APPENDIX C

Getaway Outpost Estimated Water Use Technical Memo

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TECHNICAL MEMORANDUM

Getaway Outpost Estimated Water Use
2401 Highway 175, Hopland, California 95449
Assessor's Parcel Numbers 048-270-23, -24, and a portion of -22

Date: March 25, 2020
Project No.: 9377.00

Prepared For: Getaway House, Inc.

Prepared By: Rebecca Dalske
Associate Planner

Reviewed By: Thomas Hunt, PE
RCE No. 53327

Attachments: Appendix 1: Getaway Outpost Sample Water Usage Data
Appendix 2: Brutocao Vineyards, Inc. Permission to Drill Well

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1.0 INTRODUCTION

Getaway House, Inc. (Client) is proposing the development of a micro-cabin recreational vehicle (RV) facility (Outpost) featuring up to 45 company-owned micro-cabin RVs on an approximately 90.87-acre site located at 2401 Highway 175, Hopland, and identified by Assessor's Parcel Numbers (APNs) 048-270-23, -24, and a portion of -22 (Site). This technical memo has been prepared to provide a technical basis for the estimated water use and wastewater flows for the proposed project.

1.1 Project Description

The Client proposes to develop the Site to serve an Outpost with up to 45 company-owned micro-cabin RVs to be booked for nightly stays. Each micro-cabin RV will be self-contained with a walk-in shower, toilet, mini-refrigerator, 2-top induction stovetop, kitchen sink, and seating area, and will be serviced with private utilities, including 50-amp electricity, water, septic, and heating and air conditioning. The micro-cabin RVs are essentially tiny houses on wheels and will be built by off-site builders who are Recreational Vehicle Industry Association (RVIA)-certified and follow both RVIA and American National Standards Institute (ANSI) standards for the construction of RVs and Park Model RVs. Currently, the three versions of the Client's micro-cabin RVs include a 142-square-

foot 2-person micro-cabin RV, a 159-square-foot 4-person micro-cabin RV, and a 176-square-foot 2-person accessible micro-cabin RV.

Associated improvements include the development of primary and internal Site access roads; micro-cabin RV pads for up to 45 micro-cabin RVs; a two-story, 1,008-square-foot upper floor(lodge facility) to house a full-time residence for an on-site manager, with the bottom floor (1176 square feet) consisting of a small office and storage area for daytime staff, an accessible restroom, meeting room, and a laundry area for micro-cabin RV linens; a carport; walking trails; and underground utility line (electricity, water, and wastewater disposal) installation and connections.

1.2 Estimated Occupancy

Based on data from existing Outposts, the Applicant estimates a yearly average occupancy rate of 85 percent, with an average length of stay of 1.5 nights per stay. The 2-person micro-cabin RVs would accommodate up to 2 guests (with one queen bed) and the 4-person micro-cabin RVs (with two queen beds, bunked) would accommodate a maximum of 4 guests at a time.

In addition, the project will be operated by a full-time General Manager, a full-time Facilities Manager who will reside on-site in the proposed lodge facility, and six (6) to eight (8) part-time housekeeping staff supported by company operations based in California and New York.

2.0 EVALUATION

2.1 Water

2.1.1 Estimated Water Demand

Based on water usage estimates provided by a study of operational Outposts, an estimate of water demand in gallons per day (GPD) for the proposed development is summarized below in Table 1, which indicates the water supply system will require a minimum flow capacity of 4,073.50 gallons of water per day.

Table 1: Summary of Proposed Facilities Estimated Water Demand

Type of Occupancy	Number of Units	GPD/Unit	GPD
Micro-cabin RV Recreational Vehicle[1]	45	54.3	2,443.50
Managers Unit[1]	2-bedroom residence	400	400
First-floor Laundry area[2]	36 loads	30	1,080
First-floor Employee restroom[3]	10 employees	15	150
		TOTAL GALLONS PER DAY	**4,073.50**

[1]*Based on water usage estimates provided by Getaway Outpost study*
[2]*Based on commercial washing machine water usage data provided for proposed units*
[3]*Based on water flow of fixtures to be installed*

To reduce water demand of the micro-cabin RVs, managers unit, and employee restroom, low flow plumbing fixtures, including shower heads, faucets, and toilets, would be installed.

2.1.2 Proposed Water Source

Domestic water will be provided to the Outpost and lodge facility via a proposed well to be located west of the Site in the Sanel Valley floor in the vicinity of existing producing agricultural wells and private water system. Brutocao Vineyards, Inc. has granted the Applicant permission to drill a well on an adjacent property owned by Brutocao Vineyards, on one of three parcels (identified by APNs 048-270-021, 048-270-020, and 048-260-050). Under the agreement dated January 9, 2020, the water is to be used solely by the Client for the project, is nontransferable, is not to be used for agriculture, and the amount of water to be pumped is not to exceed 5,000 gallons per day.

2.1.3 Proposed Water System

The proposed water system will be permitted through the California Department of Public Health (CDPH) and the California Code of Regulations Title 22 California Safe Drinking Water Act as a transient non-community water system. The project proposes a greater number of service connections than the number permitted by the local agency (Mendocino County Division of Environmental Health). The new well will be required to be constructed in accordance with the California Well Standards (Department of Water Resources Bulletin 74-90).

The project water system will include a raw water supply pipe with booster pumps to supply a raw water storage tank at the upper elevation of the project area. The anticipated volume of the raw water tank, to be constructed using materials that meet appropriate CalFire standards, is currently estimated at 20,000 gallons, which will include standby water volume for fire flow to on-site hydrants, the fire sprinkler system in the lodge facility, and the supply for daily flow of the treated water for use by the micro-cabin RVs and lodge facility. As required in the conditions received from CalFire on January 15, 2020, a minimum 5,000-gallon dedicated water storage will be provided on-site for emergency water use and is included in the 20,000-gallon tank mentioned previously. There will be an independent untreated water main system transporting water from the 20,000-gallon tank to the hydrants and the fire sprinkler system in the lodge facility. Although the micro-cabin RVs are exempt from fire sprinklers, a fire supply riser will be placed within 150 feet of each proposed micro-cabin RV pad. A building will be constructed adjacent to the raw water tank to house the booster pumps, or transfer pumps, to supply the raw water to the water treatment system and hydrants. A water treatment system will be housed in the building to provide filtration as needed, according to water quality from the well source and disinfection requirements to meet State of California Title 22 public health standards.

The water treatment system will likely be a package unit to be determined upon a review of the water quality analysis. Treated water will be stored for distribution in a 6,000-gallon tank located next to the treatment building and will be connected to a booster pump system and pressure tank

for pressurization of the water system. The water mains will be constructed of C900 and schedule 40 PVC, and HDPE water piping, and will be buried under the access roads, micro-cabin RV driveways, and walking access paths to the extent feasible. Each of the micro-cabin RVs will be connected to the potable water system via a no-freeze assembly manufactured by Thermaline.

2.2 Wastewater

Wastewater will be managed using a proposed on-site wastewater disposal system. Wastewater generated at each of the micro-cabin RVs and the lodge facility will be gravity fed into septic tank/pump basin units serving up to 3 or 4 micro-cabin RVs, and the lodge facility, together with joint lift stations, as needed, to a series of septic tanks and into wastewater treatment modules. Treated effluent will be disposed of using a pressurized drip irrigation system to be placed in the basin in the central portion of the Site where the most suitable soils for septic system treatment and percolation exist on the Site.

2.2.1 Estimated Flows

An estimate of wastewater flows in gallons per day (GPD) for the proposed development is summarized below in Table 2, which indicates flows to the on-site wastewater system (OWTS) will be approximately 4,073.50 GPD, based on the estimated water demands.

Table 2: Summary of Proposed Facilities Estimated Wastewater Flows

Type of Occupancy	Number of Units	GPD/Unit	GPD
Micro-cabin RV Recreational Vehicle[1]	45	54.3	2,443.50
Managers Unit[1]	2-bedroom residence	400	400
First-floor Laundry area[2]	36 loads	30	1,080
First-floor Employee restroom[3]	10 employees	15	150
		TOTAL GALLONS PER DAY	**4,073.50**

[1]*Based on water usage estimates provided by Getaway Outpost study*
[2]*Based on commercial washing machine water usage data provided for proposed units*
[3]*Based on water flow of fixtures to be installed*

2.2.2 Septic System Sizing Criteria

It should be noted that the septic system to serve the proposed development will need to be designed for a minimum flow capacity of 6,030 gallons of wastewater per day (GPD) in accordance with the County of Mendocino 1991 Uniform Plumbing Code (Plumbing Code), and as shown in Table 3, below. Based on the water use estimates presented in Table 1 above, and as shown in Table 2, above, wastewater flow estimates based on the Plumbing Code do not meet the specific usage profile, and are more than the anticipated daily flows, of a Getaway House Outpost. This discrepancy may be due, in part, to the unique construction and function of the micro-cabin RVs. The Plumbing Code provides guidance to use 100 GPD/RV unit with water and sewer hook-up; however, as the proposed micro-cabin RVs are to be utilized for temporary

overnight occupancy, the actual wastewater flows have been observed to be 54.3 GPD/unit, as described above.

Table 3: Summary of Septic System Sizing Criteria

Type of Occupancy	Number of Units	GPD/Unit	GPD
Micro-cabin RV Recreational Vehicle[1]	45	100	4,500
Managers Unit[1]	2-bedroom residence	150	300
First-floor Laundry area[2]	36 loads	30	1,080
First-floor Employee restroom[3]	10 employees	15	150
		TOTAL GALLONS PER DAY	**6,030**

[1]*Based on the County of Mendocino 1991 Uniform Plumbing Code*
[2]*Based on Commercial washing machine water usage data provided for proposed units*
[3]*Based on water flow of fixtures to be installed*

3.0 CONCLUSION

Based on the information presented in this technical memo, the proposed project will require:

- The proposed water system will have the ability to supply 4,073.50 GPD adequately serving the up to 45 micro-cabin RVs and lodge facility, while not exceeding the 5,000 GPD water usage allotment set by Brutocao Vineyards, to serve the proposed development.
- The proposed waste-water collection and treatment system will be able to handle the anticipated flows of 4,073.50 GPD, while meeting a design flow of 6,030 GPD, as required by the Mendocino County Environmental Health guidelines for waste water flow;
- The proposed project will also provide up four (4) times the water storage capacity suggested by CalFire as a minimum for fire protection of the project area, while also providing a fire hydrant with 150 feet of temporary and permanent structures, and a flow for fire sprinklers serving the Lodge building.

4.0 REFERENCES

County of Mendocino Division of Environmental Health. September 1992. *County of Mendocino 1991 Uniform Plumbing Code, Private Sewage Disposal Systems*. Available at: https://www.mendocinocounty.org/home/showdocument?id=2852

APPENDIX 1

Getaway Outpost Sample Water Usage Data

Sample Water Usage Data

The numbers below are based on sample water usage data for cabins, the lodge, & residence.

Shower Head: 1.25gpm
Kitchen Faucet: 1.50gpm
Toilet: 1.28gpf

Cabin Totals	
Total cabins tested	20
Test period occupancy rate	62%
Start date	12/31/17
End date	4/12/18
Total gallons used	35,675.5
Total occupied nights	765
2-person avg. gallons/day	36.7
2-person avg. gallons/occupied night	52.8
4-person avg. gallons/day	23
Total avg. gallons/day	**32.7**
Total avg. gallons/occupied night	**54.3**

Lodge & Residence Totals	
Number of Washers in Lodge at 40 cabin Outpost	2
30 avg. loads of laundry @ 30 avg. gallons load/day	900
2-4 person residence avg. gallons/day	400
Total avg. gallons/day	**1,300**

Site Totals	
Cabins total avg. gallon/occupied night at 40 cabin Outpost	2,172
30 avg. loads of laundry @ 30 avg. gallons load/day	900
2-4 person residence avg. gallons/day	400
Total site avg. gallons/days	**3,472**

APPENDIX 2

Brutocao Vineyards, Inc. Permission to Drill Well

1/9/20

Brutocao

Getaway House Inc.

147 Prince St.

Brooklyn, NY 11201

518-878-6496

Nico@getaway.house

To Whom it May Concern:

I, Steve Brutocao, representing Brutocao Vineyards Inc, acknowledge that in the event Getaway House may not be able to successfully drill a well on the property under contract, will hereby agree to allow Getaway House Inc. to drill a well on an adjacent property owned by Brutocao Vineyards. The specific location to be determined, but would be located on one of the following three parcels, 0482702100, 0482702000, or 0482600500. The water will be used for Getaway House inc. only, is not transferrable and is not to be used for agriculture. The amount of water to be pumped is not to exceed 5000 gals per day.

Sincerely,

Steven J. Brutocao

CEO, Brutocao Vineyards and Cellars