

II Main Water Utility



Water Utility

1 | Current conditions and issues of water utility

1. Changes of water demand

The water demand in Kitakyushu City had shown a rapid increase up to the mid-1970s in line with the high economic growth and the development of urban infrastructure, etc. as a megacity since the consolidation of former five cities.

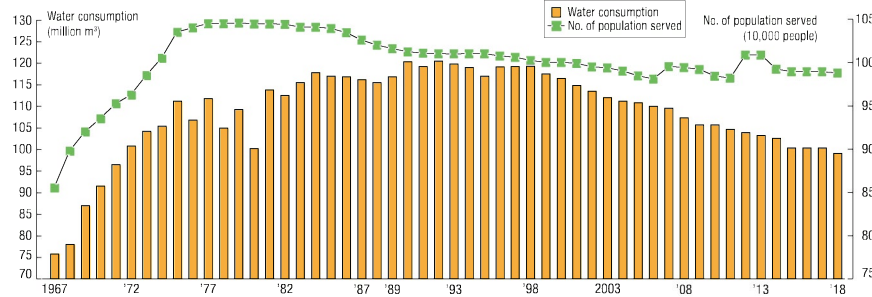
However, the increase had slowed down under the influence of the economic downturn since the first oil shock in 1973 and the service restriction due to the abnormal water shortage in 1978 and 1982, etc., and the water demand had been on a declining trend since 1985 because of the structural recession resulting from the changes in the industrial structure.

From 1989, the water demand temporarily increased

owing to the bubble economy, and recorded highest water use volume in the past in 1992, however thereafter, turned to a declining trend again due to the collapse of the bubble economy, etc. The water demand was recovered in 1996, and the water consumption exceeded that of the previous fiscal year for the first time in 4 years, and had been walking sideways thereafter, however, it has been on a declining trend from FY 1999 because of a decrease in the water demand in line with the progress of the declining birthrate and aging population, use of groundwater by large-scale consumers, etc.

In line with the economic stagnation since the Lehman's Shock in 2008, the water demand had decreased drastically, and is still on a downward trend currently.

Annual changes in the amount of water supplied to an consumed by the local population



* In Oct. 2007, the water utility system of Ashiya Town was consolidated, and in Oct. 2012 that of Mizumaki Town was consolidated.

2. Issues and responses for the future

The Water and Sewer Bureau drew up the "Medium-term Management Plan for Water Utility and Sewer of Kitakyushu City" in April 2016 as the five-year management plan (from FY2016 to FY2020) with the basic philosophy of "establishing waterworks that are trusted by the customers" and "aiming for a comfortable city in terms of water services."

With regards to the water utility and sewer projects, a severe management environment is foreseen due to the facts that the demand for water is anticipated to decrease and that the demand for renovation is anticipated to increase.

In order to properly respond to the 6 major issues faced by the water utility and sewer projects, 15 measures and 41 projects are planned to be implemented for further reduction of expenses and increase in revenues. These will help realize the managerial goal of "providing safe, secure and high-quality services under the current water bill structure."

In the future, upon receiving the inauguration of the Water and Sewer Bureau in FY 2012, we will aim to realize a far safer,

securer and more trusted water utility and sewer system to everyone, taking advantage of the effects arising from the consolidation of water utility and sewer projects.



The Master Plan for Water Utilities of Kitakyushu City

3. Main measures and projects to be implemented

Based on the "Medium-term Management Plan for Water Utility and Sewer of Kitakyushu City", the city will strive to maintain and enhance infrastructures of water utilities and sewers, which are directly connected to the lives of the citizens. These will comprise of safe and stable supply water, sewage treatment and rainwater discharge. In addition, by utilizing the high-level water utility and sewer technology the city possesses within Japan and overseas, Kitakyushu will promote the expansion of regional cooperation and overseas businesses in water utility and sewer projects.

- (1) **Preparing for the increasing occurrences of downpours, earthquakes and other natural disasters in recent years through "Crisis Management Measures against Natural Disasters"**
 - Earthquake-resistant facilities
 - Measures against floods responding to instances including downpour in July 2013
 - Enhancement of measures against cold weather based on the record-breaking cold waves in January 2016
- (2) **"Lifespan Extension and Renovation of Ageing Facilities" that were hastily developed during Japan's rapid economic growth**
 - Leveling of replacement investment by utilizing asset management techniques
 - Repair and reinforcement based on the lifespan extension plan
- (3) **"Supplying Safe, Secure and Tasty Water" to consumers which are high in demand**
 - Optimization of residual chlorine based on the water safety plan
 - Going forward with direct water supply to schools with the Aqua-fresh project
- (4) **"Reducing Environmental Load" by controlling the greenhouse gas generated and the amount of pollution load into rivers and sea**
 - Preservation of water environment by improving the combined sewer system
 - Effective utilization of sludge and energy
- (5) **"A Water and Sewer System that Contribute Domestically and Internationally", making the most of the technical power and experience possessed by the city**
 - Endorsing overseas water business and expansion of the regional cooperation with strengthened affiliation with city enterprises and Kitakyushu Water Service Co., Ltd.
- (6) **"Strengthening Management Foundation based on Revenue-Expenditure Balance" to cope with the decrease of water billing revenue**
 - Endorsing administration and financial reform
 - Cut down expenditure by saving interest expense and by making sludge into fuel, etc.
 - Measures to increase revenue by increasing supply of city water and industrial water and by accepting drainage water

4. Promotion system

At the "Water and Sewer Bureau management meeting" consisting of Chief Executive of Water and Sewer Bureau and executive directors of head office, the state of progress in water utility and sewer system projects is grasped and evaluated in order to proceed with steady promotion of measures which are stipulated in the "Medium-Term Project Management Plan for Kitakyushu City Water Utility and Sewer System" and the sound operation of the project based on City's financial plan.

At the same time, further enhancement and efficiency of project operation is planned by means of PDCA cycle method based on the professional and objective suggestions from external point of view such as opinions from "Kitakyushu City Water Utility and Sewer System Project Review Session" and "Kitakyushu City Water and Sewer Service Monitor" composed of citizens and experts.

In addition, the next master plan is also under formulation, reflecting the opinions from "Kitakyushu City Water Utility and Sewer System Project Review Session."

