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GREEN PAPER SERIES 2017 SUMMARY
Full report available on June 15 at www.ioes.ucla.edu/project/greenpapers

Technologies for Improving Water Resilience in Office Buildings

Whether you own or rent, have a single building or a large campus, this overview paper can provide some insight into the types of technologies that are readily available for your use and an estimate of what it may cost to adopt them. They will help your company reduce its environmental footprint while reducing its utility bill.

TYPES OF WATER TECHNOLOGIES

INCREASED EFFICIENCY

Reducing the amount of water used is the low hanging fruit. Low flow fixtures have been available for decades and can dramatically reduce water usage in company bathrooms and kitchens. More recent developments have produced smart meters which automate data collection and provide real-time water use accounting. This allows companies to detect leaks nearly immediately as well as identify at more actionable scale which units or rooms are using the most water.

In Practice

- Efficient fixtures
- Drip Irrigation
- Landscaping Sensors
- Cooling Towers
- Smart Meters

REUSE

Reuse technologies on the other hand allow for a second purpose for previously used water. Depending on the original source of the water different types of treatment are required to remove contaminants and prepare the water for a second use, typically irrigation. Reuse can also serve to recharge the aquafer with natural filtration and treatment provided by soils, particularly in wetlands.

In Practice

- Greywater Technologies (diversion, physical & biological treatment)
- Constructed Wetlands
- Bioswales
- Rainwater Harvest

Cooling towers are a technology solution that blends the two purposes. **Cooling towers account for 20-50% of a commercial facility's water use**. A variety of options exist to increase the efficiency of cooling tower's water use including installing conductivity meters and controllers, which monitor the level of total dissolved solids and pH levels and prevent buildup of solids. Cycled water can then be changed as needed as opposed to at a fixed, more wasteful interval. **Upgrading one cooling tower can save a company up to $4,000 annually.**

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