



# Metropolitan Waterworks Authority

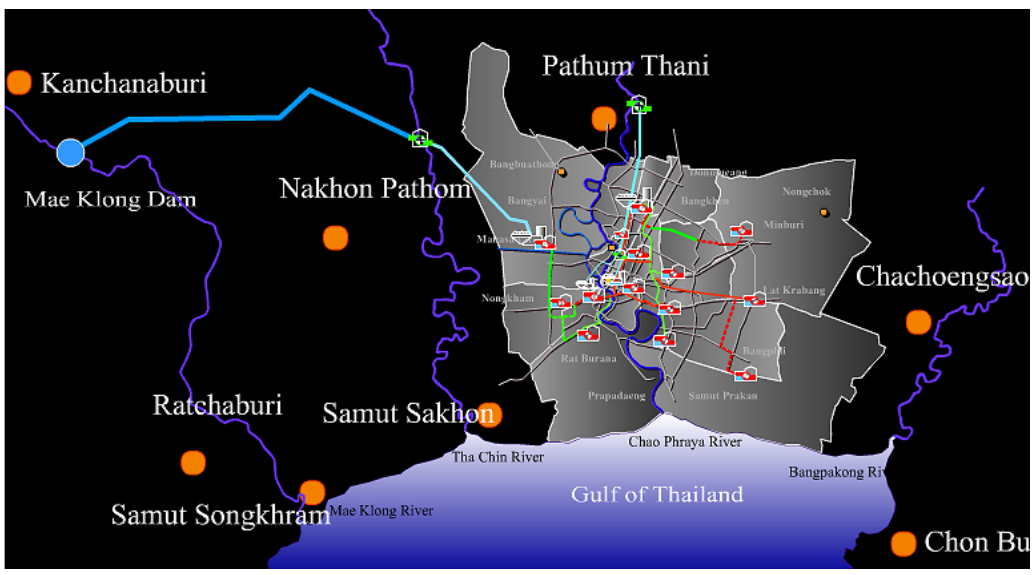
## Water Supply

Bangkok, Thailand

### Water Distribution in the Bangkok Region

The Metropolitan Waterworks Authority (MWA) was established in accordance with the Metropolitan Waterworks Authority Act in 1967 through the consolidation of four agencies.

Producing approximately 5 million cubic meters of water daily through 25,000 km of pipeline, MWA is today considered to be the world's largest water utility. The company mission is to supply high quality water to residential and industrial consumers in Bangkok, Nonthaburi and Samut Prakan. Thus, under the motto "Water for People", MWA is now serving the majority of the 14 million people in Bangkok.



MWA Service Area

MWA has achieved ISO certifications within several processes, such as water treatment and pipe repair. Besides MWA has asset values of around 54 billion Thai Baht (USD 1.37 billion), a 10 billion Baht revenue (USD 254 million) and an annual profit of more than 1 billion Baht (USD 25.4 million).

## CUSTOMER CASE

### Project Objectives

The primary objective of the project is to improve the distribution of potable water. Such improvements are much needed in Bangkok, as half of the drinking water produced never reaches the consumers due to leaks. To realize these improvements, MWA decided to implement the AQUIS simulation software from 7-Technologies (7T).

The order was placed from the 7T system integrator, Danwater's subsidiary Thai Danwater and includes data management of GIS (Geographic Information System) information from the pipeline network and the building of a computer model of the Bangkok water distribution system. The model is to be used for planning the division of the pipeline water network into 700 sections, which makes it possible to monitor and reduce loss that originates from leakages. As regards the large pipes, the model will enable MWA to constantly monitor the pipeline network.

### Network Description

Water consumption:	4,6mill/m <sup>3</sup>
Km of main pipes:	25,000
No. of distribution points:	1,684,505
Maximum size of pipe:	3,500 mm
Minimum Size of Pipe:	100 mm
Number of reservoirs:	35
Number of pump stations:	22

### AQUIS Applications

- AQUIS Hydraulic
- AQUIS Real-Time
- AQUIS Online Historical
- AQUIS Water Quality
- AQUIS Surge
- AQUIS Leak Detection
- AQUIS Load Forecaster
- AQUIS Model Manager Build
- AQUIS Model Manager Maintenance
- AQUIS Data Manager



*Wat Phra Keaw (Temple of the Emerald Buddha) in Bangkok*

### System Integrators

Danwater's know-how covers all aspects of water distribution, including water resources, water extraction, water treatment, distribution of potable water, wastewater treatment and sewer systems. Danwater cooperates closely with other companies, which all supplement each other and have around 120 specialists within the technical, economical and social areas of integrated water resources management.

Thai Danwater Co. Ltd. is a joint venture established in the spring of 2004 between Thai Hydro Engineering Co., Ltd. and Danwater.