

## Joint Study on the Review of the Okayama City Sewerage Works Master Plan

Year of Research

2007

### (Purpose)

This study intends to define areas where should be connected to the public sewerage system by priority within the boundaries of current sewerage works master plan considering the efficiency of construction, present state, future population, and other factors in order to increase the efficiency of wastewater treatment services in severe financial conditions.

### (Results)

We classified population densities of urbanization promotion areas and urbanization control areas separately. Moreover, the projection of future population using the cohort -component method shows that the future population will increase in some areas, while that in the whole city will decrease. However, we could not specify the location of aggregate settlements and their population volume.

#### (1) Urbanization Promotion Areas

Most of urbanization promotion areas, excluding the areas for industrial use, have been planned for public sewerage in city planning. Development of sewerage works in these areas has already been approved, and construction is ongoing. These areas have high population density and the efficiency of construction is expected to be high. For these reasons, these areas should be included in sewerage works planning area.

#### (2) Urbanization Control Areas

Some areas can expect a high efficiency of sewerage construction, equal to that in urbanization promotion areas. And, parts of these areas have already started constructions. Standing on a viewpoint of the efficiency of construction, we compared the performance of present sewerage maintenance technique to an individual treatment system.

As a result, we determine that connecting to the public sewerage system (centralized treatment system) is better than constructing individual treatment system for the areas which are clustered 10 or more houses and within 250m from urbanization promotion areas and existing main sewer lines. We sorted out such area as a fundamental framework area, but did not perform inclusion and exclusion of individual settlements in order to respond to the change of a future situation. Because the sewerage construction in urbanization control areas will begin relatively far in the future after construction in urbanization promotion areas.

### (Conclusion)

Since progress of future urbanization is unclear, it is not efficient to promote constructions based on conventional view of prior investment, and it is not a best policy to determine specific constructing areas at present time. In urbanization control areas, constructing areas should be basically determined at settlements locating nearby urbanization promotion areas. Also, the adequacy of the constructions should be judged by future trends and construction efficiency.

The future course is as follows.

- (1) For the time being, we will not perform the review of master plan area, and we will utilize the fundamental framework area as an examination area of the next construction areas (after finishing sewerage construction in urbanization promotion areas).
- (2) From now on, taking into account the circumstances, we will also utilize this study as data to redefine the zoning in the sewerage works master plan. In this case, it is necessary to determine immediate areas considering locations of settlements and reexamine an amount of wastewater etc based on its fixed areas.

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Key words

Effective construction of wastewater treatment plants, Review of master plan, Sewerage planning area