NaS (sodium-sulfur) Battery

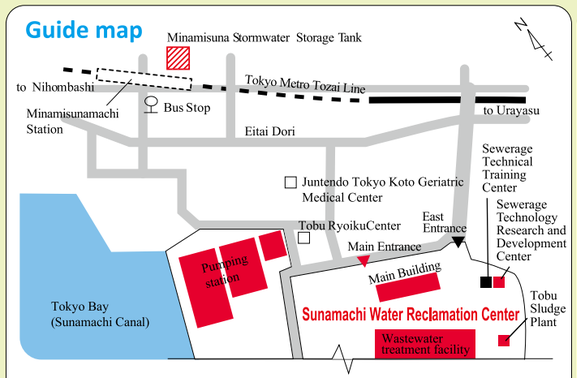
NaS battery enables us to reduce electricity costs by storing low-cost nighttime power. We can also use this stored power as a buffer against power shortages during periods of peak demand periods.

▲NaS Battery in Sunamachi WRC

Sewerage Technology Research and Development Center

The bureau established this center to experiment using real sample such as wastewater and sludge. Not only the bureau researchers but also laboratories at a universities and manufacturers can use here to develop a new technology.

Guide map



●Address 3-9-1, Shinsuna, Koto-ku, Tokyo Tel: 03-5632-2180
●Access 15 minutes walk from Minamisunamachi station east exit (Tokyo Metro Tozai Line)

Environmental management of Sunamachi Water Reclamation Center

The Sun Square

There are biotopes such as a little stream in "The Sun Square" on the left side containing the main gate. Moreover, in front of "Shinsuna Otaki," there is a pond which is recycling treated water and the fishes such as carps are swimming in it.

Ginkgo Road

There are about 200 kinds of 80,000 plants in the site of a vast center (its area equals to 20 Tokyo Dome), and there are also the ginkgo trees which were transplanted from former Tokyo Metropolitan Government Building' s site, or the American aloes that bloom once in 30 - 50 years.

There is a facility to enjoy the experience of learning about the sewerage system, its roles, and the importance of water environment.

- Business hours: 9:30 - 16:30
- Entry Fee: Free
- Closed: Mondays (open on holiday Mondays, closed the next day) and the year-end and New Year holidays
  Open daily throughout the summer (July 16 - August 31)
  Open on Sewerage Day (September 10) and Tokyo Citizens Day (October 1)
- Address: 2-3-5 Ariake, Koto-ku Ariake
  Water Reclamation Center Management office (A-tower) 5th floor
- Telephone: 03 (5564) 2458
- Website: https://www.nijinogesuidoukan.jp/

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.

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/

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)

令和5年3月発行：東京都下水道局総務部広報サービス課〒163-8001 新宿区西新宿2－8－1
☎03-5320-6515 FAX03-5388-1700 令和4年度規格表第4類登録第98号

Water environment cultivated by the district
Sunamachi Water Reclamation Center

Earth-kun, the mascot of Bureau of Sewerage

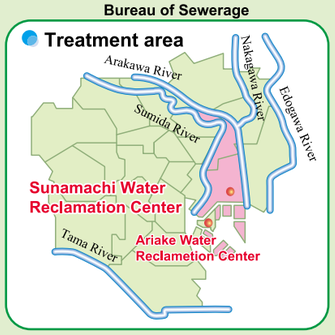
Starting operation in 1930, Sunamachi Water Reclamation Center is the second oldest Water Reclamation Center in Tokyo. Sunamachi treatment area is a delta area surrounded by Sumida River and Arakawa river.

Sunamachi Water Reclamation Center is treating the sewer generated from the vast zone of 6,153ha which consists of all of Sumida Ward, Koto Ward, and part of Chuo Ward, Minato Ward, Shinagawa Ward, Ota Ward , Adachi Ward and Edogawa Ward with Ariake Water Reclamation Center.

The treated water is discharged to Tokyo Bay. Part of the treated water is cleaned through sand filtration and used inside the center for cleaning facilities, cooling machines, and flushing toilets.

The generated sludge is carbonized and incinerated at Tobu Sludge Plant in the Center.

Treatment area



(As of April 2023)

- Operation started: February 1930
- Site area: 827,033m²
- Treatment capacity: 658,000m³/day
- Wastewater treatment facilities:
  Grit chamber : 54
  Primary sedimentation tank : 21
  Reaction tank : 24
  Secondary sedimentation tank : 20
  High-rate filtration system: 1

- Sludge Treatment Facilities
  Thickener : 7 (3)
  Storage tank : 7 (4)
  Concentrator : 12 (12)
  Dehydrator : 10 (10)
  Incinerator : 3 (3)
  Sludge carbonization facility : 2 (2)

The digits in the brackets belong to Tobu Sludge Plant.

- Storage tank in wet weather: 85,600m³
- Storm water storage tank:
  Pumping station: 33,000m³
  Ex-Kiba line: 61,000m³

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
B O D	150	4	——
C O D_{Mn}	83	9	35 or below
Total nitrogen	30.7	10.1	30 or below
Total phosphorus	3.6	1.2	3 or below

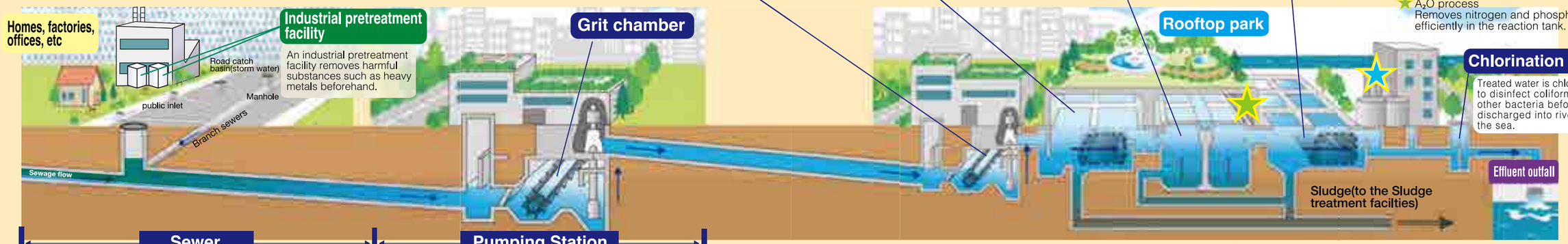
Average values of 24-hour test conducted in FY2021

※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.

BUREAU OF SEWERAGE
TOKYO METROPOLITAN GOVERNMENT

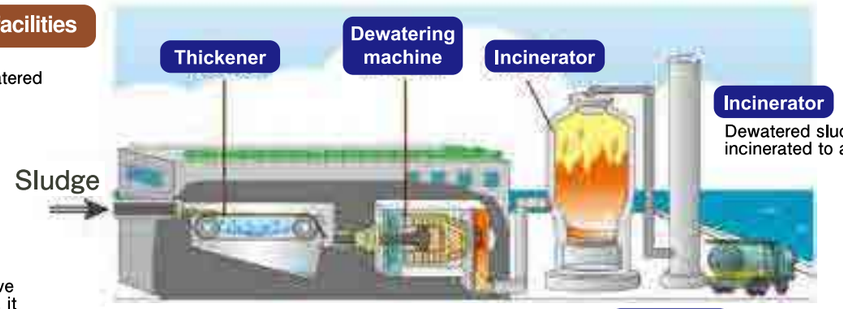
Sewerage System

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”.



Sludge treatment facilities

Sludge is thickened, dewatered and incinerated.



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

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

Dewatering machine Thickened sludge is dewatered.

Incinerator Dewatered sludge is incinerated to ashes.

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.

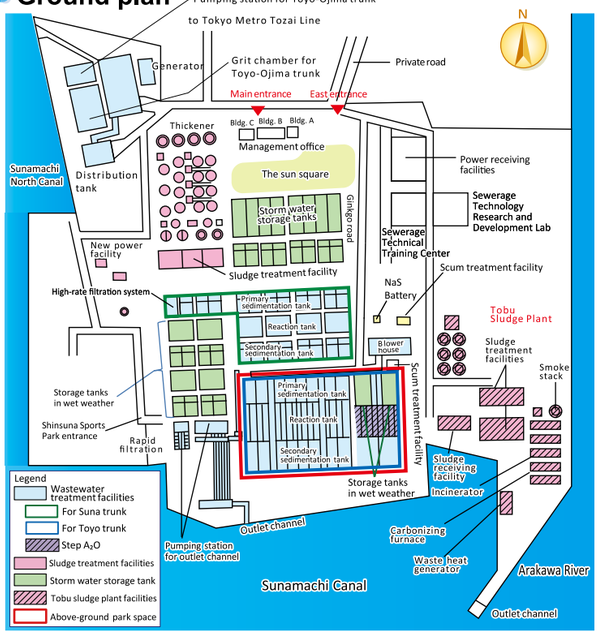
Water Quality Control in Rivers and the Sea

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 Sunamachi Water Reclamation Center

Minamisuna Stormwater Storage Tank

Minamisuna Stormwater Storage Tank is an institution for storing the stormwater collected from the area of about 500 ha, such as Sunamachi area in Koto-ward area, and aiming at mitigation of flood damage.

The stored stormwater is sent to Sunamachi Water Reclamation Center at the time of fine weather, and after processing, it is discharged to Tokyo Bay. Moreover, in order to use an institution effectively, the upper part of Storage Tank is used as public facilities, such as collective housing and a parking lot for bicycles.

▲The exterior of Minamisuna Stormwater Storage Tank

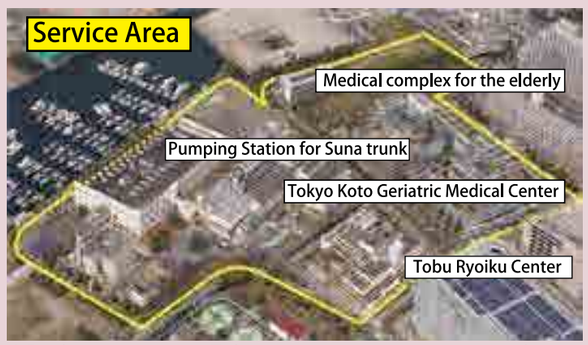
▲The interior

Regional Air Conditioning Project in Shinsuna 3-chome Area

Regional Cooling/Heating Service Area

In Juntendo Tokyo Koto Geriatric Medical Center, the treated water of Sunamachi Water Reclamation Center and the waste heat of an incinerator or a carbonization furance are utilized as a heat source of hot water supply or an air conditioning.

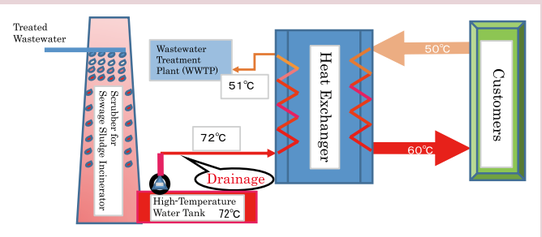
Utilizing such unused energy makes the amount of discharge of CO_2 less than using the electricity and any gas made from the fossil fuel, contributing to global warming prevention.



▲Business operator: Tokyo sewerage energy corporation

Systems for Producing Heated Water

Exhaust gas from a sludge incinerator produces approximately 70°C drainage water when cleaned without affecting the surrounding environment. We use this hot drainage to produce 60°C water through a heat exchanger with fresh water to supply to our customers.



Effects of Regional Cooling/Heating Systems

(1) Reduction of the use of fossil fuels
(2) Reduction of greenhouse gas emissions
(3) Easing of heat island phenomena
(4) Effective use of building space by downsizing heat source equipment