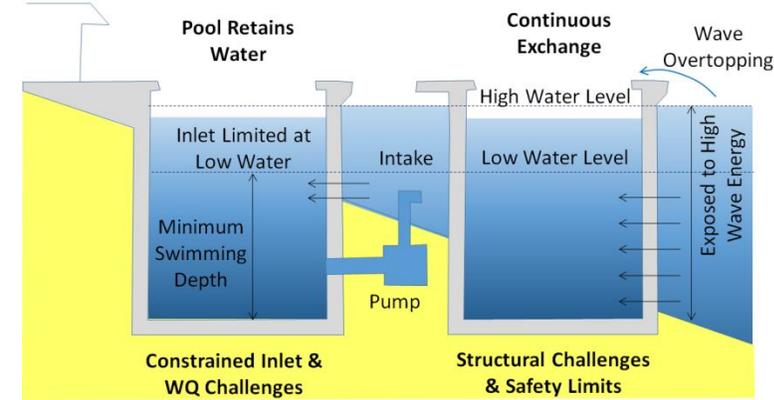# Challenges for Ocean Pools in SW Australia

Despite repeated calls for their construction, there are no man-made ocean pools in southwest Australia. This is due to several physical processes prevalent in the region.

The most significant challenge is provided by small tides and their seasonal variation, limiting both tidal and wave-driven flushing. Poor water quality can occur when levels are low, which occurs from spring to autumn. Achieving swimming depth with low water conditions requires the pool to be in deep water, or to be flushed with a seawater pumping system. Intakes need to be placed carefully to limit choking with sediment or seagrass.

Winter conditions are also crucial for delivery of both sand and seagrass fragments. Large volumes can be dropped into a pool in a short time. Only a very small amount of rotting seagrass can cause poor water quality.

Local rock provides minor constraint to building an ocean pool. Limestone typical in the southwest fractures, is leaky and erodes. However, site selection and pool design (e.g. concrete lining), can address these issues effectively.

Thomson Bay 'Pool' Rottnest

The challenges associated with ocean pools in southwest Australia have been demonstrated by several historic attempts which were tried and abandoned.

Bunbury Baths 1930s

1990s

Man-made ocean pools were considered impractical by the Public Works Department in the 1980s.

Since then, improving technology has increased the feasibility of ocean pools. New corrosion resistant materials are available. Important lessons have been learnt about intake riser design to limit sedimentation. Improved techniques for water quality and management of nutrient-rich sediments have been developed by the aquaculture industry.

Alternatives to pumped ocean pools may also be considered. Sloping pools are used in Queensland to allow for varying tides. Jetty-enclosed areas such as South Fremantle historic baths or the existing enclosure at Busselton do not require seawater pumping. Natural rock pools can also be enhanced, suitable for seasonal use.

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