Introduction

Up until now, sewerage works established by City of Yokohama comprise sewers of approximately 11,800 km, 11 wastewater treatment plans, 26 sludge treatment plants, and 26 pumping stations, and its coverage ratio has reached 99.9 percent (as of the end of fiscal 2015). The environment surrounding sewerage works has been transforming in great ways such as through the localization, concentration, and intensification of rainfall, the acceleration of global warming mitigation measures through the SDGs and the enactment of the Paris Agreement, as well as the decrease of usage fee revenue caused by population decline, etc. Taking these into consideration, enhancing the management base through flood controls, cutting CO2 emissions through effective resource utilization, optimizing operations, etc., in addition to restructuring facilities will be increasingly important.

In order to continue sewerage services, meet the demands of residents, and promote sustainable operations, it is necessary to understand the current conditions of the sewerage industry, design plans, compile budgets, and set long-term plans, etc., based on the conditions for the purpose of creating a structure to conduct operations in a unified manner through the asset management method and undertake operational improvements.

Methods

Self-checked Topic Management and Drafting Operational Improvement Categories

In order to objectively evaluate operations up until now, Yokohama Waterworks Bureau participated in the process benchmarking (hereinafter PB) of the 2016 Asset Management Customer Value (AMCV) Project (2016) developed by the Water Services Association of Australia (WSAA) with the International Water Association (IWA). As a result, four categories were suggested as categories which could expect significant improvement.

1. Enhancing the financial basis through financial simulations and implementing civil partnerships
2. Formulating a facility reconstruction plan balancing cost, risk, and facility functions
3. Establishing processes for the transmission of technologies, personnel development, and decision-making
4. Designing a strategic AM plan

Initiatives

Methods 2

Hearings and workshops (hereinafter WS) with all departments involved

- Extracted the current issues in operations through internal hearings with all departments involved.
- Taking the assessment results of the PB, the categories to be preferentially tackled for operational improvements and the details of these activities were discussed at WS, and a written plan was compiled.
- Plans were made for operational improvement through mutual coordination and relationship, and an executional and promotional organization was provided to facilitate communication between administration and employees.

Effects

1. Establish long-term plan for sewerage operations
- The policies of organizational management and the Working Group discussions were taken into consideration, and will also include policies and the service level that users requested through the public opinion collection procedures.

2. Conducting long-term restructuring forecasts and long-term financial simulations
- The long-term financial simulations with the “thought process” of the long-term strategy (Action Plan)
- The financial simulation process for the future specific initiatives is in line with the “thought process” of the Long Term Strategy (Action Plan)

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The above results are calculations based on certain assumptions in facility durability years, equipment cost, maintenance fees, charge income, corporate bonds, etc., and there is the possibility that the results could change based on the set conditions.