



## What is Surface Water?

Surface Water is a term used to describe water on the earth's surface, including rivers, creeks and wetlands.

Most surface water comes from rainfall (precipitation) runoff from the surrounding land area (catchment). Of course not all runoff ends up in rivers, some evaporates, some is used by vegetation and part of it soaks into the ground recharging our groundwater systems, some of which can then seep back into the riverbeds.

At a certain depth below the land surface, called the water table the ground becomes saturated with water. If a river happens to cut into this saturated layer, then water will seep out of the ground into the river. Groundwater seepage is most commonly seen in the form of springs eg. Berry Springs, Katherine Hot Springs and Bitter Springs.

### There are three types of surface water:

**Permanent (perennial)** - permanent surface waters are present throughout the year. They are usually in the form of rivers, lakes, springs and swamps. At times when there is little or no rain, the water level is maintained by groundwater contributions.

**Semi-permanent (ephemeral)** - Semi-permanent water bodies are those that only hold water for part of the year. These are usually small creeks, lagoons, waterholes, or low lying areas in the arid zone.

**Man-made** - surface water can also be held in man-made structures ranging from lakes, dams and turkey nests to artificial swamps and sewage treatment ponds.

### Surface Water in the NT

The majority of surface water in the Northern Territory is found in the Top End. This reflects the tropical climate that can bring vast quantities of rain and high humidity. The seasons (Dry and Wet) cause large variations in surface flow while creeks record little or no flow during the dry season and flows up to ten times the monthly average may be recorded during the wet season.

Surface waters in the Arid Zone are minimal as a result of much lower annual rainfall. Waterways (clay pans, salt pans, rivers and flood outs) are dry for the vast majority of time. Infrequent but sometimes intense rainfall events cause arid zone streams to flow for short periods.

Surface waters have been essential not only to humans, but to all life on earth, ever since life began. Plants and animals grow and congregate around waterways simply because water is so essential to all life. It might seem that rivers happen to run through many cities in the world, but it is not that the rivers go through the city, but rather that the city was built and grew around the river.



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