

Investigation of actual conditions and research on making of combined sewer system separation

Whole term

1998.12-2000.3

(Purpose)

Combined sewer has problems, such as water conservation, the risk to the environment, the effect to amenity, because the part of untreated wastewater is discharged into the public water. Therefore, measures were taken for CSO in the storm event such as installation of storm water reservoirs. However, improvement project of combined sewer, that needs a large scale facility, is not progressing in minor cities.

In this situation, the separation, that is a basic solution in order to avoid direct discharge of domestic wastewater into public water directly, has been reconsidered. The separation should be tackled systematically, even if it takes long time, because it is considered that advanced program by measures for flood caused by poor capacity of conduit and rising return period.

This study aims at making basic data which is summarized points of concern in promoting separation, especially, by paying attention to the separation as a measure for CSO and examination on technical issues and programs of separation.

(Research contents)

In this year's research, hearings in 5 cities, which promote separation, in United States and Canada were conducted.

The factor of separation

The project of separation was implemented in order not to discharge untreated wastewater into public water in most cities.

Methods of separation

In the cities which had flood damage, they used existing combined conduits for wastewater and installed new conduits for rainwater as a measure for flood.

The cost of the project

It separation cost was found less than alternatives in the cities which was researched. This is because they have applied separation for 30~50 years due to severe regulation, "Do not overflow wastewater into public water."

The measures after implementing separation

In every city, they recognized that many problems such as non-point pollution caused by separation and rising water in the storm event by unclear water etc. has remained, and measures were taken to keep non-point pollution off while implementing separation in some cities.

The effect and evaluation of separation

Separation improved the quality of public water, greatly contributed to recover the ecosystem, promoted use as waterfronts by citizens, and gave the dissolution of flood and the maintenance of infrastructures by collaboration with other project.

The others

In these cities, the response of citizens was put the main focus and recognized that it was important for smooth moving of separation to correspond to sufficient explanation and technical guidance.

Independent research

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Key words

Improvement of combined sewer, Separation of combined sewer