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SUMMARY

I. Title

“ The study of effects on ecology and water quality of Jinwi Stream by development of Namsa-myeon Industrial Zone ”

II. Objectives and Importance

So far, Yongin-si is at enmity with Pyeonetaeck-si, because of the promotion of Namsa industrial city by Yongin-si. Yongin-si claimed that their property right was attacked by development limitation of Namsa-myeon, because which serves as the water supply source, and that construction of Namsa Industrial Zone is a necessary plan for protection of water supply, improvement of city environment, and revitalization of local economy by collectivization of straggling small-scale factories in Cheoin-gu. On the contrary, Pyeonetaeck-si sets against construction of Namsa Industrial Zone for contamination of water supply source of Pyeonetaeck-si, even through it is possible to ensure water supply security. Therefore, Yongin-si persuades Gyeonggi-do to adopt scientific rational countermeasures and to present proprieties of discharge in Resource Protection Area by forecasting of water quality when the Namsa industrial city is established. In this study, a scientific basis and politic alternative plan was proposed for discharge of Resource Protection Area and construction of Namsa Industrial Zone.

III. Research scope

For the discharge in Water Resource Protection Area, ecological security assessment on Jinwi Stream was performed, and wastewater discharge status on Jinwi Stream was evaluated by analyzing water quality and comprehensive assessment. Moreover, the forecasting method of water quality, when the Namsa Industrial Zone is established, was presented based on scientific basis of discharge in Water Resource Protection Area

. Results

Total 5 sampling points which distribute in the upstream-downstream of Jinwi Stream were selected, and water quality analysis and ecological assessment were performed. According to legal standard, no excess of heavy metals were detected. In all the cases, pH 7.1 was maintained on the average. Also, TP was 0.09~0.89 mg/L and TN was 1.1~6.8 mg/L. The values of SS, COD and BOD, were fluctuated depending on weather conditions, but all the values were far lower that legal standard.

. Application plan

In addition to water quality analysis and ecological assessment, population investigation, status and forecast of wastewater discharge and non-point sources will be performed. The forecast of water quality, when the Namsa Industrial Zone is established, will also be carried out.

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