



CLEAN WATER AND SANITATION

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## WATER CONSUMPTION PER PERSON

Our university measures the total volume of water used in the university taken from the mains supply, desalinated, or extracted from rivers, lakes, or aquifers. Water extracted from springs within the campus boundaries is stored in 5 different tanks. All of the green areas in the campus are irrigated automatically with the water obtained from the source. Irrigation channels are laid on the floors of green areas. At times of irrigation, the tanks where the source water accumulates are activated, and the pressurized water is transported to the underground irrigation canals. The process of water accumulation and irrigation of green spaces is in an automatic cycle. The amount of water obtained from the springs has been measured as approximately 27 thousand cubic meters per year.

<b>The volume of water used in the university: Inbound (treated/extracted water)</b>	<b>68.028m<sup>3</sup></b>
<b>Number of campus population</b>	<b>44.469</b>

## WATER USAGE AND CARE

Our university has a process in place to treat wastewater. The wastewater generated in the campus is treated in the treatment facilities by the Metropolitan Municipality agreement. Wastewater passes through basic treatment filters before discharge. There are oil filters in the wastewater discharge channels in areas where oily wastes are formed, such as dining halls. The photograph of the oil filter in the dining hall area's wastewater drainage path is presented in the attached photo, but the photograph is unfortunately not very clear.

Our university has processes to prevent polluted water from entering the water system, including pollution caused by accidents and incidents at the university. Studies are carried out with the water and sewerage administration (SASKI) affiliated with the metropolitan municipality so that the wastewater does not interfere with the clean water network. On the other hand, since

Sakarya is located in the first-degree earthquake zone, the wastewater channels must be protected against possible earthquake risks and strong. Within the Metropolitan Municipality works' scope, a steel transmission line was laid in the region that includes Sakarya University. Despite these measures, filters are used in all wastewater discharge areas to minimize the damage resulting from contamination and damage to nature.

Our university provides free drinking water for students, staff, and visitors. In Sakarya, the water flowing from the fountain can be drunk. Many analyzes have been made, and reports have been published regarding the safety of fountain waters. Faculty members of Sakarya University also contributed to these studies. Many documents and news have been published indicating that the water flowing from the fountain in Sakarya is cleaner and safer than the water offered for sale as drinking water. However, some people do not prefer to drink water from the fountain and consume ready-made water. There are water dispensers on the campus that are open to visitors and residents. Those who wish can use the water dispensers free of charge.

Our university applies building standards to minimize water use. Most of the buildings aged five and over in Sakarya University and all of the newer buildings are equipped with water-efficient devices. Water-consuming accessories such as faucets contribute to water savings with spraying apparatuses that reduce water use and increase efficiency and photocell usage. Filling areas such as siphons provide water efficiency with semi-filling adjustment and photocell mechanisms. More than 60% of the water use devices in Sakarya University have water-saving features.

Our university plants landscapes properly to minimize water usage. Sakarya province has rainy and humid weather and a mild climate. Winters are rainy and warm, and summers are hot. Plants that will need minimum maintenance in these climatic conditions are especially pine and cedar trees. Pine and cedar trees were used in the campus landscape to minimize water use. Also, palm trees grown in arid climates with little irrigation were used in a small landscaping part. All of the green areas on the campus are irrigated automatically with water extracted from the natural source. Mains water is not used in irrigation works.

## **WATER REUSE**

Our university has a policy to maximize water reuse across the university. All of the water used for irrigation at Sakarya University comes from natural sources. Wastewater is treated and discharged. The treated wastewater is used for irrigation of forest areas on the campus. Sakarya University has approximately 800 thousand square meters of forest area. Mains water is not used for irrigation of these areas and landscape areas. Water obtained through rainwater collection channels is also used for irrigation or for meeting the water needs of stray animals. Studies to improve reuse areas by treating wastewater are at the feasibility stage. Our university measures the reuse of water across the university. Studies on measuring the amount of reused water and increasing reuse rate are under the construction works and technical department's management and control.

## **WATER IN THE COMMUNITY**

Our university provides educational opportunities for local communities to learn about good water management. Courses on good water management are given at Sakarya University. These courses are open to all of our students. Those who are not in Sakarya University can access these courses' grades through the education information system. Apart from lecture notes, seminars on good water management are held open to the public. Our faculty members include academics who are experts in good water management. External sources finance the projects developed by our faculty members, and public information meetings and seminars are organized to increase the projects' widespread impact within the scope of these projects.

Our university actively promotes conscious water usage on campus and in the wider community. Among our student societies, some groups draw attention to water saving. Also, various activities are organized within the university and open to the public within our faculties' scope of water-saving patients. In one of these events, Damla Student Community prepared a documentary on water saving and presented it to various Sakarya districts. There are reminder visuals to draw attention to water-saving usage in the campus's water usage areas. Apart from incentives and informational practices, there are currently water-efficient devices at many points on the campus.

Our university supports water conservation off-campus. Sakarya University attaches importance to protecting natural resources and proudly hosts studies in this area in the region. In the panel on water saving, organized by Sakarya University and attended by regional administrators, current practices and risks were discussed, and water resources protection recommendations were discussed.

Our university utilizes sustainable water extraction technologies on associated university grounds off-campus. Water extracted from natural resources within the campus boundaries is stored in 5 different tanks. All of the green areas in the campus are irrigated automatically with the water obtained from the source. Irrigation channels are laid on the floors of green areas. At times of irrigation, the tanks where the source water accumulates are activated, and the pressurized water is transported to the underground irrigation channels. Water accumulation and irrigation of green spaces are in a continuous and sustainable cycle.

Our university cooperates with local, regional, national, or global governments on water security. Sakarya University organizes many R&D studies and promotion programs and SASKI, which provides water supply to Sakarya on a local scale. Sakarya University hosts the panel held during the water week and brings together scientists and municipal units working on water conservation and security. Sakarya University academicians have regional and national research projects on water security. Findings obtained from regional projects are shared with regional management units and shed light on taking improvement actions. The majority of the nationally funded projects are supported by TUBITAK (Scientific and Technological Research Council of Turkey). Our researchers' technical equipment and equipment are financed within the scope of these projects, and our faculty members' research skills are improved. Also, the findings of these projects are shared with national public institutions and ministries. Some of the projects realized within the scope of TUBITAK projects are prepared in response to national needs calls, and our academicians support the national development and improvement movement.