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Groundwater dependent ecosystem pictorial conceptual model 'sandy plains'

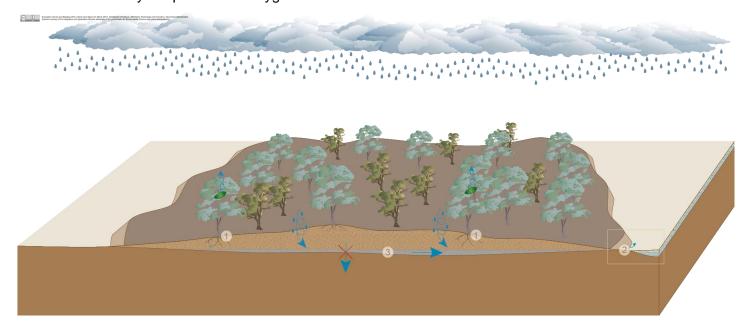
Version 1.5

Sandy plains

Tertiary to Quaternary loamy and sandy plains, composed of particles such as sand, can contain unconfined, unconsolidated sedimentary aquifers where groundwater is stored and transmitted through intergranular voids between particles.

Unconsolidated sedimentary aquifers in sandy plains may provide a range of ecosystems with water required to support their plant and animal communities, ecological processes and delivery of ecosystem services.

- Palustrine (e.g. swamps), lacustrine (e.g. lakes) and riverine (e.g. streams and rivers) wetlands located on the edge of sandy plains may depend on the surface expression of groundwater from these unconsolidated sedimentary aquifers.
- Terrestrial vegetation located on sandy plains may depend on the sub-surface presence of groundwater that is within their rooting zone.
- Aquifers in permeable sandy plains may also support ecosystems within the aquifer itself, which sometimes are indicated by the presence of stygofauna.



Geology legend



Sand



Low permeability rock



Groundwater hydrology legend



Sand (unsaturated)



Sand (saturated with groundwater)



Low permeability rock (unsaturated)



Infiltration and percolation

Rain infiltrates through the soil to recharge the aquifer below



Groundwater table



Direction of groundwater movement



Spring

A hydrogeological feature by which groundwater discharges naturally to the land surface or cave

Flora legend



Eucalyptus spp. including E. intertexta



Evapotranspiration

Process whereby plants draw water up through their roots and move it out through their leaf pores



Eucalyptus spp.

including E. melanophloia (silver-leaved ironbark) that are unlikely to access groundwater through their rooting

Groundwater dependent ecosystem legend



Terrestrial GDEs

Regional eoosystems and riverine wetlands may depend on the subsurface presence of groundwater within the capillary zone for some or all of their water requirements.



Subterranean GDEs

Aquifer and cave subternanean wetlands may depend on the subternanean presence or expression of groundwater for some or all of their water requirements.



Surface expression GDEs

Lacustrine wetlands, palustrine wetlands and riverine water bodies may depend on the surface expression of groundwater for some or all of their water requirements.

Citation

Queensland Government (2015) *Groundwater dependent ecosystem pictorial conceptual model 'sandy plains': version 1.5*, Queensland Government, Brisbane.