

Indoor Water Efficiency For Institution of Higher Learning

Presented by

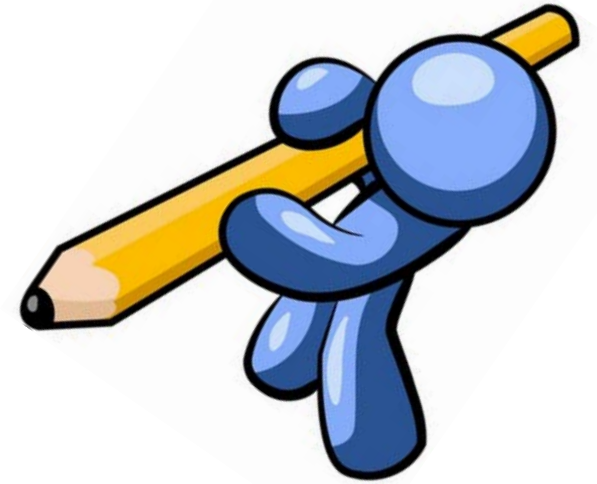
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Introduction



Focus On Reducing On Potable Water Domestic Water Consumption



- Experienced in indoor water conservation measures
- Technical advisor for multinational OEM manufacturer whom develop WELS Australia/NZ
- Spearhead development of SPWELS



Considerations

- Is WE alone effective?
- Has it take into local condition, process or practice which may not warrant lesser water use ?
- User expectation
- Highly subsidize tariff not in favour
- Demand driven (vs. demand management)
- Priorities
- Add Value



WE : Blanketed Effort For Water Saving Practices ?



WHY ONE-SIZE-FITS-ALL DOESN'T WORK.

Local Conditions

- Design and built
- Information/ data
- Prevailing practices
- Priorities
- Add Value



Existing Design And Built

- Pumps and centre gravity
- Plumbing lines and piping fixtures
- Operating conditions and procedures

Water Consumption Data

- Hardly any local study
- Benchmark ???
- Measures
- Tools
- Approach

Functional/Purpose

- Requirements
- Benchmark ???
- Hardly any local study

ATTITUDES



Attitudes

- Awareness – user and management perspective
- Priority
- Determination
- Subsidize mentality



Awareness & Roles (Users)

- Non-paying party
- Not responsible for the facilities up keeping
- No knowledge what he/she is consuming
- High incident of vandalism

Awareness & Roles (Management)

- Inherent low or non-aligned priorities and ignorance
- Lack of incentives
- Purely upkeep the facilities
- Low consideration to the make and construction
- Little regard to cost of water or water conservation effort
- No control over water cost
- Demand driven

Dollars and Sense



Zeroing On The Potential Areas Of Significant Saving



Potential Areas Of Significant Saving

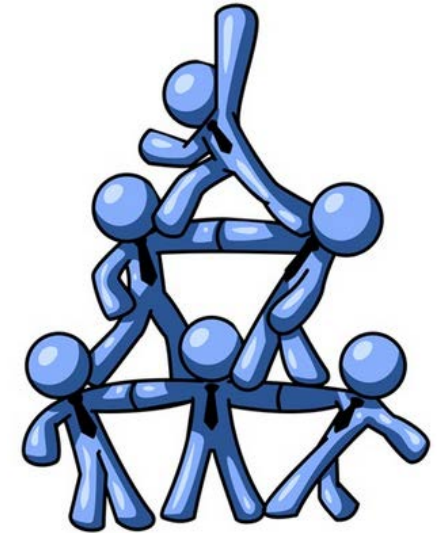
- Leak Detection & Rectification
- Metering
- Usage Profile
- Awareness Programme
- Defining Baselines(benchmarking)
- Users Participation



Add Value To Existing Building

Add Values

- Ensuring uniform supply
- Even out peak demand
- Improve plumbing line by reducing leak - reduction to uneven flow or demand
- Reduce infrastructure & operation time
- Reduce carbon footprint



Joint forces in new battle to save water





*Thank
You!*