

Research on Sewerage Facility Green and Water Park Development Project

Whole term

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(Purpose)

Urban sewerage facilities contain valuable open space, centering on sewage treatment plants and open conduits. These have high potential from the viewpoints of leisure recreation for urban residents, provision of space for disaster prevention, and creation of water fronts and natural environment areas. The purpose of this work was to organize and summarize the actual status and methods of creating “water/green space” utilizing the potential of sewerage facilities, and to study and propose policies which should be developed in the future.

In the previous fiscal year, a questionnaire survey on the creation of “water/green space” in sewerage facilities (sewage pipelines, treatment plants, pump stations) and the present status of multipurpose use covering prefecture-level governments and core cities and larger metropolitan areas was conducted and the present status was analyzed, including organization of problems. In the current fiscal year, problems in the creation of “water/green space” utilizing the potential of sewerage facilities (including use of treated water, etc.) were extracted by a detailed investigation of advanced cases based on the results from the previous year, and policies for promoting the creation of “water/green space” were examined through a study of measures to solve these problems.

This work is related to the Ministry of Land, Infrastructure and Transport (MLIT), Sewerage and Wastewater Management Department’s 11 Projects, “No. 9 Sewerage Facility Green and Water Park Development Project,” and was commissioned by MLIT.

(Results)

1. Questionnaire on creation of water/green space in sewerage facilities and condition of use

Because use in urban regions is expected, this questionnaire survey of the use of water/green potential was conducted covering prefecture-level governments, cities where prefecture offices are located, and other local governments with populations of 300,000 or more.

The area where greening is possible in various sewerage facilities included 10.6km² in separate storm sewer systems, 3.4km² in urban sewers. 1.8km² in rainwater regulating reservoirs, 11.4km² in treatment plants, and 2.7km² in pump stations, for a total of 30km². This area is equivalent to approximately 640 times the area of the Tokyo Dome baseball stadium.

2. Study of advanced cases

As advanced case studies, interviews were conducted based on the results of last fiscal year’s questionnaire survey. Five locations were selected for these advanced case studies (3 locations involving pipeline system facilities, 2 locations at treatment plants) from the viewpoints of application and use (as reference for other areas) and advanced characteristics (promotion of new originality as models).

<Pipeline facilities>

Egawa Seseragi Walk (Kawasaki City, Kanagawa Pref.), Koedo Seseragi Watercourse (Utsunomiya City, Tochigi Pref.), Sewer Rambling Road Hayakawa (Okazaki City, Aichi Pref.)

<Treatment plants>

Hinokawa Purification Center (Fukui City, Fukui Pref.), Shitamachi/Oppama Purification Center (Yokosuka City, Kanagawa Pref.)

3. Procedure for study of water/green space creation

Basically, a policy of performing the study of water/green space creation following procedures ①~⑦ was adopted. In this study, introduction of Public Involvement (PI) was also examined.

① Study of features of present condition, etc. ② Study of residents’ needs ③ Setting of problems and purposes of creation ④ Setting of targets for creation corresponding to actual conditions of the area ⑤ Establishment of the space creation plan ⑥ Study of maintenance control ⑦ Follow-up evaluation

4. Directions of policies for water/green space to be studied in the future

There are numerous financial problems in the creation of water/green space. Possible policies for solving these problems include following a route in which the creation of water/green space in sewerage facilities is positioned in higher level plans, together with positive cooperation with other projects and identification of the desires of residents.

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key words

Greening, Park, Hydrophilic, Scenery