**WAter technology needs**

**Challenge No 1. Supporting development in areas of shallow groundwater**

- Large areas to the south of Perth have shallow depth to groundwater and drain to environmentally valuable wetlands and estuaries
- Traditional development uses subsoil drains and imported sand fill to allow development over shallow groundwater
- Groundwater often has elevated nutrient concentrations and there are concerns that urban development mobilises nutrients
- We are learning that the nutrient are typically complex organic forms

**Monitoring technology**

- Affordable auto-samplers and telemetry systems (spatial and temporal resolution)
- Water quality monitoring for organic nutrients (CDOM fluoro, proxies…)
- Groundwater and baseflow monitoring

**Treatment technology**

- Passive treatment trains for organic nutrients
- Subsoil drainage treatment

**Innovative built form**

- Foundations, buildings and infrastructure that cope with shallow groundwater
**WAtor technology needs**

**Challenge No 2. Securing water for Public Open Space**

- Perth has historically relied on groundwater to irrigate Public Open Space
- Large areas to the north of Perth have insufficient groundwater to meet irrigation needs

**Irrigation efficiency technology**
- Instrumentation and control
- Low water use landscaping (especially turf)
- Soil amendment
- Irrigation methods (drippers, sprinklers,...)

**Local water recycling technology**
- Highly seasonal demand requires winter disposal or storage

**Managed aquifer recharge**
- Instrumentation, monitoring and control (where does the water go?)
- Clogging (suspended solids, microbial and geochemical clogging)