

## The groundwater flow system and hydrogeological structure in the northern foot area of Fuji volcano

# Takashi Uchiyama[1]; Satoshi Koshimizu[2]

[1] YIES; [2] Yamanashi Inst. Environ. Sci.

<http://www.yies.pref.yamanashi.jp/ear-sci/>

The researches have done from various points of view concerning the recharge in hydrological cycle and water balance in the groundwater basin, in which include the volcanic edifice and lake of the volcano foot. In Mt. Fuji, after sequence of the hydrological works of Yamamoto (1970;1995) and the hydrogeological research of Miyamoto (1968), as a pioneering work of Kanbara (1929), it reaches the point where the research regarding water quality and the isotope chemistry is done, research for groundwater flow system from this viewpoint has been carried out. In addition, for the development of volcano piedmont area, be able to advance development of groundwater resources, investigation of the recharge and storage and flow system etc to be done from 1950's, in the Fuji volcano piedmont area, the Kanto Agricultural administration Bureau Planned department (1964), Yamanashi Prefecture (1965;1974;1975) reported the results.

Recently, groundwater quality of Fuji volcano is gathering attention as new industry product and groundwater resources are being developed without the research and protection of groundwater resources and flow system. There is especially little comprehensively hydrogeological study on the groundwater flow system and hydrogeological structure in the north piedmont area.

Meanwhile, according to the development of research on volcanic disaster prevention and history of Fuji volcano, and subsurface geology of Mount Fuji piedmont area, geological materials have been accumulated. And our institute has collaborated with NIED on research, so as volcanic earthquakes and ground deformation, related to volcanic activities of Fuji volcano. We too have monitored a variation on groundwater. The history of volcanic activity on Mount Fuji, Tsuya (1968), Miyaji (1988), Uesugi et al (1992), detail previous work have been carried, but there are the many unresolved problems on volcanic activity associated with the origins of lake in the piedmont area and timing of the formation. Yamanashi Prefecture, the Institute of Environmental Sciences in recent years, collected drilling core samples from the lake bottom of Lake Yamanaka, Lake Kawaguchi, and the lakeside of Lake Motosu, and Oshino area in northeastern foot of Fuji volcano, due to aim to clarify these issues, and then given some of the results.

We illustrate the outline of groundwater flow system and hydrogeological structure in the northern piedmont area of Fuji volcano, concerning those above-mentioned results and fluctuation of groundwater level.