
Water Consumption Tracking Policy & Metric Program

1.0 Program Objective & Scope

The Water Consumption Tracking Program is established to systematically monitor, analyze, and reduce water usage across all industrial operations within the facility. The primary objective is to minimize water waste, lower operational costs, and support corporate sustainability targets by reducing the facility's water footprint. This policy applies to all production lines, cooling towers, boilers, wash-down stations, sanitation processes, and any auxiliary systems that consume municipal or recycled water. The program encompasses both potable and non-potable water sources, including any on-site water treatment or recycling systems. By implementing rigorous tracking, the facility aims to achieve a 15% reduction in water consumption per unit of production within the first 18 months, aligning with ISO 14001 environmental management standards and local regulatory requirements.

2.0 Key Performance Indicators (KPIs) & Metrics

The following KPIs are used to measure water consumption performance and drive improvement: 1) Water Intensity Ratio (WIR) = Total Water Consumption (m³) / Total Production Output (units or kg). This metric normalizes water use against production volume, enabling fair comparisons over time. 2) Water Cost per Unit = Total Water Cost (\$) / Total Production Output. 3) Water Leakage Rate = (Total Water Supplied - Total Water Used) / Total Water Supplied × 100%. A target of <2% is set for leakage. 4) Recycled Water Ratio = Recycled Water Used (m³) / Total Water Used (m³) × 100%. 5) Peak

Demand Events: Number of instances where hourly consumption exceeds 120% of the baseline average. 6) Water Savings (m³) from improvement projects. All data is collected via sub-meters at major consumption points and logged into the CMMS (ServiceGrid) at least once per shift. Meters are calibrated quarterly to ensure accuracy.

3.0 Roles & Responsibilities

Maintenance

Manager: Oversees the water tracking program, ensures sub-meters are operational and calibrated, reviews weekly consumption reports, and leads root cause analysis for abnormal spikes. Approves water-saving capital projects (CapEx) up to \$10,000.

Machine Operators: Record daily water meter readings at the start and end of each shift on the digital CMMS (ServiceGrid) or via a dedicated tablet. Report any visible leaks, unusual flow sounds, or meter malfunctions immediately to the maintenance team. Plant Leadership (Plant Manager & Sustainability Officer): Review monthly water consumption dashboards, set annual reduction targets, and allocate budget for water efficiency upgrades (e.g., low-flow nozzles, closed-loop cooling systems). Champion the program in all-hands meetings and integrate water KPIs into the facility's balanced scorecard.

4.0 Program Execution & Data Collection

The program is executed through a structured daily, weekly, and monthly cadence.

Daily: Operators record water meter readings at the start and end of each shift (8-hour intervals) using the ServiceGrid mobile app or a fixed terminal. Readings are automatically timestamped and geo-tagged. Any reading that deviates more than 10% from the historical average triggers an alert to the Maintenance Manager.

Weekly: The Maintenance Manager reviews the weekly water consumption summary generated by ServiceGrid, comparing actual usage against the production schedule. A brief 15-minute meeting is held with shift supervisors to discuss anomalies and assign corrective actions.

Monthly: A comprehensive water balance report is generated, including all KPIs, trend charts, and a summary of completed water-saving actions. This report is submitted to Plant Leadership. Data is stored in ServiceGrid for a minimum of 5 years to support trend analysis and regulatory audits. All meters are inspected and cleaned quarterly to prevent fouling or drift.

5.0 Review, Reporting & Continuous Improvement

The collected data is analyzed monthly by the Maintenance Manager and the Sustainability Officer to identify trends, seasonal variations, and opportunities for reduction. A formal Water Consumption Review Meeting is held quarterly with Plant Leadership, where the following are discussed: 1) Performance against the WIR target. 2) Top 3 water-wasting assets or processes. 3) Status of open corrective actions. 4) Proposed CapEx projects for water efficiency (e.g., installing automatic shut-off valves, upgrading to high-efficiency rinse nozzles, or implementing a condensate recovery system). All approved projects are tracked in ServiceGrid with cost-benefit analysis and actual savings reported back to the team. Continuous improvement is driven through the Plan-Do-Check-Act (PDCA) cycle: Plan (set reduction targets), Do (implement changes), Check (monitor consumption data), Act (standardize successful changes or escalate issues). Lessons learned are documented and shared across the organization to foster a culture of water stewardship.

Regulatory Disclaimer: This program document is a generic strategic template. The end-user assumes all liability for aligning these metrics, KPIs, and reliability frameworks with specific corporate goals and OEM engineering standards.