3. Problems and responses for the future

For the sewer system of Kitakyushu City, the projects have steadily advanced with the concepts of "improvement of life environment", "prevention of floods" and "conservation of public water quality" as the primary goals, which has resulted in great achievements, including the facts that currently, the wastewater problems have almost been solved, and public water quality has been remarkably improved.

However, the following problems to be worked on are still left, such as further improvement of the urban environment toward the realization of becoming the World Capital of Sustainable Development and further utilization of existing stock in addition to the responses to natural disasters such as heavy rains and earthquakes, and countermeasures for aging sewer system facilities.

(1) Preparations against natural disasters such as heavy rains and earthquakes
(2) Aging sewer system facilities
(3) Conservation of water quality in rivers and seas
(4) Contribution to the creation of comfortable waterfront areas
(5) Measures for the low carbon society
(6) Utilization of existing stock
(7) International contribution
(8) Cooperation with local communities
(9) Measures for expanding regional cooperation

Kitakyushu City Sewer System Vision

We established the "Kitakyushu City Sewer System Vision" stipulating the policies of the focused activities to be implemented for the sewer system in the future during the planned period from FY2010 to FY2020.

Basic concept

"Aiming to be a comfortable city to live in with abundant clean water"

Targets

1. Support being a safe and comfortable city ~ Protect citizens' life ~
2. Promote water and resource circulation and low carbonization ~ Create a better environment ~
3. Utilize "treasures (resources)" of the sewer system ~ Promote social vitality ~

To achieve the above targets, the basic policies and focused activities are determined for each target to promote specific activities.
Upon implementation of the specific activities, numerical targets for each measure are determined as practically as possible to present the contents and results so that the citizens may understand them easily.

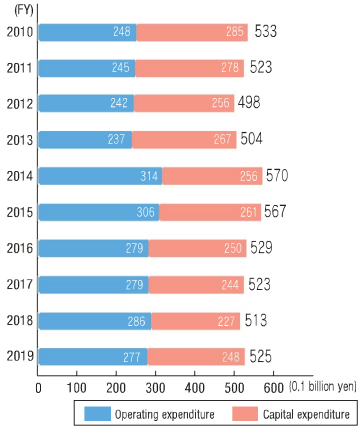
Targets	Basic policies	Focused activities
1 Support being a safe and comfortable city = Protect citizens' life =	1 Create a safe and secure city	A Create a city resilient to rain B Create a sewer system resilient to earthquakes
	2 Maintain a clean and comfortable life	C Maintain and improve sound sewer system facilities D Keep sewer system facilities longer
2 Promote water and resource circulation and low carbonization = Create a better environment =	1 Reduce loads on rivers and seas to conserve water environment	E Improve quality of wastewater and treated water F Reduce sewage flowing out from combined sewer system in rainy weather
	2 Create a comfortable water environment with affluent nature	G Return water circulation to natural state to recover clean water in the city H Use precious water resources for multiple purposes to create affluent waterfront areas
	3 Promote low carbonization for the city toward the prevention of global warming	I Produce new energy from biomass and unused resources J Reduce energy consumption in operations of sewer system facilities
3 Utilize "treasures (resources)" of the sewer system = Promote social vitality =	1 Produce new value from sewer system resources and facilities	K Utilize sewer system treated water and sites, etc. effectively L Improve existing technologies and methods
	2 Contribute to the development of Asian countries through international technical cooperation	M Transfer technologies and know-how to foreign countries and cultivate engineers in the foreign countries
	3 Support the vitality of the city	N Cooperate with local communities to promote activities in waterfront areas

2 Sewer system planning

1. Priority policy program for the development of social infrastructure

The current fiscal year marks the fifth year of the nation's Third Priority Policy Program for the Development of Social Infrastructure. In response to the program, Kitakyushu City will work on the following priority plans.

Transition of budget for sewer system projects



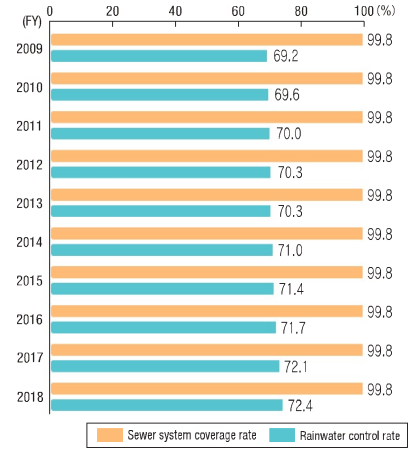
- **Rainwater control**
  For safe urban development, we will increase the capacity of rainwater drainage facilities and promote efficient measures based on the comprehensive plan including measures relating to rivers.
- **Improvement of the combined sewer system**
  Aiming for water quality conservation in the public water area, we will make efforts for the improvement of the combined sewer system.
- **Renovation and renewal**
  We will renovate and renew dilapidated sewer pipes, pump stations and water purification plants efficiently.
- **Preparation of sewage treatment plants and pump stations**
  Responding to the increase of polluted water and rainwater due to the spread of the sewer system and rainwater control measures, we will construct additional sewage treatment plants and pump stations.
- **Sophisticated water treatment**
  We will work on sophisticated water treatment by stages to increase the removal ratio of phosphorous and nitrogen in line with the water quality environment standards so as to prevent eutrophication in the public water areas.
- **Promotion of sewage system connections for toilets**
  We will aim for the full introduction of sewage system connections for toilets in the area covered by the sewer system by using the aid and support systems, such as subsidies and loans for replacing and remodeling pit latrines.

2. Sewer system improvement project

It takes a long time and costs a lot to improve the sewer system. We have been implementing the projects in a planned manner.

Approved area for sewer system projects: 18,751ha.

Transition of sewage control and rainwater control



(1) Sewage control system

For the areas to be covered by the sewer system, the work for most of the areas were completed at the end of FY 2005. Kitakyushu City, aiming to be an Environmental Capital, continuously works on the improvement of private roads and the spread of septic tanks for realizing comfortable citizens' lives and conserving the natural environment in rivers and the sea, and intends to achieve 100% sewage treatment.

(2) Rainwater control system

Aiming for a city strong against floods, we have been promoting efficient and effective measures for rainwater control from the viewpoints of hardware and software, such as an increase of capacity of rainwater drainage facilities, introduction of rainwater flow control equipment, and introduction of a precipitation information system, etc. We will aim for a 73% rainwater control rate by the end of FY 2020.

Kinzangawa Pump Station

The pump station was designed with an appearance in harmony with the surroundings because it was constructed within the residential area (land readjustment project).