

## Planning of the Groundwater Control Center in urban area

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The 21st century stands for the century of the water. The water problems are aggravated at various places in the world. Recently, besides groundwater pollution and drinking-water scarcity, severe problem of the rising groundwater table is emerging in urban areas of Japan. Shallow water table can be susceptible to amplify the ground shaking, to liquefy the subsurface layer during earthquake and to collapse the excavation walls at underground construction sites.

Osaka province where has gotten as a pivotal position of various industries in southwest Japan since beginning of the nineteenth century. The stretch of bay area suffered tremendous damages of land subsidence resulted from pumping-up a great volume of the groundwater. The government imposed legal controls on the industry-water pumping consequent upon the land subsidence as a matter of course. The measure could make the land subsidence terminate successfully and completely.

The groundwater table in Osaka, however, has continuously raised so far since the legal control and has ultimately reached to near ground surface. A lot of wells which had existed can not be found almost at the present time. Accordingly, it is very difficult to investigate the actual state of the underground water pollution which is feared strongly

It is necessary to hold the groundwater table to most reasonable level, to prevent the earthquake damages due to liquefaction. Since the pumping up can bring to circulate the groundwater, the pollution can diffuse broadly if the groundwater was polluted even partially. Therefore, investigations on the pollution of subsurface soil layer should be needed before the programmatic pumping up. We have organized interdisciplinary the research committee on the groundwater environment in urban area and on the feasibility and function of the Groundwater Control Center.