Summary of Public Pump Operation criteria

DISPOSAL	To public channel and drainage network (subject to guidelines)
OPERATION	**Summer/In season:** 60 days (subject to meeting disposal guidelines) **Winter/Spring:** 60 days (subject to meeting disposal guidelines)
COST-SHARING	**Capital cost:** 100% Salinity Program (investigation and construction) **Annual costs:** 41.5% all irrigators in Irrigation Area 41.5% direct beneficiaries 17% Local Government
LOCAL DIRECT BENEFICIARIES RATED	50% area fee based on level of approximate service 50% water used (to encourage and reward efficient water use)

For further information contact:

Department of Primary Industries,
TATURA (03) 5833 5222

Groundwater Extension Officers can provide advice on locating groundwater through the Farm Exploratory Drilling Scheme (FEDS), the management of groundwater and its use for irrigated agriculture, domestic and stock drinking water (eg. Groundwater quality impacts on productivity and stock health).

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Ed works as a Grant Officer assisting with capital grants and upgrades of shallow spear-point systems in the Shepparton Irrigation Region. He also provides advice on the Farm Exploratory Drilling Scheme (FEDS) and the level of financial support available to assist in pump and system upgrades.

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For more information please visit the DPI website at www.dpi.vic.gov.au or the DSE website at www.dse.vic.gov.au or call the Customer Service Centre on 136 186.

GOULBURN BROKEN CATCHMENT MANAGEMENT AUTHORITY

GOULBURN-MURRAY WATER

action Salinity & Water AUSTRALIA

Public Pump Operation Criteria

For the Shepparton Irrigation Region

Victoria The Place To Be

Department of Sustainability and Environment

Department of Primary Industries

Why do we need Public Groundwater Pumps?

The sub-surface drainage program of the Goulburn-Broken Regional Catchment Strategy aims to protect 200,000 ha of agricultural land from salinity over the next 25 years by a combination of public and private groundwater pumps, tile drainage and managed salt disposal (refer to Figure 1). Of this 200,000 ha, it is planned to protect 85,000ha by installing a large network of public groundwater pumps.

Public Pumps are installed where:

- Private groundwater pumping is considered unsuitable;
- There is sufficient landowner support;
- The area is subject to high watertables

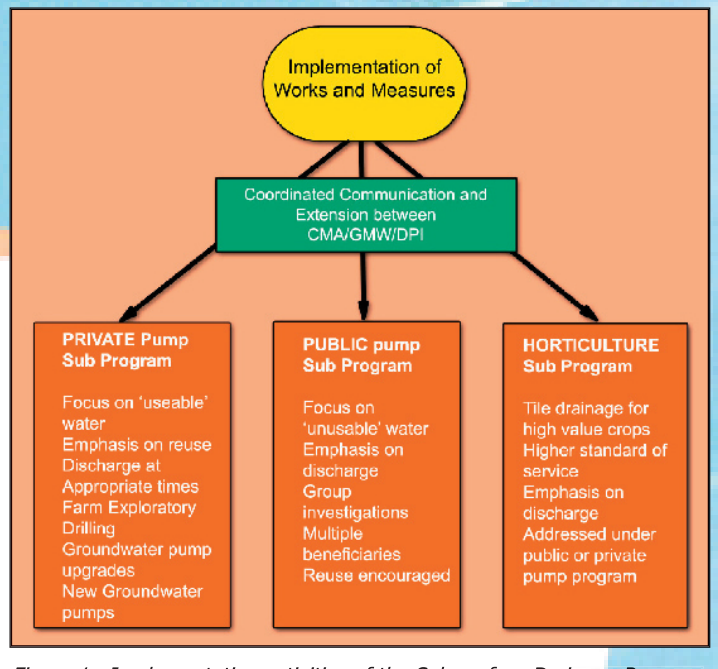

Figure 1. Implementation activities of the Sub-surface Drainage Program

Public Pump Operation

To achieve salinity control in areas with higher groundwater salinity (nominally between 3,500 – 10,000 EC), a public salinity control pump should be considered. Public pumps dispose of the moderately to highly saline groundwater in the Goulburn-Murray Water channel and drainage network. Groundwater is diluted in the channel or drain and largely re-used by irrigators downstream from the pump site (during summer disposal period). It is important to note that disposal guidelines are in place to ensure downstream salinities are kept within agreed limits.

- Public pumps generally outfall into G-MW channel and surface drainage systems
- Operate on average 60 days summer & 60 days winter/spring

Determining Level of Service

In accordance with the agreed cost sharing principles, the area directly benefiting from public salinity control pumps is determined by conducting a two month pumping test. Monitoring bore levels during the test shows the area where groundwater levels fall due to the pumping. This assists in determining average level of service for an individual property (refer to Figure 2).

The area within each Service Level is assigned a relative benefit and the total of the benefits are then averaged over the whole property. The direct beneficiaries charges are calculated so that half of the cost is based on the total area of the properties served and half on the channel water used. This is to encourage efficient water use and utilisation of other sources of irrigation water such as drainage reuse and groundwater.

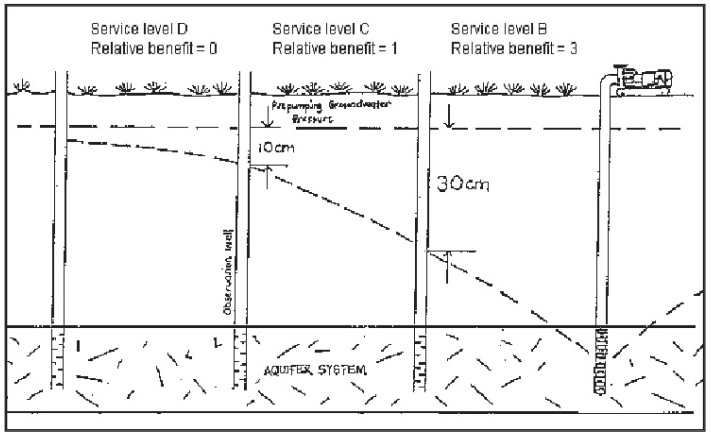

Figure 2. Determining level of service (not to scale)

Salt Disposal Entitlements

Our capacity to export salt out of the catchment is determined by the Salt Disposal Entitlements (SDEs) allocated to the region for implementation of activities that have an impact on River Murray salinity. Public pumps are one such activity.

- SDEs are measured in EC units and refer to increased River Murray salinity levels at Morgan in South Australia (where water is piped to Adelaide)

- SDEs are earned through Victoria's financial contribution to salt interception schemes (downstream works which intercept saline groundwater before it reaches the River) and other measures such as improving irrigation management, ceasing irrigation in high salinity risk areas and reducing wastewater disposal to the River)