

Sewage treatment

The University sewage sources include laboratory washing waste, dormitory and office sewage, which are collected through pipelines and sent to the sewage treatment plant for treatment. The reclaimed water is mainly used as supplementary water for grass sprinkler and ecological waterways. When there is excessive displaced water, it will be discharged to the drain on the north side of the campus and eventually into the Dian-bao River.

In addition to the traditional two-level biological treatment, the school sewage treatment plant is added with three-level treatment of filtering and ozone sterilization. The quality of the discharged water meets the discharged water standard revised on April 29, 2019. The discharged water standard is based on Article 7 Paragraph 2 of Water Pollution Control Act.

▼ List of removal rates of sewage treatment plant

Water quality standard	Removal rate
BOD	76.3%
COD	66.8%
SS	72.5%
Escherichia coli	99%

▼ Discharge water quality test data and discharge water volume

Test Item	2020	2021	2022	Discharge standard
BOD(mg/l)	6.55	10.5	15.5	30
COD(mg/l)	31.9	39.9	58.1	100
SS(mg/l)	6.6	7.55	8.2	30
Escherichia coli(CFU/100mL)	34,250	23,988	33,900	200,000
Grease(mg/l)	1.55	0.7	1	10
Water temperature(oC)	27.3	28.7	27.9	35
PH	7.5	7.6	7.7	6~9
Discharge volume(CMD)	19,187	9,813	14,818	-

Drinking water

The University has a total of 135 drinking fountains, and outsources regular monthly maintenance and regular replacement of filter materials, tank cleaning and disinfection. In accordance with the current drinking water laws and regulations, at least 1/8 of drinking fountains are inspected quarterly, i.e., 17 units, but the actual number inspected is 18 units. Water quality testing is based on the principle of sampling at least two drinking fountains in each building and once a quarter.

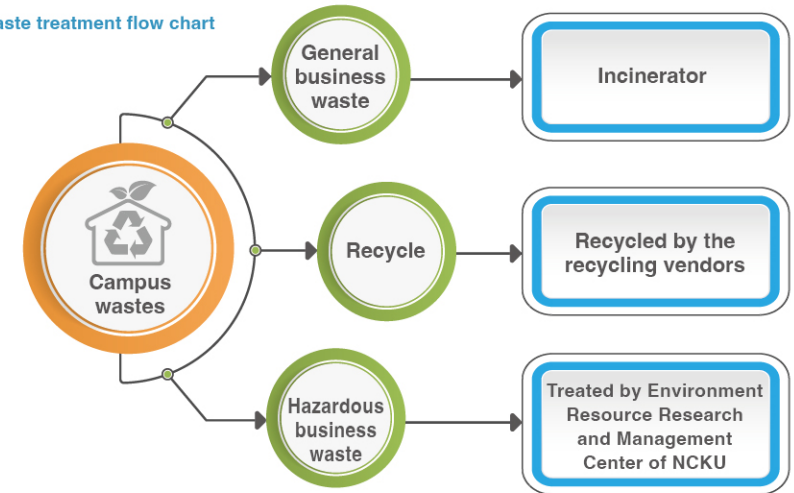
▼ Drinking Fountain Test Results

Test Item	2020	2021	2022	Standard
Escherichia coliCFU/100mL	<1	<1	<1	6
Total plate count CFU/mL	<1	<1	<1	Nil

5.1.4 Waste Management

The University's waste output can be roughly divided into general business waste and recyclables generated in the dormitory and office, and hazardous business waste generated in the laboratory. General business waste is entrusted to the manufacturer to be transported to the incineration plant for incineration; the harmful industrial wastes are cleaned and transported by qualified cleaning and transportation companies to Resource Recovery Plant of Environmental Resources Research and Management Center, National Cheng Kung University for disposal.

▼ Waste treatment flow chart



▼ List of general industrial waste disposal

Hazardous waste			Non-hazardous waste		
Treatment	On-site	Off-site	Treatment	On-site	Off-site
Incineration (incl. recycling)	-	7.487	Incineration (incl. recycling)	-	274.65
Landfill	-	-	Landfill	-	-
Others	-	-	Others	-	11.928
Subtotal	-	7.487	Subtotal	-	286.58
total		7.487	total		286.58
Total waste			294.065		

- Note: 1. Waste weights are in metric tons.
 2. "On-site" is within the physical boundaries or administrative control of NUK; "off-site" is outside NUK's physical boundaries or administrative control.
 3. All industrial wastes are sent to the entrusted manufacturer for disposal.
 4. NUK has no transfer during disposal.