

<b>Date:</b>	Monday 16 August 2010	<b>Issue number:</b>	2010-4
<b>Issue(s):</b>	<b>Connection of pumped water systems to Power and Water Corporation water mains and provision of onsite storage break tanks</b>		
<b>Audience:</b>	Proponents, Project Managers, Designers, Plumbers, Construction Supervisors, Constructors, Property and Business Building Owners		

## Connection of pumped water systems to Power and Water Corporation water mains

### Introduction

Connections to water services that include pumping systems must be constructed to protect the quality and continuity of supply of Power and Water Corporation's (Power and Water) water distribution system as well as efficiently utilise its resources.

The steady increase in developments requiring pumping for both domestic and fire systems puts increasing demands on Power and Water's infrastructure.

### Purpose

This document defines the method and arrangement of customer connections to Power and Water mains where the connected water service includes a pumping system.

The purpose of this Customer Information handout is to ensure systems are designed and constructed in a way that they:

- Protect the Power and Water mains system from potential surge and water hammer risks;
- Ensure that the capacity of the Power and Water mains system is not exceeded;
- Minimise the risks of backflow events within the Power and Water mains system;
- Reduce impact on other customers; and
- Protect existing Power and Water customers from the risk of reduced pressure in the water supply system.

### Guidelines

- No direct pumping from the mains will be permitted.
- All service connections to Power and Water mains which involve pumping must be provided with onsite storage incorporating a registered air gap (ie break tank).

- The allowable connection size and/or flow from Power and Water mains into an onsite storage tank or 'grandfathered' pump system may be restricted at Power and Water's discretion.
- No additional valving or manipulation of valving will be provided within the Power and Water's water supply system to limit or reduce capacity of onsite storage requirements.

## Applicability

This Customer Information handout covers service connections to Power and Water mains where the facility downstream of the service connection includes one or more of the following:

- A pump system for boosting fire hydrant and/or hose-reel systems
- A pump system for boosting fire sprinkler systems
- A pump system for domestic water supply
- A pump system for irrigation or related purposes
- Onsite pumping for any other purpose which results in suction from the Power and Water water supply system.

Where any of the above pump systems are installed on a water service connected to the Power and Water water supply and unless exempted, an approved storage tank with a complying air break between the pump system and the Power and Water water supply shall be installed.

## Exemptions

The following exemptions to this Customer Information handout are allowed:

- Pump systems for domestic or industrial purposes where the individual or combined pump capacity does not exceed 1 litre/second and the use is intermittent and irregular (eg jacking pump to maintain pressure in a sprinkler system);
- Recirculating hot water systems associated with a mains pressure hot water service for domestic purposes; and
- Emergency response by the Northern Territory Fire and Rescue Service (NTFRS).

## New Infrastructure

All applications for services that involve pumped systems must install onsite storage incorporating a registered air gap (ie break tank).

**No direct pumping from the mains will be permitted.**

Normal development processes apply for new water connections.

## Existing Infrastructure

Connections including direct pumping from the mains in existence at 1 September 2010 shall be 'grandfathered' until either:

- 31 December 2018 at which time upgrade will be required by the property owner;
- The service connection is upgraded at the property owner's request;
- The property is rezoned;
- The area of the property changes due to subdivision or consolidation;
- Building or land development necessitating Development Consent Authority approval;
- Building or land development approved under the NT Planning Scheme;
- Extension or modification of existing systems resulting in an increase of 10 per cent or more to maximum flow; or
- There is a detrimental effect to other Power and Water customers caused by the pumping system.

For existing connections where Power and Water has determined it is not feasible or practical to install a suitably-sized break tank, the existing connection to a pumped system will be required to be upgraded. Additionally the water supply system may be required to be upgraded or extended to account for any adverse affects of the direct pumping system.