WATER EFFICIENT INDOOR PRODUCTS & SYSTEMS - MANDATORY REQUIREMENTS & VOLUNTARY INITIATIVES

Standard/Guideline	Application	Maximum Water Pressure (PSI)	Toilets (Maximum gpf)	Urinals (Maximum gpf)	Private Lavatory Faucet (Maximum flow rate-gpm) - see definition below	Public Lavatory Faucet (Maximum flow rate-gpm)-see definition below	Metering Faucet (Gallons per cycle)	Residential Kitchen Faucet (Maxi-mum flow rate-gpm)	Residential Showerhead (Maximum flow rate-gpm)	Residential Showering Compartment (Maximum flow rate-gpm)	Residen- tial Dish-washer (Gallons Per Full Wash & Rinse Cycle)	Residential Clothes Washer (Water Factor - WF = gal per cu.ft. of drum capacity)	Comm'l Pre-Rinse Spray Valve (Max flow rate-gpm)	Graywater System	Comments
			Plumbing Fixtures and Fittings					Residential Fixtures, Fittings, & Appliances							
Organization Authoring National Standard (if any) >>>>		None	ASME/CSA	ASME/CSA and IAPMO	ASME/CSA	ASME /CSA	ASME /CSA	ASME /CSA	ASME/CSA	None	Energy Star (U.S. DOE)	Energy Star (U.S. DOE)	None	None	
National Standard	Voluntary until enacted into law or regulation	NR	1.6	1.0	2.2	0.5	0.25	2.2	2.5	NR	NR	NR	NR	NR	
U.S. Energy Policy Act(s) (EPAct - various dates)	Mandatory - all installations	NR	1.6	1.0	2.2 @ 60 psi	2.2 @ 60 psi; superseded by nat'l std & plumbing codes at 0.5-gpm maximum	0.25	2.2	2.5	NR	NR	NR	1.6	NR - Various state and local regulations govern these systems	
Green Globes - Green Building Initiative (GBI) - (draft #2)	Voluntary - 4 stories & above - residential and non-residential	NR	WaterSense HET (≤ 1.28 avg) or equivalent	0.5 or WaterSense, whichever is less	WaterSense Faucet: 1.5-gpm max; 0.8-gpm min	No mandatory maximum flow rates for these fixture fittings other than code-mandated national standard. Selection of flow rates is at the option of the designer-builder and flow rates are inserted into a spreadsheet calculator to determine expected water use. Proportionate points awarded			0.25 or WaterSense, whichever is less	NR	5.8	6.0	1.6	Encouraged through use of alternate on-site sources of water	Draft currently in the public comment period.
ASHRAE Standard 189.1 (draft #2 released for public comment)	Voluntary - 4 stories & above - residential and non-residential	NR	Tank-type: WaterSense HET (≤ 1.28 avg) Flushometer valve-type: HET (1.28-gpf or dual flush)	0.5	WaterSense Faucet: 1.5-gpm max; 0.8-gpm min	0.5	0.25	2.2	2.0	Total of 2.0-gpm per compartment of ≤3,000 sq. in. Addit 2.0-gpm allowed for each addit space increment of 3000 sq in.; recirculated non-potable water excluded.	5.8	6.0	1.3 + comply with ASTM at 26 sec	Encouraged through use of alternate on-site sources of water	Public comment period closed; responses to public comments may result in some minor changes to the draft standard
USGBC - LEED NC (New Construction) Version 2.2	Voluntary - all except single family residences	NR	LEED NC 2.2: "Employ Strategies that in aggregate use a minimum of 20% *(or 30%)* less potable water than the indoor water use baseline calculated for the building after meeting EPACT" NOTE: No individual maximum requirements apply.							NR	NR	NR	NR	Not specifically addressed but does encourage wastewater reduction measures	
NAHB Model Green Home Building Guidelines	Voluntary - new homes	NR	≤1.6 Press Assist or ≤ 1.6 Dual-flush or Waterless	NR	≤2.2 w/shut-off valve, motion sensor, pedal activated	NA	NR	NR	≤2.5 (2 pts per fixture)	NR	Energy Star		NA	Separate and reuse of greywater	
NAHB National Green Building Standard™ Draft Version #1	Voluntary - new homes	NR	WaterSense HET (≤ 1.28 avg) OR waterless toilet	≤ 0.5	≤ 1.5; Self-closing, motion sensor, metering, pedal-activated	NA	NR	NR	2.0 to ≤ 2.5 (1.0 pt per head) 1.6 to ≤ 2.0 (2.0 pts per head)	NR	Energy Star	(a) Energy Star OR (b) Energy Star AND WF ≤ 6.0 (varying points)	NA	Separation and reuse of greywater	
USGBC - LEED for Homes	Voluntary - new homes	NR	≤1.3 or ≤ 1.1 (varying points awarded)	NR	≤ 2.0 or ≤ 1.5 (varying points awarded)	NA	NR	NR	≤ 2.0 (1 pt) ≤ 1.75 (2 pts)	NR	Energy Star + GPC of ≤6.0	Energy Star + MEF of ≤ 2.0 AND WF of ≤5.5	NA	Greywater reuse for landscape irrigation OR indoor use	LEED for Homes - Draft ofSept 26, 2007
U.S. EPA WaterSense New Homes Program	Voluntary - new homes	60	WaterSense HET (≤ 1.28 avg)	NR	WaterSense Faucet (≤ 1.5; lower limit of 0.8)	NA	NR	≤ 2.2	≤ 2.5 or WaterSense (future)	Total of 2.5-gpm per compartment of ≤2,500 sq. in. Addit 2.5-gpm allowed for each addit space increment of 2,500 sq in.; recir-culated water excluded.	Energy Star	Energy Star + WF of ≤ 6.0	NA	NR	Next draft to be released soon

gpf	Gallons per flush	**ASHRAE**	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
gpm	Gallons per minute	**NAHB**	National Association of Home Builders
gpc	Gallons per cycle	**USGBC - LEED**	United States Green Building Council - Leadership in Energy & Environmental Design
psi	Water pressure in pounds per square inch	**WF**	Water Factor - gallons per cycle per cubic foot of washer capacity
ASME	American Society of Mechanical Engineers	**NR**	Not required or Not Recognized
CSA	Canadian Standards Association	**NA**	Not applicable
DOE	U.S. Department of Energy		
Lavatory faucet in "private" installation	"Private" is defined by the Uniform Plumbing Code, the International Plumbing Code, and the National Standard Plumbing Code as inclusive of residences, hotel guest rooms, and hospital patient rooms.		
Lavatory faucet in "public" installation	"Public": All installations not otherwise defined as "private"		