WATER MANAGEMENT

IN PARALLEL WITH ITS GOAL OF REDUCING ENVIRONMENTAL IMPACT TO MINIMUM, ENKA CONDUCTS ITS ACTIVITIES WITHOUT COMPROMISING FROM ITS RESPONSIBLE WATER MANAGEMENT APPROACH. TODAY WHERE CLEAN WATER RESOURCES BECOME DEPLETED AND BOTH INDUSTRIAL AND DOMESTIC WATER DEMAND RISES CONTINUOUSLY, ENKA PRODUCES VARIOUS SOLUTIONS FOR THE SUSTAINABILITY OF ITS ACTIVITIES.

Depending on regional conditions and the needs of the relevant unit, groundwater, surface water, mains and sea water are used in ENKA's operations. Regardless of the source of the water used, permits are obtained from the relevant authorities and internal and external audits are carried out to ensure appropriate operation is in place. At ENKA projects, majority of water consumption takes place due to watering activities for dust preventiont, the production of materials such as concrete and asphalt at plants and domestic water use at projects.

Discharge locations vary depending on the geography and the scope of the work. If a sewage infrastructure is present in the area, it is preferred. In locations where there is no sewage system, the wastewater is treated to acceptable quality and discharged into receiving bodies.

Both before starting business activities and then also at regular intervals, the condition of the water sources in the region, water stress and the quality of drinking water and wastewater are examined and improvement actions are taken regarding the identified remedial issues. In addition, projects that aim to reduce water consumption are developed and implemented in ENKA subsidiaries.

In order to raise the awareness of employees, regular trainings are provided and information about water management is communicated at all ENKA companies.

Water consumption data for 2019 shows a 66% decrease compared to 2018. The main reason for this decrease is that the ENKA Power Plants stopped their operations in 2019. An increase of 22% was recorded in network water consumption and water purchased from third parties for activities, when the power plants are excluded.

Wastewater produced as a result of ENKA's activities is discharged based on the most stringent of legal requirements of the host country or customer contract requirements. Furthermore, sector-specific IFC standards may also be followed depending on the project's scope.

The pollutant loads in wastewater resulting from ENKA operations in 2019 are shared in the table below:

■ Amount of Wastewater Pollutant Loads

POLLUTANTS	UNIT	POLLUTANT LOADS (2019)
CHEMICAL OXYGEN DEMAND (COD)	Tonnes/Year	546
BIOCHEMICAL OXYGEN DEMAND (BOD)	Tonnes/Year	308
TOTAL SUSPENDED SOLIDS (TSS)	Tonnes/Year	239

In locations where there is no sewage infrastructure, treatment systems are established and operated. Even if the discharge point is a sewage system, wastewater analyses are conducted through accredited laboratories and the wastewater values; especially for pH, BOD, COD, nitrogen, phosphorus, TSS and coliforms are examined in detail. If the wastewater is to be discharged into the environment, the quality of the receiving environment is also controlled and monitored with regular measurements to determine the environmental impact.

■ Amounts of Withdrawal and Discharged Water by Source

SUBSIDIARY/FACILITY/PROJECT		AMOUNT OF WATER WITHDRAWAL BY SOURCE				WASTEWATER DISCHARGE (m^3)	DISCHARGE POINT
		MUNICIPAL WATER (m^3)	SURFACE WATER (SEA, RIVER, LAKE ETC,) (m^3)	GROUND-WATER (m^3)	RAINWATER (m^3)		
CIMTAS PIPE		26,774	X	X	580	27,354	Municipal Wastewater Treatment Plant
ÇİMTAŞ STEEL		1,986	X	39,340	X	15,000	The Sea of Marmara
ENKA POWER PLANTS	ADAPAZARI	X	X	16,434	X	16,434	Municipal Wastewater Treatment Plant
	GEBZE	X	X	32,868	X	32,868	Municipal Wastewater Treatment Plant
	İZMİR*	X	8,291,089	26,131	X	6,091,022	Sea
ENKA PAZARLAMA		7,300	X	X	X	7,111	Municipal Wastewater Treatment Plant
ENKA SCHOOLS KOCAELİ		10,104	X	X	X	10,104	Municipal Wastewater Treatment Plant
ENKA FOUNDATION		51,656	X	X	X	51,656	Municipal Wastewater Treatment Plant
CITY CENTER INVESTMENT (CCI)		194,708	X	X	X	194,708	Municipal Wastewater Treatment Plant
ENKA TC		573,900	X	X	X	565,700	Municipal Wastewater Treatment Plant
MKH		62,946	X	X	X	62,946	Municipal Wastewater Treatment Plant
ENKA HEADQUARTERS		13,340	X	X	X	13,340	Municipal Wastewater Treatment Plant
NIZHNEKAMSK PROJECT		24,000	X	X	X	18,000	Municipal Wastewater Treatment Plant

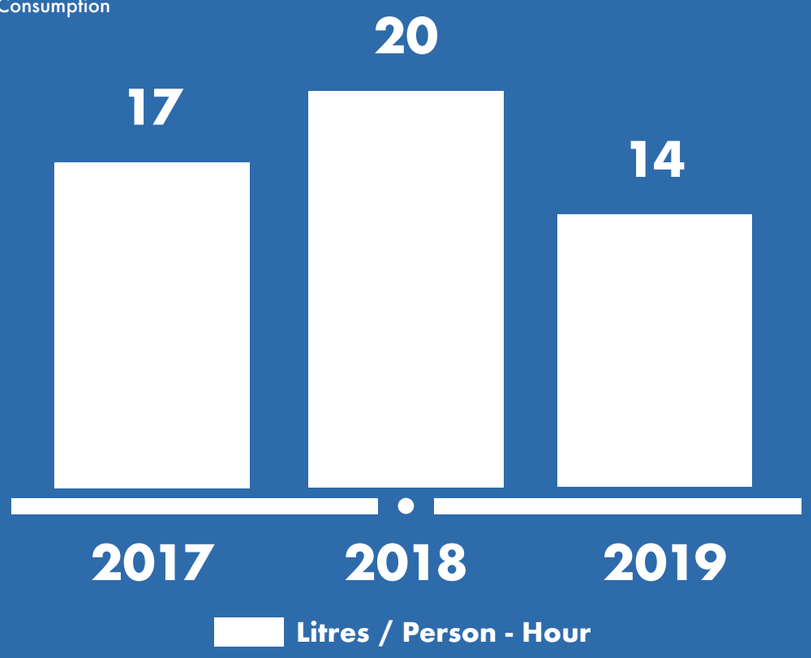
* While the seawater was included in calculations in the 2019 and 2017 reports, it was excluded in the 2018 report.

Amounts of Withdrawal and Discharged Water by Source continued.

SUBSIDIARY/FACILITY/ PROJECT	AMOUNT OF WATER WITHDRAWAL BY SOURCE				WASTEWATER DISCHARGE (m^3)	DISCHARGE POINT
	MUNICIPAL WATER (m^3)	SURFACE WATER (SEA, RIVER, LAKE ETC.) (m^3)	GROUND-WATER (m^3)	RAINWATER (m^3)		
DHI QAR PROJECT	55,333	X	X	X	3,009	Municipal Wastewater Treatment Plant
SAMAWA PROJECT	79,303	11,500	X	X	76,800	Receiving Body After Treatment
TOTAL (m^3)	1,101,350	8,302,589	114,773	580	7,218,052	

Within the scope of ENKA 2027 Sustainability Goals, Çimtaş monitors its specific water consumption data by using metrics specific to the company. In 2019, specific domestic water consumption was recorded 14 litres/person-hour, keeping below the goal of 15 litres/person-hour and achieving 30% improvement compared to 2018.

■ Çimtaş Water Consumption



■ Water Efficiency Efforts in 2019

COMPANY	WATER EFFICIENCY EFFORTS
CIMTAS PIPE	As a result of studies such as; increasing the amount of rainwater use, improvements in garden irrigation systems, daily monitoring of water consumption, early detection and repair of leaks, 25% water saving was achieved compared to 2018.
ÇİMTAŞ STEEL	Due to the volume of business in 2019, there was an increase in the number of employees compared to the previous year. With the increase in the number of employees, additional load was placed on the wastewater treatment plant and a kaizen project was initiated to improve the current performance of the treatment plant and prevent it from being affected by the increased number of employees. In this context, overload protection gauges were installed at the treatment plant together with an intermittent relay to ensure that the system operates at certain intervals. In addition, a bacteria dosage unit was installed to the oil retention system of the treatment system. As part of the individual kaizen project, the faucet flows in all the sinks at the factory were optimised and an average 250 m^3 of clean water was saved monthly.
ENKA SCHOOLS KOCAELİ	Within the scope of ENKA Sustainability Goals, ENKA Schools Kocaeli has completed the project studies for storing rainwater and using the stored rainwater for garden irrigation with the “Rainwater Recovery System”.
ENKA SCHOOLS İSTANBUL	Nearly 2,000 m^3 of water was saved over compared to 2018 through the use of sensor faucets and adjustments to their settings.
CITY CENTER INVESTMENT BV	With the installed system, the fan coil drainage water is stored and reused in the system in case the system pressure decreases or fan coil water is discharged. With the same method, it was ensured that water containing glycol discharged from the safety valves on closed system lines is reused in the systems. With these methods, approximately 300 m^3 of water was saved in a year.
ENKA TC	The “Rainwater Recycling Project” was completed within the scope of sustainability studies. With the implementation of the project at the end of 2019, rainwater collected on the roof of Sevastopolsky Shopping Centre is now treated and used for cleaning car parks, landscape watering and flushing toilets, resulting in saving the natural water sources.