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UZBEKISTAN STATE UNIVERSITY OF WORLD LANGUAGES

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## 6 CLEAN WATER AND SANITATION

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# UZBEKISTAN STATE WORLD LANGUAGES UNIVERSITY



UZBEKISTAN STATE UNIVERSITY OF WORLD LANGUAGES



#### The University uses the following water supply sources:

• Municipal water supply system: the main source of water for educational, administrative and economic needs of the campus.

#### Water recycling program:

- includes the collection and treatment of wastewater, which can then be used for the needs of the university, such as irrigation of green areas and maintenance of buildings.
- Based on the latest data on water consumption at the university:
- Average monthly consumption: 90000 m3.
- Annual consumption: 1114000 m3.

These data allow us to estimate the current volume of water use and identify areas for optimization.

- The university has implemented the following methods for accounting and monitoring water consumption:
- Use of water meters and sensors: installed at the entrance to the main buildings and water supply networks.
  Water management systems: Allow real-time data collection, which facilitates monitoring and identification of possible leaks and deviations.
- Regular reports: Monthly and annual reports help to track changes in water consumption and analyze their causes.

UzSWLU is known for its green areas and landscaping and as a result these areas require water for irrigation. The installed water meters help the engineering unit to acquire data on the efficiency of their sprinkler and drip irrigation systems used for watering these green areas. As a result, achieving the use of a minimum amount water in watering the green areas spread on the vicinity of the campus.





#### Wastewater treatment process

The university has developed a wastewater treatment process aimed at reusing water for the needs of the campus and reducing pollution. The main stages of the process include:

- Wastewater collection and filtration: All wastewater is collected in special tanks and subjected to primary filtration to remove large polluting particles.
- Mechanical and chemical purification: water passes through mechanical filters and is treated with chemical reagents, which eliminates organic and inorganic contaminants.
- Cleaning to a level suitable for reuse: after passing all the stages of purification, the water is used for irrigation, cleaning, and maintenance.









The wastewater treatment process at the university contributes to saving water resources and reducing the ecological footprint. Purification allows the reuse of water, which supports the principles of sustainable water use and contributes to the protection of natural water resources.

Regular measurements and data analysis are necessary to monitor the consumption of purified water. This makes it possible to determine the efficiency of water use, identify possible leaks and develop measures to optimize consumption.

Reducing the consumption of purified water is an important task, as it allows you to save resources, reduce cleaning costs and improve the environmental situation. Various methods can be used for this, such as the introduction of water-saving technologies, raising awareness of the importance of saving water, and other measures.



Water pollution prevention processes The University applies comprehensive measures to protect the water supply system from contaminated water. The main elements of the system include:

- Water quality monitoring and control: regular inspections of water reservoirs and water supply systems to identify deviations from quality standards.
- Emergency response protocols: Instructions have been developed in case of leaks or incidents involving chemicals or other pollutants. In the event of an incident, contaminated water is immediately isolated to prevent it from entering the water supply system.
- Filtration and isolation systems: all wastewater is filtered, and automatic shutdown mechanisms are installed in case of accidents so that contaminated water does not enter the drinking system.



These processes provide a high degree of protection against contamination of the university's water supply and help prevent possible environmental and sanitary risks associated with accidents or accidental incidents.







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The university has implemented a program to ensure the availability of free drinking water, which includes the installation of drinking fountains and coolers in various buildings on campus. This helps to maintain the health of students and staff, as well as reduces the use of disposable plastic containers.

- Drinking fountains and coolers: located in academic buildings, libraries, gyms, and other public areas, which provide easy access to drinking water for everyone.
- Regular maintenance and sanitary inspections: All fountains and coolers are regularly serviced and checked for compliance with water quality standards to ensure the safety of drinking water for all users.

![](_page_5_Picture_5.jpeg)

![](_page_5_Picture_6.jpeg)

The university's program to provide free drinking water promotes the health and well-being of all campus participants while maintaining the principles of sustainable consumption and reducing the amount of plastic waste.

The University implements building standards and technologies aimed at saving water:

- Water-saving technologies: All new buildings and renovated premises use systems with reduced water consumption, such as water-saving faucets, showers, and toilets.
- **Sustainable Construction Standards:** In design and construction, the university adheres to principles similar to LEED (Leadership in Energy and Environmental Design) standards, which require the installation of equipment for efficient water use and minimization of water waste.

The University actively applies water-saving building standards, which help reduce overall water consumption and support the sustainable development of the campus.

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#### SPRINKLER IRRIGATION SYSTEMS AT UZSWLU

Uzbek State World Languages University (UzSWLU) has been expanding its campus area each year, dedicating more space to green areas to enhance campus aesthetics, provide stress relief, and improve the environment. These green spaces contribute to a healthier atmosphere and create a welcoming environment for students, faculty, and staff. With the increase in green areas, water usage for irrigation has also grown. To manage this demand sustainably, UzSWLU has integrated drought-resistant plants and modern irrigation systems, including sprinkler and drip irrigation. These systems minimize water consumption, ensuring efficient use of resources while maintaining the beauty and health of campus landscapes.

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The University is implementing a landscaping strategy aimed at reducing the need for irrigation, which is achieved through the following measures:

- · Drought-tolerant plants: The campus is predominantly planted with plants that are resistant to dry conditions, such as shrubs, perennials, and native plant species. This allows you to significantly reduce the consumption of water for irrigation.
- Efficient irrigation systems: where irrigation is needed, drip systems and timers are used, which minimizes water consumption by directing it directly to the roots of plants.
- · Mulching and covering the soil: to preserve moisture and prevent evaporation in landscape areas, mulching, and cover plants are used, which also reduces the need for additional watering.

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#### **Environmental and economic benefits**

The use of drought-resistant plants and water-efficient technologies helps the university reduce water costs and promotes sustainable development. Reducing water consumption for irrigation also supports the university's efforts to protect the environment and contributes to the educational mission of introducing environmental practices.

The University's greening policy using drought-resistant plants and modern irrigation systems reduces water consumption, supporting sustainable development and improving the ecological condition of the campus.

![](_page_7_Picture_5.jpeg)

In the context of growing problems with water supply and ecology, the importance of water reuse is becoming more and more urgent.

For the analysis, data were collected on the university's water supply and sanitation systems, as well as information on water reuse practices in various educational and administrative buildings.

- **Collection and reuse systems:** The University has implemented systems for collecting rainwater and reusing it for watering green areas.
- **Consumption monitoring:** Regular monitoring of water consumption in different buildings allows you to monitor the efficiency of resource use and identify areas for improvement.
- Educational initiatives: Conducting seminars and information campaigns on water conservation and reuse among students and staff.

Our university is actively working to measure and improve water reuse. Sustainable monitoring practices and programs can not only reduce costs but also raise awareness of the importance of rational use of water resources. It is recommended to continue to develop and improve existing systems to achieve the best results.

![](_page_7_Figure_12.jpeg)

This image illustrates the city's water management system, particularly focusing on the collection and treatment of stormwater and wastewater. At UzSWLU (Uzbekistan State World Languages University), we utilize local water resources provided by the municipal authorities and are connected to the city's sewage system. The water collected from rain and other wastewater is directed to the municipal sewage system, where it undergoes specialized treatment processes. As a result, treated water is safely returned to the environment. Additionally, our university has a contract with the city sewage service, ensuring sustainable and environmentally friendly water management practices.

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Water resources management issues are becoming increasingly important in the context of global environmental challenges. An important task of universities is not only the training of students but also educational work with local communities aimed at improving knowledge on water use. This report is dedicated to evaluating the university's efforts in providing educational opportunities for the local population in the field of water resources management.

For the analysis, the university's educational programs, open lectures, courses, and events for the public aimed at drawing attention to water resources and their effective use were considered.

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#### The results of the analysis

- <u>Open lectures and seminars</u>: The University regularly conducts free lectures and workshops for the local population on environmental issues, including water resources management, rational water use, and water conservation methods.
- **Courses and professional development programs:** The University offers short-term courses for employees and representatives of local communities, allowing them to learn about effective water management methods.
- **Practical activities:** As part of the eco-education initiative, the university conducts actions aimed at raising awareness among residents about the importance of conserving water resources, such as joint water purification activities and landscaping projects.

The University actively promotes the education of local communities in water management issues. Through open lectures, courses and practical events, the university creates opportunities for teaching local people methods of rational water use and environmentally friendly practices. It is recommended to continue the development of such educational initiatives to expand coverage and raise awareness.

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Our university actively supports the protection of water resources and off-campus, cooperating with local communities, government agencies and environmental organizations. The main areas of this support include:

**Research projects and expert support:** The University finances and organizes research aimed at improving water quality and developing methods for the conservation and restoration of aquatic ecosystems. Scientists and students of the university provide their knowledge and developments for local initiatives on the protection of reservoirs and optimization of water use.

**Educational programs for local communities:** The University conducts lectures, seminars, and courses for the public, teaching methods of rational use of water, pollution reduction, and restoration of water resources. This helps to raise awareness among the local population and forms sustainable practices in water management.

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**Partnerships with environmental organizations and municipal authorities:** The University cooperates with environmental and municipal organizations, developing and implementing programs for the conservation of water resources. Such partnerships make it possible to use the university's resources to develop environmentally friendly solutions that can be implemented at the urban and regional levels.

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**Actions and volunteer projects:** The University supports and organizes volunteer activities such as cleaning local rivers and lakes, landscaping, and restoration of coastlines. These events attract students, staff, and residents and promote environmental activism and protection of water bodies in the region.

In this way, the university makes a significant contribution to the protection of off-campus water resources by combining educational, research, and practical initiatives for sustainable water use at the community level.

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In Uzbekistan, water extraction primarily comes from groundwater sources such as aquifers, as well as rivers and reservoirs. The country has made strides toward implementing sustainable water management practices, especially in response to growing water scarcity in Central Asia. Sustainable water extraction technologies, such as drip irrigation and water recycling systems, are being adopted in some regions to ensure efficient use and conservation of water resources. However, these technologies are not yet uniformly used across all institutions.

At UzSWLU (Uzbekistan State World Languages University), water usage is primarily reliant on municipal water systems rather than independent water extraction from natural sources. The university collaborates with local government bodies for water supply and wastewater management, including agreements to ensure that water used on campus is treated and managed according to municipal sustainability practices. Although UzSWLU does not directly extract water from aquifers or other natural sources on campus, it adheres to policies promoting responsible water use and environmental sustainability through partnerships with local authorities and utility services.

<u>Uzbekistan State World Languages University (UzSWLU) actively promotes conscious water usage on</u> <u>campus through several strategic initiatives:</u>

- 1. Awareness Campaigns: Regular seminars and workshops educate students and staff on the importance of water conservation, focusing on both global and local water scarcity issues. These events emphasize practical ways to reduce water consumption.
- 2. Infrastructure Improvements: The university has modernized its plumbing infrastructure, installing low-flow faucets and dual-flush toilets to reduce water wastage.
- 3. Irrigation System: The university has implemented modern irrigation methods, including sprinkler and drip irrigation systems for green areas, effectively minimizing water usage. Additionally, drought-resistant plants are used to reduce the need for watering.
- 4. Monitoring and Feedback: Water meters are installed at main buildings and water supply networks to track usage. The university community receives regular updates and practical advice on minimizing water consumption.
- 5. Water Recycling: Wastewater collection and recycling programs allow water to be treated and reused for campus needs, such as irrigation and maintenance, significantly reducing the university's environmental footprint.

Through these initiatives, UzSWLU fosters a culture of water consciousness, aligned with its broader sustainability goals.

Uzbekistan State World Languages University (UzSWLU) is dedicated to promoting water conservation and awareness within the wider community through various initiatives:

- 1. <u>Public Lectures and Seminars:</u> The university organizes open lectures and ecological workshops for the community, highlighting the importance of water conservation, effective water management, and recycling. These events educate local residents on sustainable practices.
- 2.Educational Programs for Community Members: UzSWLU offers short-term courses and professional development programs on water conservation and water management techniques, empowering community members with practical knowledge to improve water use habits.
- 3. Student-Led Initiatives and Volunteer Activities: University students lead projects and campaigns in local schools and other institutions, raising awareness on water-saving practices. They also participate in volunteer activities to promote water conservation and environmental protection.

Through these efforts, UzSWLU contributes significantly to fostering a culture of responsible water use within the community, aligning with its commitment to sustainable development.

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THE GLOBAL GOALS

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