

Attachments to Accompany
Water Right Application
Ardzrooni Vineyard Management, LLC

Attachment #1

3. Project Description

This project consists of the collection and storage of water in two existing onstream reservoirs. The reservoir at Point of Diversion #1 was originally built in 1973 as a Stockpond and has a capacity of 6 acre-feet. The reservoir at Point of Diversion #2 was built in 2008 and also has a capacity of 6 acre-feet. Water is used for irrigation, frost protection and heat control of 25 acres gross (21 acres net) of existing vineyard (see location on Attachment 3) that was developed in 2008 and 2009. Reservoir #1 collects water from its naturally tributary drainage area and is used as a point of diversion to offstream storage to supplement storage in Reservoir #2. Reservoir #2 collects water from its naturally tributary drainage area and receives water from Reservoir #1. As can be seen on Attachment #3, Reservoir #2 was constructed at the very top of the watershed and only collects sheetflow from an area of approximately 2 acres. The reservoirs and place of use are fully developed. No further development is proposed.

The project proposed under this Application involves no changes to the existing reservoirs at Points of Diversion #1 or #2 and no changes to the requested place of use or water diversion relative to historical conditions for this project. Accordingly, this Application qualifies for a Categorical Exemption under Title 14, California Code of Regulations, Section 15301, Existing Facilities, which states the following:

"Class 1 consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination."

Based on the foregoing, we are requesting that the State Water Board grant a Categorical Exemption to this Application and proceed with further processing as necessary for permit issuance.

Attachment #2

6. Water Availability
See separate attachment.

Attachment #3

15. Map
See separate attachment.

Attachment #4

21. Environmental Setting (Photographs)
See separate attachment.

ATTACHMENT 2

Estimate of Water Availability to Accompany Water Right Application of Ardzrooni Vineyard Management, LLC

California Water Code Section 1260(k) requires that every application for a permit to appropriate water shall include "sufficient information to demonstrate a reasonable likelihood that unappropriated water is available for the proposed appropriation." This narrative and accompanying calculations provide the required information.

The subject Application includes a point of diversion (POD #1) on an unnamed stream tributary to Perry Gulch thence the Navarro River and a point of diversion (POD #2) on an unnamed stream tributary to Perry Gulch thence the Navarro River in Mendocino County (see attached map). Diversion of up to 6 acre-feet is proposed for storage at a reservoir at POD #1 and 6 acre-feet is proposed for storage at a reservoir at POD #2. The proposed season of diversion is November 1 to May 31. The following describes the methodology used to demonstrate a reasonable likelihood that water is physically available for the proposed appropriation.

The attached map shows the proposed points of diversion and the watershed areas tributary thereto. The map also shows lines of equal mean annual runoff as shown on the map included with the document entitled *Average Annual Precipitation & Runoff in North Coastal California by S.E. Rantz, 1968*.¹ An excerpt of this map is attached (Rantz map).

The weighted mean annual runoff for the watersheds tributary to POD #1 and POD #2 were computed based on the Rantz map. Mean *seasonal* runoff for the subject watersheds was estimated by adjusting the mean annual runoff assuming that the ratio of seasonal to annual runoff is identical to the ratio of seasonal to annual mean precipitation. The Ukiah 4 WSW precipitation station was used for this purpose (record attached). The resulting seasonal runoff value was adjusted by deducting the face value of any senior water rights in the watershed above the proposed points of diversion.

Calculations for the foregoing methodology are attached. These calculations show that in an average water year approximately 22.1 acre-feet would accrue to PODs #1 and #2. The 22.1 acre-feet would be ample to fill the 6 acre-foot reservoir at POD #1 and the 6 acre-foot reservoir at POD #2, leaving about 10.1 acre-feet of runoff remaining. Accordingly, it is reasonable to conclude that water is available for the subject Application.

¹ USGS Hydrologic Investigations Atlas HA-298, prepared in cooperation with the California Department of Water Resources.

Water Right Application
by Ardzrooni Vineyard Management, LLC
Estimate of Water Availability

Monthly Precipitation⁽¹⁾

Ukiah 4 WSW, CALIFORNIA

<u>Month</u>	<u>Mean Precipitation (in)</u>
October	2.71
November	6.81
December	9.84
January	10.14
February	7.56
March	6.66
April	3.76
May	1.42
June	0.47
July	0.06
August	0.24
September	<u>0.5</u>
Annual	50.17

Point of Diversion #1 & #2

Mean Precipitation for requested diversion season (11/1 - 5/31):	46.19 in
Precipitation during requested diversion season as a percentage of total precipitation:	92.07%
Weighted Mean Annual Runoff: ⁽²⁾	20.0 in
Estimated Mean Seasonal Runoff: ⁽³⁾	18.4 in
Watershed Area for POD #1 & #2:	14.4 ac
Total Estimated Mean Seasonal Runoff at POD #1 & #2:	22.1 ac-ft
Senior Diverters of Record within POD #1 & #2 watershed (face value):	0.0 ac-ft
Total water available at POD #1 & #2:	22.1 ac-ft
Requested diversion amount:	12.0 ac-ft
Total Seasonal Amount Remaining in Stream After Diversion:	10.1 ac-ft

Notes:

⁽¹⁾ Source: Western Regional Climate Center website, <http://www.wrcc.dri.edu/summary/climsmnca.html>

⁽²⁾ *Average Annual Precipitation and Runoff in North Coastal California (Hydrologic Investigations Atlas HA-298)* by S.E. Rantz, 1968.

⁽³⁾ Estimated mean seasonal runoff is computed by multiplying mean annual runoff by percent seasonal precipitation.

Ardzrooni Vineyard Management, LLC
Calculation of Weighted Mean Annual Runoff
in POD Watersheds

Watershed	Area (ac)	Weighted Mean Annual Runoff¹ (in)
POD #1	12.8	20
POD #2	1.6	20
Weighted Average		20.0

Notes:

1. Weighted mean annual runoff for individual watersheds from automatic calculation using AutoCAD.

UKIAH 4 WSW, CALIFORNIA

Monthly Total Precipitation (inches)

-49124

File last updated on Mar 24, 2011

*** Note *** Provisional Data *** After Year/Month 201012

a = 1 day missing, b = 2 days missing, c = 3 days, ..etc.,

z = 26 or more days missing, A = Accumulations present

Long-term means based on columns; thus, the monthly row may not sum (or average) to the long-term annual value.

MAXIMUM ALLOWABLE NUMBER OF MISSING DAYS : 5

Individual Months not used for annual or monthly statistics if more than 5 days are missing.

Individual Years not used for annual statistics if any month in that year has more than 5 days missing.

YEAR(S)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN
1951	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0.14 h	0.01	3.68	8.89	17.85	30.43
1952	13.09	8.77	7.51	0.94	1.07	1.85	0.13	0	0.04	0 e	3.75	20.68	57.83
1953	17.61	0.53	7.27	3.84 c	2.86	1.43	0	0.49	0	1.36 g	8.96	4.08	47.07
1954	14.15	6.49	7.47	5.1	0	1.54	0	1.69	0.2	1.95	6.51	10.17	55.27
1955	5.52	2.57	1.64	6.36	0	0	0	0	0 z	0 z	0 z	0 z	16.09
1956	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0
1957	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0
1958	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0
1959	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0
1960	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0
1961	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0
1962	0 z	0 z	0 z	0 z	0 z	0 z	0 i	0.36	0.87	9.24	3.64	5.6	19.71
1963	4.36	6.66	9.05	9.87	1.28	0	0.01	0.01	0.09	4.32	9.52	2.36	47.53
1964	9.6	0.56	4.05	0.67	1.99	0.5	0.04	0.05	0	2.18	15.29	28.06	62.99
1965	11.47	1.79	2.28	7.12	0.01	0.12	0.01	0.52	0	0.5	11.8	6.54	42.16
1966	11.8	5.15	3.61	1.99	0.06	0.07	0	0.41	0.21	0.01	12.69	8.81	44.81
1967	15.04	0.85	9.26	5.85	0.66	1.2	0	0.03	0.06	2.63	5.32	7.69	48.59
1968	11.48	6.35	5.74	0.45	1.33	0.01	0	2.4	0.2	2.01	5.59	16.17	51.73
1969	18.52	10.51	2.34	3.15	0.11	0.01	0	0	0.08	3.12	2.32	14.17	54.33
1970	25.89	5.17	2.74	1.4	0.46	0.58	0	0	0	2.7	10.51	17.42	66.87
1971	8.6	0.89	9.46	2.42	1.47	0.05	0	0.16	0.96	0.99	5.92	9.31	40.23
1972	5.91	5.9	3.96	3.81	0.6	0.25	0	0.23	1.33	4.01	7.67	9.19	42.86
1973	15.7	9.48	5.67	0.47	0.18	0	0	0	1.84	4.67	20.17	9.04	67.22
1974	11.15	6.78	9.29	3.96	0.27	0	1.22	0.19	0	2.48	2.21	6.45	44
1975	5.6	14.44	14.82	3.12	0.23	0.14	0.13	0.42	0	5.72	3.34	3.14	51.1
1976	0.79	6.95	2.5	3.61	0.07	0.1	0.04	1.85	0.13	0.4	2.81	0.7	19.95
1977	2.94	4.15	4.5	0.38	1.96	0.01	0	0.43	4.19	1.55	5.65	10.53	36.29
1978	18.96	10.79	7.04	6.78	0.97	0.04	0	0.1	1.96	0	1.93	1.07	49.64
1979	9.19	12.52	4.75	2.36	2.02	0.01	0.02	0	0.23	6.49	10.01	6.74	54.34
1980	11.66	11.95	3.88	3.92	1.13	0.41	0	0	0.08	1.15 a	1.02	6.54	41.74
1981	11.52	4.62	4.95	0.45	1.03	0.06	0.03	0	1.14	7.31	14.35	13.56	59.02
1982	8.51	7.02	11.64	15.25	0	0.64	0	0.01	1.16	6.09	12.31	11.54	74.17
1983	11.84	16.59	20.41	7.85	0.98	0.06	0.38	1.21	0.67	1.22	19.02	17.84	98.07
1984	0.93	7.89	4.21	3.19	0.83	1.13	0	0.04	0.15	4.56	15.95	3.8	42.68
1985	0.87	5.35	8.24	0.46	0.17	0.04	0.07	0	1.49	3.45	7.56	4.51	32.21
1986	10.68	22.87	10.16	1.31	1.16	0	0	0	3.31	1.61	1.27	4.26	56.63
1987	8.56	6.1	8.6	0.38	0.66	0.04	0.07	0	0	2.24	3.9	14.27	44.82
1988	11.09	0.4	0.46	2.86	1.09	1.5	0	0	0	0.39 d	11.79	6.84	36.42
1989	2.98	1.4	14.82	2.13	0.49	0.43	0	0.11	2.23	5.95	2.8	0.06	33.4
1990	9.51	6.54	3.45	0.78	6.78	0.1	0.03	0.07	0.2	1.15	0.75	2.72	32.08
1991	1.46	3.51	15.9	1.13	1.61	0.57	0.05	0.02	0	3.37	3.54	4.36	35.52
1992	5.13	12.51	6.35	2.33	0.18	1.76	0.01	0	0.04	4.96	2.43	16.97	52.67
1993	18.47	9.12	4.11	4.67	5.53	1.34	0	0	0	0.5	2.8	7.86	54.4
1994	6.32	8.38	0.79	3.57	1.08	0.22	0.05	0	0	0.75	8.82	5.89	35.87
1995	28.89	1.32	17.47	6.59	3.53	0.67	0.65	0	0.02	0.14	0.72	18.09	78.09
1996	17.86	11.6	6.12	5.11	3.51	0.02	0	0	0.42	2.15	5.5	18.99	71.28
1997	13.37	2.29	3.5	1.93	1.42	0.87	0	0.95	0.93	3.43	12.43	5.58	46.7
1998	21.34	24.12	7.57	3.77	5.56	0.07	0	0	0.02	1.3	9.88	4.29	77.92
1999	6.08	15.67	8.28	3.05	0.37	0.02	0	0	0.18	1.24	6.42	2.77	44.08
2000	10.4	14.8	2.68	3.09	1.85	0.35	0	0 z	0.37	3.82	2.66	2.38	42.4

2001	6.66	10.25	3.72	1.65	0	0.92	0	0	0.14	0.9	11.97	15.23	51.44
2002	5.72	4.25	3.5	1.29	0.89	0	0	0	0	0	5.69	24.66	46
2003	5.16	3.43	5.49	12.43	1.22	0	0	0.02	0.27	0.1	6.57	16.23	50.92
2004	5.74	13.91	1.91	1.25	0.19	0.03	0	0	0.28	5.21	2.02	14.99	45.53
2005	9.96	4.37	9.96	4.63	5.54	3.01	0	0	0.05	0 z	6.34	23.15	67.01
2006	10.19	5.92	13.54 a	9.55	0.61	0 z	0 z	0	0	0.43	6.8	9.17	56.21
2007	1.13	9.94	1.21	0 z	0 z	0 z	0 z	0 z	0 z	1.88	1.12	7.59	22.87
2008	0 z	5.06	0 z	0 z	0 z	0 z	0 z	0	0	2.06	1.9	5.4	14.42
2009	1.29	9.75	4.78	0.73	2.73	0 z	0 z	0 z	0.05	3.31	2.88	4.09	29.61
2010	16.68	4.84	6.78	8.96	3.24	0.36	0 z	0 z	0.18	8.78	5.17	11.97	66.96
2011	2.62 y	6.05 r	0.62 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0 z	0
Period of													
MEAN	10.14	7.56	6.66	3.76	1.42	0.47	0.06	0.24	0.5	2.71	6.81	9.84	50.68
S.D.	6.38	5.33	4.46	3.26	1.62	0.66	0.2	0.52	0.87	2.32	4.83	6.66	14.67
SKEW	0.7	1.04	1.11	1.47	1.74	1.79	4.56	2.75	2.51	0.96	0.86	0.73	0.89
MAX	28.89	24.12	20.41	15.25	6.78	3.01	1.22	2.4	4.19	9.24	20.17	28.06	98.07
MIN	0.79	0.4	0.46	0.38	0	0	0	0	0	0	0.72	0.06	19.95
NO YRS	51	52	51	50	50	48	47	49	52	51	53	53	43

