



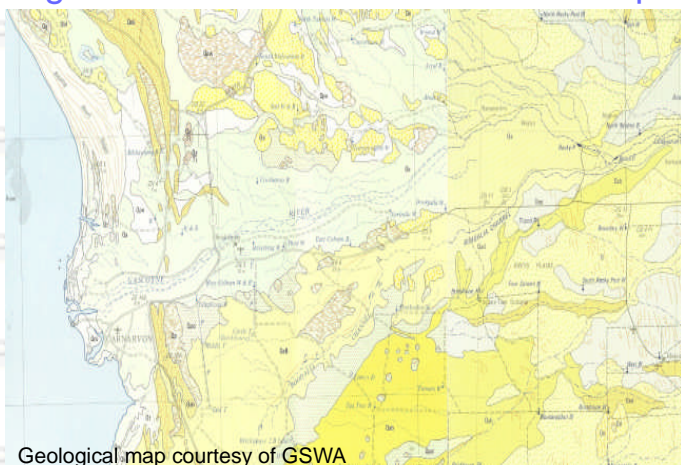
PROJECTS

HYDROGEOLOGY

Hydro22

Conceptual Hydrogeological Model, Gascoyne River Floodplain Aquifer Model, Department of Water

DoW has commissioned Cymod Systems to undertake the development of an updated numerical model of the Gascoyne River Aquifer Floodplain (GASFAMs), which supplies potable water to the town of Carnarvon and irrigation water to commercial banana plantations.



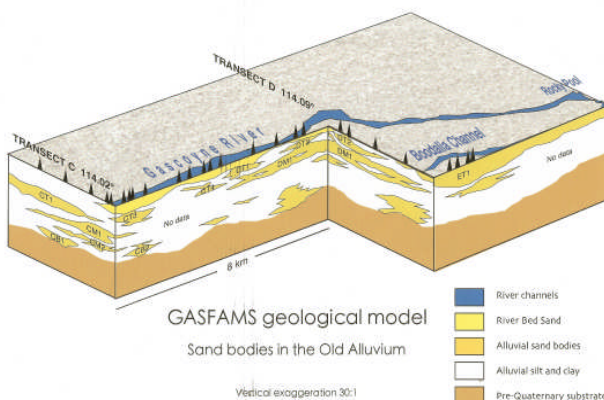
Geological map courtesy of GSWA

HydroSolutions is working with Cymod to develop a conceptual hydrogeological model as the basis for the numerical model.

Fresh unconfined groundwater is present with the River Bed Sand (RBS) aquifer, which is the bedload of the current river course. Semi-confined or leaky fresh groundwater is present within the underlying Older Alluvial Aquifer (OAA), representing a braided river floodplain depositional environment.

The aquifer system is recharged by rainfall and riverflow/ flood events at approximately three yearly intervals.

Over abstraction has previously resulted in saline up-coning and intrusion near the coast and laterally along the river. The model will be used to assess the sustainable groundwater resource, as a management tool for existing licensed abstractions, and to assess the potential for new in-land groundwater resources.



GASFAMS geological model

Sand bodies in the Old Alluvium

Vertical exaggeration 30:1

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