

Study on Network Plan for Sewage Treatment Plants

Whole term

2003.6 ~ 2006.3

(Purpose)

The sewage works are shifting from the spread promotion to the maintenance age. The stock of the sewage treatment plants have increased by the spread of sewage system, and the maintenance expense has tended to increase accordingly. The city where sewage system has been constructed from early time is going to get the concentration period of reconstruction demand. Therefore, it is expected that the required expense for reconstruction will outstand at certain period if nothing done, and that it becomes difficult to cope with social requests such as stable running of sewage works, CSO control, advance treatment etc.

As one of solution of the above problem, network arrangement of sewerage facilities is focused. Comparison between individual sewage facility and networked ones is made with respect to economy, crisis-management, additional value etc. and the project is selected by integrated evaluation of the comparison in a long-term. This study aims to present technical matters of planning in the examination of concept for planning, network possibility, work plans, and project scheme etc. to formulate the network plan.

(Results)

(1) Examination Procedure for Network Study

The possibility of the network is examined, and network plans are evaluated and selected by comparison between with and without network. In addition, the work plan and project scheme are prepared for networking as shown in Figure 1.

(2) Examination on network possibility

The practical network plan is examined selecting combination of treatment facilities and supplement objects which can be clarified advantageous by networking taking individual conditions of facilities and treatment subjects into account.

(3) Comparative study on with and without networking of the existing facilities

To confirm effectiveness of network plan compared to without network, evaluation of both plan is made conducting 1) Understanding of the present conditions and preparation of plans, 2) Comparison study in the aspects of construction and O/M costs, reconstruction and rehabilitation plans, upgrade of functions, crisis-managements, contribution to environment, integrated management etc. and 3) Integrated evaluation, and an appropriate plan is selected.

(4) Formulation of network plan

Network plan is formulated as 50-year construction procedure taking reconstruction of the network facilities and treatment plans into account after further detail examination on the measures to be taken in the regional characteristics.

(5) Formulation of Network Project

The required project costs for 50 years are estimated by year for sustainable development including the measures in the future. In addition, the 10-year network project is prepared based on the estimated total costs.

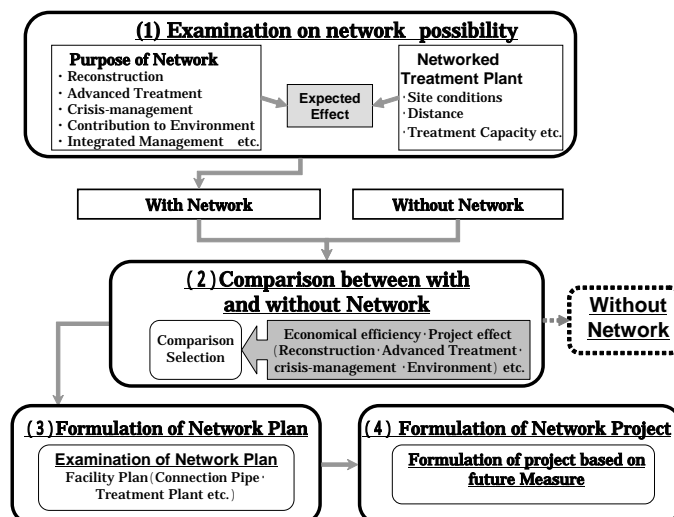


Fig1. Examination Procedure for Network Study

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key words

Network, Project, Rehabilitation, Reconstruction, Crisis-managements, Integrated management