

NaS(sodium-sulfur) Battery

We reduce the electricity bill by using power in the daytime that was saved in the sodium-sulfur battery in the nighttime with low power rate. Also we tackle with the power shortage caused by power demand control.



▲NaS battery

Seafront Ballpark on top of the Treatment Facilities

The Edogawa Ward seafront ballpark, which has been built on the space above the water treatment facilities, is used by many people to play soccer, baseball, etc. The ballpark can be turned into an evacuation area in case of an earthquake disaster.

Application for use: Edogawa Ward Seafront Ballpark
Phone: 03-3680-9251



▲Treatment facilities are underneath the ballpark.

Sawayaka (fresh) Smoke Stack

The height of the smoke stack is 100 meters. Immediately after opening, it was painted red and white. However, in 2001 we solicited design ideas from local elementary school students and changed it to a more pleasant blue gradation. It was then repainted and reborn in 2018, with further consideration made for the surrounding landscape.



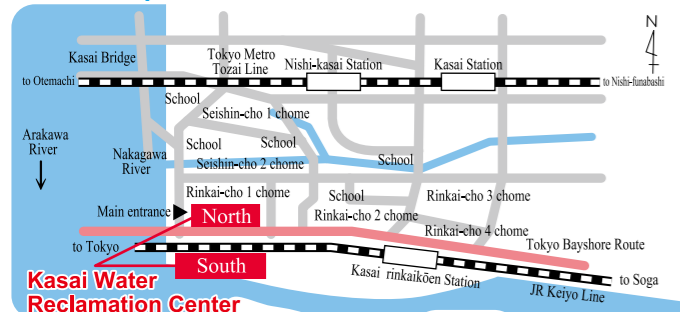
▲The smoke stack appears to be sucked into the blue sky.

Hydrogen Station

Part of the center site is being used to build a facility that supplies hydrogen, a next generation fuel. (This will be a base for refueling hydrogen fuel cell buses operated by the Tokyo Metropolitan Bureau of Transportation, also known as Toei Bus)



Guide map



- **Address** 1-1-1, Rinkai-cho, Edogawa Ward, Tokyo 134-0086, Japan
Phone: 03-5605-9991
- **Access** Get off at Nishi Kasai Station on the Tokyo Metro subway, take a metropolitan bus bound for "Rinkai-cho 2-chome Housing Complex," get off at "Tokyo Rinkai Hospi" or "Rinkai-cho 1-chome," and walk for 10 minutes to the Reclamation Center.
Or Get off at Kasai Rinkai Park Station on the JR Keiyo Line and walk for 20 minutes to the Reclamation Center.

Beware of crooked dealers who pretend to be related to the Bureau of Sewerage!

The Bureau of Sewerage does not rely on businesses to repair or clean drainage facilities in housing.

Facility tours of Water Reclamation Centers

Facility tours of water reclamation centers are available except weekends, holidays, and the New Year's season.

Please contact us about reservations and details.

«Contact point for arranging facility tours»

Telephone: 03 (3241) 0944
Hours: 9:00 ~ 17:00 (weekdays only)

● Tokyo Amesh

Tokyo Amesh is the system that shows rainfall in and around Tokyo in real time.

The rainfall is measured by radars and ground rain gauges.
※ Tokyo Amesh is the registered trademark of the Tokyo Metropolitan Government.



● Sewer Adventure

Pass the sewer quiz to become a sewer master.



● Bureau of Sewerage website

<https://www.gesui.metro.tokyo.lg.jp/>



Water environment cultivated by the district Kasai Water Reclamation Center



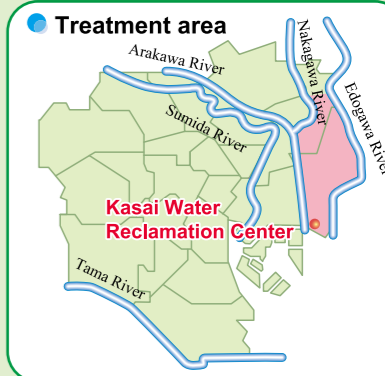
Earth-kun, the mascot of Bureau of Sewerage

Kasai Water Reclamation Center, which is located at the mouth of Arakawa River, consists of facilities in the southern and northern areas that sandwich the Metropolitan Expressway Bayshore Route. Its treatment area is 4,889 ha, including most of Edogawa Ward surrounded by Arakawa River and Edogawa River and a part of Katsushika Ward.

Treated wastewater is discharged into Tokyo Bay, while some of it is sand-filtered and used for washing/cooling machines and flushing toilets in the Center.

Generated sludge is incinerated within the Center together with sludge pumped from Nakagawa Water Reclamation Center and Kosuge Water Reclamation Center.

The treatment area has 8 pumping stations, 4 of which are operated remotely from Kasai Water Reclamation Center.



(As of April 2023)

- **Operation started :** September 1981
- **Site area :** 361,744m²
- **Treatment capacity :** 400,000m³/day
- **Wet weather storage tank :** 87,300m³
- **Stormwater storage tank :** 69,000m³
- **Wastewater treatment facilities**
Grit chamber : 18
Primary sedimentation tank : 10
Reaction tank : 10
Secondary sedimentation tank : 10
High-rate filtration system : 1
- **Sludge treatment facilities**
Thickener : 4
Concentrator : 7
Dewatering machine : 18
Incinerator : 3

● Average quality of influent and final effluent

The final effluent from the water reclamation center complies completely with the water quality standards of the Tokyo Metropolitan Environmental Security Ordinance and is sufficiently clean for fish to live in.

				(Units: mg/L)
Item	Influent	Final effluent	Regional water quality standards	
BOD	100	4	—	
COD _{Mn}	65	9	35 or below	
Total nitrogen	25.8	9.7	30 or below	
Total phosphorus	2.7	1.1	3 or below	

Average values of 24-hour test conducted in FY2021

※The higher values of BOD and COD indicate the higher levels of water contamination. BOD describes the amount of oxygen required by microorganisms to eat organic material in water, and COD describes the amount of oxygen required by oxidizer to decompose organic material in water. The quality levels of discharged water are specified in terms of BOD for rivers and COD for seas. Total nitrogen and total phosphorus are closely related to the generation of red tides.



Sewerage System

Sewerage system is mainly composed of 3 components*: sewers, pumping stations and wastewater treatment plants (WWTPs)*. Sewers collect and carry wastewater. Pumping stations pump wastewater to avoid sewers getting deeper. WWTPs treat and clean wastewater. We perform inspection, cleaning and maintenance every day to keep them working properly.

*WWTPs in Tokyo are called "Water Reclamation Centers".

WWTP

Grit chamber

Wastewater flows into this chamber first. Large objects are removed, then sand and grit are settled out.

Primary sedimentation tank

As wastewater flows in slowly through this tank for 2 to 3 hours, solids sink to the bottom.

Reaction tank

Organic matter in wastewater is absorbed to activated sludge, where microorganisms break it down. As microorganisms grow, activated sludge becomes easy to settle.

Secondary sedimentation tank

As activated sludge formed in a reaction tank flows slowly in this tank for 3 to 4 hours, it is separated into effluent and sludge.

Advanced wastewater treatment

We introduce following facilities to clean treated water even more.

- ★ Sand filter/Biologically active filter
Removes residual suspended solids that the secondary sedimentation tank cannot remove completely.
- ★ A₂O process
Removes nitrogen and phosphorus efficiently in the reaction tank.

Chlorination tank

Treated water is chlorinated to disinfect coliforms and other bacteria before discharged into rivers and the sea.

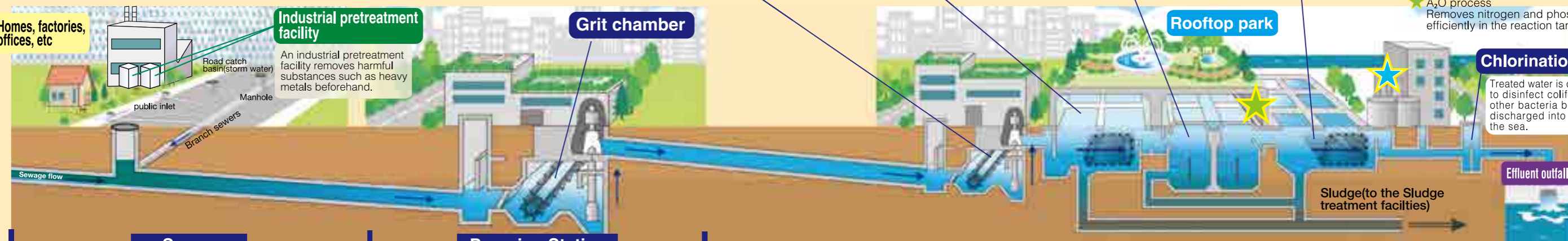
Homes, factories, offices, etc

Industrial pretreatment facility

An industrial pretreatment facility removes harmful substances such as heavy metals beforehand.

Grit chamber

Rooftop park



Sewer

Sewers collect and carry wastewater to WWTPs. The internal diameter of the sewer ranges from 25cm to 8.5m.

Pumping Station

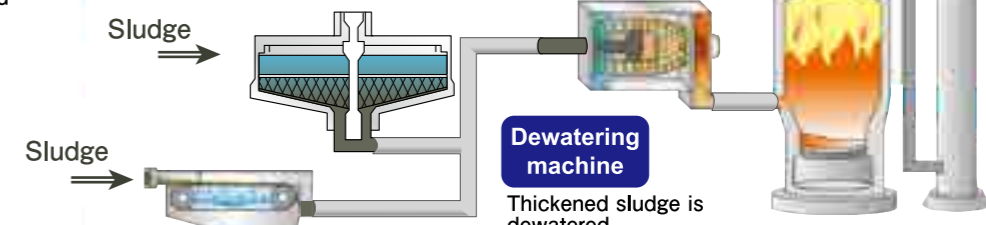
Sewers slope down to let wastewater flow naturally by gravity. Wastewater is pumped up to nearly ground level at pumping stations and flows naturally again.

Sludge treatment facilities

Sludge is thickened, dewatered and incinerated.

Thickener Gravity Thickener

Sludge is settled calmly and separated into supernatant and thickened sludge.



Thickener Belt Thickener

The sludge is coagulated by adding chemicals, placed on a belt, and water is separated out by gravity filtration.

Incinerator

Dewatered sludge is incinerated to ashes.

※If a WWTP does not have sludge treatment facilities, it transports sludge to another WWTP with sludge treatment facilities.



The Role of Tokyo Sewerage

Improvement of a Living Environment by Treating Wastewater

We treat wastewater from houses and factories and ensure a comfortable living environment.

Flood Prevention by Draining Stormwater

We protect the city from flooding by draining stormwater immediately from roads or residential areas.

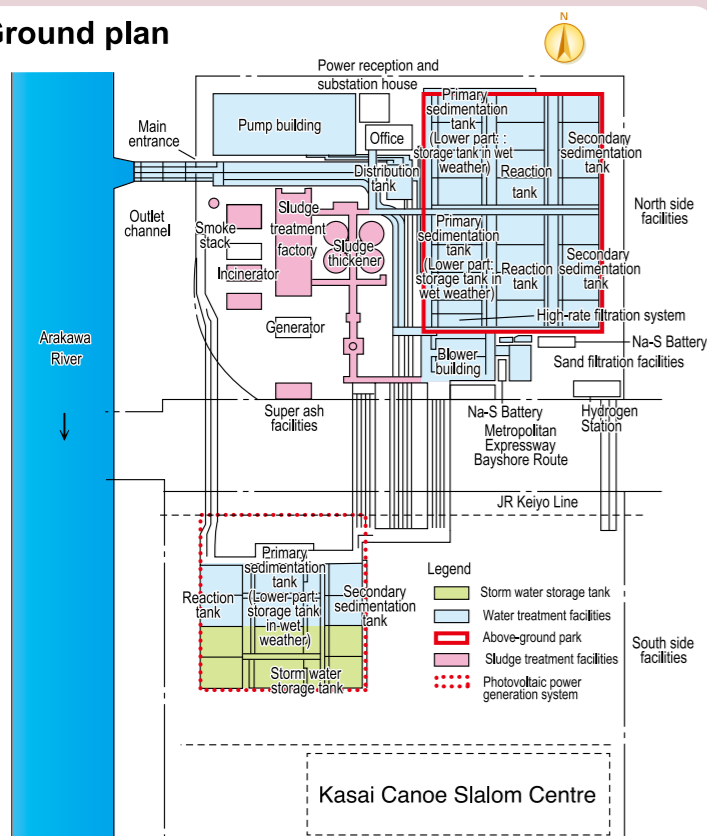
Water Quality Control in Rivers and the Sea

We improve and control the water quality of rivers and the sea by treating wastewater and returning it to them.

Our New Role

Now we play a new role in creating a good urban environment. We use sewerage resources and energy effectively, for example, reclaimed water and sewerage heat. We also utilize rooftop spaces of our facilities as parks.

Ground plan



Features of Kasai Water Reclamation Center

Photovoltaic (Solar) Power Generation

To help prevent global warming, a photovoltaic power generation system, which does not emit CO₂ at the time of power generation, was installed and the generated power is consumed by the Center as part of its total power consumption.

The total power generation capacity is 490kW, 290kW of which is generated by single-axis tracking type generators. The annual power production is equivalent to the power consumed by 160 ordinary households.



▲ Single-axis tracking type photovoltaic cell

Belt Thickener

This machine coagulates sludge with chemicals, loads it on the belt, and separates water more efficiently than conventional sludge thickening methods.



Turbocharged Fluidized Bed Incinerator

We introduce efficient incinerator such as high-temperature energy-saving type incinerator and reduce energy consumption and N₂O gas emission.

