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WATER SYSTEM FEASIBILITY REPORT

BARNETT VINEYARDS

4070 SPRING MOUNTAIN RD, ST. HELENA, CA 94574

APN: 020-300-047

MARCH 27, 2019

REV 1: SEPTEMBER 24, 2019

PREPARED BY:

MADRONE ENGINEERING

1485 MAIN STREET, SUITE 302

ST. HELENA, CA 94574

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I. Introduction & System Description

A. Introduction

Barnett Vineyards is requesting a Use Permit Major Modification to increase production and visitation for an existing winery on a ~40 acre parcel located at 4070 Spring Mountain Rd, St. Helena. Existing wine production is approved for 20,000 gallons, and is requested to be expanded to 30,000 gallons annually. The property will be improved as follows: a new tasting room/office building will be constructed, the existing parking area will be reconstructed and improved, a fire hydrant will be added, and portions of the existing driveway will be improved to current Napa County Road & Street Standards.

Madrone Engineering has prepared this Water System Feasibility Report to evaluate the capacity of the existing water system and determine the feasibility of the proposed improvements (increased production and visitation).

B. System Description

Currently, water for the property is provided by two Wells (Well #01 and #02). As part of this project, Well #01 will be disconnected from the winery and will be used for vineyard irrigation only. Well #02 will be the sole source of water for winery domestic and process needs, as well as the existing residences on the parcel.

II. Technical Capacity

A. Water Usage Estimate

The application is requesting an increase in wine production from 20,000 gallons annually to 30,000 gallons annually. Based on the proposed marketing plan for the winery, the maximum number of winery staff on-site on any given day is estimated to be nine (9) full-time employees.

The proposed marketing plan allows for up to thirty (30) visitors per day (max) in addition to winery special events. The following special events are proposed in the marketing plan:

- Wine Club/Release Events – 4/Year with up to 20 guests each, 3/Year with up to 60 guests, and 2/Year with up to 100 guests

There is also an existing 3-bedroom main residence, 2-bedroom guest house, and 1-bedroom caretaker's unit on the parcel. Based on these numbers, peak process water usage is estimated at 1,000 gallons per day. Peak winery domestic water use is estimated at 225 gallons per day, and peak residential water use is estimated at 720 gallons per day.

B. Project Wells

Well #01 was drilled in 1984, and has a 20' sanitary seal. Well #02 was drilled in 2003, and has a 55' seal (25' of concrete and 30' of bentonite). Well logs and permits for both wells are available in the Napa County Environmental Health files for the parcel, and Appendix A includes a site map showing the well locations. As part of this project, Well #01 will be disconnected from the winery and will be used for vineyard irrigation only. Well #02 will be the sole source of water for both winery domestic and process needs.

C. Water Storage

The water from well #02 will be pumped to an existing 10,000 gallon water tank, and then dispersed to the winery through existing plumbing. Fire protection water (for the hydrant) will be provided through a direct connection to a proposed 12,000-gallon water tank.

D. Water Treatment

The treatment of the water will depend on the intended use (production or domestic). At a minimum, the well water is anticipated to be treated with a water softener and a UV system. Final design of the water treatment system will be included in the Public Water System submittal to Napa County as part of the construction documents.

E. Well Yield

The existing well (Well #02) has an estimated yield of ~40 gallons per minute.

F. Consolidation

Because the parcel is outside and quite distant from a City Water Service Area, no opportunity to consolidate with nearby public water systems exists.

III. Managerial Capacity

The general manager that oversees winery operations shall also have oversight of the water system. The winery personnel, as designated by the general manager, will manage all aspects of the public water system.

The water extracted from the wells (existing or proposed) on the parcel is from an unadjudicated basin. The wells (existing and proposed) are located on the same parcel as the service connection for the water system.

IV. Financial Capacity

The revenue of the existing winery is adequate to support the proposed water system. The winery will be the only service connection for the proposed water system.

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APPENDICES

APPENDIX A: SITE MAP

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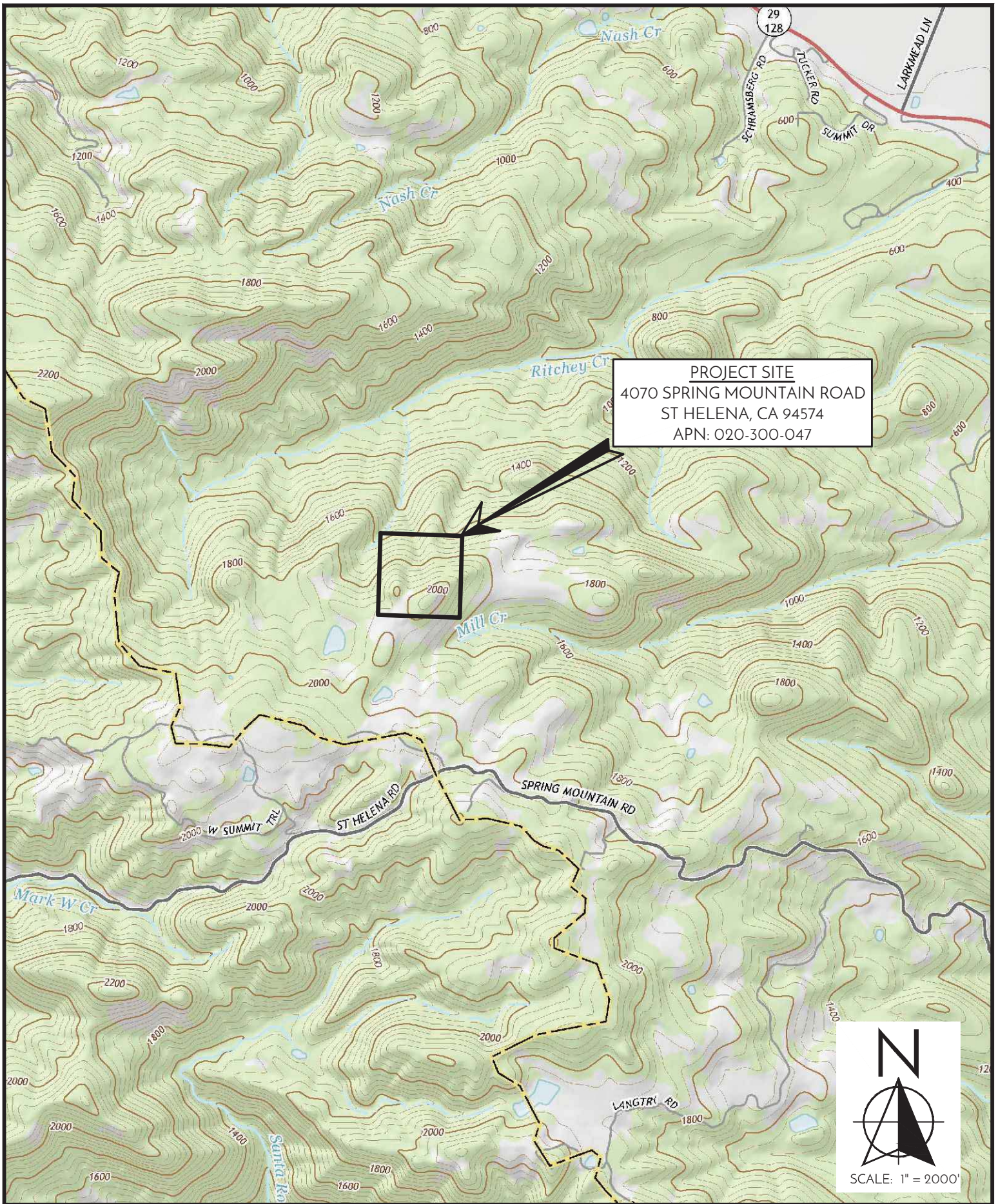
APPENDIX A
SITE MAP



BARNETT VINEYARD
VICINITY MAP

madrone engineering
1485 MAIN ST., SUITE 302
ST. HELENA, CA 94574
(707) 302-6280

DATE:	3/27/2019
SCALE:	1"=2000'
JOB #	19.005
APN:	020-300-047

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