02 A Safe and Secure Water Supply

Safe and Secure Water Supply Working Twenty-four Hours a Day to Produce Safe and Good Water

Safe and High-quality Water Production

Purification Plants

The purification plants of the Bureau take water from the Yodo River and turn it clean and potable tap water. In other words, they serve as water manufacturing factories. Water is essential to our daily lives. Therefore, the purification plants operate 24 hours a day and 365 days a year with no stoppage.

Maintenance of Purification Facilities

The purification plants and distribution plants of the Bureau must constantly send water to customers. Therefore, the Bureau makes efforts to provide safe water at any time, which include continuous facility inspections as well as the scheduled replacement of aging equipment, reinforcement of the quake resistance of existing facilities, development of distribution reservoirs, and advancement of the management system of the purification plants and distribution plants.

Advanced Water Treatment System

The advanced water treatment system consists of ozone treatment and granular active carbon treatment stages in addition to the conventional stage of water purification to produce and tasty water.
This process completely removes foul and musty odors, and greatly reduces trihalomethane, dryptosporidum, and other pathogenic microorganisms, thus improving the overall quality of water to ensure safe water supply.

Advanced Water Treatment Features

1 Elimination of foul and musty odors
Treatment with ozone and granular active carbon completely removes all foul and moldy odors and reduces chlorine scents produced by organic substances.

2 Reduction of Trihalomethane
The advanced water treatment system has decreased the average annual values of trihalomethane to less than one-tenth of the previous level.

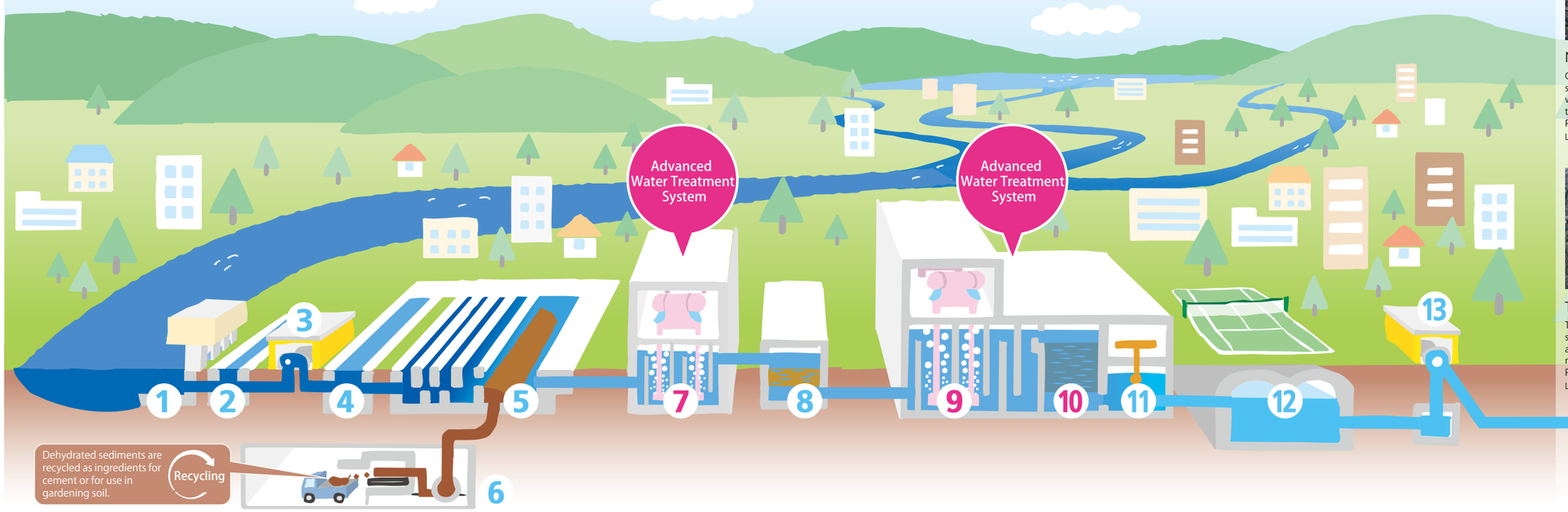
3 Protection against Pathogenic Microorganisms
The oxidizing properties of ozone ensure the safety of water against microorganisms.


Ozone Contact Basins


Granular Active Carbon magnified by electron microscope

【(1) Ozone】Ozone (O3) has strong oxidizing power. It effectively eliminates foul and musty odors through the decomposition of musty-odor casing substances and helps the oxidization of manganese in water and the sterilization of water.

【(2) Granular Activated Carbon】 Granular activated carbon is a tiny, porous particle that highly effectively eliminates substances from which trihalomethane derives and odor-causing organic substances dissolved in water. Microorganisms that reside on the porous surface of granular activated carbon particles break down the offending particles.



1 Intake Pipe
Water is taken here from the Yodo River.

2 Grit Basins
Waste and sand are removed.

3 Intake Pumps
Water is pumped from the Grit Chambers.

4 Receiving Well
The level of intake water is adjusted.

5 Coagulo-sedimentation Basins
Aluminum sulfate is introduced into the water to facilitate micro-particle settling.

6 Wastewater Treatment Facilities
Sediment is dehydrated and processed.

7 Intermediate Ozone Contact Basins
Ozone exposed to water initiates manganese oxidization and organic substance decomposition.

8 Rapid Sand Filters
Water is filtered through layers of sand.

9 Post Ozone Contact Basins
Ozone exposed to water decomposes organic substances that will generate musty odor and trihalomethane, and sterilizes the water.

10 Granular Activated Carbon Filters
Granular activated carbon highly effectively eliminates organic substances that will generate trihalomethane, while microorganisms that reside on the porous surface of granular activated carbon break down the offending particles.

11 Chlorine Contact Basins
Chlorine is added to water in order to ensure the disinfection of water until it reaches each faucet.

12 Service Reservoirs
Treated water is stored in basins.

13 Distribution Pumps
Pressure is applied to water to distribute it to each faucet of customers.

Intake → Purification → Water Distribution

Our Purification Plants

Kunijima Purification Plant

The oldest purification plant completed in 1914. It has a standard daily supply capacity of 1,180,000 m3 and supplies water to the central, northern, and northwestern areas of the city.
Location: 1-3-14 Kunijima, Higashi Yodogawa-ku, Osaka

Niwakubo Purification Plant

Completed in 1957. It has a standard daily supply capacity of 800,000 m3, and supplies water to the mid-western and southern areas of the city via the Oyodo and Tatsumi Distribution Plants.
Location: 11-31 Yodoe-cho, Moriguchi

Toyono Purification Plant

The newest plant completed in 1968. It has a standard daily supply capacity of 450,000 m3 and supplies water to the central and eastern regions of the city via the Joto Distribution Plant.
Location: 1-1 Uzumasa-Takatsuka-cho, Neyagawa