



Daley's Water Service Pty Ltd
Specialising in
Water & Energy Efficiency

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Planning an irrigation system

Asses the resources:

- Search for any legal obligations such as water allocations, pumping license or remnant vegetation.
- Check for any manmade structures such as power lines, buildings or dams.
- Conduct a soil survey to identify the structure at multiple depths.
- Test the soil for salinity, acidity, sodicity and compaction that may affect the crop yield.
- Map the topography of the area.
- Test the water supply for sustainable extraction rate.
- Test the quality of the water.

Calculate the system water application requirements:

- Estimate the crop water requirement for each stage of growth.
- Confirm the total irrigated area.
- Calculate the peak evaporation loss for each month.
- Calculate the effective rainfall for each month. (effective rainfall should be events over 3mm and under 50mm generally)
- Calculate the system utilisation. (desired hours of operation)

Estimate the return on investment:

- Value of the crop.
- Pumping cost per ML of water applied.
- Cost of water.
- Energy use in other parts within the system.
- Maintenance cost of equipment per ML of water applied.
- Labour cost per ML of water applied.
- Leasing or interest expenses.
- Taxation reductions.

Capital and other outlay:

- Earthworks, including drainage and dam storages.
- Survey cost.
- Consultant cost
- Electricity supply cost.
- Pumping system.
- Filtration unit.
- Mainline and delivery pipes.
- Irrigation emitter. (Solid Set, Drip or micro sprinklers.)
- Automation.
- Fertigation equipment.
- Irrigation scheduling tools.
- Software.
- Insurance.

Installation:

- Is the system to be assembled by professional personnel?
- Site risk assessment to be carried out.
- Relevant insurance & licensing.

Commissioning & Handover:

- Test the pressures and flows through the system.
- Conduct a system performance test.
- Supply Keys, warranty details and operating manuals.
- Advise the operator of the insurance liability status. (dealer or purchaser's responsibility)

Maintenance & training:

- Advise all maintenance procedures and schedules.
- Training in the operation of the equipment.

Possible extras offered:

- Introduction to SID (scheduling irrigation diary)
- Seasonal irrigation scheduling service.
- Annual system audit.