


PERFORMANCE GOALS FOR WATER-EFFICIENT EQUIPMENT IN NEW OR RENOVATED STANFORD UNIVERSITY BUILDINGS

TYPE OF BUILDING	TYPE of FIXTURE or EQUIPMENT	PLUMBING CODE or STANDARD WATER USE (GALS/USE)	GOAL: WATER EFFICIENT EQUIPMENT (GALLONS/USE)
Academic, Other Research, Athletics, Non-residential Buildings	Public bathroom faucets	0.5 gallons per minute (gpm)	0.5 gpm
Student Dorm, Residential, Academic, Other Research, Athletics	Residential faucets	2.2 gpm	0.5 gpm
Café, Cafeteria, Large & Small Kitchens, Student Dorm, Academic, Other Research, Athletics	Kitchen faucets	2.2 gpm	2.2 gpm
Student Dorm, Residential, Academic, Other Research, Athletics	Toilets	1.6 gallons per flush (gpf)	Dual-plumb new buildings for Recycled Water for High Efficiency Toilets (HETs): <1.28 gallon per flush; SEE MAP TEST REPORT: http://www.cuwcc.org/MaPTesting.aspx
Student Dorm, Academic, Other Research, Athletics	Urinals	1 gpf	Dual-plumb new buildings for Recycled Water and use High Efficiency Urinals (HEUs): 0.125 gpf
Student Dorm, Residential, Academic, Other Research, Athletics	Showerheads	2.5 gpm	<2 gpm (need to specify building water pressure before ordering; tamper resistant)
Student Dorm, Residential, Academic, Other Research, Athletics	Washing machines	40 gals/load	15 gals/load
Student Dorm, Residential, Academic, Other Research, Athletics	Dish washers	6.5 gals/load	< 5 gals/load
Café, Cafeteria, large kitchen	Pre-rinse nozzles; need to pass Food Service Tech Center certification (FSTC)	1.6 gpm	1.15 gpm (must be tested by FSTC)
Café, Cafeteria, large kitchen	Food Steamers; need to pass Food Service Tech Center certification (FSTC)	Use once-through tap water (continuously added, ~ 30 gals/hr) to cook	Use recirculating steam to heat steamers, also called "boilerless steamers". Steamers must be tested by FSTC, use < 2 gals/hr
Café, Cafeteria, large kitchen	Ice machines; need to pass Food Service Tech Center certification (FSTC)	Water-cooled uses 200 gallons for cooling each pound of ice	Once-through tap water cooling prohibited; Use re-circulating closed-loop chilled water or air
Café, Cafeteria, large kitchen	Commercial, industrial dishwashers	More than 1 gallon per rack	Maximum of 1 gallon per rack. Retrofit of nozzles to be efficient - Use Optirinse (Hobart) or comparable
Academic, Other Research	House vacuum system: liquid ring (wet) vs. dry vacuum pumps	Liquid ring (domestic water continuously added)	Use dry vacuum pumps
Academic, Other Research	Glass ware washers	Inefficient glassware washers	Purchase efficient units, such as HAMO brand
Academic, Other Research	Lasers, electron microscopes, or other research equipment needing cooling	Once-through water-cooled	Use re-circulating closed-loop chilled water for cooling. Once-through tap or chilled water cooling prohibited.
Academic, Other Research	Autoclaves, sterilizers: without mizers vs. with mizers	domestic water runs continuously at 2.2gpm 24 hrs, 7 days, all year	Install water mizers. Quench water runs only when >140 F wash wastewater detected (typically <6 hrs per day). If available, use recycled water for quenching.
Academic, Other Research	Reverse Osmosis/water treatment system standard 50% efficiency vs.with re-use of reject water	RO reject wastewater to sewer, no re-use	Capture RO reject water for non-potable re-use. RO reject water could be used for non-potable uses, e.g., quenching, toilet flushing, sewer trap priming.

For more information please contact: Stanford Utilities Department: MartyL@bonair.stanford.edu
http://lbre.Stanford.edu/SEM//Water_Conservation
For water budget calculator go to California Urban Water Conservation Council (CUWCC):
http://www.h2ouse.org

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