

Cal Poly San Luis Obispo Water Conservation Best Practices

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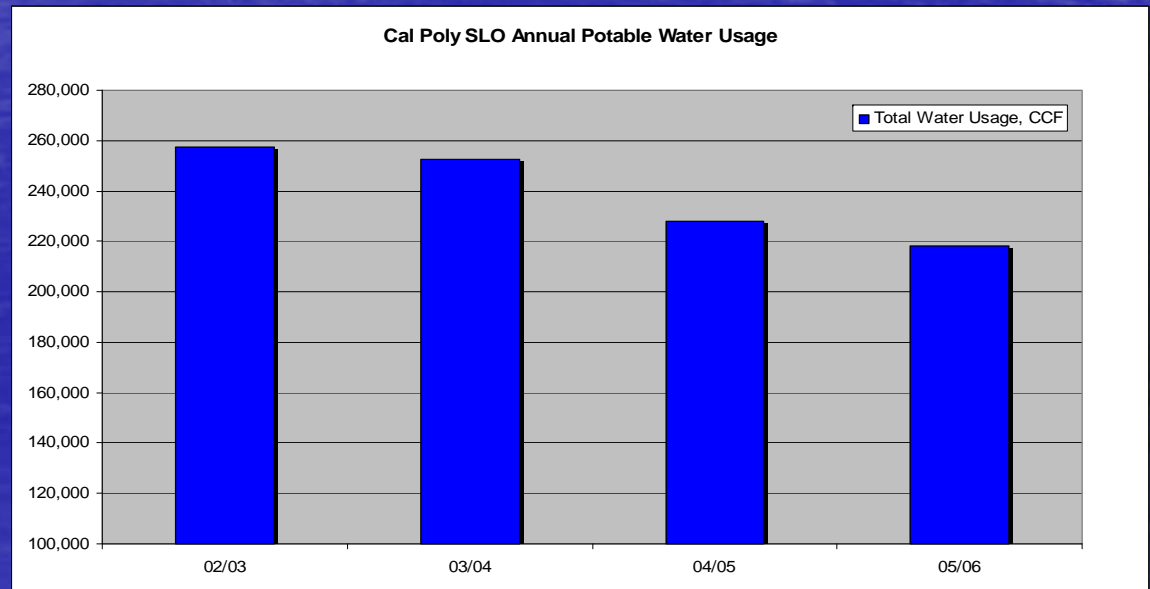
Low Flow Fixture Retrofits of over:

- 200 low flow urinals – 1.5 gpf
- 200 low flow toilets – 1.6 gpf
- 300 lavatory faucets – 1.0 gpm
- 500 shower heads – 2.5 gpm



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- Total project cost \$238,000
- Water savings:
39,000 CCF or 29 Million gal per year - 15% of campus total
Approx 25,000 gal per fixture
- Utility cost savings \$240,000 per year
@\$3/ccf for water, \$3/ccf for sewer



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Waterless vs. Ultra Low Flow

Waterless pros & cons:

- Zero water usage saves 45,000 gpy
- More housekeeping required
- Oil seal replacement
- Do not pour water down drain!
- Cartridge replacement
- Supply piping still required by code

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Waterless vs. Ultra Low Flow

Ultra Low Flow Urinal pros & cons:

- 1/8 gpf achieves 90% of waterless savings
- Less housekeeping required
- No oil seal or cartridge replacement
- Works well with sensored flush valves

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LEED EB Pilot Project

Faculty Office East Building - 20,000 gsf

- Retrofit all fixtures to ULF, sensed
- 1/8 gpf Zurn urinals
- 0.5 gpm sensed faucets
- Will achieve 60% reduction in usage
- Qualifies for two LEED points for water efficiency – Credit 3.1 and 3.2
- Project cost \$15,000
- Payback period 8 years



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Other Conservation Efforts

- Irrigation controls
- Eliminate “once through” cooling
- Public awareness
- Metering and monitoring
- Management of boilers, cooling towers, water softeners, closed loops



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Unexpected Consequences:

- Increased concentration of regulated substances in effluent to city.

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Unexpected Benefits:

- Conservation eliminated need for previously projected future sewer capacity
- Resulted in \$2M savings to Poly Canyon Village Housing project
- Funds returned to project to help pay for additional sustainability features



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Questions?