



WATER SYSTEM FEASIBILITY STUDY FOR A REGULATED PUBLIC WATER SYSTEM

For

PARABLE WINERY
4300 SILVERADO TRAIL
CALISTOGA, CA 94515

APN: 020-120-028

Prepared for:
Trey Eppright
3215 Steck Avenue, Ste. 101
Austin, TX 78757

Project #4122063.0
October 11, 2024

1515 Fourth Street, Napa, CA 94559

www.rsacivil.com

707.252.3301.v 707.252.4966.f





TABLE OF CONTENTS

INTRODUCTION	1
TECHNICAL CAPACITY.....	1
System Description	1
Twenty-Year Evaluation of Projected Water Demand	1
Twenty-Year Evaluation of Water Supply Capacity	2
Source Adequacy	2
Water Quality.....	2
CONSOLIDATION	2
MANAGERIAL	3
General.....	3
Operation and Maintenance	3
Monitoring and Testing	3
FINANCIAL	4
CONCLUSION.....	4



INTRODUCTION

Parable Winery (APN 020-120-028) is applying for a Use Permit Modification to construct a new winery building to replace the burned winery building, installation of new landscaping, and to add visitation to the existing winery program. There is an existing residence at the site that will remain with up to two (2) full-time residents.

The project proposes modification in two phases. The first phase will not require a public water system so this report will focus on Phase II using the following program:

- (1) Increase production from 20,000 gallons per year to 30,000 gallons per year;
- (2) Allow maximum visitation of 30 visitors per day with an annual maximum of 10,950 visitors;
- (3) Allow the following marketing events:
 - a. 10 events with 30 guests;
 - b. One Wine Auction event with 50 guests;
- (4) Increase employees from three (3) full-time, to four (4) full-time and two (2) part time employees.

TECHNICAL CAPACITY

System Description

The purpose of this water feasibility study for a regulated system is to demonstrate that the proposed water system can serve the proposed uses for Parable Winery and residence including proposed increases in visitation and events at the winery.

The combined winery and residence will serve more than 25 people for more than 60 days a year so the applicant will apply for a Transient-Noncommunity Water System Permit.

There are three wells on the project parcel identified as Well #1, Well #2, and Well #3. Well #2 has been abandoned and is no longer in use. Well #3 is currently inactive and is to remain. The well that will serve the public water system is identified on RSA+ plans as Well #1. It is located west of the new winery building and currently serves the residence and all irrigation uses on the parcel.

Well #1 has a 50' concrete annular seal and will meet construction requirements for use in a public water system. This well will be used for winery domestic water, winery process water, vineyard, and landscaping irrigation. No chemical or biological treatment will be performed on the well water unless quarterly testing results deem further treatment is necessary. Water for the public water system will be stored in a ± 5,000-gallon tank. A separate 50,000-gallon tank will be used for firewater.

Twenty-Year Evaluation of Projected Water Demand

Based on the Tier 1 Water Use Calculations, the annual domestic water demand for the winery (employees, visitors, events, and residents) is 0.669 acre-feet per year (217,994 gallons per year).

The combined total water demand for the parcel including process and irrigation demand is 1.78 acre-feet per year, or approximately 580,015 gallons per year.



Use	Source	Number of People/Day	Water Demand [af/yr]
Domestic	Residence	1	0.500
	Full-Time Employees	4	0.048
	Part-Time Employees	2	0.004
	Visitors	30	0.101
	Marketing events (10 days/year)	30	0.014
	Marketing events (1 day/year)	50	0.002
Total Domestic Water Demand			0.669
Total Process Water Demand			0.552
Irrigation	Vineyard Irrigation -Well		0.815
	Vineyard Irrigation – Recycled Process Wastewater		-0.446
	Landscaping Irrigation		0.190
Total Irrigation Water Demand			0.559
Total Water Demand			1.78

The daily average public water demand is 1,589 gallons per day. At 200% of average daily demand, peak daily public water demand is estimated at 3,178 gallons per day.

Twenty-Year Evaluation of Water Supply Capacity

Well #1, the existing water source, is capable of supporting the proposed combined daily groundwater demand of 3,178 gallons per day. Based on the well completion report, the existing well has a capacity of 10 gpm. When pumped on a 50% operational basis (pumping 12 hours per day), the daily project well yield is 7,200 gallons per day. This exceeds the peak daily demand on the well.

$$10 \text{ gpm} * 720 \text{ min/day} = 7,200 \text{ gal/day}$$

$$7,200 \text{ gal/day} \geq 3,178 \text{ gallons (peak daily total demand)}$$

Source Adequacy

The public water system well (Well #1) has a 50 ft annular seal constructed under permit E12-00472 and complies with Napa County Code 13.12.380 as Class IA wells for a public water system.

Water Quality

Water sampling will be conducted prior to operation of the system. Water quality is expected to meet or exceed all requirements of Chapter 15 of Title 22, California Code of Regulations (CCR).

CONSOLIDATION

The nearest publicly managed system providing Title 22 treated water is the Calistoga Farm Worker Center. While the public water system is within 3 miles of the project, the length of the required



connection would create an extended resident time, diminishing the effectiveness of chemical disinfection which would pose an increased potential for public health risk.

Based on the legal and economical constraints, RSA+ concludes that consolidating this water system is impractical and would increase opportunities for compromising public health.

MANAGERIAL

General

The owner of the water system will be the property owner of the winery parcel. The costs of operation will be covered in the winery operation costs. The owner will also hold the responsibility of water system manager for the property.

Operation and Maintenance

The following is a summary of the required Operations and Maintenance schedule:

Tasks	Frequency	Action
System Water Level	Daily	Visual Inspection
System Pressure and Conveyance	Daily	Visual Inspection
Water Tanks	Quarterly	Visual Inspection
Manually Operate Valves and Pumps	Quarterly	Operation
Water Quality Test & Reporting	Quarterly	Unit Samples Taken & Reported to Napa County

A certified distribution operator or treatment operator (T1 level or above) as specified by Chapter 13 of Title 22 CCR contracted by the owner will be responsible for system repairs.

Monitoring and Testing

Water quality testing will be conducted to comply with Chapter 15 of Title 22 of CCR. Samples will be taken to Caltest or an approved laboratory for testing.



FINANCIAL

Below is a brief summary of the system's annual estimated financial capacity based on winery revenue. Capital improvement costs and installation of the treatment and distribution systems are estimated to be a one-time expense of \$17,000, amortized over 20 years.

Capital Improvements: \$6,000

Power: \$2,500

Maintenance: \$3,500

Water Quality Testing: \$5,000

Total: \$17,000 (Amortized over 20 years - \$850 per year)

Projected Annual Gross Revenue: \$9,453,750 (Based on 12,605 cases at \$750/case)

Annual Operating Costs: \$7,563,000 (at 20% profit)

Percent of Total Operating Costs: 0.2%

CONCLUSION

This report demonstrates the feasibility of a public water system to serve Parable Winery and the neighboring residence, and that it can meet the State of California Title 22 Code of Regulations for a Transient-Noncommunity Water System to serve visitors, employees, and residents.