St. Helena Water Neutral Policy for Development

City Codes Relating to Water Use

The 1993 General Plan provides at policy 9.2.1 that "new development" shall be contingent upon the ability of the City to provide water without exceeding safe yield.

Pursuant to the City Council meeting of March 22, 2011, the City Council adopted the definition of “Safe Yield” as proposed by the Safe Water Yield Committee as follows:

“The safe annual yield of the St. Helena water supply system is that quantify of water which can be reliably delivered on an annual basis through most rainfall years, including a Dry year (rainfall at 22” to 25.9”) without undue hardship on water customers through water shortage restrictions. It is recognized that the safe annual yield, as so defined, could place significant hardship on water customers in a Critically Dry Year (rainfall at 21.9” or less) or in periods of two or more consecutive Dry Years.”

The City’s Safe Water Yield Committee recently reported that the St. Helena potable water supply system, under current conditions, **is not currently in balance** under the definition of safe yield as adopted by the City Council.

Per the City Council meeting of March 22, 2011, item 17, the CC adopted the definition of Safe Yield as proposed by the Safe Yield Committee, and it is now City policy. This policy will therefore be applied to new development.

“New development” means any of the following construction projects that have not received a certificate of occupancy from the city or county building department prior to September 13, 1994, or that was issued a building permit and did not construct a foundation prior to September 13, 1994:

1. Any freestanding building that contains water-using fixtures;
2. Any floor area additions to existing nonresidential structures;
3. Any residential additions or remodeling that increases the number of independent living units.

Water Demand Analysis

The applicant must be water-neutral (from the City-delivered water system) through any combination of on-site water conservation measures and/or off-site retrofitting and/or well water. Water neutrality shall be demonstrated in a quantitative water analysis of the project.

The analysis must consist of the calculation of the baseline existing demand, the proposed water demand, a comparison of the two and the proposed retrofits to achieve a zero water use increase from the proposed development. Flows are calculated in gallons per day (gpd) with two (2) occupants per bedroom. Offices, dens, tv rooms, etc. are considered bedrooms with or without a closet.

If onsite retrofits cannot achieve net zero increase, the developer shall identify offsite retrofits. The City does not maintain a list of offsite retrofit needs. Per City Municipal Code 13.12.050, the developer shall be responsible for identifying residential or nonresidential properties eligible for retrofitting and verify to the department of public works that the required number of retrofits have been completed prior to the issuance of a certificate of occupancy.

Existing

Use of the flows from the Napa County Alternative Sewer Treatment System Standards to calculate existing water use is acceptable to the City Public Works Department. The commercial standards are attached; for residential projects, use of 150 gpd/bedroom is accepted. For onsite irrigation with City water, calculation of actual usage is obtained by ascertaining the number of drippers/sprinklers and the time watered and using 75% of the total value, assuming no irrigation in the winter months.

Proposed

Proposed water conservation efforts shall be compared to those existing flows quantitatively. Those standards can be found at websites for the LEED standards, Energy Star standards and major cities like San Francisco's water conservation guides. Water conservation devices proposed in the water analysis will be required by conditions of approval, must be included on the building plans and inspected/verified at certificate of occupancy.

Acceptable theoretical demand for residential flows/uses:

Toilet	3 flushes/day/occupant
Faucet	0.25 min/3 times/day/occupant
Shower	8 min/shower/day/occupant
Kitchen faucet	4 min/day/occupant
Clothes washer	0.37 load/day/occupant
Dishwasher	0.1 load/day/occupant

Typical calculation:

Fixture	Flow Rate gal/min or gal/flush		Flow Duration (min., flush, load, etc.)		Daily Uses per Occupant		Number of Occupants		Gallons per Day
Showerheads	2	x	8	x	1	x	10	=	160
Sink Faucets	1.5	x	0.25	x	3	x	10	=	11
Kitchen Faucet	1.5	x	4	x	1	x	10	=	60
Toilet	1.3	x	1	x	3	x	10	=	39
Clothes Washer	19.7	x	1	x	0.37	x	10	=	73
Dish Washer	6.3	x	1	x	0.1	x	10	=	6
									349

Great strides have been achieved by applicants through the use of low flow toilets, waterless urinals, sensor driven faucets, smart yard sensors, low flow dishwashers and washing machines. Retrofitting off-site is acceptable, though the City does not maintain a list of facilities.

Retrofit fees are not being accepted by the Public Works Director in lieu of actual retrofit applications.

TABLE 4

TYPE OF OCCUPANCY	GALLONS PER DAY
Airports	5 per passenger
Campgrounds: Campground with central comfort station Campground with flush toilet, no showers Day Camps (no meals) Luxury Camp, private bath Summer and seasonal	 35 per person 25 per person 15 per person 100 per person 50 per person
Churches (sanctuary) With kitchen wastes	5 per seat 7 per seat
Country Club	125 per person
Factories	35 per person per shift
Hospitals Kitchen waste only Laundry waste only	250 per bed space 25 per bed 40 per bed
Hotels/Motels with private bathroom (no kitchen waste) Hotels/Motels without private bathroom (no kitchen waste) Hotel/Motel with private bath and kitchen	60 per two person room 50 per two person room 75 gallons per person
Institutions other than hospitals	125 per bed space
Movie Theaters	5 per seat
Offices	20 per employee
Picnic parks with toilets and showers Picnic parks with toilet waste only	10 per person 5 per person
Resort camps with limited plumbing	50 gallons per person
Restaurants: Kitchen waste (multi-use utensils) Kitchen waste (disposable utensils) And add the following for type of facility present: Conventional sit down Short Order Bar and Cocktail	 5 per meal served 3 per meal served 10 per person 8 per person 3 per person
School (non-boarding With gym and showers add With cafeteria using disposable utensils	20 per student 5 per student 3 per meal served
Self service laundries	50 gallons per wash
Service station	10 gallons per vehicle served
Retail stores For public restrooms add	20 per employee 1 per 10 square feet
Swimming pools and bathhouses	10 per person
Tourist camps or mobile home parks with individual bath units Tourist camps or trailer parks with central bathhouse	100 per person 75 per person
Work or construction camps (semi-permanent)	50 per person
Wine tasting facility (no meals served)	3 per person
Employee	15 per employee