



January 6, 2023
Job No.: 3428-000

MEMORANDUM

TO: Public Works Department, City of Calistoga

FROM: Ryan T. Hansen, Carlson, Barbee and Gibson, Inc.

SUBJECT: Preliminary Water Use and Wastewater Generation Report
2565 Grant Street
Calistoga, California

The proposed development will be located at 2565 Grant Street. The subject parcel is currently zoned rural residential and maintains and agricultural land use. The proposed project proposes 35 single-family detached homes.

The City of Calistoga requires new developments to pay an additional connection fee if they propose to exceed their current baseline allowance. Resolution No. 2017-083 provides a standardized use table for expected demands on the City’s water and wastewater treatment systems to determine connection fees (attached in Exhibit A).

WATER-USE ANALYSIS

Proposed Internal Water Usage

The site proposes to construct 35 single-family residential units. The listed water usage rate used assumes 4 bedrooms for all units.

Table 1: Four Bedroom Units – Proposed Internal Water Use

	Units	Quantity	Water Use Rate (annual acre-ft, aaf)	Site Annual Water Use (aaf)	Site Annual Water Use (gal)
Four Bedroom Units	Unit	35	0.54	18.9	6,158,583

The four-bedroom units are expected to use approximately 18.9 acre-feet of water per year or 6,158,583 gallons.

WASTEWATER GENERATION

Proposed Wastewater Generation

Generation rates were provided by the City of Calistoga for the residential units and according to the standardize use table in Resolution No. 2017-083.

Table 2: Four Bedroom Units – Proposed Wastewater Generation

	Units	Quantity	Annual Wastewater Generation (annual acre-ft, aaf)	Site Annual Wastewater Generation (aaf)	Site Annual Wastewater Generation (gal)
Four Bedroom Units	Unit	35	0.319	11.16	3,636,496

The four-bedroom units are expected to use approximately 11.16 acre-feet of wastewater per year, or 3,636,496 gallons.

Attachments

Exhibit A – Resolution No. 2017-083

Exhibit A – Resolution No. 2017-083
Standardized Use Table for Resource Management System¹

Use	Type	Water		Wastewater	
		Acre feet per year	Gallons per day	Acre feet per year	Gallons per day
Residential					
Single-family dwelling ²					
	1 - 3 bedrooms	.428	382	.224	200
	4 bedrooms ³	.540	482	.319	285
Apartment, condominium					
	1 bedroom	.124	-----	.073	-----
	2 bedrooms	.249	-----	.146	-----
	3 bedrooms	.373	-----	.220	-----
	Mobile home	.149	133	.125	112
	Second dwelling unit	.165	147	.146	130
Transient lodging - Hotel, motel, resort, B&B - per living or rental unit					
		.170	152	.150	134
Commercial - Retail, office, personal service - per 1000 sq. ft. of gross floor area					
		.110	98	.099	88
Bar - per 1000 square feet of gross floor area					
		.220	196	.198	177
Restaurant - per 1000 square feet of gross floor area					
		.580	518	.524	468

¹ The Department of Public Works may reduce the expected demand upon approval of an engineered water study demonstrating/ quantifying the site-specific water usage.

² The adoption of this resolution amending the Standardized Use Table is not intended to affect the number of bedrooms purchased through the now- defunct Leak Detection Program. All projects which purchased leak detection water shall only be vested for the original number of bedrooms purchased.

³ Each additional bedroom, add 100 gallons of water and 85 gallons of wastewater per day.