



Hydrozoning

What is hydrozoning?

Hydrozoning is the practice of establishing separate areas or zones to receive different amounts of irrigation water.

One form of hydrozoning is the landscape design practice of grouping together plants with similar water, soil and microclimate requirements to conserve water by improving water efficiency.

A second form is where dedicated sports grounds, recreational ovals, parks and verges can be classified into different zones with varying amounts of irrigation depending on what they are used for and how often they are used.

How hydrozoning works

Hydrozones work in two ways:

- For garden beds and bushland areas, drought tolerant plants are separated from those which have a higher water requirement. Some plants may need watering for 20 minutes, while another group of plants may need only ten minutes.

Plants that tolerate more heat and wind might be planted nearer the street, while more sensitive plants might be planted in shade, under roof overhangs or in fenced areas. High water-demand plants should be kept to a minimum.

- Larger turf areas such as dedicated sports grounds, recreational ovals, parks and verges can be classified into different zones according to their water usage.

For example, a high-use, dedicated sports field could be classified as Zone 1, because the turf needs more water to grow rapidly and resist the wear and tear of heavy use. A less frequently used passive park may be classified Zone 2 or 3. Hydrozone zone 1 would have a higher water allocation compared to Zone 2 and Zone 3 or 4 and so on.

Also, a site classified as a priority reserve with both very high-use areas and low-use areas receiving the same application of water could be split into at least two hydrozones: zone 1 (wetter) for high-use turf and zone 2, 3 or 4 (drier) for the low-use areas.

In this way irrigation scheduling decisions can be made at a micro level (for example, each valve) rather than a macro level (whole complex gets the same watering run time) and so conserve water.

New irrigation systems are designed to assist in hydrozoning by allowing more flexibility in irrigating specific areas.

Hydrozoning also provides a framework for making more major cutbacks in water usage to meet allocation limits or for contingencies during dry times in the short term, and provide a system of irrigation offsets balancing areas deemed to need more water in the longer term.

Water conservation can be achieved by moving more areas of turf into the medium and low hydrozones or by temporarily discontinuing irrigation.

Why hydrozoning is important?

Climate change and predicted reduced rainfall present significant challenges to the management of water resources in Western Australia. This coupled with depleting aquifer levels is leading councils to look at hydrozoning as a way to conserve water.

A key priority action identified in the State Water Plan 2007 is:

- to review the value and use of water for public open spaces, collaboratively with local government, parks, leisure and recreational sectors, to support their enjoyment and sustainable development.

Faced with hotter, drier climates, and reduced water availability, we need to become smarter water users when providing high quality outdoor recreational facilities.

Local government uses about four percent of all water in the state and around 10% or 48 gegalitres per year of total groundwater usage in the Perth region for irrigating public open spaces. Hydrozoning passive use areas around reserves can save more than 20% of water allocations.

Local governments implementing hydrozones are showing leadership in setting an example for efficient water use and minimum wastage of water in working with the Department of Water as part of water conservation plans.

Hydrozoning is an important tool to be used in developing effective water conservation plans, by promoting water conservation and irrigation efficiency and ensuring that groundwater allocation targets can be met.

By developing water conservation plans based on hydrozoning and adopting other important initiatives such as metering, our attractive outdoor lifestyle and high quality recreational facilities will be maintained.