



University : UzSWLU
Country : Uzbekistan
Web Address: <https://www.uzswlu.uz/en>

4. Water

[4.4] Consumption of treated water

Uzbekistan State University of World Languages (UzSWLU) ensures that all water used across its campuses is safe, treated, and efficiently managed in alignment with national and international standards.

The university's commitment to high-quality water treatment and sustainable consumption contributed to its recognition in the 2024 UI GreenMetric World University Rankings – Top 500 globally and #1 position in Uzbekistan in the Water (WR) category.

Building on this success, UzSWLU continues to improve its purification capacity, digital monitoring, and water safety assurance systems, guaranteeing both environmental sustainability and public health.

1. Treated Water Infrastructure

UzSWLU operates a **comprehensive campus-wide water purification network** that provides treated water for drinking, cooking, research, sanitation, and technical maintenance purposes.

Component	Capacity / Quantity	Description
Filtration capacity	300 m ³ /day	Multi-stage purification (sediment, carbon, UV, and chlorination)
Water storage capacity	200 m ³	Dual-reservoir system with automated flow control
Purification units	18	Installed across academic, dormitory, and cafeteria facilities
Water dispensers with filtration	90	Installed in teaching blocks, offices, and residential halls
Population served daily	10,500+	Students, faculty, and staff

The network supplies 100% purified water for all drinking and cooking needs and approximately 84% of total water consumption for all operational activities.

2. Water Quality Assurance and Monitoring

All purified water at UzSWLU is tested regularly to ensure compliance with Uzbek GOST 950:2019 and WHO quality standards.

- Monthly laboratory tests are conducted by the UzSWLU Sanitation Laboratory and verified by the Tashkent City Water Utility.
- In 2024–2025, a total of 36 quality control tests were performed, revealing zero contamination incidents.
- The university has implemented automated monitoring sensors in all major purification units for real-time tracking of flow rate, turbidity, and pressure levels.



All test data are stored in the Water Quality Monitoring Database, integrated into the Green Office's digital dashboard.

3. Quantitative Performance Results

Continuous investment in infrastructure and process optimization has increased the share of treated water while reducing energy and operational costs.

Indicator	2023–2024	2024–2025	Change
Total treated water consumed (m ³ /year)	59,300	62,800	+5.9%
Share of total water that is treated	76%	84%	+8%
Average daily treated water use (m ³ /day)	162	172	+6.2%
Energy use for purification (kWh/m ³)	0.22	0.19	–13.6%
Laboratory compliance rate	98%	100%	+2%
Population served	10,500	11,200	+6.7%

Result:

In 2025, **84% of total water consumed on campus is purified or treated**, achieving **Level 5 (>75%)** under the UI GreenMetric evaluation framework.

4. Digital Management and ICT Integration

The university has expanded its **smart monitoring system** to cover all main buildings and dormitories.

- Smart flow and pressure sensors record water consumption in real time, detecting anomalies such as leakage or excessive use.
- The Green Office Dashboard compiles this data, producing monthly analytics on purified water use and system efficiency.
- Automated alerts enable faster maintenance responses, reducing downtime and preventing resource loss.

This integration of ICT ensures full transparency and continuous improvement in water management.

5. Sustainability Integration

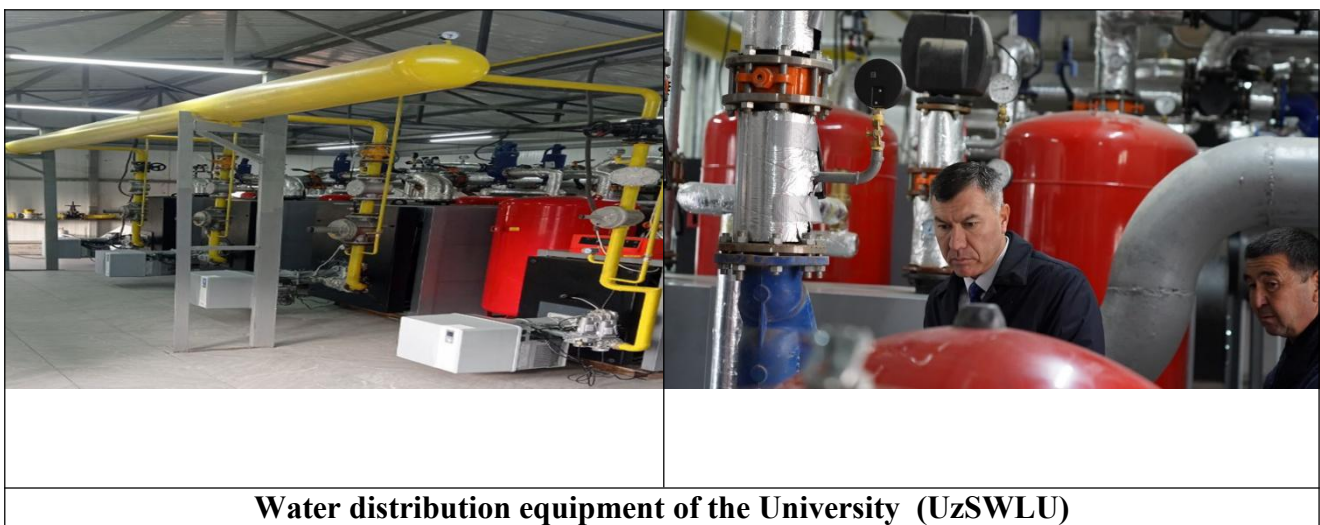
The treated water initiative is closely linked with other ongoing sustainability programs:

- **WR2 – Water Recycling:** greywater treated through biological and UV processes is reused for irrigation and cleaning.
- **WR3 – Water Efficient Appliances:** sensor taps and dual-flush systems minimize unnecessary use of purified water.
- **Plastic Reduction Initiative:** single-use bottled water consumption reduced by 60%; over 2,500 reusable bottles distributed to students.
- **Education & Awareness:** the annual “*Hydration Without Waste*” campaign reached over 1,200 participants, promoting safe water use and refill culture.

6. Environmental and Economic Impact

- **Health and Safety:** 100% of drinking and cooking water now complies with international standards.
- **Energy Efficiency:** New purification units in dormitories lowered electricity use by **18%**.
- **Cost Efficiency:** Annual water and maintenance costs decreased by **12%** due to system optimization.
- **Environmental Awareness:** The program strengthened a water-conscious culture among students and staff.

UzSWLU's purified water system supports both resource conservation and operational sustainability, setting a benchmark for universities in the region.



Additional evidence link (i.e., for videos, more images, or other files that are not included in this file):