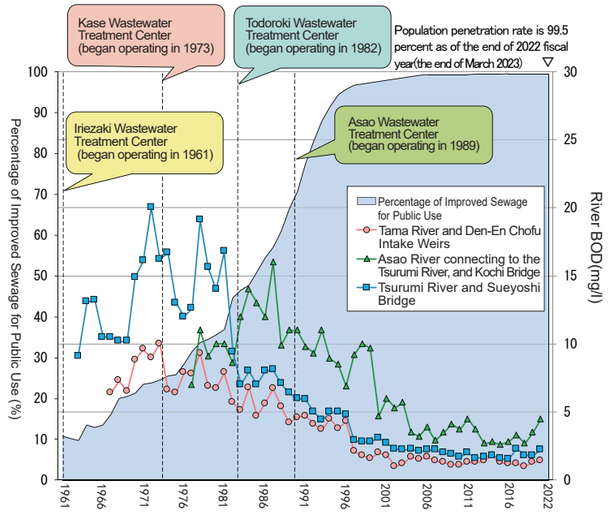
Overview of the Sewerage Systems of Kawasaki

Kawasaki City' s Sewerage Administration Department provides quality sewerage services, protecting citizens' safe and comfortable life, as well as considering the environment.

Kawasaki sewage works was developed in 1931 to avoid flooding in the old town surrounding Kawasaki Station. From 1963, based on the 5-year-plan in cooperation with national government, a policy of establishing sewerage for 100% of the population to improve the quality of public water was established. The 5-year plan took place 8 times, and as a result, in March 1995 sewage works reached 90% of the population. Currently, it has reached 99.5%.

Due to these actions, the water quality of the sea and rivers has been improved, and the bubbles of neutral detergent completely covered the surface Tama River during the 1960s and 1970s but in recent years the "Ayu" known as sweet fish have been swimming upstream and this water environment has been greatly beneficial to them.

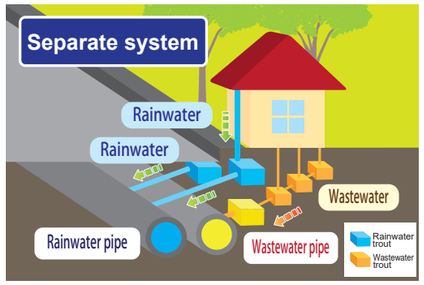
In addition to sewage treatment and rainwater elimination, the roles required of sewage systems have become increasingly diverse and sophisticated over time. The city is taking various measures against wind and flood damage, which are becoming more severe and frequent due to climate change, as well as earthquake countermeasures, aging countermeasures, advanced treatment, and global warming countermeasures.



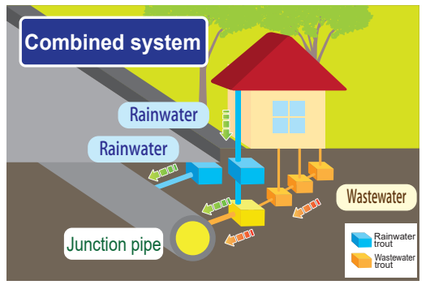
※The BOD is an indicator that tells how polluted water is. Generally speaking, the higher the number, the more polluted the water, and vice versa.

» Drainage method of sewerage systems

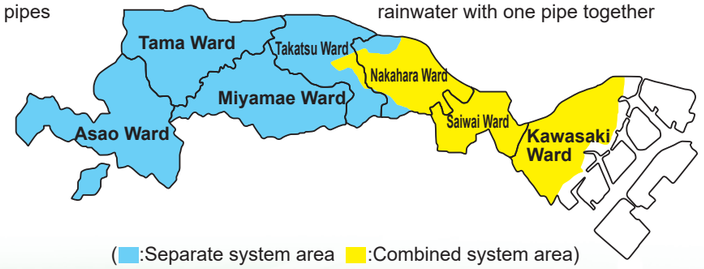
sewerage systems include combined systems, which flush down rainwater and household wastewater(wastewater from the toilet and laundry)through single sewer pipes, and separate systems that flush them down through separate sewer pipes .In Kawasaki City , Iriezaki Treatment District and a part of the Kase Treatment District use the combined system, while the other section of the Kase Treatment District, the Todoroki Treatment District,and the Asao Treatment District use the separate system.



●Method to drain wastewater and rainwater with separate pipes



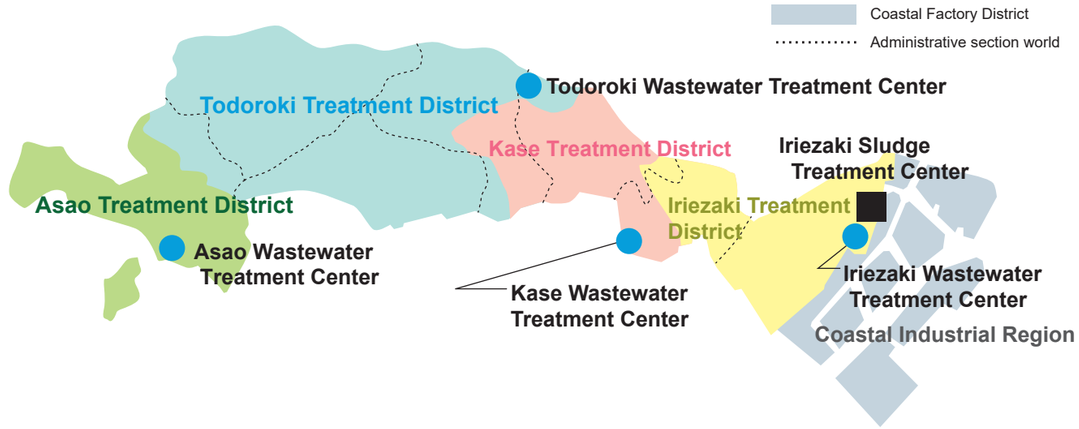
●Method to drain Wastewater and rainwater with one pipe together



(■:Separate system area ■:Combined system area)

»Sewage facilities

The sewage water collected by sewer pipes(3,158km) go through pumping stations to Wastewater Treatment Centers (wastewater treatment plants), where the wastewater is cleaned and discharged to public water bodies. Rainwater is directly discharged to public water bodies, and in case of combined sewerage systems it is temporarily stored in stormwater tanks and storage pipes for the purpose of preserving the quality of public water bodies, and then it is discharged after treated at wastewater treatment centers. Meanwhile, the sludge generated in the process of sewage treatment is collected in sludge treatment center(incineration facilities) and burned.



Iriezaki Wastewater Treatment Center

It began operation in September 1961. The treatment district is composed of the entire Kawasaki Ward and parts of Saiwai and Nakahara Wards, all covered by combined systems. As a full scale sewage treatment center, the center in Kanagawa prefecture is the one of the oldest sewage plants in Japan.Upon the completion of part of the Eastern System in FY2002 and the West Line Advanced Wastewater Treatment System Facilities in FY2018, treated water has been efficiently used in the Zero-Emission Industrial Complex of the Coastal Area and adjacent bus service offices.

Kase Wastewater Treatment Center

It began operation in in November 1973. It covers the area composed of Saiwai, Nakahara, Takatsu Wards and a part of Miyamae Ward which are located among Tama River, Yagami River and Tsurumi River and use combined systems and separate systems. The upper part of the facility is used as a multipurpose space in normal times and as an emergency evacuation site in times of disaster.

Todoroki Wastewater Treatment Center

Beginning operation in November 1982. It covers the area over the right bank of Tama River including Nakahara, Miyamae, Takatsu, Tama and Asao Wards and uses separate systems. It is an entirely underground wastewater treatment facility constructed in the Todoroki Ryokuchi Park. A part of the advanced wastewater treatment facility was completed in FY2003, the treated water is effectively used as headwater for Egawa Seseragi Promenade.

Asao Wastewater Treatment Center

Beginning operation in March 1989, it covers a greater part of Asao Ward and uses separate systems. An advanced wastewater treatment facility was partly completed in December 2000 and started service. Pedestrain malls are arranged around the facility, and the upper part is also opened as a multipurpose space.

Iriezaki Sludge Treatment Center

It began operation in November 1995. In order to effectively maintain sludge treatment, sludge is collected in 4 treatment centers within the city and is transported through a conveying pipe and then incinerated. The waste heat generated from this process is utilized for heated swimming pools. All amounts of the burnt ashes are effectively used as a cement raw material.

Our Strategy to form a Good Circulatory Function of our Sewerage Systems

We provide fine sewerage services by designing medium to long term plan to project public's secure and comfortable life with care for the environment.

In the future, in order for the waterworks and industrial water system in our city to all-round develop and to expand alongside future generations, it has become necessary for us to take a hard look at the current situation (2017) within the next 30 to 50 years and over the next 10 years implement the "Kawasaki City Waterworks Vision", and "Kawasaki City Waterworks Mid-term Project Plan" (from FY2017-FY2021) which is set to begin in March 2017. The project was formulated in March 2017 and has been steadily implemented. In March 2022, after properly evaluating the results of the implementation of the five-year medium-term plan, we formulated the "Kawasaki City Water Supply and Sewerage Business Medium-term Plan (2022-2025)" based on the current status and challenges of the business while accurately grasping changes in the business environment.The main policy organization of the mid-term plan of the waterworks and water resources for industrial usage is shown underneath.

The Main Policy Organization of the Mid-term Plan of the Sewerage System

≪The 10 Year Plan≫	≪Policy≫
1 Preparations for Heavy Rain and Flooding 【Safety and Trust】	Flooding Countermeasures
2 Maintenance and management during disasters 【Strong Disaster Resistance】	Earthquake Disaster Measures concerning Underground Water Pipelines and Facilities
	Crisis Management Measures of the Sewerage System
3 Renewal and Managment of Pipelines and Facilities 【Sustainability】	Waterpipe and Facility Deterioration Measures
	Maintenance of Water Pipes and Facilities
4 Creating a Clean Water Environment 【Environment】	Highly Filtered Sewage
	Improvement of Combined Sewerage Systems
	Providing a Sewerage System to 100% of the Population
	Sewerage works guidance and water quality control
5 Global Environment 【Environment】	Global Warming Countermeasures
	Natural Resources of Sewage, Effective Usage of Facilities

Flooding Countermeasures

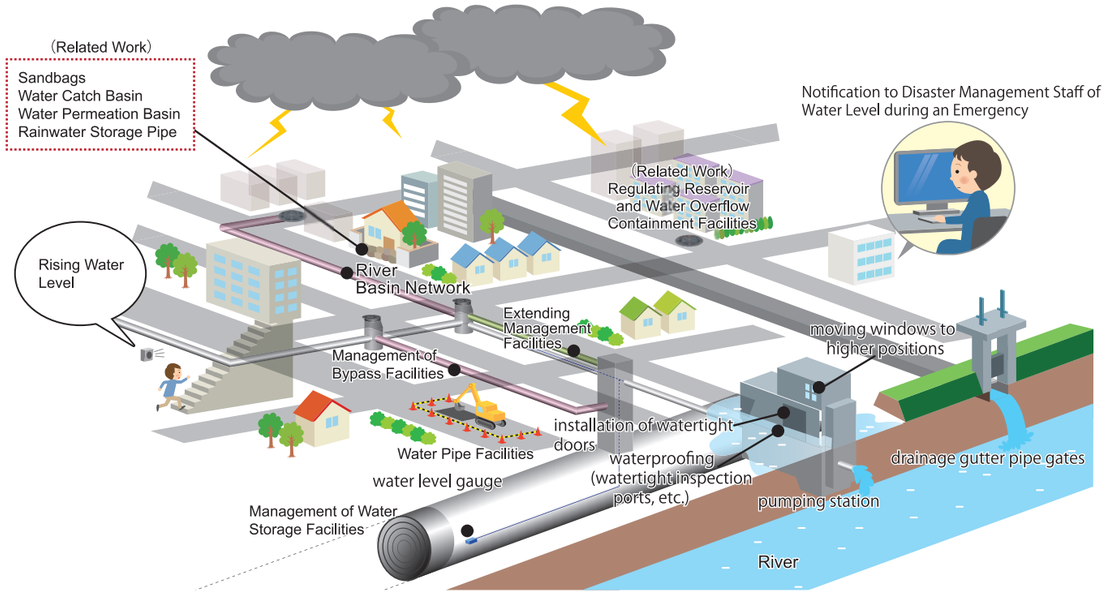
Due to cities progression in recent years, heavy rainfall happening over a short time period and isolated showers etc. correspond to the increase of the flow of rain water and climate change. Due to the change as to how the rain falls, the risk of flooding is increasing. We are therefore continuing to place much effort into creating a stronger, more stable waterworks system to avoid overflow.

» Flood control measures in priority areas and limited area to a certain region

In response to the increasingly severe and frequent flooding caused byclimate change, based on flooding records and flooding simulations,
we have designated areas with high risk of flooding as priority areas and are steadily implementing floodingcountermeasures, including the mainte nance of rain water drain pipelines.In addition, effective flood counter measures based on regional characteristics will be promoted for locally inundation areas, such as areas around drainage pipes that were inudaed by the East Japan Typhoon in 2019, and other areas that are inundated due to geographical factors or partial capacity shortage of drainage facilities. As a short-term measure, we have so far installed motorized gates and observation equipment, and intro duced a drainage pump truck.We will continue to promote medium and long-term measures by upgraing pump gate facilities and pum ing stations.

Daishigawara Storage Pipe
(Operations started in March 2019)

Electrification of drainage gutter pipe gates
(started operation in July 2020)



Flood Policy Course of Action

» Waterproofing of Water treatment center and pumping station

At water treatment centers and pumping stations, we will promote waterproofing in stages according to the magnitude of risk in the event of a disaster and the importance of the facilities, thereby ensuring the necessary sewerage functions in the event of a disaster.

Waterproofing of facilities (watertight panels)

Earthquake Disaster Measures concerning Underground Water Pipelines and Facilities

In Kawasaki City, too, there is concern that the city may be hit by a large scale earthquake in the near future. To prevent the loss of sewer functions even in the event of a large-scale earthquake, the city will systematically and efficiently promote earthquake countermeasures for sewer pipes and facilities, including the reinforcement of pipelines and the promotion of earthquake resistance in conjunction with seismic reinforcement and reconstruction of facilities.

» Water Pipe Earthquake Countermeasures

Among the important pipe lines that are not earthquake-resistant, priority is given to earthquake-resistant pipe lines connecting water treatment centers with wide-area evacuation centers, regional disaster prevention centers/evacuation centers, and medical institutions positioned in the regional disaster prevention plan.

Earthquake-proofing important Water Pipes throughReorganization Measures

» Earthquake Countermeasures of the Water Treatment Center and Pumping Stations

To prevent sewage water from remaining in pipelines and overflowing into urban areas even in the event of a large-scale earthquake, we will promote the earthquake proofing of water treatment centers and pumping stations in phases. The earthquake proofing of the functions that operate and control the facility (management functions) was completed in 2019, and efforts are underway to upgrade the earthquake proofing to ensure the sewage pumping and disinfection functions.

Earthquake proofing Buildings under Construction(by using braces etc.)

» Secure fuel storage capacity

Efforts are underway to increase existing fuel storage capacity, as it will be necessary to secure the necessary fuel to maintain sewer functions for the first 72 hours after the disaster. See "Strengthening Disaster Response Capabilities and Cooperation in Times of Disaster" (page 23) and "Conducting Drills" (page 29).

Crisis Management Measures of the Sewerage System

» Improving our Ability to continue functioning as normal in Disaster Situations

See "Strengthening Disaster Response Capabilities and Cooperation in Times of Disaster" (page 23) and "Conducting Drills" (page 29).

» Strengthen coordination and promoting disaster risk information during disasters

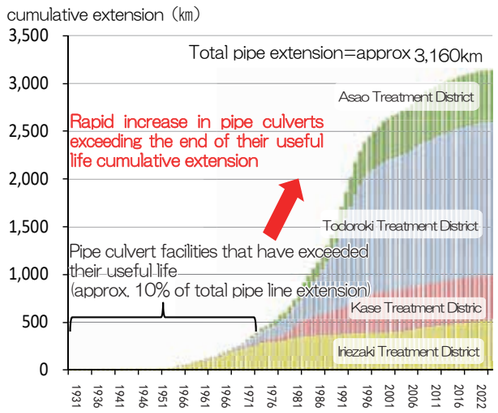
See "Strengthening Disaster Response Capabilities and Cooperation in Times of Disaster" (page 23) and "Promotion of Transmission for Disaster Risk Information" (page 30).

Deterioration Measures and Maintenance of Water Pipes and Facilities

In the sewage system, which has a huge stock, aging of facilities is expected to further accelerate in the future. Therefore, we will promote aging countermeasures that balance medium- and long-term risks and costs.

» Reconstruction of Waterwork Pipes

The length of the water pipes in Kawasaki City reached 3,160km (as of FY2022) and during this, over the past 50 years 321km of these pipes have been deteriorating – 10.0% in total. In the near future, we expect a large increase in the deterioration of pipes, and we will reconstruct these pipes alongside their appropriate risk management as well as average workload in order to offer a stable waterworks service.



Management of extension for sewer pipeline (as of the end of Fiscal year 2022)

» Reconstruction of Wastewater Treatment Center and Pump Facilities

We are currently working on the renewal of the aging sewage facilities that are reaching their replacement date in our city. In addition, as the facility is reconstructed, we will upgrade its functions (energy saving, water resistance, earthquake resistance, improved treatment capacity, etc.).

Reconstruction project of Watada Pumping Station (Left: Reconstruction status, Right: Completion image)

Reconstruction project of Iriezaki General Sludge Center (left: before reconstruction, right: completed image)

» Renewal and life extension of facilities at water treatment centers and pumping stations

For the countermeasures against aging mechanical and electrical equipments, we prioritize the renewal and life extension of equipment based on the condition of the equipment and the risk of functional deterioration of the water treatment center and pump stations in the event of equipment failure, and then proceed efficiently and effectively with a combination of renewal and life extension to minimize the equipment life cycle costs.

» Management and Maintenance of Wastewater Treatment Center Sewerage Water Pipes and Pumps

In order to keep sewage pipelines, water treatment centers, and pump station facilities in sound condition, we conduct maintenance management that combines preventive maintenance with planned inspections, investigations, and repairs. In addition, the asset management information system allows us to manage maintenance and facility information in an integrated manner, thereby implementing appropriate asset management through the effective use of information.

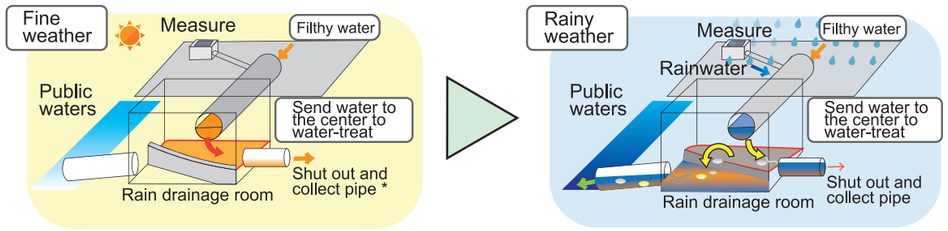
Inspection status of equipment using tablets

Highly Filtered Sewage

All of the processed sewage from our city all eventually runs into Tokyo bay and this includes remains such as nitrogen and phosphorus etc. which continue the eutrophication process. As this causes problems such as red tide damage etc., further water quality improvement is necessary.
Tokyo and 3 prefectures surrounding Tokyo Bay have formulated the “Comprehensive Basin-wide Planning of Sewerage Systems in Tokyo Bay Plan”, and the local government relations which include our city are working on improving facilities’ function of purification in order to clear the target stated in the planning. In our city, a higher level of water purification is being conducted in certain facilities and we will continue to tackle the removal of nitrogen and phosphorous, as they cause the eutrophication process.

Improvement of Combined Sewerage Systems

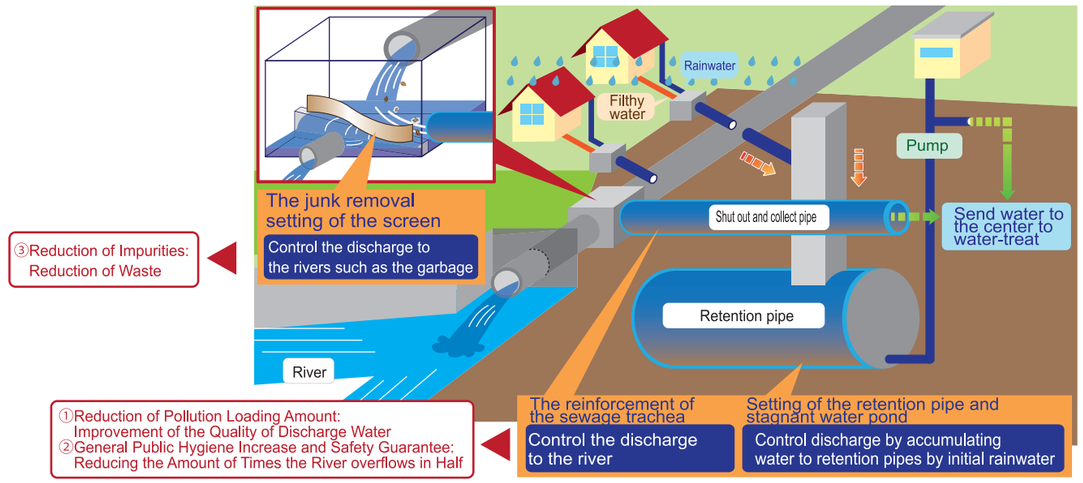
In the combined sewer system the water contamination and hygienic safety is a serious problem as dirty water sometimes mixes with rain water in rainy weather and partially runs into public waters without being treated. Therefore, the amount of untreated water must be kept to as little as possible. Since it takes a considerable amount of time ensure these measures completely, our law fixed a standard to be cleared by FY2023. In our city, we have pointed out several technical issues to be fixed in order to achieve this standard and we are currently working for further improvement.



All wastewater is sent to one of the city's wastewater treatment centers.

When the sewage level rises too high as a result of excess rainfall, a portion of sewage containing both rainwater and wastewater discharges directly into public bodies of water.

Construction of Merging Sewerage Systems



Improvement example of combined sewerage systems

Providing a Sewerage System to 100% of the Population

The rate of the population who access the sewerage filtration is at 99.5% and is very nearly used by the whole city. Also, due to the sewerage facilities, the river water quality is improving. We are now aiming at 100% to dissolve the regions spread.

Management of Operation Centers, Water Quality Management of Sewage

In order to prevent wastewater from interfering with the function of thesewerage facilities, the Water Treatment Center monitors wastewater from business sites and provides guidance to business operators to prevent wastewater that may interfere with the treatment of the water treatment center.
In addition, to ensure that appropriate water treatment can be implemented in response to the daily changes in incoming sewage,necessary water quality inspections are conducted periodically at each stage of the water treatment process, and good, clean water is continuously returned to the river and ocean.

Wastewater sampling at business sites

Global Warming Countermeasures

Please refer to “Energy Saving and Reduction of Greenhouse Gas Emissions” and “Efficient Use of Reusable Energy Sources” on Page 39.

Natural Resources of Sewage, Effective Usage of Facilities

Please refer to “Effective Use of Resources and Energy” on Page 40.

Overview of facilities

Wastewater treatment centers

Name of wastewater treatment centers	Iriezaki	Kase	Todoroki	Asao
Time of starting operation	September 1961	November 1973	November 1982	March 1989
Planned treatment area(ha)	2,009	1,871	5,490	1,920
Planned treatment population(people)	322,700	318,900	681,500	143,200
Planned treatment capacity(m³/day)	318,600	168,900	313,900	62,800
Treatment method	○Conventional activated sludge process ○Carrier-use anaerobic-anoxic-oxic process	○(Pseudo) Anaerobic aerobic activated sludge method	○Anaerobic-oxic Oxygen aeration activated sludge process, Biological aerated filter + ozonation	○(Pseudo) Anaerobic aerobic activated sludge method ○Carrier-use anaerobic-anoxic-oxic process
Effluent water area	Tokyo Bay	Tributaries of Tsurumi River/Yagami River	Tributaries of Tama and Tsurumi River/Yagami River	Tributaries of Tsurumi River/Asao River

Sludge treatment center facilities

Division	Iriezaki Sludge Treatment Center
Time of starting operation	November 1995
Planned treatment capacity(t-DS/day)	120
Treatment method	Concentration-dehydration-incineration (fluidized bed incinerator)

Pumping station facilities

Treatment district	Name of pumping station	Time of starting operation	Pump type
Iriezaki	Rokugo	March 1935	Rainwater/wastewater
	Oshima	December 1938	Rainwater/wastewater
	Watarida	November 1943	Rainwater/wastewater
	Kyomachi	June 1952	Rainwater/wastewater
	Furuichiba	January 1953	Rainwater/wastewater
	Kannongawa	July 1953	Rainwater/wastewater
	Daishigawara	July 1955	Rainwater/wastewater
	Tode	September 1967	Rainwater/wastewater
	Komukai	March 1956	Rainwater/wastewater
	—	—	—

Treatment district	Name of pumping station	Time of starting operation	Pump type
Kase	Maruko	June 1962	Rainwater/wastewater
	Kase	October 1961	Rainwater
	Shibukawa	September 1975	Rainwater
	Tennomori	August 1973	Rainwater
	Egawa	February 1988	Rainwater
	Kanigaya	August 1991	Rainwater
	Hisasue	August 1991	Rainwater
Todoroki	Noborito	June1964	Rainwater
	Todoroki	June 1973	Rainwater
Asao	Odoriba	August 1991	Wastewater

Storm water tank facilities

Name	Oshima storm water tank	Kyomachi storm water tank	Watarida storm water tank	Kannongawa storm water tank
Time of starting operation	April 1988	May 1992	June 1992	May 1997
Covered area	393ha	178 ha	241ha	252ha
Retarding basin method	Storage sedimentation discharge method (improvement of combined system)	Storage method (improvement of combined systems, anti-inundation measures)	Storage method (improvement of combined systems, anti-inundation measures)	Storage method (improvement of combined systems, anti-inundation measures)
Capacity of retarding basin	21,280 m³	18,000 m³	24,000 m³	26,000 m³

Overview of Storm Water Storage Pipes and Storage Reservoirs

Name	Location	Type,Pipe Diameter	Extension(m)	Storage Capacity(m³)	Activated in
Daishigawara	Daishigawara area, Kawasaki Ward	Storm water storage pipe(φ5,000mm)	2,050	35,600	Mar.2019
Daishigawara No.1	Nakase area, Kawasaki Ward	Storm water storage pipe(φ2,600mm)	512	2,600	Apr.1994
Daishigawara No.2	Minatocho area, Kawasaki Ward	Storm water storage pipe(φ3,000mm)	278	1,700	Apr.1994
Tode No.2	Miyakocho area, Saiwai Ward, and others	Storm water storage pipe(φ4,250mm)	740	10,300	Mar.1995
Tode No.3	Todehonmachi area, Saiwai Ward	Storm water storage pipe(φ3,000mm), storage reservoir	106	4,100	Mar.1995
Hirama	Kamihirama area, Nakahara Ward	Storm water storage pipe(φ2,400mm)	1,167	5,300	Apr.1995
Egawa	Ida area, Nakahara Ward	Storm water storage pipe(φ8,500mm)	1,490	81,000	Jun.2001
Shibukawa	Yagami area, Saiwai Ward	Storm water storage pipe(φ10,400mm)	1,760	144,000	Aug.2004
Kawasaki Station Square	Nisshincho area, Kawasaki Ward	Storm water storage pipe(φ2,200mm)	1,123	4,470	Sep.2006
Shimohirama	Simohirama area, Saiwai Ward	Storage reservoir	——	2,640	Apr.1990
Chitose	Chitose area, Takatsu Ward	Storage reservoir	——	3,500	Jun.1994
Nogawa	Nogawa area, Takatsu Ward	Storage reservoir	——	4,200	Apr.1997
Kawasaki Station West Entrance	Horikawacho area, Saiwai Ward	Storm water storage pipe(φ1,000mm),storage reservoir	653	4,000	Jan.2007

Measures for Earthquakes, Downpours and Flooding

Waterworks and sewerage systems are vital infrastructures used to protect citizen's lives and properties. We are implementing our strategies to minimize the impact on the everyday lives of citizens from the occurrence of disasters such as earthquakes, downpours and flooding.

Crisis Management Measures at Waterworks and Sewerage Bureau

Strengthening coordination of disaster response and responding capabilities during disaster

In light of large-scale earthquakes and increasingly severe and frequent wind and flood disasters, we will continue to conduct drills, review, and make improvements by the PDCA cycle.Verify and review the Waterworks and Sewerage Bureau Disaster Prevention Plan and Business Continuity Plan, etc., to improve their effectiveness and strengthen disaster response capabilities.
In addition, we will promote the strengthening of cooperation in the event of a disaster by continuously conducting drills with major cities, etc., which will lead to the establishment of a wide-area support system.
By certifying our staff with considerably high skills as waterworks specialist, expecting an emergency would motivate individuals as well as the whole bureau to improve our strategies and capability to cope with disasters.
Moreover, in case of emergency regarding water resources such as natural disasters and drought, we will take flexible actions to cope with the situation at hand and with mutual support from other water works and related organizations in the prefecture.

Qualifying Ability of Waterworks Specialists

Drills Based On our Mutual Assistance Agreement with Shizuoka City

Countermeasures meeting based on the Waterworks and Sewerage Bureau's Disaster Prevention Plan

Preparations for Earthquake

We promote the earthquake resistance of water supply facilities and water for industrial use way facilities and sewer facilities to prepare for a large-scale earthquake.(Please refer to page 12 for an overview of the seismic-reinforcement initiatives taking place at waterworks/industrial waterworks facilities and to page 18 for the sewerage system overview)

Ensuring drinking water supply

In order to secure drinking water necessary for the daily lives of citizens in the event of a disaster, water supply facilities that can store tap water have been established.
These facilities are called water distribution reservoirs and distribution towers or disaster countermeasure water storage tanks.
Emergency shutoff valves that automatically activate when strong tremors are detected are installed in the water inflow and outflow portions of the facilities, and all or part of the stored water in the facilities are shut off to be used during a disaster.
As a result, a total of 160,000 m³ of drinking water can be secured for use in times of disaster.

Emergency water supply locations

Emergency water supply locations are facilities that provide emergency water supply in the event that water supply facilities are damaged and water is cut off. In order to increase the convenience of emergency water supply locations and to provide emergency water supply more quickly, we are currently developing emergency water supply locations that do not require the installation of water supply equipment and can be used at all municipal elementary and junior high schools designated as evacuation centers and at some of the water distribution reservoirs and towers (146 emergency water supply locations were established as of the end of FY2022). As of April 1, 2023, 285 emergency water supply centers, including those that do not need to be set up, have been established in the city.
In addition, necessary equipment and materials are provided for temporary emergency water supply using fire hydrants, etc., so that emergency water supply can be carried out outside of the emergency water supply centers depending on the disaster situation.
To ensure smooth implementation of emergency water supply, emergency water supply drills are held in conjunction with local disaster drills.

Emergency water supply locations where opening procedure is not necessary

The water supply faucets

The utilization of existing water faucets such as outdoor water fountains in elementary and junior high school playgrounds, etc. as an emergency water supply locations.
The water pipes connected, and distribution pipes that branch out from these water fountains use highly earthquake-resistant pipes. In addition, the water fountains are separated from the water supply system of the school buildings, etc., so they will not be affected at the same time even if the school buildings are damaged.
Since the elementary and junior high schools with the water fountains installed are designated as evacuation centers, residents in the surrounding areas will be able to supply their own water in the event of a disaster.

The dual function emergency water supply location

The combined disaster water supply point is an emergency water supply locations that has a water fountain that does not need to be set up, and through a connected water distribution reservoir and distribution tower, is capable of securing drinking water and dispensing water to water tanker trucks in the event of a disaster.
The water distribution reservoir and tower connected to the water fountain are earthquake-resistant.
The entrance to the water fountain is locked during normal times, so in the event of a disaster, the staff or members of the local volunteer disaster prevention organizations can unlock and provide water to the residents of the surrounding community on their own.

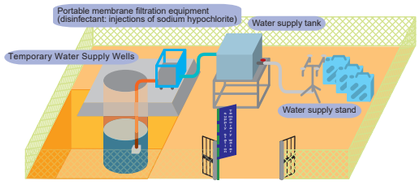
Mutual Tap Water Accommodation with Tokyo Metropolis

In order to ensure a stable water supply in the event of an emergency such as an earthquake or a large-scale water quality accident, we have established a system to mutually supply water by establishing a connecting pipe in cooperation with the Tokyo Metropolitan Government. The Noborito and Machida connecting pipes were installed in FY2006 to enable mutual water supply of 115,000m³/day.

Mutual Tap Water Accommodation with Tokyo Metropolis

Development of wells for disaster

The Waterworks and Sewerage Bureau has been investigating the effective usage of a well in Tama Ward. As a source of water for the waterworks, of the wells both permanently and temporarily out of use, wells with high water quality are being developed for use in the event of a disaster.
※Wells for disasters will be used to supplement emergency water supply locations.



Arranging Image of Temporary Water Supply Wells

Comprehensive Toilet Measures in Times of Disaster

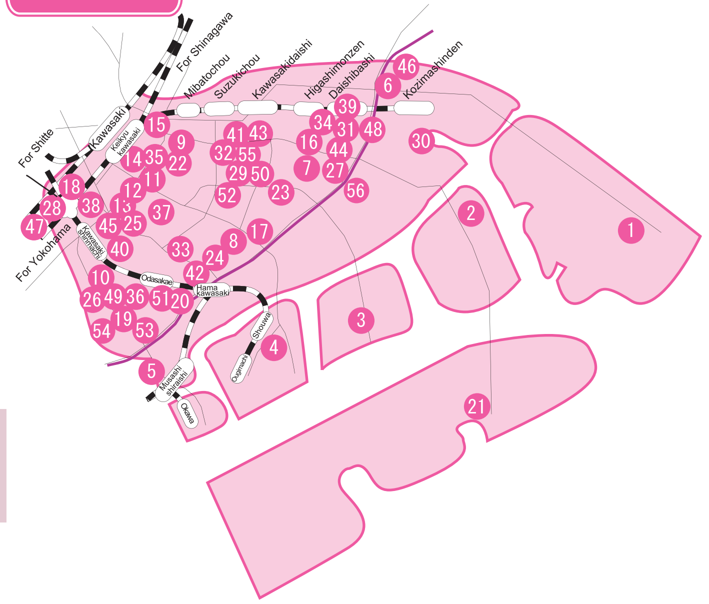
When toilets are unavailable during a disaster, various problems such as poor physical condition become apparent.For this reason, we are promoting measures such as raising awareness of the stockpiling of portable toilets that can be used immediately in the event of a disaster at sewage facilities.
In addition, we are promoting an all-departments study on how toilet measures, including manhole toilets, should be implemented in the event of a disaster, and are promoting efforts to enhance comprehensive toilet measures in the event of a disaster.

Leaflet “Toilet problems during disasters (published on website)”

Development of emergency water supply locations

Emergency water supply locations are used to provide water to households in Kawasaki in the event of a water outage caused by a natural disaster (e.g. earthquakes). As of April 1st, 2023, the city has been developing 285 emergency water supply locations. Presently, we are building emergency water supply locations that do not require any specialized equipment for establishing.
For a description of the types of water supply locations, please visit the Waterworks and Sewerage

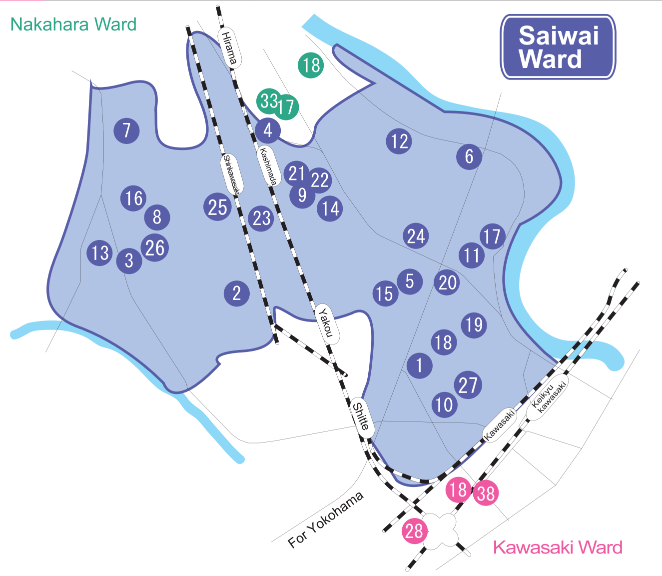
Kawasaki Ward



Kawasaki Ward

①	Ukishimacho 11-3	In front of Ukishima Bus Terminal
②	Chidoricho 13-1	In front of ENEOS Corporation, Kawasaki Plant
③	Mizuecho 3-3	In front of Mitsubishi Cable Industries Ltd.
④	Ohgimachi 2-5	On the west side of the Ohgimachi Crossing
⑤	Shiraishicho 1	In front of Asahi Breweries Ltd.
⑥	Tonomachi 1-17-19	In front Tonomachi Municipal Elementary School
⑦	Daimachi 7-2	On the south side of the Daishi Park Front Crossing
⑧	Hamacho 1-10-3	In front of the Head-Office building of Akiyama Co.
⑨	Fujimi 1-1-4	In front of CULTTZ Kawasaki
⑩	Oda 1-9-17	In front of Oda 1-chome Chuo Park
⑪	Higashidacho 8-14	In front of NTT Kawasaki Branch Office (Route 15)
⑫	Higashidacho 11-27	In front of Shinkawabashi Hospital (Route 15)
⑬	Minamimachi 17	In front of Minamimachi Koban (Route 15)
⑭	Higashidacho 5-4	In front of Kawasaki City Hall Building No.3
⑮	Horinouchicho 10-14	In front of SUSHIRO Kawasaki Daiichi-keihin Store
⑯	Daishikoen 1	In the premise of Daishi Park
⑰	Sakuramoto 1-14-3	In the premise of Sakuragawa Park
⑱	Nisshincho 5-1	West Kaminamiki Park
⑲	Oda 4-20	In the premise of Oda Park
⑳	Oda 7-3-1	On the north side of Disaster Prevention Center
㉑	Higashi-ohgishima31	In front of Higashi-ohgishima Welfare center
㉒	Fujimi 2-1-2	In the premise of Fujimi Municipal Junior High School
㉓	Ikegamishincho 1-2-4	On the west side of Sakuramoto Municipal Junior High School
㉔	Hamacho 2-11-22	On the north side of Rinko Municipal Junior High School
㉕	Wataridamukaicho 11-1	On the east side of Watarida Municipal Junior High School
㉖	Oda 2-21-7	On the west side of Tajima Municipal Junior High School
㉗	Yotsuyakamicho 24-1	On the south side of Minamidaishi Municipal Junior High School
㉘	Shimonamiki 50	On the east side of Kawasaki Municipal Junior High School
㉙	Fujusaki 2-19-1	In the premise of Kawanakajima Municipal Junior High School
㉚	Hinode 2-17	In the premise of Dekino Park
㉛	Daishigawara 2-1-1	On the west side of Daishi Municipal Junior High School
㉜	Nakajima 3-3-1	On the west side of Kawasaki Municipal Junior High School
㉝	Tajimacho 14-1	In the premise of Watarida Municipal Elementary School
㉞	Higashimonzen 2-6-1	In the premise of Daishi Municipal Elementary School
㉟	Miyamaecho 8-13	In the premise of Miyamae Municipal Elementary School
㊱	Oda 4-12-24	In the premise of Oda Municipal Elementary School
㊲	Watarida 1-20-1	In the premise of Tajima Municipal Elementary School
㊳	Nisshincho 20-1	In the premise of Kawasaki Municipal Elementary School
㊴	Higashimonzen 3-4-6	In the premise of Higashimonzen Municipal Elementary School
㊵	WataridaShincho 3-15-1	In the premise of Shincho Municipal Elementary School
㊶	Asahicho 2-2-1	In the premise of Asahicho Municipal Elementary School
㊷	Hamacho 2-11-22	In the premise of Rinko Municipal Junior High School
㊸	Kawanakajima 2-4-19	In the premise of Kawanakajima Municipal Elementary School
㊹	Yotsuyakamicho 24-1	In the premise of Minamidaishi Municipal Junior High School
㊺	Wataridamukaicho 11-1	In the premise of Watarida Municipal Junior High School
㊻	Tonomachi 1-17-19	In the premise of Tonomachi Municipal Elementary School
㊼	Shimonamiki 50	In the premise of Kawasaki Municipal Junior High School
㊽	Daishigawara 2-1-1	In the premise of Daishi Municipal Junior High School
㊾	Oda 2-21-7	In the premise of Tajima Municipal Junior High School
㊿	Fujisaki 3-2-1	In the premise of Fujisaki Municipal Elementary School
51	Oda 5-11-20	In the premise of Higashi-Oda Municipal Elementary School
52	Oshima 5-25-1	In the premise of Higashi-Oshima Municipal Elementary School
53	Asada 2-11-21	In the premise of Asada Municipal Elementary School
54	Kyomachi 3-19-11	In the premise of Kyomachi Municipal Junior High School
55	Fujisaki 2-19-1	In the premise of Kawanakajima Municipal Junior High School
56	Yotsuya Shimocho 4-1	In the premise of Yotsuya Municipal Elementary School

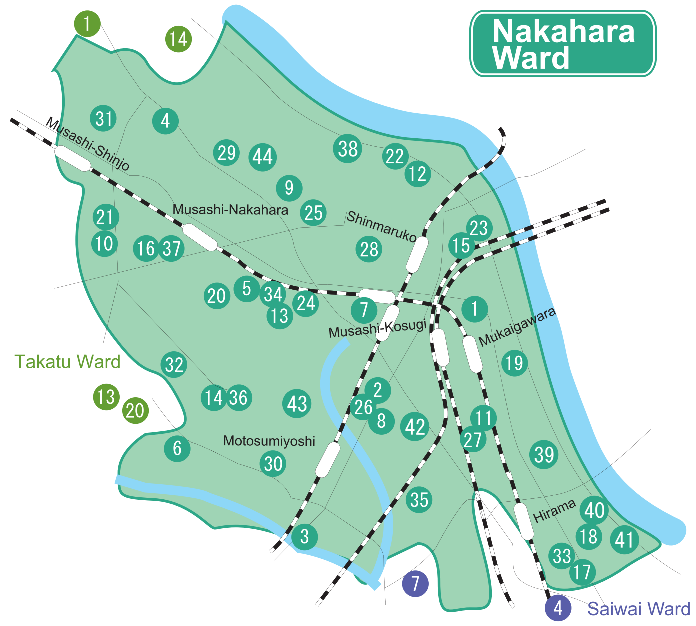
Saiwai Ward



Saiwai Ward

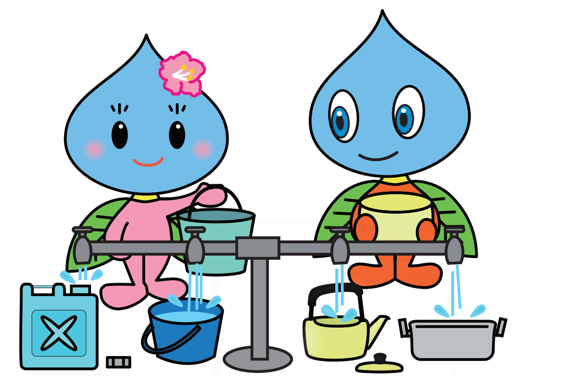
①	Miyakocho 39-1	On the east side of Minamigawara Park
②	Ogura 4-3-24	On the east side of the crossing at City Bus Ogura Shimocho bus stop
③	Minamikase 3-10-1	On the west side of Minamikase Municipal Junior High School
④	Shimohirama 1-2	In front of Kawasaki Municipal Housing Corporation Kashimada Green Heights
⑤	Totehonmachi 1-11-1	In the premise of Saiwai Ward Office
⑥	Higashifuruichiba 1	In the premise of Miyuki Park
⑦	Kitakase 2-3-1	In front of Hiyoshi Municipal Junior High School
⑧	Minamikase 2-19-4	In the premise of Minamikase-Gotan Park
⑨	Tsukagoshi 1-60	In the premise of Tsukagoshi Municipal Junior High School
⑩	Nakasaiwaicho 4-31	In the premise of Minamigawara Municipal Junior High School
⑪	Tote 4-2-1	On the west side of Miyuki Municipal Junior High School
⑫	Furuichiba 1-1	In the premise of Furuichiba Municipal Elementary School
⑬	Minamikase 4-24-1	In the premise of Minamikase Municipal Elementary School
⑭	Furukawamachi 70	In the premise of Furukawa Municipal Elementary School
⑮	Totehonmachi 1-165	In the premise of Tote Municipal Elementary School
⑯	Minamikase 2-13-1	In the premise of Yumemigasaki Municipal Elementary School
⑰	Tote 4-2-1	In the premise of Miyuki Municipal Junior High School
⑱	Miyakocho 18	In the premise of Minamigawara Municipal Elementary School
⑲	Nakasaiwaicho 2-17	In the premise of Saiwaicho Municipal Elementary School
⑳	Endomachi 1	In the premise of Miyuki Municipal Elementary School
㉑	Shimohirama 175	In the premise of Shimohirama Municipal Junior High School
㉒	Tsukagoshi 1-60	In the premise of Tsukagoshi Municipal Junior High School
㉓	Higashiogura 1-1	In the premise of Higashiogura Municipal Elementary School
㉔	Komukainishimachi 4-30	In the premise of Nishimiyuki Municipal Elementary School
㉕	Kitakase 1-37-1	In the premise of Hiyoshi Municipal Elementary School
㉖	Minamikase 3-10-1	In the premise of Minamikase Municipal Junior High School
㉗	Nakasaiwaicho 4-31	In the premise of Minamigawara Municipal Junior High School

Nakahara Ward



Nakahara Ward

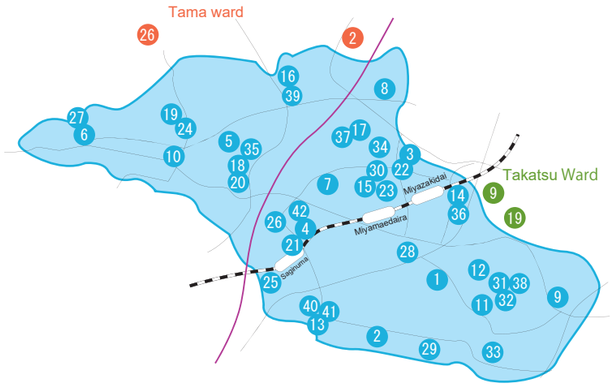
①	Kamimarukosannocho 2-1369	On the east side of the Kamimarukosannocho West Crossing
②	Kizukisumiyoshicho 1-1	In front of Japan Organization of Occupational Health and Safety
③	Kizuki 4-32-1	Under the Tokyu-Toyoko Line girder bridge
④	Miyauchi 2-11-1	Tokyu Bus Kamimiyauchi bus stop
⑤	Shimokodanaka 2-17-1	On the east side of Nishinakahara Municipal Junior High School
⑥	Ida1-40	In front of the Bus Depot of Ida Bus Operation Office, Transportation Bureau
⑦	Kosugimachi 3-245	In the premise of Nakahara Ward Office
⑧	Kizukisumiyoshicho 33-1	In the premise of Nakahara Peace Park
⑨	Miyauchi 4-1-2	At the front entrance of Todoroki Green Space
⑩	Shimoshinjo 1-15-2	On the west side of Shinjo Municipal Elementary School
⑪	Nakamaruko 562	At the east gate of Tamagawa Municipal Junior High School
⑫	Kosugijinyacho 1-24-1	At the south gate of Nakahara Municipal Junior High School
⑬	Imainakamachi 7-1	On the west side of Imai Municipal Junior High School
⑭	Idasugiyamacho 11-1	In the premise of Ida Municipal Junior High School
⑮	Kamimarukohachimancho 815	In the premise of Kamimaruko Municipal Elementary School
⑯	Shimokodanaka 1-4-1	In the premise of Ohto Municipal Elementary School
⑰	Kamihirama 1480	In the premise of Hirama Municipal Elementary School
⑱	Kamihirama 1368	On the south side of Hirama Municipal Junior High School
⑲	Shimonumabe 1955	In the premise of Shimonumabe Municipal Elementary School
⑳	Shimokodanaka 2-17-1	In the premise of Nishinakahara Municipal Junior High School
㉑	Shimoshinjo 1-15-1	In the premise of Shinjo Municipal Elementary School
㉒	Kosugijinyacho 1-24-1	In the premise of Nakahara Municipal Junior High School
㉓	Kamimarukohachimancho 815	In the premise of Kamimaruko Municipal Elementary School
㉔	Imainakamachi 7-1	In the premise of Imai Municipal Junior High School
㉕	Kosugigotencho 1-950	In the premise of Nakahara Municipal Elementary School
㉖	Kizukisumiyoshicho 1-11	In the premise of Higashi-Sumiyoshi Municipal Elementary School
㉗	Nakamaruko 562	In the premise of Gyokusen Municipal Junior High School
㉘	Kosugimachi 2-295-1	In the premise of Kosugi Municipal Elementary School
㉙	Miyauchi 2-4-1	In the premise of Miyauchi Municipal Elementary School
㉚	Idanakanocho 29-1	In the premise of Ida Municipal Elementary School
㉛	Kamikodanaka 1-27-1	In the premise of Ogayato Municipal Elementary School
㉜	Shimokodanaka 3-35-1	In the premise of Shimokodanaka Municipal Elementary School
㉝	Kamihirama 1480	In the premise of Hirama Municipal Elementary School
㉞	Imainishimachi 3-18	In the premise of Imai Municipal Elementary School
㉟	Kariyado 25-1	In the premise of Kariyado Municipal Elementary School
㊱	Ida Sugiyama-cho 11-1	In the premise of Ida Municipal Junior High School
㊲	Shimo-Kodanaka 1-4-1	In the premise of Ohto Municipal Municipal Elementary School
㊳	Kosugijinyacho 2-19-1	In the premise of Nishimaruko Municipal Elementary School
㊴	Kitayacho 32	In the premise of Gyokusen Municipal Elementary School
㊵	Kamihirama 1368	In the premise of Hirama Municipal Junior High School
㊶	Kamihirama 585	In the premise of Gawara Municipal Elementary School
㊷	Kizukisumiyoshicho 27-1	In the premise of Sumiyoshi Municipal Junior High School
㊸	Kizuki Gion-cho 17-1	In the premise of Sumiyoshi Municipal Elementary School
㊹	Miyauchi 4-13-1	In the premise of Miyauchi Municipal Junior High School



Takatsu Ward

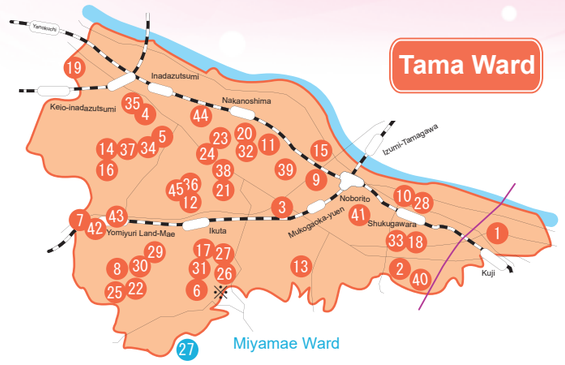
①	Kitamigata 1-11-2	Under Daisan Keihin Road, in front of Watanabe Heights
②	Chitose 578	In front of Chitose Koban
③	Hisasue 637	On the southeast side of Hisasue Amaterasuoomikamisha
④	Mizonokuchi 5-24	On the west side of CLIO Mizonokuchi Ichibankan
⑤	Shinsaku 1-24-5	On the west side road of Tachibana Treatment Center
⑥	Mizonokuchi 1-6-7	In front of JA CERESA Kawasaki
⑦	Shimosakunobe 2-8-1	In front of Takatsu Ward Office
⑧	Shinsaku 1-19-1	At the east gate entrance of Citizens' Plaza
⑨	Kajigaya 2-10	In the premise of Kajigaya No.1 Park
⑩	Hisasue 1938	In the premise of Hisasue Omotekouchi Park
⑪	Chitose 1300	On the south side of Tachibana Municipal Junior High School
⑫	Mizonokuchi 4-19-1	In the premise of Takatsu Municipal Elementary School
⑬	Shibokuchi 730	On the north side of Shibokuchi Municipal Elementary School/ Higashitachibana Municipal Junior High School
⑭	Shimonoge 2-8-3	Shimonoge 2-chome Park
⑮	Suenaga 4-1-1	On the east side of Higashitakatsu Municipal Junior High School
⑯	Hisamoto 3-11-3	In the premise of Hisamoto Municipal Elementary School
⑰	Kuji 3-16	In the premise of Kujinosato Park
⑱	Chitose 1300	In the premise of Tachibana Municipal Junior High School
⑲	Kajigaya 4-12	In the premise of Kajigaya Municipal Elementary School
⑳	Shibokuchi 730	In the premise of Shibokuchi Municipal Elementary School/ Higashitachibana Municipal Junior High School
㉑	Chitose 1024	In the premise of Tachibana Municipal Elementary School
㉒	Shinsaku 1-9-1	In the premise of Shinsaku Municipal Elementary School
㉓	Kajigaya 2-14-1	In the premise of Nishikajigaya Municipal Elementary School
㉔	Hisasue 647	In the premise of Hisasue Municipal Elementary School
㉕	Hisamoto 3-11-2	In the premise of Takatsu Municipal Junior High School
㉖	Kuji 1-10-1	In the premise of Nishitakatsu Municipal Junior High School
㉗	Kamisakunobe 3-9-1	In the premise of Minamihara Municipal Elementary School
㉘	Suenaga 3-8-1	In the premise of Suenaga Municipal Elementary School
㉙	Kuji 4-2-1	In the premise of Kuji Municipal Elementary School
㉚	Kamisakunobe 559	In the premise of Kamisakunobe Municipal Elementary School
㉛	Kitamigata 2-5-1	In the premise of Higashi Takatsu Municipal Elementary School
㉜	Mizoguchi 4-19-1	In the premise of Takatsu Municipal Elementary School

Miyamae Ward



①	Nogawadai 1-9-16	On the east side of Tokyu Bus Nogawadai Station West Exit bus stop
②	Arima 6-6-1	On the east side of Nakaarima Crossing
③	Miyazaki 3-5-15	On the northeast side of Miyazakidai Municipal Elementary School
④	Tsuchihashi 3-1-11	On the southeast side of Tsuchihashi Municipal Elementary School
⑤	Sugao 6-33-13	In front of Heights Bloom
⑥	Sugaogaoka 29-8	On the north side of the Hiebara Crossing
⑦	Miyamaedaira 2-20-5	In the parking lot of Miyamae Ward Office
⑧	Shibokuhoncho 2-10-1	In the premise of Higashitakane Forest Park
⑨	Nogawahoncho 2-29-1	City/Tokyu Bus: Nogawa Post Office bus stop
⑩	Sugao 4-6-1	At the entrance of Mukougaoka Driving School
⑪	Nishinogawa 2-2-1	On the north side of Nogawa Municipal Junior High School
⑫	Nogawadai 2-8-1	In the premise of Nogawa No.3 Park
⑬	Arima 7-7-1	On the south side of Arima Municipal Junior High School
⑭	Miyazaki 107	On the east side of Miyazaki Municipal Junior High School
⑮	Miyamaedaira 2-7	On the south side of Miyamaedaira Municipal Junior High School
⑯	Taira 3-15-1	On the north side of Taira Municipal Junior High School
⑰	Shiboku-honcho 5-11-1	On the east side of Mukougaoka Municipal Junior High School
⑱	Inukura 1-10-1	On the north side of Inukura Municipal Junior High School
⑲	Sugao 2-10-1	On the north side of Sugao Municipal Junior High School
⑳	Inukura 1-10-1	In the premise of Inukura Municipal Junior High School
㉑	Tsuchihashi 3-1-1	On the south side of Waterworks Bureau Saginuma Distribution Reservoir
㉒	Miyazaki 3-18-2	In the premise of Miyazakidai Municipal Elementary School
㉓	Miyamaedaira 3-14-1	In the premise of Miyamaedaira Municipal Elementary School
㉔	Sugao 2-10-1	In the premise of Sugao Municipal Junior High School
㉕	Saginuma 2-1	In the premise of Saginuma Municipal Elementary School
㉖	Saginuma 4-11-6	On the north side of Waterworks Bureau Miyazaki Distribution Reservoir
㉗	Shiomidai 4-1	On the north side of Waterworks Bureau Shiomidai Distribution Reservoir
㉘	Maginu 1-30-9	In the premise of Miyazaki Municipal Elementary School
㉙	Higashiarima 5-12-1	In the premise of Arima Municipal Elementary School
㉚	Miyamaedaira 2-7	In the premise of Miyamaedaira Municipal Junior High School
㉛	Nogawadai 3-10-1	In the premise of Nishinogawa Municipal Elementary School
㉜	Nishinogawa 2-2-1	In the premise of Nogawa Municipal Junior High School
㉝	Minaminogawa 2-12-1	In the premise of Minaminogawa Municipal Elementary School
㉞	Taira 6-5-1	In the premise of Taira Municipal Elementary School
㉟	Inukura 1-3-1	In the premise of Inukura Municipal Elementary School
㊱	Miyazaki 107	In the premise of Miyazaki Municipal Junior High School
㊲	Shiboku-honcho5-11-1	In the premise of Mukougaoka Municipal Junior High School
㊳	Nishinogawa2-19-1	In the premise of Nogawa Municipal Elementary School
㊴	Taira 3-15-1	In the premise of Taira Municipal Junior High School
㊵	Arima 7-6-1	In the premise of Arima Municipal Elementary School
㊶	Arima 7-7-1	In the premise of Arima Municipal Junior High School
㊷	Tsuchihashi 3-1-11	In the premise of Tsuchihashi Municipal Elementary School

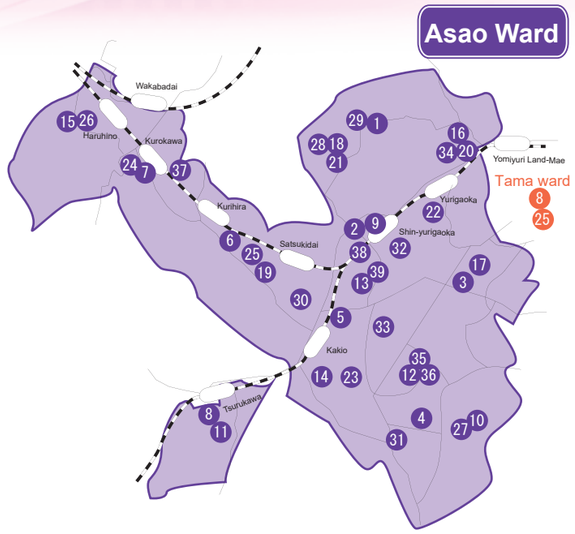
Tama Ward



①	Seki 3-8	On the east side of the Seki Crossing
②	Nagao 6-34-7	In front of Waterworks Bureau Nagao Pressurization Pump Place
③	Masugata 3-4-1	In front of Chalier Mukougaokayuen
④	Suge 2-3-12	City/Odakyu Bus:Inadatsutsumi Station Entrance bus stop
⑤	Sugebanba 2-17-1	On the east side of Higashisuge Municipal Elementary School
⑥	Mita 4-6-15	On the north side of Waterworks Bureau Nagasawa Purification Plant
⑦	Nishiikuta 1-15-6	Takaishi Footbridge
⑧	Nishiikuta 5-28-1	On the north side of Waterworks Bureau Takaishi Distribution Reservoir
⑨	Noborito 1775-1	In front of Tama Ward Office
⑩	Shukugawara 4-21	East of the crossing on the west side of Inada Municipal Junior High School
⑪	Noborito 599	In front of Charmer Noborito
⑫	Ikuta 7-22-1	In the premise of Ikuta Municipal Junior High School
⑬	Masugata 6-26	In front of the entrance of Japan Open-air Folk House Museum
⑭	Sugekitaura 4-13	In the back of Nishisuge Park Parking Lot
⑮	Sugekitaura 4-13	In the premise of Noborito No.2 Park
⑯	Sugebanba 4-1	On the north side of Minamisuge Municipal Junior High School
⑰	Mita 2-5420-2	On the west side of Ikuta Municipal Junior High School
⑱	Shukugawara 3-18-1	In the premise of Inada Municipal Elementary School
⑲	Sugeshirosita 28-1	In the premise of Suge Municipal Junior High School
⑳	Nakanoshima 3-12-1	In the premise of Nakanoshima Municipal Elementary School
㉑	Masugata 1-22-1	On the west side of Masugata Municipal Junior High School
㉒	Minamiikuta 3-4-1	On the west side of Minamiikuta Municipal Junior High School
㉓	Nakanoshima 1-16-1	On the east side of Nakanoshima Municipal Junior High School
㉔	Nakanoshima 1-16-1	In the premise of Nakanoshima Municipal Junior High School
㉕	Nishiikuta 5-28-1	On the north side of Waterworks Bureau Takaishi Distribution Reservoir
㉖	Mita 5-1-1	On the northeast side of Waterworks Bureau Nagasawa Purification Plant
㉗	Mita 3-6-4	In the premise of Mita Municipal Elementary School
㉘	Shukugawara 4-1-1	In the premise of Inada Municipal Junior High School
㉙	Minamiikuta 3-1-1	In the premise of Minami Ikuta Municipal Elementary School
㉚	Minamiikuta 3-4-1	In the premise of Minami Ikuta Municipal Junior High School
㉛	Mita 2-5420-2	In the premise of Ikuta Municipal Junior High School
㉜	Nakanoshima 3-12-1	In the premise of Nakanoshima Municipal Elementary School
㉝	Shukugawara 3-18-1	In the premise of Inada Municipal Elementary School
㉞	Sugebanba 2-19-1	In the premise of Higashisuge Municipal Elementary School
㉟	Suge 2-6-1	In the premise of Suge Municipal Elementary School
㊱	Ikuta 7-22-1	In the premise of Ikuta Municipal Elementary School
㊲	Sugekitaura 4-2-1	In the premise of Nishi-Suge Municipal Elementary School
㊳	Masugata 1-22-1	In the premise of Masugata Municipal Junior High School
㊴	Noborito 1329	In the premise of Noborito Municipal Elementary School
㊵	Nagao 7-28-1	In the premise of Nagao Municipal Elementary School
㊶	Shukugawara 2-1-1	In the premise of Nishi-Suge Municipal Elementary School
㊷	Sugebanba 4-1-1	In the premise of Minamisuge Municipal Junior High School
㊸	Sugebanba 3-25-1	In the premise of Minamisuge Municipal Elementary School
㊹	Fuda 23-1	In the premise of Shimofuda Municipal Elementary School
㊺	Ikuta 1-1-1	In the premise of Ikuta Fureai Plaza
※	Mita 5-1-1	Odakyu Bus: Water Purification Plant Entrance bus stop (Tokyo Metropolitan Bureau of Waterworks Facility)

※A facility of the Tokyo Metropolitan Bureau of Waterworks.

Asao Ward



①	Chiyogaoka 7-3-20	Odakyu Bus: Chiyogaoka bus stop
②	Manpukuji 1-11-3	On the east side of the crossing in front of Asao Police Station
③	Higashiyurigaoka 4-42-7	In front of Mitsuisumitomo Bank Yurigaoka Branch
④	Ouzenjihigashi 5-50-46	On the north side of Higashikakio Post Office
⑤	Kamiasao 5-11-1	In front of Grand Maison Kamiasao
⑥	Kurihira 1-1-26	Odakyu/Kanagawa Chuo Bus: Azuma bus stop
⑦	Kurigidai 2-15-1	In front of Kawasaki City Kurokawa Youth Outdoor Activity Center
⑧	Okagami 680	At the crossing on the north side of Okagami Municipal Elementary School
⑨	Manpukuji 1-5-1	In the premise of Asao Ward Office
⑩	Nijigaoka 1-21-1	In the premise of Nijigaoka Park
⑪	Okagami 675-1	In the premise of Okagami Municipal Elementary School
⑫	Ozenjihigashi 4-14-2	On the west side of Ozenji-Chuo Municipal Junior High School
⑬	Kamiasao 4-39-1	On the north side of Asao Municipal Junior High School
⑭	Kamiasao 6-40-1	On the north side of Kakio Municipal Junior High School
⑮	Haruhino 4-8-1	On the west side of Haruhino Municipal Elementary School and Municipal Junior High School
⑯	Hosoyama 2-2-1	On the north side of Nishiikuta Municipal Elementary School
⑰	Higashiyurigaoka 4-12-1	On the north side of Nagasawa Municipal Junior High School
⑱	Kanahodo 3-16-1	On the east side of Kanahodo Municipal Junior High School
⑲	Shiratori 1-5-1	On the south side of Shiratori Municipal Junior High School
⑳	Hosoyama 2-2-1	In the premise of Nishiikuta Municipal Elementary School
㉑	Kanahodo 2-10-1	In the premise of Kanahodo Municipal Elementary School
㉒	Yurigaoka 2-1-2	In the premise of Yurigaoka Municipal Elementary School
㉓	Kamiasao 6-40-1	On the East Side of Waterworks Bureau Kurokawa Water Distribution Reservoir
㉔	Kurokawa 313	In the premise of Kakio Municipal Junior High School
㉕	Shiratori 1-5-1	In the premise of Shiratori Municipal Junior High School
㉖	Haruhino 4-8-1	In the premise of Haruhino Municipal Elementary & Junior High School
㉗	Nijigaoka 1-21-2	In the premise of Nijigaoka Municipal Elementary School
㉘	Kanahodo 3-16-1	In the premise of Kanahodo Municipal Junior High School
㉙	Chiyogaoka 8-9-1	In the premise of Chiyogaoka Municipal Elementary School
㉚	Katahira 5-28-1	In the premise of Katahira MunicipaI Elementary School
㉛	Ozenjihigashi 6-3-1	In the premise of Higashikakio Municipal Elementary School
㉜	Ozenjinishi 1-26-1	In the premise of Minamiyurigaoka Municipal Elementary School
㉝	Hakusan 5-3-1	In the premise of Shinpukuji Municipal Elementary School
㉞	Takaishi 3-25-1	In the premise of Nishi-Ikuta Municipal Junior High School
㉟	Ozenjihigashi 4-14-1	In the premise of Ozenji Chuo Municipal Elementary School
㊱	Ozenjihigashi 4-14-2	In the premise of Ozenji Chuo Municipal Junior High School
㊲	Kurigidai 5-15-1	In the premise of Kurigidai Municipal Elementary School
㊳	Kamiasao 3-24-1	In the premise of Asao Municipal Elementary School
㊴	Kamiasao 4-39-1	In the premise of Asao Municipal Junior High School

Measures for Downpours , Flooding

Recent urbanization has increased the volume of rainwater runoff and climate change has changed the way rainfall occurs, increasing the risk of flooding due to heavy rainfall exceeding the drainage capacity of sewage systems and rising water levels in rivers. In light of this, in order to steadily realize the creation of a flood-resistant city, we are promoting the improvement of rainwater harvesting pipes, retention ponds, and rainwater trunk lines, as well as crisis management measures to minimize the impact on the lives of citizens. (See page 18 for flood control measures and page 22 for an overview of storage pipes and retention ponds.)

›› Conducting training

• Training for operating drainage gutter pipe gates

If forward flow cannot be confirmed when the water level of the Tama River rises to a certain level, the drainage flume gate must be closed immediately. Therefore, training is continuously conducted based on the operation procedures reviewed in 2020 to ensure reliable operation of the flume gate. In addition, since nighttime operations are expected under certain circumstances, we are further strengthening our response capabilities by conducting training under conditions of poor visibility.

Operation training of drainage flume gate

• Operational training of drainage pump trucks

At the closing time of drainage flume gate, a drainage pump truck must be deployed immediately to ensure drainage to eliminate internal water. For this reason, we conduct drills to control traffic and secure work zones in anticipation of the dispatch of drain pump trucks, as well as to confirm work using crossing pipes to clear full roadblocks and manholes for drain pump input to shorten the preparation time for drainage work.

Operational training of drainage pump trucks

›› Promotion of Information Transmission on Disaster Risks

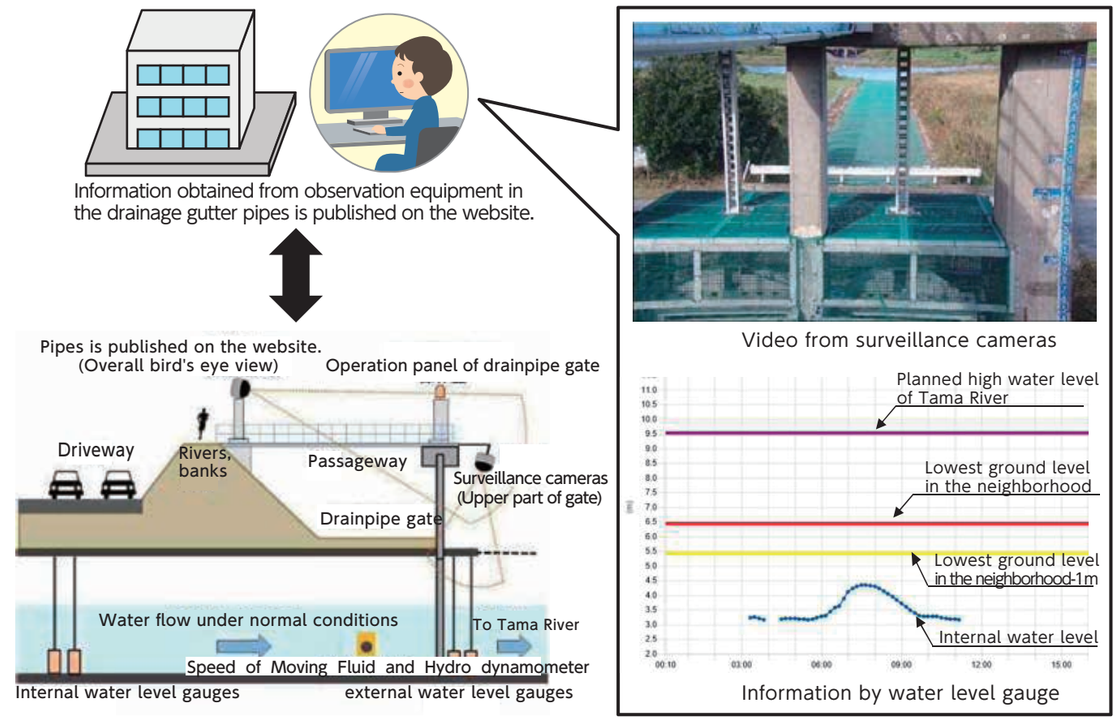
• The Inland Flood Hazard Map

The Inland Flood Hazard Map is an easy-to-understand compilation of information on flooding, such as anticipated flooded areas and depth of flooding, as well as information on flood damage mechanisms and evacuation methods, in order for citizens to confirm in advance the risk of flooding in their homes, etc. and their actions in the event of flooding, and to prepare on a daily basis for flooding caused by inland waters. They are distributed at Kawasaki City Office Building No. 3 and each ward office, and are also published on the Waterworks and Sewerage Bureau website.

The Inland Flood Hazard Map

• Providing Information on Drainage Gutter Pipes

As a short-term countermeasure against the flooding damage caused by Typhoon East Japan in 2018 in Nakahara, Takatsu, and Tama wards, observation equipment (internal water level gauge, external water level gauge, flow velocity and direction gauge, and monitoring camera) were installed in five drainage gutter pipes in Sanno, Miyauchi, Suwa, Futago, and Unane, where flooding damage had occurred.And information obtained from observation equipment and other sources is available on the website on Waterworks and Sewerage Bureau.



Providing information on drainage gutter pipe

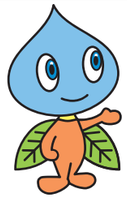
• Designation of sewers under known water level

Designated the "Kawasaki City Public Sewer Horikawa Trunk Line," which drains rainwater in the area around the east exit of Kawasaki Station, where there is a large underground shopping center, as a sewer under known water level.When the water level in the sewage pipes reaches the special precautionary level for rainwater runoff, information on the arrival of the water level is notified to the managers of underground malls, etc., for the purpose of contributing to the smooth and prompt prevention of flooding and evacuation from underground malls, etc.

Substantial Customer Service

In order to enhance customer satisfaction, we listen to our customers and enrich counter service.

Waterworks and Sewerage Bureau provide the customers with waterworks, industrial water system and sewerage system services and receives a water rate, water rate for industrial use and sewage service charge in exchange for the services. The information on the waterworks, industrial water system and sewerage system is publicized through a public relations magazine “Waterworks and Sewerage System of Kawasaki” and its website.
Paying utmost attention to the “customers’ comments” to increase customers’ satisfaction, we have been reflecting them on our business operations to enrich customer service.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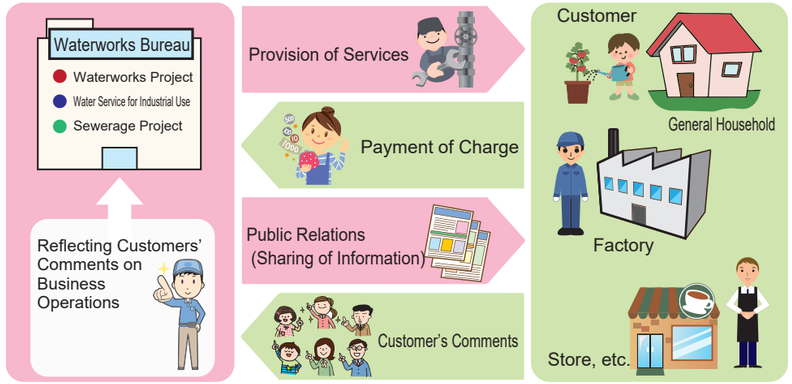


Counter Service

Customer Service Counters for inquiries regarding commencement and interruption of use, fees, repairs, etc.

We established the “Waterworks Customer Service Center” in January 2013 in order to accept requests for the opening/closing of water meters following a change of residence, fee payments, and other such general inquiries. The facility is open 7 days a week all year round and accepts general requests regarding opening/closing of meters, fee-related requests, etc., from 8:30 A.M. to 8:00 P.M. Requests for leakage repairs, restoration of clogged pipes, etc., are accepted 24 hours a day.

Payment of water and sewerage usage charges

Payment of Charge

In addition to account transfers, credit card payments, and payments at convenience stores using payment slips, we have introduced mobile payment applications ("LINE Pay", "PayPay", "au PAY", "d-payment", and "Jcoin") that allow payment regardless of time or location.

Category	Payment Method
Water rate, sewage service charge	Account transfer, credit card continuing payments Payment forms (Water and Sewerage Bureau Service Center, designated financial institutions, convenience stores, LINE Pay, PayPay, au PAY, d-payment, Jcoin)

To pay by Account transfer

Please apply using the application form or the Web Account Transfer Acceptance Service (except for corporate accounts).

To pay by credit card

Please apply through Yahoo! Public Money Payment.We do not handle requests for a single billing amount of 10,000,000 yen or more.

Public Relations and Public Hearing Activities

Through the "Kawasaki's Waterworks & Sewerage" newsletter, the Waterworks & Sewerage Bureau's website, and events such as the Mizumizu Fair, we actively disseminate information customers want to know and issues we are facing in the waterworks and sewerage business in an easy-to-understand manner, and are making an effort to enhance customer understanding and trust.
As well, in order to accurately comprehend the needs of our customers and their awareness of waterworks policies, along with carrying out public awareness questionnaires, we also conduct waterworks tours during the summer vacation season in order to give children—the leaders of the future—the opportunity to learn about waterworks systems.

Nagasawa Purification Plant Information Facility (With a Glimpse of the Future)

At this facility, visitors will be guided on Water Circulation to learn about the characteristics of Kawasaki’ s waterworks and sewerage system that utilizes the blessings of nature. They will deepen their understanding of water that we casually use in every day.


With a Glimpse of the Future


Wakuwaku Aqua

Kawasaki Waterworks and Sewerage Information Facility (Wakuwaku Aqua)

Visitors will have hands-on experience as they observe water being processed in front of them to understand the importance of the role of waterworks and sewerage within the water environment.

Summer Vacation Waterworks and Sewerage Tour

In order to help deepen the concern with understanding of the waterworks and sewerage project, a waterworks tour is conducted for elementary school kids and their parental guardians living in Kawasaki during the summer vacation.※The Sewerage workshop was not held in FY2023.

Yamakita Town Exchange Project

With the goal of promoting understanding among Kawasaki citizens and creating a vibrant water source area, various exchange activities are being conducted between Kawasaki City and Yamakita Town as well as Kanagawa Prefecture, which hosts Lake Tanzawa, one of Kawasaki's water sources.


Yamakita Town Exchange Project

Artwork Contest for Elementary School Students

In order to deepen understanding and interest in the water supply and sewerage operations, art contests are held for elementary school students under two categories: painting and poster design category and slogan design category.

Manhole Card

As an aim to help deepen the understanding and the interest of the sewerage projects, we have made manhole cards which are being distributed as of August 2017.
Distributed at Kawasaki City Tourist Information Centers (such as Kawasaki Kita Terrace, etc.), and at other events such as the Mizumizu Fair.

Manhole Card

Industrial Water System Users Council

This council exchanges opinions with the corporate users of the industrial water system on the problems in using the industrial water system and provides the information on the financial conditions and facilities development plans.

Facilities Available for Public Use

Top Surfaces of the Facilities

As an effective use of the upper part of the Saginuma Water Distribution Pond and the Asou Water Treatment Center, a multi-purpose plaza has been developed and opened to the public.

Iriezaki Yonetsu Riyou Pool

An environmentally-friendly hot-water swimming pool effectively using after-heat produced from the sludge incineration process of the Iriezaki Sludge Treatment Center.

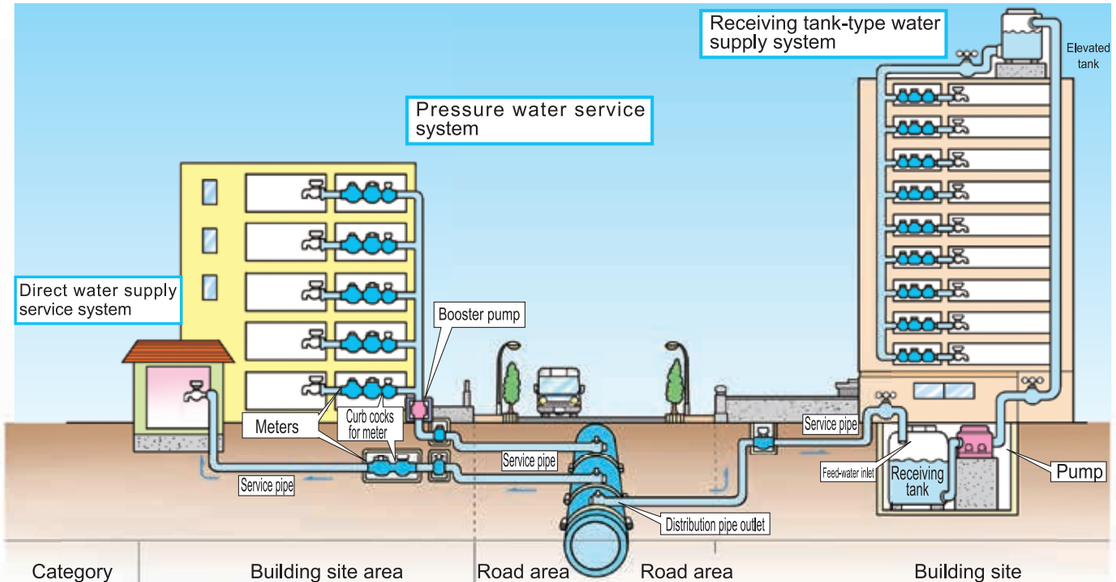

Opened Asao Community Hill

Water Service Installations and Private Sewers

Water service installations and drainage facilities are part of the architecture and are assets of clients. Therefore, Kawasaki Waterworks Bureau will conduct design review and inspection upon construction completion of these water service installations and drainage facilities.

Water service installation (waterworks)

The water supply system of waterworks is classified into several types; direct water supply service system which directly supplies water by utilizing water pressure of the distribution pipe; pressure water service system which directly supplies water using a booster pump when water pressure of the distribution pipe is not enough to provide water to upper floors; and receiving tank-type water supply system which supplies water with a pump stored in a receiving tank or which supplies water after delivering it in an elevated tank installed on a place such as a rooftop.



Category	Building site area	Road area	Road area	Building site
Name	Water service installation	Distribution pipe	Water service installation (from the distribution pipe outlet to the feed-water inlet of receiving tank)	Water supply facility with receiving tank
Maintenance and management of water service installation	Customer (owner and user)	Waterworks and Sewerage Bureau	Customer (owner and user)	
Water quality control	Waterworks and Sewerage Bureau			Person who installed water supply facility with receiving tanks

※ In order to resolve the problem of old service pipes that may cause water leakage, the Waterworks Bureau is improving service pipes under roads and service pipes including water meters within 2 m from building sites by replacing them with stainless steel pipes during renewal construction of distribution pipes or when water leakage occurs from a service pipe.

Water service installation is asset of a customer

A water service installation (excluding a water meter) is a part of a construction and an asset of a customer. A water service installation has to be maintained and managed, and its costs have to be borne by a customer. (The Waterworks and Sewerage Bureau repairs service pipes with problems such as water leak in the road area or within 2 m from the building site.)

Person who installed water supply facility with receiving tanks is responsible for the water supply facility with receiving tanks of a building or condominium

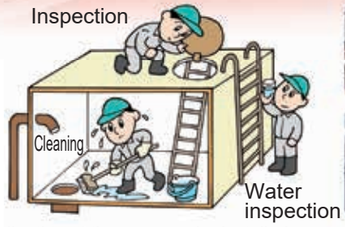
A water supply system in a building or condominium which supplies water to users after receiving water in a receiving tank supplied from the Waterworks and Sewerage Bureau is referred to as “water supply facility with receiving tanks.” A person who installed a water supply facility with receiving tanks (i.e.,owner of the building, condominium association, etc.) is responsible for cleaning and inspecting the receiving tank periodically (once a year) and ensuring supply of sanitary and safe water.

Benefits of a Direct Water Supply Service System

The direct water supply service system is a system which directly supplies water from the distribution pipe and not via a receiving tank, providing customers with a lot of benefits such as a supply of fresh tap water, and the elimination of the necessity of periodical cleaning and inspection of receiving tanks.

Involvement to water supply facilities with receiving tanks

The Waterworks and Sewerage Bureau conducts external examinations and simple water quality tests (of residual chlorine, color, turbidity, smell, and taste) on water supply facilities with receiving tanks that have an effective capacity of less than 8m³,and which are not required by law to have regular tests. When test results show that improvement is needed, advice and instructions are given to those who installed the receiving tank.



Obligation of the person who installed water supply facility with receiving tanks

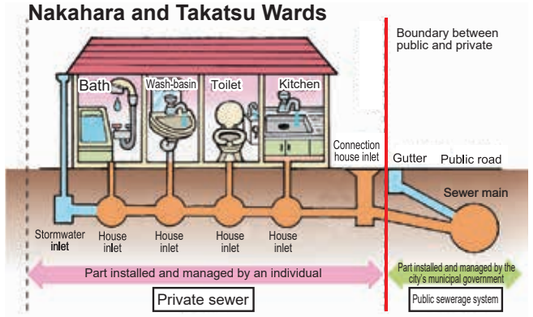
Investigation on receiving tank

Private sewer (sewerage system)

The sewerage system consists of a part which is installed under a public road and managed by the city’ s municipal government (public sewerage system);and a part which is installed in a customer’s building site and managed by a customer (private sewer). Like public sewerage system, there are 2 types of private sewers: combined sewer system and separated sewer system. A customer is required to install a private sewer of the same type as that public sewerage system.

Combined sewer system

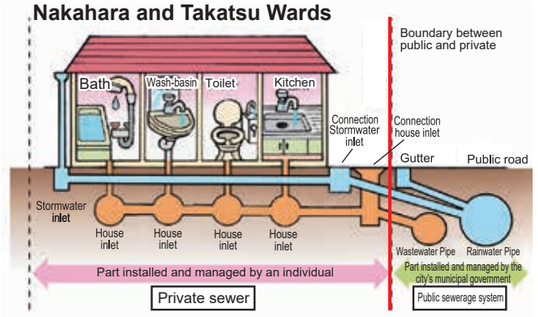
Kawasaki and Saiwai Wards, and a part of Nakahara and Takatsu Wards



The combined sewer system in a type which carries sanitary sewage from toilet, bath and kitchen, etc. and stormwater together in a single drain pipe.

Separated sewer system

Miyamae, Tama and Asao Wards and a part of Nakahara and Takatsu Wards



The separated sewer system is a type which carries sanitary sewage from toilet, bath and kitchen, etc. in a sanitary sewer pipe, and stormwater in a storm sewer pipe or a gutter.

Construction of water service installations and private sewers

Only water pipe plumbers certified by Kawasaki city are allowed to conduct construction of water service installations including new construction and remodeling, and only private sewer companies certified by Kawasaki city are allowed to conduct construction of private sewers including remodeling to flush toilets. (Remodeling of a pit latrine into a flush toilet also requires construction of water service installation.) In addition, when construction of water service installation and/or private sewer installation is to be conducted, the installation and/or sewer has to undergo design review by the Waterworks and Sewerage Bureau , or check and inspection upon completion of the private sewer.

Subsidization and loan facilitation program

Private sewer (sewerage system)

A person who owns a building in an area where a sewerage system has been established and their wastewater can be treated at a water treatment center (referred to as “treatment district”) is obliged to promptly remodel their toilet to flush toilet and install a private sewer. The Waterworks and Sewerage Bureau is working to promote use of the sewerage system by establishing subsidization and loan facilitation programs for the construction cost of private sewers accompanying remodeling to flush toilets.

Subsidization and loan facilitation program

This program is to subsidize the construction cost and provide interest-free loan (through financial institutions) when construction of remodeling of a pit latrine to a flush toilet, and construction of abolishing existing domestic wastewater treatment units and enabling sanitary sewage to flow into the sewerage system.

Subsidies (per sewer)
When there is 1 toilet: 10,000 yen
When there are more than 2 toilets: 5,000 yen per toilet
Loan (per sewer)
Within 450,000 yen (to be calculated according to the criteria set by the city)

※There are certain requirements for the subsidization and loan facilitation program to be applied

Private-road public sewerage development program

This is a program for promoting flush toilets by which the city’s municipal government develops a sewerage system as public one under a private road upon request if certain criteria and conditions are satisfied.

Subsidization program for installing private-road common private sewers

This is a program to subsidize a part of costs for construction of installing a common private sewer under an existing private road in a treatment district, and, upon completion, remodeling toilets into flush toilets.

Subsidization program for repairing private-road common private sewers

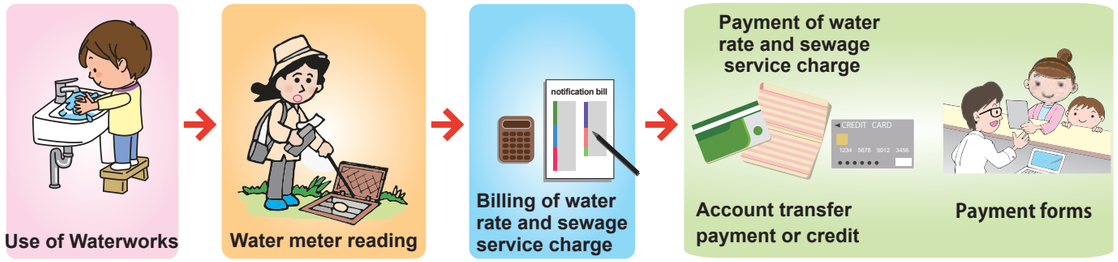
This is a program to subsidize a part of the construction costs for repairing a common private sewer under an existing private road.

Water Rates, Water Rates for Water Resources for Industrial Use, and Sewage Service Charges

Water rates and sewage service charges are calculated according to water consumption of waterworks, etc. on the basic of the benefit principle.

Water rates

Basic charges, excess charges and calculation method, etc. of water rates are stipulated by Waterworks Ordinance of Kawasaki city. A water rate to be paid by a customer is calculated according to the measured water consumption determined by meter reading. Water meter reading, and calculation and billing of water rates are usually conducted every 2 months.



Sewage service charges

Basic amounts, excess amounts and calculation method, etc. of sewage service charges are stipulated by Sewage Ordinance of Kawasaki city. A sewage service charge to be paid by a customer is calculated according to the water consumption when the customer uses waterworks and/or water resources for industrial use. Customers who use groundwater and rainwater and requested to pay sewage service charges based on the individually recognized amount of wastewater flow discharged to the sewerage.
Sewage service charges are usually charged and paid every 2 months with water rates.

Unit price schedule for water rates (for 2-month period)

Effective from April 2010

Type	Water consumption (㎥)		Unit price (yen)
Private, general	Basic charge	16 or less	1,060
	Excess charge	17 ～ 20	95
		21 ～ 40	139
		41 ～ 50	185
		51 ～ 60	194
		61 ～ 100	209
		101 ～ 200	253
		201 ～ 400	278
		401 ～ 1,000	329
		1,001 ～ 2,000	343
		2,001 ～	357
Public bath	Basic charge	16 or less	1,060
	Excess charge	17～	46

※Consumption tax or amount equivalent to local consumption tax are not included in the unit prices.

Unit price schedule for sewage service charges (for 2-month period)

Effective from April 2004

Type	Wastewater discharge amount (㎥)		Unit price (yen)
Private, general	Basic amount	16 or less	1,320
	Excess amount	17 ～ 20	10
		21 ～ 40	128
		41 ～ 60	164
		61 ～ 100	242
		101 ～ 200	303
		201 ～ 400	364
		401 ～ 1,200	393
		1,201～4,000	422
		4,001 ～ 10,000	446
		10,001～	475
Public bath	Basic amount	20 or less	220
	Excess amount	21～	11

※Consumption tax or amount equivalent to local consumption tax are not included in the unit prices.

Methods for calculating water rates and sewage service charges (assuming the case where water consumption in a 2-months period is 40 ㎥)

Water rate	
16㎥ or less (basic charge)	1, 060yen①
17㎥～ 20㎥ 95yen ×4㎥	=380yen②
21㎥～ 40㎥ 139yen ×20㎥	=2, 780yen③
①+②+③	=4, 220yen
Amount equivalent to consumption tax	422yen
Water rate (to be charge)	4, 642yen

Sewage service charge	
16㎥ or less (basic amount)	1, 320yen①
17㎥～ 20㎥ 10 yen ×4㎥	=40yen②
21㎥～ 40㎥ 128 yen ×20㎥	=2, 560yen③
①+②+③	=3, 920yen
Amount equivalent to consumption tax	392yen
Sewage service charge (to be charged)	4, 312yen

The charge for the above 2-month period is 4,642yen for water rate and 4,312yen for sewage service charge, or 8,954yen in total.

Water rates for water resources for industrial use

Basic charges, service charges, excess charges and calculation method, etc. of water rates for water resources for industrial use are stipulated by the City of Kawasaki Industrial Water Ordinance. Water rates to be paid by customers are calculated according to the water consumption determined by water meter reading and charged monthly. Customers are requested to make payment for water rates for water resources for industrial use at a designated financial institution based on a notification bill issued by the Waterworks Bureau.

Effective from April 2010

Category	Unit price
Basic charge	34.40yen per 1 ㎥ of obligatory water consumption
Service charge	2.30yen per 1 ㎥ of consumed water within the range of obligatory water consumption
Excess charge	60.30yen per 1 ㎥ of consumed water in excess of obligatory water consumption

※Consumption tax or amount equivalent to local consumption tax not included in the unit prices.

Connection charge for use of waterworks

The connection charge for use of waterworks is a charge to be paid by customers such as those who use the city's waterworks for the first time so that they will bear a part of the cost required for developing waterworks facilities. The connection charge aims to preserve fairness between existing and new users of the waterworks, and is charged in the following cases:

- ●when a customer applies for water service installation construction in order to newly use waterworks,
- ●when a customer applies for remodeling construction such as increasing of aperture diameter of water meter, and increasing of the number of households supplied, or
- ●when water rates for apartment house are to be applied.

Amount of connection charges for use of waterworks

Meter aperture diameter	New installation of meter	Increase of meter diameter
13～25mm	150,000yen	Difference between before and after remodeling commensurate with the aperture diameter of water meter
40mm	1,250,000yen	
50mm	1,950,000yen	
75mm	4,450,000yen	
100mm	7,950,000yen	
150mm	17,950,000yen	

※In the case where the water meter has a diameter exceeding 150mm, the amount specified in the City of Kawasaki Waterworks Ordinance Enforcement Rules in collected.
※The amounts described above do not include the amount equivalent to consumption tax.

What is benefit principle?

It takes costs to provide services. The benefit principle is the idea that the cost required for providing a service should be borne by a person who receives the service according to the benefit he or she receives. The benefit of water supply service corresponds to the volume of water consumed by the customer.