BHOS WATER MANAGEMENT REPORT 2026

INTEGRATED WATER EFFICIENCY, CONSERVATION, RECYCLING AND REUSE FRAMEWORK

INTRODUCTION

Baku Higher Oil School (BHOS) applies a comprehensive and integrated water management system aimed at improving water efficiency, reducing potable water consumption, and ensuring sustainable use of water resources across its campuses. The system is built on circular water management principles, combining conservation, recycling, reuse, monitoring, and efficiency technologies into a unified operational framework.

CAMPUS WATER CONSUMPTION BASELINE

BHOS operates across two main campuses with a total population of approximately 2,200 users, distributed as follows: Agsheher Building with 1,000 users and Bibiheybat Campus with 1,200 users.

TOTAL ANNUAL POTABLE WATER CONSUMPTION

48,000,000 Liters / Year

WATER USAGE MONITORING POLICY AND CONTROL SYSTEM

BHOS implements a structured Water Usage Monitoring Policy to ensure continuous tracking, transparency, and optimization of water consumption across all campus facilities. All buildings are equipped with digital water meters enabling real-time monitoring of consumption. Data is recorded continuously and analyzed monthly to identify trends, inefficiencies, and potential leaks.

Key monitoring indicators include:

- **100%** building-level digital water metering coverage
- **12** structured monitoring reports generated annually
- Leak detection response time timeline: **24–48 hours**
- Estimated **6–8% reduction** in baseline water losses due to smart monitoring systems

WATER CONSERVATION PERFORMANCE

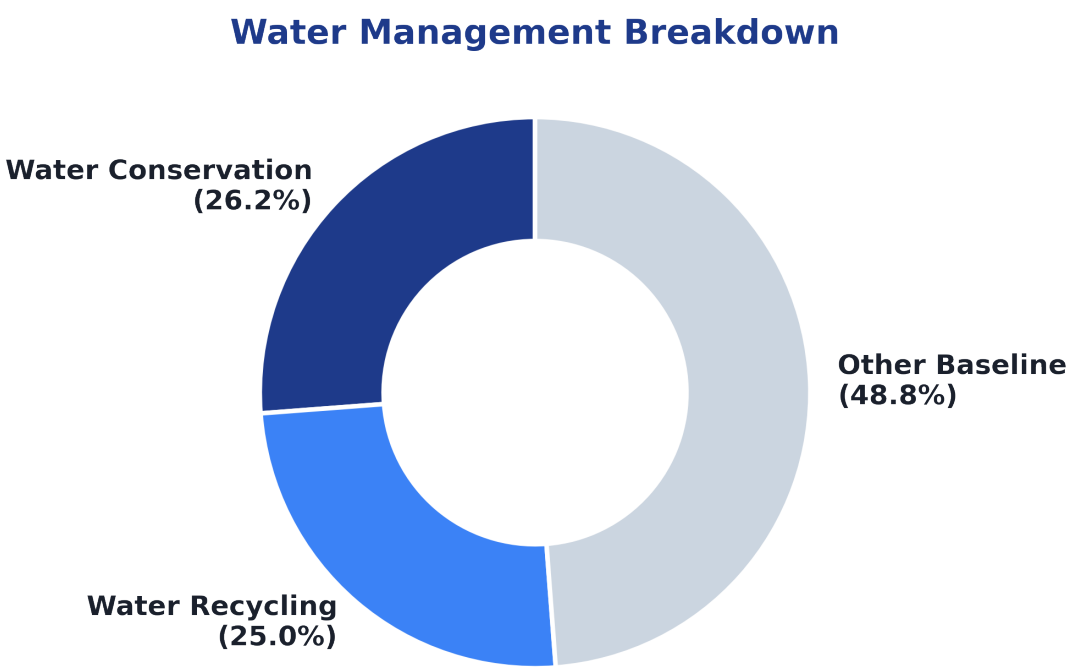
Water conservation is achieved through rainwater harvesting, infiltration systems, smart monitoring, and water-efficient infrastructure.

CONSERVATION RATE

26.2%

Conservation Rate Calculation Formula:

$$\eta_{cons} = (12{,}600{,}000\ L/year / 48{,}000{,}000\ L/year) \times 100 = 26.2\%$$



WATER RECYCLING SYSTEM

Water recycling involves the collection, treatment, and structural re-routing of non-potable water streams across campus facilities to minimize clean water consumption.

WATER RECYCLING RATE

25.0%

Recycling Rate Calculation Formula:

$$\eta_{recycle} = (12{,}000{,}000\ L/year / 48{,}000{,}000\ L/year) \times 100 = 25\%$$

TREATED WATER UTILIZATION

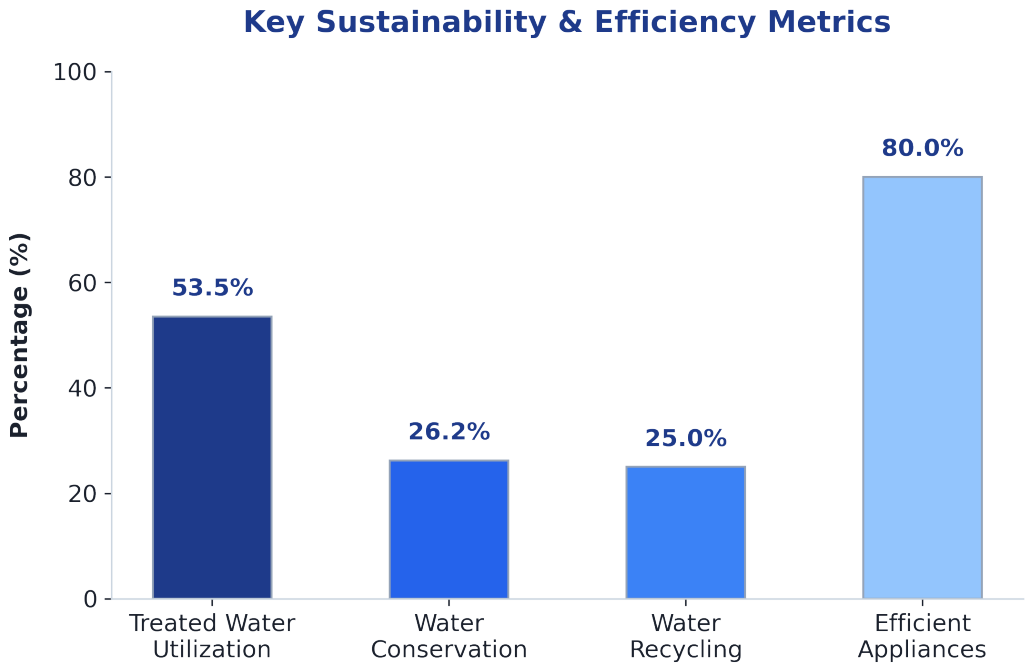
Treated non-potable water streams are extensively exploited for landscape irrigation, deep cleaning operations, and secondary technical facilities.

UTILIZATION RATE

53.5%

Utilization Rate Calculation Formula:

$$\eta_{utilization} = (25{,}680{,}000\ L/year / 48{,}000{,}000\ L/year) \times 100 = 53.5\%$$



INFRASTRUCTURE & SUSTAINABLE HARVESTING ASSETS

Specific hardware systems and landscape asset designs maximize alternative storage capabilities and natural hydrological preservation:

RAINWATER HARVESTING STORAGE CAPACITY

648,000 Liters

TOTAL STORMWATER INFILTRATION AREA

15,450 m²

WATER-EFFICIENT APPLIANCES COVERAGE

80%

DRINKING WATER POINTS & PLASTIC REDUCTION STRATEGY

BHOS has installed premium drinking water points across campus facilities to encourage the use of reusable bottles and significantly lower dependency on single-use plastic bottles. This initiative systematically cuts plastic waste generation, fosters sustainable consumption habits, and elevates environmental accountability across students and administrative staff alike.

11. WATER AWARENESS, STUDENT ENGAGEMENT, AND BEHAVIORAL CHANGE INITIATIVES

In addition to technical and operational measures, BHOS promotes responsible water consumption through educational activities, awareness campaigns, and student engagement programs designed to foster a culture of environmental responsibility across the university community.

The university actively supports the **“Bir Damcı Dəyər Verək” (Let Us Value Every Drop)** campaign implemented by the Ministry of Ecology and Natural Resources of the Republic of Azerbaijan and the Azerbaijan State Water Resources Agency. Through participation in national environmental initiatives, BHOS raises awareness about water scarcity, efficient water use, protection of freshwater resources, and sustainable consumption practices.

Water conservation themes are incorporated into campus sustainability events, environmental seminars, student orientation activities, awareness weeks, and educational campaigns organized throughout the academic year. These initiatives encourage students and staff to adopt responsible water-use behaviors, including reducing unnecessary water consumption, reporting leaks, supporting water-saving technologies, and using reusable water bottles instead of single-use plastics.

Student participation is a key component of the program. BHOS students actively engage in environmental events, sustainability competitions, awareness campaigns, volunteer activities, and educational projects focused on water conservation and environmental protection. These activities provide opportunities for students to develop practical sustainability skills while contributing to campus environmental goals.

During the reporting period, **more than 1,500 students and staff members** participated in sustainability-related awareness activities, workshops, competitions, environmental campaigns, and educational events addressing water conservation and responsible resource management. Feedback collected after these activities indicated increased awareness of sustainable water-use practices and stronger engagement with campus environmental initiatives.

The combination of awareness programs, student participation, and technological interventions helps ensure that water efficiency improvements are maintained over the long term through positive behavioral change and institutional sustainability culture.

WATER PERFORMANCE SUMMARY DASHBOARD

OPERATIONAL INDICATOR	MEASURED VALUE	PERCENTAGE / FRAMEWORK STATUS
Total Water Consumption Baseline	48,000,000 L/year	100% Baseline
Treated Water Utilization	25,680,000 L/year	53.5% Target Met
Water Conservation Yield	12,600,000 L/year	26.2% Saved
Water Recycling Efficiency	12,000,000 L/year	25.0% Recycled
Water-Efficient Appliances Coverage	80% of infrastructure	High Coverage
Digital Smart Metering	100% of buildings	Fully Deployed
Audited Monitoring Reports	12 per year	Monthly Compliance
Emergency Leak Response Time	24–48 hours	SLA Compliant
Rainwater Storage Assets	648,000 L	Active Infrastructure
Active Infiltration Area	15,450 m²	Groundwater Recharge
Community Engagement Reach	1,500+ Participants	Active Campaign

CONCLUSION (SDG ALIGNMENT SUMMARY)

The BHOS water management system demonstrates a structured and data-driven approach to sustainability, integrating conservation, recycling, reuse, monitoring, and efficiency strategies into a unified framework. Overall, the system achieves a 26.2% reduction in potable water consumption, while 25% of water demand is covered through recycling systems, and 53.5% is supplied through treated water utilization.

From a sustainability perspective, the system contributes strategically to the following United Nations Sustainable Development Goals:

SDG 3: Good Health | SDG 4: Quality Education | SDG 6: Clean Water | SDG 9: Infrastructure

SDG 11: Sustainable Cities | SDG 12: Responsible Consumption | SDG 13: Climate Action

SDG 14: Life Below Water | SDG 15: Life on Land | SDG 17: Partnerships

Overall, BHOS demonstrates a definitive transition toward a circular, data-driven, and education-integrated water management model that significantly strengthens environmental performance and strictly aligns with international UI GreenMetric standards.

End of Report • Baku Higher Oil School