



Berli Jucker Public Company Limited
บริษัท เบอร์ลี ยุคเกอร์ จำกัด (มหาชน)

Water Use Assessment Report

Support answer: 2.5 Water

Topic: Water Use Assessment

Report Year: 2024

Currently, the global water crisis has led to reduced water availability, lack of access to clean water, and widespread water pollution in several countries. Both the public and government sectors worldwide are adapting and preparing to address these issues by integrating water management methods into their operations. Effective water management is crucial for organizations to survive and thrive amid the water crisis.

To address these challenges, water management should be systematic and consistent across the organization. This approach enables easier analysis, planning, and resolution of water resource issues, aligning with the long-term goal of reducing water consumption by 15% per revenue by 2032 for Berli Jucker Public Company Limited and its Group of Companies (BJC).

BJC adopts key principles from ISO 46001: Water Efficiency Management Systems to guide its implementation of structured and measurable water management practices. This international standard provides a robust framework for improving water use efficiency across facilities and operations.

Water use assessment is a key process that helps identify opportunities for improving water efficiency.

Rubia Industries (RIL)

Rubia Industries (RIL) has implemented a water use assessment to identify opportunities for increasing water efficiency within its soap production processes. Through this assessment, RIL identified potential for water reuse in the wet scrubber and cooling tower systems, which are significant water-consuming operations.

As a result, in 2024, RIL successfully reused a total of 19,788 cubic meters of water. This initiative reflects BJC's broader commitment to sustainable water management and aligns with the company's long-term water efficiency goals.



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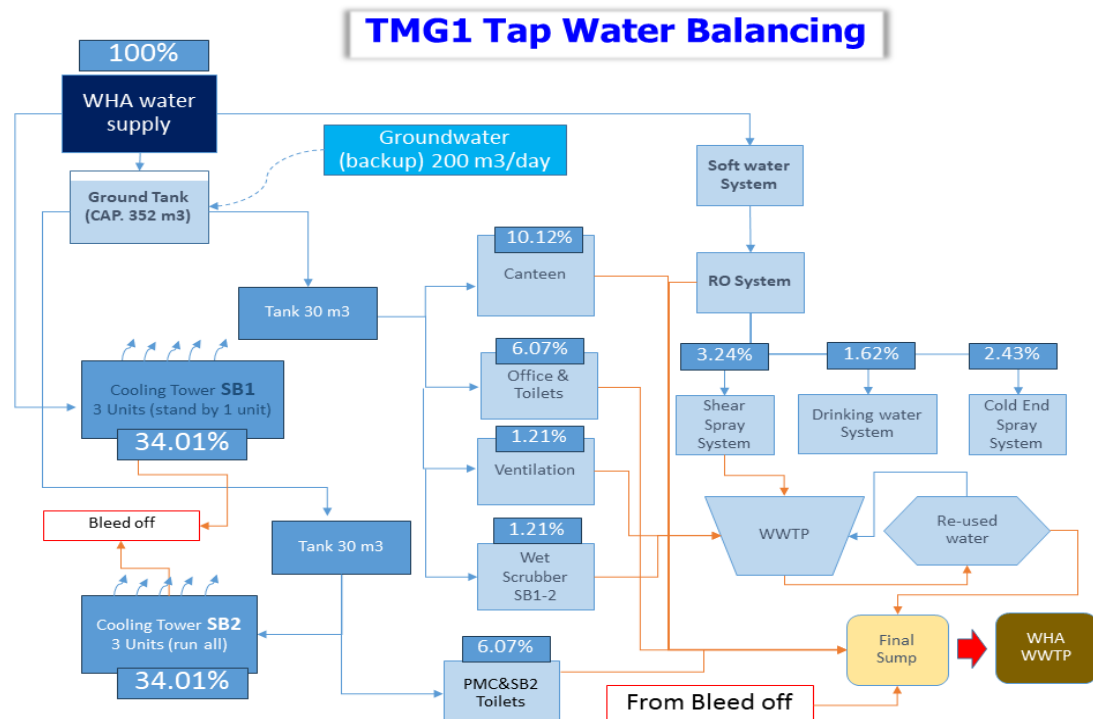
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Thai Malaya Glass (TMG)

Thai Malaya Glass (TMG) has conducted a comprehensive water use assessment across both TMG1 and TMG2 facilities. The assessment focused on identifying activities and functions of significant water use, determining processes and services that affect used water quality, and monitoring water use quantities throughout the production cycle.

Based on the assessment findings, both facilities have successfully integrated water reuse systems into their operations to improve efficiency and reduce 20,440 cubic meters of water consumption. These systems are now actively contributing to TMG's efforts to optimize water usage and support long-term sustainability.

Details of the water reuse practices are illustrated in the picture below.





BJC

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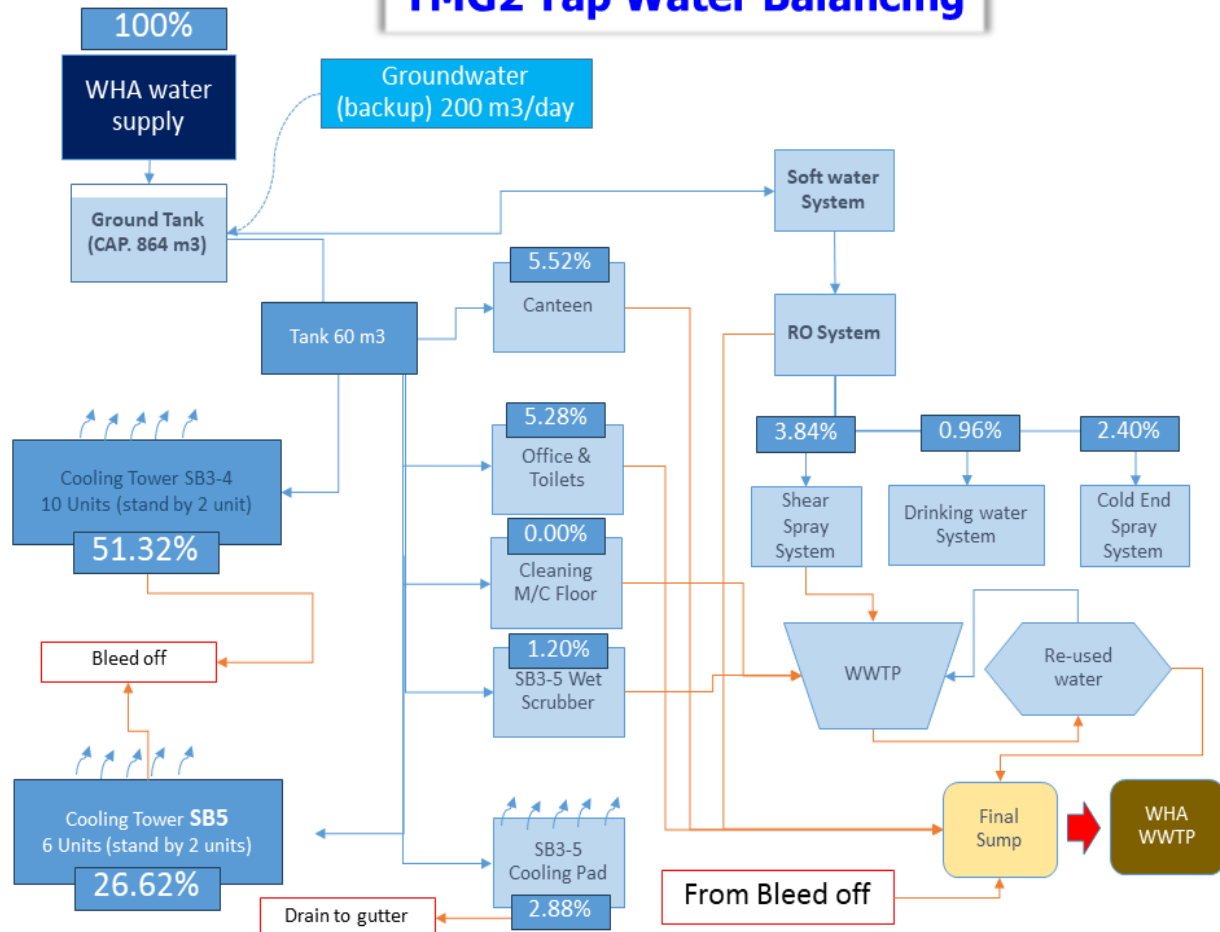
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TMG2 Tap Water Balancing





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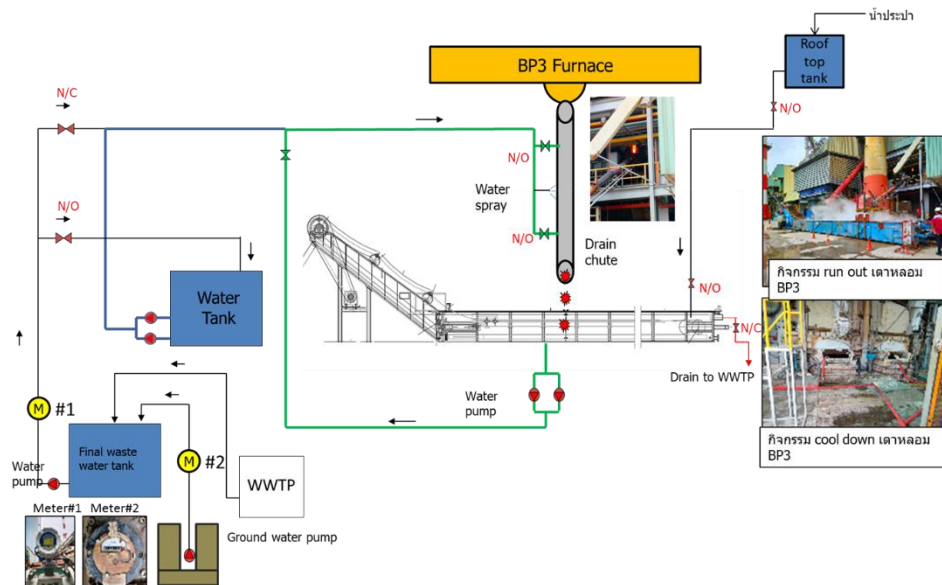
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Thai Glass Industries (TGI)

Project: Using Recycled Water to Replace Tap Water in BP3 Furnace Maintenance

The company conducts an annual Run Out & Cool Down process for the BP3 glass furnace, which requires a large amount of water for cooling at high temperatures. Previously, tap water was used, leading to high water consumption and costs. After evaluating water usage, the team redesigned the system to use recycled water from the wastewater treatment plant (WWTP) instead of tap water for cooling.



This project reduced tap water usage by 1,001 cubic meters per maintenance cycle, saving resources and costs while demonstrating the company's commitment to efficient and sustainable resource management.



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Project: Improving Water Efficiency by Using Recycled Water in Glass Debris Washing

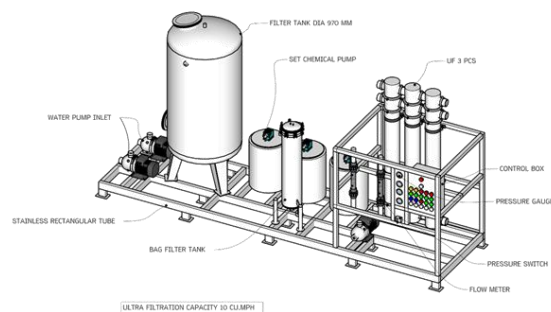
The company conducts glass debris washing to reduce dust and maintain moisture during the hot season, preventing foaming caused by organic reactions during melting. Previously, tap water was used for moistening, resulting in high electricity and water consumption.

By analyzing water use identifying significant water-consuming activities, understanding processes affecting wastewater quality, and monitoring usage quantities the team identified opportunities for better water efficiency. Consequently, tap water was replaced with recycled water (from the wastewater treatment plant, WWTP) in the glass debris washing process.

This change saved 1,832 cubic meters of tap water annually, demonstrating effective resource management and supporting sustainability goals.

Berli Jucker Food (BJF)

BJF has conducted a water use assessment focusing on treated wastewater from its on-site treatment system. The assessment aimed at identifying activities and functions with potential for better water efficiency, as well as determining processes that affect used water quality and monitoring water use quantities throughout the facility.





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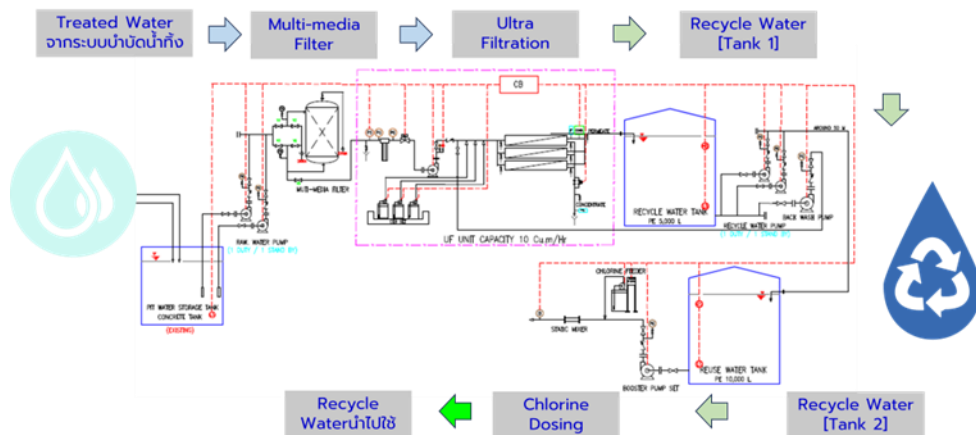
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As a result, BJF installed an Ultra Filtration System with disinfection capability to reclaim treated wastewater and reuse it within the production process. This system enables 100 cubic meters of water reuse per day, leading to a reduction of approximately 3,780 cubic meters of municipal water use per year.

These assessments allow BJF to gather relevant data, monitor key water efficiency indicators, and continuously review performance to drive improvements in overall water management.



In 2024, BJF implemented the "Farming Water Control" project to optimize water use in potato farming by adjusting irrigation levels according to each growth stage of the crop. Prior to implementation, BJF conducted field assessments and water usage trials to determine the specific water needs of potatoes at each development phase, ensuring that irrigation matched crop requirements precisely.



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By applying these targeted water management techniques across 4,281 rai of farmland, the project successfully reduced water usage by 1.13 million cubic meters. This initiative reflects BJC's commitment to sustainable agriculture, data-driven water efficiency, and responsible resource use throughout the supply chain.

