

## Groundwater flow regime controlled by geological structure of the composite volcano

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Major anion compositions of spring water affected by volcanic volatile matters show the clear difference in the north and east feet (sulfate-chloride type) and the southern foot (bicarbonate type) of Asama volcano, central Japan. Such regional difference of spring water chemistry indicates that the flowing direction of the groundwater which contacted the volcanic hydrogen chloride and sulfur dioxide gases in the deep part of younger stage volcanic construction is limited in the north and east direction. From these facts, it was estimated that groundwater flow regime in the younger construction of composite volcano like Asama volcano is controlled by collapse shape of the older one. A similar phenomenon has been reported in Iwate volcano, northeast Japan.