



What is Surface Water and How Much is There?

What is classified as Surface Water?

Surface water is a term used to describe water in a watercourse, lake or wetland, and any includes water flowing over or lying on land after having precipitated naturally, or after having risen to the surface naturally from underground (groundwater).

There are three types of surface water; permanent (perennial), semi-permanent (ephemeral) and man-made. Permanent surface waters are present throughout the year. They are usually in the form of waterholes, lagoons, springs and swamps. At times when there is little or no rain, the water level is maintained by the groundwater table.



Girraween Lagoon – Perennial



Ewart Lagoon- Ephemeral



Katherine River – Perennial River

Ephemeral water bodies are those that only hold water for part of the year. Surface water can also be held in man-made structures such as river dams or rain-catching dams.

Why do we need Surface Water?

The majority of surface water in the Northern Territory is found in the top end. Darwin and Katherine extract their water supplies from surface waters. Katherine draws water from the Katherine River while most of Darwin's water is supplied from Darwin River Dam.



Abandoned Sand Mining Pits, Darwin- Man Made Wetlands



Rapid Creek - Weir used to direct flow of water



Darwin River Dam- Darwin Drinking Water Supply

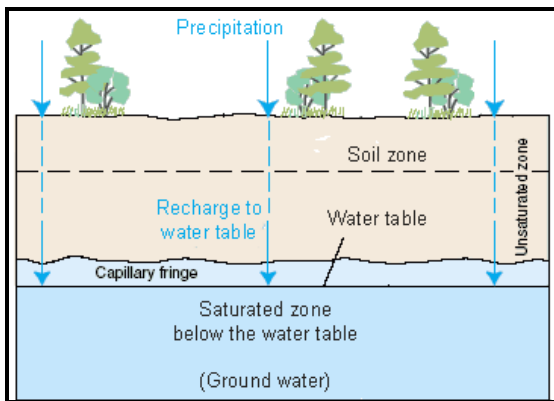
Surface water resources in Central Australia are limited and are difficult to use commercially. However, surface water is used to supplement pastoral water supplies (eg. small waterholes). The more arid the region, the more likely a community will obtain its water from underground sources. The water supply for Alice Springs for instance, is all from bores (the Amadeus Basin).

Surface water is vital to the survival of many of the Territory's unique ecosystems including rivers, billabongs, lakes and wetlands and is vital to human existence in the Territory.

The use of rivers and lakes for fishing, swimming and other recreational activities is intrinsically linked with the Territory lifestyle and is popular among locals and the visitors alike.

How Does Surface Water Interact with Groundwater?

The source of groundwater (recharge) is through precipitation or surface water that percolates downward. Between 5% to 50% of annual precipitation results in groundwater recharge- this however, is dependent on climate, land use, soil type, geology and many other factors. In some areas, streams literally recharge the aquifer through stream bed infiltration. Left untouched, groundwater naturally arrives at a balance, discharging and recharging depending on hydrologic conditions.



How Groundwater Interacts with Surface Water?

One of the most commonly used forms of groundwater comes from unconfined shallow water table aquifers. These aquifers are major sources of drinking and irrigation water. They also interact closely with streams, sometimes flowing (discharging) water into a stream or lake and sometimes receiving (gaining) water from the stream or lake. Springs, Creeks, Rivers which are fed by groundwater in dryer months, and the associated plants and animals which rely these, are commonly referred to as as Groundwater Dependant Ecosystems.

Further Information:

Water Resources

Department of Natural Resources, Environment, the Arts and Sport

Palmerston

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Katherine

32 Giles Street, PMB123, Katherine NT 0852, Ph: 8973 8831

Alice Springs

1st Floor Alice Plaza, Todd Mall, PO Box 1120 Alice Springs NT 0871, Ph: 8951 9215

Internet Site: www.nt.gov.au/nretas/water/manage.html