

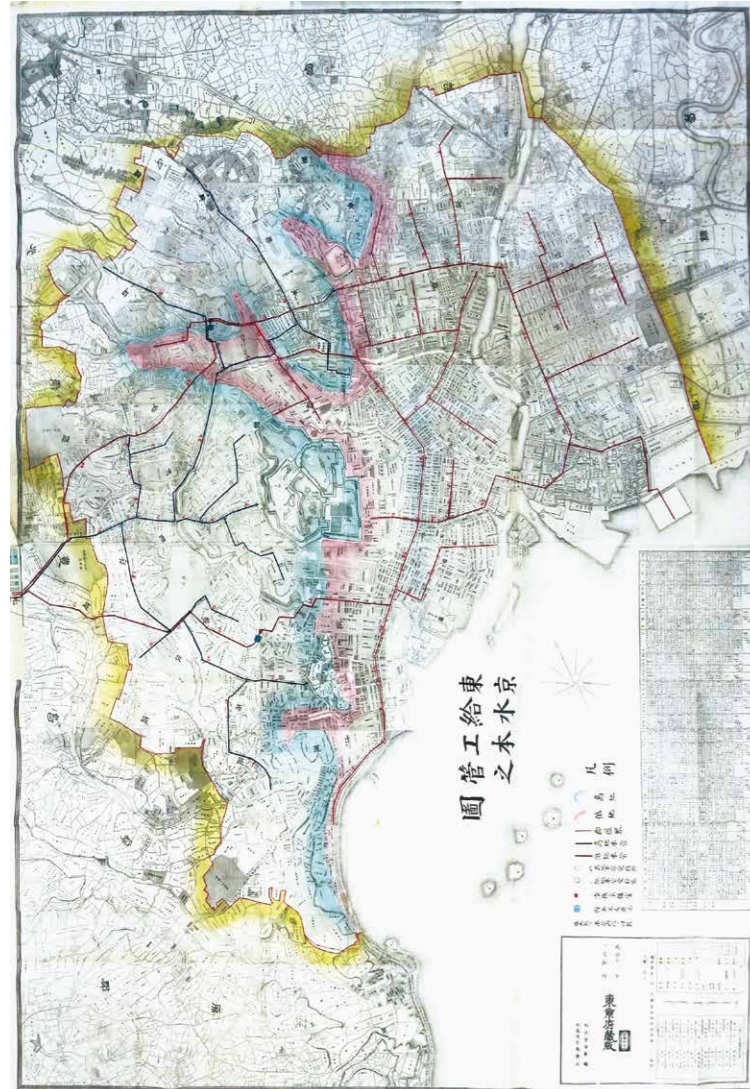
# Development of the modern water supply and sewerage system

Water supply in the early Meiji era was provided from the Tamagawa Josui Canal and Kanda Josui Canal, which were built in the Edo period, and the Senkawa Suido and Azabu Suido canals that sourced their water from the Tamagawa Josui Canal. Because there were issues such as water pollution from inadequate management, the government undertook inspections and studies to improve water quality, and in 1880 formulated the plans for water improvement in Tokyo.

Meanwhile, since 1877 there were cholera outbreaks in Tokyo prefecture, and in 1882, about 5,000 people died in Tokyo prefecture, with over 4,500 deaths in the 15 wards of Tokyo city. This tragedy heightened the necessity of building sewer systems from the perspective of hygiene management. In 1883, the national government notified Tokyo prefecture of its obligation

to improve its water supply and sewer systems. In response, Tokyo prefecture advanced construction of the sewer system in the Kanda district.

Because subsidies from the national treasury were not granted, the project was stopped after only 4 kilometers of sewer lines were constructed; but this was the start of Tokyo's modern sewerage system. Improvement of the water supply and sewer systems was laid out in detail with the advancement of studies of the Tokyo City Plan in 1888. With revision of the Tokyo City Plan, water supply projects were given priority from the perspectives of public hygiene and securing water for firefighting, and the original plans were full executed and completed by 1911.



**Map of Tokyo's water supply mains**

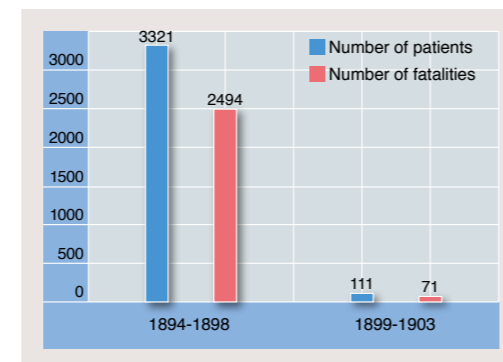
From the collection of the National Archives of Japan  
Map as of when permission was granted for water supply system construction.



**New Tamagawa Josui Canal** From the collection of the Tokyo Waterworks Historical Museum.

### Plan to build the water supply system

The water supply and sewer system study commission, made up of specialists such as engineer W.K. Burton, prepared the first report on Tokyo City's water supply system in December 1888, and the first report on sewer systems in July 1889. In 1890, the plan for improving Tokyo's water supply system received the approval of the Cabinet. This plan called for using the Tamagawa Josui Canal to take water from Tama River to the purification plant where it is precipitated and filtered and then supplied to the city through steel pipes. In 1898, service was initiated from the Yodobashi Purification Plant to the Kanda and Nihombashi direction, and after starting the supply of filtered, purified water in the following year, the areas supplied were gradually expanded, with the system completed in 1911.



### Change in number of cholera patients

Supply of filtered and purified water became possible from 1899. Comparing the number of cholera patients before and after 1899, it is seen that the numbers of both patients and deaths from cholera had dramatically decreased. Water supply improvement projects had greatly contributed to the development of a sanitary living environment.

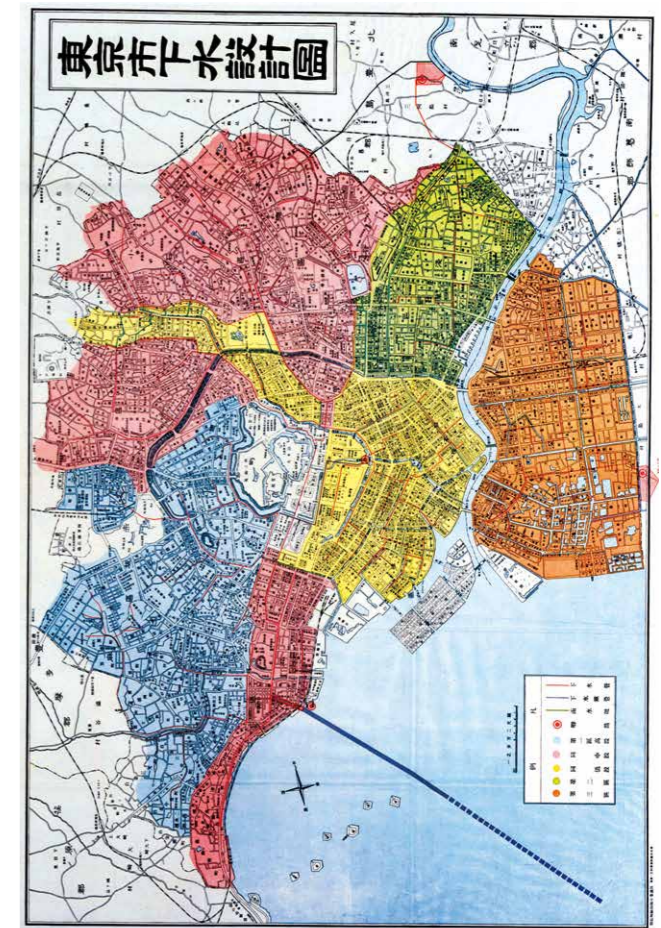
Source: Prepared from *Tokyo kindai suido 100 nen shi* (100-year history of Tokyo's modern water system). Bureau of Waterworks, Tokyo Metropolitan Government.



### Start of construction of the Kanda Sewer in 1884

With the outbreak of cholera in 1882, Tokyo prefecture built Tokyo's first modern sewer system, Kanda Sewer, in the area around Kanda station and to its east. The cross section of the sewer conduit took the shape of an upside-down bird's egg to secure flow speed and prevent the deposit of waste even when there is only a small amount of sewer flow.

Source: Bureau of Sewerage, Tokyo Metropolitan Government.



### Tokyo city sewer system plan released in 1908

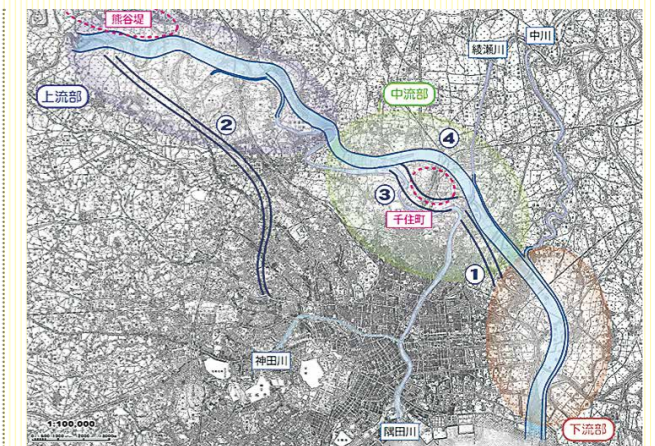
As the urban environment worsened with the rapid growth of modern industry and increasing concentration of the population in Tokyo city, the Sewerage Act was enacted in 1900. Professor Eiji Nakajima of Tokyo Imperial University, who was commissioned by the Tokyo City Planning commission to study design of the sewer system, submitted his report in 1907. His plan, which was based on a population of 3 million and called for construction of sewer conduits and treatment facilities in built up districts, was the first to establish the construction of sewer lines for individual home and the details of wastewater facilities such as pipe materials, diameter, and gradients. Approval was granted for the first phase of construction in 1911.

Source: Bureau of Sewerage, Tokyo Metropolitan Government.



## Arakawa Floodway

● The Sumida River, from which the Arakawa River branches off, flooded frequently due to its narrow width and low embankments. As a drastic flood control measure, the Meiji government began construction of the Arakawa Floodway in 1911. This was an enormous project that extended for 22 kilometers and required the relocation of 1,300 homes, but with water passage accomplished with completion of the Iwabuchi Floodgate in 1924, it was able to be completed in 1930. Arakawa Floodway's construction reduced the risk of disasters and also led to the formation of a new industrial district along the river. It also serves today as a place providing precious open space where the residents can relax.



### Route map of Arakawa Floodway

Source: Arakawa-Karyu River Office, Kanto Regional Development Bureau, Ministry of Land, Infrastructure, Transport and Tourism.