



Report on Total Water Consumption (Cubic Meters per Year)

Tishk International University (TIU)

Academic Year 2024–2025

1. Introduction

This report presents a comprehensive assessment of total water consumption at Tishk International University (TIU) for the academic year 2024–2025. Water is a critical resource for campus operations, supporting academic activities, laboratory work, sanitation, and landscaping. Monitoring water consumption is essential for ensuring efficient resource management, reducing environmental impact, and supporting the university's sustainability objectives.

2. Scope and Definition

The reported water consumption includes all water used across campus facilities, covering:

- Academic Buildings: Classrooms, laboratories, and faculty offices
- Administrative Facilities: Offices and service departments
- Student Facilities: Cafeterias, restrooms, and common areas
- Laboratories: Water used for experimental and cleaning purposes
- Landscaping and Gardening: Irrigation of green areas and outdoor spaces

The measurement reflects the total annual water consumption, expressed in cubic meters per year (m^3/year).

3. Methodology

The calculation of total water consumption was conducted using a systematic and reliable approach as follows:

1. Data Collection:

- Water meter readings were collected on a **monthly basis** from all main supply points across the campus.
- Sub-metering data (where available) were also considered for more detailed tracking of specific facilities.

2. Aggregation:

- Monthly consumption values were compiled and aggregated to determine the total annual water usage.

3. Data Validation:

- Recorded data were cross-checked against utility records and historical consumption patterns to ensure consistency and accuracy.
- Any anomalies (e.g., sudden spikes due to leaks or maintenance activities) were reviewed and addressed.

4. Standardization:

- All measurements were reported in cubic meters (m^3), ensuring consistency with international reporting practices.

4. Organizational Responsibility

The Maintenance & Infrastructure Unit, in coordination with the Landscaping and Gardening Unit, was responsible for:

- Monitoring and recording water meter readings
- Ensuring accurate data collection and reporting
- Managing irrigation systems and water distribution across campus
- Identifying inefficiencies and implementing corrective measures

This collaborative approach ensures comprehensive coverage of both indoor and outdoor water use.

5. Results

The total water consumption for TIU during the academic year 2024–2025 is:

Total Water Consumption: 21,295.2 m³/year

This figure represents the cumulative water usage across all campus operations over the reporting period.

6. Analysis and Interpretation

The recorded consumption reflects the operational scale of the university and its diverse water needs. Key observations include:

- Laboratories and landscaping activities typically account for a significant share of water consumption due to continuous operational and irrigation requirements.
- Water usage is likely higher during warmer months due to increased irrigation demand and cooling-related needs.
- The university's reliance on water for sanitation, academic processes, and campus maintenance highlights the importance of efficient water management strategies.

From a sustainability perspective, this consumption level serves as a baseline indicator for future performance tracking and resource optimization.

7. Recommendations for Improvement

To enhance water efficiency and reduce consumption, the following measures are recommended:

- To install low-flow fixtures, sensor-based taps, and water-efficient appliances across campus.
- To implement regular inspections and rapid response systems to detect and repair leaks.
- To use automated irrigation systems with moisture sensors to optimize water use in landscaping.
- To explore greywater recycling systems for irrigation and non-potable uses.
- To promote water conservation practices among students and staff.
- To expand the use of digital metering and real-time monitoring tools for improved tracking and decision-making.