

## Healing process of the Nojima Fault zone after 1995 Hyogo-ken Nanbu earthquake

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Two faults of the Nojima Fault and the Higashiura Fault exist in the northeastern part of Awaji Island. Repeated activities of these faults have formed the topography of Awaji Island. In this study, we report the result of the Nojima water injection experiment of 2018 and the healing process of the Nojima Fault zone estimated from self-potential variations associated with water injection experiments. The water injection experiments were conducted 8 times between 1997 and 2018 in an 1800 m long borehole near the Nojima Fault, which is the surface earthquake fault of 1995 Hyogo-ken Nanbu earthquake, to investigate the recovery process of the fault zone after the large earthquake. We have estimated the time evolution of hydraulic parameters from self-potential variations associated with water injection. It is expected that hydraulic parameters will decrease as the healing process of the fault zone progresses. Though the Nojima Fault has repeatedly moved at a recurrence interval of ca. 2,000 years during the Late Quaternary, it is estimated from the experiment results that the healing process of the fault zone is progressing in several years after the earthquake shorter than the recurrence interval.

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