



Change
for Better

CARE



Metropolitan Waterworks Authority

2020

Annual Report

MWA

Change for
Better

CARE



MWA is striving to become a national leading state-owned enterprise in the 53rd year with all aspects of development to support the needs of water consumption of the people in Bangkok, Nonthaburi and Samut Prakan.



Change for Better CARE Change for Better CARE is the concept that MWA has developed and adapted in operation to offer better services to consumers. CARE is derived from 4 words, including **C** (Customers), **A** (Appreciation), **R** (Response & Rapid), and **E** (Effectiveness), having meanings as described below.



customers

Giving better things to customers

Based on the change of new pipelines to reduce leakage, reduce the loss of water resources, and increase water pressure to [ensure that there is sufficient water for daily consumption](#) with water production capacity expansion project to support economic expansion in the future.



ppreciation

Creating satisfaction to the public

As MWA operates the business in accordance with the “Water Safety Plan” which emphasizes cleanliness from upstream to downstream, **water is clean, safe, and meets the standard of drinking water of World Health Organization (WHO)** to the extent that MWA is ready for delivering quality water to all households.



R

esponse & Rapid

Providing quick services to customers

With modern technology and innovations that can respond to the lifestyle of the new generations conveniently, quickly and easily in just one click, the services cover all water matters and consumers may contact MWA through [MWA CALL CENTER 1125 for 24 hours a day](#). Moreover, there is payment agency which is the one-stop government service center and Bangkok Express Service for quick, convenient and modern access.

Metropolitan Waterworks Authority (MWA)

is the state-owned enterprise under the supervision of Ministry of Interior

MWA started operating on 16 August 1967 under Metropolitan Waterworks Authority Act, B.E. 2510 (1967)

The main mission is to procure raw water sources for waterworks, produce, deliver and distribute water within Bangkok Metropolis, Nonthaburi and Samut Prakan Province and operate other business related to or beneficial for waterworks

Vision

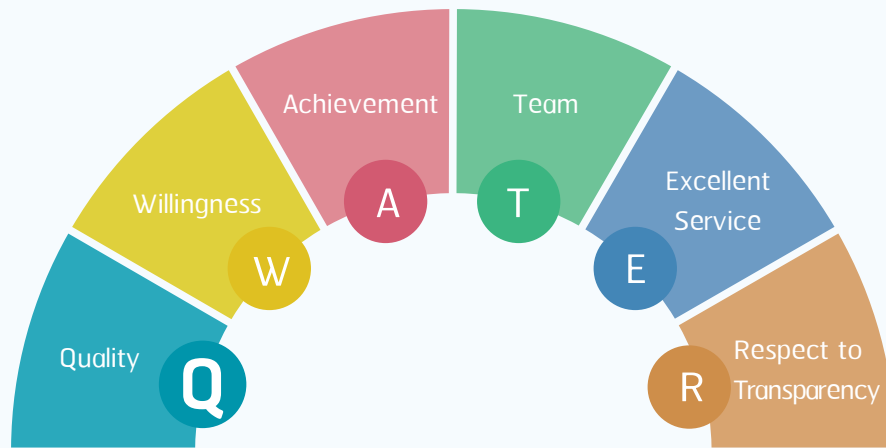
“To be a high-performance water supply organization with excellent corporate governance and reach international standard”

Mission

1. Develop organization growth and sustainability
2. Implement Water Safety Plan according to WHO standard by assuring the stability of water resource production and transmission
3. Deliver professional water supply service to reach and balance stakeholder needs
4. Improve people's quality of life by expanding water services and societal responsibility all over Thailand



Core values



Statement of Directions for State-owned Enterprises consists of 3 levels

1. Overall Statement of Directions for State-owned Enterprises

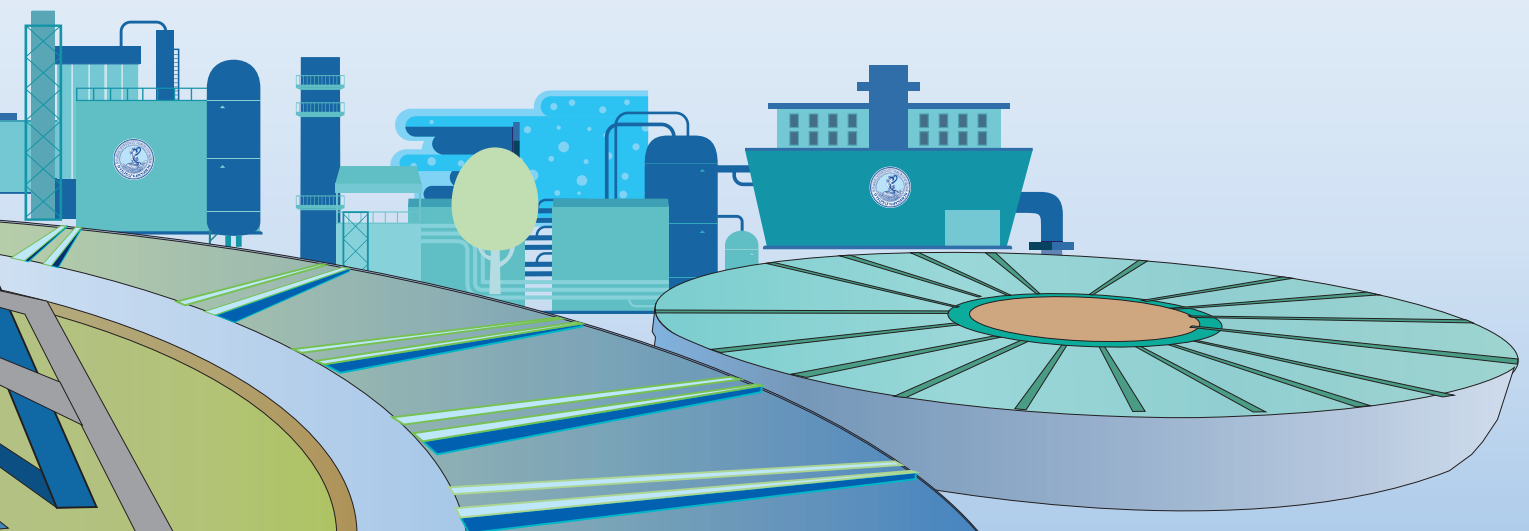
It is the government mechanism to promote the national economy and society in the stable, prosperous, and sustainable way.

2. Statement of Directions for State-owned Enterprises in Public Utility Sector

Development of infrastructure and real estate to upgrade the quality of life of people and accommodate the growth of urban society and sustainable economic areas

3. Statement of Directions for Metropolitan Waterworks Authority

Improvement and expansion of water system for quality and sufficiency to accommodate the urban expansion and development of related business to increase value to the organization



THAILAND QUALITY CLASS



Thailand Quality Class (TQC) 2019



Awards of Pride





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Good Corporate Governance

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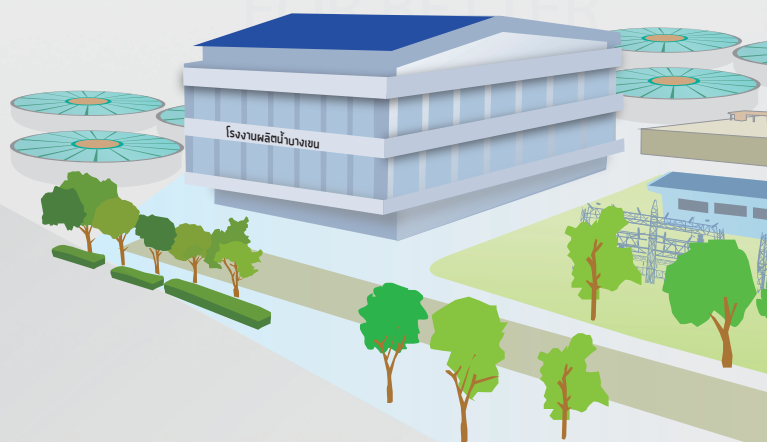
Message from Chairman of MWA Board of Directors



A stylized blue ink signature of Mr. Nisit Jansomwong.

(Mr. Nisit Jansomwong)
Chairman of MWA Board of Directors

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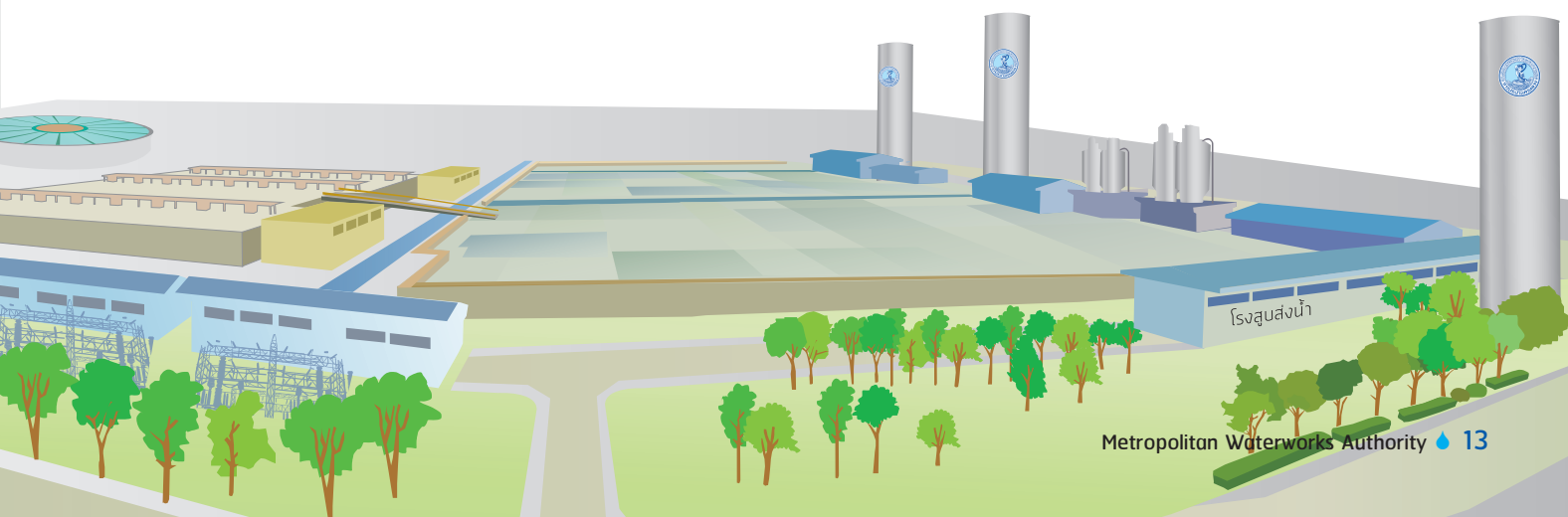


“MWA improves the operations under the concept “Change for Better CARE” with the aim of providing better services to the Customers”

It has been 53 years that MWA has determined and dedicated for steering the organization to become the national leading organization that produces and supplies water which is one of the most important infrastructures for development of the people's lives. MWA also strives for improving the standards of water supply service provision to meet the international standards in accordance with the directions of development and improvement of operations under the concept “Change for Better CARE” with the aim of providing better services to the Customers (C) to ensure the Appreciation (A) of the public by giving Rapid Responses (R). All of our operations will create Effective (E) results to the people and the nation Equally (E) while contributing to the Environment (E). These include water supply service provision, initial inspection and repair of water pipes, survey of pipe leakage in houses, water tank cleaning service, and raising the public awareness of the value of water resources and efficient water consumption. We operate on the basis of the good corporate governance code, oppose all kinds of corruption in the organization, and comply strictly with the occupational safety, health and environment measure. We are committed to strengthen our operations, enhance the competences to become a high-performance organization, and develop technology and innovations to ensure continuity of our operations for promoting potentials of the organization amidst the rapid economic, social, environmental, and technological frustration for the benefit of the society and the nation.

MWA Board of Directors has delivered the policy and driven the organizational operations under the policy of Ministry of Interior with the aim of mitigating hardships, maintaining well-being, ensuring the benefit of customers, reducing inequality, and allowing everyone to access good quality, clean, and safe water, delivering water in accordance with the Water Safety Plan (WSP) under WHO standards widely and sufficiently, expanding the areas of water distribution in the potential connected zones while employing innovations and technology to facilitate the public, promoting development of big data, research and development of innovations and digital services to the customers. These endeavors result in several awards and achievements including Thailand Quality Class (TQC) Award 2019, State-Owned Enterprise Award 2019 for Excellent Board of Directors of State Enterprises, Asia Responsible Enterprise Award 2020, Digital Government Award 2019, Best Practice Award for Water Resources Management 2019 granted by Office of the National Water Resources, Sustainability Disclosure Award 2019 granted by the Securities and Exchange Commission and Thaipat Institute, 1st Prize of International Innovation Award 2019 in the category of Service and Solution from “Chlorine Next” Project in Singapore.

MWA Board of Directors realizes the importance of collaboration between all executives, employees, and operators who are behind these achievements. We are also grateful for your dedications and efforts that always lead the organization to a better goal for the benefit of all stakeholders, as well as creating economic and social value for sustainable growth in the future.



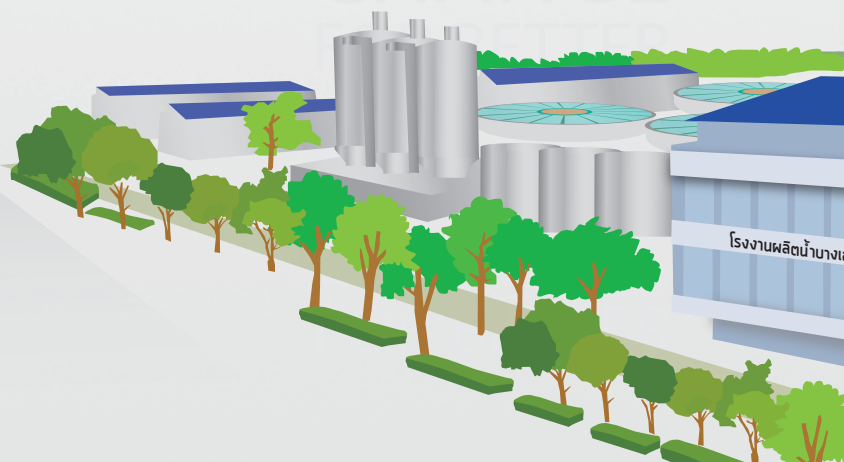
Message from MWA Governor



A handwritten signature in blue ink, appearing to read 'Kavee'.

(Mr. Kavee Areekul)
MWA Governor

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“MWA is still striving for developing the organization for the benefit of Thai people and moving forward to become a high-performance organization which can create benefit to the nation and the people by supplying clear, clean water in stable and sustainable manner.”

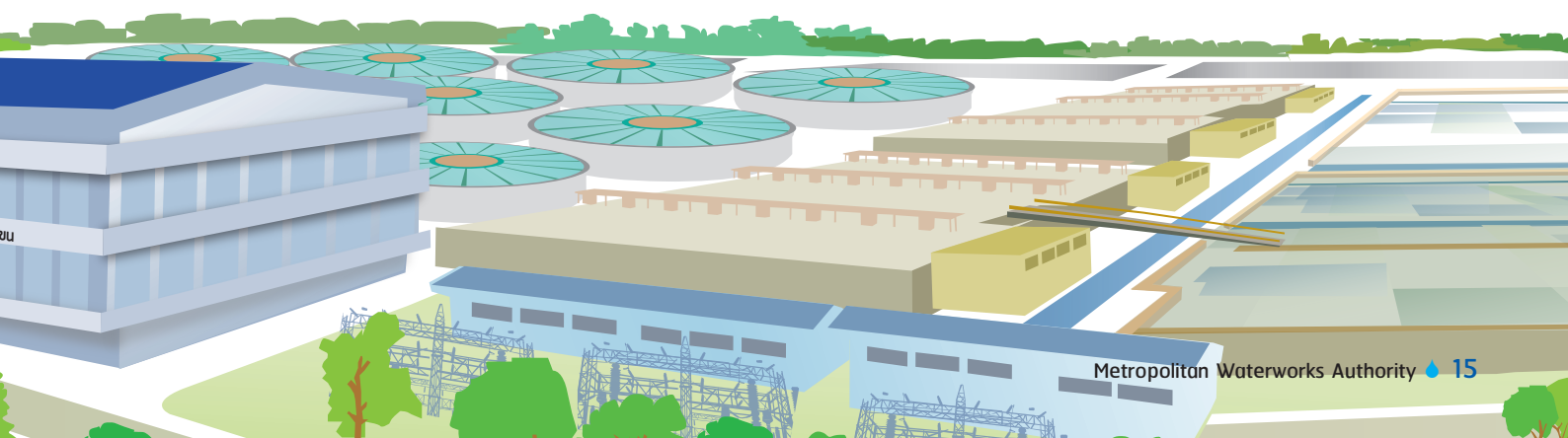
For the past 53 years since the establishment of Metropolitan Waterworks Authority, the organization has developed continuously to the extent that it can supply water to people in 3 provinces, including Bangkok Metropolis, Nonthaburi and Samut Prakan, currently making a total number of consumers of 2.5 million. The main objective of MWA is to steadily provide clean and safe water for public consumption. To achieve this goal, the development mechanisms in all dimensions must be connected with the National Strategies and National Economic and Social Development Plan, as well as the strategies of Ministry of Interior.

In the fiscal year 2020, there have been circumstances, problems and difficulties that affected the stability of waterworks and water distribution system to consumers, ranging from the intrusion of seawater, drought, wastewater management in the serviced areas. Mitigation measures have been assisted by the start agencies which provide effective collaboration in solving problems, including

departments of Ministry of Interior, Office of the National Water Resources (ONWR), Royal Irrigation Department, Bangkok Metropolitan Administration, departments of Ministry of Transport, and other government networks, to which MWA would like to express gratitude for their help.

Provision of water supply to consumers is the main policy that MWA prioritizes. We apply the concept **“Change For Better CARE”** which is the continuous concept from the past operations with the aim of developing and changing to the better service to **Customers** by creating **Appreciation** with **Rapid Response** for the true **Effectiveness**.

For the future development, MWA is still striving for developing the organization for the benefit of Thai people and moving forward to become a **high-performance organization** which can create benefit to the nation and the people by supplying clear, clean water in stable and sustainable manner.



Organization Structure

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Workforce Structure

As of 30 September 2020

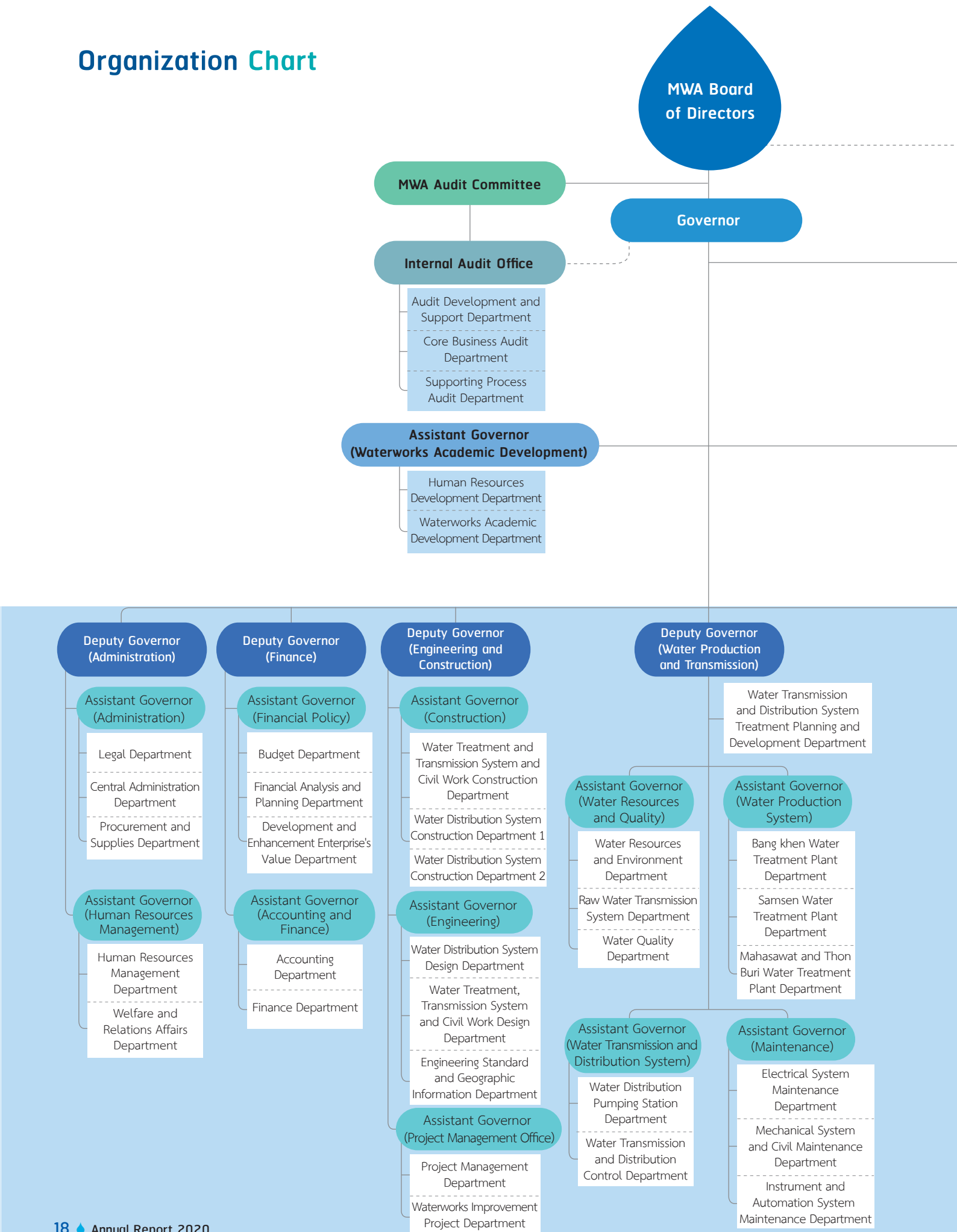
MWA has the total of 5,384 personnel, consisting of 4,339 employees and 1,045 contract workers. The total expenses on personnel are 3,135.07 million Baht, comprised of 2,925.80 million Baht for employees and 209.27 million Baht for contract workers.

| Operation Line | Manpower (persons) | | |
|--|--------------------|------------------|--------------|
| | Employees | Contract workers | Total |
| 1. Governor | 277 | 87 | 364 |
| 2. Deputy Governor (Administration) | 283 | 66 | 349 |
| 3. Deputy Governor (Finance) | 168 | 15 | 183 |
| 4. Deputy Governor (Eastern Services) | 1,197 | 289 | 1,486 |
| 5. Deputy Governor (Western Services) | 950 | 210 | 1,160 |
| 6. Deputy Governor (Engineering and Construction) | 365 | 54 | 419 |
| 7. Deputy Governor (Water Production and Transmission) | 873 | 299 | 1,172 |
| 8. Deputy Governor (Planning and Development) | 102 | 14 | 116 |
| 9. Deputy Governor (Information Technology) | 124 | 11 | 135 |
| Total | 4,339 | 1,045 | 5,384 |

Personnel expenses in the past 3 years

| Operation Line | Expenses (Million Baht) | | | | | | | | |
|--|-------------------------|-----------------|-----------------|------------------|---------------|---------------|-----------------|-----------------|-----------------|
| | Employees | | | Contract workers | | | Total | | |
| | 2020 | 2019 | 2018 | 2020 | 2019 | 2018 | 2020 | 2019 | 2018 |
| 1. Governor | 240.63 | 257.38 | 224.95 | 14.73 | 14.34 | 15.65 | 255.36 | 271.72 | 240.61 |
| 2. Deputy Governor (Administration) | 197.47 | 214.16 | 186.58 | 10.58 | 10.83 | 12.42 | 208.05 | 224.98 | 199.00 |
| 3. Deputy Governor (Finance) | 128.90 | 140.72 | 118.78 | 2.30 | 2.37 | 2.71 | 131.20 | 143.09 | 121.48 |
| 4. Deputy Governor (Eastern Services) | 748.17 | 811.90 | 696.52 | 62.64 | 63.32 | 67.58 | 810.81 | 875.22 | 764.10 |
| 5. Deputy Governor (Western Services) | 622.91 | 673.60 | 577.56 | 57.61 | 51.89 | 52.66 | 680.52 | 725.49 | 630.22 |
| 6. Deputy Governor (Engineering and Construction) | 208.69 | 217.92 | 179.53 | 8.70 | 8.80 | 9.65 | 217.39 | 226.72 | 189.18 |
| 7. Deputy Governor (Water Production and Transmission) | 599.44 | 654.31 | 560.85 | 50.30 | 56.50 | 64.98 | 649.74 | 710.81 | 625.83 |
| 8. Deputy Governor (Planning and Development) | 79.35 | 84.87 | 72.91 | 0.73 | 1.05 | 1.19 | 80.08 | 85.92 | 74.10 |
| 9. Deputy Governor (Information Technology) | 100.24 | 105.69 | 89.60 | 1.68 | 1.39 | 1.76 | 101.92 | 107.08 | 91.37 |
| Total | 2,925.80 | 3,160.55 | 2,707.28 | 209.27 | 210.49 | 228.60 | 3,135.07 | 3,371.04 | 2,935.88 |

Organization Chart



Office of MWA Board of Directors

Corporate Governance Department
MWA Board of Directors Affairs Department

Office of Governor

Corporate Communication Department
Operation of MWA Department
Social Responsibility Management Department

Deputy Governor (Planning and Development)

Assistant Governor (Planning and Development)

Policy and Strategy Department
Business Development Department
Monitoring and Evaluation Department
Risk Management Department

Deputy Governor (Information Technology)

Assistant Governor (Information Technology)

Information Technology Strategy Department
Technology Development and Support Department
Technology and Communication Department

Deputy Governor (Eastern Services)

Assistant Governor (Services 1)

Sukhumvit Branch Office
Phra Khanong Branch Office
Samut Prakan Branch Office

Assistant Governor (Services 2)

Mansri Branch Office
Thung Mahamek Branch Office
Phaya Thai Branch Office
Lat Phrao Branch Office

Assistant Governor (Services 3)

Prachachuen Branch Office
Bang Khen Branch Office
Min Buri Branch Office
Suvarnabhumi Branch Office

Deputy Governor (Western Services)

Assistant Governor (Services 4)

Bangkok Noi Branch Office
Taksin Branch Office
Phasi Charoen Branch Office
Suksawat Branch Office

Assistant Governor (Services 5)

Nonthaburi Branch Office
Bang Bua Thong Branch Office
Mahasawat Branch Office

Assistant Governor (Services)

Service Support Department
Water Meter Department
Water Loss Management Department

MWA Board of Directors

(As of 31 December 2020)



2

1

3

1. Mr. Nisit Jansomwong
Chairman

2. General Singthong Meethong, Ph.D.
Independent Director

3. Mr. Anuchit Trakulmututa
Independent Director



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⑦

4. Mr. Krisada Kaweeyarn
Independent Director

5. Mr. Chaitat Saetang, D.B.A.
Independent Director

6. Mr. Varayuth Yenbamroong
Independent Director

7. Mr. Prasit Suebchana
Independent Director



8. M.R. Sasiprin Chandratat
Independent Director

9. Mr. Nattakit Tangpoonsinthana, Ph.D.
Independent Director

10. Mr. Roya Juntaratana
Independent Director

11. Mr. Sanya Saengpumpong
Independent Director



12. Mr. Nitat Maneesilasan
Independent Director

13. Mr. Werawat Yomchinda
Independent Director

14. Mr. Chamroen Phothiyod
Director

15. Mr. Kavee Areekul
MWA Governor

MWA

Board of Directors

Mr. Nisit Jansomwong

Position: Chairman

Age: 58

Education/Training:

- Bachelor of Arts (Political Science) (First-Class Honors, Gold Medal), Chulalongkorn University
- Master of Arts (Political Science) (Excellent honors), Chulalongkorn University
- Certificate of District Chief Program (Class 41) Institute of Administration Development
- Certificate of New Public Management (Class 2) Office of the Civil Service Commission
- Advanced Certificate Course in Politics and Governance in Democratic Systems for Executive, (Class 11), King Prajadhipok's Institute
- Certificate of The Joint State-Private Course (Class 23), National Defence College of Thailand
- Advanced Certificate Course in Justice Administration (Class 3), Office of Justice Affairs
- Advanced Certificate Course in Politics and Elections Development (Class 4), Office of The Election Commission of Thailand
- Certificate of Senior Budget Administrator (Class 2), Bureau of the Budget
- Director Certification Program (DCP) (Class 253)
- Advanced Certificate Course of Capital Market Academy Programs (Class 28)
- Certificate of College of the Constitutional Court (Class 6)

Work Experience:

- Head of Plan and Develop the Staffing System Group, The Secretariat of the Cabinet
- Head of Social Work Group, Executive Office of the Cabinet, The Secretariat of the Cabinet
- Specialists in Strategic Development and Management Systems, Management System Development Group, The Secretariat of the Cabinet
- Director, Bureau of Strategic Development and Special Policy Monitoring, The Secretariat of the Cabinet
- Director General, Office of Policy and Planning, Office of the Permanent Secretary for Defence
- Governor of Samut Prakarn Province
- Deputy Director General, Community Development Department

- Director, Center for Recovery Management System Office of the Prime Minister
- Advisor to Provincial Administration Integrity
- Deputy Director, Office of Thai Women Empowerment Funds, Office of the Prime Minister
- Chairman of Audit Committee of Thailand Post Distribution Company Limited
- Chief of Inspector for Interior, Office of the Inspector for Interior
- Governor of Prachuap Khiri Khan Province
- Governor of Ratchaburi Province
- Governor of Phuket Province
- Governor of Nonthaburi Province
- Deputy Permanent Secretary for Interior
- Director General of Community Development Department

Present Positions:

- Director General of Department of Lands
- Chairman of MWA Board of Directors
- Vice Chairman of Thailand Post Distribution Company Limited
- Subcommittee of Public Sector Audit and Evaluation
- Subcommittee of Independent Director of Performance Enhancement for Human Resource Management of Office of the Civil Service Committee
- The Law Reform in Urgent Stage Commission
- Subcommittee of Improvement or Abrogation of Unnecessarily Burdensome Laws

Holding the positions of directors/high-level executives in state enterprises/other juristic persons:

- Director General of Department of Lands
- Vice Chairman of Thailand Post Distribution Company Limited
- The Law Reform in Urgent Stage Commission

Securities holding (shareholding) in a juristic person related to core business:

- Non

Juristic persons related to MWA directors:

- Non



General Singthong Meethong, Ph.D.

Position: Independent Director

Age: 60

Education/Training:

- Bachelor of Science, Chulachomklao Royal Military Academy
- Master of Arts (Political Science), Ramkhamhaeng University
- Ph.D. (Public Affairs), Burapha University
- Thailand National Defence College (Class 57), National Defence Studies Institute
- Infantry Officer Basic Course, Infantry School Infantry Center
- Infantry Officer Advance Course, Infantry School Infantry Center
- Command and General Staff Officer Course (CGSOC) (Class 70)

Work Experience:

- Commander of Infantry Battalion 4, Infantry Regiment 1, King's Guard
- Infantry Regiment 1 Deputy Commander, King's Guard
- Commander of Infantry Battalion 19
- Infantry Regiment 9 Deputy Commissioner
- Commander General, Kanchanaburi Military District
- Commanding General, Military Circle 11
- Commanding General, Military Circle 14
- Special Expert, Royal Thai Army (Lieutenant General)
- Deputy Chief of Staff, Royal Thai Army
- Army Special Qualified General, Royal Thai Army

Present Positions:

- Independent Director and Chairman of the Risk Management Subcommittee, Metropolitan Waterworks Authority

Holding the positions of directors/high-level executives in state enterprises/other juristic persons:

- Non

Securities holding (shareholding) in a juristic person related to core business:

- Non

Juristic persons related to MWA directors:

- Non

Mr. Anuchit Trakulmututa

Position: Independent Director

Age: 61

Education/Training:

- Bachelor of Engineering, Technology and Vocational Education College (Rajamangala University of Technology)
- Bachelor of Arts (Political Science), Ramkhamhaeng University
- Bachelor of Law, Thammasat University
- Master of Development Administration (Public Administration), NIDA
- High level Senior Administration Program (Class 55), Damrong Rajanupab Institute
- Modern Executive Program, Department of Town and Country Planning (DTCP)
- High level Senior Administration of City Planning Program (Class 1), Department of Town and Country Planning (DTCP)
- Department Inspector, Prime Minister's office
- Advance Diploma in Public Administration and Law (Class 16), King Prajadhipok's Institute

Work Experience:

- Department of Town and Country Planning Inspector, Ministry of Interior
- Vice Governor of Songkhla Province, Ministry of Interior
- Governor of Yala Province, Ministry of Interior

Present Positions:

- Independent Director and Chairman of the Water Loss Monitoring and Water Pressure Management Subcommittee, Metropolitan Waterworks Authority

Holding the positions of directors/high-level executives in state enterprises/other juristic persons:

- Non

Securities holding (shareholding) in a juristic person related to core business:

- Non

Juristic persons related to MWA directors:

- Non

Mr. Krisada Kaweeyarn

Position: Independent Director

Age: 49

Education/Training:

- Master of Business Administration (MBA) Kenan - Flagler Business School, The University of North Carolina at Chapel Hill, USA
- Bachelor degree in Accounting and Finance (Second Class honour - Upper division) Faculty of Commerce and Accountancy, Thammasat University
- Islamic Finance Diploma in Islamic Finance, The United Kingdom Chartered Institute for Securities and Investment
- Business Government and International Economy, Harvard Business School
- Director Certification Program (DCP), Thai Institute of Directors (IOD)
- Advanced Master of Management Program (AMM), Graduate School of Public Administration, National Institute of Development Administration
- Top Executive Program in Metropolitan Development (Mahanakorn 4), Navamindradhiraj University
- Thammasat Leadership Program, Thammasat University, Thailand
- Capital Market Academy, Class 10
- Homeland Security Program, Internal Security Operations Command
- Public Economic Management for Executives, King Prajadhipok's Institute

Work Experience:

- Independent Director and Chairman of the Audit Committee, Metropolitan Waterworks Authority
- Member of the Board of Director and Chairman of the Executive Board, The Krungthep Thanakom Co., Ltd, The Bangkok Metropolitan Administration's Enterprise
- Vice President, Radio and TV Thailand under the Royal Patronage

- Vice President, Digital Media for Consumer Association (Thailand)
- Vice President, Radio and TV Thailand under the Royal Patronage
- Chairman of the Board of Director, CAT Telecom Public Company Limited
- Chairman of the Board of Director, Islamic Bank of Thailand
- Executive Director, Dhanarak Asset Development Co., Ltd.
- Advisor to the Board of Director, Software Industry Promotion Agency (Public Organization)
- Member of the Internal Audit Committee, Playing Card Factory
- Senior Vice President, Lehman Brothers (Thailand) Limited
- Vice President, GE Capital, Danbury Connecticut (USA)

Present Positions:

- Independent Director and Chairman of the Improvement Subcommittee, Metropolitan Waterworks Authority
- CEO, Ploenchit Asset Management Co., Ltd
- CEO, Altus Capital Partners (Thailand) Limited
- Managing Director, Precious Wood Industry Co., Ltd.

Holding the positions of directors/high-level executives in state enterprises/other juristic persons:

- CEO, Ploenchit Asset Management Co., Ltd
- CEO, Altus Capital Partners (Thailand) Limited
- Managing Director, Precious Wood Industry Co., Ltd.

Securities holding (shareholding) in a juristic person related to core business:

- Non

Juristic persons related to MWA directors:

- Non



Mr. Chaitat Saetang, D.B.A.

Position: Independent Director

Age: 41

Education/ Training:

- Bachelor of Arts (B.A.) in Mass Communication, Ramkhamhaeng University
- Master of Business Administration (MBA) (Marketing), Ramkhamhaeng University
- Doctor of Business Administration (DBA) (Business Management), Phranakorn Rajabhat University
- Director Certification Program (DCP 222), Thai Institute of Directors (IOD), 2016
- Family Business Governance (FBG 13), Thai Institute of Directors (IOD), 2018
- Senior Management Program in Urban Development (Metropolitan Development), 5th Batch, Navamindradhiraj University, 2017
- Digital CEO Program, 1st Batch, Digital Economy Promotion Agency, 2017
- Senior Executive Management for Industrial Business Development and Investment, 5th Batch, Institute of Business and Industrial Development, 2018
- Top Executive Program in Commerce and Trade (TEPCoT), 12th Batch, Thai Chamber of Commerce Institute, 2019
- Advanced Retail Management (ARM) Program, 28th Batch, Office of Business Networking Management, CP All Public Company Limited, 2019
- Project Management Essential Program, Career for the Future Academy, 2007
- Top Executives for Nation Building Program, 1st Batch, Nation-Building Institute, 2017

Work Experience:

- Advisor for Digital Content Marketing & IMC
- Advisor for IT Human Transformation
- Advisor for Digital Signage Design
- Advisor for Adaptation of Sufficiency Economy Philosophy for Sustainability
- Advisor for Presentation Skills for Small Businesses

Present Positions:

- Independent Director and Chairman of the MWA Digital Technology Development Subcommittee, Metropolitan Waterworks Authority
- Chief Executive Officer, Chaiyagarn Consulting Co., Ltd.

Holding the positions of directors/high-level executives in state enterprises/other juristic persons:

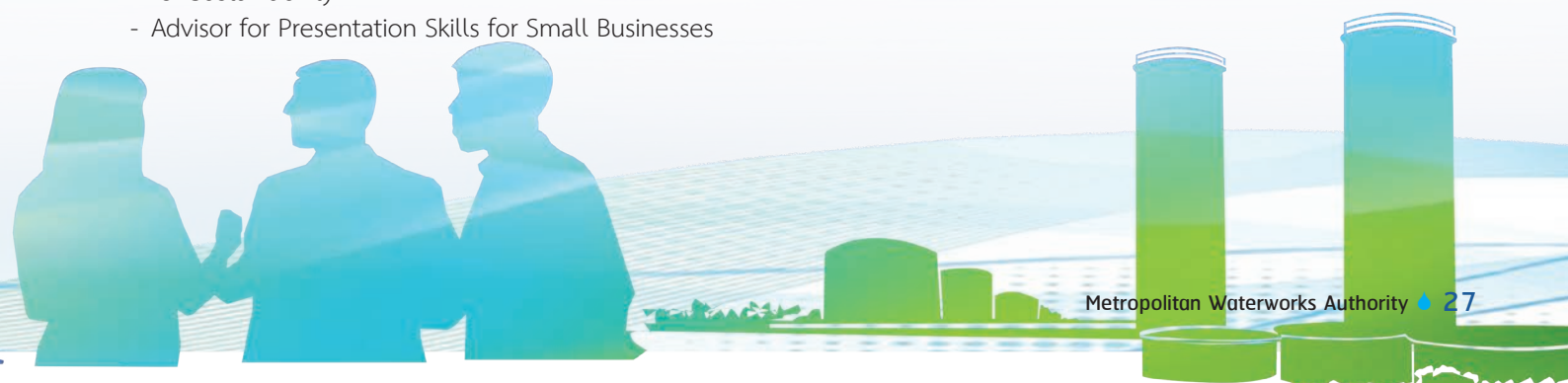
- Chief Executive Officer, Chaiyagarn Consulting Co., Ltd.

Securities holding (shareholding) in a juristic person related to core business:

- Non

Juristic persons related to MWA directors:

- Non



Mr. Varayuth Yenbamroong

Position: Independent Director

Age: 36

Education/Training:

- Bachelor of Science (Aerospace Engineering), University of California, USA
- Master of Science (Mechanical Engineering), University of California, USA

Work Experience:

- Civil Engineering (Drainage Design), Los Angeles County Department of Public Works, USA
- Systems Engineer, Northrop Grumman Corporation, USA
- Senior Integration Project Engineer Lead, Northrop Grumman Corporation, USA
- Director of Strategy and Business Development, Northern Gulf Petroleum Pte Ltd.
- Director and Chief Technology Officer (CTO), Mobile LTE Company Limited
- Director and Chief Executive Officer (CEO), Mobile LTE Company Limited

Present Positions:

- Independent Director of Metropolitan Waterworks Authority
- Director & Chief Executive Officer (CEO), Mu Space and Advanced Technology Co., Ltd.
- Chief Technology Officer (CTO), Mu Space and Advanced Technology Co., Ltd.

Holding the positions of directors/high-level executives in state enterprises/other juristic persons:

- Director & Chief Executive Officer (CEO), Mu Space and Advanced Technology Co., Ltd.

Securities holding (shareholding) in a juristic person related to core business:

- Non

Juristic persons related to MWA directors:

- Non

Mr. Werawat Yomchinda

Position: Independent Director

Age: 58

Education/Training:

- Bachelor of Political Science, Ramkhamhaeng University
- Mini MBA, 32nd Batch, Thammasat Business School
- Diploma of Advance Energy Project, 15th Batch
- Certificate of “Kasettrapipat” Training (Honorable), 76th Batch, Ministry of Agriculture and Cooperatives

Work Experience:

- Director, Wastewater Management Authority
- President of Sub-committee on Public Relations, Wastewater Management Authority
- Director, The Zoological Park Organization of Thailand
- President of Sub-committee on Business Development, The Zoological Park Organization of Thailand
- President of Sub-committee on Information Technology, The Zoological Park Organization of Thailand

Present Positions:

- Independent Director and Chairman of the MWA Relations Affairs Committee, Metropolitan Waterworks Authority
- Chief Executive Officer, Maxima Studio Co., Ltd.

Holding the positions of directors/high-level executives in state enterprises/other juristic persons:

- Chief Executive Officer, Maxima Studio Co., Ltd.

Securities holding (shareholding) in a juristic person related to core business:

- Non

Juristic persons related to MWA directors:

- Non



Mr. Prasit Suebchana

Position: Independent Director

Age: 63

Education/Training:

- Bachelor of Laws, Ramkhamhaeng University
- Master of Arts (Public Administration), National Institute of Development Administration
- Director Certification Program (DCP) 90/2007, Thai Institute of Directors (IOD)
- Audit Committee Program (ACP) 20/2007, Thai Institute of Directors (IOD)
- Strategic for Improving Director' Effectiveness, Kellogg School of Management, U.S.A.
- Diploma, National Defence College, The State, Private Sector and Political Sectors, National Defence College (Class of 2004)
- Chief Information Officer (CIO) Program, 10th Batch, Human Resources Institute, Thammasat University
- Managing People for HR Executive Program, 2nd Batch, Human Resources Institute, Thammasat University
- Mini MBA , Thammasat University
- Top Executive Development Program: Government Administrator (TED 2), Civil Service Development Institute, The Office of the Civil Service Commission (OCSC)
- Corporate Governance Program for Directors and Top Executives of State-owned Enterprise and Public Organizations, 2010, 5th Batch, Public Director Institute
- Senior Executives on Justice Administration Program, 15th Batch, Judicial Training Institute
- Top Executive Program in Commerce and Trade (TEPCoT), 5th Batch, The University of the Thai Chamber of Commerce

Work Experience:

- Deputy Director General, The Treasury Department
- Inspector-General, Ministry of Finance
- Deputy Permanent Secretary, Ministry of Finance
- Chairman of Government Housing Bank
- President and Chairman of Risk Management Committee, Government Housing Bank
- Director, Chief Executive Officer, and Chief Relation Affair Officer, Government Savings Bank

- Vice President and Chief Executive Officer, Aeronautical Radio of Thailand Limited
- Director and President of Sub-committee on Strategy and Administration of The Transport Company Limited
- Executive Director, Neighbouring Countries Economic Development Cooperation Agency (Public Organization)
- Director and President of Audit Committee, Provincial Electricity Authority
- Director and President of Audit Committee, National Housing Authority
- Vice President, Dhanarak Asset Development Company Limited
- Director, Court Officer, Advisory Level
- Committee on Budget and Fiscal Discipline, State Audit Office
- Director and Member of Risk Management Committee, IRPC Public Company Limited
- Director, Don Muang Tollway Public Company Limited
- Director, Dhipaya Insurance Public Company Limited
- Director, Bangpra Golf International Company Limited
- Director, PEA Encom International Company Limited
- Director, N.C.C. Management and Development Company Limited
- Director, Universal Utilities Company Limited

Present Positions:

- Independent Director and Chairman of the Procurement Subcommittee, Metropolitan Waterworks Authority
- Director, Rubber Authority of Thailand

Holding the positions of directors/high-level executives in state enterprises/other juristic persons:

- Director, Rubber Authority of Thailand

Securities holding (shareholding) in a juristic person related to core business:

- Non

Juristic persons related to MWA directors:

- Non

Mr. Nattakit Tangpoonsinthana, Ph.D.

Position: Independent Director

Age: 56

Education/Training:

- Bachelor of Communication Arts (Mass Communication), Chulalongkorn University
- Master of Business Administration, University of North Texas, USA
- Ph.D. in Mass Communication Arts, Chulalongkorn University
- Certificate of Director Certification Program (DCP 209), Thai Institute of Directors
- Industrial Business Development and Investment Program for Top Executives, Institute of Business and Industrial Development (Class 2)
- Certificate of Good Governance for State Enterprise / Public Organization Directors & Executives Program (Class 14), Public Director Institute, King Prajadhipok's Institute
- Capital Market Leader Program, Capital Market Academy (CMA-24)
- Top Executive Program in Commerce and Trade (TEPCoT) (Class 11), University of the Thai Chamber of Commerce
- TME Tourist Management Program for Executive
- Diploma, National Defense Course 62

Work Experience:

- Account Director of Lintas Worldwide Advertising Company Limited (Thailand)
- Associate Director in Marketing and Sales Division, Samart Corporation Public Company Limited
- Lecturer in Department of Mass Communication, Faculty of Communication Arts, Chulalongkorn University
- Chief Marketing Officer, Thai Samsung Electronics Company Limited
- Advisor in Public Relations to Ministry of Commerce and Ministry of Labour
- Advisor to Minister of Science and Technology
- Advisor to Deputy Minister of Agriculture and Co-Operatives

Present Positions:

- Independent Director and Chairman of the MWA Governor's Performance Appraisal Subcommittee, Metropolitan Waterworks Authority
- Senior Executive Vice President of Central Group
- Executive Vice President in Marketing Line, Central Pattana Public Company Limited
- Director, Siam Rajathanee Company Limited
- Chairman of Marketing Management Group, Thailand Management Association (TMA)
- Subcommittee: Thailand National Committee on Competitive Benchmarking Development

Holding the positions of directors/high-level executives in state enterprises/other juristic persons:

- Senior Executive Vice President of Central Group
- Executive Vice President in Marketing Line, Central Pattana Public Company Limited
- Director, Siam Rajathanee Company Limited

Securities holding (shareholding) in a juristic person related to core business:

- Non

Juristic persons related to MWA directors:

- Non



M.R. Sasiprin Chandratat

Position: Independent Director

Age: 56

Education/Training:

- Bachelor of Accountancy, Chulalongkorn University
- MBA (Finance), University of Central Oklahoma, The USA
- Directors Accreditation (DAP 52/2006) Program, Thai Institute of Directors (IOD)
- Director Certification Program (DCP 121/2009), Thai Institute of Directors (IOD)
- Audit Committee Program (ACP 34/2010), Thai Institute of Directors (IOD)
- Role of the Compensation Committee (RCC) 2012, Thai Institute of Directors (IOD)

Work Experience:

- Director, Islamic Bank of Thailand
- Director, CAT Telecom Public Company Limited
- Director, Thailand Institute of Scientific and Technological Research

Present Positions:

- Director and Chairman of Sub-committee on Monitoring of Compliance with MWA Policies
- Chief Executive Officer, Ploenchit Capital Company Limited

Holding the positions of directors/high-level executives in state enterprises/other juristic persons:

- Chief Executive Officer, Ploenchit Capital Company Limited

Securities holding (shareholding) in a juristic person related to core business:

- Non

Juristic persons related to MWA directors:

- Non

Mr. Roya Juntaratana

Position: Independent Director

Age: 59

Education/Training:

- Bachelor of Engineering (Civil Engineering), Rajamangala University of Technology
- Bachelor of Business Administration (Construction Management), Sukhothai Thammathirat Open University
- Director Certification Program (DCP), Thai Institute of Directors (IOD)
- Diploma National Defence College, The National Defence Course (NDC), (Class 60), 2017
- The Executive Program in Energy Literacy for a Sustainable Future (TEA), (Class 15), 2020

Work Experience:

- Chief Office of the Minister, Ministry of Energy
- Deputy Director General, Department of Alternative Energy Development and Efficiency

Present Positions:

- Independent Director and Chairman of the Human Resources Management & Development Subcommittee, Metropolitan Waterworks Authority
- Inspector-General, Ministry of Energy, Office of the Permanent Secretary, Ministry of Energy
- Director, EGAT International Co.,Ltd.

Holding the positions of directors/high-level executives in state enterprises/other juristic persons:

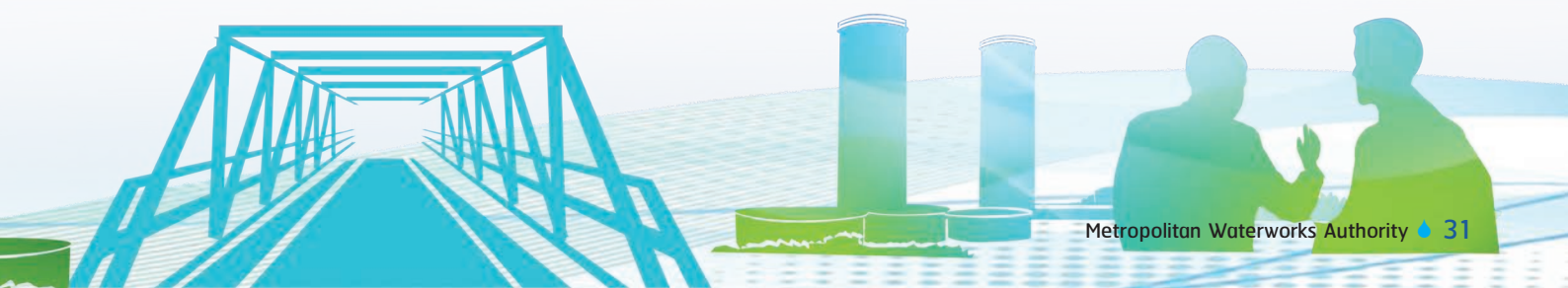
- Inspector-General, Ministry of Energy, Office of the Permanent Secretary, Ministry of Energy
- Director, EGAT International Co.,Ltd.

Securities holding (shareholding) in a juristic person related to core business:

- Non

Juristic persons related to MWA directors:

- Non



Mr. Sanya Saengpumpong

Position: Independent Director

Age: 58

Education/Training:

- Bachelor of Engineering (Civil Engineering), Rajamangala University of Technology
- Master of Engineering (Irrigation Engineering), Kasetsart University
- Master of Public and Private Management, National Institute of Development Administration
- Top Executive Development Program in Agriculture and Cooperatives, 51th Batch, Kasetrathikarn Institute, Office of the Permanent Secretary for Ministry of Agriculture and Cooperatives, 2009
- Administration and Leadership Competency Development Program, GRIPS Institute, Japan, 2009
- Security Psychology Program for Executives, Institute of Security Psychology, National Defence Studies Institute, 2010
- The Civil Service Executive Development Program: Visionary and Moral Leadership (Nor Bor Sor 1), 87th Batch, Office of the Civil Service Commission, 2017-2018

Work Experience:

- Director of Bureau of Water Management and Hydrology, Royal Irrigation Department
- Expert in Irrigation Engineering, Royal Irrigation Department
- Expert in Irrigation Engineering (Maintenance), Royal Irrigation Department

Present Positions:

- Independent Director and Chairman of the Audit Committee, Metropolitan Waterworks Authority
- Inspector-General, Ministry of Agriculture and Cooperatives, Office of the Permanent Secretary for Ministry of Agriculture and Cooperatives

Holding the positions of directors/high-level executives in state enterprises/other juristic persons:

- Inspector-General, Ministry of Agriculture and Cooperatives, Office of the Permanent Secretary for Ministry of Agriculture and Cooperatives

Securities holding (shareholding) in a juristic person related to core business:

- Non

Juristic persons related to MWA directors:

- Non



Mr. Nitat Maneesilasan

Position: Independent Director

Age: 54

Education/Training:

- Bachelor of Computer Science, University of The Thai Chamber Of Commerce
- Bachelor of Law, Ramkhamhaeng University
- Diploma Attorney, Batch No.48, Lawyers Council of Thailand Under The Royal Patronage
- Master of General Management, Mahidol University College of Management
- Director Accreditation Program, 2004
- Mini MBA of Retail Management, 1995
- Real Estate Entrepreneurs Program, Kasetsart University, 2011

Work Experience:

- Chairman of the Executive Committee and Managing Director, Solution Corner (1998) PLC.
- Director, Media Executive Group Co.,Ltd.
- Vice President IT, University of the Thai Chamber of Commerce Alumni Association
- Vice President, Thai Software Industry Association
- Advisor and Secretary of the Police Commission of the Police Commission, The House of Representatives
- Advisor and Specialist Committee on Land, Natural Resources and Environment, The House of Representatives
- Specialist of The Representative, The House of Representatives
- Working group study on state security for Nuclear energy case, Faculty of Law energy, The House of Representatives
- The working group on considering further study. Service Places Act, B.E. 2509, The House of Representatives
- Board of Directors on considering the application for BOI promotion, Software Industry Promotion Agency
- Honorary Advisor, Software Industry Promotion Agency
- Subcommittee of Software Industry Promotion Agency

Present Positions:

- Independent Director and Chairman of the Corporate Governance (CG) & Corporate Social Responsibility (CSR) Subcommittee, Metropolitan Waterworks Authority
- Advisory Board of Deputy Minister of Public Health Office of the Minister Ministry of Public Health
- Subcommittee On Organization Management, Office Of Trade Competition Commission
- Managing Director, Openserve Co.,Ltd
- Director, Third Dragon Co.,Ltd.
- Director, Armando Software Co.,Ltd.
- Director, Happy Serve Co.,Ltd.
- Director, Little Hill Place Co.,Ltd.
- Attorney/Legal Advisor, Law Office JKL

Holding the positions of directors/high-level executives in state enterprises/other juristic persons:

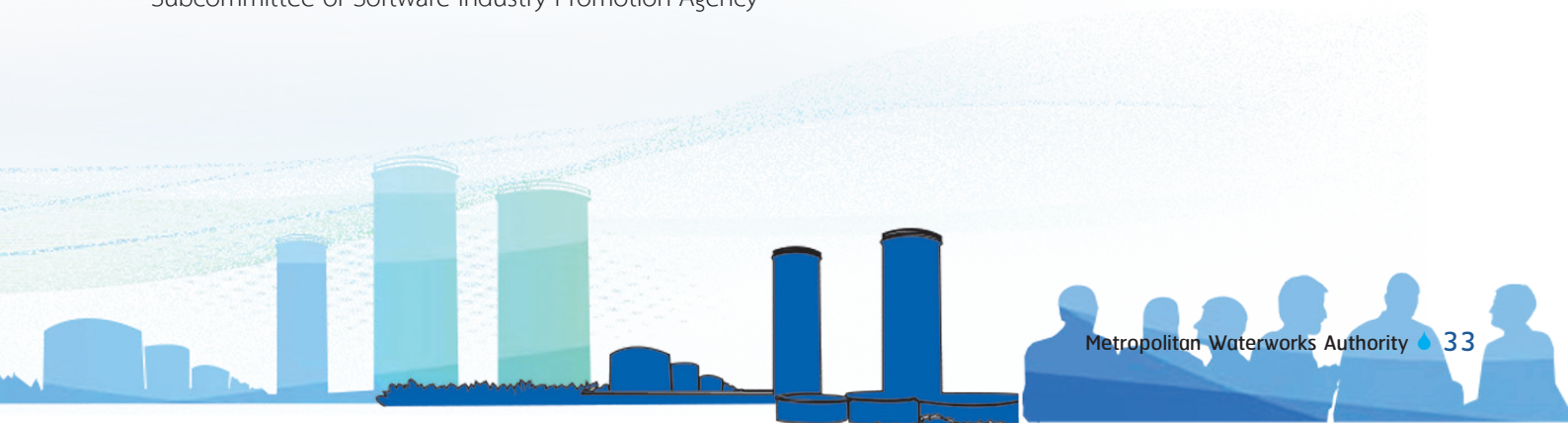
- Managing Director, Openserve Co.,Ltd
- Director, Third Dragon Co.,Ltd.
- Director, Armando Software Co.,Ltd.
- Director, Happy Serve Co.,Ltd.
- Director, Little Hill Place Co.,Ltd.

Securities holding (shareholding) in a juristic person related to core business:

- Non

Juristic persons related to MWA directors:

- Non



Mr. Chamroen Phothiyod

Position: Director

Age: 57

Education/Training:

- Bachelor of Laws, Ramkhamhaeng University
- Master of Public Administration, National Institute of Development Administration
- Director Certification Program (DCP), Thai Institute of Directors (IOD)
- Corporate Governance Program for Directors and Top Executives of State-owned Enterprise and Public Organizations, 2010, 17th Batch, King Prajadhipok's Institute
- The Civil Service Executive Development Program (Nor Bor Sor), 73th Batch, College of Executives, Office of the Civil Service Commission
- Strategic Management in Corruption Prevention and Suppression Program for Chief Executive Officers, 4th Batch, College of Executives, Sanya Dhamasakti National Anti-Corruption Institute
- National Defence, 58th Batch, National Defence College, National Defence Studies Institute
- Ministerial Inspector-General for the Year 2017, The Prime Minister's Office
- Top Executive Program in Commerce and Trade (TEPCoT) (Class 11), Commerce Academy, University of the Thai Chamber of Commerce
- The Executive Program in Energy Literacy for a Sustainable Future, 13th Batch, Thailand Energy Academy
- Executive Professional Development Course: Port and Shipping Trend & Technology World Maritime University
- Financial and Fiscal Management Program for Senior Executive, 7th Batch, The Comptroller General's Department

Work Experience:

- Director of Regional Customs Office 1, The Customs Department
- Director of Post-clearance Audit Bureau, The Customs Department
- Deputy Director-General, The Customs Department

- Advisor on Tax Development and Administration, The Customs Department
- Inspector-General, Ministry of Finance
- Chief Inspector-General, Ministry of Finance
- Chairman of Trade Siam Company Limited
- Director, S.R.T. Electrified Train Company Limited
- Director, Port Authority of Thailand
- Director, National Housing Authority
- Director, Thailand Convention & Exhibition Bureau (Public Organization)
- Sub-commission on Waterway Transport and Maritime

Present Positions:

- Director and Chairman of Sub-committee on Legal Affairs and Petition, MWA
- Deputy Permanent Secretary, Ministry of Finance
- Director, Sports Authority of Thailand
- Director, Bangkok Mass Transit Authority
- Director, Anti-Corruption Foundation

Holding the positions of directors/high-level executives in state enterprises/other juristic persons:

- Deputy Permanent Secretary, Ministry of Finance
- Director, Sports Authority of Thailand
- Director, Bangkok Mass Transit Authority
- Director, Anti-Corruption Foundation

Securities holding (shareholding) in a juristic person related to core business:

- Non

Juristic persons related to MWA directors:

- Non



Mr. Kavee Areekul

Position: Director and MWA Governor

Age: 58

Education/Training:

- Bachelor of Engineering (Civil Engineering), Khon Kaen University
- Master of Business Administration (Business Administration), Kasetsart University
- National Defence College of Thailand (Class 58)
- The Executive Program in Energy Literacy for a Sustainable Future (Class 11)
- Director Certification Program (DCP) (Class 245), Thai Institute of Directors (IOD)
- Leadership Succession Program (LSP) (Class4), Institute of Research and Development for Public Enterprises (IRDP)
- Royal Thai Army College Program (Class 55)
- Waterworks Management Program, England and Israel
- Non-revenue Water Management Program, Japan Water Works Association (JWWA) and International Water Association (IWA)
- Geographic Information System (GIS), Chulalongkorn University
- Top Executive Program in Metropolitan Development (Class7)

Work Experience:

- Water Loss Technology Management Director
- Mansri Branch Office Manager
- Assistant Governor (Service 2)
- Acting Deputy Governor (Water Production and Transmission)
- Deputy Governor (Eastern Services)
- Deputy Governor (Engineering and Construction)
- Director of Wastewater Management Authority

Present Positions:

- Director of Metropolitan Waterworks Authority
- Governor of Metropolitan Waterworks Authority
- Vice Chairman of Thai Waterworks Association (TWWA)

Holding the positions of directors/high-level executives in state enterprises/other juristic persons:

- Non

Securities holding (shareholding) in a juristic person related to core business:

- Non

Juristic persons related to MWA directors:

- Non

Remarks:

- (1) **Being a director/senior executive in other state-owned enterprises/juristic persons** means other state-owned enterprises/juristic persons which the director of MWA holds the position of director or senior executive.
- (2) **Holding securities (shares) in the juristic person related to the main business** means holding securities (shares) of MWA in the juristic person related to MWA main business in the proportion of more than 10 percent of the total shares with voting rights.
- (3) **Juristic person related to MWA director** means any juristic person having or expectedly having transactions related to MWA which the spouses, children, adopted children who are minors of MWA director hold the controlling power in any form such holding more than 50 percent of the total shares with voting rights or having the power to control the majority votes in the shareholders' meeting or having the power to control appointment or dismissal of half of the total directors or more.

Remarks: MWA does not have any subsidiary/affiliated company.



MWA Executives

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MWA

Executives

(as of 30 December 2020)



Mr. Kavee Areekul

MWA Governor

Education/Training:

- Bachelor of Engineering (Civil Engineering), Khon Kaen University
- Master of Business Administration (Business Administration), Kasetsart University
- National Defence College of Thailand (Class 58)
- The Executive Program in Energy Literacy for a Sustainable Future (Class 11)
- Director Certification Program (DCP) (Class 245), Thai Institute of Directors (IOD)
- Leadership Succession Program (LSP) (Class 4), Institute of Research and Development for Public Enterprises (IRDPE)
- Royal Thai Army College Program (Class 55)
- Top Executive Program in Metropolitan Development (Class 7), Navamindradhiraj University
- Waterworks Management Program, England and Israel
- Non-revenue Water Management Program, Japan Water Works Association (JWWA) and International Water Association (IWA)
- Geographic Information System (GIS), Chulalongkorn University

Work Experience at MWA:

- Water Loss Technology Management Director
- Mansri Branch Office Manager
- Assistant Governor (Service 2)
- Acting Deputy Governor (Water Production and Transmission)
- Deputy Governor (Eastern Services)
- Deputy Governor (Engineering and Construction)

Other work experience:

- Manager of branch offices receiving the highest satisfaction in 2014 (Mansri Branch)
- MWA Role Model for Good Corporate Governance, 2014
- President of MWA Staff Association
- Director of Wastewater Management Authority
- President of MWA Watershed Forest Conservation Project
- President of Thailand Waterworks Association
- Director of MWA Provident Fund



Mr. Somboon Sunanthapongsak
Deputy Governor (Eastern Services)

Education/Training:

- Bachelor of Engineering (Civil Engineering), Khon Kaen University
- Bachelor of Business Administration (Construction Management), Sukhothai Thammathirat Open University
- Master of Business Administration, Chulalongkorn University
- Director Certification Program (DCP), Class 234, Thai Institute of Directors (IOD)
- Joint Staff Program (Class 53)

Work Experience:

- Deputy Governor (Western Services)
- Deputy Governor (Water Production and Transmission)

Mr. Thamrong Buranatrakul
Deputy Governor (Information Technology)

Education/Training:

- Bachelor of Engineering (Civil Engineering), Khon Kaen University
- Bachelor of Business Administration (Construction Management), Sukhothai Thammathirat Open University
- Master of Engineering (Environmental Engineering), Chulalongkorn University
- The Civil Service Executive Development Program: Visionary and Moral Leadership, Office of the Civil Service Commission
- e-Government Executive Program (e-GEP), Thailand Digital Government Academy (TDGA)

Work Experience:

- Assistant Governor (Water Transmission and Distribution System)
- MWA Expert Level 10



Miss Chawewan Uthaiyibool
Deputy Governor (Administration)

Education/Training:

- Bachelor of Political Science (Public Administration), Thammasat University
- Master of Arts (Public Administration), National Institute of Development Administration
- Naval War College, Class 45
- The Civil Service Executive Development Program: Visionary and Moral Leadership, Office of the Civil Service Commission

Work Experience:

- Assistant Governor (Human Resource Management)
- Assistant Governor (Administration)



Mr. Raksak Suriyaharn
Deputy Governor (Water Production and Transmission)

Education/Training:

- Bachelor of Engineering (Civil Engineering), Khon Kaen University
- Air War College, Class 45
- Top Executive Program in Advance Metropolitan Administration, Bangkok Metropolitan Administration

Work Experience:

- Assistant Governor (Service 4)
- Deputy Governor (Western Services)



Mr. Komkrit Dinakara Na Ayudhya
Deputy Governor (Engineering and Construction)

Education/Training:

- Bachelor of Engineering (Civil Engineering), Kasetsart University
- Air War College, Class 46
- Security Management and Leadership for Executives Programme, Class 1

Work Experience:

- Assistant Governor (Project Management Office)
- MWA Expert Level 10

Mr. Prasopsuk Somprasonk
Deputy Governor (Western Services)

Education/Training:

- Bachelor of Engineering (Civil Engineering), King Mongkut's University of Technology Thonburi
- Army War College, Class 56
- Public Administration and Public Law Program, King Prajadhipok's Institute

Work Experience:

- Assistant Governor (Service 1)
- Assistant Governor (Service 2)



Mrs. Nongluck Ratanaudomchok
Deputy Governor (Finance)

Education/Training:

- Bachelor of Accountancy (Accounting), Thammasat University
- Psychological Operations for Administration, Security Psychology Institute
- Advance Financial and Fiscal Management Program, The Comptroller General's Department

Work Experience:

- MWA Expert Level 9
- Assistant Governor (Accounting and Finance)



Mr. Suthirug Buchagul
Deputy Governor (Planning and Development)

Education/Training:

- Bachelor of Engineering (Civil Engineering), Khon Kaen University
- Mini Master of Management Program (MMM), National Institute of Development Administration
- Leadership Succession Program (LSP), Class 9, Institute of Research and Development for Public Enterprises

Work Experience:

- Deputy Project Management Office Director (Level 9)
- Assistant Governor (Planning and Development)



Miss Sutisa Naksen
MWA Expert Level 10

Education/Training:

- Bachelor of Business Administration (Accounting)
 Ramkhamhaeng University
- Master of Business Administration (Finance and Banking),
 Ramkhamhaeng University
- Psychological Operations for Administration, Security
 Psychology Institute
- Advance Financial and Fiscal Management Program,
 The Comptroller General's Department

Work Experience:

- Assistant Governor (Waterworks Academic Development)
- Assistant Governor (Financial Policy)

Miss Busagon Procks-anocha
MWA Inspector Level 10

Education/Training:

- Bachelor of Science (Accounting), Kasetsart University
- Master of Accountancy (Financial Accounting), Chulalongkorn
 University
- Master of Science (Information Technology), Eastern Asia
 University
- Corporate Governance for Directors and Senior Executives
 of Regulators, State Enterprise and Public Organizations,
 Public Director Institute (PDI)
- e-Government Executive Program (e-GEP), Thailand Digital
 Government Academy (TDGA)

Work Experience:

- MWA Expert Level 9
- Assistant Governor (Internal Audit Office)



Mr. Maitri Kaewsangtham

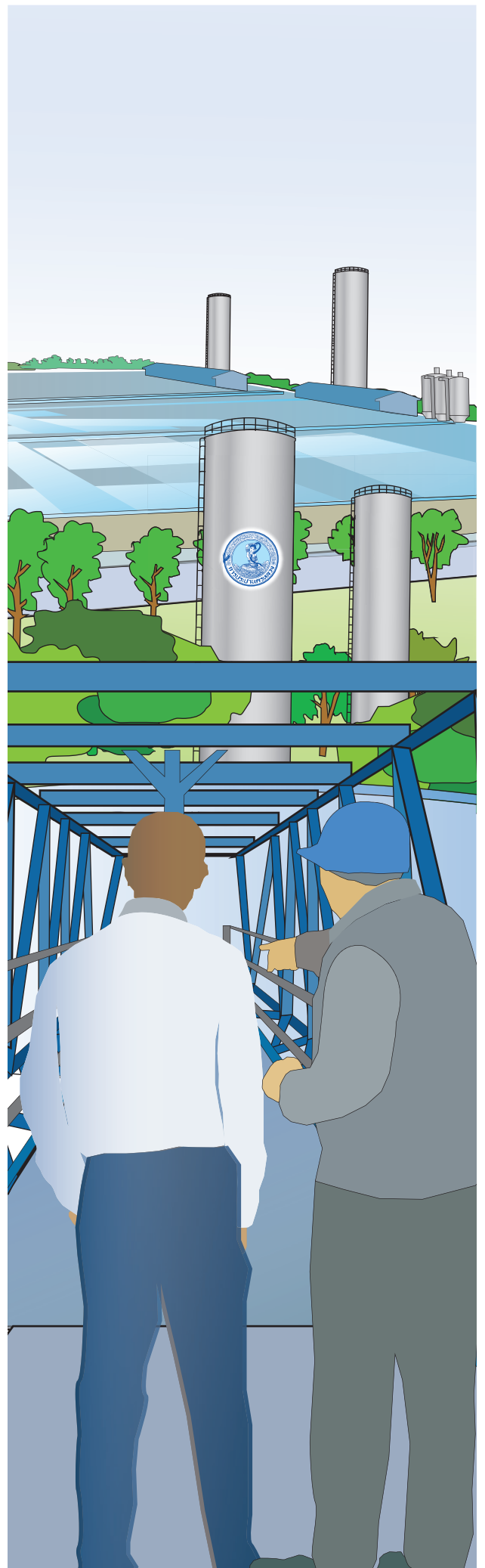
MWA Expert Level 10

Education/Training:

- Bachelor of Engineering (Civil Engineering), Khon Kaen University
- Graduate Diploma of Science (Sanitary Engineering), IHE, Delft, The Netherlands
- Master of Science (Sanitary Engineering), IHE, Delft, The Netherlands
- Top Executive Program in Advance Metropolitan Administration, Bangkok Metropolitan Administration

Work Experience:

- Bangkok Noi Branch Office Manager
- Assistant Governor (Water Transmission and Distribution System)



Executives (Assistant Governors and Equivalents)

(As of 8 October 2020)

Line of Governor



Miss Suwara Thawitchasri
Assistant Governor
(Office of MWA Board of Directors)



Mrs. Umpaisri Thanthumwong
Assistant Governor
(Internal Audit Office)



Mrs. Nisapas Wongpat
Assistant Governor
(Waterworks Academic Development)



Mrs. Rachirach Uthayo
Assistant Governor
(Office of Governor)

Line of Deputy Governor (Administration)



Mr. Mongkol Kerkkittikul
Assistant Governor
(Administration)



Mrs. Apinya Rotchanahatsadin
Assistant Governor
(Human Resource Management)

Line of Deputy Governor (Finance)



Miss Jinda Chantatamma
Assistant Governor
(Accounting and Finance)



Mrs. Wasana Nakpiphatkul
Assistant Governor
(Financial Policy)

Line of Deputy Governor (Eastern Services)



Mr. Marnus Changnoi
Assistant Governor
(Services 1)



Mr. Saharat Porkaew
Assistant Governor
(Services 2)



Mr. Wison Midtrapanon
Assistant Governor
(Services 3)

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Line of Deputy Governor (Western Services)



Mr. Sukit Ekatikomkit
Assistant Governor
(Services 4)



Mr. Veerachai Wisespunthurungsi
Assistant Governor
(Services 5)



Mr. Suthep Eapakorn
Assistant Governor
(Services)

Line of Deputy Governor (Engineering and Construction)



Mr. Banjong Vongsa
Assistant Governor
(Construction)



Mr. Pornsak Panyoi
Assistant Governor
(Engineering)



Mr. Manit Panaim
Assistant Governor
(Project Management Office)

Line of Deputy Governor (Water Production and Transmission)



Mr. Montri Longtee
Assistant Governor
(Water Production System)



Mr. Sathaporn Sunkumnurd
Assistant Governor
(Water Transmission and Distribution System)



Mr. Washirawit Powichit
Assistant Governor
(Water Resources and Quality)



Mr. Amnat Pakros
Assistant Governor
(Plant Maintenance)

Line of Deputy Governor (Planning and Development)



Miss Widchuda Liamsanguan
Assistant Governor
(Planning and Development)

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Line of Deputy Governor (Information Technology)



Mrs. Kanitta Pholcharoen
Assistant Governor
(Information Technology)

MWA Expert Level 9



Miss Anchalee Musigatham
MWA Expert Level 9



Mr. Suntorn Thonggumnerd
MWA Expert Level 9



Mrs. Maytawee Suchartlumporn
MWA Expert Level 9



Mr. Adisak Pranverapaiboon
MWA Expert Level 9



Mr. Phairot Sonsap
MWA Expert Level 9



Mrs. Payom Srianan
MWA Expert Level 9



Miss Sompit Nawapornchai
MWA Expert Level 9



Miss Kornvilai Yeawyasat
MWA Expert Level 9



Mrs. Sukontip Ngarmwacha
MWA Expert Level 9

MWA Inspector Level 9



Mr. Sinut Sinittarnon
MWA Inspector Level 9

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Executives

(Department Directors and Equivalents)

(as of 8 October 2020)

Line of Governor

| | |
|-----------------------------|---|
| Miss Prapai Kampangkeaw | Director of Audit Development and Support Department |
| Mr. Wira Srisakunworathai | Director of Supporting Process Audit Department |
| Miss Usa Chaivanichpol | Director of Human Resources Development Department |
| Mrs. Suchada Nakyoy | Director of Core Business Audit Department |
| Mrs. Wantanee Chumpoo | Director of Operation of MWA Department |
| Mrs. Sunisa Piyasuwan | Director of Waterworks Academic Development Department |
| Miss Nattaya Bunkerd | Director of Corporate Governance Department |
| Mrs. Nittaya Pibul | Director of MWA Board of Directors Affairs Department |
| Mrs. Sirijan Santirojanakul | Director of Social Responsibility Management Department |
| Mrs. Chavina Wiratyosin | Director of Corporate Communication Department |

Line of Deputy Governor (Administration)

| | |
|------------------------------|--|
| Mrs. Suwanna Parkros | Director of Central Administration Department |
| Mrs. Tatrpa Kanjanasint | Director of Legal Department |
| Mr. Narintorn Mahanaka | Director of Human Resources Management Department |
| Mrs. Phongpan Wattanasermkit | Director of Welfare and Relations Affairs Department |
| Miss Pattana Witchajutakul | Director of Procurement and Supplies Department |

Line of Deputy Governor (Finance)

| | |
|-----------------------------------|--|
| Mrs. Pattharaporn Pattharasikarin | Director of Financial Analysis and Planning Department |
| Miss Kanlaya Wichachoocherd | Director of Budget Department |
| Mrs. Pawnthip Dinakara Na Ayudhya | Director of Accounting Department |
| Miss Patcharin Punyapornsup | Director of Finance Department |

Line of Deputy Governor (Eastern Services)

| | |
|----------------------------------|-------------------------------------|
| Mr. Kittipat Uthikamporn | Phaya Thai Branch Office Manager |
| Mr. Archawan Im-erbtham | Suvarnabhumi Branch Office Manager |
| Miss Amphai Phanayuwattana | Mansri Branch Office Manager |
| Mr. Sarawut Boonwong | Phra Khanong Branch Office Manager |
| Mrs. Duangjit Suvanphatep | Lat Phrao Branch Office Manager |
| Miss Duangkamol Rienpuech | Bang Khen Branch Office Manager |
| Mr. Chaipayorn Rattanatanangpong | Samut Prakan Branch Office Manager |
| Mr. Luanchai Kanjanasint | Sukhumvit Branch Office Manager |
| Miss Phakamas Choakanantrakul | Thung Mahamek Branch Office Manager |
| Miss Jitaree Mungkun | Prachachuen Branch Office Manager |
| Mr. Pratan Leardcharoenroek | Min Buri Branch Office Manager |

Line of Deputy Governor (Western Services)

| | |
|-------------------------------|--|
| Mr. Supichete Tavorntaveevong | Director of Water Loss Management Department |
| Mr. Piyapong Srisomboon | Taksin Branch Office Manager |
| Mr. Phichet Wongphitak | Mahasawat Branch Office Manager |
| Miss Panicha Wetchosodsakda | Director of Service Support Department |
| Mr. Sanchai Pongputtchart | Director of Water Meter Department |
| Mr. Nurach Noisopa | Nonthaburi Branch Office Manager |
| Mr. Pornchai Mongkolkruit | Suksawat Branch Office Manager |
| Mr. Wimarn Marsjaroon | Phasi Charoen Branch Office Manager |
| Mrs. Sasithorn Meekunieam | Bang Bua Thong Branch Office Manager |
| Mr. Sukit Musikkaphan | Bangkok Noi Branch Office Manager |

Line of Deputy Governor (Engineering and Construction)

| | |
|-----------------------------|--|
| Mr. Sayan Namngern | Director of Water Treatment and Transmission System and Civil Work Construction Department |
| Mr. Chana Pongpothakul | Director of Water Distribution System Design Department |
| Mrs. Thimaporn Wimonanupong | Director of Engineering Standard and Geographic Information Department |
| Mr. Sutthisak Lapprasert | Director of Waterworks Improvement Project Department |
| Mr. Dollachet Klahan | Director of Water Treatment, Transmission System and Civil Work Design Department |
| Mr. Arnuparp Supapant | Director of Water Distribution System Construction Department 1 |
| Mr. Viwat Kuharat | Director of Water Distribution System Construction Department 2 |
| Mr. Somchai Suksuntichai | Director of Project Management Department |

Line of Deputy Governor (Water Production and Transmission)

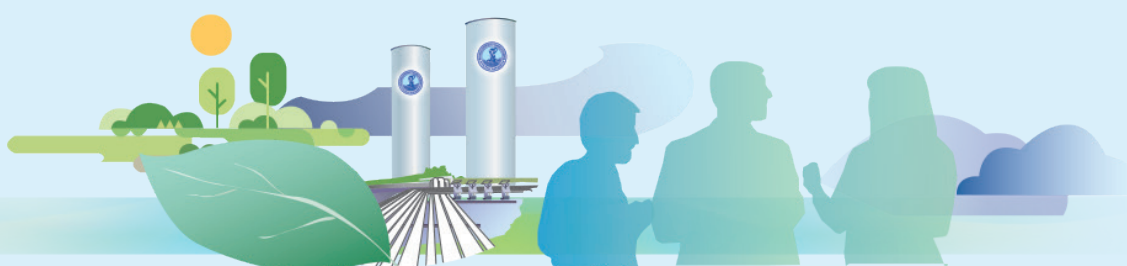
| | |
|-------------------------------|--|
| Mr. Sermsak Jansam | Director of Water Transmission and Distribution Control Department |
| Mr. Thaveesak Ngarmwacha | Director of Water Transmission and Distribution System Treatment Planning and Development Department |
| Mr. Pornsak Samornkraisorakit | Director of Mahasawat and Thon Buri Water Treatment Plant Department |
| Mr. Thanapong Kausangunsilp | Director of Mechanical System and Civil Maintenance Department |
| Mr. Somsak Passananon | Director of Water Resources and Environment Department |
| Mr. Tintapas Kongkhanoy | Director of Bang Khen Water Treatment Plant Department |
| Mr. Sunai Tanpanich | Director of Samsen Water Treatment Plant Department |
| Mr. Yongyut Srimode | Director of Electrical System Maintenance Department |
| Miss Nongnara Atanavanich | Director of Water Quality Department |
| Mr. Pummate Chaitragul | Director of Water Distribution Pumping Station Department |
| Mr. Pisarn Thudee | Director of Instrument and Automation System Maintenance Department |
| Mr. Vittaya Kongkeatvanit | Director of Raw Water Transmission System Department |

Line of Deputy Governor (Planning and Development)

| | |
|-----------------------------|--|
| Miss Yutirat Khampheeraphan | Director of Business Development Department |
| Miss Suwaree Chiawchanlikit | Director of Monitoring and Evaluation Department |
| Miss Orawan Suraiman | Director of Risk Management Department |
| Mr. Chiranuwat Narong | Director of Policy and Strategy Department |

Line of Deputy Governor (Information Technology)

| | |
|---------------------------|---|
| Mrs. Pitsawart Phapsuwan | Director of Technology Development and Support Department |
| Mrs. Nongnuch Wongkalasin | Director of Information Technology Strategy Department |
| Mr. Paripan Pinsurong | Director of Technology and Communication Department |



MWA Experts Level 8

| | |
|--------------------------------|---------------------|
| Miss Kanyarach Nantanawikul | MWA Experts Level 8 |
| Mrs. Duaenchai Sinthuyon | MWA Experts Level 8 |
| Mrs. Suntaree Akepanidtaworn | MWA Experts Level 8 |
| Mrs. Petiporn Chantawong | MWA Experts Level 8 |
| Mrs. Boonbundal Boonchuwit | MWA Experts Level 8 |
| Mr. Winyu Roongadulpisan | MWA Experts Level 8 |
| Mrs. Leewan Tankrittiwat | MWA Experts Level 8 |
| Mr. Supprasert Jirapanasom | MWA Experts Level 8 |
| Mrs. Kanya Sonsap | MWA Experts Level 8 |
| Miss Anoottaree Prasertchai | MWA Experts Level 8 |
| Mr. Prawit Sangsukcharoen | MWA Experts Level 8 |
| Mrs. Aimchit Chumchalem | MWA Experts Level 8 |
| Mrs. Pornwarin Poonsup | MWA Experts Level 8 |
| Miss Chatsinee Surasen | MWA Experts Level 8 |
| Mr. Phaisarn Ngernkorn | MWA Experts Level 8 |
| Mr. Anuruk Promchai | MWA Experts Level 8 |
| Mr. Wichai Sangpornsraroon | MWA Experts Level 8 |
| Mr. Pravej Ampornrat | MWA Experts Level 8 |
| Miss Achara Poramathikul | MWA Experts Level 8 |
| Mr. Arttachai Ketrattanabovorn | MWA Experts Level 8 |
| Mr. Khajohnwatch Suwanlaaid | MWA Experts Level 8 |
| Mr. Teerasak Jangwiboon | MWA Experts Level 8 |
| Miss Roskon Dankul | MWA Experts Level 8 |
| Miss Warangkana Sudto | MWA Experts Level 8 |
| Miss Nuchnapa Wongmongkhon | MWA Experts Level 8 |

Auditor Level 8

| | |
|-----------------------|-----------------|
| Mrs. Lakkana Chuenkul | Auditor Level 8 |
|-----------------------|-----------------|

Senior Executives to retire in the budget year 2020

| | |
|---------------------------|--|
| Mr. Prinya Yamasamit | MWA Governor |
| Mrs. Lawan Chatrungchewan | Deputy Governor (Planning and Development) |



Industrial Situations and Future Trends

In 2020, global economy has declined due to COVID-19 pandemic which is severely and broadly spreading worldwide. All countries were required to execute the measures to prevent and control the pandemic by restriction of domestic and international travels, lockdown and suspension of economic activities which may cause the risk of virus transmission. Although some countries are successful in controlling the spread within the countries, making the number of new cases continuously reduce, such measures causes the interruption of economic activities, including manufacturing, export, tourism, and investment. International Monetary Fund (IMF) adjusted the World Economic Outlook in 2020 from -3% to -4.9% in all economic regions around the world except China, which IMF forecast an expansion at 1.0%, while the US and European economy were expected decline by 8.0% and 10.2%, respectively. Significant factors influencing economic recovery include ability and period implemented by each country to control the spread and prevent the second or new wave of the spread, capacity of enforcement of financial measures to help the business sector resume

their operations, and advancement of manufacturing of medicines and vaccines for prevention and treatment of the disease.

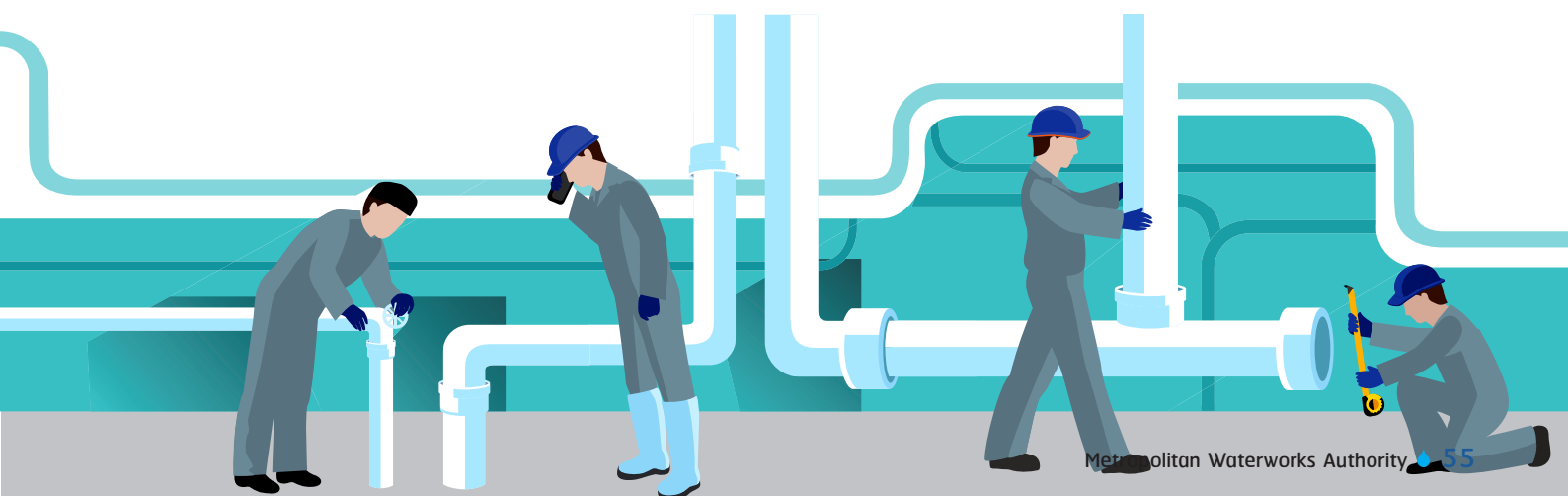
National Economics and Social Development Council estimate a decrease in Thailand's Gross Domestic Product (GDP) in 2020 by 6 percent in comparison with the expansion by 2.4 percent in 2019 as a result of COVID-19 situation. Nonetheless, there were supporting factors including the success in control and prevention of the spread in the country and easing of measures of lockdown and domestic travel restriction, as well as disbursement of budgets and promotion of economic activities in government sector.

Regarding the industrial sector trends in the 3rd quarter of 2020, non-agricultural production decreased by 6.4 percent which was higher than the decrease by 12.9 percent in the 2nd quarter. However, the tourism industry encountered a sharp decline of foreign tourists due to COVID-19 since the 1st quarter of 2020 which severely affected tourism business operators and other relevant sectors.



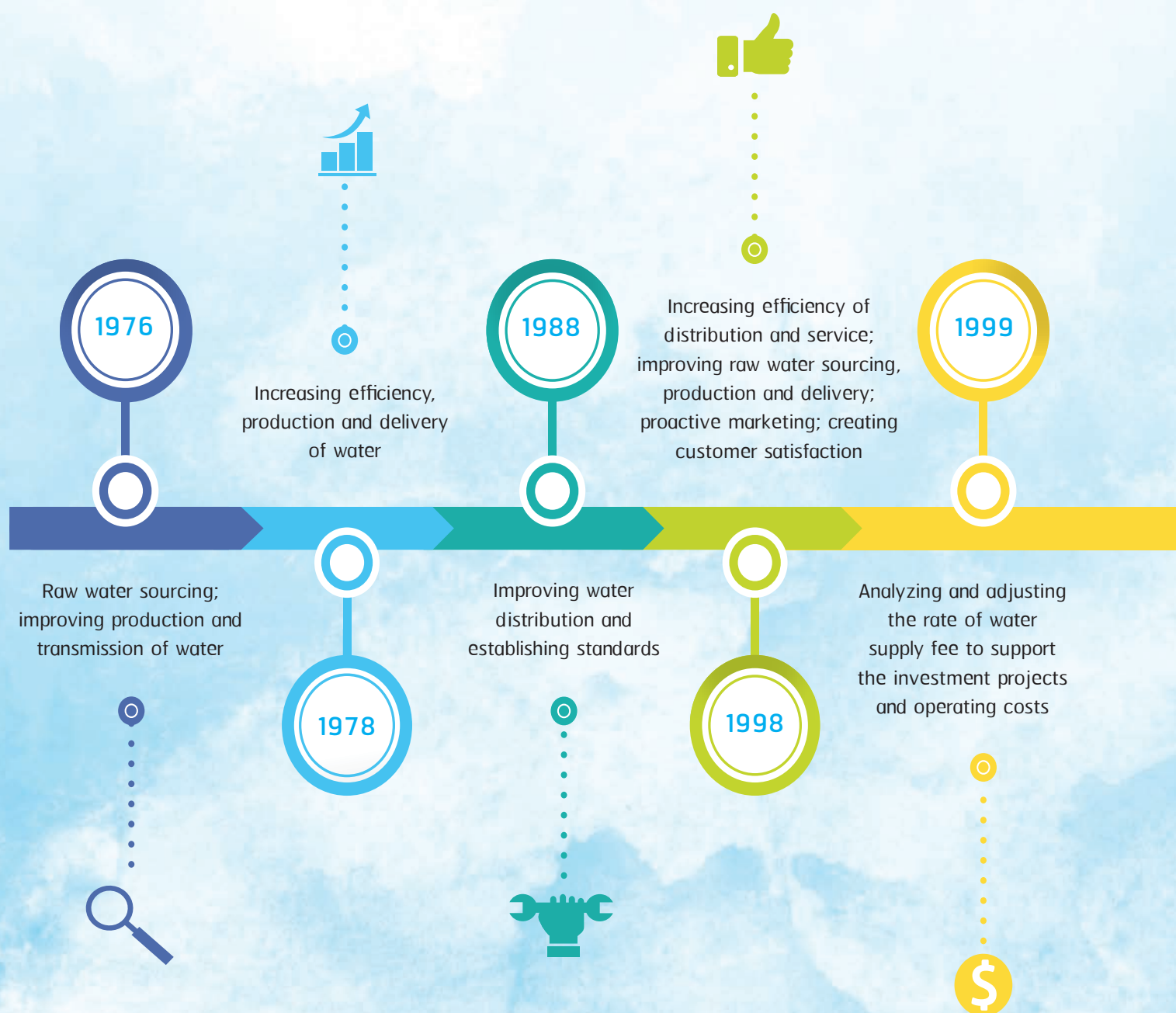
Owing to the above situations, the amount of water sale of MWA in 2020 decreased from 2019 by 1.2 percent for hotel and shopping center group and industrial and educational institution group. However, the sale increased in the residence group because of the continuous growth of consumption in the expanded areas, as well as the emergence of ready-for-sale property projects with more residents. Additionally, the implementation of Work from Home policy and online learning of educational institutions was another factor influencing the increasing amount of water sale in the residence group.

In 2021 MWA estimates that the amount of water sale will increase from 2020 because of the economic recovery both domestically and globally in the second half of the year and the implementation of economic promotion of the government to recover economic activities. Despite the new wave of COVID-19 at the end of 2020, the government has experience in disease control and the vaccination can be expected at the beginning of 2021. Also, the rate of loan interests tend to reduce, leading to an expansion of real estate section, which aligns with the World Bank's forecast that Thailand's economy will gradually recover and expand at the minimum of 3.5% in 2021.



Roadmap

of the 5th Corporate Plan of MWA





Improving the process of management, production and sale of drinking water to enhance efficiency; emphasizing customers, employees, and information technology



Delivering safe water and developing work processes in accordance with international standards



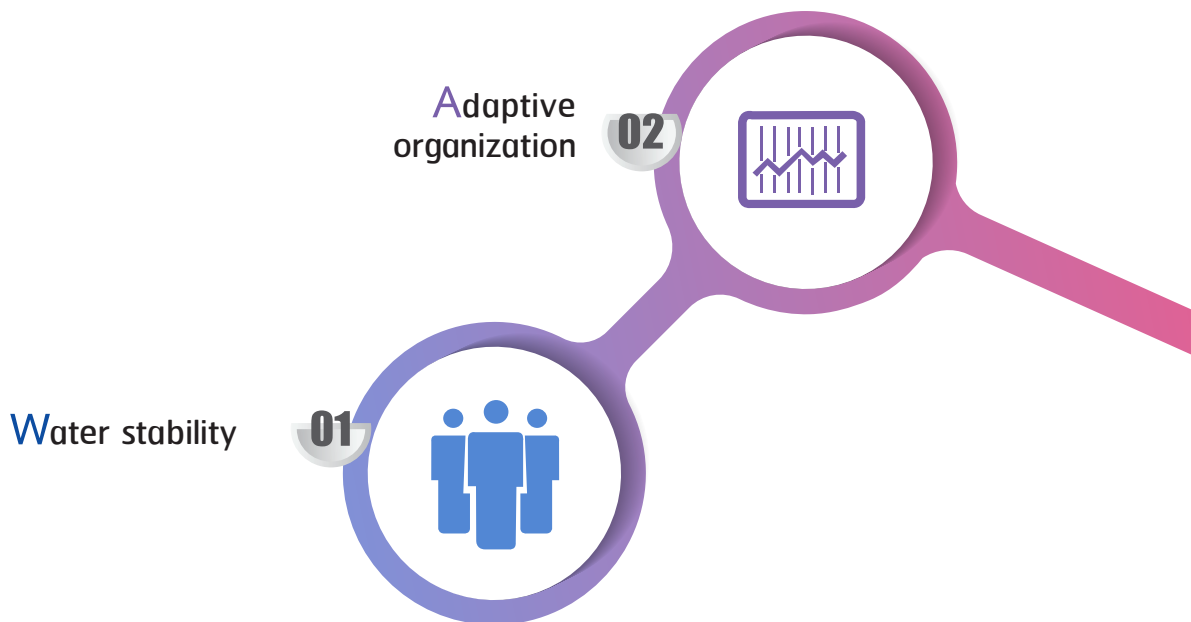
Moving forward to become a high-performance organization (HPO)

Focusing on upgrading and increasing efficiency of management for preparation and moving forward to be domestically accepted and as the leader of ASEAN



Future Policies and Plans

Operate the key projects and work plans under 4 aspects of the corporate strategies, as well as responding to the policy of MWA Governor indicating “Gearing Up MWA Sustainability” which emphasizes 3 aspects of developments, including improvement of water infrastructure to be stable and cover all serviced areas, development of work processes by implementing technology for the utmost benefits, and consideration of human resources in terms of recruitment, development and retention of quality personnel of the organization. These can be summarized as follows:



Aspect 1 Water Stability

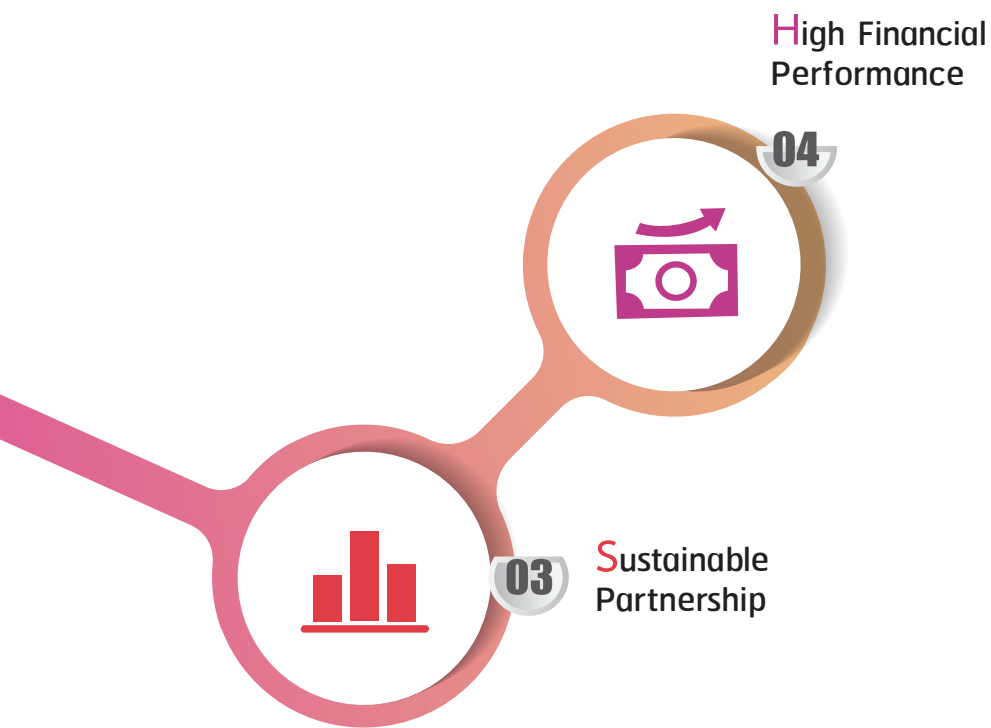
Objectives:

- Improve damaged pipes to be in the sustainably usable condition to support effective distribution of high-pressure water.
- Promote effective production, distribution and transmission system.
- Increase western production capacity by 0.8 million cubic meters, construction of water transmission tunnels, construction of additional clear water reservoir and Bang Mod Water Distribution Pumping Station
- Develop/Improve water infrastructure.

Aspect 2 Adaptive Organization

Objectives:

- Develop data analytical skill to MWA personnel and establish the pilot units to support big data analysis to be adopted for the utmost benefit.
- Increase the digital service channels to increase the virtual branch services and create customer satisfaction.
- Arrange the management system and automatically response to threats and establish the process or playbook and respond to cyber threats effectively.
- Promote research and development of work process and create innovations in waterworks activities in all aspects.
- Determine the policies on development of geographic information system at the level of Enterprise GIS for development of utilization of the geographic information system that covers all main processes of MWA.



Aspect 3 Sustainable Partnership

Objectives:

- Respond to the needs and expectations of customers, as well as solving problems and complaints effectively to increase the level of customer satisfaction and reliability.
- Support to become a high-performance organization with excellent corporate governance.
- Enable the local people in the responsible areas to access the infrastructure, respond to the basic needs of customers, increase the level of customer satisfaction, improve determination of service provision at the leading level, and promote creation of reliability of MWA brand.

Aspect 4 High Financial Performance

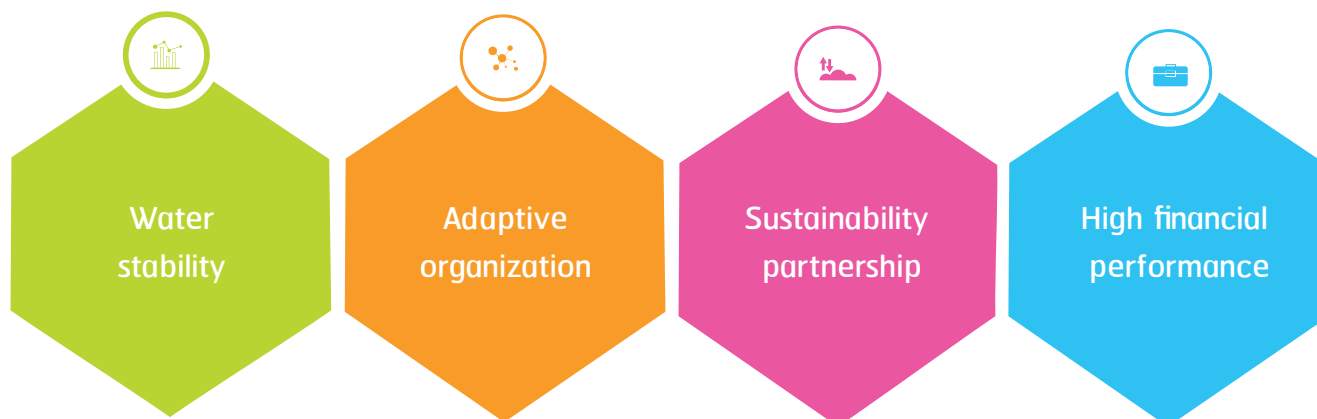
Objectives:

- Find the ways to increase income from the main business (water supply) to build financial stability for the organization to determine the clear path to expand the areas of water distribution at the potential joint areas.
- Generate income from affiliated business in addition to utilization of the customer base, experience, expertise, innovation, and MWA's brand to create customer satisfaction.

Important Plans and Projects

| Projects | Period of Operation | Project Expenses | Operating Results until the Budget Year 2020 (percent) |
|---|---------------------|------------------|--|
| 1. The 7th Bangkok Water Supply Improvement Project Expansion of the production capacity of Bang Khen and Mahasawat Water Treatment Plants ,each to 400,000 m ³ per day; construction of Bang Phli and Min Buri Water Distribution Pumping Station, as well as construction of water transmission tunnel and water piping for the total distance of 1,000 kilometer | 1999-2020 | 25,177.3 | 95.51 |
| 2. The 8th Bangkok Water Supply Improvement Project Expansion of the production capacity of Bang Khen and Mahasawat Water Treatment Plants, each to 400,000 m ³ per day; construction of additional clear water reservoir at Ratburana and Phetkasem Water Distribution Pumping Station purchase and installation of raw water pumps, transmission and distribution pumps, as well as water piping and other relevant works | 2008-2020 | 7,494.0 | 83.52 |
| 3. The 9th Bangkok Water Supply Improvement Project Expansion of the production capacity of Mahasawat Water Treatment Plant to 800,000 m ³ per day; increase efficiency of water distribution system by constructing water transmission tunnel, construction of Bang Mod Water Distribution Pumping Station and expansion of clear water reservoir, as well as water piping and other relevant works | 2017-2024 | 42,750.0 | 2.40 |
| 4. Enhancement of capacity of water distribution in the trunk main system Re-installation of water pipes and improvement of water pipes in the areas under responsibility of 18 branches of MWA | 2016-2022 | 4,300.0 | 19.84 |
| 5. Water piping improvement for stability of water distribution system project Improvement of water distribution pipelines to reduce the loss of water and improvement of overall efficiency of MWA piping networks | 2012-2021 | 2,042.4 | 43.52 |
| 6. Improvement of raw water transmission system to enhance stability and permanently prevent flood project Improvement of eastern raw water transmission system for Bang Khen, Sam Sen, and Thonburi Water Treatment Plant ranging from Bang Khen Water Treatment Plant to Samlao Raw Water Pumping Station to ensure efficiency of water transmission and permanently prevent flood along the waterworks canal embankment | 2013-2022 | 1,939.0 | 12.35 |

Results of performance under the operation plan of the fiscal year 2020 In accordance with the 5th MWA Corporate Plan



Aspect 1 Water Stability

The 9th Bangkok Water Supply Improvement Project

Completion of the design and preparation of bidding document for construction of water transmission tunnels and will procure the contractor for expansion of water production capacity at Mahasawat Water Treatment Plant by 800,000 cubic meters per day; increase of efficiency of water distribution system with water transmission tunnel construction, construct Bang Mod Water Distribution Pumping Station, clear water reservoir; procurement and installation of water pumps and power sub-stations and construction of water pipelines as well as other relevant works in the budget year 2021 (The project is expected to complete within the budget year 2023-2024).

The 10th Bangkok Water Supply Improvement Project

Determination of the terms of reference by expanding the production capacity at Mahasawat water treatment plant by 400,000 cubic meters per day to increase efficiency of water diversion from the western to the eastern areas during the crisis of low quality of raw water in Chao Phraya River; construction of the new water treatment plant at the upper west side by 400,000 cubic meters per day; expansion of clear water reservoir at Bang Khen Water Treatment Plant by 190,000 cubic meters, and construction of 2 additional tunnels to support the water diversion

from the western to the eastern side. It is in the process of preparation of the project suitability report to be proposed to MWA Board of Directors and Council of Ministers, respectively. The operation plan was issued for the period of 6 years (2023-2028). The initial estimated budget is 22,350 million Baht.

Improvement of the pipelines to reduce loss of water

In the budget year 2020: Completion of the replacement of new pipelines for 1,003 kilometers.

Enhancement of stability of raw water system

- Improve western raw water transmission system to increase stability of the western embankment, which can be divided into 2 ranges: from Mahasawat Water Treatment Plant to Bang Khu Lat underwater pipe and from Bang Khu Lat underwater pipe to Bang Len Raw Water Pumping Station. This project is under the process of preparation of reference price.

- Collaboratively work with Royal Irrigation Department in requesting water allocation in the drought season in for 900 million cubic meters for the eastern side (from November 2019 - April 2020) and 460 million cubic meters for the western side (from January - June 2020) and coordinate with Office of the National Water Resources to collect data about the water management plan during the drought season.



Aspect 2 Adaptive Organization

Development of Data Driven Organization

MWA has developed data and information technology system, as well as personnel, to support Digital Transformation as follows:

- Develop the personnel for big data analysis by providing various training programs such as workshops for data engineers, Data Scientists Bootcamp, class 2, and Business Intelligence Analyst Bootcamp, class 2. The total personnel who have passed the trainings are 72.
- There is the big data analysis system through public cloud for effectively analyzing and estimating situation. Analytical reports to support the operations on water quality, water loss, and water demand are also made.

Digital Service Development

- Development of virtual branches by improving and launching 15 request submission service in the form of e-Service (via Website/MWA OnMobile), including request for new connection, damaged water meter, meter replacement, and so on, to increase the service channels and facilitate consumers.

- Increase online water supply bill payment channels through credit card, kiosk, online banking and increase convenient, fast and 24-hour service channels through Facebook, Twitter, Instagram, YouTube, and Line@ under the account name @MWATHailand.

- Provide e-Bill service to facilitate consumers. Water supply bills can be viewed through smart devices conveniently and in real time. e-Tax Invoice & e-Receipt are provided to shorten the time for obtaining tax invoice and receipt from 30 days to 1 hour. Moreover, this method can help reduce damage and loss of paper documents and loss of paper resources.

Creation of Enterprise Architecture (EA)

MWA applies the principles of Enterprise Architecture (EA) under TOGAF 9.2 in operation by developing Digital Transformation in customer service to support digital transformation of MWA.

Aspect 3 Sustainable Partnership

Engagement in developing key communities

- Conduct the field trips to create relationships with local people to develop communities and survey needs and expectation of the local communities. In the fiscal year 2020, field trips and surveys were done in 16 communities.

- Organize MWA CSR Day and lecture on “How to create sustainability for MWA” given by Dr. Nattakit Tangpoonsinthana, Director of MWA and Chairman of Corporate Good Governance (CG) and Corporate Social Responsibility (CSR) Subcommittee.

Improving corporate governance management

- Drive Corporate Governance Council of the Metropolitan Waterworks Authority to sustainability which is the soft power that creates integrity, morality, ethics, and corporate governance in the organization with the aim of strengthening MWA by collaboration of all personnel in MWA in protecting the benefit of the organization and the public to ensure that MWA is the organization of transparency without corruption.

- Arrange the 2nd “Stakeholder’s Day” activity to create relationships between stakeholders on 29 November 2019 at 10.30 hrs. at Vayupak Convention Center 3-4, Centara by Centara Hotel, Government Complex and Convention Center, Chaengwatthana.

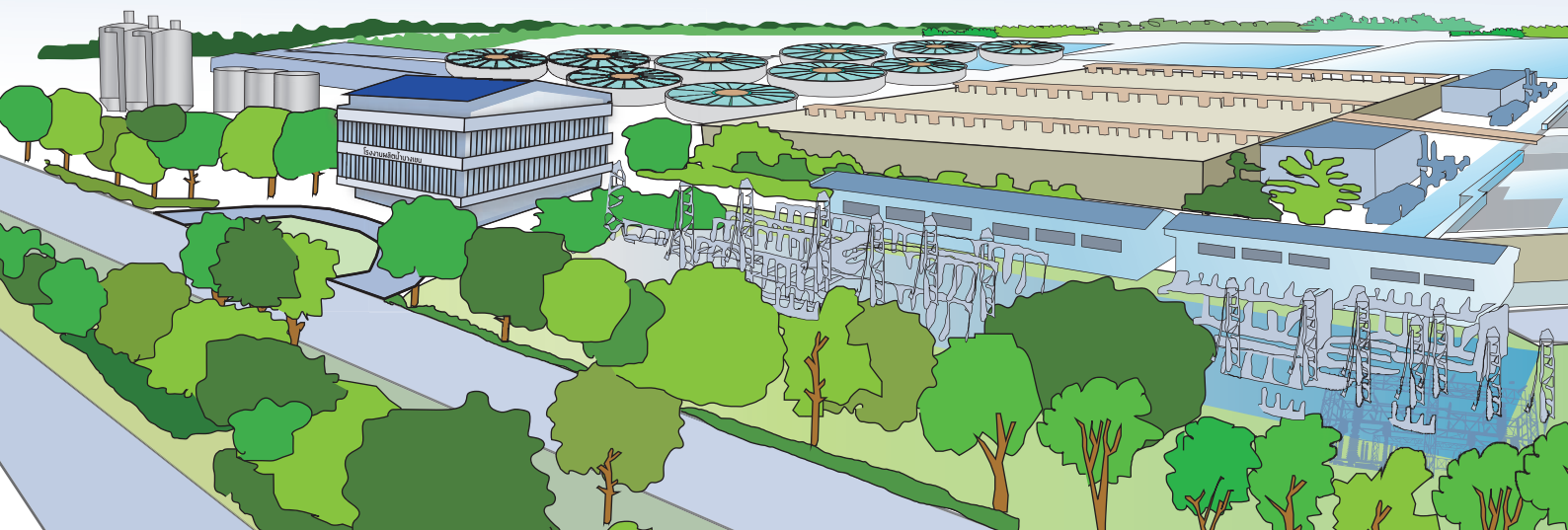
Aspect 4 High Financial Performance

Expansion of water supply service widely, sufficiently and stably. This was realized upon expansion of serviced areas under responsibility by installing the water pipelines in the part for which MWA is in charge. The total distance of this project is 112 kilometers.

Development potential of the related business

such as development of business for after service support, operation of business related to waterworks development of the government agencies or non-profit organizations, establishment of business units (BU), and development of related products and services which generate extra income for development of mega infrastructure to ensure stability of service provision. MWA could gain extra income from related business at approximately 565 million Baht.





Corporate Administration

Risk Management

MWA realizes the importance of effective corporate risk management as a key mechanism that helps the organization achieve its objectives and goals and reduce possible loss. MWA completed the operations according to the components of corporate risk management under the guidelines of The Committee of Sponsoring Organizations of The Treadway Commission (COSO), which is the international standard. MWA operates risk management by integration at all levels by transferring knowledge and policy from Risk Management & Internal Control Subcommittee to the operation level. The operation started from consideration of risk issues related to both external and internal factors. Risk management plan was made systematically, and the risk management results were followed up regularly to reduce risks at the acceptable level and respond to the risks in timely manner. Also, the risk management has been fostered to be the corporate culture of MWA. In conclusion, MWA has conducted the following activities:

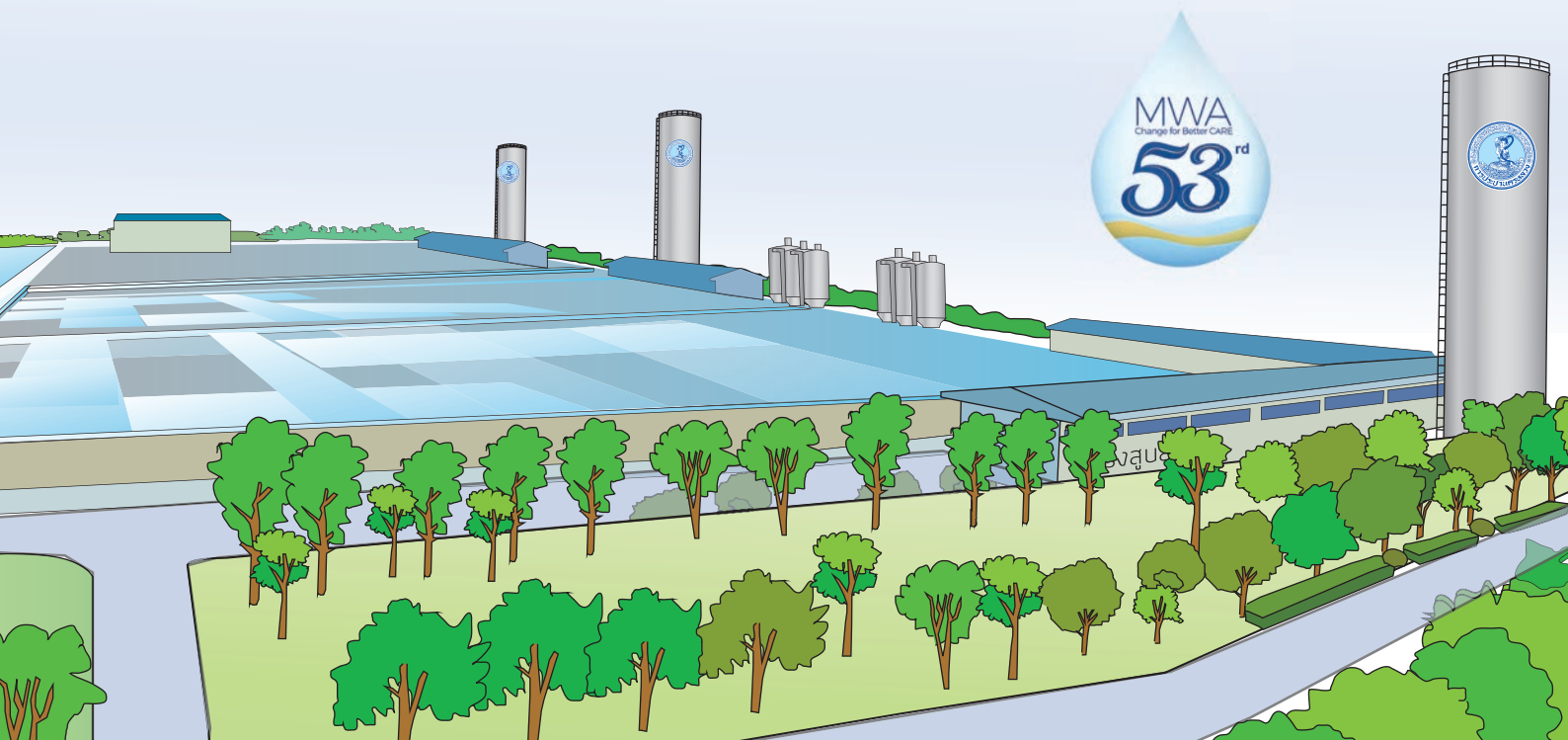
Raw water amount and quality

In the year 2020, although MWA encountered drought and salinity intrusion, MWA still put importance on raw water amount and quality by establishing the Command Center for Water Crisis Solution to monitor water situation

and closely inspect water quality in the river, as well as coordinating with relevant agencies for water management on regular basis and for risk management to respond to impacts from salinity intrusion at the raw water receiving point on the eastern side of MWA. Moreover, MWA follows up the Key Risk Indicators (KRI) in terms of both water quality and water amount regularly so that the executive can use the data for management and monitor raw water quality in timely manner.

Stability of water production, transmission and distribution system

MWA plans to increase stability of water production, transmission, and distribution system during the drought season in short term, medium term and long term as well as investing in the 9th Bangkok Water Supply Improvement Project to create sustainability and stability of raw water, water production, water transmission, and water distribution system of MWA to accommodate the situations/crises which may occur in the future. In addition, MWA has the Business Continuity Plan (BCP) of the important processes ranging from raw water system to service provision to consumers by arranging practices for emergency operation plan and Business Continuity Plan with internal and external agencies to make sure that MWA can continuously operate and supply water to consumers.



Emphasis on stakeholders

MWA put importance on stakeholders around the water treatment plant by providing knowledge of water production and chemical used in the production process, as well as practicing emergency operation plan, with stakeholders around the water treatment plant to make sure that MWA is always prepared for responding to possible emergencies. Furthermore, MWA improved the structures and equipment of chemical distribution building of the 3 water treatment plants to create safety stability to operators and stakeholders around the water treatment plants.

Finance

To ensure that the spending of investment budget meets the determined target, MWA controlled the risks of budget spending throughout the process, starting from having the divisions to prepare procurement process in advance, review necessity and needs of investment in accordance with the actual operation, improve procurement process, determine reference price, prepare appropriate Terms of Reference (TOR), and select contractors having appropriate experience and expertise to conduct the projects to achieve the plan and support the overall contribution to the national economic growth.

Information technology

To ensure that the information technology of MWA is safe and ready to use in stable manner in all circumstances,

MWA reviewed and revised the Business Continuity Plan for IT, as well as practicing the plan in accordance with ISO27001: 2013, especially the implementation of the plan upon disruption of server or emergency to equip the operators with skills and ability to work according to the process effectively. During COVID-19 pandemic, MWA prepared sufficient video conference for internal operation during the Work-From-Home period and maintain social distancing. In addition, the measures to prevent network intrusion and attack were also implemented, which is the issues of interest of many leading organizations as seen through the global media.

Improvement of efficiency of water loss reduction

MWA aims at producing water for consumption sufficiently and in the way that cover all serviced areas while also taking account of the use of water resources for the utmost benefit. Therefore, Risk management is emphasized to improve efficiency of water loss reduction by repairing more of the old, damaged pipes, inspecting leakage at water distribution pipes, hiring labor to work on water loss reduction in each area, managing appropriate manpower to manage water loss in each responsible area, as well as enhancing efficiency in construction of water distribution pipes and pipe repairs to minimize the problems of leaking/damaged pipes in the future to ensure sustainable water distribution system in general.

Internal control

MWA realizes that the internal control is one of the mechanisms that support the corporate governance, hence fostering the operations under the 5th MWA Corporate Plan (2020-2022) by implementing the internal control as the tool to ensure continuous management and development by adhering to the Rules of Ministry of Finance on Standards and Procedures for Internal Control for Government Agencies, B.E. 2561 (2018) in accordance with the international standard of The Committee of Sponsoring Organizations of the Treadway Commission: COSO 2013 (COSO).

In 2020, MWA operated various activities to develop efficiency and effectiveness of internal control system and promote sustainable development, which can be summarized as follows:

1. Creation of risk management and internal control culture

Under the rapidly changing situation at the present, the organization cannot avoid facing challenges in operating various activities. For this reason, MWA places importance on encouraging the personnel to have risk management and internal control culture by arranging activities and projects to provide knowledge of risk management and internal control to the personnel at all levels, which include

Risk Management and Internal Control Roadshow, quiz shows, photo competition to raise awareness of risk management and internal control, as well as providing the training to increase new knowledge to the executives and employees continuously so that the strong culture can improve risk management and internal control and enable MWA to achieve the objectives of the organization amidst the rapidly changing environment.

2. Integration of internal control process with key working processes of MWA

MWA improves the internal control process, develop, focus on systematic and continuous integration within the organization, determine that the divisions establish the internal control self-assessment (CSA) by taking account of the mission of each division and key work processes of MWA, as well as requirements of the process, KPI, control points, KPI in process, and target values to ensure that the operating results meet the objectives of the operation. The aim is to integrate with the knowledge management regarding the response to critical points that covers key work processes of MWA to enable MWA to respond to risks, operational environment, consumer needs, change of digital technology, and Thailand 4.0 policy which needs to be driven by innovations for effective, transparent, and verifiable operation.



Internal Audit

The purpose of conducting Internal Audit of the Internal Audit Office is to provide assurance and consulting services fairly and independently under the supervision of MWA Audit Committee to increase value and ensure achievement of the corporate objectives by determining the clear roles and responsibilities indicated in the Internal Audit Office Charter. Review is conducted yearly to ensure compliance with the roles, responsibilities, standards, and relevant procedures, there is a policy to determine the internal auditor to treat the audited unit as a customer by giving useful suggestions, leading to the improvements for achievement of the objectives, focusing on constructive audit, promoting teamworking, implementing data analytics and Computer Assisted Audit Techniques (CAATs) to increase efficiency of the operation.

Internal Audit Practice and Reporting

Long-term audit plan (budget years 2017-2021) and the annual audit plan for fiscal year 2020 were made on the basis of Risk-Based Audit with an emphasis on the key risks of the organization in accordance with the 5th Corporate Plan of MWA (2020-2022) by taking account of the expectations of MWA Audit Committee, State Audit Office, and the top management. The Audit Universe (AU) covers all operations of the organization, including the report on audit results to the management of the audited unit for improvements. The results of operation in accordance with the suggestions are followed up and reported to MWA Governor, MWA Audit Committee and MWA Board of Directors on quarterly basis.

In addition, consultations are given to the management and the audited unit for improvement of

efficiency and effectiveness of the internal control, risk management, and governance, including participation in the project that supports the state-owned enterprise in terms of corporate management (Mentoring Project) to create relationships between two organizations and strengthen the state-owned enterprise for driving the economic and social development of the country.

Maintain the Quality of Internal Audit

The internal auditor performed his/her duties in accordance with the internal audit manual which has been reviewed to ensure compliance with the corporate contexts on annual basis. Work quality was reviewed following the chain of command. The Internal Audit Office was assessed by the MWA Audit Committee, top management, audited unit (post-operation satisfaction), self-assessment, and the independent third-party expert (quality assessment) at least once every 5 years. All results of the assessment were analyzed for improvement of efficiency, and appropriate training programs were provided to the internal auditor for enhancing his/her skills and competences, as well as promoting and supporting the internal auditor to develop him/herself by obtaining professional certificate in internal audit or other professions. In 2020, internal auditor development project was established to encourage the internal auditor to obtain international internal audit certificates such as CIA and CISA.

Remuneration of the auditor:

The State Audit Office is MWA's auditor for the fiscal year 2020. The remuneration is 2.50 million Baht.



Corporate Social and
Environment Responsibility

CHANGE
FOR BETTER
CARE





MWA Corporate Social and Environment Responsibility Policy (MWA CSR Policy)

As MWA realizes the importance of all stakeholders, the principles of corporate social and environmental responsibility under ISO 26000, which consists of 7 behavioral principles which are responsibility, transparency, ethical performance, respect for the stakeholders' benefits, respect for the rule of law, respect for compliance with international practices, and respect for human rights, have been implemented as the framework for operation throughout the value chain.

MWA reviewed the CSR Policy for Board of Directors, the Governor, the executives, and the employees of MWA to use the guidelines for their operation as follows:

1. Strive for development of waterworks in accordance with the main corporate mission with CSR in Process and CSR after Process while adhering to 7 topics of the management system of ISO26000 comprised of corporate governance, human rights, labor practice, environmental practice, fair treatment, consumer issue, and involvement of communities and development of communities by focusing on engagement of stakeholders while taking account of the prevention of possible impacts of the corporate operations and identifying the clear goals.
2. Create and raise awareness of the personnel at all levels of social responsibility, morality and ethics to the extent of becoming part of the organizational culture.
3. Build relationships with stakeholders systematically under AA1000 Stakeholder Engagement Standard (AA1000SES) which results in effective management of important issues of stakeholders that achieve the goals with an emphasis on employment of the corporate expertise in supporting and responding to the needs and expectations of stakeholders.
4. Promote sustainable development and operating result reporting by implementing Global Reporting Initiative (GRI) in enhancing the effectiveness of the corporate operations and increasing reliability of the report to be internationally accepted.

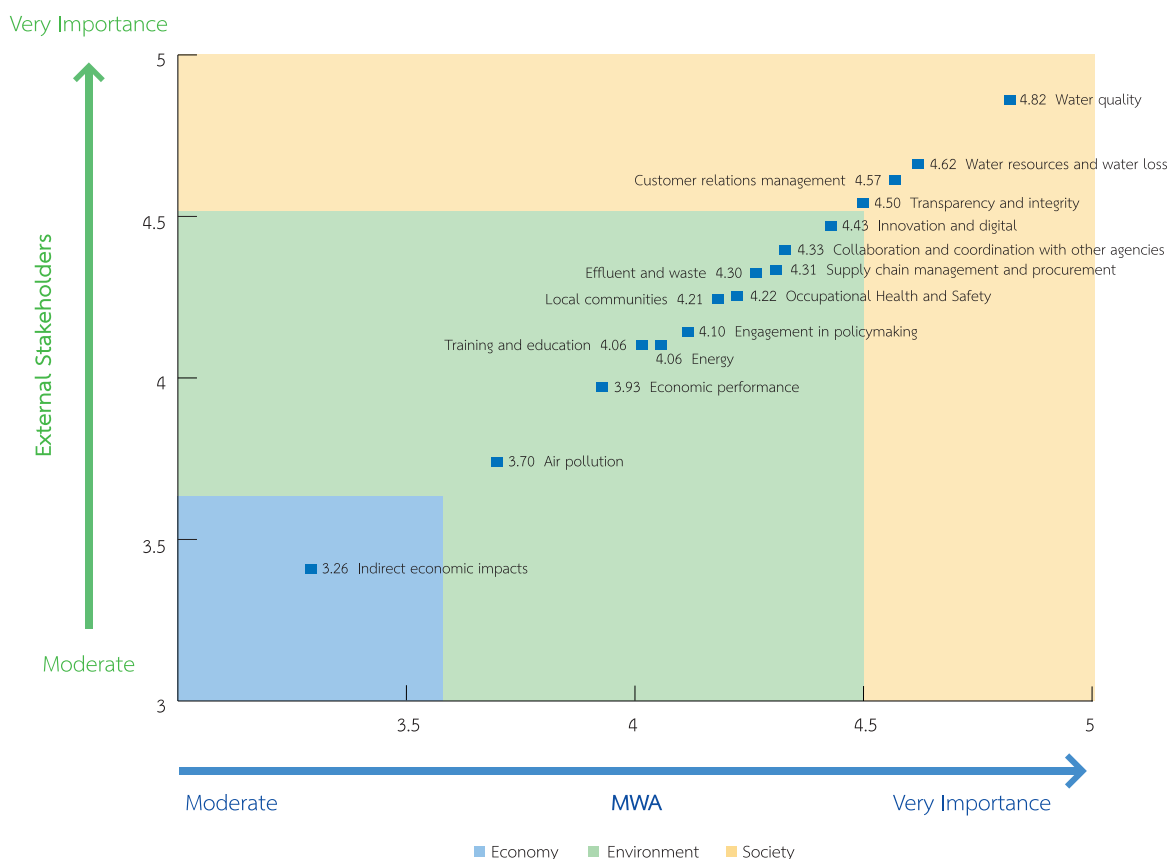


Corporate Social and Environment Responsibility Activities

MWA continuously operates the business with social and environmental responsibility by implementing the principles of social responsibility of ISO 26000 of International Organization for Standardization (ISO) as the guidelines for practice and determining the MWA CSR Policy to ensure effective and efficient operation of the main mission by producing clean water with international standard quality and delivering it to consumers appropriately and sufficiently. In addition, MWA creates relationships with stakeholders in accordance with AA1000SES (Stakeholder Engagement Standard) to meet the needs of 9 groups of stakeholders throughout MWA value chain (policy agencies and government shareholders, relevant agencies in terms of mission, vendors, partners, customers, employees and contract workers, important communities/communities and societies, mass media, activists/independent organizations/civil society sector/scholars) fairly and appropriately. Moreover, MWA prepared the sustainability report to promote and communicate MWA's sustainability management plan and operating results in economic, social and environmental aspects by implementing the Global Reporting Initiatives (GRI Standard) as the guidelines for disclosure since 2016. This includes the process of determination and selection of materiality of sustainability consisting of identification, prioritization and validation.



This includes the process of materiality matrix from both internal and external perspective in 2020 as shown in the figure below.



Corporate Social Responsibility Operations

Economic Dimension

MWA strives for becoming a high-performance water supply organization which can drive the economy with innovations and technology that help develop and foster the organization to have economic stability by focusing on complete and equitable clean water accessibility (the project to expand the serviced area to cover all urban communities), having complete risk management and adhering to corporate governance and ethics to ensure transparency and verifiability under good corporate governance, conflict of interest management, corporate governance operation of MWA (Corporate Governance Council), internal control, and internal audit. Moreover, stakeholders are provided with the opportunity to take part in the making of MWA policy through critique of strategies which is held annually.

Social Dimension

MWA places importance on occupational health and safety, as well as development of competences of human resource to have skills and knowledge in waterworks to manage relationships with consumers effectively. Benefits and welfare of employees, provident fund, and preparation

for retirement age are arranged. In addition, corporate culture in participation in development of communities and societies from upstream to downstream is embedded (MWA Project to Conserve Watershed Forest, Water Conservation Camp Project, MWA Plumber for People Project) to create good quality of life in the society for sustainable co-living.

Environmental Dimension

MWA preserves natural resources throughout the water production process, especially “water” which is the key cost of water production. National water resources management has been conducted collaboratively with other relevant agencies to foster internal collaboration within MWA in reducing water loss and raising awareness of the water value to the public (label indicating water efficiency of the products). Furthermore, MWA successfully manages waste from water production process as required by industrial standards such as wastewater and sludge to prevent impacts on the environment and communities around the business establishment. Also, eco-efficiency is studied and assessed to establish eco-efficiency standards of the organization and determine the plan for effective improvement of eco-efficiency.

Water Production Process Chart

Clear Water Reservoir

Filtered water is delivered and stored in water storage. The filtered water is disinfected by an appropriate concentration of chlorine (Post-chlorination) in order to make the tap water clean and safe.

Filter Tank

The filter is dual media type composed of anthracite coal (upper layer) and sand (lower layer) used for eliminating the remaining small particles from clarifier. The filter underdrain is plenum type with nozzles installed underlying floor to prevent media leaks.

Clarifier Tank

Raw water reacts with coagulant to destabilise colloid. The destabilised colloid will come into contact and become larger floc and settle down to the bottom while the clear water flows up into launders then goes to filter tanks.

Transmission Pumping Station

Conveys water via tunnels to Booster Pumping Stations.

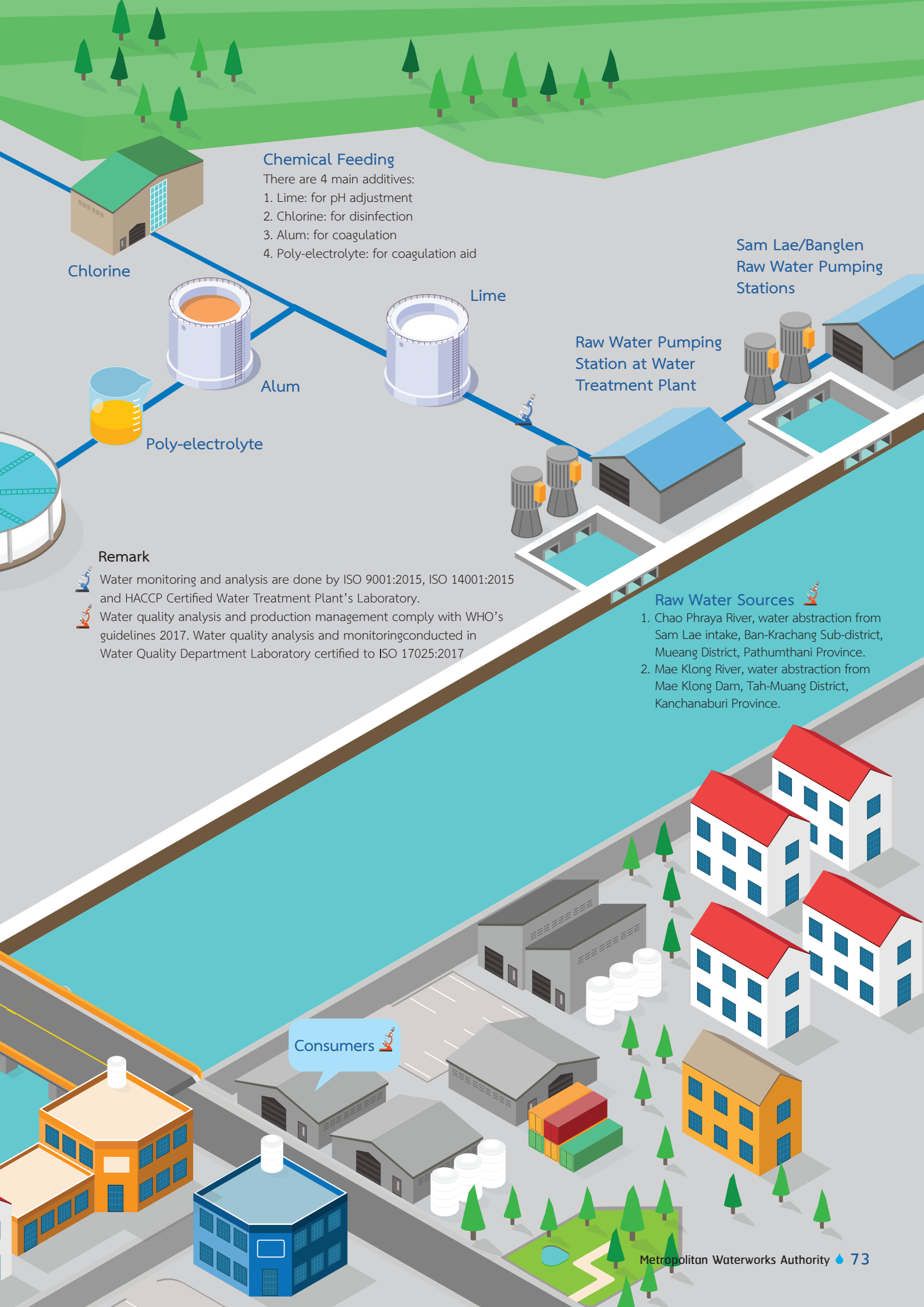
| Unit: (million cu.m./day) | Production Capacity | Water Production |
|---------------------------------|---------------------|------------------|
| Samsen Water Treatment Plant | 0.550 | 0.286 |
| Thonburi Water Treatment Plant | 0.170 | 0.100 |
| Bangkheng Water Treatment Plant | 4.400 | 4.040 |
| Mahasawat Water Treatment Plant | 1.600 | 1.600 |

Booster Pumping Station

Supplies water to consumers.

Surge Tower

Trunk Mains and Distribution Pipes



Chemical Feeding

There are 4 main additives:

1. Lime: for pH adjustment
2. Chlorine: for disinfection
3. Alum: for coagulation
4. Poly-electrolyte: for coagulation aid

Chlorine

Lime

Alum

Poly-electrolyte

Sam Lae/Banglen
Raw Water Pumping
Stations

Raw Water Pumping
Station at Water
Treatment Plant

Remark

Water monitoring and analysis are done by ISO 9001:2015, ISO 14001:2015 and HACCP Certified Water Treatment Plant's Laboratory.

Water quality analysis and production management comply with WHO's guidelines 2017. Water quality analysis and monitoring conducted in Water Quality Department Laboratory certified to ISO 17025:2017

Raw Water Sources

1. Chao Phraya River, water abstraction from Sam Lae intake, Ban-Krachang Sub-district, Mueang District, Pathumthani Province.
2. Mae Klong River, water abstraction from Mae Klong Dam, Tah-Muang District, Kanchanaburi Province.

Consumers

Length of Pipes and Equipment (As at 30 September 2020)

| Diameter Size | Pipe Length (km.) | | | | |
|------------------------------------|-------------------|--------|----------|----------|--------|
| | ST | ST | | CI | PC-ST |
| | | SCP | RCP (ST) | | |
| Tunnel and Conduit | | | | | |
| 3,400 | 10.367 | | | | 6.582 |
| 3,200 | 40.846 | | | | |
| 3,000 | 16.286 | | | | |
| 2,800 | 0.070 | | | | 25.124 |
| 2,500 | 11.980 | | | | 6.172 |
| 2,300 | 19.497 | | | | 1.755 |
| 2,000 | 36.801 | | | | 8.153 |
| 1,500 | 7.289 | | | | |
| Total in Transmission System (km.) | 143.135 | 0.000 | 0.000 | 0.000 | 47.786 |
| Trunk Main | | | | | |
| 1,800 | 12.540 | 0.676 | | | |
| 1,500 | ↑ 98.389 | 11.810 | 10.672 | | |
| 1,200 | ↑ 148.899 | 14.924 | 2.099 | 0.044 | |
| 1,000 | ↑ 538.111 | 16.361 | ↑ 44.760 | ↓ 12.885 | |
| 900 | ↑ 29.167 | | | ↓ 20.224 | |
| 800 | ↑ 482.327 | 0.330 | 0.170 | ↓ 8.796 | |
| 700 | ↑ 39.301 | | | 11.001 | |
| 600 | ↑ 147.530 | | 0.009 | ↓ 15.746 | |
| 500 | ↑ 37.169 | | | ↓ 19.159 | |
| 400 | 19.104 | | | 18.039 | |
| Total in Trunk Main (km.) | 1,552.537 | 44.101 | 57.710 | 105.893 | 0.000 |
| Distribution Pipe | | | | | |
| 400 | ↓ 37.021 | | | 6.595 | |
| 300 | ↑ 279.404 | | | 2.244 | |
| 250 | ↓ 1.812 | | | 0.351 | |
| 200 | ↓ 125.048 | | | 1.656 | |
| 150 | ↑ 146.888 | | | 0.112 | |
| 100 | ↑ 10.399 | | | 0.623 | |
| 50 | 0.048 | | | 0.057 | |
| Total in Distribution Pipe (km.) | 600.620 | 0.00 | 0.00 | 11.638 | 0.00 |
| Total in Distribution System (km.) | 2,296.291 | 44.101 | 57.710 | 117.531 | 47.786 |

* Length of pipes and equipment excluding the length of service pipes (Size 1/2-3 inches)

| | | | |
|-------------------------------------|--------|-----------------------------------|---------|
| Number of fire hydrant size 150 mm. | 31,354 | Number of gate valve | 142,286 |
| | | (Distribution Pipe) | |
| Above-ground fire hydrant | 31,330 | Number of gate valve (Trunk Main) | 4,465 |
| Underground fire hydrant | 24 | Number of DMA gate valve | 3,049 |
| | | Total | 149,800 |
| | | Butterfly Valve | 2,723 |



Classification of Pipes

| PC | AC | DI | PVC | GI | HDPE | PB | Total |
|--------|-------------|-------|--------------|-----------|----------|-------------|--------------|
| | | | | | | | 16.949 |
| | | | | | | | 40.846 |
| | | | | | | | 16.286 |
| | | | | | | | 25.193 |
| | | | | | | | 18.152 |
| | | | | | | | 21.252 |
| | | | | | | | 44.954 |
| | | | | | | | 7.289 |
| 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 190.921 |
| | | | | | | | 13.216 |
| | | | | | | | 120.871 |
| 0.354 | | 0.013 | | | | | 166.332 |
| 4.533 | | | | | | | 616.650 |
| 3.074 | | | | | 1.250 | | 53.716 |
| 4.866 | | 0.423 | | | 3.041 | | 499.953 |
| 6.830 | | | | | 1.338 | | 58.470 |
| 4.978 | 3.786 | 2.704 | | | 0.582 | | 175.335 |
| 12.160 | 3.008 | | | | 0.127 | | 71.624 |
| 0.222 | 0.042 | | | | 0.177 | | 37.584 |
| 37.018 | 6.836 | 3.140 | 0.000 | 0.000 | 6.515 | 0.000 | ↑ 1,813.750 |
| | ↓ 103.991 | | ↑ 111.906 | | 0.262 | | 259.775 |
| | ↓ 1,185.834 | | ↑ 4,670.339 | 0.053 | ↑ 49.990 | | 6,187.864 |
| | ↓ 18.271 | | ↑ 1.323 | | | | 21.756 |
| | ↓ 408.078 | | ↑ 4,571.832 | 0.012 | ↑ 83.018 | | 5,189.645 |
| | ↓ 908.204 | | ↑ 9,253.241 | ↓ 22.868 | ↑ 15.430 | | 10,346.744 |
| | ↓ 331.074 | | ↑ 12,785.160 | ↓ 187.222 | ↑ 68.767 | | 13,383.245 |
| | 0.441 | | ↓ 34.799 | ↓ 30.461 | 3.071 | ↓ 1,779.267 | 1,848.144 |
| 0.00 | 2,955.893 | 0.00 | 31,428.601 | 240.616 | 220.538 | 1,779.267 | ↑ 37,237.172 |
| 37.018 | 2,962.729 | 3.140 | 31,428.601 | 240.616 | 227.053 | 1,779.267 | 39,241.843 |



Services of MWA Branch Office

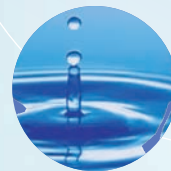
(As of 30 September 2020)

| Branch Office | Served Area | Consumer | New Connection | Produced water for distribution | Distributed Water | | | Length of Pipes |
|-----------------|-----------------|------------------|----------------|---------------------------------|------------------------|------------------------|------------------------|-------------------|
| | | | | | Sold Water | Other Water | Total | |
| | Km ² | Connection | Connection | Million m ³ | Million m ³ | Million m ³ | Million m ³ | Km. |
| Region 1 | 493.70 | 490,485 | 15,910 | 506.78 | 339.56 | 16.46 | 356.02 | 7,840.076 |
| Sukhumvit | 95.01 | 126,655 | 2,727 | 142.22 | 101.84 | 2.15 | 103.99 | 2,193.553 |
| Phra Khanong | 120.34 | 154,493 | 4,611 | 153.80 | 98.72 | 9.59 | 108.31 | 2,431.571 |
| SamutPrakan | 278.35 | 209,337 | 8,572 | 210.76 | 139.00 | 4.72 | 143.72 | 3,214.951 |
| Region 2 | 226.47 | 396,489 | 4,533 | 469.93 | 315.79 | 4.51 | 320.30 | 5,870.406 |
| Phaya Thai | 60.89 | 88,421 | 1,038 | 152.33 | 92.39 | 3.06 | 95.45 | 1,496.778 |
| ThungMahaMek | 31.86 | 71,618 | 564 | 86.02 | 59.26 | 0.12 | 59.38 | 778.914 |
| Mansri | 35.81 | 68,331 | 446 | 122.15 | 79.48 | 0.40 | 79.88 | 863.982 |
| Lat Phrao | 97.91 | 168,119 | 2,485 | 109.43 | 84.66 | 0.93 | 85.59 | 2,730.733 |
| Region 3 | 768.50 | 537,629 | 19,497 | 382.83 | 289.58 | 5.82 | 295.40 | 9,566.470 |
| Prachachuen | 77.87 | 117,152 | 1,960 | 99.67 | 64.33 | 2.08 | 66.41 | 1,717.470 |
| Bang Khen | 82.23 | 129,166 | 3,695 | 74.29 | 54.66 | 0.92 | 55.58 | 1,980.662 |
| Min Buri | 289.79 | 166,267 | 6,497 | 85.10 | 73.32 | 1.21 | 74.53 | 3,180.496 |
| Suvarnabhumi | 318.61 | 125,044 | 7,345 | 123.78 | 97.27 | 1.61 | 98.88 | 2,687.839 |
| Region 4 | 525.22 | 609,902 | 12,692 | 492.72 | 294.18 | 10.18 | 304.36 | 8,484.435 |
| Bangkoknoi | 112.12 | 135,485 | 1,711 | 121.96 | 67.14 | 2.54 | 69.68 | 2,076.026 |
| Taksin | 113.96 | 158,711 | 2,599 | 122.46 | 80.70 | 3.06 | 83.76 | 2,052.475 |
| Phasi Charoen | 129.15 | 172,468 | 3,684 | 126.10 | 76.01 | 1.04 | 77.05 | 1,932.310 |
| Suksawat | 169.98 | 143,238 | 4,698 | 122.20 | 70.33 | 3.54 | 73.87 | 2,423.624 |
| Region 5 | 469.35 | 445,042 | 15,284 | 268.85 | 172.93 | 9.28 | 182.21 | 7,480.460 |
| Nonthaburi | 91.96 | 130,782 | 1,871 | 103.30 | 67.12 | 2.72 | 69.84 | 1,982.128 |
| Bang Bua Thong | 211.19 | 146,649 | 6,178 | 73.47 | 50.06 | 4.36 | 54.42 | 2,673.203 |
| MahaSawat | 166.20 | 167,611 | 7,235 | 92.08 | 55.75 | 2.20 | 57.95 | 2,825.129 |
| Total | 2,483.24 | 2,479,547 | 67,916 | 2,121.12 | 1,412.04 | 46.25 | 1,458.29 | 39,241.843 |

Activities in the fiscal year 2020



MWA Academic Festival 2020



Stakeholders Day





MWA Plumber for People Project




MWA WATER HEROES




Demand Side Management (DSM) Project





 The 3rd year, “Baworn” Project
(Houses, Temples, Schools)



 Pineapple Eye Project





MWA Consumer Meeting Activity



Business Intelligence Analyst Bootcamp, Class 2





School Water Supply System
Project, 6th year



Red Cross Fair 2019



Good Corporate Governance

CHANGE
FOR BETTER
CARE



Corporate Governance Policy

MWA Board of Directors continuously adopts the corporate governance principles and determines clear MWA Good Governance Policy since 2006 which is in accordance with the principles and guidelines for corporate governance in state-owned enterprises in 2019 and Good Corporate Governance rules of the Stock Exchange of Thailand, and MWA Good Governance Policy handbook has been disseminated since 2012 with the latest revision in 2020 in e-book on website and Application My@mwa of the organization as the main guidelines to enhance effectiveness of the management system in compliance with the 20-year national strategies (2018-2037), the 12th Economic and Social Development Plan (2017-2021), National Strategic Plan on Anti-corruption, Phase 3 (2017-2021), and Strategic Plan of Ministry of Interior (2017-2021), including the government policies by adhering to morality, ethics, and social and environmental responsibility, which contributes to sustainable and growth of the organization, as well as driving the operation to achieve the corporate vision “To be a high-performance water supply organization with excellent corporate governance and reach international standard” and the national strategic vision “Thailand is stable, prosperous, sustainable as a developed country by development under Sufficiency Economy Philosophy”.

Review of the compliance with the rules and guidelines on corporate governance

MWA has made the corporate governance manual by adhering to and placing importance on the corporate governance principles to ensure effectiveness, integrity, transparency, verifiability of the operations and fairness to all groups of stakeholders which is the key foundation of development to become sustainable organization. Therefore, to ensure that the above rules and guidelines conform to the change of environment, MWA has reviewed the content of the corporate governance manual of MWA which is the compass for determining the framework of good practices of the Board of Director, sub-committee, executives, and employees of MWA. Such review and revision have already been approved by the Corporate Good Governance (CG) and Corporate Social Responsibility (CSR) Subcommittee and MWA Board of Directors. Upon the revision, the description of definitions was changed to align with the indicators of vision and the new assessment system for state-owned enterprises. The content of MWA Good Governance was also adjusted to align with the Rules and Guidelines for Corporate Governance in State-owned Enterprises, B.E. 2562 (2019) and Guidelines for Practice of State Enterprise Policy Office. Also, regarding the code of conduct and ethics of operation of MWA, as Section 6(3) of Ethical Standard Act, B.E. 2562 (2019) indicates that State Enterprise Policy Office (SEPO) shall make the code of conduct for executives and employees of state-owned enterprises, by virtue of the Transitional Provision, Section 22, it is stated that any code of conducts, rules, regulations, or criteria regarding the ethics of government officials which have been effective prior to the effective of this Act shall remain effective to the extent of not conflicting with this Act until the code of conduct or rules related to the code of conduct hereunder are issued. Therefore, the existing code of conduct and ethics of MWA shall remain valid until further clarification.



MWA Corporate Governance

MWA Corporate Governance consists of 6 principles which are the main basis of management and operation by creating stability of the organization and fairly treating stakeholders as follows:

1

The Rule of Law

Establishing rules and regulations which are fairly applied to all parties without double standards, ensuring compliance with the rules and regulations and timeframe for practice to prevent illegal benefit seeking, establishing practices which respect the rights and freedom, and updating the rules and regulations to align with the situation.

2

Virtue

Adhering to the integrity in performing duties to be the role model and encouraging people to develop themselves to create Thai society to be the society of integrity, sincerity, patience, discipline, and work honestly without supporting corruption and collaborating to prevent corruption in the organization.

3

Transparency

Transparency in management which is verifiable in all aspects such as having the clear and disclosable work process, having the auditable process, disclosing information which is useful for the public in straightforward, correct, transparent, and timely manner.

4

Participation

Giving opportunities to employees to allow them to participate in administration and management regarding suggestions and decisions on various matters, including allocation of resources of the organization which affect the operations, employees, and owners, by giving information, welcoming opinions, providing consultations, taking part in planning and practicing, as well as controlling from stakeholders.

5

Accountability

Being aware of the rights and duties, responsibilities, care, being active in solving problems, giving opportunities and being ready for inspection, conducting assessment that reflects liabilities of stakeholders, as well as accepting the consequences of their performance and operation.

6

Efficiency&Effectiveness

Efficient and effective management, utilization of resources for the utmost benefit of the public, creating quality products and services for competitiveness, maintain society and environment for sustainability, determining key performance indicators, and establishing organizations or persons who are independent and acceptable by the society to conduct the assessment.

MWA emphasizes the operation in accordance with the corporate governance and international standards and focuses on effective anti-corruption. MWA Board of Directors places importance on good governance and anti-corruption. For example, MWA Board of Directors, MWA Sub-committees, the Governor, the management at all levels and all employees express their intention to practice “MWA - Transparency, Accountability, Anti-Corruption” continuously for 5 years to affirm the aim of management with integrity, honesty, transparency, and verifiability in all processes. Moreover, MWA Corporate Governance Policy has been determined, which covers various aspects such as No Gift Policy, B.E. 2563 (2020), Policy on Integration of Governance Risk and Compliance (GRC), Policy and Guidelines on Fair Competition, Policy on Sustainable Development of MWA, Internal Control Policy, MWA CSR POLICY, MWA Promotion of Creativity and Innovation Management Policy, and MWA Knowledge Management Policy. Also, MWA Corporate Governance Council was established, and MWA is the first state-owned enterprise to establish this council to encourage the personnel to take part in preventing the organizational benefits and create immune for the organization without internal or external interference to ensure that MWA is the sustainably transparent organization without corruption. There is MWA Anti-corruption Operation Center, which operates anti-corruption and misconduct of MWA in compliance with the national strategies on anti-corruption and respond to the government policy on promotion of good governance in official administration to create the network steering the policies and measures together with Anti-corruption Operation Center of Ministry of Interior, located at Information Center, 1st floor, Headquarters, Metropolitan Waterworks Authority. Anti-corruption and misconduct issues can be filed through complaint filing channels, telephone, fax, internet and intranet, and QR Code.

MWA
Change for Better CARE

MWA Corporate Governance Operation

MWA focuses on operations with corporate governance in accordance with the 5th Corporate Plan of MWA (2020-2022). Corporate governance operations are included in Strategy 3 - Sustainable Partnership. The corporate vision has also been determined as “To be a high-performance water supply organization with excellent corporate governance and reach international standard”. MWA places importance on promoting corporate governance because it is the key factor in driving the missions to achieve the vision and corporate governance’s vision indicators stated that “In 2022, MWA must obtain ITA score higher than 90 percent or must be listed in the first 8 ranks of the state-owned enterprises”. For this reason, corporate governance master plan for the budget year 2018-2022 was made and transferred to the Action Plan for the year 2020, which can be divided into 4 plans and 14 activities as follows:

Plan 1 : Develop knowledge of corporate governance and anti-corruption for success. Activities under this plan emphasize communication for giving knowledge to executives and employees, as well as developing communication within and outside the organization by focusing on creating understanding of MWA ethics and code of conduct, reducing of the use of discretion and adjustment of digital system thinking project, Integrity and Transparency Assessment (ITA) and MWA Anti-corruption Operation Center through various media such as e-Saraban, intranet, internet, public address system, poster, and social media. In addition, e-Learning was added and communication is assessed by pre-post test.

Plan 2 : Create mechanisms, corporate governance and anti-corruption plan for sustainability. This plan emphasizes the creation of mechanisms with activities in the 5 main projects, which are 1. MWA Corporate Governance Council Promotion Project for sustainability. Create new mechanisms of communication by assigning members of the council as representatives to disseminate knowledge and improve communication on corporate governance to employees, as well as being the intermediary in accepting suggestions from colleagues before submitting them to MWA executives, 2. Assessment of Anti-corruption Risk in the Organization. Workshops on Assessment of Anti-corruption Risk in the Organization was held, and Anti-corruption risk management plan was made under the topic of “The replacement of meters and equipment at the stage of disbursement of meters and equipment”, 3. Reduction of the use of discretion and adjustment of digital system thinking project to create understanding between analog and digital system thinking to employees so that employees can clearly separate personal interests from public interests, leading to reduction of corruption. 4. Adoption of morality in operation to promote it in operation of MWA employees. 5. Feasibility study of using electronic time attendance record at MWA to receive feedback from MWA personnel on the issues related to time attendance record. Those suggestions will be used for improvement and development of related operations.

Plan 3 : Promote corporate governance and anti-corruption to stakeholders. All executives and employees have announced their stance in complying with the Role Model Project of the top management. The signing ceremony “MWA-Transparency, Accountability, Anti-Corruption” at the levels of MWA Board of Directors and executives. The signing was also expanded to employees of all divisions, and all stakeholders were given opportunities to give feedback through Stakeholder’s Day activities. MWA Anti-corruption Operation Center have been operated to supervise code of conduct promotion and ensure effectiveness of anti-corruption and misconduct activities of MWA. Moreover, mechanisms to promote merits of personnel through merit record project have been created by conferring honorable certificates to employees and contract workers who obtained praises on monthly basis.

Plan 4 : Improving corporate governance to the leading level of the country with international standard by participating in Integrity and Transparency Assessment (ITA) for the budget year 2020. This project received full collaboration from affiliated divisions in performing their duties with transparency and governance. Therefore, ITA score of MWA in 2020 was 92.21 which was the 12th in rank for state-owned enterprises. Also, to ensure that MWA operations are up to date and in accordance with international standards, MWA corporate governance manual for the budget year 2020 was reviewed.

With the strong determination to operate corporate governance activities of MWA people, we have fully driven the organization to achieve the goal of corporate governance vision **“To be the national leading organization with corporate governance at the international standard”** and the corporate vision **“To be a high-performance water supply organization with excellent corporate governance and reach international standard”** in stable and sustainable manner.

Remuneration of the Governor and Top Executives

- MWA Governor is recruited from nomination. The employment contract term is up to 4 years, and the remuneration is as determined by MWA Board of Directors based on knowledge, ability, duties and responsibilities, and corporate payment ability within the determined scope of remuneration rate.
- Remuneration of the top executives (deputy governors and equivalents) shall be in accordance with the account of wage structure of state-owned enterprise employee (53 levels). In addition, there are monetary and non-monetary remunerations, as well as other welfare under MWA Rules.

Unit: Million Baht

| Description | 2020 | 2019 | 2018 | Differences between 2020-2019 Increase (Decrease) | |
|--|-------|-------|-------|--|------------|
| | | | | Million Baht | Percentage |
| Remuneration of the Governor | 4.31 | 4.54 | 4.29 | (0.23) | (5.07) |
| Remuneration of the Deputy Governors and Equivalents | 22.54 | 25.60 | 23.37 | (3.06) | (11.95) |
| Total | 26.85 | 30.14 | 27.66 | (3.29) | (10.92) |

Structure of MWA Board of Directors

Pursuant to Standard Qualifications of State Enterprise Directors and Officials Act, B.E. 2518 (1975), it is stated that the state enterprise directors consist of Chairman and at 9 to 13 other directors, and governor, who are directors by position. MWA Board of Directors shall be appointed by the Council of Ministers, having the term of office for 3 years each (In case of resignation of any director, a replacement shall be appointed and have the term of office equivalent to the term of the previous director.)

The current MWA Board of Directors consists of 15 members (as at 31 December 2020)

- 7 members from directors' pool (including Chairman and Governor)
- 12 independent directors

All of the directors have knowledge and experience which are useful for MWA and have a variety of professions, including engineering, law, business administration, political science, information technology as required by Metropolitan Waterworks Authority Act, B.E. 2510 (1967) and Corporate Governance principles.

Supervision of MWA Board of Directors and Executives

Pursuant to Metropolitan Waterworks Authority Act, B.E. 2510 (1967), as well as the Corporate Governance principles, duties and responsibilities are separated between MWA Board of Directors and the management. MWA Board of Directors are responsible for determining the policies and supervise MWA business, as well as monitoring operations and assessing the Governor's performance. On the other hand, the governor is responsible for managing and controlling MWA business to ensure compliance with the law, rules and policies determined by Board of Directors. The report must also be submitted to the Board of Directors.

Meeting

MWA Board of Directors schedules the meeting plan for the whole calendar year in advance. The meeting shall be held at least once a month and special or extra meetings may be convened as deemed appropriate. Office of MWA Board of Directors shall act as Secretary to send out the invitations, meeting agendas, and meeting documents. In the budget year 2020, 11 regular meetings were held.

(Details of the meetings of each director are shown on page 104-105 of the annual report.)

Workshop and seminar workshops with the executives are also held to determine the strategic operations and MWA operation plans in the future.

MWA Board of Directors receives the meeting agendas and meeting documents approximately 7 days in advance, so they have enough time to study before the meeting.

In each Board of Directors Meeting, directors may express their opinions widely and independently. If any director has interest in the matter being discussed, he/she shall leave the meeting room until the matter is settled. For example, in performance appraisal of the Governor, the Governor shall leave the meeting room. Minutes of meeting are recorded, which contain opinions/notices in writing. The approved minutes of meeting shall be kept for examination of directors and relevant persons.

In addition, MWA Board of Directors may invite the deputy governors to attend the meeting to provide useful information for consideration of the Board of Directors and to accept the policies directly so that they can implement the policies correctly and promptly, except for the meeting on certain agendas that are limited to the Board of Directors, to ensure independence.

Appointment of Committees /Sub-committees

In the year 2020, MWA Board of Directors appointed 12 committees/sub-committees to screen important processes. Details of the components, scope of duties and responsibilities of each committee/sub-committee are shown on pages 93-103 of the annual report. Furthermore, the key sub-committees have issued the charters as the guidelines for performance of their duties and responsibilities in accordance with the Corporate Governance principles.

Remunerations of MWA Board of Directors/ Committees/Sub-committees appointed by MWA Board of Directors

Remunerations and meeting allowances are in accordance with the resolution of the Council of Ministers dated 24 April 2019, except the Audit Committee's remunerations which shall be in accordance with the Rule of Ministry of Finance on Audit Committee and Internal Control Unit of State-owned Enterprises, B.E. 2555 (2012).

1. Remuneration / Meeting Allowance

1.1 In case of MWA Board of Directors, directors shall receive the monthly remuneration and meeting allowance provided that MWA Board of Directors shall be responsible for income tax payment as follows:

- Directors receiving the monthly remuneration not exceeding 10,000 Baht per month, in case of holding the position for less than a full month, remuneration shall be paid in proportion of the actual time of office holding.

- Chairman shall receive the monthly remuneration at the rate twice of the director's monthly remuneration (20,000 Baht per month).

- Directors shall receive the meeting allowance once a month at the rate not exceeding 20,000 Baht per person per month and not exceeding once a month. Only directors who attend the meeting shall receive the meeting allowance. Chairman of the meeting shall receive additional allowance at the rate of 25 percent of the director's allowance. If necessary, the meeting allowance may be paid more than once a month but not exceeding 15 times a year.

1.2 MWA committees and other committees who are not the state-owned enterprise personnel and appointed as the members of small committees/sub-committees/ working group shall receive the meeting allowance for each meeting attended at the same rate of not exceeding 0.5 time of the meeting allowance of the state-owned enterprise directors, totally not exceeding 2 committees, only once a month per each committee. Chairman of the meeting shall receive additional allowance at the rate of 25 percent of the director's allowance unless otherwise indicated by the law, rules or resolution of Council of the Ministers. If such director is the state-owned enterprise personnel and the meeting is considered as the duty of such personnel, the personnel shall not receive the meeting allowance since it is the normal duty performance.

1.3 MWA Audit Committee shall receive the remuneration as MWA Audit Committee at the lump sum rate on monthly basis equivalent to the meeting allowance of MWA Board of Directors. Chairman of the Audit Committee shall receive additional remuneration at the rate of 25 percent of the normal remuneration. If there is no meeting in any month, remuneration shall also be paid. If any director holds the position for less than a full month, remuneration shall be paid in proportion of the period of his/her office.

1.4 MWA Relations Affairs Committee is the legal committee under the law on relations affairs having the duty to support the work of State Enterprise Director. They shall receive the meeting allowance once a month at the rate of 0.5 time of the meeting allowance of the State Enterprise Director. Only the directors who attend the meeting shall receive the meeting allowance. In case of the directors by position cannot attend in person but assign other persons to attend on their behalf, the letter or evidence of authorization shall be clearly made. The proxies shall receive the meeting allowance.

1.5 Directors shall have at least 75 percent of the total committee meetings arranged in the year.

2. Bonus

Chairman and Directors shall be entitled to receive the bonus as determined by Council of the Ministers.

Allocation of the bonus shall be made when State Audit Office has already performed the audit and certified the financial statements. Also, the bonus allocation shall be approved by State Enterprise Policy Office (SEPO), so MWA can request for allocation of the net profits for bonus payout to the committee under the following conditions:

2.1 Rate of bonus payout for State Enterprise Directors shall be considered based on the profits for bonus allocation as follows:

| Profits for allocation of bonus (million Baht) | Bonus (Baht/person) |
|--|--|
| Not exceeding 100 | 3 percent of the profits For allocation of bonus but not exceeding 60,000 Baht per person |
| More than 100 to 300 | 65,000 |
| More than 300 to 500 | 70,000 |
| More than 500 to 700 | 75,000 |
| More than 700 to 1,000 | 80,000 |
| More than 1,000 to 2,000 | 90,000 |
| More than 2,000 to 5,000 | 100,000 |
| More than 5,000 to 8,000 | 110,000 |
| More than 8,000 to 11,000 | 120,000 |
| More than 11,000 to 13,000 | 130,000 |
| Increased profits at each range 2,000 | Additional payment of 10,000 |

Chairman and Vice Chairman shall receive more bonus than directors by 25 percent and 12.50 percent, respectively.

2.2 State-owned enterprises which allocate bonus to employees when yielding profits shall pay bonus to directors according to the assessment results as follows:

| Assessment results (points) | Amount of bonus received by directors (Baht/person/year) |
|-----------------------------|--|
| 5.00 (Excellent) | Base + 100% of the base |
| 4.50 | Base + 75% of the base |
| 4.00 (Very Good) | Base + 50% of the base |
| 3.50 | Base + 25% of the base |
| 3.00 (Good) | Base |
| 2.50 | Base - 25% of the base |
| 2.00 (Fair) | Base - 50% of the base |
| 1.50 | No bonus |
| 1.00 (Need improvement) | No bonus |

Criteria

1. Bonus shall be paid to directors when MWA has sent the net profits which are classified as national income to Ministry of Finance or upon approval of SEPO to pay in installments in the fixed period only.

2. Method of calculation of the net profits for bonus allocation shall be as determined by SEPO, Ministry of Finance.

3. Directors who receive bonus shall be responsible for tax payment. In the fiscal year, if the director is absent from the meeting for more than 3 months, the bonus shall be paid under the following conditions:

- Absent from the meeting for more than 3 months but not exceeding 6 months, 25% of the bonus shall be reduced.

- Absent from the meeting for more than 6 months but not exceeding 9 months, 50% of the bonus shall be reduced.

- Absent from the meeting for more than 9 months or more, 75% of the bonus shall be reduced.

Conflict of interest management

MWA Board of Directors places importance on conflict of interest of relevant parties wisely, transparently and verifiably by determining the rules and procedures related to conflict of interest in the Corporate Governance Policy. MWA Board of Directors, executives and all employees are required to disclose information to prevent conflict between personal and MWA interest, directly or indirectly. Reports on conflict of interest shall be made in the determined form to be submitted to the superiors in the chain of command at the end of each budget year and during the budget year. In case of any operation which may be considered as conflicts of interest, such operation shall be reported to the superior. The Internal Audit Office shall summarize the report on conflict of interest of the entire organization. In the budget year 2020, there were 4,419 cases of conflicts of interest of MWA Board of Directors, sub-committees, and contract workers reported and 4,419 cases were did not have the conflicts of interest.

Connected transaction Policy

MWA has determined the connected transaction policy as part of conflict of interest policy which MWA Board of Directors, executives and personnel shall observe and comply with to avoid making any transactions connected or possibly connected with MWA that lead to conflict of interest.

Connected transactions may be the transactions causing the conflict of interest and leading to transfer of the corporate benefits. In MWA procurement process, direct and indirect interests between bidders who are natural persons and other juristic persons shall be examined in terms of administrative relations, capital relations or cross-relations between administration and capital.

For the future connected transactions, MWA still adheres to and strictly complies with Government Procurement and Inventory Management Act, B.E. 2560 (2017) and Rule of Ministry of Finance on Procurement and Inventory Management, B.E. 2560 (2017), as well as other related laws and regulations.



Information about the key stocks held by MWA directors and related to MWA and report on MWA related-party transactions

MWA has made the report on disclosure of stocks (shares) and related-party transactions for MWA Board of Directors to report to the public. The information as at 31 December 2020 is as follows:

| Director Names | Holding of stocks (shares) in the juristic person related to the main business | Related juristic persons | Holding positions of directors/senior executives in other state-owned enterprises/juristic persons | | |
|---|--|--------------------------|--|----------|-----------|
| | | | Chairman | Director | Executive |
| Chairman | | | | | |
| 1. Mr. Nisit Jansomwong | - | - | - | A | B |
| Directors and Independent Directors | | | | | |
| 2. General Dr. Singthong Meethong | - | - | - | - | - |
| 3. Mr. Anuchit Trakulmututa | - | - | - | - | - |
| 4. Mr. Krisada Kaweeyarn | - | - | - | C | D |
| 5. Dr. Chaitat Saetang | - | - | - | E | E |
| 6. Mr. Varayuth Yenbamroong | - | - | - | F | F |
| 7. Mr. Prasit Suebchana | - | - | - | G | - |
| 8. Dr. Nattakit Tangpoonsinthana | - | - | - | H | I |
| 9. M.R. Sasiprin Chandratat | - | - | - | - | J |
| 10. Mr. Roya Juntaratana | - | - | - | K | L |
| 11. Mr. Sanya Saengpumpong | - | - | - | - | M |
| 12. Mr. Nitat Maneesilasan | - | - | - | N | O |
| 13. Mr. Werawat Yomchinda | - | - | - | - | P |
| Directors (representative from Ministry of Finance) | | | | | |
| 14. Mr. Chamroen Phothiyod | - | - | - | Q | R |
| Directors and Governor | | | | | |
| 15. Mr. Kavee Areekul | - | - | - | - | - |

- A : Vice Chairman of Thailand Post Distribution Company Limited
The Law Reform in Urgent Stage Commission
- B : Director General of Department of Lands
- C : Chief Executive Officer of Ploenchit Asset Management Company Limited
Chief Executive Officer of Altus Capital Partners (Thailand) Company Limited
- D : Managing Director of Precious Wood Industry Company Limited
- E : Chief Executive Officer and Director of Chaigyarn Consulting Company Limited
- F : Chief Executive Officer and Director of Mu Space and Advanced Technology Company Limited
- G : Director of Rubber Authority of Thailand
- H : Director of Siam Rajathanee Public Company Limited
- I : Senior Executive Vice President of Central Group
Executive Vice President in Marketing Line, Central Pattana Public Company Limited
- J : Chief Executive Officer of Ploenchit Capital Company Limited
- K : Director of EGAT International Company Limited
- L : Inspector General of Ministry of Energy, Office of the Permanent Secretary, Ministry of Energy
- M : Inspector General of Ministry of Agriculture and Cooperatives, Office of the Permanent Secretary, Ministry of Agriculture and Cooperatives
- N : Director of Third Dragon Company Limited
Director of Armando Software Company Limited
Director of Happy Serve Company Limited
Director of Little Hill Place Company Limited
- O : Managing Director of Openserve Company Limited

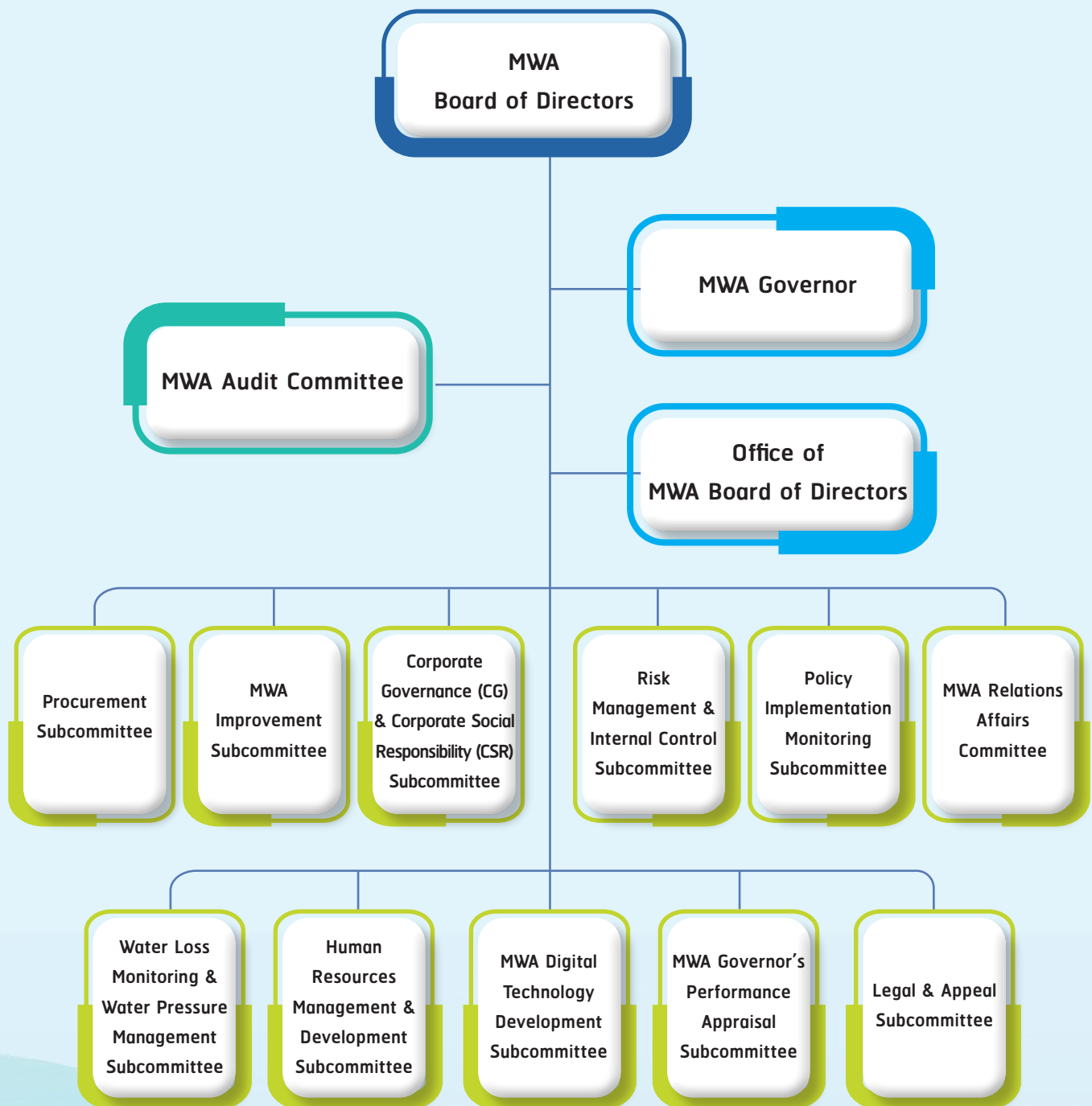
- P : Chief Executive Officer of Maxima Studio Company Limited
- Q : Director of Sports Authority of Thailand
Director of Bangkok Mass Transit Authority
Director of Anti Corruption Foundation
- R : Deputy Permanent Secretary of Ministry of Finance

Remark: MWA does not have any subsidiary/affiliated company.

Definitions:

- Holding of stocks (shares) in the juristic person related to the main business** means holding of stocks (shares) of MWA directors in the juristic person related to the main business of MWA in the proportion of exceeding 10 percent of total shares with the voting rights.
- Related juristic persons** means the juristic persons having or expected to have any transactions related to MWA in which the spouses/children/minor children of MWA directors have any of the controlling power e.g., holding more than 50 percent of the total shares with voting rights or having the power to control the majority votes in the shareholders' meeting or having the power to control appointment or dismissal of at least half of all directors.
- Holding positions of directors/senior executives in other state-owned enterprises/juristic persons** means other state-owned enterprises/juristic persons in which MWA directors hold the positions of directors or senior executives (see the list of other state-owned enterprises/juristic persons in which MWA directors hold the positions on Pages 24-35 of the Annual Report.)

MWA Board of Directors Structure



Appointment of Committees & Subcommittees

(as at 31 December 2020)

1. Procurement Subcommittee

| | |
|---|---------------------|
| 1. Mr. Prasit Suebchana | Chairman |
| 2. Mr. Roya Juntaratana | Vice Chairman |
| 3. Mr. Trirong Khanom | Member |
| 4. Mr. Areesak Streanraparpanyut | Member |
| 5. Mr. Napong Sirikantayakul | Member |
| 6. Mr. Krid Thammasiri | Member |
| 7. Mr. Pasuk Choeychom | Member |
| 8. Deputy Governor (Administration) | Member |
| 9. Deputy Governor (Engineering and Construction) | Member |
| 10. Assistant Governor (Project Management Office) | Secretary |
| 11. Director of Project Management Department | Assistant Secretary |
| 12. Director of Procurement and Supplies Department | Assistant Secretary |

Responsible for screening the proposal for procurement of supplies and hiring, hiring of consultant and hiring for design and supervision of the construction within the scope of powers of MWA Board of Directors and consider the revision of contracts or agreements for procurement, exemption or reduction of fines for the contract parties and extension of work period under the contracts or agreements within the scope of powers of MWA Board of Directors prior to proposing to MWA Board of Directors; follow up and press the procurement and manage the contracts as deemed appropriate; screen and revise the drafts of law, regulations and rules related to MWA procurement to suit the current operations prior to proposing to MWA Board of Directors and to Ministry of Finance; give consultations and/or suggestions on solving problems of procurement/contract management within the scope of powers of MWA Board of Directors.



2. MWA Improvement Subcommittee

| | |
|---|---------------------|
| 1. Mr. Krisada Kaweeyarn | Chairman |
| 2. M.R. Sasiprin Chandratat | Vice Chairman |
| 3. Mr. Nitat Maneesilasan | Member |
| 4. Mr. Nattakit Tangpoonsinthana | Member |
| 5. Governor | Member |
| 6. Lt. Gen. Kittipan Chupiputt | Member |
| 7. Mr. Vararatana Jutimitta | Member |
| 8. The Representatives from Office of the National Economic and Social Development Council (Ms. Soontraluck Petchkoon, Ms. Ratchanee Saelim, Ms.Theeranuch Sinsirithawon) | Member |
| 9. Mr. Noon Saiong | Member |
| 10. Mr. Supich Jurukul | Member |
| 11. Mr. Chira Wongburana | Member |
| 12. Deputy Governor (Planning and Development) | Member |
| 13. Chairman of Labour Union of MWA | Member |
| 14. Assistant Governor (Planning and Development) | Secretary |
| 15. Director of Policy and Strategy Department | Assistant Secretary |

Be responsible for screening the corporate plan and annual action plan, as well as considering the budget to ensure conformity with the operation plan; consider waterworks business or water system ranging from raw water sourcing/ production/transmission, sale, and service; give consultations and/or suggestions on management, and investment to the management and MWA Board of Directors to become the high-performance organization; consider and advise about financial management, operating results, and financial status to create financial stability, as well as ensuring that the spending of investment budget is in accordance with the designated action plan; provide consultations and recommendations related to waterworks to expand extra income sources for MWA; consider the methods and rules to ensure follow-up and assess MWA operation regularly to achieve the corporate objectives and goals; consider revising the rules and work procedures for appropriateness and effectiveness of work; report the operating results to MWA Board of Directors for acknowledgement on monthly basis.



3. Corporate Governance (CG) and Corporate Social Responsibility (CSR) Subcommittee

| | |
|---|---------------------|
| 1. Mr. Nitat Maneesilasan | Chairman |
| 2. Mr. Varayuth Yenbamroong | Vice Chairman |
| 3. Governor | Member |
| 4. ACM. Charnrit Plikarnon | Member |
| 5. Mr. Sakkasem Niyomvanich | Member |
| 6. Mr. Pradit Ruangdit | Member |
| 7. Mr. Apichat Sakdiset | Member |
| 8. Mrs. Rachadaporn Kaewsanit | Member |
| 9. Mr. Visut Bootsripoom | Member |
| 10. Assoc.Prof. Arjin Numsomran | Member |
| 11. Pol.Capt. Chotwarit Chatchaiyakit | Member |
| 12. Mr. Sukich Udindu | Member |
| 13. Assistant Governor (Office of MWA Board of Directors) | Member |
| 14. Chairman of Labour Union of MWA | Member |
| 15. Assistant Governor (Office of Governor) | Secretary |
| 16. Director of Corporate Governance Department | Assistant Secretary |

Corporate Governance (CG) and Corporate Social Responsibility (CSR) Subcommittee is responsible for screening CG Policy Statement, ensuring strict compliance with the policies, and reviewing the policies to make sure that they are in accordance with the changes and international practices, considering the long-term and annual action plan on good governance, considering and approving the action plan on Corporate Governance (CG) and Corporate Social Responsibility (CSR), supervising, overseeing, monitoring, and giving suggestions on the operation to ensure compliance with the corporate governance principles, and reporting the results to MWA Board of Directors at least quarterly, determining the policies and strategies on proactive MWA public relations with all stakeholders, considering and approving the annual action plan on public relations prior to proposing it to MWA Board of Directors, supervising, overseeing, monitoring, and giving suggestions on public relations operations to build positive image for MWA to be acceptable and reliable for the public and reporting the results to MWA Board of Directors at least quarterly, determining the guidelines for Thai Waterworks Museum management which depicts MWA history from the past to the present and the future possibility, as well as allocating the budget to ensure success of the operations.



4. Risk Management and Internal Control Subcommittee

| | |
|---|---------------------|
| 1. General Singthong Meethong | Chairman |
| 2. M.R. Sasiprin Chandratat | Vice Chairman |
| 3. Mr. Nitat Maneesilasan | Member |
| 4. Governor | Member |
| 5. Mr. Surapol Arunmas | Member |
| 6. Mr. Kreecha Kirdsriphan | Member |
| 7. Lt. Gen. Kuntapon Aukkaranuluk | Member |
| 8. Lt. Gen. Suvit Mahasaksoonthorn | Member |
| 9. Maj. Gen. Banlang Vajrakupta | Member |
| 10. Ms. Kanatwatda Supap | Member |
| 11. Deputy Governor (Planning and Development) | Member |
| 12. Deputy Governor (Water Production and Transmission) | Member |
| 13. Assistant Governor (Planning and Development) | Secretary |
| 14. Director of Risk Management Department | Assistant Secretary |

Risk Management and Internal Control Subcommittee is responsible for giving suggestions and supports to MWA Board of Directors in determining the policy on risk management and internal control, determining risk appetite and risk tolerance, giving suggestions and approval of identification, analysis, and assessment of risks to ensure that all key risks of the organization, ranging from raw water sources to the service provision process are managed sufficiently and appropriately, giving suggestions to create stability and Business Continuity Management (BCM) so that the water supply system is stable enough to deal with any crisis, verifying conformity between strategies and objectives and corporate mission, vision, and core value, key decisions of the management, response to fluctuations which significantly affect the corporate performance or overall risks, response to the incidents deviating from the core value, considering and approving the annual action plan on risk management and action plan on internal control of each fiscal year and proposing it to MWA Board of Directors for approval before the beginning of the new fiscal year, considering the corporate risk management plan and proposing it to MWA Board of Directors for approval before the beginning of the new fiscal year, supervising and monitoring compliance with the policy, action plan and process of risk management and internal control of the management, screening and giving suggestions on incentives and remuneration of the executives by taking account of effectiveness of continuous risk management and internal control and overall integration, screening and auditing risk management report and internal control report and submitting the results to MWA Board of Directors, monitoring the results of risk management and internal control operations for proposal to MWA Audit Committee and MWA Board of Directors, respectively, at least quarterly, screening the report of corporate internal control assessment results and submitting the results to MWA Audit Committee, MWA Board of Directors, and Ministry of Interior, respectively, at least once a year within ninety days from the end date the fiscal year, as well as promoting appropriate culture and communication of risk management and internal control in the organization.



5. MWA Relations Affairs Committee

Mr. Werawat Yomchinda

Chairman

Employer's Representatives:

| | |
|--|--------|
| 1. Deputy Governor (Eastern Services) | Member |
| 2. Deputy Governor (Information Technology) | Member |
| 3. Deputy Governor (Administration) | Member |
| 4. Deputy Governor (Water Production and Transmission) | Member |
| 5. Deputy Governor (Engineering and Construction) | Member |
| 6. Deputy Governor (Western Services) | Member |
| 7. Deputy Governor (Financial) | Member |
| 8. Deputy Governor (Planning and Development) | Member |
| 9. Assistant Governor (Human Resource Management) | Member |

Employee's Representatives:

| | |
|--|-----------|
| 1. Acting Lt. Ruangsin Kotchanin | Member |
| 2. Mr. Supan Srimata | Member |
| 3. Mr. Suchan Tanavirodkul | Member |
| 4. Mr. Noppanan Gunluksar | Member |
| 5. Mr. Paiwong Leelakan | Member |
| 6. Mr. Naris Plukchalee | Member |
| 7. Mr. Kritsana Namwiwatsuk | Member |
| 8. Mr. Praphon Prathomchai | Member |
| 9. Mr. Sakon Boonsuaykwan | Member |
| 10. Director of Welfare and Relations Affairs Department | Secretary |

MWA Relations Affairs Committee has the duties under Section 23 of State Enterprise Labour Relations Act, B.E. 2543 (2000) to consider and approve the enhancement of efficiency of the state-owned enterprises operations, as well as promoting and developing labour relations, seeking harmony and resolving disputes in the state-owned enterprises, considering revision of work rules which will be useful for employer, employees, and state-owned enterprises, seeking consultations for solving problems according to the complaints of employees or labour unions, including the complaints about disciplinary punishments, and considering improvement of employment condition.



6. MWA Audit Committee

| | |
|---|-----------|
| 1. Mr. Sanya Saengpumpong | Chairman |
| 2. Mr. Krisada Kaweeyarn | Member |
| 3. Mr. Chamroen Phothiyod | Member |
| 4. Assistant Governor (Internal Audit Office) | Secretary |

MWA Audit Committee is responsible for auditing efficiency and effectiveness of the internal control process, risk management process, and corporate governance process, auditing to ensure that MWA has correct and reliable financial reports, auditing and considering approval of the reports on corporate operations to ensure that MWA has good process and responsible divisions manage their jobs effectively in accordance with the criteria for Enablers assessment, auditing to ensure that MWA has the good internal audit system and considering independence of the Internal Audit Office, considering appointment, transfer, withdrawal, promotion, and appraisal of performance of Internal Audit Office staffs, considering appropriateness and sufficiency of the personnel resources and other resources of the Internal Audit Office for the MWA Governor to discuss with the auditor regarding the scope and guidelines for auditing the performance and issues detected in the financial statements, and probably giving suggestions on the audit or verification of any transactions as deemed necessary, attending specific meetings with the auditor to discuss the issues that require discussion without the presence of executives or irrelevant persons on the meetings at least once a year, discussing with the executives to ensure that Audit Committee understands the business, risk management and internal control of MWA and having official meeting at least once a year, auditing MWA's operations to ensure compliance with the laws, rules, regulations, orders, notifications, practices, or criteria related to MWA's operations, auditing to ensure that the code of conduct for executives, employees and contract workers has been made in writing and all executives and employees have been informed and communicated about the importance of, ethics, code of conduct and good practices, considering related-party transactions or any transactions which may cause conflict of interest or corruption affecting MWA's operation, as well as reporting the audit of transactions which may cause conflict of interest and related reports, reporting the operating results related to the internal audit of the Audit Committee to be proposed to MWA Board of Directors and sending copies to Ministry of Interior and Ministry of Finance, preparing and reviewing the operation manual for Audit Committee to be used as the guidelines for work in conformity with the Charter of Audit Committee at least once a year.



7. Policy Implementation Monitoring Subcommittee

| | |
|---|---------------------|
| 1. M.R. Sasiprin Chandratat | Chairman |
| 2. Mr. Sanya Saengpumpong | Vice Chairman |
| 3. General Singthong Meethong | Member |
| 4. Mr. Vimol Malila | Member |
| 5. Mr. Jaran Saowakul | Member |
| 6. Mr. Wichien Anukul | Member |
| 7. Assoc. Prof. Thira Jearsiripongkul | Member |
| 8. Mrs. Sranya Sinamphet | Member |
| 9. Deputy Governor (Administration) | Member |
| 10. Deputy Governor (Eastern Services) | Member |
| 11. Deputy Governor (Western Services) | Member |
| 12. Deputy Governor (Water Production and Transmission) | Member |
| 13. Deputy Governor (Engineering and Construction) | Member |
| 14. Deputy Governor (Information Technology) | Member |
| 15. Ms. Kornvilai Yeawyasat | Secretary |
| MWA Expert Level 9 | |
| 16. Director of Waterworks Improvement Project Department | Assistant Secretary |
| 17. Director of MWA Board of Directors Affairs Department | Assistant Secretary |

Policy Implementation Monitoring Subcommittee is responsible for monitoring compliance with the government policies, supervisory ministry, and MWA Board of Directors, following up the Bangkok Water Supply Improvement Project, and reimbursement of investment budget to ensure conformity with the plan for efficiency and effectiveness of the investment budget spending, following up the performance under the resolution of MWA Board of Directors as assigned, as well as reporting the results of performance under the policies to MWA Board of Directors at least once a quarter.



8. Water Loss Monitoring and Water Pressure Management Subcommittee

| | |
|---|---------------------|
| 1. Mr. Anuchit Trakulmututa | Chairman |
| 2. Mr. Werawat Yomchinda | Vice Chairman |
| 3. Mr. Chaitat Saetang | Member |
| 4. Governor | Member |
| 5. Mr. Trirong Khanom | Member |
| 6. The Representative from Department of Public Work, Bangkok Metropolitan Administration (Mr. Chiradeth Karunkitkul) | Member |
| 7. Mr. Daroon Saengchai | Member |
| 8. Mr. Utarn Pichayaporn | Member |
| 9. Mr. Panasin Chungswanant | Member |
| 10. Deputy Governor (Eastern Services) | Member |
| 11. Deputy Governor (Western Services) | Member |
| 12. Deputy Governor (Engineering and Construction) | Member |
| 13. Assistant Governor (Services) | Secretary |
| 14. Director of Water Loss Management Department | Assistant Secretary |

Water Loss Monitoring and Water Pressure Management Subcommittee is responsible for screening the strategies and action plan on management of water loss and water pressure of MWA, considering water pressure management to ensure conformity with water loss management plan, considering and screening performance of water loss and water pressure management plan, considering and giving suggestions on implementation of innovative technology in water loss and water pressure management, inviting entities or persons related to water loss and water pressure management to provide essential information, summarizing all activities to be conducted and proposing them to MWA Board of Directors for approval, supervising, demanding, and monitoring water loss and water pressure management to ensure conformity with the plan and reporting the progress to MWA Board of Directors regularly.



9. Human Resources Management and Development Subcommittee

| | |
|--|---------------------|
| 1. Mr. Roya Juntaratana | Chairman |
| 2. Mr. Anuchit Trakulmututa | Vice Chairman |
| 3. Mr. Nattakit Tangpoonsinthana | Member |
| 4. Governor | Member |
| 5. Mr. Komol Buathong | Member |
| 6. Mr. Chalernsak Panasri | Member |
| 7. Mr. Asawin Chotipanang | Member |
| 8. Ms. Rasa Kanchanasai | Member |
| 9. Deputy Governor (Administration) | Member |
| 10. Assistant Governor (Waterworks Academic Development) | Member |
| 11. Chairman of Labour Union of MWA | Member |
| 12. Assistant Governor (Human resource Management) | Secretary |
| 13. Director of Human Resources Development Department | Assistant Secretary |
| 14. Director of Human Resources Management Department | Assistant Secretary |

Human Resources Management and Development Subcommittee is responsible for screening policies, strategies, goals, master plans, and annual action plans regarding Human Resource Management (HRM) and Human Resource Development (HRD) to ensure the same systematic direction, giving approval of determination of vision, operation direction or policy, as well as target of corporate operation concerning the long-term and short-term knowledge management and long-term and short-term knowledge management plan to be proposed to MWA Board of Directors for approval, screening the policy on promotion of creativity and innovations, strategies, targets, master plans on both long-term and annual innovative management to be proposed to MWA Board of Directors for approval, supporting and promoting research, development, and creation of waterworks innovations to conform with MWA corporate plan and striving for internationality to create value, screening the policy, direction and possibility of management of MWA Waterworks Institute of Thailand to be acceptable and up to the international standard, screening the structure of organization chart and remuneration structure of MWA personnel to be proposed to MWA Board of Directors for approval, giving suggestions on increasing efficiency of human resources management and human resources development, knowledge management and innovative management, supervising and monitoring human resources management and human resources development, knowledge management and innovative management, and reporting the progress to MWA Board of Directors periodically at least once every quarter to ensure achievement of the annual action plan.



10. MWA Digital Technology Development Subcommittee

| | |
|--|---------------------|
| 1. Mr. Chaitat Saetang | Chairman |
| 2. Mr. Varayuth Yenbamroong | Vice Chairman |
| 3. Governor | Member |
| 4. Associate Prof. Pisit Boonsrimuang | Member |
| 5. Mr. Thochchayanut Jeinthanuttkanont | Member |
| 6. Mr. Piyakarn Peerasaksophon | Member |
| 7. Mr. Arnon Tubtiang | Member |
| 8. Mr. Yongyuth Areerat | Member |
| 9. Mr. Prechaporn Suwatnodom | Member |
| 10. Deputy Governor (Western Services) | Member |
| 11. Deputy Governor (Water Production and Transmission) | Member |
| 12. Deputy Governor (Information Technology) | Member |
| 13. Deputy Governor (Engineering and Construction) | Member |
| 14. Assistant Governor (Information Technology) | Secretary |
| 15. Director of Information Technology Strategy Department | Assistant Secretary |

MWA Digital Technology Development Subcommittee is responsible for considering the direction, giving consultations and suggestions on digital technology and related digital technology strategies, promoting corporate governance in terms of digital technology at MWA, supervising, ensuring and supporting implementation of digital technology in the organization, giving consultations and suggestions, reviewing digital action plan which conforms with the changing technology and appropriate for MWA context, as well as monitoring the results of information technology management, giving consultations and suggestions to MWA Board of Directors and the executives in terms of digital technology strategies.



11. MWA Governor's Performance Appraisal Subcommittee

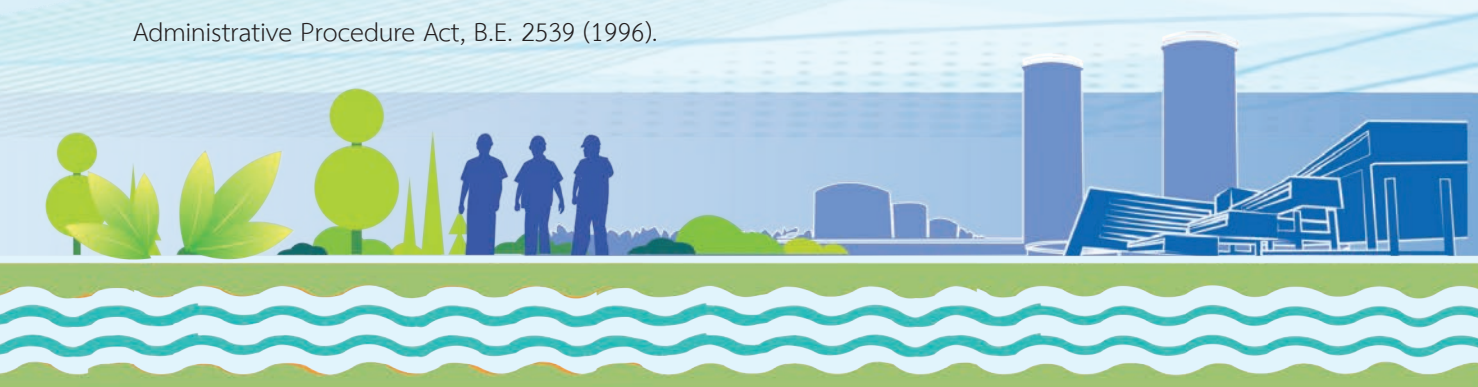
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|--|---------------------|
| 1. Mr. Nattakit Tangpoonsinthana | Chairman |
| 2. Mr. Roya Juntaratana | Vice Chairman |
| 3. Mr. Werawat Yomchinda | Member |
| 4. Assistant Governor (Office of MWA Board of Directors) | Secretary |
| 5. Ms. Nuchnapa Wongmongkhon | Assistant Secretary |
| MWA Expert Level 8 | |

MWA Governor's Performance Appraisal Subcommittee is responsible for screening the action plan of MWA Governor to ensure conformity with the objectives, goals and missions so that MWA Governor can perform in accordance with the strategies and directions of corporate management in various aspects for the highest efficiency and effectiveness before proposing it to MWA Board of Directors for approval, determining Key Performance Indicators (KPIs) and MWA Governor performance appraisal in conformity with the missions before submitting it to MWA Board of Directors for approval, monitoring and appraising MWA Governor performance within the specified period in accordance with the determined appraisal method and KPI before proposing it to MWA Board of Directors for approval.

12. Legal and Appeal Subcommittee

- | | |
|---|---------------------|
| 1. Mr. Chamroen Phothiyod | Chairman |
| 2. Mr. Prasit Suebchana | Vice Chairman |
| 3. Mr. Chartpong Chirabandhu | Member |
| 4. Mr. Komol Buathong | Member |
| 5. Mrs. Saowarot Rimsakorn | Member |
| 6. Mr. Seree Nonthasoot | Member |
| 7. Mr. Krit Khamtawee | Member |
| 8. Director of Legal Department | Secretary |
| 9. Director of Legal Development Division | Assistant Secretary |

Legal and Appeal Subcommittee is responsible for screening and revising drafts of laws, regulations, agreements, and contracts of MWA to be suitable for the current operations, considering feedback related to the laws, contracts, regulations, rules, and orders of MWA in case of any issues or questions which require decision and order, giving feedback on appeal against administrative orders or complaints in accordance with MWA Rule on Personnel Management, B.E. 2543 (2000) and Administrative Procedure Act, B.E. 2539 (1996).



Meetings and Remunerations of Committees and Subcommittees

| No. | Name - Last Name | Position | MWA Board of Directors | MWA Audit Committee | MWA Relations Affairs Committee | Procurement Subcommittee | MWA Improvement Subcommittee | Corporate Governance (CG) and Corporate Social Responsibility (CSR) Subcommittee | Risk Management and Internal Control Subcommittee |
|-----|--|----------|------------------------|---------------------|---------------------------------|--------------------------|------------------------------|--|---|
| | | | 11 times | 6 times | 12 times | 5 times | 7 times | 5 times | 6 times |
| 1 | Mr. Vullop Phringphong | Chairman | 0/0 | | | | | | |
| 2 | Prof. Suwatana Chittaladakorn | Director | 0/0 | | | | | | 0/1 |
| 3 | Asst. Prof. Teekawuth Potapirom | Director | 0/0 | 1/1 | | | | | 1/1 |
| 4 | Mr. Nisit Jansomwong | Director | 0/0 | | | | | | |
| 5 | Mr. Nisit Jansomwong | Chairman | 10/11 | | | | | | |
| 6 | Mr. Wanchai Lawattanatrakul | Director | 11/11 | | | | 7/7 | | |
| 7 | Mr. Nattakit Tangpoonsinthana | Director | 11/11 | | | | 1/7 | 5/5 | |
| 8 | Mr. Chaichana Mitrpant | Director | 8/11 | | 7/7 | | | | |
| 9 | Mr. Thongplew Kongjun | Director | 10/11 | 0/6 | | | | | |
| 10 | Assoc. Prof. Chanin Tinnachote | Director | 11/11 | 1/1 | | | | | |
| 11 | Mr. Chamroen Phothiyod | Director | 11/11 | 5/5 | | | | | |
| 12 | General Singthong Meethong | Director | 10/11 | | 5/5 | | | | 5/5 |
| 13 | Mr. Varayuth Yenbamroong | Director | 11/11 | | | | | | |
| 14 | Mr. Chaitat Saetang | Director | 11/11 | | | | 7/7 | | 5/5 |
| 15 | Mr. Anuchit Trakulmututa | Director | 11/11 | | | | | | |
| 16 | Mr. Prasit Suebchana | Director | 11/11 | | | 4/5 | | | |
| 17 | Mr. Trirong Khanom | Director | 10/10 | | | 5/5 | | | |
| 18 | Mr. Krisada Kaweeyarn | Director | 10/11 | 5/5 | | | | 5/5 | |
| 19 | Mr. Prinya Yamasamit (MWA Governor) | Director | 7/7 | | | | 5/5 | 4/4 | 4/4 |
| 20 | Mrs. Lawan Chatrunchewan (MWA Deputy Governor acting Governor) | Director | 1/1 | | | | 1/1 | | 1/1 |
| 21 | Mr. Kavee Areekul (MWA Governor) | Director | 3/3 | | | | 1/1 | 1/1 | 1/1 |

Remarks:

Resolution of Council of Ministers on Appointment of MWA Board of Directors (14 members) dated 26 September 2017, with the completion of 3-year term on 25 September 2020

Resolution of Council of Ministers on Appointment of MWA Board of Directors dated 15 April 2020 to replace the retired 4 members of Board of Directors

Resolution of Council of Ministers on Appointment of MWA Board of Directors dated 21 April 2020 to replace the retired 5 members of Board of Directors

| | | | |
|--------------------|--|----------|---|
| No. 1 | Mr. Vullop Phringphong | Chairman | retired from the position because of the age of 65 years on 9 October 2019 |
| No. 2 | Prof. Suwatana Chittaladakorn | Director | retired from the position because of the age of 65 years on 29 December 2019 |
| No. 3 | Asst. Prof. Teekawuth Potapirom | Director | retired from the position because of the age of 65 years on 11 October 2019 |
| No. 4 | Mr. Nisit Jansomwong | Director | resigned from the position, effective from the date of his appointment as Chairman |
| | | Chairman | appointed by the resolution of Council of Ministers as Chairman on 21 April 2020 |
| No. 11 - 14 | Resolution of Council of Ministers dated 15 April 2020 | | - monthly remuneration paid for MWA Director since 15 April 2020 |
| No. 15 - 16 and 18 | Resolution of Council of Ministers dated 21 April 2020 | | - monthly remuneration paid for MWA Director since 21 April 2020 |
| No. 17 | Mr. Trirong Khanom | Director | appointed by the resolution of Council of Ministers as MWA Director on 21 April 2020/ Retired from position because of the age of 65 years on 18 September 2020 - monthly remuneration paid for MWA Director between 21 April and 18 September 2020 |

| Policy Implementation Monitoring Subcommittee | Water Loss Monitoring and Water Pressure Management Subcommittee | Human Resources Management and Development Subcommittee | MWA Digital Technology Development Subcommittee | MWA Governor's Performance Appraisal Subcommittee | MWA Governor Nomination Subcommittee | MWA Governor Remuneration Consideration Subcommittee | Meeting Allowance for Members of All Committees | Remuneration for MWA Directors | Annual Bonus for 2020 | Total |
|---|--|---|---|---|--------------------------------------|--|---|--------------------------------|-----------------------|--------------|
| 6 times | 6 times | 6 times | 8 times | 2 times | 4 times | 3 times | | | | |
| | | | | | | | 0.00 | 5,806.45 | 4,158.26 | 9,964.71 |
| | 1/1 | 1/1 | | | | | 22,500.00 | 29,354.84 | 33,635.75 | 85,490.59 |
| | | | | | | | 21,370.97 | 3,548.39 | 4,065.85 | 28,985.21 |
| | | 1/1 | | | | | 12,500.00 | 66,666.67 | 76,388.88 | 155,555.55 |
| | | | | | | | 225,000.00 | 103,333.33 | 74,001.72 | 402,335.05 |
| 1/1 | | | | 2/2 | 4/4 | | 297,500.00 | 118,333.33 | 135,590.27 | 551,423.60 |
| | | 1/1 | | | 4/4 | | 282,500.00 | 118,333.33 | 135,590.27 | 536,423.60 |
| | 2/6 | | 3/8 | | 3/4 | | 287,500.00 | 118,333.33 | 135,590.27 | 541,423.60 |
| 6/6 | | | | | | | 471,666.67 | 118,333.33 | 135,590.27 | 725,590.27 |
| | 6/6 | | 8/8 | | | | 467,333.33 | 118,333.33 | 135,590.27 | 721,256.93 |
| 4/5 | | | | | 4/4 | | 319,333.34 | 53,666.67 | 61,493.05 | 434,493.06 |
| | | | | | | | 285,000.00 | 53,666.67 | 61,493.05 | 400,159.72 |
| | | 3/5 | | | | 2/3 | 260,000.00 | 53,666.67 | 61,493.05 | 375,159.72 |
| | | | | | | 3/3 | 280,000.00 | 53,666.67 | 61,493.05 | 395,159.72 |
| | 5/5 | | | 2/2 | | 3/3 | 290,000.00 | 51,666.66 | 59,201.38 | 400,868.04 |
| | | 5/5 | | | 4/4 | | 290,000.00 | 51,666.66 | 59,201.38 | 400,868.04 |
| | | 5/5 | | 2/2 | | | 272,500.00 | 49,333.33 | 56,527.77 | 378,361.10 |
| | | | | | | | 354,166.66 | 51,666.66 | 59,201.38 | 465,034.70 |
| | 5/5 | 4/4 | 6/6 | | | | 260,000.00 | 103,548.39 | 118,649.18 | 482,197.57 |
| | | 1/1 | 1/1 | | | | 0.00 | 2,903.23 | - | 2,903.23 |
| | 1/1 | 1/1 | 1/1 | | | | 60,000.00 | 11,881.72 | 3,819.43 | 75,701.15 |
| | | | | | | | 4,758,870.97 | 1,337,709.65 | 1,472,774.53 | 7,569,355.16 |

| | | | |
|--------|--------------------------|-------------------------------------|--|
| No. 19 | Mr. Prinya Yamasamit | MWA Governor/ Director | retired from position because of the age of 60 years on 11 August 2020 |
| No. 20 | Mrs. Lawan Chatrunghewan | MWA Deputy Governor acting Governor | under the order of MWA Board of Directors No. 2/2563 Re: Appointment of an Employee to Act for the Governor and Take the Position of MWA Acting Governor effective as of 10 May 2020 (Holding office of Acting Governor between 12 and 20 August 2020) |
| No. 21 | Mr. Kavee Areekul | MWA Deputy Governor acting Governor | under the order of MWA Board of Directors No. 4/2563 Re: Appointment of an Employee to Act for the Governor and Take the Position of MWA Acting Governor effective as of 21 August 2020 / Signed the employment agreement to hold office of MWA Governor dated 16 September 2020 |

Compliance with Official Information Act, B.E. 2540 (1997)

MWA Information Center, providing information under Official Information Act, B.E. 2540 (1997), consists of both physical and electronic information centers. Electronic information center effectively provides the information which suits the New Normal age because it is convenient and easy to access. Consumers can enter the internet system to search information about MWA without traveling, including the information which is not published in the system. Consumers can access www.oic.go.th/INFOCENTER2/237 or visit MWA Information Center located on the 1st Floor of the Headquarters Office, Metropolitan Waterworks Authority.

Operating results for the year 2020

MWA Information Center operated under the action plan of the year 2020 in accordance with Official Information Act, B.E. 2540 (1997) and Rule of Metropolitan Waterworks Authority Re: Information of Metropolitan Waterworks Authority, B.E. 2561 (2018) as follows:

- [MWA Information Committee's Meeting](#) for consideration of the matters and acknowledgement of operating results such as consideration of disclosure of information under Official Information Act, B.E. 2540 (1997) and reporting the operating results under the action plan and statistics of information service in the fiscal year 2020.

- [Study trip](#) The Committee, together with the persons in charge of MWA Information Center, totally 18 persons, took a study trip to Information Center of Department of Foreign Trade, Ministry of Commerce to exchange knowledge of information center operations and information service on 21 January 2020. Also, MWA welcomed 3 external organizations, including Metropolitan Electricity Authority, Department of Foreign Trade, and Office of the National Economic and Social Development Council, to observe the work of MWA Information Center.

- [Participation in the training and knowledge testing](#) under the project of training and knowledge and understanding testing under Official Information Act, B.E. 2540 (1997) of Office of Official Information Committee. MWA sent 2 personnel to participate in the project and both of them passed the test. One personnel was sent to participate on the e-Learning training related to Official Information Act, B.E. 2540 (1997) of Office of the Civil Service Commission and received the e-Certificate conforming the completion of training on 12 February 2020.

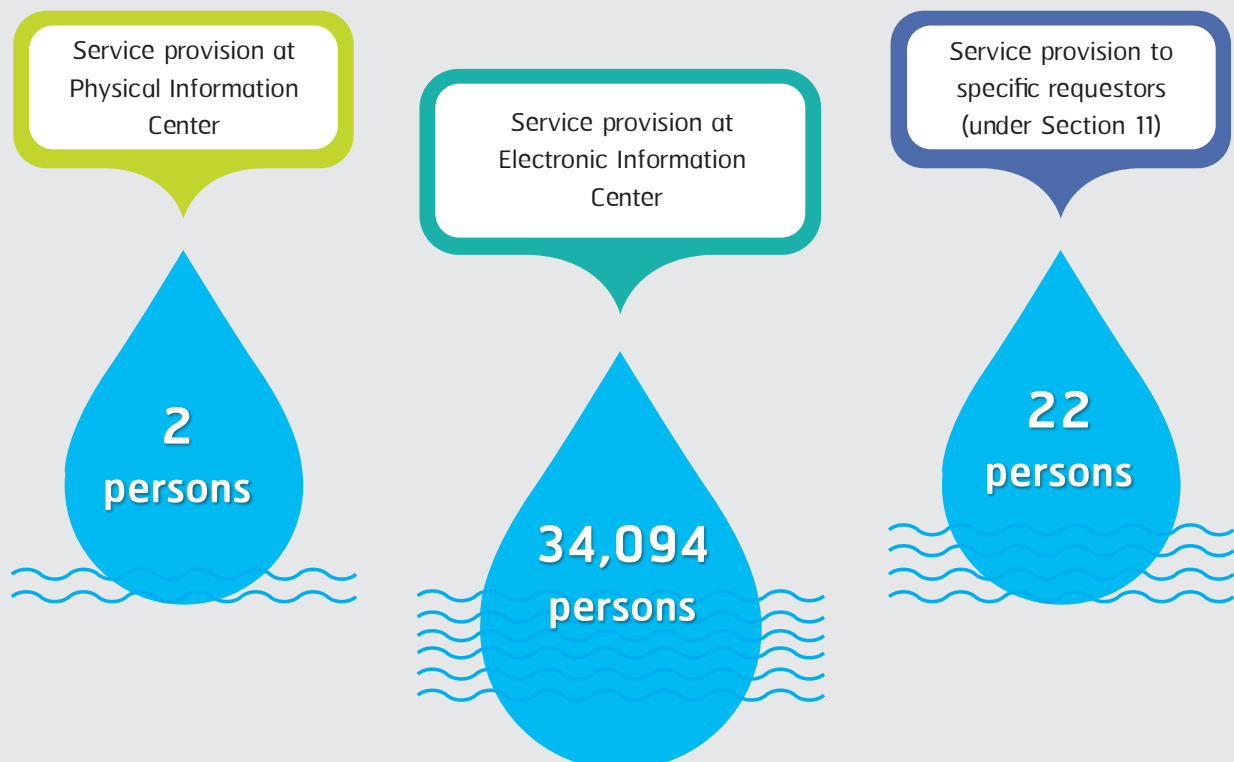


- **Training of knowledge** to the personnel to create knowledge and understanding of information provision to the public, especially during COVID-19 pandemic, shall be adjusted to small-group training in accordance with the measures to control and monitor COVID-19 outbreak of MWA and the government in exemption, postponement, arrangement of activities, trainings, and seminars in which a huge group of people gathered. Therefore, the knowledge training was provided to 6 personnel from Nonthaburi Branch Office on 16 March 2020.

- **Promotion of MWA Information Center** by making news and articles to be published in media and arranging activities to promote MWA Information Center and publicize knowledge of Official Information Act, B.E. 2540 (1997) in comprehensible and fun version for children and youths on Children's Day "MWA WATER HEROES " at Thai Waterworks Museum on 11 January 2020.



Statistics on Service Provision in fiscal year 2020



Information and Statistics

| General Information | Fiscal Year | | | | |
|--|-------------|-----------|-----------|-----------|-----------|
| | 2016 | 2017 | 2018 | 2019 | 2020 |
| Total amount of distributed water (Million m ³) | 1,965.9 | 2,063.8 | 1,997.1 | 2,075.2 | 2,121.1 |
| Bang Khen Water Treatment Plant | 1,290.9 | 1,404.5 | 1,334.4 | 1,402.3 | 1,410.0 |
| Sam Sen Water Treatment Plant | 129.7 | 120.7 | 116.4 | 113.0 | 102.4 |
| Thonburi Water Treatment Plant | 30.9 | 40.5 | 37.4 | 41.1 | 36.4 |
| Mahasawat Water Treatment Plant | 514.4 | 498.1 | 508.9 | 518.8 | 572.3 |
| Total amount of sold water (Million m ³) | 1,406.3 | 1,408.6 | 1,401.4 | 1,467.4 | 1,458.3 |
| Residences | 653.8 | 656.8 | 651.5 | 675.7 | 694.3 |
| Businesses, state-owned enterprises, government agencies, and other | 723.7 | 723.4 | 719.6 | 753.2 | 717.8 |
| Public water and other | 28.8 | 28.4 | 30.3 | 38.5 | 46.2 |
| Percentage of sold water (percent) | 71.53 | 68.25 | 70.17 | 70.71 | 68.75 |
| Number of consumers at the end of the years (persons) | 2,281,058 | 2,328,598 | 2,375,490 | 2,423,540 | 2,479,547 |
| Residences | 1,835,430 | 1,878,888 | 1,921,897 | 1,957,391 | 2,010,824 |
| Businesses, state-owned enterprises, government agencies, and other | 445,628 | 449,710 | 453,593 | 466,149 | 468,723 |
| Small consumers (persons) | 2,244,815 | 2,292,106 | 2,338,779 | 2,386,832 | 2,443,405 |
| Water meter size 1/2 inch | 1,394,915 | 1,421,764 | 1,459,347 | 1,510,537 | 1,571,405 |
| Water meter size 3/4 inch | 783,235 | 802,913 | 811,431 | 807,907 | 803,240 |
| Water meter size 1 inch | 66,665 | 67,429 | 68,001 | 68,388 | 68,760 |
| Major consumers (persons) | 36,243 | 36,492 | 36,711 | 36,708 | 36,142 |
| Water meter size 1 1/2 inches | 14,804 | 15,058 | 15,610 | 16,078 | 16,169 |
| Water meter size 2 inches | 14,015 | 13,972 | 13,672 | 13,243 | 12,814 |
| Water meter size over 2 inches | 7,424 | 7,462 | 7,429 | 7,387 | 7,159 |
| Number of new connections (Connection) | 71,325 | 65,327 | 65,653 | 67,745 | 67,916 |
| Average amount of water consumption per month (m ³) | 50.88 | 49.85 | 48.55 | 49.58 | 47.98 |
| Residences | 30.08 | 29.44 | 28.56 | 29.02 | 29.16 |
| Businesses, state-owned enterprises, government agencies, and other | 135.57 | 134.54 | 132.56 | 136.14 | 127.67 |
| Average water fee per m ³ (THB) | 12.02 | 12.01 | 11.98 | 11.99 | 10.93 |
| Residences | 10.03 | 10.03 | 9.99 | 10.00 | 8.96 |
| Businesses, state-owned enterprises, government agencies, and other | 13.83 | 13.82 | 13.79 | 13.79 | 12.85 |
| Total personnel (persons) | 5,386 | 5,403 | 5,365 | 5,378 | 5,384 |
| Number of personnel at the end of the year | 4,326 | 4,385 | 4,310 | 4,303 | 4,339 |
| Number of contract workers | 1,060 | 1,018 | 1,055 | 1,075 | 1,045 |
| Ratio of consumers per personnel (persons) | 424 | 431 | 443 | 451 | 461 |
| Population in the responsible area at the end of the year (persons) | 8,192,123 | 8,222,916 | 8,249,551 | 8,276,526 | 8,216,446 |
| Number of households in the responsible area at the end of the year (houses) | 4,099,437 | 4,210,444 | 4,323,941 | 4,436,973 | 4,534,086 |

| Financial Information | Fiscal Year | | | | |
|---|-------------|----------|----------|----------|----------|
| | 2016 | 2017 | 2018 | 2019 | 2020 |
| Total assets (Million Baht) | 68,254.4 | 72,214.9 | 75,108.5 | 79,365.8 | 81,337.9 |
| Current assets | 14,873.5 | 17,343.6 | 21,561.4 | 20,751.8 | 13,653.8 |
| Non-current assets | 53,380.9 | 54,871.3 | 53,547.1 | 58,614.0 | 67,684.1 |
| Total liabilities (Million Baht) | 12,435.9 | 15,405.8 | 14,599.2 | 15,742.2 | 15,055.4 |
| Current liabilities | 4,932.4 | 4,678.4 | 4,453.4 | 4,059.6 | 3,105.6 |
| Non-current liabilities | 7,503.5 | 10,727.4 | 10,145.8 | 11,682.6 | 11,949.8 |
| Owners' Equity (Million Baht) | 55,818.5 | 56,809.1 | 60,509.3 | 63,623.6 | 66,282.5 |
| Total income (Million Baht) | 20,074.2 | 19,193.2 | 19,203.0 | 20,051.4 | 18,045.0 |
| Operating income | 19,681.1 | 18,850.5 | 18,801.1 | 19,548.9 | 17,559.8 |
| Income from water fee and water equipment service | 17,698.6 | 17,740.3 | 17,602.6 | 18,334.2 | 16,548.9 |
| Income from new connection | 391.6 | 406.6 | 396.7 | 385.9 | 247.9 |
| Income from other operations | 1,590.9 | 703.6 | 801.8 | 828.8 | 763.0 |
| Non-operating income | 393.1 | 342.7 | 401.9 | 502.5 | 485.2 |
| Total expenses (Million Baht) | 12,904.5 | 11,624.8 | 11,683.8 | 13,047.6 | 12,422.0 |
| Operating expenses | 12,831.2 | 11,701.4 | 11,676.6 | 13,012.8 | 12,390.6 |
| Direct Operating expenses | 7,945.7 | 7,305.8 | 7,142.7 | 8,173.6 | 7,536.1 |
| Depreciation and amortization | 4,829.0 | 4,345.5 | 4,493.3 | 4,808.4 | 4,829.0 |
| Interest expense and loan fee | 56.5 | 50.1 | 40.6 | 30.8 | 25.5 |
| Non-operating expenses | 73.3 | (76.6) | 7.2 | 34.8 | 31.4 |
| Other expenses | 2.6 | 10.9 | 26.0 | 36.7 | 33.6 |
| (Profit) Loss from foreign exchange rate | 70.7 | (87.5) | (18.8) | (1.9) | (2.2) |
| Net profits (Million Baht) | 7,169.7 | 7,568.4 | 7,519.2 | 7,003.8 | 5,623.0 |
| Return on Asset (percent) | 10.50 | 10.48 | 10.01 | 8.82 | 6.91 |
| Return on Equity (percent) | 12.84 | 13.32 | 12.43 | 11.01 | 8.48 |
| Net Profit Margin (percent) | 36.43 | 40.15 | 39.99 | 35.83 | 32.02 |
| Asset Turnover (times) | 0.29 | 0.26 | 0.25 | 0.25 | 0.22 |
| Current ratio (times) | 3.02 | 3.71 | 4.84 | 5.11 | 4.40 |
| Debt to Total Asset Ratio (times) | 0.18 | 0.21 | 0.19 | 0.20 | 0.19 |
| Debt to Equity Ratio (times) | 0.22 | 0.27 | 0.24 | 0.25 | 0.23 |
| Cost of water sale per cubic meter (Baht) | 8.65 | 8.31 | 8.03 | 8.67 | 8.30 |

*** Remark:** In year 2017, The financial information has changed from the original due to the accounting adjustment in the budget year 2018. As a result, the financial information in fiscal year 2017 must be updated for the purpose of comparison.

Rate of Water Fee and Rate of New Installation Fee

Rate of Water Fee

| Type 1 Residences | | Type 2 Businesses, government agencies, state-owned enterprises, Industry, and other | |
|---|-----------------------------------|---|--------------------------------------|
| Amount of water consumption (m ³) | Water price (THB/m ³) | Amount of water consumption (m ³) | Water price (THB/m ³) |
| 0 - 30 | 8.50 | 0 - 10 | 9.50 But not less than 90.00 Baht |
| 31 - 40 | 10.03 | 11 - 20 | 10.70 |
| 41 - 50 | 10.35 | 21 - 30 | 10.95 |
| 51 - 60 | 10.68 | 31 - 40 | 13.21 |
| 61 - 70 | 11.00 | 41 - 50 | 13.54 |
| 71 - 80 | 11.33 | 51 - 60 | 13.86 |
| 81 - 90 | 12.50 | 61 - 80 | 14.19 |
| 91 - 100 | 12.82 | 81 - 100 | 14.51 |
| 101 - 120 | 13.15 | 101 - 120 | 14.84 |
| 121 - 160 | 13.47 | 121 - 160 | 15.16 |
| 161 - 200 | 13.80 | 161 - 200 | 15.49 |
| More than 200 | 14.45 | More than 200 | 15.81 |

Remarks:

- Water supply rates are exclusive of VAT.
- For water wholesale, the average water prices are as follows:
 - * Residential type: 10.50 Baht/m³
 - * Other types: 13.00 Baht/m³

Effective as of 1 June 2004, MWA shall charge the raw water fee at the rate of 15 Satang/m³ for contribution to Royal Irrigation Department.

Rate of New Installation in Lump Sum and Monthly Service Fee

Unit: Baht

| Meter Size (inches) | 1/2 | 3/4 | 1 | 1 1/2 | 2 | 3 | 4 | 6 | 8 | 12 |
|--------------------------|-------|-------|-------|--------|--------|--------|--------|---------|---------|---------|
| Rate of New Installation | 5,000 | 6,000 | 8,000 | 12,500 | 38,500 | 76,000 | 93,500 | 156,500 | 210,000 | 431,500 |
| Monthly Service Fee | 25 | 40 | 50 | 80 | 300 | 400 | 500 | 900 | 1,100 | 3,500 |

Remarks:

- For the expenses for the part that exceeds 20 meters from MWA's main pipe, water supply requestor shall pay the price of pipeline installation and equipment as follows:

| Size of pipe (mm.) | 20 | 25 | 40 | 50 | 100 | 150 | 200 | 300 |
|------------------------|-----|-----|-----|-----|-------|-------|-------|-------|
| Price per meter (Baht) | 355 | 386 | 452 | 997 | 1,981 | 2,160 | 2,364 | 3,017 |

- The expenses in the above table are exclusive of VAT.

Payment Channels

MWA Counter Service

- the MWA Head Office
- 18 MWA Branch Offices
- Special Collection Division
- Government Center
 - Central Plaza West Gate
 - Central Plaza Chaeng Watthana
 - The Mall Ngamwongwan

Suk Sawat Smart Customer Service

at PhraPradaeng District Office and PhraSamut Chedi District Office, SamutPrakan Province which accept requests and payment of water supply fee

Drive Thru Payment

where customers do not have to get off the car

- at the MWA head office
- MWA branch offices including
 - Sukhumvit Branch and Phra Khanong Branch
 - Taksin Branch
 - Suk Sawat Branch
 - Nonthaburi Branch
 - Prachachuen Branch
 - Bang Khen Branch
 - Phaya Thai Branch
 - Min Buri Branch
 - Phasi Charoen Branch
 - SamutPrakarn Branch
 - Suvarnabhumi Branch

MWA website
(www.mwa.co.th)

Internet banking system

Credit card and ABC Point Card

Auto debit

ATM of all banks

Counter Service e.g

- bank counter
- MEA Branch Offices
- Thailand Post
- Counter Service
- Tesco Lotus
- and Big C, etc.

Smart phone applications e.g.,

- MWA onMobile
- KBank
- SCB
- TMB
- KTB
- GSB
- Thanachart
- True Money
- mPAY
- AirPay
- BluePay
- 2C2P
- Counter Service Pay
- Shopee
- Lazada



Channels under development, including

Online payment system for the agents to accept overdue bill payments

Contact Channels

1. MWA Call Center, which is the center providing information, accepting complaints and requests, and coordinating solution of the problems for people or consumers through

- Hot Line 1125 (available 24 hours)
- e-Mail: mwa1125@mwa.co.th
- Facebook: www.facebook.com/1125callcenter
- Twitter: @mwa1125
- Website: www.mwa.co.th
- Web Chat
- Line Official: @mwathailand

Acceptance of requests for

- | | |
|--|---|
| 1) Change of the invoice address | 7) Other services regarding water meter |
| 2) Change of consumer type | 8) Registration for information receipt through SMS |
| 3) Change of name/place of water usage | 9) Notification of damaged water meter |
| 4) Change of residential address | 10) Notification of faulty water meter |
| 5) Cancellation of information receipt through SMS | 11) Reservation of appointment with MWA Branch Office |
| 6) Post-metering service | |

When consumers contact MWA Call Center to request for service, the officer will record the information in the Customer Relationship Management (CRM) system and notify related division or person to take action immediately.

2. MWA website (www.mwa.co.th) where there are electronic services as follows:

- e-Services such as request for new water installation, group water installation, request for water pipeline installation, real estate projects, inspection of installation status, water supply fee payment, inquiries, acceptance of complaints, submission of requests for service, registration for acceptance of e-Receipts/e-Tax Invoices, and registration for acceptance of e-Water Bills
- Water supply fee calculation
- Registration for refund of water usage security deposit
- Registration for acceptance of e-Receipts/e-Tax Invoices
- Acceptance of complaints



3. 18 MWA Branch Offices which will take care of and provide service to the people in their responsible areas, consisting of

- Request for new water installation within day and cancellation of water usage
- Change of details of consumers
- Notification of damaged-leaked pipe and repair
- Acceptance of requests
- Payment of other service fees in MWA Easy Pay Project e.g., AIS mobile fee with 10 Baht charge, KTC credit card payment with 10 Baht charge per person, LH Bank credit payment without fee, electricity bills without fee
- Replacement of water meter
- Deposit of water meter
- Water supply fee payment

4. Service centers in shopping malls: MWA Branch Offices will take care, accept requests, and accept water supply fee payment as follows:

- Government Center, Nonthaburi Province, Central Plaza West Gate Branch, Central Plaza Chaeng Watthana Branch, and The Mall Ngamwongwan Branch
- Bangkok Express Service, Bangkok Metropolis, The Mall Bang Khae Branch

5. Suk Sawat Smart Customer Service Center at Phra Pradaeng District Office and Phra Samut Chedi District Office, SamutPrakan Province which accept requests and payment of water supply fee

6. MWA Clean Water Clinic

Water Supply Section, Water Quality Surveillance Division, which provides consultations on water quality problems, Tel. 0 2981 7321, Fax 0 2981 7313 e-Mail: waterclinic@mwa.co.th Facebook: www.facebook.com/mwacleanwater





7. MWA onMobile to submit the request for new water installation, notification of damaged or leaked pipes or submission of the photo of damaged point which the system will clearly identify the area, abnormal water supply fee, water not running, slow water flow, turbid water, smelly water, and complaints to be submitted to related divisions for taking action. Consumers can also update information about MWA from the application, check the areas where water is not running, contact MWA Branch Office, pay water supply fee, check water quality, check statistics of water usage, print water bills, scan for payment, register to request for e-Receipts/e-Invoices, register to request for e-Bills, register to request for a refund of water usage security deposit, and correct house code.



Locations of MWA Offices



Head Office

 400 Prachachuen Road, Thung Song Hong Sub-district,
Lak Si District, Bangkok Metropolis 10210
 Tel 0 2504 0123  Fax 0 2500 2582-3
 Email mwa1125@mwa.co.th




Sukhumvit Branch Office

1564/1 Sukhumvit Road, Phra Khanong Sub-district,
Klong Toei District, Bangkok Metropolis 10260
 Tel. 0 2331 0028-30
 Fax 0 2331 7533
 Email br07s00@mwa.co.th

Phra Khanong Branch Office

1564/1 Sukhumvit Road, Phra Khanong Sub-district,
Klong Toei District, Bangkok Metropolis 10260
 Tel. 0 2331 0031-32
 Fax 0 2331 1061
 Email br13s00@mwa.co.th



SamutPrakan Branch Office

27 Bunsiri 4 Alley, Sukhumvit Road, Pak Nam Sub-district,
Mueang District, SamutPrakan Province 10270
 Tel. 0 2384 1411-2
 Fax 0 2384 3065
 Email br17s00@mwa.co.th




Phaya Thai Branch Office

1057 Vibhavadi-Rangsit Road, Chatuchak Sub-district,
Chatuchak District, Bangkok Metropolis 10900
 Tel. 0 2537 8225
 Fax 0 2537 8227
 Email br03s00@mwa.co.th




ThungMahaMek Branch Office

9/2 Nang Linchi Road, ThungMahaMek Sub-district, Sathon
District, Bangkok Metropolis 10120
 Tel. 0 2286 0172, 0 2286 0174-5,
0 2286 0177, 0 2286 0179
 Fax 0-2286-0153
 Email br05s00@mwa.co.th

Prachachuen Branch Office

2 Soem Suk Alley, Prachachuen Road, Chatuchak
Sub-district, Chatuchak District, Bangkok Metropolis 10900
 Tel. 0 2585 7444, 0 2585 0319, 0 2585 3889,
0 2585 0490
 Fax 0 2586 0922
 Email br15s00@mwa.co.th



Bang Khen Branch Office

3 Chaeng Watthana Road, Anusawari Sub-district,
Bang Khen District, Bangkok Metropolis 10220
 Tel. 0 2552 1550-4
 Fax 0 2521 1176
 Email br16s00@mwa.co.th




Phasi Charoen Branch Office

454 Kanchanaphisek Road, Bang KhaeNuea Sub-district,
Bang Khae District, Bangkok Metropolis 10160
 Tel. 0 2455 0055
 Fax 0 2454 5500
 Email br11s00@mwa.co.th

Bangkok Noi Branch Office




170 Village No. 2, Kanchanaphisek Road, Plai Bang Sub-district,
Bang Kuai District, Nonthaburi Province 11130
 Tel. 0 2449 0011, 0 2448 0461
 Fax 0 2449 0065

Service Unit

258/4 CharanSanit Wong 30/1 Alley,
Ban Chang Lo Sub-district, Bangkok Noi District,
Bangkok Metropolis 10700
 Tel. 0 2411 3117, 0 2411 2240
 Fax 0 2411 3117
 Email br01s00@mwa.co.th




Taksin Branch Office

71 Rama 2 Road, 31 Alley, Bang Mot Sub-district,
Chom Thong District, Bangkok Metropolis 10150

 Tel. 0 2427 6000
 Fax 0 2427 7772
 Email br02s00@mwa.co.th




Mansri Branch Office

1203 Nakhon Chaisi Road, SamsenNai Sub-district,
Phaya Thai District, Bangkok Metropolis 10400

 Tel. 0 2298 6700-24
 Fax 0 2298 6735
 Email br06s00@mwa.co.th



Lat Phrao Branch Office

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Ramkhamhaeng Road, Wang Thonglang Sub-district,
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Min Buri Branch Office

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Min Buri District, Bangkok Metropolis 10510

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Suvarnabhumi Branch Office

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Lat Krabang District, Bangkok Metropolis 10520

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Suk Sawat Branch Office

71 Rama 2 Road, 31 Alley, Bang Mot Sub-district,
Chom Thong District, Bangkok Metropolis 10150

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Bang BuaThong Branch Office

59 Village No. 2, Bang Kruai-Sai Noi Road, Sano Loi
Sub-district, Bang Bua Thong District,
Nonthaburi Province 11110

 Tel. 0 2571 3982-7
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 Email br54s00@mwa.co.th




MahaSawat Branch Office

170 Village No. 2, Kanchanaphisek Road, Plai Bang
Sub-district, Bang Kruai District, Nonthaburi Province 11130

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Nonthaburi Branch Office

282 Nonthaburi Road, Tha Sai Sub-district, Mueang District,
Nonthaburi Province 11000

 Tel. 0 2589 0035-8
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 Email br04s00@mwa.co.th

Factors Affecting Financial Status and Operating Results

In the fiscal year 2020, MWA has encountered a variety of challenges, including drought, brackish water management which affected the amount and quality of raw water for water production. In addition, we faced the outbreak of COVID-19 and lockdown measure imposed by the government, which were the important factors affecting the reduction of income from water supply fee that is our main source of income. Since the pandemic has severely affected Thailand's economy in all sectors, economic activities have temporarily been interrupted, especially manufacturing and export. The number of tourists has sharply decreased, causing a decrease in the amount of sold water of the business sector, industrial sector, shopping malls, and hotels; whereas, the amount of sold water of the residential group has slightly increased as a result of Work From Home measure. Nevertheless, MWA realizes the hardship of consumers who have been affected by the pandemic; therefore, several measures have been implemented, such as discounts on water supply fee, refund of water usage security deposit, exemption from water supply interruption, and so on, which accounted for 1,700 million Baht. For this reason, MWA has reviewed and adjusted the work strategies to be more suitable and respond to the changing factors with by focusing on development of potential to operate the related business to generate extra income in addition to the main income from water supply fee. Also, MWA has collaborated with PWA to expand the water supply service at the joint areas to allow all people to access clean and safe water at the same standard. Technology and innovations have also been developed in response to the disruptive technology to meet the expectations of delivering the excellent service to consumers.

In terms of expenses, MWA provides service through the production system structure and water pipeline network which have been in service for years, resulting damage and leakage of pipes and the high rate of water loss, causing the higher expenses of repair and water loss management. Moreover, the raw water sources used for water production have been affected by the changing environment, including global warming, drought and tidal bore, causing the risk of low quality of raw water. In addition, because of COVID-19 outbreak, MWA had to monitor and maintain the water quality as suggested by World Health Organization (WHO) by increasing the amount of chlorine to enhance effectiveness of bacteria and virus disposal, affecting an increase in expenses. Based on the above factors, MWA focuses on development of appropriate management for the declining quality of raw water while seeking alternative raw water sources and coordinates with Royal Irrigation Department to regularly follow up water situation to ensure stability of raw water system so that MWA can produce sufficient water despite the abnormal situation, as well as determining strategies for sustainable water pressure and water loss management in the area, enhancing efficiency of emergency management and systematic implementation of water safety plans, installation of extensive water pipelines, and investment in the Water Supply Improvement Project through asset management to enhance effectiveness of full utilization of the existing assets, including appropriate risk management and resource allocation to generate the returns that are worth investment. Financial factors which impact the operating results include the interest rate, loan rate, and foreign exchange rate. Although JPY has become stronger against THB this year, MWA has managed risks by using Cross Currency Swap (CCS), which could reduce the risk of fluctuation of the exchange rate. Also, MWA placed importance on loan management plan, excess liquidity management, resulting in low level of liabilities and financial stability.

Based on the above factors and effects, it can be seen that MWA still has a strong financial status thanks to determination of effective corporate management strategies to deal with all levels of risks, including continuous improvement and development of corporate capacity to become a High-Performance Organization (HPO) to be able to grow and develop in conformity with the direction of national, social and environmental development in sustainable way.

Key Financial Information

| Descriptions | 2020 | 2019 | 2018 |
|--|-----------|-----------|-----------|
| Financial Position (Million Baht) | | | |
| • Current assets | 13,653.75 | 20,751.80 | 21,561.42 |
| • Total assets | 81,337.85 | 79,365.84 | 75,108.52 |
| • Current liabilities | 3,105.59 | 4,059.65 | 4,453.44 |
| • Total liabilities | 15,055.32 | 15,742.26 | 14,599.20 |
| • Owners' Equity | 66,282.53 | 63,623.58 | 60,509.32 |
| Operating Results (Million Baht) | | | |
| • Total Income | 18,044.95 | 20,051.36 | 19,203.00 |
| • Total Expenses | 12,421.99 | 13,047.61 | 11,683.82 |
| • Net Profits | 5,622.96 | 7,003.75 | 7,519.18 |
| Financial Ratio | | | |
| • Net Profit Margin (percent) | 32.02 | 35.83 | 39.99 |
| • Return on Asset (percent) | 6.91 | 8.82 | 10.01 |
| • Return on Equity (percent) | 8.48 | 11.01 | 12.43 |
| • Debt to Equity Ratio (times) | 0.23 | 0.25 | 0.24 |
| • Current Ratio (times) | 4.40 | 5.11 | 4.84 |
| • Average Collection Period (days) | 32 | 27 | 28 |



Capital Structure

Capital and Shareholder Structure

100% of MWA shares are held by Ministry of Finance.

Unit: Million Baht

| Descriptions | 2020 | 2019 | 2018 |
|-------------------|----------|----------|----------|
| Initial capital | 1,192.71 | 1,192.71 | 1,192.71 |
| Government budget | 7,194.14 | 7,194.14 | 7,194.14 |

Loan Debts

Unit: Million Baht

| Loan Debts | 2020 | 2019 | 2018 |
|----------------|----------------|----------------|----------------|
| Domestic loans | - | - | - |
| Foreign loans | 340.188 | 402.252 | 485.979 |
| Total | 340.188 | 402.252 | 485.979 |

Remittance to Ministry of Finance

Unit: Million Baht

| Remittance to Ministry of Finance | 2020 | 2019 | 2018 |
|-----------------------------------|----------|----------|----------|
| Remittance to Ministry of Finance | 3,413.20 | 3,904.00 | 3,734.00 |

Approved Budgets

Unit: Million Baht

| Approved Budgets | 2020 | 2019 | 2018 |
|-------------------|-----------------|-----------------|-----------------|
| Operating budget | 6,985.0 | 7,820.0 | 7,600.0 |
| Investment budget | 6,200.0 | 4,500.0 | 3,688.0 |
| Total | 13,185.0 | 12,320.0 | 11,288.0 |

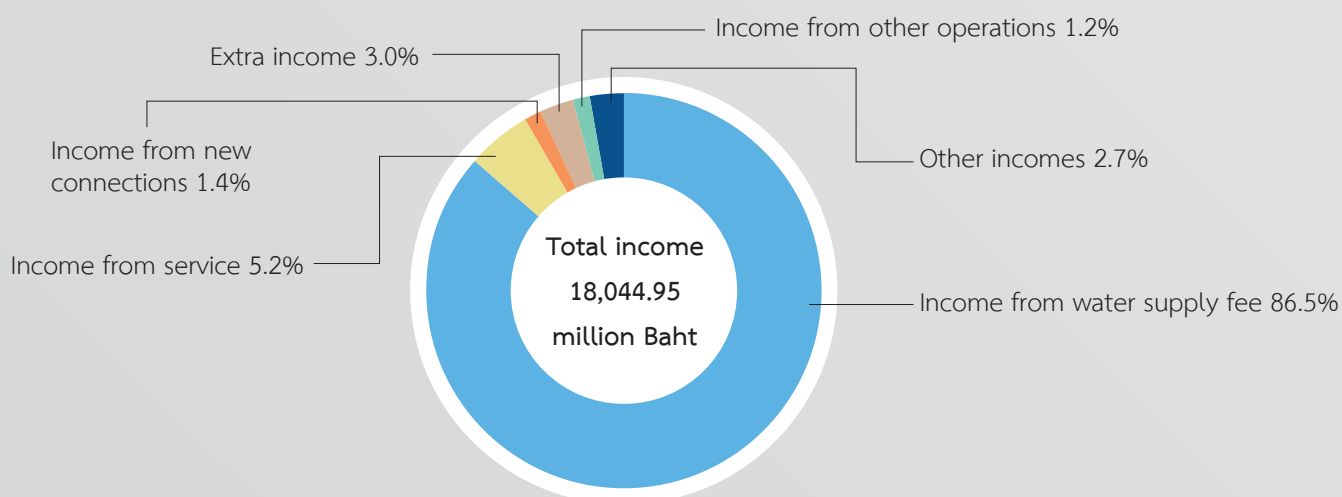
Financial Position Analysis Report

Overall, the operating results in the year 2020 show that Metropolitan Waterworks Authority (MWA) had the net profits of 5,622.96 million Baht, which is lower than those of the previous year by 1,380.79 million Baht, due to the reduction of income from water supply fee which is the main source of income of MWA in spite of the decrease of overall expense in comparison with the previous year.

Operating Results

Income

MWA has the total income of 18,044.95 million Baht, which is lower than the previous year by 2,006.41 million Baht, accounting for 10.01 percent, mostly because of the decrease in water supply fee, service fee, and other operating income for the total amount of 1,884.55 million Baht. The main reason is that MWA has the measure to help consumers who have been affected by COVID-19 outbreak by giving discounts¹ on water supply fee, exemption from temporary and permanent interruption of water supply, and exemption of water supply fee payment. Also, the amount of sold water and average water supply fee are decreased, especially for business consumers due to economic decline as a result of the pandemic. In addition, the income from New connections is reduced after the adjustment of the useful life of assets in the water meter category from 8 years to 10 years.



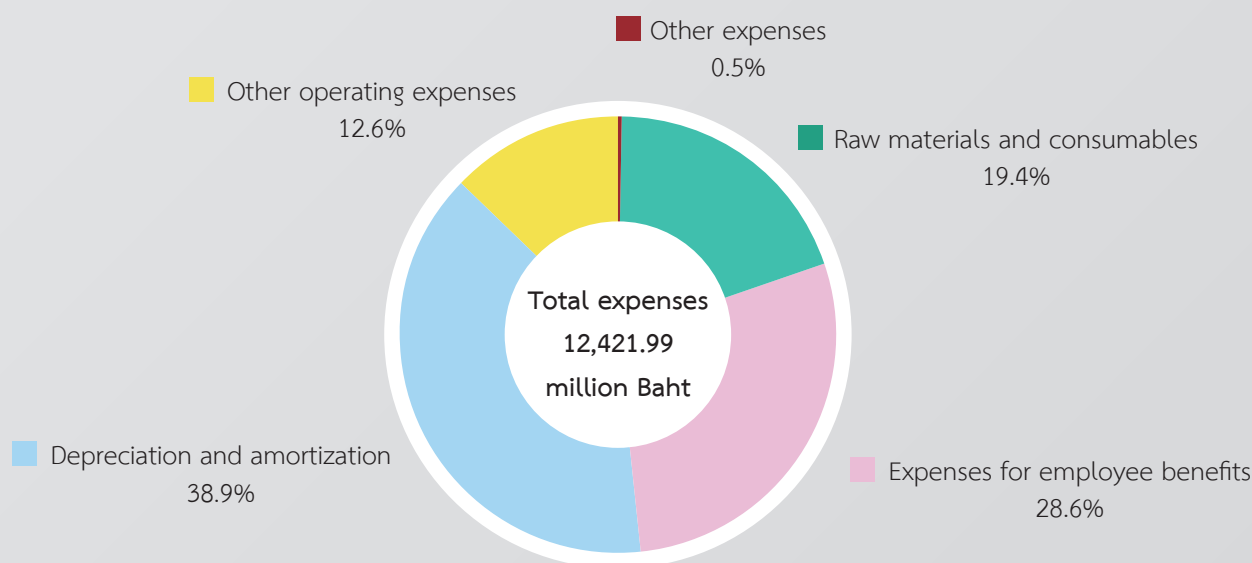
Unit: Million Baht

| Description | 2020 | 2019 | Increase/Decrease |
|------------------------------|------------------|------------------|-------------------|
| Operating income | 17,559.79 | 19,548.85 | (1,989.06) |
| Income from water service | 15,612.06 | 17,349.01 | (1,736.95) |
| Income from service fee | 936.81 | 985.15 | (48.34) |
| Income from new connections | 247.94 | 385.91 | (137.97) |
| Extra income | 539.06 | 505.60 | 33.46 |
| Income from other operations | 223.92 | 323.18 | (99.26) |
| Other incomes | 485.16 | 502.51 | (17.35) |
| Total | 18,044.95 | 20,051.36 | (2,006.41) |

Remarks: ¹ Measure to reduce water supply fee: Case 1: Consumer using water $\leq 10 \text{ m}^3$ shall be exempted from water fee, service fee and raw water fee, Case 2: Consumer using water $> 10 \text{ m}^3$ shall be exempted from water supply for the first 10 m^3 of water used while the fee for the amount of water exceeding 10 m^3 shall be discounted at the rate of 20 percent.

Expenses

MWA has the total expenses of 12,421.99 million Baht, which decreased the previous year by 625.62 million Baht, accounting for 4.79 percent, due to a decrease in expenses for employee benefits by 425.18 million Baht as a result of adjustment of pension for retirement², as well as a decrease in other operating expenses by 311.73 million Baht because of the payment of administrative fee and special remuneration plus interest in accordance with the judgment³ in the amount of 422.07 million Baht. On the other hand, the costs of raw materials and consumables increased by 99.52 million Baht, mainly because of an increase in the costs of chemicals used to adjust the low quality of raw water, as well as the COVID-19 situation in which chemicals were used more to control the free residual chlorine in water.



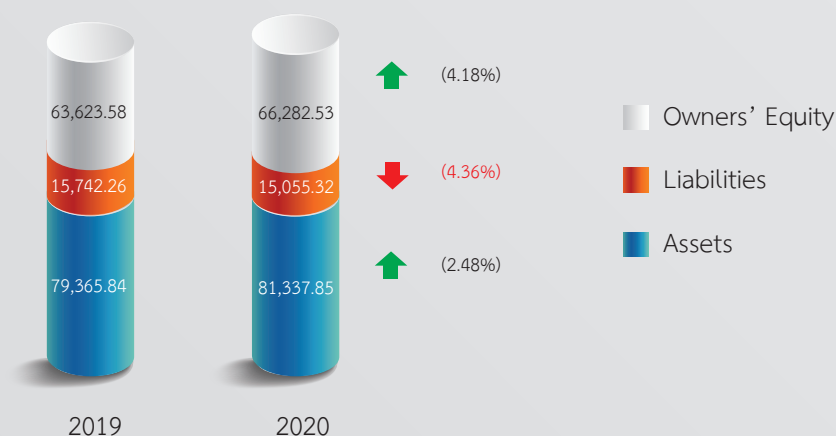
Unit: Million Baht

| Description | 2020 | 2019 | Increase/Decrease |
|--------------------------------|------------------|------------------|-------------------|
| Operating expenses | 12,365.14 | 12,982.02 | (616.88) |
| Raw materials and consumables | 2,411.55 | 2,312.03 | 99.52 |
| Expenses for employee benefits | 3,554.16 | 3,979.34 | (425.18) |
| Depreciation and amortization | 4,828.97 | 4,808.46 | 20.51 |
| Other operating expenses | 1,570.46 | 1,882.19 | (311.73) |
| Other expenses | 56.85 | 65.59 | (8.74) |
| Total | 12,421.99 | 13,047.61 | (625.62) |

Remarks: ² Pension for retirement has been increased. For employees who have worked for 20 years and above shall obtain at least the sum equivalent to the wage for the last 400 days (previously, 300 days) which shall be effective for state-owned enterprise employees from 30 September 2019 in accordance with the Resolution of Council of Ministers dated 10 September 2019.

³ Dispute with Thames Water International (Thailand) Company Limited in the Water Loss Operation Agreement.

Financial Position



- **Total assets** are 81,337.85 million Baht, which is higher than those of the previous year by 1,972.01 million Baht, mainly because of an increase in the assets under construction.
- **Total liabilities** are 15,055.32 million Baht, which is lower than those of the previous year by 686.94 million Baht, mainly resulted from a decrease in national income to be contributed to the treasury.
- **Owners' Equity** is 66,282.53 million Baht, which is higher than those of the previous year by 2,658.95 million Baht, because of an increase in the retained earnings.

Liquidity

As of 30 September 2020, MWA has the remaining cash and cash equivalent at 1,979.18 million Baht, increasing from 2019 by 1,378.23 million Baht, as detailed below:

- **Net cash from operating activities**, amounting to 7,955.09 million Baht, decreasing from 2019 by 2,279.06 million Baht, mainly because of a decrease in water supply fee and service fee and the lower recognition of income from water pipeline installation. Also, in 2020, water usage security deposit was refunded in accordance with the measure to assist consumers affected by COVID-19.
- **Net cash spent on investment activities**, amounting to 3,055.12 million Baht, decreasing from the previous year by 3,010.54 million Baht. mainly because of a decrease in temporary investment despite an increase in acquisition of fixed assets for operation in comparison with the previous year.
- **Net cash spent on fundraising activities**, amounting to 3,521.74 million Baht, decreasing from the previous year by 495.31 million Baht because of a decrease in national income to be contributed to the treasury

Unit: Million Baht

| Description | 2020 | 2019 | Increasing/Decreasing Cash Flow |
|---|-----------------|---------------|---------------------------------|
| Net cash from operating activities | 7,955.09 | 10,234.15 | (2,279.06) |
| Net cash spent on investment activities | (3,055.12) | (6,065.66) | 3,010.54 |
| Net cash spent on fundraising activities | (3,521.74) | (4,017.05) | 495.31 |
| Cash and cash equivalent – Net increase | 1,378.23 | 151.44 | 1,226.79 |
| Cash and cash equivalent at the beginning of the period | 600.95 | 449.51 | 151.44 |
| Cash and cash equivalent at the end of the period | 1,979.18 | 600.95 | 1,378.23 |

Report of the Audit Committee

The current Audit Committee has been appointed under the order of MWA Board of Directors No. 1/2563 dated 7 May 2020, consisting of 3 members who are experts having the knowledge and ability of accounting, finance, engineering, political science, and law as follows:

- | | |
|---------------------------|----------|
| 1) Mr. Krisada Kaweeyarn | Chairman |
| 2) Dr. Thongplew Kongjun | Member |
| 3) Mr. Chamroen Phothiyod | Member |

Whereby Assistant Governor (Internal Audit Office) acts as Secretary.

The previous Audit Committee has been appointed under the order of MWA Board of Directors No. 5/2562 dated 1 March 2019 holding office between 1 March 2019 and 11 October 2019, consisting of 3 members as follows:

- | | |
|--|----------|
| 1) Assistant Professor Teekawuth Potapirom | Chairman |
| 2) Dr. Thongplew Kongjun | Member |
| 3) Assoc. Prof. Chanin Tinnachote | Member |

MWA Board of Directors resolve on hiring the consultants to the Financial Accounting Audit Committee and Internal Audit Specialist to participate in the meeting to provide knowledge and suggestions to Audit Committee. There are 2 consultants who are:

- | | |
|-------------------------------|---|
| 1) Mrs. Wilai Chattanrassamee | Consultant for Accounting and Financial Audit Committee |
| 2) Mr. Pongsak Sangsingkee | Internal Control Expert |

In the fiscal year 2020, Audit Committee arranged 6 meetings by discussing and exchanging opinions with the top executives, internal auditors and representatives from the State Audit Office. Audit Committee attended a specific meeting with the representatives from the State Audit Office without the presence of executives to discuss the auditing scope and plans, operating results, remarks in the financial statements, and emphasized matters or other related matters where there were audit fee and financial statements audit fee in the total amount of 2.50 million Baht.

Audit Committee has performed the duties under the scope and power assigned by MWA Board of Directors and Rule of Ministry of Finance on Audit Committee and Internal Audit Office of State-owned Enterprises, B.E. 2555 (2012), operation manual of Audit Committee in state-owned enterprises, Ministry of Finance and Charter of Audit Committee which can be summarized as follows:

1. Financial report: Audited the MWA financial statements for the fiscal year 2019 and audited the financial statements of the 1st and the 2nd quarters for the fiscal year 2020 (October 2019 - March 2020) (Before and After the audit performed by State Audit Office), financial statements for the 3rd quarter (April-June 2020) (Before the audit performed by State Audit Office) to make sure that MWA financial statements were prepared correctly in materiality, important information including the change in the key accounting estimates was disclosed sufficiently, and transactions which were useful for users of financial statements were presented.

2. Internal control: Reviewed efficiency, effectiveness and sufficiency of the internal control process by considering the audit results of the Internal Audit Office and representative of the State Audit Office, report the results of operations regarding the internal control of Internal Control Committee, as well as reporting the key remarks and solutions to be proposed to MWA Board of Directors to encourage top executives to have efficient and effective internal control system.

3. Risk Management: Reviewed the performance under MWA risk management process in the fiscal year 2020 to make sure that risk management is effective in dealing with the risks which may affect achievement of the corporate objectives by considering the audit of efficiency, effectiveness and suitability of risk management process on regular basis, as well as providing suggestions to responsible divisions for further improvement.

4. Core Business Enablers: Reviewed the corporate operations to ensure that MWA has all 7 aspects of Core Business Enablers in accordance with the criteria and plan of state-owned enterprise performance appraisal.

5. Supervision and development of audit work: Considered the reviewed and issuance of charters, Internal Audit Office, and operation manual for internal audit work, approval of audit plan for the fiscal year 2021, and review of the operations of Internal Audit Office according to the annual audit plan, audit results, as well as giving additional opinions in addition to the opinions of Internal Audit Office, and followed up the correction of the significant matters, considered appropriateness of human resources, and other resources of Internal Audit Office, as well as encouraging the internal auditor to develop themselves to obtain professional certificate on internal audit.

6. Maintenance of the quality of Audit Committee: Reviewed and issued Audit Committee Charter, operation manual and plan for Audit Committee meeting, quarterly and annual report on Audit Committee operations, including the appraisal of performance of Audit Committee in group and individually in accordance with the good practice of State Enterprise Policy Office, Ministry of Finance.

In conclusion, Audit Committee exercised knowledge and ability with sufficient independence in accordance with the duties and responsibilities indicated in the Audit Committee Charter with the opinions that MWA prepared financial statements having materiality and reliability in accordance with the generally acceptable accounting standards, had good corporate governance system, reliable risk management system, appropriate internal control system for compliance with the relevant law, rules and regulations.



(Mr. Krisada Kaweeyarn)

Chairman of Audit Committee

Remark: MWA Audit Committee (under the order of MWA Board of Directors No. 6/2563 dated 2 December 2020) approved the financial statements of MWA for the year ended 30 September 2020 (approved by State Audit Office) in the Meeting No. 3/2564 dated 8 April 2021.

Report on the Board of Directors Responsibility for Financial Report

The Board of Directors of the Metropolitan Waterworks Authority (MWA) is responsible for financial statement by directing the preparation of financial statement in accordance with the generally accepted accounting standards. There is an adequate disclosure of significant information in the Notes to the Financial Statement as well as certified by the Office of the Auditor General.

The Board of Directors has appointed the MWA Audit Committee which comprises of Independent Directors to supervise the auditing, the review of the financial statement and the internal control, to ensure the accounting records are correct, fully adequate, and punctual, and to prevent fraud and irregular conduct.

The MWA Board of Directors has considered that the financial statement of the Metropolitan Waterworks Authority reports the financial status, performance results, and changes in equity and cash flow accurately in the subject matters under generally accepted accounting standards.



(Mr. Nisit Jansomwong)

Chairman of MWA Board of Directors



(TRANSLATION)

AUDITOR'S REPORT

To The Board of Directors of Metropolitan Waterworks Authority

Opinion

The State Audit Office of the Kingdom of Thailand has audited the financial statements of Metropolitan Waterworks Authority (MWA) which comprise the statements of financial position as at September 30, 2020, the statements of income, the statements of comprehensive income, the statements of changes in equity and the statements of cash flows for the year then ended, and the notes to the financial statements, including a summary of significant accounting policies.

In the State Audit Office of the Kingdom of Thailand's opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Metropolitan Waterworks Authority as at September 30, 2020, and its financial performance and its cash flows for the year then ended in accordance with Thai Financial Reporting Standards.

Basis for opinion

The State Audit Office of the Kingdom of Thailand conducted the audit in accordance with State Audit Standards and Thai Standards on Auditing. The State Audit Office of the Kingdom of Thailand's responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the financial statements section of the State Audit Office of the Kingdom of Thailand's report. The State Audit Office of the Kingdom of Thailand is independent of the Company in accordance with the ethical requirements set out in the State Audit Standards issued by the State Audit Commission and the Federation of Accounting Professions' Code of Ethics for Professional Accountants that are relevant to the State Audit Office of the Kingdom of Thailand's audit of the financial statements, and has fulfilled other ethical responsibilities in accordance with these requirements. The State Audit Office of the Kingdom of Thailand believes that the audit evidence the State Audit Office of the Kingdom of Thailand has obtained is sufficient and appropriate to provide a basis for the State Audit Office of the Kingdom of Thailand's opinion.

Other information

The management is responsible for the other information. The other information comprises the information included in the annual report, but does not include the financial statements and auditor's report thereon. The annual report is expected to be made available to the State Audit Office of the Kingdom of Thailand after the date of this auditor's report.

The State Audit Office of the Kingdom of Thailand's opinion on the financial statements does not cover the other information and the State Audit Office of the Kingdom of Thailand will not express any form of assurance conclusion thereon.

In connection with the audit of the financial statements, the State Audit Office of the Kingdom of Thailand's responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the financial statements or the State Audit Office of the Kingdom of Thailand's knowledge obtained in the audit, or otherwise appears to be materially misstated.

When the State Audit Office of the Kingdom of Thailand reads the annual report, if the State Audit Office of the Kingdom of Thailand concludes that there is a material misstatement therein, the State Audit Office of the Kingdom of Thailand is required to communicate the matter to those charged with governance.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Thai Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of the financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

Auditor's Responsibility for the Financial Statements

The State Audit Office of the Kingdom of Thailand's objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes the State Audit Office of the Kingdom of Thailand's opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with State Audit Standards and Thai Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with State Audit Standards and Thai Standards on Auditing, the State Audit Office of the Kingdom of Thailand exercises professional judgment and maintain professional skepticism throughout the audit. the State Audit Office of the Kingdom of Thailand also :

- Identifies and assesses the risks of material misstatement of the financial statements, whether due to fraud or error, designs and performs audit procedures responsive to those risks, and obtains audit evidence that is sufficient and appropriate to provide a basis for the State Audit Office of the Kingdom of Thailand's opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtains an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluates the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Concludes on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If the State Audit Office of the Kingdom of Thailand concludes that a material uncertainty exists, the State Audit Office of the Kingdom of Thailand is required to draw attention in the auditor's report of the State Audit Office of the Kingdom of Thailand to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify the State Audit Office of the Kingdom of Thailand's opinion. The State Audit Office of the Kingdom of Thailand's conclusions are based on the audit evidence obtained up to the date of the auditor's report of the State Audit Office of the Kingdom of Thailand. However, future events or conditions may cause the Company to cease to continue as a going concern.

- Evaluates the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

The State Audit Office of the Kingdom of Thailand communicates with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that the State Audit Office of the Kingdom of Thailand identifies during the State Audit Office of the Kingdom of Thailand's audit.

(Signed) *Chittina Siriwatcharakul*

(Mrs. Chittina Siriwatcharakul)

Director of Financial and Procurement Audit Office No.17

(Signed) *Pranee Kirirat*

(Mrs. Pranee Kirirat)

State Auditor, Senior Professional Level

METROPOLITAN WATERWORKS AUTHORITY
STATEMENTS OF FINANCIAL POSITION
AS OF SEPTEMBER 30, 2020

| | | | Unit : Baht |
|---|-------------|-----------------------|---|
| | <u>Note</u> | <u>2020</u> | <u>2019</u> <u>(Restated)</u> |
| | | | <u>October 1, 2018</u> <u>(Restated)</u> |
| ASSETS | | | |
| Current assets | | | |
| Cash and cash equivalents | 5.2,7.1 | 1,979,175,284 | 600,954,953 |
| Current investments | 7.2 | 9,801,296,000 | 18,283,890,000 |
| Trade accounts receivable | 5.3,7.3 | 647,479,212 | 551,193,205 |
| Accrued revenue of water sales, meter fees and raw waters | 7.4 | 827,225,864 | 852,690,557 |
| Inventories and supplies | 5.4,7.5 | 216,956,235 | 211,954,965 |
| Other current assets | 7.6 | 181,620,812 | 251,118,331 |
| Total current assets | | 13,653,753,407 | 20,751,802,011 |
| Non-current assets | | | |
| Long-term Investment | | 12,950,000,000 | 4,850,000,000 |
| Property, plant and equipment | 5.5,7.7,10 | 46,750,873,233 | 47,330,291,064 |
| Intangible assets | 5.6,7.8 | 137,886,108 | 170,420,703 |
| Works under construction | 5.7,7.9 | 7,626,033,931 | 5,975,227,562 |
| Advance payment | 7.10 | 195,564,316 | 244,110,138 |
| Other non-current assets | | 23,742,586 | 43,990,461 |
| Total non-current assets | | 67,684,100,174 | 58,614,039,928 |
| Total assets | | 81,337,853,581 | 79,365,841,939 |

The accompanying notes are an integral part of these financial statements.

STATEMENTS OF FINANCIAL POSITION (Continued)

AS OF SEPTEMBER 30, 2020

| | | | Unit : Baht |
|---|---------------|-----------------------|------------------------|
| | Note | 2020 | 2019 |
| | | | October 1, 2018 |
| | | | (Restated) |
| LIABILITIES AND EQUITY | | | |
| Current liabilities | | | |
| Trade accounts payable | | 1,016,389,564 | 1,087,065,024 |
| Current portion of long-term loans | 7.11 | 85,046,981 | 80,450,437 |
| Accrual remittance to the Ministry of Finance | 7.12 | 849,000,000 | 1,469,300,000 |
| Other current liabilities | 7.13 | 1,155,153,637 | 1,422,833,417 |
| Total current liabilities | | 3,105,590,182 | 4,059,648,878 |
| Non-current liabilities | | | |
| Long-term loans | 7.11 | 255,140,942 | 321,801,747 |
| Employee benefit obligations | 7.14 | 2,739,986,025 | 2,471,480,146 |
| Provision on litigation | 7.15 | 16,357,866 | - |
| Customers' guarantee deposits | | 1,507,064,078 | 1,699,691,640 |
| Deferred revenues | 5.8, 7.16, 10 | 6,963,555,426 | 6,717,904,202 |
| Unearned income | 10 | 108,704,954 | 110,952,931 |
| Other non-current liabilities | 7.17 | 358,923,805 | 360,785,899 |
| Total non-current liabilities | | 11,949,733,096 | 11,682,616,565 |
| Total liabilities | | 15,055,323,278 | 15,742,265,443 |
| Equity | | | |
| Capital | 7.18 | 8,386,847,139 | 8,386,847,139 |
| Unappropriated retained earnings | 10 | 58,446,250,201 | 55,616,188,637 |
| Other components of equity | 10 | (550,567,037) | (379,459,280) |
| Total equity | | 66,282,530,303 | 63,623,576,496 |
| Total liabilities and equity | | 81,337,853,581 | 79,365,841,939 |

The accompanying notes are an integral part of these financial statements.

(Signed) **Kavee Areekul**

(Mr. Kavee Areekul)

Governor

(Signed) **Pawnthip Dinakara Na Ayudhya**

(Mrs. Pawnthip Dinakara Na Ayudhya)

Director of Accounting Department

METROPOLITAN WATERWORKS AUTHORITY
STATEMENTS OF INCOME
FOR THE YEARS ENDED SEPTEMBER 30, 2020

| | | Unit : Baht | |
|---|-------------|-----------------------|-----------------------|
| | <u>Note</u> | <u>2020</u> | <u>2019</u> |
| | | | <u>(Restated)</u> |
| Operating revenues | | | |
| Water sales | | 15,612,056,206 | 17,349,013,230 |
| Water meter fees | | 936,808,642 | 985,147,825 |
| Tab water connection fees | | 247,945,447 | 385,907,904 |
| Work contract revenues | | 539,060,470 | 505,602,663 |
| Other operating income | 10 | 223,922,872 | 323,179,248 |
| Total operating revenues | | 17,559,793,637 | 19,548,850,870 |
| Operating expenses | | | |
| Changes in inventories of finished goods and work in progress | | 201,289 | (172,797) |
| Work performed by the entity and capitalized | | (46,055,107) | (50,300,893) |
| Raw materials and consumables used | 7.19 | 2,411,554,756 | 2,312,031,779 |
| Directors remuneration | 7.20 | 21,602,223 | 23,344,238 |
| Employee benefit expenses | | 3,554,164,209 | 3,979,335,228 |
| Depreciation and amortization expenses | 10 | 4,828,966,232 | 4,808,457,796 |
| Other operating expenses | 7.21 | 1,594,705,284 | 1,909,322,563 |
| Total operating expenses | | 12,365,138,886 | 12,982,017,914 |
| Profit from operating | | 5,194,654,751 | 6,566,832,956 |
| Other revenues and expenses | | | |
| Interest income | | 415,852,248 | 389,434,677 |
| Other revenues | | 69,306,922 | 113,078,301 |
| Other expenses | 10 | (33,571,988) | (36,705,264) |
| Finance costs | | (25,486,788) | (30,830,044) |
| Gains (losses) on foreign exchange rate | 7.22 | 2,206,419 | 1,941,503 |
| Total Other revenues and expenses | | 428,306,813 | 436,919,173 |
| Profit for the year | | 5,622,961,564 | 7,003,752,129 |

The accompanying notes are an integral part of these financial statements.

METROPOLITAN WATERWORKS AUTHORITY
STATEMENTS OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED SEPTEMBER 30, 2020

| | <u>Note</u> | <u>2020</u> | <u>2019</u> (Restated) |
|--|-------------|----------------------|---------------------------|
| Profit for the year | | 5,622,961,564 | 7,003,752,129 |
| Other comprehensive income | | | |
| Items that will not be reclassified to profit or loss in subsequent periods | | | |
| Actuarial Gains (Losses) | 7.14 | (171,107,757) | (385,421,530) |
| Total comprehensive income for the year | | <u>5,451,853,807</u> | <u>6,618,330,599</u> |

The accompanying notes are an integral part of these financial statements.

METROPOLITAN WATERWORKS AUTHORITY
STATEMENTS OF CHANGES IN EQUITY
FOR THE YEARS ENDED SEPTEMBER 30, 2020

Unit : Baht

| | Initial Capital | Government Budget | Total Capital | Unappropriated retained earnings | Other components of equity | Total equity |
|--|--------------------|----------------------|---------------|--|----------------------------------|-----------------|
| Balance as of October 1, 2018 | 1,192,708,301 | 7,194,138,838 | 8,386,847,139 | 52,169,057,199 | (46,582,698) | 60,509,321,640 |
| The effect of changes in accounting errors | - | - | - | (58,320,691) | 52,544,948 | (5,775,743) |
| Balance after Adjustment | 1,192,708,301 | 7,194,138,838 | 8,386,847,139 | 52,110,736,508 | 5,962,250 | 60,503,545,897 |
| Remittance to Ministry of Finance | - | - | - | (3,498,300,000) | - | (3,498,300,000) |
| Profit for the year | - | - | - | 7,003,752,129 | - | 7,003,752,129 |
| Total comprehensive income for the year | - | - | - | - | (385,421,530) | (385,421,530) |
| Balance as of September 30, 2019 | 1,192,708,301 | 7,194,138,838 | 8,386,847,139 | 55,616,188,637 | (379,459,280) | 63,623,576,496 |
| Balance as of October 1, 2019 | 1,192,708,301 | 7,194,138,838 | 8,386,847,139 | 55,621,697,262 | (379,459,280) | 63,629,085,121 |
| The effect of changes in accounting errors | - | - | - | (5,508,625) | - | (5,508,625) |
| Balance after Adjustment | 1,192,708,301 | 7,194,138,838 | 8,386,847,139 | 55,616,188,637 | (379,459,280) | 63,623,576,496 |
| Remittance to Ministry of Finance | - | - | - | (2,792,900,000) | - | (2,792,900,000) |
| Profit for the year | - | - | - | 5,622,961,564 | - | 5,622,961,564 |
| Total comprehensive income for the year | - | - | - | - | (171,107,757) | (171,107,757) |
| Balance as of September 30, 2020 | 1,192,708,301 | 7,194,138,838 | 8,386,847,139 | 58,446,250,201 | (550,567,037) | 66,282,530,303 |

METROPOLITAN WATERWORKS AUTHORITY
STATEMENTS OF CASH FLOWS
FOR THE YEARS ENDED SEPTEMBER 30, 2020

| | 2020 | Unit : Baht 2019 (Restated) |
|---|---------------|--|
| Cash flows from operating activities | | |
| Profit for the year | 5,622,961,564 | 7,003,752,129 |
| Adjustment of net income to cash received (paid) | | |
| From operating activities | | |
| Depreciation | 4,756,186,819 | 4,721,127,786 |
| Amortization - intangible assests | 72,724,901 | 87,275,498 |
| Amortization | 54,512 | 54,512 |
| Allowance for obsolete inventories | 393,612 | - |
| Doubtful accounts | 8,504,890 | 2,820,328 |
| (Gains) losses on foreign exchange rate | (74,210) | 127,977 |
| Losses from disposal of assets | 14,005,944 | 22,909,348 |
| Gains from disposal of obsolete materials and supplies | (18,500,213) | (8,754,666) |
| Finance costs | 25,486,788 | 30,830,044 |
| Interest income | (415,852,248) | (389,434,677) |
| Deferred revenues from donated assets | (2,855,831) | (2,975,857) |
| Deferred revenues from tab water connection fees | (232,469,496) | (369,533,763) |
| Deferred revenues from work contract revenues | (508,175,215) | (471,075,832) |
| Deferred revenues from pipelines-MOU | (42,308,735) | (38,609,230) |
| Provision for employee benefit obligations | 236,648,520 | 554,924,831 |
| Prosecution losses | 16,357,866 | - |
| Other operating expenses | (1,249,949) | - |
| Other non-operating expenses | - | (203,336) |
| Operating income before changes in operating assets and liabilities | 9,531,839,519 | 11,143,235,092 |
| Operating assets (increase) decrease | | |
| Trade accounts receivable | (100,224,553) | (48,972,206) |
| Accrued revenue of water sales, meter fees and raw waters | 25,464,693 | (2,057,823) |
| Inventories | 238,982,965 | 76,257,205 |
| Other current assets | (4,192,588) | 2,392,094 |
| Other non-current assets | 19,870,087 | (578,211) |

The accompanying notes are an integral part of these financial statements.

METROPOLITAN WATERWORKS AUTHORITY
STATEMENTS OF CASH FLOWS (Continued)
FOR THE YEARS ENDED SEPTEMBER 30, 2020

| | 2020 | Unit : Baht 2019 (Restated) |
|--|------------------------|--|
| Cash flows from operating activities (Continued) | | |
| Operating liabilities increase (decrease) | | |
| Trade accounts payable | (2,199,744,537) | (2,070,590,639) |
| Accrued bonus expense | (193,007,875) | (89,736,439) |
| Other current liabilities | (53,602,773) | 61,808,930 |
| Provision for employee benefits | (139,250,398) | (130,218,182) |
| Customers' guarantee deposits | (192,627,562) | 31,717,664 |
| Deferred revenues | 974,101,518 | 1,159,862,395 |
| Unearned income-MOU | 49,345,816 | 50,399,645 |
| Other non-current liabilities | (1,862,094) | 50,632,131 |
| Net cash from operating activities | 7,955,094,238 | 10,234,153,675 |
| Cash flows from investing activities | | |
| Current investment increase | 8,482,594,000 | 1,244,972,416 |
| Long - term investment decrease | (8,100,000,000) | (4,700,000,000) |
| Interest received | 489,542,355 | 231,377,169 |
| Proceeds from disposals of property, plant, and equipment | 35,811,121 | 30,754,091 |
| Proceeds from disposal of obsolete materials and supplies | 18,991,488 | 12,832,747 |
| Payments of fixed assets acquisition | (3,982,064,880) | (2,885,597,203) |
| Net cash used in investing activities | (3,055,125,916) | (6,065,660,780) |
| Cash flows from financing activities | | |
| Repayment on borrowing | (82,896,849) | (81,132,469) |
| Finance costs | (25,649,122) | (31,917,900) |
| Remittance to Ministry of Finance | (3,413,200,000) | (3,904,000,000) |
| Net cash used in financing activities | (3,521,745,971) | (4,017,050,369) |
| Net increase(decrease) in cash and cash equivalents | 1,378,222,351 | 151,442,526 |
| Cash and cash equivalents at the beginning of the year | 600,954,953 | 449,514,446 |
| Cash and cash equivalents at the ending of the year | 1,979,177,304 | 600,956,972 |
| Supplementary cash flow information | | |
| Invested in fixed assets on payables | 366,232,067 | 379,659,506 |

The accompanying notes are an integral part of these financial statements.

METROPOLITAN WATERWORKS AUTHORITY
NOTES TO THE FINANCIAL STATEMENTS
FOR THE YEARS ENDED SEPTEMBER 30, 2020

1. GENERAL INFORMATION

Established and Objective

1.1 Metropolitan Waterworks Authority (MWA) is the state enterprise under the Metropolitan Waterworks Authority Act, B.E. 2510 (1967) and its amendment with objectives as follows,

1.1.1 To survey and provide raw water sources and acquire raw water for use in the waterworks.

1.1.2 To produce, supply and distribute treated water in the Bangkok Metropolis, Nonthaburi and Samut Prakan provinces and control the standard of the private waterworks system in such areas.

1.1.3 To engage in other related business or beneficial to MWA.

The head office is located at 400 Prachachuen Road, Laksi, Bangkok, 10210.

1.2 Important event during reporting period

In 2020, the situation of the Coronavirus Disease 2019 (COVID-19) outbreak, affect on the performance of the MWA for the year ended September 30, 2020, by the MWA has followed Government measures to help customer according to the cabinet meeting resolutions on March 17, 2020 and May 5, 2020 are as follows:

1. Extension of the payment period for customer who registered for hotel business and residential rental without interest can pay in installments up to 6 months of each billing. (usage of April - May 2020 water period)

2. Reduction of water bills for all Categories of customer. Starting from usage of April - June 2020 water period (billing of May - July 2020), details are as follows:

- Case 1, customers who use water less than or equal to 10 cubic meters, waive of monthly service fee and raw water fee

- Case 2, customers who consume more than 10 cubic meters of water, waive of billing for the first 10 cubic meters of water. Excess of 10 cubic meters, reduce of billing at 20%.

3. Refund water usage insurance for Category 1, Residential and Category 2 such as water users, government businesses, state enterprises, industry and others.

4. Waive of fees for payment through an agency for a period of 3 months from 17 April - 30 June 2020.

5. Refrain from Temporary and permanent suspending water supply service (no wire harnessing and water meter removal) for a period of 6 months from March 23 to September 30, 2020. Apart From waive of fees for payment through an agency for overdue water bill invoices from April 7 - October 31, 2020 according to the memorandum No. D.G.(E.S.) 79/2020 dated March 31, 2020, D.G.(E.S.) 112/2020 dated May 14, 2020 and D.G.(E.S.) 217/2563 dated August 31, 2020

The MWA has been aware of the impact from the implementation of the above measures. In the income statement for the year ended September 30, 2020.

2. BASIS OF PREPARATION AND PRESENTATION OF THE FINANCIAL STATEMENTS

The financial statements have been prepared in accordance with Thai Generally Accepted Accounting Principles under the Accounting Act, B.E.2543 being these Thai Financial Reporting Standards issued under the Accounting Profession Act, B.E. 2547 and presents its financial statements in compliance with the notification of the Department of Business Development “Definition of the abbreviated components required in the financial statements” B.E. 2559.

Preparation of financial statements in accordance with Thai Financial Reporting Standards, Management is required to use estimates and assumptions that affect income, expenditure, assets and liabilities for the purpose of determining the value of assets, liabilities as well as contingent liabilities. For that reason the result of the transactions when actually happened therefore may differ from the estimates.

3. NEW FINANCIAL REPORTING STANDARDS

3.1 Thai Financial Reporting Standards that became effective in the current year

MWA has adopted the revised and new financial reporting standards issued by the Federation of Accounting Professions which become effective for fiscal years beginning on or after January 1, 2019. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards, with most of the changes directed towards revision of wording and terminology, and provision of interpretations and accounting guidance to users of standards. The adoption of these financial reporting standards does not have any significant impact on the financial statements.

3.2 Thai Financial Reporting Standards not yet effective

During the period, the Federation of Accounting Professions announced several revised financial reporting standards (revised 2019). This is effective for financial statements with accounting periods beginning on or after January 1, 2020. Such financial reporting standards have been revised or made to be in line with International Financial Reporting Standards. The management of the MWA is currently assessing the impact on the financial statements of financial reporting standards that will become effective in the future.

4. CHANGE IN ACCOUNTING ESTIMATES AND ERRORS

4.1 The MWA HAS CHANGED ITS ESTIMATION FOR THE FISCAL YEAR 2020 AS FOLLOWS:

1. The residual value of water meter category at the end of the useful life. From 15% rate to 5% of the acquired value.
2. Originally water meter calculated depreciation not exceeding the useful life of 8 years, changed to calculate depreciation not exceeding 10 years of useful life.
3. Originally revenue recognition for new water supply installation was recognized according to the useful life of the property for 8 years, transforming to 10 years.

As a result of the estimation changes, the depreciation of water meter assets for fiscal year 2020 has been increased by approximately 11.16 million baht and revenue installing new water supply for fiscal year 2020 decreased approximately 126.49 million baht.

4.2 EMPLOYEE BENEFIT OBLIGATIONS

In 2020, the MWA has reviewed the estimates of expenses and employee benefit obligations in accordance with accounting standards. From the new appraisal, the assumptions used in the calculation, such as discount rate, salary increase rate, employee turnover rate and mortality rate, etc., causes the difference between the original provision and the recalculated provision. The MWA has recorded such differences as actuarial gains and losses in other comprehensive income statements. The difference from other long-term employee benefits of the MWA is recognized immediately in the statement of income.

4.3 CORRECTIONS OF ERRORS

In the fiscal year 2020, the MWA has found errors in accounting recording as follows:

The money received by government to contribute to the construction of the plumbing works according to the Memorandum of Understanding for the Subsidy (MOU)

Previously, the MWA showed government grants in relation to assets. It is deducted from the value of the related assets. Government grants are recognized when work is completed in profit or loss over the useful life of the asset in reduced depreciation.

Then MWA considered that the item did not qualify for government grants According to TAS 20 Accounting for Government Grants and Disclosure of Government Assistance. Therefore MWA has amended such items to be in accordance with the Financial Reporting Standard No. 15 regarding revenue from contracts with customers. It is recorded as an unearned income item when the contributions are received. It is recognized as a deferred income when the asset is ready for use. It is recognized as income at a consistent rate with depreciation over the useful life of that asset.

The MWA has adjusted the financial statements for comparison purpose. With the following effects

| | Unit : Million Baht | |
|---|---------------------|----------|
| STATEMENTS OF FINANCIAL POSITION AS OF SEPTEMBER 30, | 2019 | 2018 |
| Increase Net Property, Plant and Equipment | 416.66 | 389.35 |
| Increase Deferred revenues | 422.16 | 395.01 |
| Increase Unearned income | 110.95 | 125.95 |
| Decrease Government Grants | (110.95) | (125.84) |
| Decrease Unappropriated retained earnings | (5.50) | (5.77) |
| STATEMENTS OF INCOME FOR THE YEARS ENDED SEPTEMBER 30, 2019 | | |
| Increase Other operating income | 38.61 | |
| Increase Depreciation and amortization expenses | 38.34 | |
| Increase Other expenses | 0.01 | |

5. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

5.1 REVENUES AND EXPENSES RECOGNITION are recognized on accrual basis.

5.2 CASH AND CASH EQUIVALENTS

Cash and cash equivalents comprise cash on hand, deposits held at call with banks but do not include deposits with banks which are held to maturity, and other short-term highly liquid investments with maturities of three months or less from the date of acquisition and without restriction of use and that are subject to an insignificant risk of change in value.

5.3 TRADE ACCOUNTS RECEIVABLE AND ALLOWANCE FOR DOUBTFUL ACCOUNTS

Trade Accounts receivable are stated at original invoice amount less allowance for doubtful accounts. Allowance for doubtful accounts computed from percentage of the outstanding balance of trade accounts receivable except trade accounts receivable from government agencies and state enterprises, which is overdue more than 6 months from the date of the debt due. The estimation has been based on the Ministry of Finance regulation regarding the accounting and finance of state enterprises B.E. 2548 as follow:

| <u>Outstanding period</u> | <u>Percentage of Allowance for Doubtful Accounts</u> |
|---------------------------|--|
| Over 6 months - 1 Year | 50 |
| Over 1 Year | 100 |

5.4 INVENTORIES

Inventories are valued at the lower of cost price or net realizable value, Consist of:

5.4.1 Materials and supplies use in MWA's operation such as pipes, water meter and chemical are valued at cost moving average method.

For disposal obsolete materials will have an allowance for loss with the same amount.

Obsolete materials by dismantling of assets valued at book values.

5.4.2 Finished Goods comprises of drinkable bottle are valued cost moving average method.

5.5 PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment are stated at cost on the date of acquisition or the completion of constructions, less accumulated depreciation. The cost of assets includes the acquisition price and other necessary expenses in making them ready to operate.

Depreciation of plant and equipment is calculated by reference to their costs on a straight-line basis over the estimated useful lives as follows:

| | Useful lives (Years) |
|-------------------------|----------------------|
| Land improvement | 30 |
| Building and factory | 30 |
| Machinery and equipment | 5, 7, 10, 20, 25 |
| Pipe and tunnel | 10, 15, 25, 35 |
| Meter | 7, 10 |
| Office equipments | 5 |
| Vehicles | 5, 8 |

Donated assets recorded with deferred revenue and recognized to revenue throughout the useful lives.

5.6 INTANGIBLE ASSETS

Intangible assets are the right to use the digital data map and the computer software presented at cost deducted by accumulated amortization expense. Amortization is charged to the income statement on a straight-line basis according to the 5-20 years estimated useful life of assets.

5.7 WORKS UNDER CONSTRUCTION

All costs related directly to qualifying assets, and its assets under construction are recorded as works under construction. When the construction is completed and prepare the assets for its intended use, its cost will be transferred to property, plant and equipment.

5.8 DEFERRED REVUNUES

5.8.1 Deferred revenue is the money that the MWA charges from the applicant to use the water supply for the installation of new water supply and the laying of pipes. The ownership of assets, maintenance and repair belong to the MWA. Such items are presented as deferred income. They are recognized as income at a rate consistent with depreciation over the useful life of that asset.

5.8.2 The asset from donation account is recorded together with the Deferred revenue from donation. They are recognized as income at a rate consistent with depreciation over the useful life of that asset for donation assets in operations.

5.9 BORROWING COSTS

Borrowing costs consist of interest expense, fee, all of the finance charges and exchange differences arising from foreign currency. Adjustment of the cost of interest expense recognized as an expense in the whole amount.

Except for borrowing costs related to qualifying fixed assets and assets under construction are capitalized as part of the constructions cost. When constructions are completed, such borrowing costs will be recorded as the expenses.

5.10 FOREIGN CURRENCY TRANSACTIONS

Transactions in foreign currencies are converted to Thai Baht at the exchange rates prevailing at the dates of the monetary assets and liabilities transactions. Denominated in foreign currencies at the end of reporting period are Thai Baht conversion at the exchange rates prevailing at that dates as referred to the average buying or selling rate notified by the Bank of Thailand. Gains (losses) on foreign exchange rate resulting from the currency adjustment are recognized as revenue and expense.

5.11 EMPLOYEE BENEFITS

Recognition and measurement

5.11.1 Short-term employee benefits are recognized in profit and loss as expenses when incurred.

5.11.2 Post-employment benefits

Defined contribution plans

MWA and its employees have established MWA provident fund in accordance with the Provident Fund Act B.E. 2530 (1987) and registered on June 2, 1997.

The fund is separated from assets of MWA and managed by asset management company and will be paid to employees upon termination of employment in accordance with the rules of the fund.

The MWA contributes to the fund on a monthly basis at a rate of 9% of salaries for members having 1-10 years of service, 10% for members having 11-20 years of service and 11 % for members having more than 20 years of service. Contributions are recognized in loss as expenses when incurred.

Defined benefit plans comprised of 4 projects as follows:

1. The pension fund MWA established MWA employee pension fund on October 28, 1976 with the objective of helping the employees in the case of vacating office without fault equal to the product of working age calculated annually by the last month's salary. MWA contribution to the fund on a monthly basis at the rate of 10% of salary of MWA pension fund members.

2. The remuneration on retirement preferences is employee benefits are notification of State Enterprise Labor Relations Commission's minimum standards of employment conditions in state-owned enterprises, 2010. Employee retired which work more than 15 years. Benefits are equal to the wage rate of the last 300 days.

On September 25, 2019, the State Enterprise Labor Relations Committee announced The Government Gazette, the minimum standard of employment conditions in state enterprises (Issue 4), issued with the approval of the Cabinet on September 10, 2019 which stipulates that employees who have worked continuously for 20 years or more to receive benefits not less than the last 400 days' wage rate.

3. The annual leave project that has not been exercised is employee benefits retirement and the annual leave is not exercised. Benefits are equal to the number of days that have not been exercised. Up to 45 days of the final wage rate.

4. The project of the awards age 60 years or retirement is a project of the awards when employees age 60 years or retirement.

The obligation under the defined benefit plan is determined based on actuarial techniques, using the Projected Unit Credit Method, in order to determine present value of the obligation, current service cost and past service cost. These are recognized as a liability in statements of financial position and expenses in profit and loss. Actuarial gains and losses arising from post-employment benefits are recognized in statements of comprehensive income when incurred.

5.11.3 Other long-term employee benefits plan is a project of the awards when employees work 25 years.

The MWA uses actuarial estimation techniques in the same method as for termination of employment benefit plans. It is recognized as a liability in the statement of financial position. Actuarial expenses and gains (losses) are recognized in the income statement in the period in which they are incurred.

6. SIGNIFICANT ACCOUNTING JUDGEMENTS AND ESTIMATES

The preparation of financial statement in conformity with generally accepted accounting principles requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income, and expenses. Actual results may differ from these estimates. The significant judgements and estimate is as follow:

6.1 PROPERTY, PLANT, EQUIPMENT AND DEPRECIATION

In determining depreciation of plant and equipment, the management is required to make estimates of the useful lives and residual value of the plant and equipment and to review estimate useful lives when there are any changes.

6.2 ACCRUED REVENUE OF WATER SALES, METER FEES

Unbilled revenue was calculated from water consumption from the last reading date to reporting date by estimated from water consumption average per day of the latest month to the following month backwards 3 years.

6.3 LITIGATION

The MWA has recorded provisions on litigation for cases which have considered the status of the cases and are expected to bear liability. As for the liabilities that may arise from being prosecuted for damages. In which the management has discretion In an evaluation of a lawsuit that has been prosecuted and is confident that no damages will occur, such provisions will not be recorded at the date of the financial statements.

7. ADDITIONAL DATA

7.1 CASH AND CASH EQUIVALENTS comprised of:

| | Unit : Million Baht | |
|-----------------------------|---------------------|---------------|
| | <u>2020</u> | <u>2019</u> |
| Cash on hand | 1.71 | 2.38 |
| Savings and current account | 1,965.52 | 586.97 |
| Cash in transit | 11.95 | 11.60 |
| Total | <u>1,979.18</u> | <u>600.95</u> |

7.2 CURRENT INVESTMENTS comprised of:

Current investment as of September 30, 2020 and 2019 amounting to 9,801.30 million Baht and 18,283.89 million Baht are fixed deposit account (over 3 months).

7.3 TRADE ACCOUNTS RECEIVABLE comprised of:

| | Unit : Million Baht | |
|--|---------------------|----------------|
| | <u>2020</u> | <u>2019</u> |
| Water utilities bills receivable | 697.37 | 592.85 |
| <u>Less</u> Undue output taxes water utilities | <u>(44.79)</u> | <u>(37.97)</u> |
| Total water utilities bills receivable | 652.58 | 554.88 |
| Water connection fees receivable | 8.79 | 5.04 |
| Total trade accounts receivable | 661.37 | 559.92 |
| <u>Less</u> allowance for doubtful accounts | <u>(13.89)</u> | <u>(8.73)</u> |
| Total | <u>647.48</u> | <u>551.19</u> |

As of September 30, 2020 and 2019, the water utility bills receivable were shown as follows:

| | Unit : Million Baht | | | | | |
|------------------------|---------------------|---------------|---------------|----------------|---------------|---------------|
| | <u>2020</u> | | | <u>2019</u> | | |
| <u>Aging period</u> | <u>Private</u> | <u>Public</u> | <u>Total</u> | <u>Private</u> | <u>Public</u> | <u>Total</u> |
| | <u>sector</u> | <u>sector</u> | | <u>sector</u> | <u>sector</u> | |
| 1 - 6 months | 318.39 | 251.81 | 570.20 | 214.76 | 286.12 | 500.88 |
| Over 6 months – 1 year | 11.54 | 30.13 | 41.67 | 1.74 | 17.03 | 18.77 |
| Over 1 year | 8.09 | 32.62 | 40.71 | 7.82 | 27.41 | 35.23 |
| Total | <u>338.02</u> | <u>314.56</u> | <u>652.58</u> | <u>224.32</u> | <u>330.56</u> | <u>554.88</u> |

7.4 ACCRUED REVENUE OF WATER SALES, METER FEES comprised of:

| | Unit : Million Baht | |
|----------------|----------------------------|--------------------|
| | <u>2020</u> | <u>2019</u> |
| Private sector | 721.49 | 745.39 |
| Public sector | 105.74 | 107.30 |
| Total | <u>827.23</u> | <u>852.69</u> |

7.5 INVENTORIES comprised of:

| | Unit : Million Baht | |
|---|----------------------------|--------------------|
| | <u>2020</u> | <u>2019</u> |
| Finish goods | 0.35 | 0.55 |
| Materials and Supplies | 214.26 | 210.23 |
| Material in transit | 2.74 | 1.17 |
| Less allowance for obsolete inventories | (0.39) | - |
| Total | <u>216.96</u> | <u>211.95</u> |

7.6 OTHER CURRENT ASSETS comprised of:

| | Unit : Million Baht | |
|-----------------------------|----------------------------|--------------------|
| | <u>2020</u> | <u>2019</u> |
| Accrued interest receivable | 175.69 | 249.38 |
| Prepaid expense | 0.12 | 0.16 |
| Other assets | 5.81 | 1.58 |
| Total | <u>181.62</u> | <u>251.12</u> |

7.7 PROPERTY, PLANT AND EQUIPMENT details as follows:

Unit : Million baht

| | 2020 | | | | | | | | |
|----------------------------|-------------|-----------|------------|--------------|--------------------------|--------------|-----------|--------------|----------------|
| | Cost | | | | Accumulated Depreciation | | | | Property,Plant |
| | Oct 1, 2019 | Additions | Write off | Sep 30, 2020 | Oct 1, 2019 | Depreciation | Write off | Sep 30, 2020 | and Equipment |
| | | | | | | | | | Sep 30, 2020 |
| Land | 4,287.78 | - | - | 4,287.78 | - | - | - | - | 4,287.78 |
| Building and improvements | 19,532.78 | 143.69 | (0.51) | 19,675.96 | 12,873.54 | 462.34 | (0.34) | 13,335.54 | 6,340.42 |
| Machineries and equipments | 11,894.66 | 372.72 | (126.81) | 12,140.57 | 9,286.59 | 461.26 | (126.72) | 9,621.13 | 2,519.44 |
| Pipes | 91,310.75 | 3,100.10 | (192.20) | 94,218.65 | 60,283.70 | 3,159.82 | (178.62) | 63,264.90 | 30,953.75 |
| Meters | 5,773.87 | 445.96 | (359.43) | 5,860.40 | 3,639.55 | 436.49 | (318.71) | 3,757.33 | 2,103.07 |
| Office - equipments | 2,191.47 | 150.97 | (280.29) | 2,062.15 | 1,687.91 | 220.02 | (280.26) | 1,627.67 | 434.48 |
| Vehicles and transport | 341.97 | 21.67 | (48.43) | 315.21 | 231.70 | 16.42 | (44.84) | 203.28 | 111.93 |
| Total | 135,333.28 | 4,235.11 | (1,007.67) | 138,560.72 | 88,002.99 | 4,756.35 | (949.49) | 91,809.85 | 46,750.87 |

Property, plant and equipment, amounting to 138,560.72 million Baht , as of September 30, 2020 included fully depreciation assets 37,509.75 million Baht, which have the carrying amount 47.92 million Baht.

Unit : Million baht

| | 2019 | | | | | | | | |
|----------------------------|-------------|-----------|-----------|--------------|--------------------------|--------------|-----------|--------------|----------------|
| | Cost | | | | Accumulated Depreciation | | | | Property,Plant |
| | Oct 1, 2018 | Additions | Write off | Sep 30, 2019 | Oct 1, 2018 | Depreciation | Write off | Sep 30, 2019 | and Equipment |
| | | | | | | | | | Sep 30, 2019 |
| Land | 4,284.28 | 3.50 | - | 4,287.78 | - | - | - | - | 4,287.78 |
| Building and improvements | 19,415.83 | 129.86 | (12.91) | 19,532.78 | 12,401.07 | 482.47 | (10.00) | 12,873.54 | 6,659.24 |
| Machineries and equipments | 11,659.20 | 349.87 | (114.41) | 11,894.66 | 8,913.81 | 484.76 | (111.98) | 9,286.59 | 2,608.07 |
| Pipes | 88,144.93 | 3,460.99 | (295.17) | 91,310.75 | 57,463.87 | 3,096.05 | (276.22) | 60,283.70 | 31,027.05 |
| Meters | 5,645.34 | 409.90 | (281.37) | 5,773.87 | 3,485.46 | 391.53 | (237.44) | 3,639.55 | 2,134.32 |
| Office - equipments | 1,934.87 | 343.29 | (86.69) | 2,191.47 | 1,525.60 | 248.96 | (86.65) | 1,687.91 | 503.56 |
| Vehicles and transport | 352.52 | 19.54 | (30.09) | 341.97 | 243.99 | 17.36 | (29.65) | 231.70 | 110.27 |
| Total | 131,436.97 | 4,716.95 | (820.64) | 135,333.28 | 84,033.80 | 4,721.13 | (751.94) | 88,002.99 | 47,330.29 |

Property, plant and equipment, amounting to 135,333.28 million Baht, as of September 30, 2019 included fully depreciation assets 37,135.70 million Baht, which have the carrying amount 139.04 million Baht.

7.8 INTANGIBLE ASSETS

Intangible assets presented at cost deduct by accumulated amortization expense. Amortization is calculated by straight-line method basis according to estimated useful life of assets, details as follows:

Unit : Million baht

| | <u>2020</u> | | | | | | | |
|------------------------------------|--------------------|------------------|------------------|---------------------------------|--------------------|---------------------|------------------|--------------------------|
| | <u>Cost</u> | | | <u>Accumulated Depreciation</u> | | | | <u>Intangible assets</u> |
| | <u>Oct 1, 2019</u> | <u>Additions</u> | <u>Write off</u> | <u>Sep 30, 2020</u> | <u>Oct 1, 2019</u> | <u>Amortization</u> | <u>Write off</u> | <u>Sep 30, 2020</u> |
| Rights to use the digital data map | 209.89 | 1.85 | - | 211.74 | 170.09 | 8.71 | - | 178.80 |
| Software | 1,160.90 | 41.92 | (17.30) | 1,185.52 | 1,030.28 | 64.02 | (13.73) | 1,080.57 |
| Total | 1,370.79 | 43.77 | (17.30) | 1,397.26 | 1,200.37 | 72.73 | (13.73) | 1,259.37 |

Unit : Million baht

| | <u>2019</u> | | | | | | | |
|------------------------------------|--------------------|------------------|------------------|---------------------------------|--------------------|---------------------|------------------|--------------------------|
| | <u>Cost</u> | | | <u>Accumulated Depreciation</u> | | | | <u>Intangible assets</u> |
| | <u>Oct 1, 2018</u> | <u>Additions</u> | <u>Write off</u> | <u>Sep 30, 2019</u> | <u>Oct 1, 2018</u> | <u>Amortization</u> | <u>Write off</u> | <u>Sep 30, 2019</u> |
| Rights to use the digital data map | 215.68 | 4.00 | (9.79) | 209.89 | 171.02 | 8.86 | (9.79) | 170.09 |
| Software | 1,170.43 | 74.93 | (84.46) | 1,160.90 | 1,036.33 | 78.41 | (84.46) | 1,030.28 |
| Total | 1,386.11 | 78.93 | (94.25) | 1,370.79 | 1,207.35 | 87.27 | (94.25) | 1,200.37 |

7.9 ASSETS UNDER CONSTRUCTION details as follows:

Unit : Million baht

| | <u>2020</u> | | | |
|--|--------------------|------------------|------------------------------|---------------------|
| | <u>Oct 1, 2019</u> | <u>Additions</u> | <u>Transferred to assets</u> | <u>Sep 30, 2020</u> |
| The Seventh Bangkok water Supply Improvement Project | 132.72 | 100.79 | - | 233.51 |
| The Eighth Bangkok water Supply Improvement Project | 422.91 | 16.05 | (2.52) | 436.44 |
| The Ninth Bangkok water Supply Improvement Project | 596.87 | 370.85 | (434.82) | 532.90 |
| Normal Capital Expenditure | 4,822.73 | 5,279.36 | (3,678.91) | 6,423.18 |
| Total | 5,975.23 | 5,767.05 | (4,116.25) | 7,626.03 |

Unit : Million baht

| | 2019 | | | |
|--|--------------------|------------------|----------------------------------|---------------------|
| | Oct 1, 2018 | Additions | Transferred to assets | Sep 30, 2019 |
| The Seventh Bangkok water Supply Improvement Project | 431.51 | 76.97 | (375.76) | 132.72 |
| The Eighth Bangkok water Supply Improvement Project | 704.36 | 11.80 | (293.25) | 422.91 |
| The Ninth Bangkok water Supply Improvement Project | 330.48 | 387.12 | (120.73) | 596.87 |
| Normal Capital Expenditure | 4,456.40 | 4,167.77 | (3,801.44) | 4,822.73 |
| Total | 5,922.75 | 4,643.66 | (4,591.18) | 5,975.23 |

7.10 Advance Payment

Advance payment as of September 30, 2020 and 2019 amounting to 195.56 million Baht and 244.11 million Baht, respectively have paid according to the conditions in the agreement. The contractor has to submit Thai Government's bond or a guarantee issued by a local bank in accordance with Rules of Metropolitan Waterworks Authority (Volume 100) on Procurement B.E.2537 (1994) and Government Procurement and Supplies Management Act B.E. 2560 (2017).

7.11 LONG-TERM LOANS details as follows:

| Loan facility | 2020 | | 2019 | | Annual Interest rate (percent per annum) | Number of installment | Repayment Condition | |
|--|-----------------------------|---------------------------------|-----------------------------|---------------------------------|---|--------------------------|-------------------------------------|------------------------------------|
| | Foreign currency | Thai Baht equivalent | Foreign currency | Thai Baht equivalent | | | The First repayment date | The Last repayment date |
| | | | | | | | | |
| Japanese Yen currency (Unit : million Yen) | | | | | | | | |
| Yen 11,706.00 million loan | 1,120.15 | 340.19 | 1,400.19 | 402.25 | 1.70 | 37 | Sep 20, 2006 | Sep 20, 2024 |
| Total long-term loans | 1,120.15 | 340.19 | 1,400.19 | 402.25 | | | | |
| Less Total current portion | (280.04) | (85.05) | (280.04) | (80.45) | | | | |
| Long-term loans - net | 840.11 | 255.14 | 1,120.15 | 321.80 | | | | |

BOT average selling Foreign Exchange Rate

As of Sep 30, 2020 1 JPY = 0.303698 THB

As of Sep 30, 2019 1 JPY = 0.287284 THB

Movements in the long-term loans account are summarized below;

| | Unit : Million baht | |
|----------------------------------|-----------------------------------|---------------------------------------|
| | <u>Foreign</u> <u>currency</u> | <u>Thai Baht</u> <u>equivalent</u> |
| <u>Japanese Yen currency</u> | | |
| Balance as of October 1, 2019 | 1,400.19 | 402.25 |
| Losses on foreign exchange rate | - | 21.55 |
| Repayment | (280.04) | (83.61) |
| Balance as of September 30, 2020 | <u>1,120.15</u> | <u>340.19</u> |

7.12 ACCRUED REMITTANCE TO THE MINISTRY OF FINANCE

In this fiscal year, the Ministry of Finance has prescribed MWA to deliver a remittance to the Ministry of Finance 45% of the net income before provision of bonus expense, which delivering twice a year.

Movements in the accrual remittance to the Ministry of Finance account are summarized below;

| | Unit : Million Baht | |
|---------------------------------------|---------------------|-----------------|
| | <u>2020</u> | <u>2019</u> |
| Balance as of October 1, | 1,469.30 | 1,875.00 |
| Increase during the period | | |
| - The first half of the year 2019 | - | 2,029.00 |
| - The second half of the year 2019 | - | 1,469.30 |
| - The first half of the year 2020 | 1,943.90 | - |
| - The second half of the year 2020 | 849.00 | - |
| Decrease during the period | | |
| Remittance to the Ministry of Finance | | |
| - The second half of the year 2018 | - | (1,875.00) |
| - The first half of the year 2019 | - | (2,029.00) |
| - The second half of the year 2019 | (1,469.30) | - |
| - The first half of the year 2020 | (1,943.90) | - |
| Balance as at September 30, | <u>849.00</u> | <u>1,469.30</u> |

The outstanding balance of remittance to the Ministry of Finance as of the second half of the year 2020 amounting to 849.00 million Baht.

7.13 OTHER CURRENT LIABILITIES comprised of:

| | Unit : Million baht | |
|--------------------------------------|---------------------|-----------------|
| | <u>2020</u> | <u>2019</u> |
| Accrued interest payables | 0.65 | 0.81 |
| Accrued public utilities | 118.95 | 118.06 |
| Accrued expenses | 82.49 | 68.42 |
| Accrued expense on value added taxes | 53.58 | 52.81 |
| Accrued withholding taxes | 13.96 | 16.76 |
| Accrued bonus expense | 573.00 | 766.00 |
| Accrued raw water | 24.14 | 23.43 |
| Unearned income | 13.49 | 7.22 |
| Cross currency swap obligation | 42.49 | 76.17 |
| Outstanding cheques | 1.52 | 16.11 |
| Other liabilities | 230.88 | 277.04 |
| Total | <u>1,155.15</u> | <u>1,422.83</u> |

7.14 EMPLOYEE BENEFIT OBLIGATIONS

Provisions for employee benefits in the consolidated statement of financial position as of 30 September

| | Unit : Million baht | |
|--|---------------------|-----------------|
| | <u>2020</u> | <u>2019</u> |
| Post-employment benefits | | |
| The pension fund | 1,096.45 | 1,035.91 |
| The remuneration on retirement preferences | 1,925.00 | 1,843.69 |
| The annual leave project that has not been exercised | 217.99 | 200.49 |
| The project of the awards age 60 years or retirement | 151.27 | 110.99 |
| Total | <u>3,390.71</u> | <u>3,191.08</u> |
| <u>Less</u> Plan assets | <u>(710.29)</u> | <u>(766.62)</u> |
| Total Post-employment benefits | <u>2,680.42</u> | <u>2,424.46</u> |
| Other long-term employee benefits plan | | |
| The awards when employees work 25 years | 59.57 | 47.02 |
| Total Other long-term employee benefits plan | <u>59.57</u> | <u>47.02</u> |
| Employee benefit obligations - net | <u>2,739.99</u> | <u>2,471.48</u> |

Unit : Million baht

2020

| | Post-Employment Benefits | | | | | Other Long-term Employee Benefits | |
|---|---------------------------------|------------------|-----------------|-------------------|--------------|--|--------------|
| | Staff | Legal | Unused | Retirement | Total | 25 years | Total |
| | Pension | severance | vacation | award | | long- | |
| | fund | plan | plan | | | service | |
| | | | | | | award | |
| Of October 1, 2019 | 1,035.91 | 1,843.69 | 200.49 | 110.99 | 3,191.08 | 47.02 | 3,238.10 |
| service cost | 38.15 | 126.97 | 14.50 | 10.93 | 190.55 | 5.12 | 195.67 |
| Interest Cost from Defined Benefit Obligation | 9.87 | 25.57 | 2.89 | 1.99 | 40.32 | 0.67 | 40.99 |
| Benefits paid | (97.69) | (86.17) | (9.77) | (5.09) | (198.72) | (4.14) | (202.86) |
| Actuarial (Gains) Losses | 110.21 | 14.94 | 9.88 | 32.45 | 167.48 | 10.90 | 178.38 |
| Of September 30, 2020 | 1,096.45 | 1,925.00 | 217.99 | 151.27 | 3,390.71 | 59.57 | 3,450.28 |
| Less Fair value of plan assets | (710.29) | - | - | - | (710.29) | - | (710.29) |
| Amount recognized in statement of financial position. | 386.16 | 1,925.00 | 217.99 | 151.27 | 2,680.42 | 59.57 | 2,739.99 |

Unit : Million baht

2019

| | Post-Employment Benefits | | | | | Other Long-term Employee Benefits | |
|---|---------------------------------|------------------|-----------------|-------------------|--------------|--|--------------|
| | Staff | Legal | Unused | Retirement | Total | 25 years | Total |
| | Pension | severance | vacation | award | | long- | |
| | fund | plan | plan | | | service | |
| | | | | | | award | |
| Of October 1, 2018 | 1,010.60 | 1,140.42 | 169.92 | 114.04 | 2,434.98 | 53.95 | 2,488.93 |
| Past service cost | - | 355.17 | - | - | 355.17 | - | 355.17 |
| Service cost | 37.05 | 99.42 | 10.65 | 6.74 | 153.86 | 3.66 | 157.52 |
| Interest cost | 13.05 | 38.09 | 4.14 | 2.38 | 57.66 | 1.03 | 58.69 |
| Benefits paid | (107.46) | (72.68) | (10.75) | (5.13) | (196.02) | (6.13) | (202.15) |
| Actuarial (Gains) Losses | 82.67 | 283.27 | 26.53 | (7.04) | 385.43 | (5.49) | 379.94 |
| Of September 30, 2019 | 1,035.91 | 1,843.69 | 200.49 | 110.99 | 3,191.08 | 47.02 | 3,238.10 |
| Less Fair value of plan assets | (766.62) | - | - | - | (766.62) | - | (766.62) |
| Amount recognized in statement of financial position. | 269.29 | 1,843.69 | 200.49 | 110.99 | 2,424.46 | 47.02 | 2,471.48 |

Expenses recognized in the statements of comprehensive income, as follows:

Unit : Million baht

2020

| | Post-Employment Benefits | | | | | Other Long-term Employee Benefits | |
|---|--------------------------|----------------------|----------------------|------------------|----------|-----------------------------------|----------|
| | Staff Pension fund | Legal severance plan | Unused vacation plan | Retirement award | Total | 25 years long-service award | Total |
| Statements of income | | | | | | | |
| service cost | 38.15 | 126.97 | 14.50 | 10.93 | 190.55 | 5.12 | 195.67 |
| Interest Cost from Defined Benefit Obligation | 9.87 | 25.57 | 2.89 | 1.99 | 40.32 | 0.67 | 40.99 |
| Return on plan assets | (10.91) | - | - | - | (10.91) | - | (10.91) |
| Actuarial (Gains) Losses | - | - | - | - | - | 10.90 | 10.90 |
| Total | 37.11 | 152.54 | 17.39 | 12.92 | 219.96 | 16.69 | 236.65 |
| Other comprehensive income | | | | | | | |
| Actuarial Gains (Losses) | (113.84) | (14.94) | (9.88) | (32.45) | (171.11) | - | (171.11) |
| Total | (113.84) | (14.94) | (9.88) | (32.45) | (171.11) | - | (171.11) |

Unit : Million baht

2019

| | Post-Employment Benefits | | | | | Other Long-term Employee Benefits | |
|----------------------------|--------------------------|----------------------|----------------------|------------------|----------|-----------------------------------|----------|
| | Staff Pension fund | Legal severance plan | Unused vacation plan | Retirement award | Total | 25 years long-service award | Total |
| Statements of income | | | | | | | |
| Past service cost | - | 355.17 | - | - | 355.17 | - | 355.17 |
| Service cost | 37.05 | 99.42 | 10.65 | 6.74 | 153.86 | 3.66 | 157.52 |
| Interest cost | 13.05 | 38.09 | 4.14 | 2.38 | 57.66 | 1.03 | 58.69 |
| Return on plan assets | (10.97) | - | - | - | (10.97) | - | (10.97) |
| Actuarial (Gains) Losses | - | - | - | - | - | (5.49) | (5.49) |
| Total | 39.13 | 492.68 | 14.79 | 9.12 | 555.72 | (0.80) | 554.92 |
| Other comprehensive income | | | | | | | |
| Actuarial Gains (Losses) | (82.67) | (283.26) | (26.54) | 7.04 | (385.43) | - | (385.43) |
| Total | (82.67) | (283.26) | (26.54) | 7.04 | (385.43) | - | (385.43) |

Movements in the present value of the plan assets – Staff Pension fund, as follows:

| | Unit : Million baht | |
|------------------------------|---------------------|----------|
| | 2020 | 2019 |
| Beginning Balance | 766.62 | 827.58 |
| Add Return on plan assets | 10.91 | 10.97 |
| Obligation payable from MWA. | 34.08 | 35.53 |
| Less Benefits paid | (97.69) | (107.46) |
| Plan assets Gains (Losses) | (3.63) | - |
| Ending Balance | 710.29 | 766.62 |

Principal actuarial assumptions to determine the present value of Post-Employment Benefits provision, as follows:

| | Annual percentage (%) | |
|---------------------------|---|-------------|
| | 2020 | 2019 |
| Discount rate | 0.51-2.78 | 1.39 – 2.16 |
| Salary increase rate | 5.0-8.0 | 7.50 |
| Employee turnover rate | 0.0-2.0 | 0.78 |
| Mortality rate | According to the announcement by the Office of Insurance Commission (OIC) Thai Death Table 2017 | - |
| Improvement the mortality | 3.0 | - |

A sensitivity analysis of the Principal actuarial assumptions to determine the present value of post-employment benefit provisions and other long-term employee benefits as of September 30, 2020 is as follows:

| | Change in present value of provision increase (decrease) |
|--------------------------------|---|
| | Unit : Million baht |
| | 2020 |
| Discount rate -1.0% | 363.88 |
| Discount rate + 1.0% | (315.53) |
| Salary increase rate -1.0% | (293.95) |
| Salary increase rate +1.0% | 337.86 |
| Gold price -20% of assumptions | (42.17) |

| | |
|--|---------|
| Gold price +20% of assumptions | 42.17 |
| Employee turnover rate -20.0% of assumptions | 19.60 |
| Employee turnover rate +20.0% of assumptions | (19.32) |
| Improvement the mortality -1.0% | (10.84) |
| Improvement the mortality +1.0% | 9.54 |

7.15 PROVISION ON LITIGATION

As of September 30, 2020, the MWA was prosecuted to claim damages. Which has considered the status of the cases and expected to have liability in 4 cases and recorded the accounts at the expected payment 16.36 million Baht. Note to the financial statements No. 9.

7.16 DEFERRED REVENUES comprised of:

| Unit : Million baht | | | | |
|---------------------------|------------------------------|-----------------|---------------------------------|-------------------------------|
| 2020 | | | | |
| | <u>As of Oct 1, 2019</u> | <u>Added</u> | <u>Recognized as income</u> | <u>As of Sep 30, 2020</u> |
| Other assets | 14.31 | 1.53 | (2.86) | 12.98 |
| Water meter | 1,392.24 | 327.77 | (232.47) | 1,487.54 |
| Government plumbing works | 299.89 | 9.15 | (37.49) | 271.55 |
| Private plumbing works | 4,589.30 | 637.17 | (470.68) | 4,755.79 |
| MOU | 422.16 | 55.84 | (42.31) | 435.69 |
| Total | <u>6,717.90</u> | <u>1,031.46</u> | <u>(785.81)</u> | <u>6,963.55</u> |

| Unit : Million baht | | | | |
|---------------------------|------------------------------|-----------------|---------------------------------|-------------------------------|
| 2019 | | | | |
| | <u>As of Oct 1, 2018</u> | <u>Added</u> | <u>Recognized as income</u> | <u>As of Sep 30, 2019</u> |
| Other assets | 13.29 | 4.00 | (2.98) | 14.31 |
| Water meter | 1,425.56 | 336.21 | (369.53) | 1,392.24 |
| Government plumbing works | 322.42 | 14.08 | (36.61) | 299.89 |
| Private plumbing works | 4,214.19 | 809.57 | (434.46) | 4,589.30 |
| MOU | 395.01 | 65.76 | (38.61) | 422.16 |
| Total | <u>6,370.47</u> | <u>1,229.62</u> | <u>(882.19)</u> | <u>6,717.90</u> |

7.17 NON-CURRENT LIABILITIES comprised of:

| | Unit : Million baht | |
|--|----------------------------|-------------|
| | 2020 | 2019 |
| Collective and metering representative deposits | 22.80 | 23.49 |
| Work guarantee (retention) and Contractor deposits | 336.12 | 337.30 |
| Total | 358.92 | 360.79 |

7.18 CAPITAL

As of September 30, 2020, capital 8,386.85 million Baht, included initial capital 1,192.71 million Baht and government budget 7,194.14 million Baht.

7.19 RAW MATERIALS AND CONSUMABLES USED comprised of:

| | Unit : Million baht | |
|---|----------------------------|-------------|
| | 2020 | 2019 |
| Raw water | 299.86 | 279.05 |
| Chemical | 393.68 | 302.47 |
| Electricity utility | 1,423.89 | 1,424.02 |
| Pipe and equipment for repair and maintenance | 160.73 | 167.52 |
| Other raw material and consumables used | 133.39 | 138.97 |
| Total | 2,411.55 | 2,312.03 |

7.20 REMUNERATION FOR DIRECTORS

The remuneration for directors for the year ended September 30, 2020 and 2019 amounting to 21.60 million Baht and 23.34 million Baht are expense of Director and MWA's Board of directors.

7.21 OTHER OPERATING EXPENSES comprised of:

| | Unit : Million baht | |
|---|---------------------|-----------------|
| | 2020 | 2019 |
| Contract out - inspection and improvement of distribution valve | 25.17 | 19.60 |
| Contract out - leakage pipes survey and repair | 386.35 | 331.91 |
| Contract out - other services | 224.78 | 226.86 |
| Outsourcing expenditure | 209.27 | 210.49 |
| Collective and metering representative expenses | 126.49 | 130.07 |
| Repair and maintenance expenses | 191.83 | 151.96 |
| Work contracts expenses | 9.83 | 9.71 |
| Other expenses | 420.98 | 828.72 |
| Total | <u>1,594.70</u> | <u>1,909.32</u> |

7.22 GAINS (LOSSES) ON FOREIGN EXCHANGE RATE comprised of:

| | Unit : Million baht | |
|---------------------------|---------------------|-------------|
| | 2020 | 2019 |
| During period (realized) | | |
| - From loans repayment | 2.13 | 2.07 |
| On September (unrealized) | | |
| - From loans outstanding | (20.83) | 2.59 |
| - Cross currency swap | 20.91 | (2.72) |
| Total | <u>2.21</u> | <u>1.94</u> |

8. DISCLOSURES OF FINANCIAL INSTRUMENT

MWA had entered into Plain vanilla cross currency swap agreement on March 17, 2006, to reduce the risk from exchange rate. Contract principle amounting to 11,706.00 million Yen, utilized amounting to 5,180.74 million Yen, to the MWA's Lender through 18.5 years contract which details as follows.

| | |
|---|-----------------------|
| Swap contract notional receipt | 5,180.74 million Yen |
| Swap contract interest receipt rate (per annum) | 1.70 |
| Swap contract exchange rate | 1 JPY = 0.334 THB |
| Swap contract notional payment | 1,730.37 million Baht |
| Swap contract interest payment rate (percent per annum) | 5.759 |
| <u>As of September 30, 2020</u> | |
| Outstanding Loan | 1,120.15 million Yen |
| Remaining Tenor | 4 Years |

9. OBLIGATION AND CONTINGENT LIABILITIES

Material changes in the obligations and contingent liabilities with detail as follows:

9.1 OBLIGATIONS UNDER LEASE AGREEMENT is the amount to be paid in the future according to the lease agreement as of September 30, 2020 with detail as follows:

| | Unit : Million baht |
|----------------------------------|---------------------|
| | <u>2020</u> |
| Not more than 1 year | 79.33 |
| Over 1 year but not over 5 years | 148.59 |
| Over 5 years | <u>0.75</u> |
| Total | <u>228.67</u> |

9.2 CASE IN WHICH THE MWA FILED A PETITION TO REVOKE THE ARBITRAL AWARD

9.2.1 Metropolitan Waterworks Authority has hired Nawarat Patanakarn Public Company Limited, Contract No.G-MC-7D / 2 to construct a water tunnel. Construction cost limit of 1,142.00 million baht.

On June 22, 2010, the contractor submitted a dispute to the Arbitration Office. Council of the Thai Chamber of Commerce Dispute No.Black 5/2553 calls for the MWA to pay additional work according to the contract. The amount of capital is 145.27 million baht, plus interest at the rate of 7.5 percent per annum from the day following the date of the dispute. Until payment is complete

On October 31, 2016, the arbitral tribunal made a decision requiring the claimant to pay an amount of Baht 8.00 million to the claimant within 60 days from the day following the date of acknowledgment of the arbitral award. If the period has passed The claimant has not paid all or part of the payment to the claimant. The claimant shall pay interest at the rate of 7.5% per annum of the outstanding principal from the day following the due date until payment is complete.

On January 27, 2017, the MWA filed a petition to revoke the arbitral award to the Central Administrative Court.

On April 23, 2020, the Central Administrative Court dismissed the case.

On May 18, 2020, the MWA filed an appeal to the Supreme Administrative Court.

The matter is currently being considered by the Supreme Administrative Court.

The MWA has set aside losses that may arise from the outcome of the said case in item 7.15 in the financial statements 8.0 million Baht .

9.2.2 Hydrotek Public Company Limited and Salcon Engineering Berhad has submitted a dispute to Thailand Arbitration Center, black case no.112/2017, dated January 15, 2018, demanding MWA extended working period to 478 days and refunded fine to claimants amounting to 42.02 million Baht with interest at the rate 7.5 percent per annum, calculated from the date of filing statements of claim until the total payment has been met by contract no. G-PK/RB-8.

On July 12, 2018 Attorney submitted an objection.

Investigative appointment of opposing's witness on March 26, 2019 and April 3 and 5, 2019. The claimant requested to postpone the investigative appointment and submit the witness's account. The court allowed the submission of witness accounts and testimony until April 25, 2019.

Investigative appointment on October 9, 10 and 15, 2019.

On January 10, 2020, the arbitrator issued an award requiring the MWA to return the money to the claimant of 18.34 million baht.

At present, the matter is in the process of submitting a request for revocation of the arbitral award to the Administrative Court.

9.2.3 Metropolitan Waterworks Authority employ SG-STPE Joint Venture, Contract No. E-RW / TR (BK) / (MS) -8 (R) to operate water pump purchase and installation. Contract work value is 274.05 million baht and 407.64 million yen.

On 18 November 2014, the MWA issued a letter of termination of the agreement due to SG - STPE joint venture is unable to complete the work according to the contractual period, although the MWA has extended the contract for another 120 days.

On September 10, 2015, the contractor submitted a dispute to the Arbitration Institute. Dispute Black No. 66/2558 calls for the MWA to revoke the termination of the contract under the letter of termination dated November 18, 2014 and revoke a penalty amount of 134.21 million baht by allowing the contractor to return to work under the contract in part to finish and is entitled to receive the rest of the wages of 54.81 million baht and pay for the parts that have been delivered in the amount of 5.05 million baht, totaling 59.86 million baht. About the job abandonment contractor according to the said contract

On January 26, 2017, the contractor submitted an amendment to the dispute proposal by requiring the MWA to pay additional expenses of 56.61 million baht, totaling 116.47 million baht and 81.53 million yen.

On December 25, 2018, the Arbitral Tribunal issued an award for the MWA to pay the work fee for 5th to 6th payment period in 10% of contract work value, amounting to 27.40 million baht and 40.76 million yen, totaling 43.50 million baht. By requiring the petitioner to pay a fine of 69.00 million baht

At this time, the MWA and the claimant have filed a petition to revoke the award.

9.3 THE CASES ARE UNDER CONSIDERATION OF DEPARTMENT OF CIVIL DISPUTE SETTLEMENT AND ARBITRATION

9.3.1 Royal Irrigation Department demands from Department of Rural Roads and MWA reimburse damages from river bank protection wall moved and collapsed into Lad Pho canal amounting to 32.50 million Baht. The Department of Civil Dispute Settlement and Arbitration had memo no. 0๗0020(๗๗2)/14, dated January 11, 2018 to inform MWA for clarify the facts.

On February 28, 2018 MWA clarified the facts with related documents to attorney.

Currently this case is proceeding of attorney.

9.3.2 Metropolitan Electricity Authority (MEA) demands from MWA to settle final period for TIE LINE electric system improvement 69 KV and setting them at electric substation of Samsen Water Treatment Plant amounting to 4.09 million Baht. The Department of Civil Dispute Settlement and Arbitration had memo no. ๐๙0020(๗๗1)/6 ,dated January 5, 2018 to inform MWA for clarify the facts.

On March 29, 2018 MWA had memo to assign associated staff for clarify the facts. MWA clarified the facts with related documents to attorney.

On July 3, 2018 MWA appointed MEA to clarify the facts.

On January 16, 2019 MWA confirmed the facts and clarified additional facts and brought the witnesses to further clarify the facts to the prosecutor who held the case.

The Department of Civil Dispute Settlement and Arbitration requests the representatives of the MWA to give additional statements on April 24, 2019.

Currently this case is being processed by the prosecutor who owns the file.

9.4 MWA was charged 18 cases of lawsuit, estimated total claims for compensation and damages amount of Baht 248.48 million, as follow:

9.4.1 The four civil cases claimed for compensation amounting to 87.31 million Baht, on contract default, which two are being considered in the Civil Court, one case of the Appeal Court and another one is being considered in the Supreme Administrative Court.

9.4.2 The thirteen civil cases claimed for damages amounting to 160.89 million Baht, They are being considered. One cases under consideration of Civil Court, seven cases are in the Central Administrative Court, four cases are in the Supreme Administrative Court, and the other one case is in the Supreme Court.

9.4.3 The civil case claimed for damages amounting to 0.28 million Baht. This case is in the consideration of the Appeal Court.

The MWA has set aside a provision for damages that may arise as a result of the aforementioned cases in Clause 7.15 in the financial statements amounting to 8.36 million Baht.

10. ADJUSTMENT AND RECLASSIFICATION

The MWA has classified the statement of financial position as of 30 September 2019, the income statement, Statement of changes in equity and cash flow statement for the year Ended on September 30, 2019 to be compared.

| | Unit : Baht | | |
|---|------------------------------|-------------------|-----------------------------|
| Transactions | Before adjustment | Adjustment | After adjustment |
| <u>Statement of Financial position</u> | | | |
| <u>As of September 30, 2018</u> | | | |
| Net Property, Plant and Equipment | 47,013,811,035 | 389,354,036 | 47,403,165,071 |
| Deferred revenues | 5,975,458,977 | 395,017,262 | 6,370,476,239 |
| Unearned income | - | 125,950,297 | 125,950,297 |
| Government Grants | 125,837,780 | (125,837,780) | - |
| Unappropriated retained earnings | 52,122,474,501 | (11,737,993) | 52,110,736,508 |
| Other components of equity | - | 5,962,250 | 5,962,250 |
| <u>Statement of Financial position</u> | | | |
| <u>As of September 30, 2019</u> | | | |
| Net Property, Plant and Equipment | 46,913,635,425 | 416,655,639 | 47,330,291,064 |
| Deferred revenues | 6,295,739,938 | 422,164,264 | 6,717,904,202 |
| Unearned income | - | 110,952,931 | 110,952,931 |
| Government Grants | 110,952,931 | (110,952,931) | - |
| Unappropriated retained earnings | 55,242,237,982 | 373,950,655 | 55,616,188,637 |
| Other components of equity | - | (379,459,280) | (379,459,280) |
| <u>Statement of Income</u> | | | |
| <u>For the year ended September 30, 2019</u> | | | |
| Other operating income | 284,570,018 | 38,609,230 | 323,179,248 |
| Depreciation and amortization expenses | 4,770,122,620 | 38,335,176 | 4,808,457,796 |
| Other expenses | 36,698,328 | 6,936 | 36,705,264 |
| <u>Statement of change in Equity</u> | | | |
| <u>For the year ended September 30, 2019</u> | | | |
| <u>Unappropriated retained earnings</u> | | | |
| Balance as of October 1, 2018 | 52,122,474,501 | 46,582,698 | 52,169,057,199 |
| The effect of changes in accounting errors | - | (58,320,691) | (58,320,691) |
| Profit for the year | - | 7,003,752,129 | 7,003,752,129 |
| Total comprehensive income for the year | 6,618,063,481 | (6,618,063,481) | - |
| <u>Other components of equity</u> | | | |
| Balance as of October 1, 2018 | - | (46,582,698) | (46,582,698) |

| | | | |
|--|---|---------------|---------------|
| The effect of changes in accounting errors | - | 52,544,948 | 52,544,948 |
| Total comprehensive income for the year | - | (385,421,530) | (385,421,530) |

Statement of cash flows

For the year ended September 30, 2019

| | | | |
|--|---------------|--------------|---------------|
| Profit for the year | 7,003,485,011 | 267,118 | 7,003,752,129 |
| Depreciation | 4,682,792,610 | 38,335,176 | 4,721,127,786 |
| (Gains) losses from disposal of assets | 22,902,412 | 6,936 | 22,909,348 |
| Deferred pipelines revenues - MOU | - | (38,609,230) | (38,609,230) |
| Accrued bonus expense | - | (89,736,439) | (89,736,439) |
| Other current liabilities | (27,927,509) | 89,736,439 | 61,808,930 |
| Unearned income-MOU | - | 50,399,645 | 50,399,645 |

11. Approval of Financial Statements

These financial statements were authorized for issue by the Governor of MWA on March 17, 2021.

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Metropolitan Waterworks
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Metropolitan Waterworks Authority

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