

IV Sewer System



1 Roles and outline of the sewer system

1. Roles of the sewer system

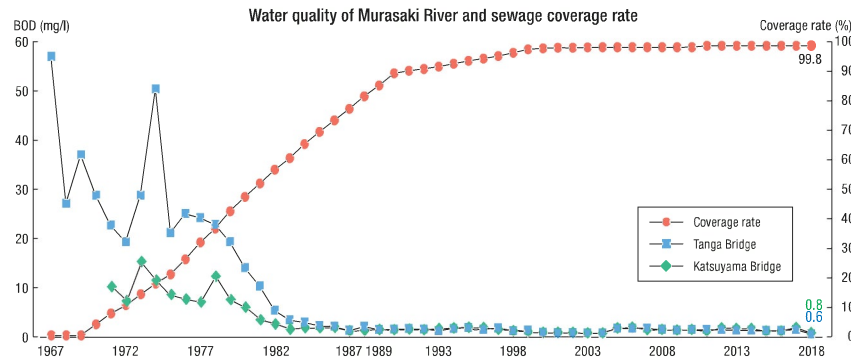
The sewer system is one of the most fundamental facilities which are indispensable for comfortable urban life. It provides citizens with a healthy, safe and comfortable living environment by preventing floods, facilitating the construction of sewage system connections for toilets and removing polluted water. Also, the sewer system is important for water circulation in urban areas due to its indispensable role in preserving water quality in waterways and basins polluted by domestic wastewater. Effective and versatile use of the facilities in the sewer system is expected for the future.



- 1 Removal of rainwater (prevention of floods)**
 The sewer system prevents damage to houses and roads caused by flooding during the rainy season and typhoons.
- 2 Improvement of the surrounding environment**
 The sewer system eliminates dirty puddles, and prevents the generation of offensive odors, flies and mosquitoes.
- 3 Promotion of the spread of sewer system connections for toilets**
 The sewer system facilitates building new sewage system connections for toilets, resulting in a comfortable and clean living environment.
- 4 Conservation of water quality**
 The sewer system prevents inflow of polluted water and protects the abundant natural environment.

(1) The Murasaki River changed to a clear stream

The Murasaki River, which is popular among citizens as a symbol of Kitakyushu City, was once polluted like a sewage canal. At present, fishes, such as sweetfish and ice goby have come back to the river, and fireflies are seen upstream. It is mainly because the polluted water in the river was purified due to the preparation of the sewer system. As stated above, the sewer system has been playing an important role in purifying the water in rivers and the sea and protecting the abundant natural environment.



* BOD (biochemical oxygen demand) is one of the indicators of organic materials. The lower a BOD level is, the less organic contents, such as waste and dirt, there are in the water.

(2) Restored Dokai Bay

In 1963, when Kitakyushu City started full-fledged construction of the sewer system, Dokai Bay was, just like the Murasaki River, so polluted by smoke and industrial drainage that even the propeller of a ship would corrode, and was known as the "Sea of Death" throughout Japan. However, the water quality was improved along with the spread of the sewer system, and currently, more than 100 kinds of fish and shellfish live in Dokai Bay.

Dokai Bay was once a notorious symbol of Kitakyushu City reflecting the public pollution problems in the city. However, Dokai Bay has currently been restored enough that many creatures may live in it.



Dokai Bay in the 1960s



Dokai Bay at the present

2. Current conditions of the sewer system project

Public sewer system projects have advanced under the 5 Year Sewerage Construction Plan of the national government based on the Act on Emergency Measures concerning the Construction of Sewerage Systems. Kitakyushu City started full-fledged activities along with the start of the 1st 5 Year Plan (national) in 1963. The percentage of the population connected to the sewer system reached 99.8% at the end of FY 2005.

From now on, we will take necessary measures according to the plan for carrying out the roles of the sewer system, such as measures against the increasing trend of heavy rain and earthquakes, replacement of dilapidated facilities, further improvement of water quality, etc. To this end, under the "Kitakyushu City Sewer System Vision" (drawn up in February 2010) stipulating the policies of activities relating to the sewer system during the next 11 years (from FY 2010 to 2020), we will make collaborative efforts with all the citizens to realize the "Comfortable Water Circulating City," the basic concept of the vision.

(1) Coverage conditions

The total coverage area as of the end of FY2018 is about 16,341ha, and the coverage rate (percentage of the population connected to the sewer system to the total population) is 99.8%.

Coverage rate / population (each ward)

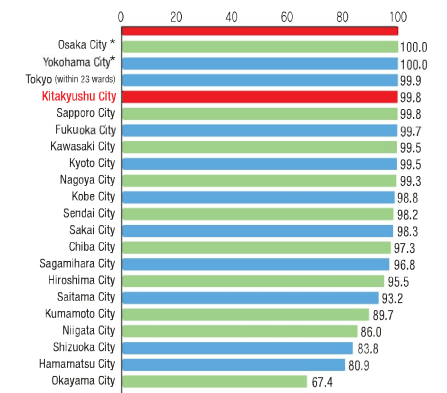
(As of the end of FY 2018)

Ward	No. of population in respective administrative areas	Population covered by sewer system	Coverage rate
Moji	98,335	98,101	99.8
Kokurakita	180,501	180,170	99.8
Kokuraminami	210,710	210,535	99.9
Wakamatsu	82,859	82,527	99.6
Yahatahigashi	66,350	66,294	99.9
Yahatanishi	253,671	180,501	99.9
Tobata	57,756	57,756	100
Kitakyushu City	950,182	948,806	99.8

* The numbers of population are based on registered population (population of registered foreign residents is added to that of the Basic Resident Register).

Sewer system coverage conditions in large cities

(As of the end of FY 2018)



(Population covered by sewer system / Total population)

Note: Items marked with * show that the coverage rate results in 100.0% when it is rounded off.

The functions of the sewer system facilities can be demonstrated through appropriate management and operations. If these functions are not used sufficiently, it will lead to various problems, such as floods, road collapse, water contamination and environmental destruction. Therefore, periodical investigation and maintenance are indispensable. Especially, since the sewer system project of Kitakyushu City started on a full scale in 1963, just after the consolidation of the former 5 cities, and there are some dilapidated facilities and equipment in the sewer system, it is requested to carry out periodical maintenance for such facilities and equipment.