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van Beek, C.G.E.M.

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Groundwater serves many purposes. It is a source of public and private drinking water, it is utilized as an industrial feedstock and it is used in agriculture for irrigation and cattle watering. The abstraction of groundwater also serves many civil engineering purposes such as stabilization of structures, construction pit dewatering and remediation of polluted groundwater. Furthermore, groundwater is increasingly used for supply and storage of energy for the cooling and heating of buildings.

Many wells abstracting groundwater suffer from impaired performance as a result of clogging by mechanical or biogeochemical processes. This represents a significant economic loss due to volume reductions, cost of well rehabilitations or construction of new wells. This thesis provides a comprehensive description of the various causes and processes associated with well clogging in addition to describing methodologies for diagnosis and prevention.

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