA) received the **"Thai Award"** 2025 under the One Million Acts of Goodness to Repay the Nation Project, organized by the Foundation for Thai Society. MWA received the "Outstanding Organization of the Year Award" in the category of Outstanding Organizational Management for its commitment to safety, welfare, occupational health, and environmental management, as well as its outstanding performance in delivering quality water services that meet standards, implementing the Water Safety Plan (WSP), and developing technologies and innovations in water management.



Occupational Safety, Health, and Working Environment Committee of the MWA, as per Order No. 3471/2024

Governor	Chairman
Deputy Governor (Administration)	Director
Deputy Governor (Water Production and Transmission)	Director
Deputy Governor (Engineering)	Director
MWA Expert Level 10 under the Governor	Director
Assistant Governor (Human Resources)	Director
Chairman of the Occupational Safety, Health, and Environment Committee No. 1-22	Director
Director of Legal Department	Director
Director of the Budget Department	Director
Chairman of MWA State Enterprise Labor Union	Director
Director of Safety, Welfare, and Occupational Health Division	Director and Secretary

Occupational Safety, Health, and Environment Committee (OSHE Committees No. 1-22)

Directors representing the employer (supervisory level employees)

- Division director employees or above (Executive level safety officers)
- Section supervisor employees or equivalent (work supervisor safety officers)

Professional Safety Officer (Director and Secretary)

(Occupational health personnel appointed to become professional safety officers by the Governor)

Directors representing employees (Employees Level 1-5)

Remarks:

- (1) OSHEC means the Occupational Safety, Health, and Environment Committee.
- (2) OSHEC is appointed in accordance with the Ministerial Regulations on an annual basis. Each enterprise consists of representatives of the employers (executive level) and employees (operational level). The meetings on safety shall be held every month to discuss matters relating to safety. It also includes defining the communication channels for communicating the policies to employees/subcontracted workers in each entity, as well as organizing activities that create understanding and awareness regarding safety and the environment in the workplace.



Incident Investigation Process for Work-Related Risks (403-2, 403-7)

Every month, each Occupational Safety, Health, and Environment Committee (Safety Committee) conducts workplace safety inspections using standardized inspection forms. If any deficiencies are identified, corrective actions with defined implementation timelines must be established and summarized in the monthly meeting reports. The Safety Committee supervises operations in accordance with the procedures for reporting unsafe conditions. If employees or operatives witness unsafe incidents, they are required to report them according to the designated procedures, including the accident reporting process. Each department is required to submit reports on work-related injuries and illnesses using Form 001 for employees and Form 002 for operatives. The Safety, Welfare, and Occupational Health Division collects the data and investigates incidents before presenting the findings to the Compensation Consideration Committee for consideration of compensation benefits.

6-Step to Develop and Promote SSHE (403-4)

1



To prepare the Short-term and Long-term Safety Management Plans, then propose them to the Safety Committee for approval.

2



To review/establish the SSHE Policy.

3



To prepare the SSHE Action Plan for each Safety Committee, including Safety Handbook and Safety Indicators.

4



To communicate and implement the plan, including organizing the MWA Outstanding Safety Organization Contest at both internal and national levels.

5



To monitor and evaluate performance.

6



To summarize and analyze SSHE performance and its safety indicators, then present to MWA Governor for acknowledgment on an annual basis.

Work-Related Risk and Hazard Management ^(403-2, 403-7)

The MWA conducts work-related risk and hazard assessments across all departments; however, the assessments do not yet cover all work activities. As an initial step, the MWA has piloted the implementation of the Occupational Health and Safety Management System Standard (ISO 45001:2018) at Mahasawat Water Treatment Plant and Bang Khen Water Treatment Plant. Mahasawat Water Treatment Plant received ISO 45001 certification for its Occupational Health and Safety Management System from the Management System Certification Institute (MASCI) on 5 July 2023, while Bang Khen Water Treatment Plant received certification on 8 September 2023. In 2026, Sam Sen Water Treatment Plant developed a master plan for the Occupational Health and Safety Management System. The implementation of this system requires hazard identification and risk and opportunity assessment (Hazard Identification, Risk, and Opportunities Assessment) based on both routine and non-routine work activities, as well as the development of an occupational health and safety risk management plan by considering the Hierarchy of Controls to prevent and reduce work-related risks.

Elimination

Substitution with materials, processes, guidelines, or equipment with a lower degree of hazards, for instance, originally, the MWA used paints containing hazardous chemicals (Toluene) to spray the flow meters. Later, it switched to a new generation of watercolors that did not contain harmful chemicals (Toluene).



Engineering Controls

Such as the installation of chlorine gas neutralization system to prevent chlorine gas leakage.



Warnings

Such as the installation of chlorine gas leakage detectors/fire alarms and hazard warning signs according to the nature of each job.



Safety Training for Employees and Subcontracted Workers ⁽⁴⁰³⁻⁵⁾

The MWA provides safety training through various courses in accordance with legal requirements. Safety and occupational health training is provided for employees at all levels and relevant contractors, including training for specific operations, such as working in confined spaces, working with electricity, and forklift operation. Training is provided to employees and workers involved in such operations before commencing work, with competency assessments conducted before and after the training. In the fiscal year 2025, the MWA conducted 39 training courses under the SSHE Excellence Project, which aims to enhance the management of welfare, safety, occupational health, and working environment measures. The training courses included "Occupational Health, Safety, and Environment for General Employees and New Employees in accordance with the Occupational Safety, Health, and Environment Act, B.E. 2554 (2011)," "Safety Officer (Supervisor Level)," "Safety Officer (Executive Level)," "Roles and Responsibilities of the Safety Committee," "Leaders, Supervisors, Rescuers, and Workers in Confined Spaces," and "Review of Safety Procedures for Working in Confined Spaces," etc.

Communication and Awareness on Occupational Safety, Health and Environment ⁽⁴⁰³⁻⁴⁾

In addition to providing safety knowledge through various training courses in accordance with the law, each Safety Committee (22 committees in total) also organized activities to promote knowledge, understanding, and awareness among employees and contract workers regarding safety and the creation of a good working environment. The performance of each Safety Committee (22 committees in total) was evaluated as a mechanism to encourage the continuous implementation of safety, welfare, occupational health, and environmental policies. The evaluation was conducted by the Working Group for the Evaluation of Safety, Occupational Health, and Working Environment Committees to facilitate the exchange of safety knowledge and experiences. The evaluation criteria consisted of 2 aspects: document review and on-site assessment. The evaluated entities were divided into 2 categories: factories and offices.



Statistics Table Showing Work-Related Injuries and Deaths During the Fiscal Years 2021-2025 ⁽⁴⁰³⁻⁹⁾

	Fiscal Year				
	2021	2022	2023	2024	2025
Injury Frequency Rate: I.F.R.					
Target (not over)	0.20	0.20	0.2	0.15	0.15
Result – Employees	0.15	0.30	0	0.38	0.97
Result – Meter Reading, Collection, and Wire-Binding Representatives	-	-	-	0	0
Result – Contract Workers	-	-	-	0.48	0.93
Injury Severity Rate: I.S.R.					
Target (not over)	1.50	1.50	0.75	0.15	0.15
Result – Employees	2.65	0.45	0	3.97	3.23
Result – Meter Reading, Collection, and Wire-Binding Representatives	-	-	-	0	0
Result – Contract Workers	-	-	-	0	0
Recordable work-related injuries					
Number of work-related injuries (up to 3 days off) (case)	0	0	2	0	0
Number of work-related injuries (more than 3 days off) (case)	1	1	0	0	1
High-consequence work-related injuries					
Number of Work-Related Illnesses	0	0	0	0	0
Number of work-related deaths	0	0	0	0	0

Notes:

1. Data collection process refers to the collection of work hours from the HR systems resulting from taking leave, working overtime, and shifting operations, applying the American National Standards Institute for calculating the I.F.R. and I.S.R. In the fiscal year 2025, there were 6,187,269 work hours, with a reference of 1,000,000 work hours.
2. High-Consequence Work-Related Injuries refer to the number of workers who have been injured at the workplace and required to take more than six months off, but do not include work-related deaths (as defined in accordance with the requirements of GRI 403-9: Work-related injuries).

According to the statistics on work-related injuries and fatalities, one employee was injured and required to take leave for more than three days. The case was classified as a recordable work-related injury (an injury requiring medical treatment) according to the definitions specified in the accident reporting requirements. The incident occurred while the employee was installing a water meter and required surgery, resulting in 19 working

days of leave. As a result, measures were implemented to prevent such an incident from recurring, including coordinating with the homeowner to relocate the water meter installation point to a safer location. In addition, all Safety Committees were instructed to strictly supervise and ensure that employees and operatives comply with regulations, safety manuals, occupational health requirements, and working environment standards.



(403-3) The MWA conducts annual health screenings for employees and contractors based on risk factors to prevent and mitigate occupational health impacts, and requires new employees assigned to units exposed to risk factors to undergo a pre-employment health screening (baseline) as required by law. In the fiscal

year 2025, the MWA hired an occupational medicine physician to provide examinations, treatment, and counseling by referring employees with abnormal results from the risk factor health screening for follow-up visits as follows:

No.	Examination Items	Health Examination Results		Total
		Normal	Abnormal	
1	 Hearing Function Test	395	176	571
2	 Occupational Vision Test	46	199	245
3	 Pulmonary Function Test	421	51	472
4	 Arsenic	17	7	24
5	 Cadmium	24	0	24
6	 Chromium	38	0	38
7	 Lead	101	0	101
8	 Mercury	38	0	38
9	 Hepatitis A Virus Test	198	0	198
10	 Stool Examination	197	0	197

Health Support ⁽⁴⁰³⁻⁶⁾

The MWA implements various health promotion projects and promotes employees' mental health, such as the "Mobile Stress-Relief Service Vehicle" Project, which aims to promote good mental health among employees. In addition, the MWA provides medical examination, treatment, nursing care, disease diagnosis, and consultation services for employees and their families, retirees, and retirees' spouses, covering medical, dental, pharmaceutical, and clinical pathology services. In cases where employees' illnesses exceed the capacity of the MWA's medical services, they are referred or recommended to receive treatment at other hospitals with higher capabilities.

Moreover, the Medical Services Division analyzes employees' annual health examination results and develops health improvement projects to address health issues through internal communication channels and training or lectures, such as the lecture entitled "Stroke: A Silent Threat That Should Not Be Overlooked."



Non-Discrimination and Equal Opportunity

As a state-owned enterprise under the Ministry of Interior, the Metropolitan Waterworks Authority (MWA) is committed to adhering to good governance principles and respect for human rights. We have established internal operational guidelines to protect the rights, freedoms, and well-being of all personnel and stakeholders without discrimination. Furthermore, the MWA operates under the belief that access to clean, safe, and high-quality tap water is a fundamental right for everyone.



Internal Dimension: Equal Opportunity in Human Resource Management

The MWA recognizes the right to human dignity and equality and believes that all employees contribute to the enterprise's success. Everyone must be hired fairly and with clear responsibilities. The MWA treats all stakeholders fairly, without discrimination based on similarities or differences in terms of gender, educational status, disability, race, nationality, religion, skin color, political opinion, beliefs, union membership, or any other factor. All employees at all levels will fairly receive opportunities and support for the development of their skills, abilities, and potential for advancement, including welfare benefits and fair compensation based on performance, while operating within the framework of relevant laws, regulations, rules, and orders, such as the State Enterprise Labor Relations Act and the Metropolitan Waterworks Authority Regulations on the Code of Ethics for Executives and Employees of the Metropolitan Waterworks Authority, B.E. 2566 (2023).



Fair Recruitment and Selection:

During May-June 2025, the MWA opened applications for external candidates for positions across 12 main professional fields, including engineers, computer scientists, accountants, legal officers, administrators, public relations officers, occupational health officers, and marketing officers.



Gender Equality at the Leadership Level:

The MWA promotes the role of personnel of all genders in driving the organization. As of 1 October 2025, the MWA's senior management team consists of 6 women and 6 men, reflecting an open organizational culture that provides opportunities for growth into senior leadership without gender limitations.



Promoting the Right to Freedom of Association and Collective Bargaining:

Employees are provided with opportunities to freely express their opinions, access information, and exercise their rights to freedom of association and collective bargaining without interference. Key initiatives include participation in the MWA State Enterprise Labor Union and the MWA Good Governance Council, which serve as central platforms for protecting employee rights and aligning mutual interests. Furthermore, personnel at all levels are encouraged to share their views to drive the constructive development of the organization.



Equal Compensation:

Actions strictly adhere to the salary and benefits structure of state enterprises, with payment of equal compensation for work of equal value, without using gender or age as a condition.



Prevention of Workplace Harassment:

Clear guidelines have been established to combat all forms of harassment, sexual harassment, and bullying in the workplace to protect the rights and well-being of all employees.



Support for People with Disabilities as required by law:

Examples include employment, providing locations for selling goods, and providing facilities for people with disabilities.

Cases of Discrimination and Corrective Actions

0 Cases

No complaints regarding discrimination or human rights violations were reported during the fiscal year 2025.

In addition, the MWA has policies that demonstrate its commitment to human rights to clearly show the enterprise's intention to not discriminate, such as the MWA's Code of Ethics, the Social and Environmental Responsibility Policy, and adherence to the 7 main

management systems of the international standard ISO 26000, the Sustainable Development Policy, the Good Corporate Governance Policy, Stakeholder Treatment Policy and Guidelines, and safety, occupational health, and environmental policies, etc.



External Dimension: Equal Treatment of Stakeholders

The Metropolitan Waterworks Authority (MWA) recognizes that its crucial role as a state-owned enterprise providing basic public utilities is not limited to caring for its internal personnel. It also extends to non-discrimination and creating equal opportunities for all external stakeholders throughout the value chain. Therefore, the MWA operates with human rights and dignity in mind and aims to create a supportive and sustainable environment for growth in society through various practices, such as the following:



Customers (Equal and Equitable Access to Services):

The MWA is committed to driving its core mission to ensure that residents in its service area (Bangkok, Nonthaburi, and Samut Prakan) have equal and comprehensive access to clean, safe, and high-quality tap water that meets the standards of the WHO, without discrimination based on location or economic status. The MWA is also upgrading its services to reduce the digital divide by integrating efficient digital service systems, such as the MWA onMobile application and various online services, to facilitate convenience in the digital age. This is coupled with maintaining and developing traditional service channels at branch offices to accommodate the elderly and customers who may not be technologically

savvy. Furthermore, universal design principles, such as ramps and accessible restrooms, are implemented at branch offices to facilitate access for people with disabilities and the elderly.



**Partners (Transparency, Equality, and Fairness in the Supply Chain):**

The MWA supports the creation of a business ecosystem based on honesty and fairness by conducting procurement processes through the Electronic Government Procurement (e-GP) system of the Comptroller General's Department. This is a key mechanism that provides opportunities for entrepreneurs of all levels, from large companies to small and medium-sized enterprises (SMEs), to have equal access to information, bidding processes, and competitive opportunities.

The MWA's partner selection and evaluation process is based on the principles of accuracy, transparency, and accountability, free from discrimination, exclusion, or favoritism towards any particular group of capital

or individual. In addition, the MWA encourages its partners and subcontractors to be aware of and adhere to human rights principles and labor standards to jointly drive a supply chain free from harassment and discrimination in all forms.

**Community and Society (Inclusive Development and Leaving No One Behind):**

The MWA drives corporate social and environmental responsibility projects focused on sustainable development by improving the quality of life across diverse communities—particularly low-income households and remote areas beyond the main distribution network—to reduce disparities in access to safe sanitation.

The MWA not only delivers clean water but also continuously supports knowledge sharing on water resource conservation, water quality monitoring, and community development. This ensures that all citizens have equal opportunities to improve their lives and well-being, in line with the enterprise's commitment to sustainable growth alongside Thai society.



Employee Welfare and Stability

Because employees are valuable assets that are at the heart of driving the enterprise toward stable and sustainable growth, the Metropolitan Waterworks Authority (MWA) prioritizes the quality of life, well-being, and security of employees alongside continuous work capability improvement, which is achieved through specifying the appropriate rights, benefits, and welfare for all enterprise employees and ensuring that these benefits are equitable, comprehensive, and aligned with today's working environment.

In the fiscal year 2025, the MWA implemented **a project to enhance and promote welfare services under the Human Capital Management (HCM) Master Plan** and the MWA's annual action plan with the goal of fostering relations with stakeholders via projects that promote increased employee and contractor engagement. In the fiscal year 2025, the MWA reviewed and enhanced employee benefits and welfare consistent with a diverse range of requirements, including health, financial security, and work-life balance, in addition to creating incentives and promoting ties to the enterprise. The MWA hopes that every employee will receive comprehensive, fair, and appropriate care that suits each of their stage in life and their job description. As such, an analysis of appropriate benefits and welfare was conducted by gathering related input variables, such as the opinions and needs of personnel regarding their benefits and welfare (VOE: Voice of Employee) through various channels, including employee engagement and satisfaction surveys, employee benefit and welfare satisfaction and opinion surveys, negotiations through the MWA State Enterprise

Employee Satisfaction with Compensation and Benefits in the Fiscal Year 2025

4.1256 points



Labor Union, committee meetings on various benefits, or other meetings, as well as online channels such as complaints submitted via Intranet, Facebook, LINE and telephone, and lecturer feedback, etc.

The overall analysis revealed that employees want the MWA to enhance benefits and welfare the most in regards to education on how to invest in the provident fund, followed by other issues such as improving and developing the technology system for supporting welfare services, ensuring that the provident fund has a diverse investment format or policy, and expanding or improving venues for receiving medical treatments. Regarding medical treatments, the MWA provides modern, convenient, fast, and safe access to medical facilities, with disease screening by medical specialists, along with consultation and assistance for relieving stress in personnel, along with a wide range of food and beverage vendors and transport services for employees to ensure appropriateness and value. Furthermore, activities have been organized to foster relations between executives and employees, including management visits to employees in various areas, and the MWA provides special-interest housing loan welfare, the MWA Fitness Center, along with enhanced uniform welfare. Accordingly, the MWA has used opinions on the needs of employees to undertake the following actions:



1 Education on investing in provident funds:

Eleven training courses on finance and investment have been provided to all employee groups. These courses are continuously conducted online and onsite, with instructors from asset management companies and the Stock Exchange of Thailand, free of charge. Additionally, supplementary courses have been incorporated into the project to enhance and upgrade employee experience throughout their careers, under the topic "Happy Money: Financial Education Training," along with instilling a savings discipline in MWA employees aged 50 and above to prepare for retirement.





2

Improving and developing technology systems to support welfare services:

A scholarship application system for employees' children was implemented for the first time in the fiscal year 2025, and a technology system to support employee welfare benefits is currently under development and is expected to be completed in the fiscal year 2027.



3

The provident fund offers diverse investment policies:

MWA provident fund members can choose their own investment policies based on their risk appetite. The MWA reviews the suitability of investment policies every two calendar years through the KTAM PVD FUND application of Krungthai Asset Management, which is the member registrar, and through designated channels.



4

Expanding and improving diverse medical care options: The MWA has modern, convenient, fast, and safe medical facilities offering disease screening by medical specialists and providing counseling and assistance to alleviate stress in personnel.

An agreement has been made with Phyathai 3 Hospital to provide discounted medical treatment for employees and their families. Furthermore, the operational guidelines of the medical facilities provided by the MWA have been improved by classifying patients into four levels, ensuring that MWA personnel who become ill while on duty receive appropriate and timely treatment. In addition, telemedicine services are continuously provided to employees, along with counseling and assistance services to relieve stress for personnel through the Department of Mental Health's Mental Health Check-in system, and a mobile stress relief unit.



5

Optimizing the cost-effectiveness of employee transportation services:

A survey was conducted to assess satisfaction and demand for employee transportation services on each route. Additional pick-up points were added based on employee suggestions, and existing transport vehicles are managed to adequately accommodate departments that have relocated to the head office, such as the Phaya Thai branch office and the service support department.



6

Organizing activities to foster relationships between executives, employees, and contractors, and conducting management visits to employees in various areas:

Relationship-building activities are continuously incorporated into the enterprise engagement promotion plan. Opportunities are given to executives in each department to consider activities as appropriate, such as departmental seminars, shared meals, tea gatherings to discuss work-related problems and challenges, departmental meetings, and efforts aimed at creating a positive communication and work atmosphere, including organizing events on important occasions such as New Year's Day and Songkran, congratulatory events and award presentations. Activities are also organized related to recognition and both monetary and non-monetary rewards, such as the Q-water Point activity, where management allows employees to give points each month for accumulation and redemption of rewards. Additionally, management makes visits to employees at work sites and conduct inspections on various occasions, such as when visiting and encouraging employees working in public service and water treatment on New Year's Day and Songkran, as well as visiting and encouraging employees following the recent earthquake. Various outreach activities have also been organized, such as mobile meetings and study tours to other organizations to acknowledge operational results and identify problems/obstacles in the workplace for consideration in setting appropriate work policies.



7 Special interest housing loan welfare:

Currently, the MWA has special interest housing loan welfare agreements on behalf of employees with three government banks, namely the Government Housing Bank, Government Savings Bank, and Krungthai Bank.



8 MWA Fitness Center:

The fitness center has been upgraded with modern, safe, and up-to-standard equipment to meet the needs of users.



9 Improvement of welfare regarding uniforms:

Revisions have been made to directives regarding the payment guidelines and work uniform designs for MWA employees. Some work uniform designs have been improved, and additional departments have been granted the right to receive work uniforms.



(2-30) In addition to the abovementioned improvements to benefits and welfare, the MWA has also established an **MWA Public Relations Committee** to serve as a joint consultative committee. Representatives from both the employer and employees will jointly consider and find solutions to problems and improve employment conditions, working conditions, or regulations that benefit both parties. This is in order to strengthen good relations and lead to smoother and more successful internal management, in accordance with the State Enterprise Labor Relations Act, B.E. 2543 (2000).

Furthermore, the **Metropolitan Waterworks Authority State Enterprise Labor Union** was established to protect the welfare and rights of employees. It acts as intermediary in monitoring improvements to employment conditions and employee welfare, as well as receiving complaints and providing advice to employees. The president of the MWA State Enterprise Labor Union

has also been given the opportunity to participate in important subcommittees, such as the Corporate Governance (CG) and Corporate Social Responsibility (CSR) subcommittees, as well as serving on working groups related to the consideration of various welfare and benefits. This ensures equal rights for expressing opinions and full protection of personnel rights, as well as regular participation in MWA activities to foster harmony, coordinate collaboration, and create positive outcomes for the enterprise and personnel without any conflict.

As a result of improvements in employee benefits and welfare, along with the continuous cultivation of good relations with the MWA State Enterprise Labor Union, **employee satisfaction with compensation and benefits reached 4.1256 out of 5.00 in the fiscal year 2025.**





Welfare to Support the Family Institution

The MWA continuously prioritizes family-oriented welfare programs to help improve the quality of life of employees and lead to long-term commitment to the enterprise. This includes family members being able to use medical treatment entitlements in both public and private hospitals based on criteria set by the MWA, along with monetary benefits provided to the children of employees, such as tuition, financial assistance for childbirths, financial assistance for the children of monthly employees, scholarships for children of employees, and providing designated areas for mothers

and children in “Oun Ai Rak” rooms as safe spaces for mothers to store breastmilk, not to mention adjusting maternity leave days in accordance with the law, giving employees the right to take ongoing maternity leave to provide childcare after childbirth, and granting male employees the right to take leave to assist their spouses who have given birth to children. Additionally, a new work format that counts work hours has been adopted to help employees manage their work hours to promote work-life balance.

Employee Data on Maternity Leaves and Post-Leave Return to Work for Fiscal Years 2023-2025 ⁽⁴⁰¹⁻³⁾

Fiscal Year	No. of Leaves Taken	No. of Employees Returning to Work Post-Leave in Fiscal Year	Total Leaves Expiring in Next Fiscal Year	Employee Return Rate Post-Leave (%)	Employee Retention Rate Post-Leave (%)	Remarks
1  Maternity Leave for Childbirth (Female)						
2023	35	28	7	100	97.14	One resignation (15 Dec. 2023)
2024	36	33	3	100	100	
2025	22	18	4	100	100	
2  Ongoing Leave for Childcare After Taking Leave for Childbirth (Female)						
2023	7	5	2	100	85.71	One resignation (15 Dec. 2023)
2024	3	1	1	50	50	One resignation (15 Dec. 2023)
2025	4	2	2	100	100	
3  Leave for Assisting Spouse after Childbirth (Male)						
2023	30	28	2	100	100	
2024	35	35	-	100	100	
2025	33	32	1	100	100	

No. of New Employees and Retired Employees and Other Departures ⁽⁴⁰¹⁻¹⁾

(Data as of 30 September 2025)



No. of New Employees by Age and Gender (people)

No. of New Employees	Fiscal Year 2023			Fiscal Year 2024			Fiscal Year 2025		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Age 21-30 years	11	5	16	16	9	25	35	11	46
Age 31-40 years	3	-	3	2	4	6	2	2	4
Age 41-50 years	-	-	-	-	-	-	-	-	-
Age 51 years and up	-	-	-	-	-	-	-	-	-
Total	19			31			50		



No. of Retirees, Resignations, and Other Departures by Age and Gender

Age	Reason for Departure	Fiscal Year 2023			Fiscal Year 2024			Fiscal Year 2025		
		Male	Female	Total	Male	Female	Total	Male	Female	Total
21-30 years	Resignation	1	6	7	5	2	7	5	2	7
31-40 years	Resignation	5	4	9	4	5	9	2	3	5
	Death	1	-	1	-	-	-	-	-	-
	Dismissal without wrongdoing	-	-	-	-	1	1	-	-	-
	Firing (due to wrongdoing)	-	-	-	1	-	1	1	-	1
41-50 years	Resignation	-	3	3	3	-	3	2	1	3
	Death	2	-	2	2	-	2	-	-	-
	Dismissal without wrongdoing	1	-	1	-	-	-	-	-	-
	Firing (due to wrongdoing)	-	-	-	-	1	1	-	-	-
51 years and up	Resignation	1	-	1	2	-	2	1	2	3
	Death	4	3	7	2	-	2	1	-	1
	Dismissal without wrongdoing	1	1	2	3	3	6	1	-	1
	Firing (due to wrongdoing)	-	-	-	2	-	2	-	-	-
	Retirement	39	45	87	42	46	88	78	58	136
Total		55	62	117	66	58	124	91	66	157



Local Communities : Growing Sustainably Together

The main mission of the Metropolitan Waterworks Authority (MWA) is to produce water supply to serve the public in its service area spanning across three provinces (Bangkok, Nonthaburi, and Samut Prakan). In addition to providing reliable water services, the MWA places great importance on creating shared value for stakeholders, communities, and society. It promotes the responsible use of resources, fosters strong relationships, and builds collaborative partnerships with government agencies, private organizations, local administrative organizations, independent organizations, and communities surrounding its water treatment plants. In doing so, the MWA participates in developing target communities in the enterprise's operational area in the western watershed areas in order to reduce inequality in the use of water resources while also promoting positive attitudes toward the MWA. Furthermore, the MWA supports economic and social growth and development to build relations with stakeholders and strengthen the key communities based on the needs and expectations of these communities. The MWA uses its skills and expertise in waterworks and other competencies to create benefits for communities where it operates, in order to promote engagement between the MWA and the local populace in the operational areas of the MWA for greater strength and stability. The MWA's efforts can be divided into various projects as follows:



The MWA received **the 2025 “Thailand Award”** under the One Million Acts of Goodness Project of the Thai Social Foundation. The award, in the category of “Outstanding Organization of the Year,” recognized the MWA’s commitment to social responsibility activities, including providing plumbing training courses to the public under the “Plumber for People project” to develop skills and generate income, as well as various other activities contributing to society and the nation.

Key Community Strengthening Projects



Operational Area:

Key communities within the MWA's area of operation, including around the Tha Muang Raw Water Collection Point in Tha Muang District, Kanchanaburi Province



Goal:

Improve relations and the quality of life of the communities as joint water users and support the expansion of the production capacity of Mahasawat Water Treatment Plant.



Project Participant Satisfaction Score (5 points total):

4.77 points

The MWA plans to expand its water production capacity at the Mahasawat Water Treatment Plant. This plant uses raw water from the Mae Klong River, upstream of the Mae Klong Dam, and transmits it via the Western Water Supply Canal, passing through communities in Kanchanaburi, Suphan Buri, Nakhon Pathom, and Nonthaburi provinces, over a distance of approximately 107 kilometers, before reaching the Mahasawat Water Treatment Plant. These communities are considered key stakeholders in the shared use of water resources. Therefore, the MWA plans to implement a continuous community empowerment project, running from fiscal years 2023 to 2027, to enhance stakeholder relationships and strengthen key communities based on their needs and expectations. This will be achieved by leveraging the MWA's expertise in water supply and other competencies to benefit these communities, as possible, to foster stronger and more sustainable participation between the MWA and the people in its operational areas.



Performance in the Fiscal Year 2025:

The MWA organized the following activities in Tha Muang District, Kanchanaburi Province:

Muang Chum Community: The MWA provided training on the operation and maintenance of community drinking water filtration systems.

Wat Ban Mai: The MWA upgraded the plumbing system, repaired restrooms, and renovated the landscape.

Ban Makok Mu School (Punyasiriwitthaya): The MWA renovated the tap water system and installed drinking water filtration systems for both the school and the community.

Plumber for People Project



Operation Area:

The service area covering three provinces (Bangkok, Nonthaburi, and Samut Prakan)



Goal:

Share the enterprise's primary expertise to create jobs, reduce expenses and build a volunteer network for maintaining the public water supply systems.



Project Participant Satisfaction Score (5 points total):

4.74 points

To transfer core competencies and expertise to the general public, participants in the project received vocational training in plumbing and basic pipe maintenance. The project also supports the establishment of community plumber networks for knowledge exchange through a collaborative network with the Metropolitan Waterworks Authority (MWA). This enables trainees to repair home plumbing systems, assist communities in various locations, and even earn supplementary income by becoming professional plumbers. Furthermore, the project includes **Plumber for People CSR activities**, where trainees from the project work in schools, temples, and communities to repair and maintain plumbing systems. This promotes the practical application of plumbing skills, fosters teamwork, encourages community involvement, expands the collaborative network between the MWA and various government and private sector organizations, and contributes to sustainable community development.

In addition to providing knowledge and promoting skills in the general public, the MWA also trained upcoming retirees and ordinary employees on plumbing knowledge and how to maintain plumbing systems and sanitary ware, as well as how to repair plumbing fixtures inside of homes in order to look after themselves and their families, and in the fiscal year 2025, training in the **“Basic Plumbers for Employees and Retirees” course** was organized. Furthermore, in order to create opportunities to develop skills and jobs for society, the MWA also expanded on the project in collaboration with correctional institutions and juvenile detention centers by providing plumbing training to detainees at the Central Correctional Institution for Drug Addicts in Lat Yao Sub-district, Chatuchak District, Bangkok.



Performance in the Fiscal Year 2025:

• Knowledge Training:

Basic Plumber Course:

Two batches were conducted with a total of 65 participants (1st batch: 32 people / 2nd batch: 35 people).

Professional Plumber Course:

One batch was conducted with a total of 48 participants.

“Basic Plumber for Employees and Retirees” course:

One batch was conducted with a total of 56 participants.

“Creating Professional Opportunities” project:

One batch was conducted with a total of 30 participants.

• Plumber for People CSR Activities:

Trainees visited and repaired the plumbing system of Pracha Phiban School, Bang Khen District, and Sotsuksa School, Nonthaburi Province.

Youth Water Conservation and Water Conservation School Network Project



Operation Area:

Communities and society along the Eastern Water Supply Canal, which spans across Pathum Thani Province and Bangkok, over a distance of 30 kilometers



Goal:

Foster environmental awareness about water and environmental conservation, and expand the school collaboration network.



Project Participant Satisfaction Score (5 points total):

4.80 points



The project aims to instill in youths the importance of water resources and the environment, and to promote responsible use of water, so that they grow up to be vital conservators of water resources and the environment, and extend their impact to their families, communities, and society. Furthermore, the project aims to enhance relationships with stakeholders, specifically communities and social groups along the Eastern Water Supply Canal of the MWA. In 2024, a total of 16 schools in the target area joined the MWA's Water Conservation School Network. Their goal is to strengthen the youth

water conservation group in educational institutions along the Eastern Water Supply Canal of the MWA, expand the Water Conservation School Network in the fiscal year 2025, and further strengthen relationships with schools that have already joined the network.

Performance in the Fiscal Year 2025:

Field Trips: Over two field trips of eight schools each, 16 visited Bang Khen Water Treatment Plant to study its operation.

Youth Water Conservation Activities: Knowledge station activities (such as Young Plumbers Station, Water Quality Jigsaw Station, Water Conservation Bingo Station, and Youth Waste Eradicator Station) were organized for 16 schools in the target area as part of three separate events, with four schools participating per event.



Project to Promote Good Relations with Communities along the Eastern Water Canal



Operation Area:
Communities along the Eastern Water Canal (30 kilometers starting from Sam Lae Raw Water Pumping Station)



Goal:
Reduce impacts from community expansions affecting the quality of raw water and establish a network to monitor and preserve water resources.



Project Participant Satisfaction Score (5 points total):
5 points

The Metropolitan Waterworks Authority (MWA) operates Sam Lae Raw Water Pumping Station in Mueang Pathum Thani District, Pathum Thani Province. The station serves as the raw water collection point for the Eastern Water Supply Canal. Communities have expanded rapidly along the Eastern Water Supply Canal, resulting in intrusion into land areas along the banks of the canal led to a deterioration in the quality of the canal's water, making it urgently necessary for the MWA to establish relationships with and carefully provide knowledge and understanding to the people about the conservation of water resources, water sources, and the environment.

Performance in the Fiscal Year 2025:

The MWA hosted a communal forest robe offering ceremony at Sam Lae Temple.

The MWA donated drinking water cups to communities and the environmental/public health activities of Bang Kadi Industrial Park, Sam Lae Temple Pre-school Education Center

Renovation of water pipes, repairs of water gutters and renovation of the landscape of Sam Lae Temple Pre-school Education Center, Mueang Pathum Thani District, Pathum Thani Province.





MWA Project to Conserve Watershed Forest



Operation Area:

Watershed areas and communities (Ping, Wang, Yom, Nan and Mae Klong River Basins) where the MWA's raw water is sourced



Goal:

Conserve and restore the soil, water, and forests by integrating cooperation with networked partners to ensure the security and sustainability of raw water sources.



In the fiscal year 2025, the “MWA Project to Conserve Watershed Forest” continued to undertake efforts to conserve and restore natural resources in an integrated manner to promote conservation of water resources, soil, and forests and as well as the participation of watershed communities and networked partners to ensure continuity in support of the MWA's main mission of acquiring raw water for tap water production in order to ensure that the MWA continues to have sustainable and sufficient access to high-quality raw water.

Performance in the Fiscal Year 2025:

- **Cooperation Building:** The MWA held discussions and organized an exhibition on a stage where the MWA's water consumers (upstream, mid-stream, and downstream) came together to promote development in the Nan River Basin.
- **Development of Public Utilities in Watershed Communities:**

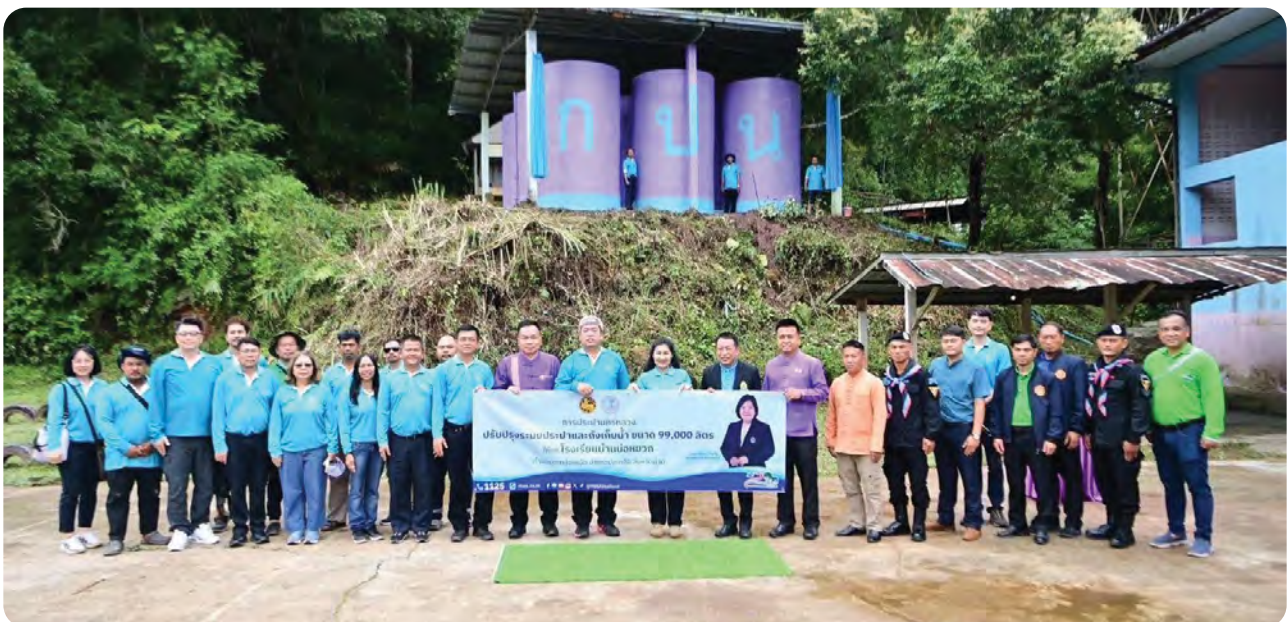
Drinking water filter donations to Ban Huai Maeng School, Uttaradit Province.

“MWA New Gen: Into the Watershed” volunteer activity to create weirs in communities around Bhumibol Dam, Tak Province.

Renovation of water distribution pipes/ village water supply systems along with donation of a 12,000-liter water storage tank to Ban Huai Hat Community, Nan Province.

Renovation of water supply systems and donation of a 99,000-liter water storage tank to Ban Bo Yuak School, Nan Province.

Renovation of the raw water pumping system of Ban Tha Pui Tok Community, Tak Province.



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Water and Effluents



Water Management for Tap Water Production

(303-1) The Metropolitan Waterworks Authority (MWA) recognizes the importance of water resources to the agricultural, industrial, and household sectors. Therefore, we have created effective raw water management guidelines for use in tap water production in collaboration with agencies responsible for systematically overseeing water issues to allocate raw water for tap water production. We closely coordinate with the Office of National Water Resources and the Royal Irrigation Department during the dry season. While doing so, the MWA assesses the quantity of raw water needed for the production of tap water in advance for the dry season each year by making predictions based on multiple factors, such as the water usage behaviors of the consumers, water usage trends in various sectors and production plans that are updated at different time periods, etc. Next, we send the estimated figure of raw water required for use during the dry season to the Royal Irrigation Department by October of each year in order to use the information as a guideline for setting the overall water drainage plans of the country and cultivation plans in each river basin suitably according

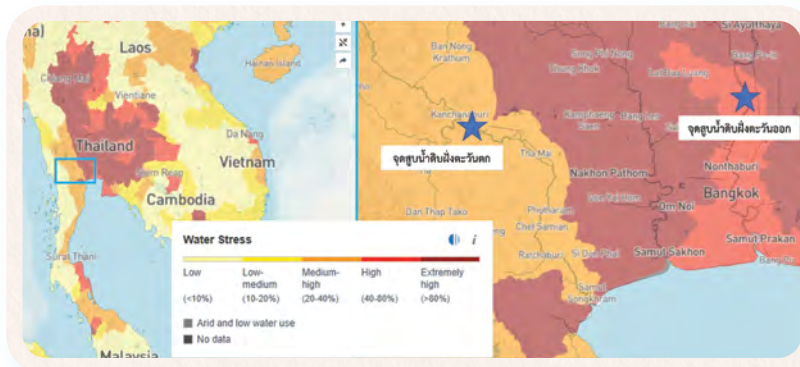
to the amount of water capital available at the end of the rainy season.

The MWA obtains raw water from 2 main sources for tap water production. For the eastern side, raw water is sourced from the Chao Phraya River (Bhumibol Dam, Sirikit Dam, Khwae Noi Bamrung Daen Dam, and Pa Sak Chonlasit Dam), while raw water for the western side is obtained from the Mae Klong River (Srinakarin Dam and Vajiralongkorn Dam). In the fiscal year 2025, the MWA used a total of 1,648,360 megaliters of raw water on the eastern side (1,648 million cubic meters) and 563,157 megaliters (563 million cubic meters) on the western side. The raw water collection point on the eastern side is located in an area facing high water stress, while the western side is located in an area with moderate-to-high water stress. The raw water from both sources is freshwater with total dissolved solids (TDS) below 1,000 mg/l, with the annual average values on the eastern and western sides at 182 and 120 mg/l, respectively.

Quantity of Raw Water Used by the MWA for Water Production in Fiscal Years 2022-2025 ⁽³⁰³⁻³⁾

Raw Water Sources	Upstream Area	Raw Water Used for Tap Water Production (Megaliter)			
		2022	2023	2024	2025
Chao Phraya River	Bhumibol Dam, Sirikit Dam, Kwae Noi Bamrung Daen Dam, and Pa Sak Chonlasit Dam	1,722,572	1,680,460	1,664,992	1,648,360
Mae Klong River	Srinakarin Dam and Vajiralongkorn Dam	601,567	562,567	568,056	563,157

Remark: Data as of 30 September 2025

**Figure Showing the Raw Water Collection Points of the MWA Compared with the Water-Stressed Area Map**

Reference: <https://www.wri.org/applications/aqueduct/water-risk-atlas/>

(303-1) The raw water that the MWA uses to produce tap water is allocated under the “Irrigation Zone Water Management and Dry Season Crop Cultivation Plan” of the Royal Irrigation Department, which is a plan that was evaluated based on the volume of usable water and water already allocated for various water use activities in the river basins. For the dry season, the Chao Phraya River Basin has a six-month duration, starting from November to April next year, and the Mae Klong River Basin has a six-month duration, starting from January to June.

The amount of raw water that the MWA was allocated in the 2024/2025 dry season in the Chao Phraya River basin was 900,000 megaliters (900 million cubic meters) or 6.75 percent of the total usable water volume as of 1 November 2024 [The total volume of usable water was 13,345,000 megaliters (13,345 million cubic meters.)]. Meanwhile, for the Mae Klong River Basin, the MWA was allocated 460,000 megaliters of water (460 million cubic meters) or 4.83 percent of the total volume of usable water as of 1 November 2024 [The total volume of usable water was 9,514,000 megaliters (9,514 million cubic meters.)].

Table Showing the Total Raw Water Allocated by the Royal Irrigation Department and Total Usable Water Received from the Chao Phraya River Basin and the Mae Klong River Basin During the Dry Season in Fiscal Years 2022-2025 (303-3)

Unit: Megaliter

Fiscal Year	2022	2023	2024	2025	Amount of Water Allocated as a Percentage of Total Water Available for Use
Chao Phraya Basin					
Allocated raw water by the Royal Irrigation Department	900,000	900,000	900,000	900,000	6.75
Allocated raw water	859,541	841,691	825,319	751,145	
Percentage	95.50	94	91.71	83.46	
Mae Klong Basin					
Allocated raw water by the Royal Irrigation Department ²	460,000	460,000	460,000	460,000	4.83
Allocated raw water	300,626	275,967	286,939	280,394	
Percentage	65.35	59.99	62.38	60.96	
Total raw water received from 2 water sources					
Allocated raw water by the Royal Irrigation Department	1,360,000	1,360,000	1,360,000	1,360,000	
Allocated raw water	1,160,167	1,117,658	1,112,258	1,031,539	
Percentage	85.31	82.18	81.78	75.85	

Remarks:

1. Data as of 30 September 2025
2. Adjust the allocated raw water volume in the Mae Klong River Basin during the dry season to align with the “Water and Crop Management Plan for the Dry Season in the Irrigation Area,” changing the previous figure used by the MWA from 360 million cubic meters to 460 million cubic meters in accordance with the plan.

Table Showing Raw Water Used for Production and Tap Water Produced for Distribution by Location Water Treatment Plants ⁽³⁰³⁻⁵⁾



 Water Treatment Plant	Raw Water and Water Produced for Distribution (Fiscal Year 2025) (Megaliter)		
	 Raw Water	 Water Produced for Distribution	 Difference between Raw Water and Water Produced for Distribution
1 Bang Khen	1,505,573	1,359,111	146,462
2 Sam Sen	102,884	88,062	14,822
3 Thon Buri	39,903	36,975	2,928
4 Mahasawat	563,157	524,677	38,480

Remark: Data as of 30 September 2025



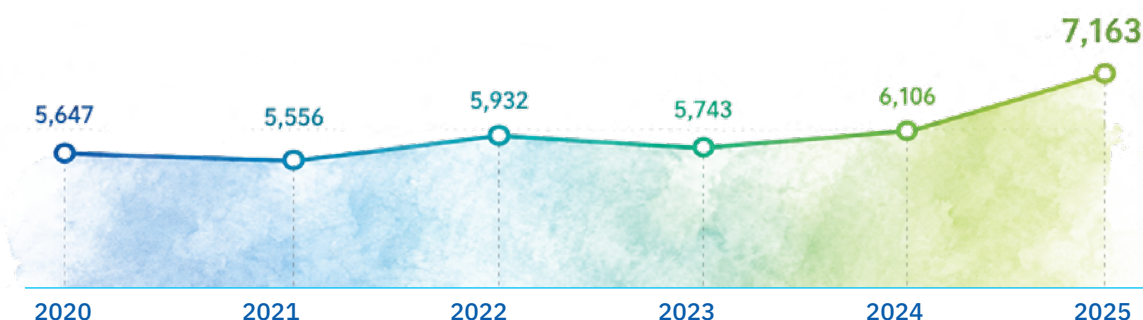
Reuse of Effluent Generated by Water Production Processes

We realize the importance of being responsible for our water resources. The Mahasawat Water Treatment Plant therefore has formulated a method for reusing effluent generated by the water production process (Reuse: filtration reservoir cleaning) with turbidity in the normal standard. The amount of recycled effluent for the fiscal year 2025 is shown in the table below.

Table Showing Total Recycled Effluent for the fiscal year 2025 of the Mahasawat Water Treatment Plant (Unit: Megaliter)

 Fiscal Year 2025	Month												Total
	Oct 24	Nov 24	Dec 24	Jan 25	Feb 25	Mar 25	Apr 25	May 25	Jun 25	Jul 25	Aug 25	Sep 25	
	539	559	563	564	577	664	615	617	569	642	666	588	7,163

Table Showing Total Recycled Effluent for Fiscal Years 2020-2025 of the Mahasawat Water Treatment Plant



Water Loss Management in the Tap Water Distribution System

The MWA has established guidelines for water loss management through its Water Loss and Pressure Management Subcommittee. The primary focus is on controlling and reducing water loss in the distribution network by repairing leaks, implementing District

Metered Areas (DMAs), and replacing aging pipes. A target has been set to reduce water loss to 23.00 percent by 2028. This will be achieved through pipe renovation, active leakage control, pressure management, and the adoption of advanced leak detection



technologies for swift maintenance. Once pipe renovations are complete, the system will ensure reliable, 24-hour access to clean and safe tap water for all residents. The local residents will also benefit from stronger water pressure, fewer supply disruptions due

to pipe maintenance, and reduced traffic congestion. Furthermore, these pipe replacements will significantly minimize water loss from leaks and bursts, conserving valuable water resources and reinforcing Thailand's secure access to its natural resources.

Non-Revenue Water Reduction Performance, Fiscal Years 2018-2025

Fiscal Year	Amount of Water Produced for Distribution (Megaliters)	Cumulative Rate of Water Loss (%)		Results of Pipe Improvement Projects to Reduce Water Loss (km)
		Target	Performance	
2018	1,997,100	28.75	29.83	407.110
2019	2,075,200	29.29	29.29	784.558
2020	2,121,100	27.29	31.25	1,002.424
2021	2,116,500	30.20	33.09	1,130.722
2022	2,080,300	30.50	31.64	1,210.368
2023	2,042,412	27.50	27.12	1,271.474
2024	2,038,133	26.00	25.68	1,304.100
2025	2,008,826	24.40	24.54	1,102.000

In the fiscal year 2025, a workshop under the title “Exchanging Water Loss Reduction Knowledge” was organized through collaboration between the MWA and the Provincial Waterworks Authority (PWA) in order to create a stage for the executives and personnel of both agencies to exchange their knowledge.

Reducing water loss in the tap water distribution systems from upstream to downstream is a key policy to restore water resources and ensure their availability for sustainable societal use. The workshop demonstrates a unified integration of knowledge among agencies, sharing best practices, Active Leakage Control (ALC), and advanced leak detection, or the use of technology to inspect pipe leaks, including the utilization of big data as a major driving force for developing new technologies and innovations to upgrade the work of both organizations. All of these dimensions will directly impact the quality of services delivered to the public and benefit the secure development of the tap water systems of Thailand.





Effluent and Waste



Wastewater Management ⁽³⁰³⁻²⁾

The MWA has established guidelines for wastewater management based on applicable standards and laws as a control framework. Wastewater generated from the MWA's operations is classified into two main sources as follows:

- 1. Effluent generated by water treatment processes:** Most of this effluent is generated by sedimentation and water filtration processes. The MWA collects and treats all effluent using a sediment removal system to comply with required standards prior to discharging it into public water bodies. Additionally, effluent samples are collected at the legally mandated discharge frequency, and laboratory test results are regularly reported to the relevant regulatory bodies.
- 2. The MWA collects and treats effluent using centralized or on-site treatment systems to comply with applicable standards.** Effluent potentially contaminated with hazardous substances from the Water Quality Analysis Laboratory is collected and properly treated using appropriate methods prior to disposal.

Total Effluent from the Four Water Treatment Plants (Megaliter) ⁽³⁰³⁻⁴⁾

Water Treatment Plant	Total Effluent (Fiscal Year)				Source to Receive Effluent ¹	Types of Effluent	Results of Effluent Quality Analysis
	2022	2023	2024	2025			
 Bang Khen	30,577	31,791	29,175	25,194	Khlong Bang Talat	Fresh water ²	Up to standard
 Sam Sen	10,901	11,063	9,385	10,180	Khlong Sam Sen	Fresh water	Up to standard
 Thon Buri	943	1,125	1,809	2,170	Khlong Bang Khun Non	Fresh water	Up to standard
 Mahasawat	3,648	2,701	2,272	2,509	Khlong Plai Bang	Fresh water	Up to standard
Total	46,069	46,680	42,641	40,053			

Remarks:

- Source to receive effluent is a whole freshwater source, and it can be defined as the water stress area as shown in the photo on page 105.
- Freshwater refers to water with a TDS value of less than 1,000 mg/l.
- The laws related to the MWA's wastewater and discarded water are as follows:
 - The Ministry of Natural Resources and Environment Announcement on Setting Control Standards for Wastewater from Industrial Factories, Industrial Estates, and Industrial Zones issued on 29 March 2016.
 - The Ministry of Industry Announcement on Setting Control Standards for Wastewater from Factories issued on 30 May 2017.
 - Ministerial Regulation on Specifying the Criteria, Procedures, and Formats for Compilation of Statistics and Data and Information Recording and Summary Reports on Wastewater Treatment System Performance, B.E. 2555 (2012), issued on 3 April 2012.



Waste

The MWA has classified waste generated within the organization into 2 types, namely: ^(306-1, 306-2)

- 1. Effluent generated by water production processes:** It is a soil sludge generated by water production processes, managed as required by law [Notification of the Ministry of Industry on the Disposal of Sewage or Disused Materials, B.E. 2548 (2005), enacted on 27 December 2005, stipulating in the Gazette, page 14, volume 123, special section 11, dated 25 January 2006].
- 2. Solid waste generated by activities within office buildings:** It is a solid waste that occurs in MWA headquarters and its branches. This includes the four water treatment plants, managed in accordance with government policy.

Management Guidelines for Effluent Generated by Water Production Processes ^(306-3, 306-4, 306-5)

In general, effluent is generated by water production processes mainly arising from the processes mainly arising from sludge drainage and pond flushing after treatment with a sludge removal system.

Due to limitations in our effluent treatment system (both natural and mechanical), large quantities of sludge remain in the system. Laboratory examination indicates that the sludge contains no contaminants that significantly affect the environment. Thus, the MWA has hired contractors to collect the waste and proceed with its disposal using landfill methods as required by law.

Total Sludge Generated by Water Production Processes

Water Treatment Plant	Total Sludge (Unit: ton)				Fiscal Year 2025	
	2022	2023	2024	2025	Waste Disposal Site	Meet the Standards
1. Bang Khen	74,370	67,600	75,861	71,344.58	Title Deed No. 44655, Nong Suea District, Pathum Thani Province, owned by Mrs. Khruawan Kalawichai (Method of disposal: 082, filling low-lying areas)	Pass
2. Sam Sen	6,934	7,293	5,148.61	6,677.45	Title Deed No. 11879, Naraphirom Sub-district (Klong Naraphirom), Bang Len District (Bang Pla), Nakhon Pathom Province, owned by Mr. Anuwat Kaewduangkae (Method of disposal: 082, filling in low-lying areas)	Pass
3. Thon Buri	2,315	2,452	2,700.44	2,450.00	Title Deed No. 120923, Bang Krang Sub-district, Mueang Nonthaburi District, Nonthaburi Province, owned by Mr. Anuwat Kaewduangkae (Method of disposal: 082, filling in low-lying areas)	Pass
4. Mahasawat	6,935	18,893	19,473.26	16,932.00	Mr. Yongyut Choknakawaro, owner of Title Deed No. 5761, Map Sheet No. 5036IV3030, Don Faek Sub-district, Nakhon Chai Si District, Nakhon Pathom Province (Method of disposal: 082, filling in low-lying areas)	Pass



Energy Management



Energy Use

The MWA prioritizes environmentally conscious operations in response to climate change and recognizes the critical importance of energy conservation. Consequently, the MWA has established an energy conservation policy to guide its energy management. A dedicated working group, operating under the Strategic Sustainable Development and Integrated Economic Development Committee (BCG Model), has been appointed to enhance organizational eco-efficiency. This group is responsible for collecting and analyzing data, setting evaluation guidelines, managing energy, and implementing projects aimed at reducing greenhouse gas (GHG) emissions.

In the fiscal year 2025, the MWA used a total of 428,335.10 megawatt-hours (MWh), divided into electrical energy used in the water treatment and distribution process and in office buildings as follows:

Electricity Consumption of the MWA in Fiscal Years 2022-2025 ⁽³⁰²⁻¹⁾

Electricity Consumption



Fiscal Year	Water Treatment and Distribution (MWh)	Office Buildings (MWh)	Total Electricity Consumption (MWh)
2022	435,894.85	18,568.62	454,463.48
2023	413,162.11	19,381.28	432,543.39
2024	414,489.41	18,967.47	433,456.88
2025	410,658.89	17,676.21	428,335.10

Remarks:

1. Electricity consumption data was provided by the Eco-Efficiency Support Working Group and calculated based on fiscal year electricity tariffs from the SAP system, as certified by the Office of the Auditor General.
2. Water treatment and distribution refer to the water treatment system, transmission pumping system, distribution pumping system, and raw water canal pumping system. Office buildings include the Sam Sen Water Transmission and Distribution Pumping Office, the Engineering Building, the Medical Center, the Training Center, and all 18 MWA branch offices.

Accordingly, in the fiscal year 2025, MWA consumed approximately 864,305 kWh of electricity generated from the solar cell systems installed at its Headquarters, equivalent to an average of approximately 72,025 kWh per month.

Fuel Consumption of the MWA



Fuel Type	Fiscal Year			
	2022	2023	2024	2025
Diesel (liters)	572,833	624,509	571,903	576,047
Gasohol (liters)	179,322	116,068	108,981	101,211
NGV (kg)	6,744	4,323	1,078	118



Thermal Energy of Fuel and Electricity of the MWA (megajoules: MJ) ⁽³⁰²⁻¹⁾



	Fiscal Year			
	2022	2023	2024	2025
Electricity	1,636,068,512	1,557,156,193	1,560,444,772	1,542,006,371
Fuel	26,823,250	26,600,741	24,309,860	24,171,277
Total Energy	1,662,891,761	1,583,756,934	1,584,754,632	1,566,177,648

Remarks:

1. Thermal energy from electricity is calculated based on electricity consumption across the water treatment and distribution processes, as well as office buildings.
2. Thermal energy from fuel is calculated based on the consumption of NGV, gasohol, and diesel.
3. The conversion factors for fuel and electricity are based on heating values provided by the Department of Alternative Energy Development and Efficiency (DEDE).

From the data on the amount of thermal energy from fuel and electricity of the MWA in the fiscal years 2022-2025, it was found that the intensity values of energy use per unit of production are as follows: ⁽³⁰²⁻³⁾



Energy Consumption in Treatment per Volume of Water Sold (megajoules per cubic meter)

	Fiscal Year			
	2022	2023	2024	2025
	1.17	1.06	1.05	1.03



Greenhouse Gas Emissions

The MWA has compiled data and assessed the enterprise's greenhouse gas emissions within the scope of Operational Control Sections^(305-1 and 305-7), covering all seven types of greenhouse gases, namely carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃).

Furthermore, the MWA does not engage in activities that generate perfluorocarbon (PFCs) or nitrogen trifluoride emissions, nor has any sulfur hexafluoride leakage been detected from its electrical insulation systems. For the fiscal year 2025, total greenhouse gas emissions across all organizational activities are projected at 280,260.42 tons of carbon dioxide equivalent (tonCO₂e) categorized as follows:

No.	Description	Greenhouse Gas Emissions (tonCO ₂ e)			
		Fiscal Year 2022	Fiscal Year 2023	Fiscal Year 2024	Fiscal Year 2025
Category 1: Direct greenhouse gas emissions and absorption by the enterprise (Scope 1) ⁽³⁰⁵⁻¹⁾					
Total Type 1		1,765	1,980	1,813	2,214.08
Type 2: Indirect greenhouse gas emissions from energy use (Scope 2) ⁽³⁰⁵⁻²⁾					
Including type 2		227,186	216,228	216,685	214,124.72
Category 3: Other indirect greenhouse gas emissions (Scope 3) ⁽³⁰⁵⁻³⁾					
Total type 3		65,609	74,581	84,327	63,921.62
Total Greenhouse Gas Emissions (tonCO ₂ e)		294,560	292,790	302,825	280,260.42

Remarks:

1. Type 1 greenhouse gas emissions are calculated from the use of NGV, gasohol, and diesel fuels in the office buildings. In the fiscal year 2025, the calculation was expanded to include the amount of coolant leakage in the Sutthi Tharakhon Building and the vehicle service area, the engineering building, and the medical office building, as well as methane (CH₄) emissions from septic tank systems. If only fuel consumption is considered, the greenhouse gas emissions would be 1,804.95 tons of carbon dioxide equivalent (tonCO₂e).
2. Scope 2 greenhouse gas emissions are calculated from electricity use in water treatment and distribution and office buildings.
3. Scope 3 greenhouse gas emissions are calculated based on the use of chemicals in the water production process, including lime, alum, chlorine, and PACl; the transportation of chemicals; the transportation of sludge for disposal; and paper consumption in office buildings.
4. The Global Warming Potential (GWP) values are based on AR5 (Thai National LCI Database, TIIS-MTEC-NSTDA, AR5, with TGO electricity data for 2016-2018). The greenhouse gas emission factors (Emission Factors) for electricity generation and consumption are referenced from the Thailand Greenhouse Gas Management Organization (Public Organization).

In the fiscal year 2025, MWA used a total of 205 kilograms of R-22 refrigerant in its air-conditioning and refrigeration systems, resulting in an ozone-depleting substance equivalent of 11.275 kgCFCeq. The calculation was based on an Ozone Depletion Potential (ODP) Factor of 0.055, in accordance with the U.S. Environmental Protection Agency (U.S. EPA) standard, Phaseout of Class II Ozone-Depleting Substances.



From the data on greenhouse gas emissions arising from the enterprise's activities in the fiscal years 2022-2025, the greenhouse gas emission intensity (GHG emission intensity) data is as follows:

Greenhouse gas emissions per volume of water sold (tonCO ₂ e per cubic meter) ⁽³⁰⁵⁻⁴⁾	Fiscal Year			
	2022	2023	2024	2025
	0.000207	0.000197	0.000200	0.000185

In the fiscal year 2025, the MWA was able to reduce the greenhouse gas intensity per volume of water sold to only 0.000185 tons of carbon dioxide equivalent per cubic meter, the lowest level compared to the base year, the fiscal year 2022 (a reduction of 10.63 percent). This reflects more efficient energy management, energy-saving measures, and an increased proportion of renewable energy use (Solar Power).



Greenhouse Gas Emissions Reduction ⁽³⁰⁵⁻⁵⁾

The MWA's eco-efficiency analysis, which has established an environmental indicator as the carbon footprint for organization (CFO), found that a key activity generating significant greenhouse gas emissions is the use of electricity from external sources. The majority of this electricity consumption is generated by water transmission and distribution pumping systems. This is because water supply services within the MWA's area of responsibility are provided through a network of water tunnels and closed-loop pressure pipes.

Furthermore, the locations of water treatment plants, transmission pumping stations, and distribution pumping stations consist of large infrastructures that require 24-hour service.

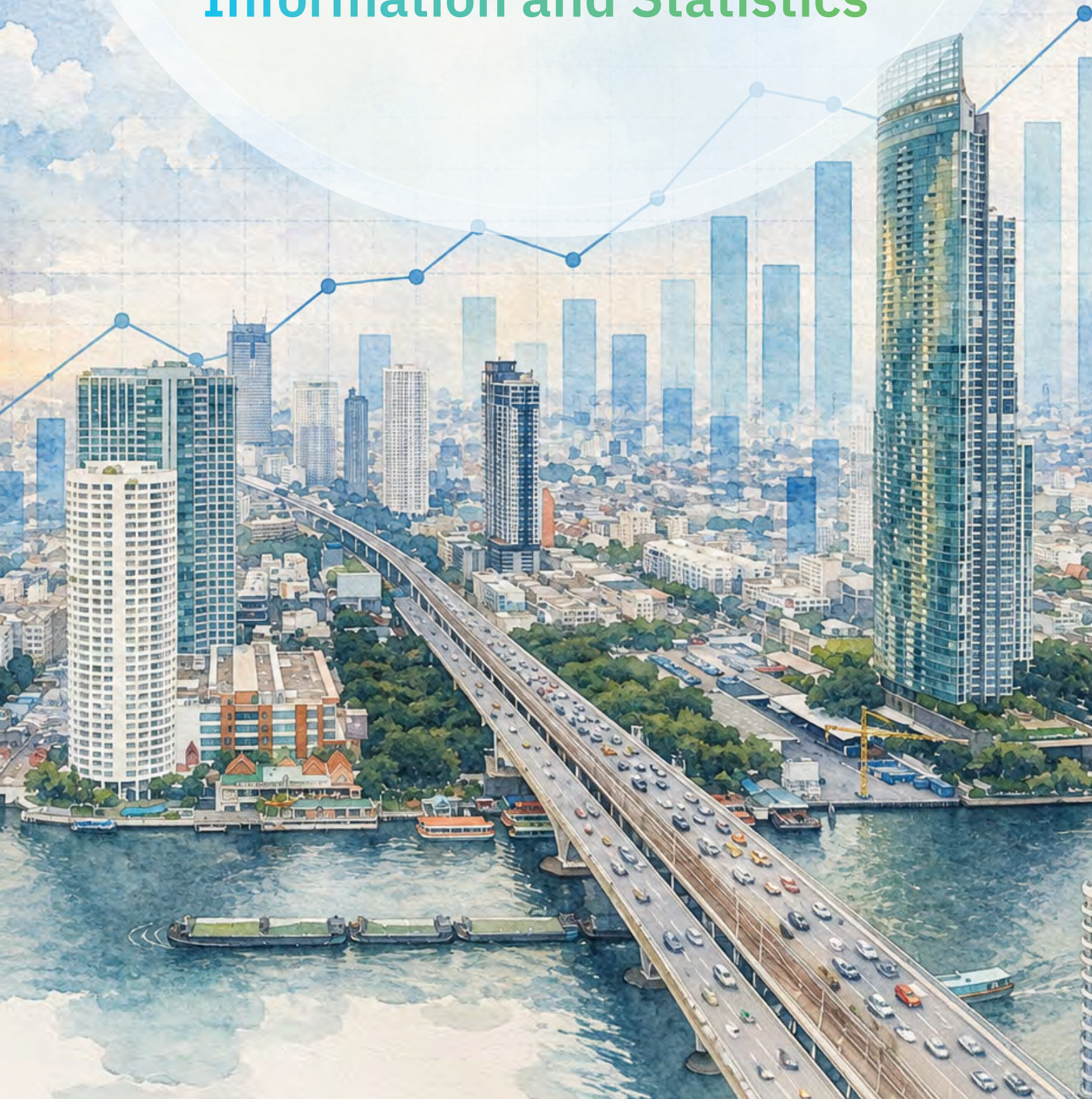
Given that structural and operational improvements to water pressure and volume management require time to implement, the MWA has established a short- and long-term Eco-Efficiency Improvement Plan (FY 2026-2030). Key initiatives include centralizing vehicle management with shared routes, transitioning rental fleets to electric vehicles (EVs), implementing building energy conservation, installing solar cell systems on facilities

and water treatment infrastructure, optimizing water pumping operations to maintain appropriate pressure levels, and reducing paper usage, etc.

In the fiscal year 2025, the MWA will utilize electricity generated from projects involving the installation and maintenance of energy-saving equipment in renewable or alternative energy power generation systems. Phase 1 of the project involved the installation of a solar cell system at the MWA headquarters with a total installed capacity of 999.60 kWp. This solar cell system generated a total of 864,305 kWh of electricity from 1 October 2024 to 30 September 2025, averaging approximately 72,025 kWh per month. This represents a reduction in greenhouse gas emissions (CO₂) from the use of the solar cell system in Phase 1 by approximately 432,066 kgCO₂eq, equivalent to approximately 0.036 million kgCO₂eq per month (36,006 kgCO₂eq per month). Phase 2 of the project includes 13 branch offices, 9 water pumping stations, the Bang Khen Water Treatment Plant, the Sam Sen Water Treatment Plant, and the Mahasawat Water Treatment Plant. Installation is expected to begin within the fiscal year.

Appendix:

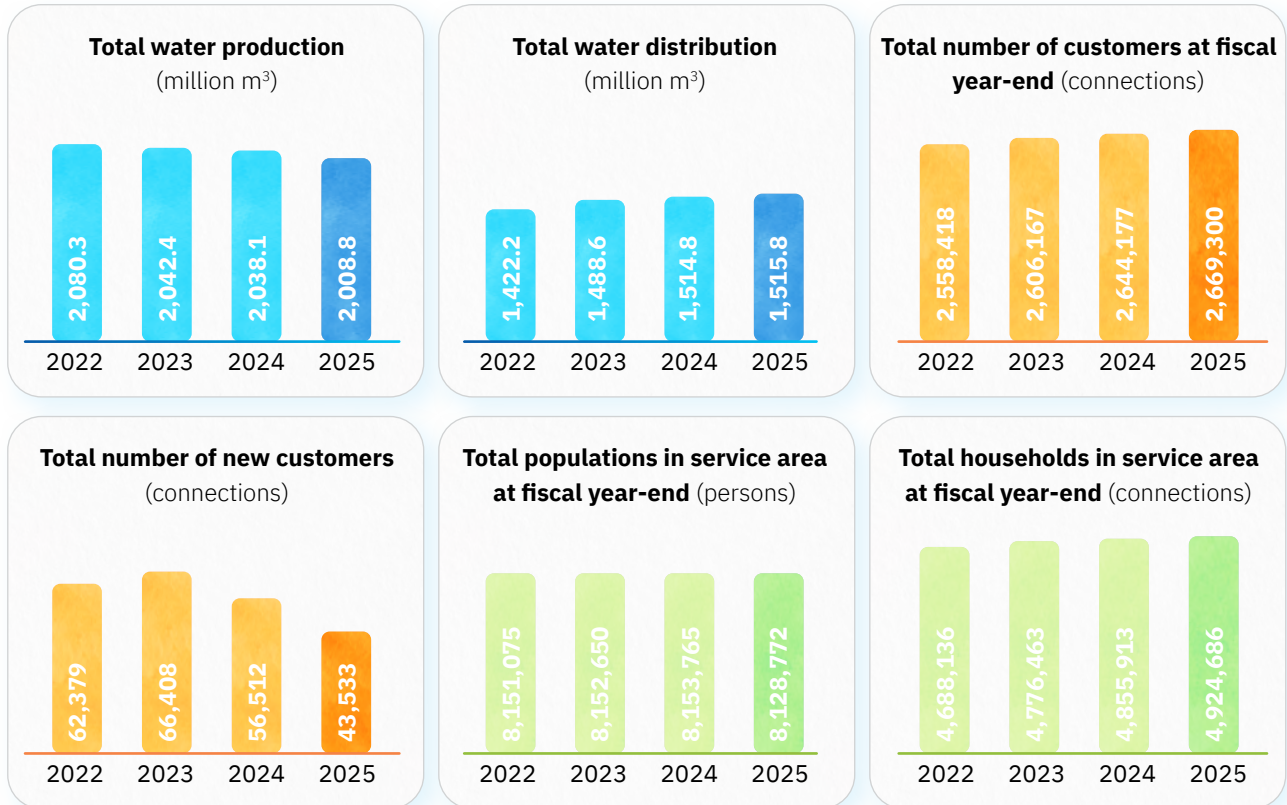
Key Performance Information and Statistics





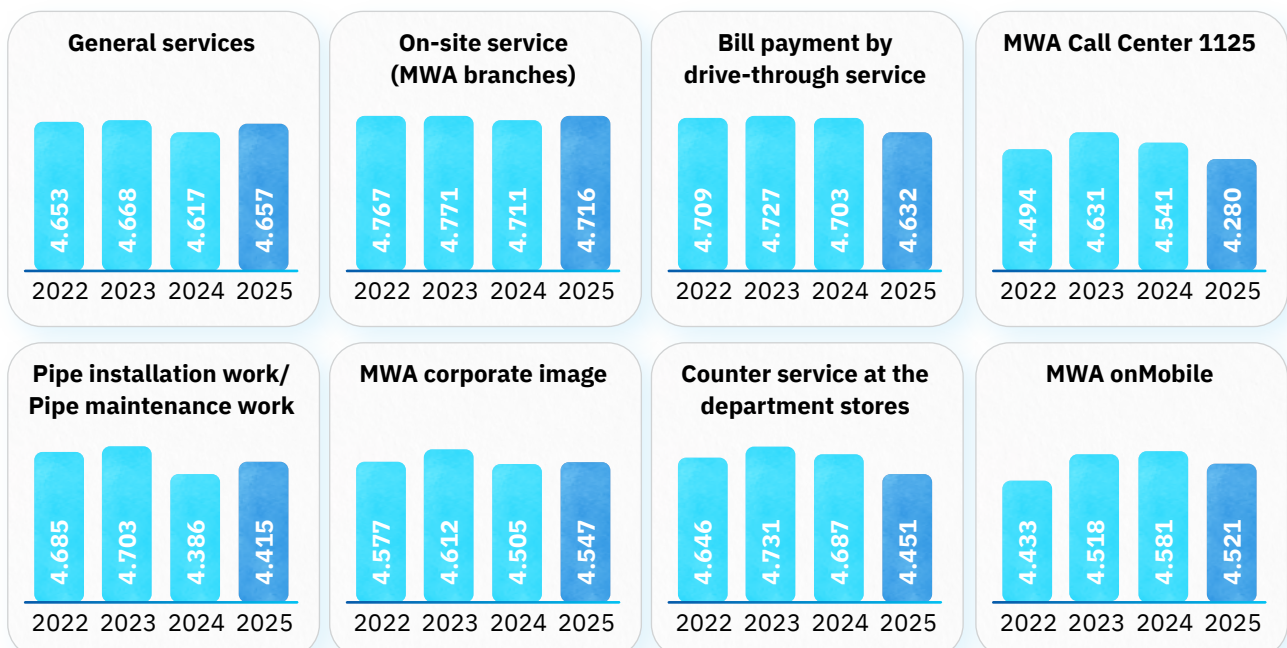
MWA Performance

Key Marketing Performance

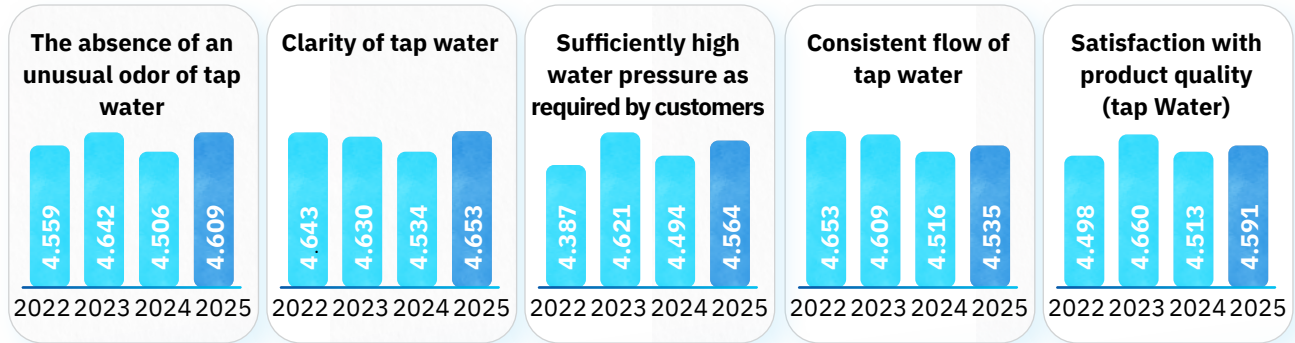


Key Customer Performance Results

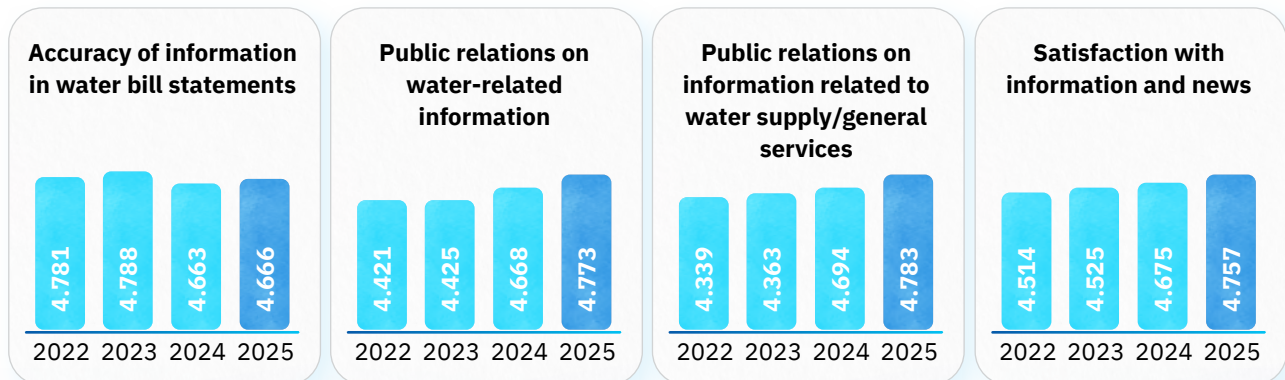
Satisfaction with General Services (Out of 5 Points)



Satisfaction with Product Quality (Tap Water) (Out of 5 Points)



Satisfaction with Information and News of the MWA (Out of 5 points)



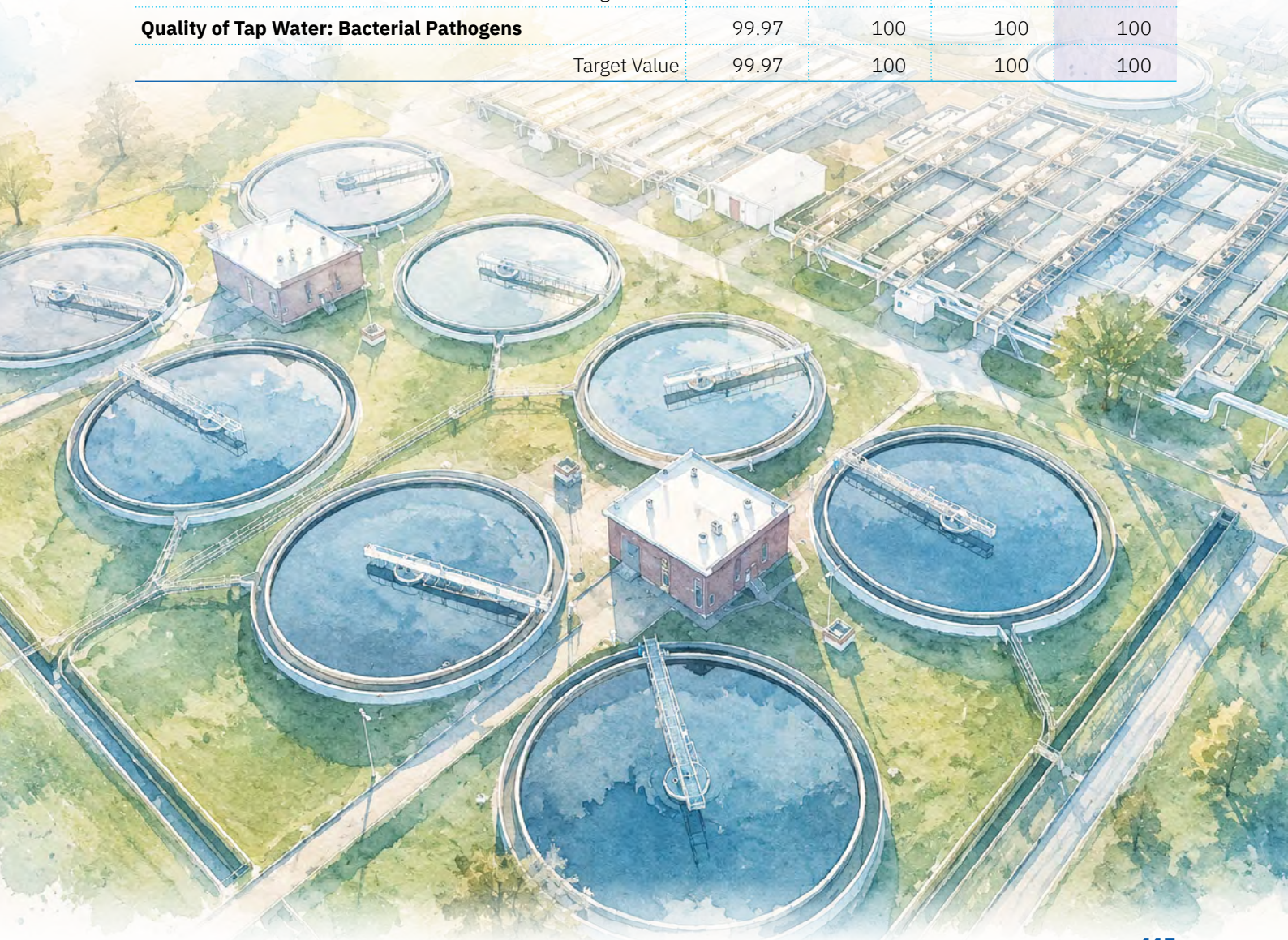
Key Product Performance (Tap Water Quality), Fiscal Year 2025





Key Performance in Water Production and Distribution

	Fiscal Year			
	2022	2023	2024	2025
Total number of samples from water distribution system used for water quality analysis	3,504	3,061	3,576	3,465
E. coli	99.97	100	100	100
Target Value	Zero E. coli			
Turbidity (unit: NTU)	0.33	0.25	0.34	0.36
Target Value				
pH	7.24	7.36	7.24	7.38
Target Value	6.5-8.5			
Free Residual Chlorine (unit: mg/L)	0.71	0.68	0.67	0.74
Target Value	No more than 0.2			
Quality of Tap Water: Physical	99.97	100	100	100
Target Value	100	100	100	100
Quality of Tap Water: Chemical	100	100	100	100
Target Value	100	100	100	100
Quality of Tap Water: Bacterial Pathogens	99.97	100	100	100
Target Value	99.97	100	100	100



Data and Statistics

Financial Information

Financial Information	2022	2023	2024	2025
Total assets (Million baht)	87,211.4	90,224.1	93,470.4	98,767.3
Current assets	11,431.1	13,315.7	13,503.2	12,539.5
Non-current assets	75,780.3	76,908.4	79,967.2	86,227.8
Total liabilities (Million baht)	17,683.0	18,982.9	19,616.5	22,861.1
Current liabilities	5,303.4	5,876.3	6,002.4	5,855.1
Non-current liabilities	12,379.6	13,106.6	13,614.1	17,006.0
Total equity (Million baht)	69,528.4	71,241.2	73,853.9	75,906.2
Total revenues (Million baht)	18,490.4	19,459.1	20,780.0	21,183.2
Operating revenue	18,067.4	19,043.2	20,038.7	20,055.4
Revenue from water sales and water equipment fees	16,837.8	17,706.7	18,654.5	18,581.9
Revenue from new connection fees	308.9	324.2	327.9	321.4
Other operating income	920.7	1,012.3	1,056.3	1,152.1
Non-operating Revenues	423.0	415.9	741.3	1,127.8
Total expenses (Million baht)	14,380.0	15,598.6	15,653.5	15,875.2
Operating expenses	14,375.3	15,569.9	15,587.6	15,767.7
Direct operating expenses	8,840.2	9,914.9	9,639.0	9,525.4
Depreciation and amortization	5,515.3	5,639.9	5,937.1	6,228.9
Interest expense and loan fee	19.8	15.1	11.5	13.4
Non-operating expenses	4.7	28.7	65.9	107.5
Other expenses	4.7	28.7	65.9	107.5
(Profit) Loss from foreign exchange rate	-	-	-	-
Net profit (Million baht)	4,110.4	3,860.5	5,126.5	5,308.0
Return on Assets (Percent)	4.71	4.28	5.48	5.37
Return on Equity (Percent)	5.91	5.42	6.94	6.99
Net Profit Margin (Percent)	22.75	20.27	25.58	26.47
Asset Turnover (Times)	0.21	0.21	0.21	0.20
Current Ratio (Times)	2.16	2.27	2.25	2.14
Debt to Total Assets Ratio (Times)	0.20	0.21	0.21	0.23
Debt to Equity Ratio (Times)	0.25	0.27	0.27	0.30
Cost of water sales per m ³ (Baht)	10.07	10.56	10.19	10.50



General Information

Item	Fiscal Year			
	2022	2023	2024	2025
Total amount of water production (Million m³)	2,080.3	2,042.4	2,038.1	2,008.8
Bang Khen Water Treatment Plant	1,394.0	1,386.4	1,381.5	1,359.1
Sam Sen Water Treatment Plant	86.4	87.3	88.8	88.0
Thon Buri Water Treatment Plant	39.9	40.4	38.5	37.0
Mahasawat Water Treatment Plant	560.0	528.3	529.3	524.7
Total amount of water distribution (Million m³)	1,422.2	1,488.6	1,514.8	1,515.8
Residences	695.6	715.6	788.3	797.4
Business, state enterprises, government agencies, and others	640.5	679.6	650.5	630.0
Public water and others	86.1	93.4	76.0	88.4
Percentage of water distribution (Percent)	68.4	72.88	74.32	75.46
Number of consumers at the end of the year (Connections)	2,558,418	2,606,167	2,644,177	2,669,300
Residence	2,109,493	2,155,257	2,191,070	2,214,059
Business, state enterprises, government agencies, and others	448,925	450,910	453,107	455,241
Small consumers (Connections)	2,523,957	2,571,637	2,609,595	2,634,658
Water meter size 1/2 inch	1,658,198	1,707,664	1,747,254	1,774,351
Water meter size 3/4 inch	795,051	792,845	790,916	788,838
Water meter size 1 inch	70,708	71,128	71,425	71,469
Key consumers (Connections)	34,461	34,530	34,582	34,642
Water meter size 1 ½ inches	15,596	15,951	16,125	16,253
Water meter size 2 inches	12,235	12,200	12,116	12,040
Water meter size over 2 inches	6,630	6,379	6,341	6,349
Number of new connections (Connections)	62,379	66,408	56,512	43,533
Average amount of water consumption per month (m³)	43.86	44.99	45.62	44.75
Residences	27.78	27.94	30.17	30.15
Business, state enterprises, government agencies, and others	118.05	125.95	120.35	115.59
Average water tariff per m³ (Baht)	11.69	11.81	12.1	12.15
Residences	9.85	9.94	10.27	10.35
Business, state enterprises, government agencies, and others	13.69	13.78	14.31	14.42
Total number of personnel (Persons)	5,272	5,175	5,089	5,033
Number of employees at the end of the year	4,252	4,154	4,059	3,978
Number of contract workers	1,020	1,021	1,030	1,055
Ratio of consumers per personnel (Connections)	485	504	520	530
Population in responsible area at the end of the year (Persons)	8,151,075	8,152,650	8,153,765	8,128,772
Number of households in responsible area at the end of the year (Houses)	4,688,136	4,776,463	4,855,913	4,924,686

GRI Content index

Statement of use	Metropolitan Waterworks Authority (MWA) of Thailand has reported in accordance with GRI Standards for the period 1 October 2024 to 30 September 2025
GRI 1 used	GRI: Foundation 2021
Applicable GRI Sector Standard (s)	-

GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION (Page)	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTER	REASON	EXPLANATION	
General Disclosure						
GRI 2: General Disclosures 2021	The organization and its reporting practices					
	2-1 Organizational details	10-17				
	2-2 Entities included in the organization's sustainability reporting	12-13				
	2-3 Reporting period, frequency and contact point	8-9				
	2-4 Restatements of information	8				
	2-5 External assurance	125				
	Activities and workers					
	2-6 Activities, value chain and other business relationships	11, 16, 20				
	2-7 Employees	13				
	2-8 Workers who are not employees	13				
	Governance					
	2-9 Governance structure and composition	36-37				
	2-10 Nomination and selection of the highest governance body	37-38				
	2-11 Chair of the highest governance body	36				
	2-12 Role of the highest governance body in overseeing the management of imapcts	38-40				
	2-13 Delegation of responsibility for managing impacts	39				
	2-14 Role of the highest governance body in sustainability reporting	39-40				
	2-15 Conflicts of interest	44				
	2-16 Communication of critical concerns	51-52				
2-17 Collective knowledge of the highest governance body	41					
2-18 Evaluation of the performance of the highest governance body	41					



GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION (Page)	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTER	REASON	EXPLANATION	
GRI 2: General Disclosures 2021	2-19 Remuneration policies	42				
	2-20 Process to determine remuneration	42				
	2-21 Annual total compensation ratio	n/a	a, b, c	Confidentiality	Board Committee Compensation is confidential	
	Strategy, policies and practices					
	2-22 Statement on sustainable development strategy	6-7				
	2-23 Policy commitments	23-25				
	2-24 Embedding policy commitments	23-25				
	2-25 Processes to remediate negative impacts	50-52				
	2-26 Mechanisms for seeking advice and raising concerns	51-53				
	2-27 Compliance with laws and regulations	23-24				
	2-28 Membership associations	63-65				
	Stakeholder engagement					
	2-29 Approach to stakeholder engagement	29-32				
	2-30 Collective bargaining agreements	92				
Material Topics						
GRI 3: Material Topics 2021	3-1 Process to determine material topics	8				
	3-2 List of material topics	9				
Anti-corruption						
GRI 3: Material Topics 2021	3-3 Management of material topics	36, 43				
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	45				
	205-2 Communication and training about anti-corruption policies and procedures	46-47				
GRI 205: Anti-corruption 2016	205-3 Confirmed incidents of corruption and actions taken	48-49				
Energy						
GRI 3: Material Topics 2021	3-3 Management of material topics	110				
GRI 302: Energy 2016	302-1 Energy consumption within the organization	110				
	302-2 Energy consumption outside of the organization	n/a		Not applicable	No energy consumption outside the organization	

GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION (Page)	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTER	REASON	EXPLANATION	
GRI 302: Energy 2016	302-3 Energy intensity	111				
	302-4 Reduction of energy consumption	110, 113				
	302-5 Reductions in energy requirements of products and services	n/a		Not applicable	The organization does not have direct influence over customers' energy consumption in water use.	

Water and Effluents

GRI 3: Material Topics 2021	3-3 Management of material topics	104				
	303-1 Interactions with water as a shared resource	104-105				
GRI 3: Material Topics 2021	303-2 Management of water discharge-related impacts	104				
GRI 303: Water and Effluents 2018	303-3 Water withdrawal	104				
	303-4 Water discharge	108				
	303-5 Water consumption	106				

Emissions

GRI 3: Material Topics 2021	3-3 Management of material topics	112				
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	112				
	305-2 Energy indirect (Scope 2) GHG emissions	112				
	305-3 Other indirect (Scope 3) GHG emissions	112				
	305-4 GHG emissions intensity	113				
	305-5 Reduction of GHG emissions	113				
	305-6 Emissions of ozone-depleting substances (ODS)	112				
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	n/a	a, b, c	Not applicable	No activities generating NOx and SOx	

Waste

GRI 3: Material Topics 2021	3-3 Management of material topics	109				
	306-1 Waste generation and significant waste-related impacts	109				
	306-2 Management of significant waste-related impacts	109				
GRI 306: Waste 2020	306-3 Waste generated	n/a	a	Incomplete	Data collection in progress	
	306-4 Waste diverted from disposal	n/a	a, b, c	Incomplete	Data collection in progress	
	306-5 Waste directed to disposal	109				



GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION (Page)	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTER	REASON	EXPLANATION	
Employee Welfare and Stability						
GRI 3: Material Topics 2021	3-3 Management of material topics	92				
GRI 401 Employment 2016	Disclosure 401-1 New employee hires and employee turnover	96				
GRI 401 Employment 2016	Disclosure 401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	92-94				
	Disclosure 401-3 Parental leave	95				
Occupational Health and Safety						
GRI 3: Material Topics 2021	3-3 Management of material topics	83				
	403-1 Occupational health and safety management system	83				
	403-2 Hazard identification, risk assessment, and incident investigation	85-86				
	403-3 Occupational health services	88				
	403-4 Worker participation, consultation, and communication on occupational health and safety	83-84, 86				
	403-5 Worker training on occupational health and safety	86				
	403-6 Promotion of worker health	88				
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	85-86				
GRI 403: Occupational Health and Safety 2018	403-8 Workers covered by an occupational health and safety management system	83				
	403-9 Work-related injuries	87				
	403-10 Work-related ill health	87				
Training and Education						
GRI 3: Material Topics 2021	3-3 Management of material topics	74				
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	77				
	404-2 Programs for upgrading employee skills and transition assistance programs	74-76				
	404-3 Percentage of employees receiving regular performance and career development reviews	78-79				
Non-Discrimination and Equal Opportunity						
GRI 3: Material Topics 2021	3-3 Management of material topics	89				

GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION (Page)	OMISSION			GRI SECTOR STANDARD REF. NO.
			REQUIREMENT(S) OMITTER	REASON	EXPLANATION	
GRI 405: Diversity and Equal Opportunity 2016	Disclosure 405-1 Diversity of governance bodies and employees	13 and AR pages 24-27				
	Disclosure 405-2 Ratio of basic salary and remuneration of women to men	n/a		Confidentiality	Salary and remuneration of employee are confidential	
GRI 406: Non-discrimination 2016	Disclosure 406-1 Incidents of discrimination and corrective actions taken	90				
Local Communities						
GRI 3: Material Topics 2021	3-3 Management of material topics	93				
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	97-101				
	413-2 Operations with significant actual and potential negative impacts on local communities	97-101				
Customer Health and Safety						
GRI 3: Material Topics 2021	3-3 Management of material topics	80				
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	81				
GRI 416: Customer Health and Safety 2016	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	81				
Non-GRI Topics						
Effective Communication						
GRI 3: Material Topics 2021	3-3 Management of material topics	51				
Business Continuity Management						
GRI 3: Material Topics 2021	3-3 Management of material topics	55				
Innovation and Digitalization						
GRI 3: Material Topics 2021	3-3 Management of material topics	57				
Partnership and Collaboration						
GRI 3: Material Topics 2021	3-3 Management of material topics	63				
Efficiency of Internal Management Processes						
GRI 3: Material Topics 2021	3-3 Management of material topics	66				
Accessible and Affordable Services and Product						
GRI 3: Material Topics 2021	3-3 Management of material topics	70				

INDEPENDENT ASSURANCE OPINION STATEMENT

2025 – Metropolitan Waterworks Authority – Sustainability Report

The British Standards Institution is independent to Metropolitan Waterworks Authority (hereafter referred to as MWA in this statement) and has no financial interest in the operation of Metropolitan Waterworks Authority other than for the assessment and verification of the sustainability statements contained in this report.

This independent assurance opinion statement has been prepared for the stakeholders of Metropolitan Waterworks Authority only for the purpose of verifying its statements relating to its environmental, social and governance (ESG), more particularly described in the Scope, below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent assurance opinion statement may be read.

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by Metropolitan Waterworks Authority. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to Metropolitan Waterworks Authority, only.

Scope

The scope of engagement agreed upon with Metropolitan Waterworks Authority includes the following:

- 1) The assurance covers the whole report and focuses on systems and activities during the 2025 fiscal year (1 October 2024 – 30 September 2025) at Metropolitan Waterworks Authority with the following materiality:
 - GRI 303: Water and Effluents 2018
 - GRI 403: Occupational Health and Safety 2018
- 2) The evaluation of the nature and extent of Metropolitan Waterworks Authority's adherence to all four AA1000 AccountAbility Principles and the reliability of specified sustainability performance information in this report as conducted in accordance with type 2 of AA1000AS v3 sustainability assurance engagement.

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Opinion Statement

We conclude, that the Sustainability Report Review provides a fair view of Sustainability report programmed and performances during 2025. We believe that the Sustainability report economic, social and environment performance indicators are accurate and are supported by robust internal verification processes.

Based on our work described in the verification report, nothing has come to our attention that causes us to believe that data and information stated in the Reporting Organization's Sustainability Report is not correctly presented or with omission, in any material respects or that Inclusivity, Materiality Responsiveness and Impact based on AA1000 criteria are not correctly addressed.

Our work was carried out by a team of sustainability report assurors in accordance with the AA1000 Assurance Standard v3. We planned and performed this part of our work to obtain the necessary information and explanations we considered to provide sufficient evidence that Metropolitan Waterworks Authority's description of their approach to AA1000 Assurance Standard and their statement that the Sustainability Report has been prepared in accordance with the GRI Standards, were fairly stated.

Methodology

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- a top-level review of issues raised by external parties that could be relevant to the Metropolitan Waterworks Authority's policies, to assess the appropriateness of statements made in the report.
- discussion with managers and staffs on Metropolitan Waterworks Authority's approach to stakeholder engagement. However, we had no direct contact with external stakeholders.
- interviews with staffs involved in sustainability management, report preparation and provision of report information were carried out.
- review of key organizational developments.
- review of the findings of internal audits.
- review of supporting evidence for claims made in the reports.
- an assessment of the company's reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality, Responsiveness and Impact as described in the AA1000 AccountAbility Principles Standard (2018).

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Conclusions

A detailed review against the AA1000 AccountAbility Principles of Inclusivity, Materiality, Responsiveness and Impact and the GRI Standards is set out below:

Inclusivity

This report has reflected a fact that Metropolitan Waterworks Authority is seeking the engagement of its stakeholders. The participation of stakeholders has been initiated in developing and achieving an accountable and strategic response to sustainability. The reporting systems are being developed to deliver the required information. There are fair reporting and disclosures for economic, social and environmental information in this report, so that appropriate planning and target-setting can be supported. In our professional opinion the report covers Metropolitan Waterworks Authority's inclusivity issues.

Materiality

Metropolitan Waterworks Authority publishes sustainability information that enables its stakeholders to make informed judgments about the company's management and performance. In our professional opinion the report covers the Metropolitan Waterworks Authority's material issues.

Responsiveness

Metropolitan Waterworks Authority has implemented the practice to respond to the expectations and perceptions of its stakeholders. An Ethical Policy for Metropolitan Waterworks Authority is developed and provides the opportunity to further enhance Metropolitan Waterworks Authority's responsiveness to stakeholder concerns. In our professional opinion the report covers the Metropolitan Waterworks Authority's responsiveness issues. However, the future report should be further enhanced by the following areas:

- MWA may consider enhancing the disclosure under GRI 403-8 by providing quantitative information on the number and percentage of employees and workers who are not employees covered by the occupational health and safety management system, including coverage by internally audited and externally audited or certified systems, where applicable.
- MWA may consider enhancing its disclosure relating to communication and training on anti-corruption policies and procedures by region, and further disaggregating business partners by type, in order to improve completeness and alignment with the responsiveness principle.

Impact

Metropolitan Waterworks Authority has demonstrated a process on identify impacts that encompass a range of environmental, social and governance topics, and fairly represented the impacts in the report. In our professional opinion the report covers the Metropolitan Waterworks Authority's impacts.

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GRI-reporting

The Metropolitan Waterworks Authority provided us with its self-declaration of compliance with the GRI Standards ("In accordance"). Based on our review, we confirm that the social responsibility and sustainable development indicators referenced in the GRI Content Index have been reported, partially reported, or omitted, as applicable. In our professional opinion, the self-declaration adequately covers the Metropolitan Waterworks Authority's material social responsibility and sustainability issues.

Assurance level

The moderate level assurance provided is in accordance with AA1000 Assurance Standard v3 in our review, as defined by the scope and methodology described in this statement.

Responsibility

This Sustainability Report is the responsibility of the Director of Social Responsibility Management Department of Metropolitan Waterworks Authority, as declared in her responsibility letter. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

Competency and Independence

The assurance team was composed of Lead Auditors and Carbon Footprint Verifiers experienced in industrial sector, and trained in a range of sustainability, environmental and social standards including AA1000 AS, GRI, ISO14001, ISO14064-1, ISO20400 and experience on the SRA Assurance service provisions. BSI is a leading global standards and assessment body founded in 1901.

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For and on behalf of BSI:

Parnuwat Usapein

Parnuwat Usapein, Lead Assurer



For and on behalf of BSI:

Kuldhaj Bunbongkarn, Managing Director Assurance, Thailand



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Survey on Satisfaction
towards MWA Sustainability
Report 2025



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Sustainability
Report
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