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**Investigation of pollution state to consider water quality  
improvement plan of small urban streams in Gyeonggi Province  
area**

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Gyeonggi Province have a plan to introduce close-to-nature river construction methods for improvement of water quality of small urban stream in the province area. For this project, actual condition of water quality of streams located in Gyeonggi Province area must be estimated correctly. The purpose of this study therefore is to investigate the water quality of five small urban stream (Anseong-cheon, Wangsuk-cheon, Joryeong-cheon, Boka-cheon, Dongmak-cheon) in Gyeonggi Province area and to estimate the characteristics of water quality with land use of riparian. Main land uses of riparian of five streams investigated in this study were divided into 3 types. Main land use of first type was urban and farm land(Anseong-cheon, Wangsuk-cheon), it of second type was farm land(Joryeong-cheon, Boka-cheon), and it of third type was mountain(Dongmak-cheon). Based on the results, the streams of first type, Anseong-cheon and Wangsuk-cheon, showed higher concentration of pollutants than other streams. Also first type, showed high concentration for SS, BOD, T-N pollutants. This reason was judged because sewage waste water from urban area was directly inflowed without treated. Second type, Joryeong-cheon and Boka-cheon, showed high concentration for COD, T-P, T-N. Third type, Dongmak-cheon, showed low concentration for pollutants because pollutant source was few. In case of first type streams, since inflow of raw sewage waste water make decrease water quality of main streams, a counter plan is required to improve water quality. As a counter plan, direct purification systems, such as contact oxidation methods using porous concrete and gravel media and water-dwelling plants, are considered. And second type streams are judged to be useful establishment of a riparian buffer zone to prevent direct inflow of nutrient materials such as nitrogen and phosphorus.