

Survey Study on Formulation of By-basins Comprehensive Plan for Sewerage Construction in Bisan Seto Sea Area

Whole term

1999.10 - 2002.3

(Purpose)

The Bisan Seto sea area which is near the Okayama prefecture, the Hiroshima prefecture, and the Kagawa prefecture is designated as the type II of the environmental standards concerning of nitrogen and phosphorus for the water quality environment preservation in April, 1997 fiscal year. Currently, the environmental standard for water quality has not been applied in some parts of the area near the Okayama prefecture and the Hiroshima prefecture. On the other hand, although the standard values are mostly attained in the Kagawa prefecture, the effect of the discharge load from the Kagawa prefecture is not neglected (survey in 1998 fiscal year). In order to maintain good water environment in the future, it is necessary to apply water quality improvement in all three prefectures.

In this survey, based on the result of the sea-area contamination analysis ranging from the present to the future of the Bisan Seto sea area, the acceptable pollutant loads of COD, nitrogen, and phosphorous of each prefecture level required for the each comprehensive plan for sewerage construction are calculated, and basic-policy on the comprehensive plan for sewerage construction in the Bisan Seto sea area (1981 fiscal year) is revised. In addition, each prefecture decides by-basins comprehensive plan for sewerage construction based on the basic policy which is decided by the survey.

(Survey contents)

In 2001 fiscal year, based on the results until 2000 fiscal year, such as future contamination analysis, the prefectures distribution proposal of the total acceptable pollution loads was rationally made through examination of the enforceable measure, and the basic policy was also decided by the discussion and agreement in "the investigating committee of the Bisan Seto sea-area by-basins comprehensive plan for sewerage construction."

(Results)

(1) Examination of acceptable pollution loads

Based on the future contamination analysis result carried out in the last fiscal year, the acceptable pollution loads required in order to maintain and attain the environmental standard for water quality of the Bisan Seto sea area was calculated. The calculation was set up by the discussion in the committee (for a deliberation adjustment) based on the view of taking the enforceable measure.

(2) Distribution between prefectures of the acceptable pollution loads

When distributing acceptable pollution loads between prefectures, the distribution is based on "the current pollution load ratio" in the comprehensive proposal for the basin area. However, when the basin characteristic of this sea area was taken into consideration, there was a possibility of lacking rational distribution between each source.

The distribution between prefectures of the acceptable pollution load in this investigation was set up by the distribution method basically based on the rational "equal measure for each prefecture", and the effectiveness on each quality of treated water of each treatment division was examined.

(3) Development of the basic policy

The purposes of the comprehensive proposal for the basin area are maintenance and achievement of the environmental standard for water quality of the Bisan Seto sea area. However, if the improvement of sewerage situation in three related prefectures is taken into consideration, it will require a very long period of time in order to attain the final target. Therefore, the medium-term objective in this survey (Based on the acceptable pollutant loads) which aims at the long-term objective was incorporated in the basic policy, and concrete examination was performed in individual comprehensive proposal for the basin area of each prefecture.

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Person in charge of study: Tsuneto Takaso, Akira Katagiri, Kenji Sasaoka, Takanobu Hoshi,
Takahiro Ito

Key words

Bisan Seto, Comprehensive proposal for the basin area, Advanced wastewater treatment