



Minimum Separation Distances From Surface Water and Groundwater

This fact sheet has been produced to assist stakeholders in understanding the requirements for minimum separation distances between sources of pollution and a water resource.

Minimum separation distances are needed to reduce the risk of contamination to a water resource by pollutants such as chemicals, toxic compounds or effluent.

In addition, specified separation distances between bores may exist within declared water management plan areas.

Minimum Separation Distances

When drilling or constructing a bore within a Water Control District, Bore Construction Permit holders must uphold the following condition from the Terms and Conditions of the Permit, that is: *Separation distance from any obvious pollution sources such as; the closest part of any septic tank effluent trench, fertiliser storage, chemical storage, packing sheds, plant workshops, and animal enclosures must be a minimum of 100m.*

If you are drilling outside a Water Control District, septic and standard pollution separation distances still apply.

Before drilling a bore, important points that applicants must plan for are;

- Location of effluent.
- Location of storage areas of potential pollutants.
- Location and condition of equipment that may cause pollution e.g. diesel generators and pumps. Equipment should be kept in excellent condition and maintained on a

regular basis, to reduce the potential for pollution.

Separation distances between effluent sources and water resources are important for environmental health but also human health. The Environmental Health - Code of Practice for Small On-Site Sewage and Sullage Treatment Systems and the Disposal or Reuse of Sewage Effluent November 1996 highlights minimum separation distances for a number of water resources as listed in Table 1.

Table 1- Separation Distances for Sewage and Sullage Treatment Systems

Site feature	Separation distance (m) Upslope from site	Separation distance (m) Down-slope from site
Bore or Well	100	100
Lake, swamp, etc	50	30
Watercourse	50	30
Watercourse (from which water supplies extracted)	200	100
Water supply reservoir	200	100

It is important that you check with the Department of Health and Families, Environmental Health, and the Department of Natural Resources, Environment, The Arts and Sport during the planning stage to ensure that you meet with Northern Territory Departmental guidelines.

Storage of Chemicals or Other Potential Contaminants

We should not rely on separation distance alone; a water resource should also be

protected through sound design and management of storage areas of potential contaminants. Australian Standards (some of which are listed below) have been developed to help the community with suitable storage measures.

Flammable and Combustible Liquids (AS1940-2004, Section 2.2.5)

For minor storage on open land (greater than 2 hectares), flammable and combustible liquids shall be kept at least one metre away from any boundary, workshop, dwelling or protected place, body of water, watercourse or environmentally sensitive area (Section 2.2.5 *The storage and handling of flammable and combustible liquids*)

Leaks and Spills (AS1940-2004, Section 4.4.3)

Provision shall be made to contain any leaks or spillages, and to prevent them from contaminating the surrounding soil or entering any watercourse or water drainage system.

- The capacity of the spillage containment compound shall be at least 100% of the volume of the largest package plus 25% of the storage capacity up to 10 000 L, together with 10% of the storage capacity between 10 000 L and 100 000 L, and 5% above 100 000 L;
- Where more than one storage is connected to a common compound, drainage tank or pit, the capacity of the compound shall be equal to the largest compound required for any one store, plus 25% of the capacity of the compounds required for the other stores connected to it. (Section 4.4.3 *Minor storage on open land*)

Agricultural and Veterinary Chemicals (AS2507-1998)

A separation distance of at least five metres is required from any water source and spillage containment and storage requirements include;

- a) The floor or base of the storage area shall be impermeable to the chemicals being stored.
- b) Where there is a possibility of soil or water contamination from the goods being stored, a method of containing any leaks or spills

within the storage area shall be provided. This may be achieved by using a bund or a sloping floor. NOTE: Portable Bunding may be acceptable; and

- c) The storage area should not be located in an area that is prone to flooding. In any case, it should be located above the highest recorded flood level.

Photo 1- Unsatisfactory Fuel Storage



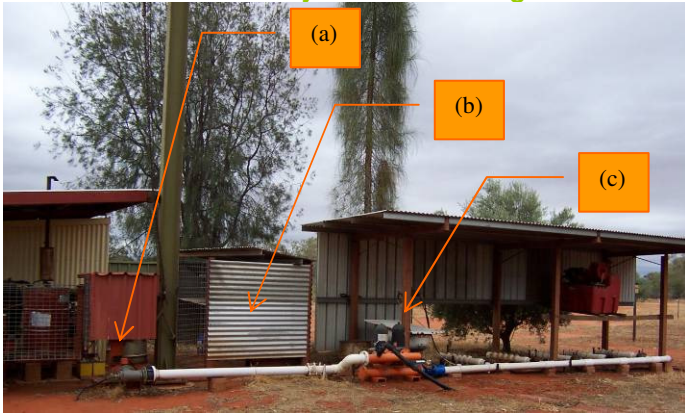
The fuel storage tanks as shown in Photo 1 are at the required separation distance of one metre from the waterway according to Australian Standard AS1940-2004. Unfortunately, the fuel storage tanks do not comply due to unsuitable spillage containment as per Australian Standard AS1940-2004 Section 4.4.3.

Photo 2 – Satisfactory Fuel Storage



Photo 2 shows a satisfactory setup which provides a minimum separation distance of one metre between the bore and the fuel storage tank. It also has a suitable spillage containment compound and meets Australian Standards and Departmental Guidelines as impact of pollution to the water source is minimised.

Photo 3 – Unsatisfactory chemical storage



*The bore head (a) and water distribution set-up in **Photo 3** presents a risk to environmental and human health due to unsatisfactory chemical storage (b). The separation distance is much less than the minimum standard of five metres for chemicals and there is no suitable spillage containment for leaks or spills in the storage shed (b) or chemical and/or fertiliser mixing facility (c).*

The Department of Natural Resources, Environment, The Arts and Sport (NRETAS) is responsible for the monitoring and prevention of groundwater and surface water pollution. The Department of Health and Families, Environmental Health is responsible for approving the required separation distances for waste. For further info visit: http://www.health.nt.gov.au/Environmental_Health/

Further Information:

Water Resources Branch

Department of Natural Resources,
Environment, the Arts and Sport

Palmerston

3rd Floor Goyder Building, PO Box 496
Palmerston NT 0831 Ph: 8999 3678

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

Email Water.nretas@nt.gov.au

(South)

Wateradvisorysouth.nreta@nt.gov.au

Web: www.nt.gov.au/nretas/water