

Numerical modelling of seawater intrusion in Manukan Island's Aquifer.

ABSTRACT

A numerical model SEAWAT-2000 was developed to investigate the current seawater intrusion status in the low lying area of Manukan Island. SEAWAT-2000 output indicated that there is about 1.4% of freshwater and seawater mixing ratio at sea level in low lying area of Manukan Island illustrates the seawater intrusion problem. Upconing process simulated by SEAWAT-2000 showed the current status of seawater intrusion in Manukan Island is about 14.6% of freshwater and seawater mixing ratio at the beneath of pumping well (W6). The improved understanding of current seawater intrusion status is crucial for groundwater management by adjustments pumping schemes to protect groundwater.

Keyword: Groundwater; Seawater intrusion; SEAWAT-2000.