



University : Uzbekistan State World Languages University

Country : Uzbekistan

Web Address: https://www.uzswlu.uz/en#

## [1] Setting and Infrastructure (SI)

## [1.11] Total area on campus for water absorption besides the forest and planted vegetation (meter<sup>2</sup>)

In today's world, the urban environment serves as the primary living space for the majority of the population in both industrial and post-industrial societies. Consequently, there is an increasing global emphasis on mitigating technogenic (human-made) impacts and improving urban ecological resilience through sustainable infrastructure and landscape design.

As large institutional entities, university campuses play a vital role in shaping the ecological quality of urban life. Due to their spatial footprint, operational scale, and public influence, universities directly affect air, soil, and water conditions within their surrounding urban ecosystems. For this reason, campus infrastructure design has evolved from conventional construction to ecologically adaptive planning, where water-sensitive landscape management has become a key sustainability component.

At the Uzbekistan State World Languages University (UzSWLU), sustainable landscape development is focused on creating and maintaining permeable and water-absorbing surfaces that allow natural infiltration and minimize stormwater runoff. These include permeable pavements, ecofriendly parking lots, gravel walkways, landscaped courtyards, and open soil zones distributed across the university's main and satellite campuses — including Main, Zakovat, Mukimiy, Lutfiy, Angren, and Orta Chirchiq sites.

Such surfaces are designed to enhance groundwater recharge, prevent local flooding, and reduce the urban heat island effect while maintaining soil fertility and improving the vitality of nearby vegetation. By facilitating rainwater infiltration and storage, these zones reduce the need for artificial irrigation, helping the university maintain balanced hydrological and microclimatic conditions even in the hot and dry seasons typical of Central Asia.

The Landscaping and Environmental Monitoring Department systematically monitors these zones to ensure that infiltration capacity, soil permeability, and vegetation cover remain stable throughout the year. The department also implements rainwater harvesting systems, porous drainage networks, and bioswale channels that capture and redirect rainfall into the ground, rather than allowing it to become surface runoff.

As of 2025, the total campus area of UzSWLU is 156,348 square meters, of which approximately 84,833 square meters (54%) are designated as water absorption zones. These include:

- Green and forested areas (≈53,833 m²) that naturally absorb rainfall and promote evapotranspiration;
- Permeable pavements and eco-friendly parking areas (≈15,000 m²) constructed with porous materials that allow water to filter into the soil;
- Open sports fields and courtyards ( $\approx 9,000 \text{ m}^2$ ) covered by natural soil and grass;
- Rain gardens and bioswale systems (≈7,000 m²) currently being implemented at the Angren and Orta Chirchiq campuses.

Through this integrated approach, the university has significantly reduced surface runoff, increased natural water retention, and enhanced groundwater recharge capacity. These measures also lower the risk of local flooding during heavy rains, improve air humidity, and contribute to overall climate comfort on campus.





The establishment of water-absorbing zones has also encouraged student-led research in urban hydrology, landscape ecology, and sustainable water management. Many projects under the "Green Campus Initiative" and the "Barqaror Til, Barqaror Dunyo" (Sustainable Language, Sustainable World) program use the campus as a living laboratory for environmental innovation and interdisciplinary learning.

These actions directly support the United Nations Sustainable Development Goals (SDGs), particularly SDG 6 (Clean Water and Sanitation), SDG 11 (Sustainable Cities and Communities), and SDG 13 (Climate Action).

As a result, UzSWLU stands as a national model of water-sensitive campus design, where environmental protection, education, and urban resilience are integrated into a unified sustainability framework. Through its ongoing efforts, the university continues to improve not only its own ecological performance but also the broader urban hydrological balance of Tashkent and its surrounding regions.

Table 1. Water Absorption Area Distribution – UzSWLU (2025)

| №     | Category                            | Area (m²) | Share of Total (%) | Description                                 |
|-------|-------------------------------------|-----------|--------------------|---|
| 1     | Green and forested zones            | 53,833    | 34.4%              | Natural soil, grass, and tree-covered areas |
| 2     | Permeable pavements and eco-parking | 15,000    | 9.6%               | Porous paving materials, eco parking lots   |
| 3     | Sports fields and open courtyards   | 9,000     | 5.7%               | Natural turf and soil-based surfaces        |
| 4     | Rain gardens and bioswales          | 7,000     | 4.5%               | Under development for stormwater collection |
| Total | ≈84,833 m²                          | ≈54.2%    |                    |   |













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

https://www.uzswlu.uz/en#

https://www.instagram.com/uzswlu\_official

https://www.facebook.com/uzswlu.uz

https://www.youtube.com/c/Ozbekistondavlatjahontillariuniversiteti

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