

Groundwater flow transition in the southwestern Tokyo Metropolitan Area after restriction of groundwater abstraction

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Regional groundwater flow located in the southwestern Tokyo Metropolitan Area (southwest region of Kanto plain) is previously called “Urawa groundwater flow (e.g., Kino, 1970)”. Groundwater in this region has been developed largely since 1950s, and huge amount of groundwater abstraction has induced land subsidence not only in upland area but lowland area in this region. Thus, the national government and local governments have restricted groundwater abstraction in stages. That is, history of groundwater development and restriction largely differ between the areas in this region.

Although the groundwater development has affected the regional groundwater flow, transition of the regional groundwater flow is not clarified. This study aims to clarify transition and present situation of the regional groundwater flow in this region based on the dataset of groundwater levels that has been monitored by Tokyo metropolitan government and Saitama prefectural government to contribute to sustainable groundwater management.

We present the characteristics of transition and present situation of the regional groundwater flow.

Keywords: groundwater level fluctuation, groundwater development, municipalities, restriction of groundwater abstraction, groundwater basin management, Tokyo Metropolitan Area