




LRE Water
 909 Colorado Avenue
 Glenwood Springs, CO 81601
 (970)-945-6777 Voice
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Memorandum

To: BWCD BOARD OF DIRECTORS
From: ERIC MANGEOT 
CC: CHRIS GEIGER
Date: SEPTEMBER 30, 2020
File: APPLICATION AND INCLUSION

Applicant Name: Timothy and Martha Rodabaugh

Type of Use: Domestic Commercial
 Industrial Agricultural

Amount: 1.1 AF 0.033 cfs 15 gpm

Location: Area A A-1 Area B Inclusion
 County: EAGLE Contiguous:
 BWCD Division: 7

Mid Valley Metro District Notice Required? Yes No

Blue Creek Water Rights Applied? Yes No

02CW77 Umbrella Plan Water Rights Applied? Yes No **Cost:** \$1,200

This application is to cover depletions associated with a single-family dwelling, 4 horses, and evaporative depletions associated with 10,000 square foot pond. Total contract depletions are 1.1 acre-feet (AF) as shown on the attached tables. The pond is proposed to be constructed on the property to the south of the existing residence (~UTM NAD83 Z13 4360855.84 N, 344344.0 E).

The property is approximately 40 acres and is owned by the Timothy and Martha Rodabaugh in Eagle County, Colorado (Parcel No. 247106400015). The parcel is located in the SE1/4 of Section 6, Township 8 South, Range 84 West of the 6th P.M. The physical address of the property is 16350 Frying Pan Road. The property is outside of the Division 7 boundary and requires inclusion into the District. A BWCD map is also attached showing the location of the property.

The source of supply for under the contract is the Rodabaugh Well (15 gpm): Located in the NE1/4 SE1/4 of Section 6, Township 8 South, Range 84 West, of the 6th P.M. at a point 1,700 feet from the South section line and 800 feet from the West section line (UTM NAD83 Z13 4360873.6 N, 344355.74 E).

Water User :	Timothy and Martha Rodabaugh	
Analysis Date :	September 30, 2020	
District Area:	A	
Source Series:	4	
Maximum Demand:	15	0.033
	(GPM)	(CFS)

BASALT WATER CONSERVANCY DISTRICT
WATER REQUIREMENTS
(acre feet)

Month	Total Demand						Consumptive Use							(14) Source of Aug/Replace
	(1) Domestic In-house	(2) Pond Evaporation	(3) Domestic Irrigation	(4) Agriculture	(5) Livestock	(6) TOTAL	(7) Domestic In-house	(8) Pond Evaporation	(9) Domestic Irrigation	(10) Agriculture	(11) Livestock	*(12) TOTAL	*(13) Depletions	
January	0.033	0.008	0.000	0.000	0.004	0.046	0.005	0.008	0.000	0.000	0.004	0.019	0.037	GNM
February	0.030	0.024	0.000	0.000	0.004	0.058	0.005	0.024	0.000	0.000	0.004	0.036	0.049	GNM
March	0.033	0.049	0.000	0.000	0.004	0.086	0.005	0.049	0.000	0.000	0.004	0.064	0.066	GNM
April	0.032	0.073	0.000	0.000	0.004	0.109	0.005	0.073	0.000	0.000	0.004	0.090	0.087	GNM
May	0.033	0.102	0.000	0.000	0.004	0.139	0.005	0.102	0.000	0.000	0.004	0.122	0.107	GNM
June	0.032	0.126	0.000	0.000	0.004	0.162	0.005	0.126	0.000	0.000	0.004	0.148	0.130	GNM
July	0.033	0.130	0.000	0.000	0.004	0.168	0.005	0.130	0.000	0.000	0.004	0.153	0.133	GNM
August	0.033	0.106	0.000	0.000	0.004	0.143	0.005	0.106	0.000	0.000	0.004	0.126	0.117	GNM
September	0.032	0.089	0.000	0.000	0.004	0.126	0.005	0.089	0.000	0.000	0.004	0.108	0.105	GNM
October	0.033	0.061	0.000	0.000	0.004	0.098	0.005	0.061	0.000	0.000	0.004	0.077	0.082	GNM
November	0.032	0.033	0.000	0.000	0.004	0.069	0.005	0.033	0.000	0.000	0.004	0.046	0.060	GNM
December	0.033	0.012	0.000	0.000	0.004	0.050	0.005	0.012	0.000	0.000	0.004	0.024	0.042	GNM
TOTALS -->	0.392	0.813	0.000	0.000	0.049	1.254	0.059	0.813	0.000	0.000	0.049	1.013	1.013	

Assumptions					
(1)	NUMBER OF RESIDENCES	1	(5)	# of Livestock @ 11 gals/day	4
	# persons/residence	3.5	(7)	% CU for Domestic/Commercial	15
	# gallons/person/day	100			
(2)	Commercial/Other Demand (af)	0.000	(9)	% Lawn Irrig. Efficiency	80
	Pond Evaporation	0.813		Consumption of Irrig. (af/ac)	0.000
(3)	Sq. Ft. of Lawn Irrigated	0	(10)	% Crop Irrig. Efficiency	80
	Lawn Application Rate (af/ac)	0.000		Consumption of Irrig. (af/ac)	0.000
(4)	Acres of Crop Irrigated	0.00	(9-10)	Elevation (feet)	8240
	Crop Application Rate (af/ac)	0.000			

Area A-1
Pond Creek
Individual Well Glover

*(12), (13) Total Includes 5% Transit Loss
10% from Green Mtn.

**TABLE 1
EVAPORATION CALCULATION - > 6,500 RODABAUGH POND**

Month	SEO Monthly Distribution	(1) Gross Lake Evaporation		(2) Average Precipitation		(3) Effective Precipitation		(4) Net Evaporation		(5) Total Evaporation
		(feet)	(inches)	(feet)	(inches)	(feet)	(inches)	(feet)	(inches)	(acre-feet)
January	1.0%	0.04	0.43	0.07	0.84	0.00	0.00	0.04	0.43	0.008
February	3.0%	0.11	1.28	0.07	0.79	0.00	0.00	0.11	1.28	0.024
March	6.0%	0.21	2.55	0.05	0.58	0.00	0.00	0.21	2.55	0.049
April	9.0%	0.32	3.83	0.11	1.35	0.00	0.00	0.32	3.83	0.073
May	12.5%	0.44	5.31	0.09	1.02	0.00	0.00	0.44	5.31	0.102
June	15.5%	0.55	6.59	0.14	1.73	0.00	0.00	0.55	6.59	0.126
July	16.0%	0.57	6.80	0.10	1.14	0.00	0.00	0.57	6.80	0.130
August	13.0%	0.46	5.53	0.17	1.99	0.00	0.00	0.46	5.53	0.106
September	11.0%	0.39	4.68	0.16	1.96	0.00	0.00	0.39	4.68	0.089
October	7.5%	0.27	3.19	0.13	1.57	0.00	0.00	0.27	3.19	0.061
November	4.0%	0.14	1.70	0.07	0.80	0.00	0.00	0.14	1.70	0.033
December	1.5%	0.05	0.64	0.11	1.32	0.00	0.00	0.05	0.64	0.012
	100.0%	3.54	42.50	1.26	15.09	0.00	0.00	3.54	42.50	0.813

(1) = Monthly distribution of gross annual evaporation rate in accordance with SEO General Criteria.

(2) = Monthly precipitation from local weather station.

(3) = Equal to 0 per State Policy No. 2004-3.

(4) = Net Evaporation = Column (1) - Column (3)

(5) = Column (4) x Open Water Surface Area (tbd acres) x Column (4) in feet.

Surface Area = 10,000 square feet
 0.230 acres

Well Pumping Depletion Model (WPDM)

1. Enter Project Description:

Rodabaugh
Individual Glover for Well (Permit No. 178974)

2. Select One of the Following Four Aquifer Options:

Option No. 1

Option No. 2

Option No. 3

Option No. 4

Boundary affects approximated by use of an effective stream depletion factor (sdf).

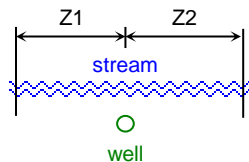
Option No. 2

3. Enter Physical Characteristics:

Clear Data:

Aquifer Transmissivity (gpd/ft):	<input type="text" value="100,000"/>	(Required for Option Nos. 1, 2, or 3 only)
Aquifer Specific Yield:	<input type="text" value="0.20000"/>	(Required for Option Nos. 1, 2, or 3 only)
Distance X (feet):	<input type="text" value="500"/>	(Required for Option Nos. 1, 2, or 3 only)
Distance W (feet):	<input type="text" value="850"/>	(Option No. 2 only)
Distance B (feet):	<input type="text"/>	(Option No. 3 only)
sdf:	<input type="text"/>	(Option No. 4 only)

For Option Nos. 1, 2, or 3, do you want to compute depletion for a segment of the stream?



*Distance Z1 (feet): (enter -99999 for negative infinity)
 *Distance Z2 (feet): (enter 99999 for infinity)

* Z1 can not exceed Z2, and Z2 can not exceed B.

Project Data Summary	
Aquifer Option:	Option No. 2
Transmissivity (gpd/ft):	100,000
Specific Yield:	0.20
Distance X (ft):	500
Distance W (ft):	850
Distance B (ft):	0
sdf:	0
Compute Depletion for Stream Segment?:	No
Distance Z1 (ft):	0
Distance Z2 (ft):	0

1. Clear All Previous Pumping Data and Depletion Results (including Item Nos. 3 and 4):

Click to Clear Previous Data & Results

2. Select Time Units:

3) Months

3. Enter Number of Pumping Periods:

360

Notes: a) Can not be greater than 3,600 periods.
b) execution time is faster if fewer pumping periods used.

4. Enter Starting Date:

1/1/2020

(e.g., enter 12/01/1950 for December 1, 1950)

5. Pumping Schedule and Depletion Results:

a) Below, enter the Pumping Rate (Col C, yellow cells) corresponding with the associated Pumping Period.

b) Cyclical Data Entry Option (not required):

Enter the number of pumping periods to cycle: 12

Enter the number of cycles: 10

Enter the pumping rates to cycle (Col C, yellow cells).

Click button to cycle data: Cycle Data

c) After the data have been entered, click on the button below to calculate the resulting stream depletion.

Calculate Stream Depletion

6. Graph:

Select Data to Graph - 4) Depletion Rate

Click Button to Create Graph - Create Graph

Pumping Schedule			Pumping Summary		Depletion Summary		
Date	Pumping Period (months)	Pumping Rate (gpm)	Volume Pumped This Period (acre-feet)	Cumul. Volume Pumped (acre-feet)	Depletion Rate (gpm)	Volume of Depletion (acre-feet)	Volume of Depletion This Period (acre-feet)
1/1/2020	1	0.33	0.04	0.04	0.33	0.04	0.04
2/1/2020	2	0.47	0.06	0.11	0.47	0.10	0.06
3/1/2020	3	0.63	0.08	0.19	0.63	0.18	0.08
4/1/2020	4	0.83	0.11	0.30	0.83	0.29	0.11
5/1/2020	5	1.02	0.14	0.44	1.02	0.42	0.13
6/1/2020	6	1.22	0.16	0.60	1.22	0.58	0.16
7/1/2020	7	1.22	0.16	0.77	1.22	0.74	0.16
8/1/2020	8	1.05	0.14	0.91	1.05	0.89	0.14
9/1/2020	9	0.95	0.13	1.04	0.95	1.02	0.13
10/1/2020	10	0.72	0.10	1.13	0.72	1.12	0.10
11/1/2020	11	0.52	0.07	1.20	0.52	1.19	0.07

Pumping Schedule			Pumping Summary		Depletion Summary		
Date	Pumping Period (months)	Pumping Rate (gpm)	Volume Pumped This Period (acre-feet)	Cumul. Volume Pumped (acre-feet)	Depletion Rate (gpm)	Volume of Depletion (acre-feet)	Volume of Depletion This Period (acre-feet)
12/1/2020	12	0.36	0.05	1.25	0.36	1.24	0.05
1/1/2021	13	0.33	0.04	1.30	0.33	1.29	0.05
2/1/2021	14	0.47	0.06	1.36	0.47	1.35	0.06
3/1/2021	15	0.63	0.08	1.44	0.63	1.43	0.08
4/1/2021	16	0.83	0.11	1.56	0.83	1.54	0.11
5/1/2021	17	1.02	0.14	1.69	1.02	1.67	0.13
6/1/2021	18	1.22	0.16	1.86	1.22	1.83	0.16
7/1/2021	19	1.22	0.16	2.02	1.22	2.00	0.16
8/1/2021	20	1.05	0.14	2.16	1.05	2.14	0.14
9/1/2021	21	0.95	0.13	2.29	0.95	2.27	0.13
10/1/2021	22	0.72	0.10	2.39	0.72	2.37	0.10
11/1/2021	23	0.52	0.07	2.46	0.52	2.44	0.07
12/1/2021	24	0.36	0.05	2.50	0.36	2.50	0.05
1/1/2022	25	0.33	0.04	2.55	0.33	2.54	0.05
2/1/2022	26	0.47	0.06	2.61	0.47	2.60	0.06
3/1/2022	27	0.63	0.08	2.70	0.63	2.68	0.08
4/1/2022	28	0.83	0.11	2.81	0.83	2.79	0.11
5/1/2022	29	1.02	0.14	2.94	1.02	2.92	0.13
6/1/2022	30	1.22	0.16	3.11	1.22	3.08	0.16
7/1/2022	31	1.22	0.16	3.27	1.22	3.25	0.16
8/1/2022	32	1.05	0.14	3.41	1.05	3.39	0.14
9/1/2022	33	0.95	0.13	3.54	0.95	3.52	0.13
10/1/2022	34	0.72	0.10	3.64	0.72	3.62	0.10
11/1/2022	35	0.52	0.07	3.71	0.52	3.70	0.07
12/1/2022	36	0.36	0.05	3.76	0.36	3.75	0.05

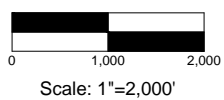
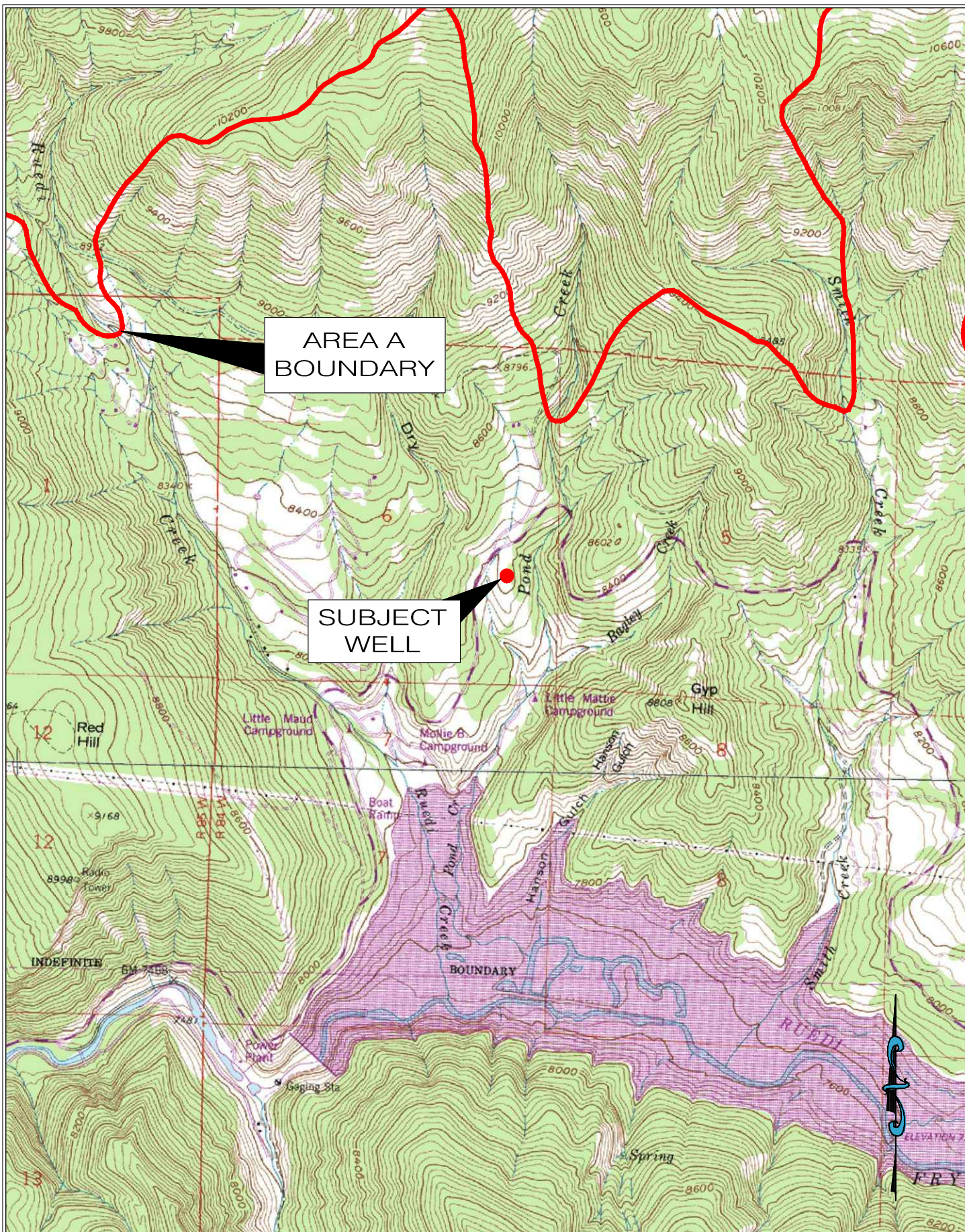


Figure 1: Timothy and Martha Rodabaugh

Water Allotment Contract Application
Basalt Water Conservancy District

3. Legal description and address of property on which District's water rights and/or contract water will be used (attach map and vesting deed with proof of ownership)*:

A map and vesting deed with proof of ownership is attached

4. Elevation of property: _____ 6-7,000 ft., _____ 7-8,000 ft., 8-9,000 ft.

5. Name and legal description of water supply diversion point(s):

Name of Diversion N/A.

Type of Diversion Well (e.g., a well, spring, ditch, pipeline, etc.)

Legal Description: NE Quarter, SE Quarter, Section 6, Township 8 S, Range 84 W, of the 6th Principal Meridian, at a location 1700 feet from the South Section line and 800 feet from the East Section line.

UTM Coordinates (NAD 83):

Northing: _____.

Easting: _____.

_____ Zone 12 / _____ Zone 13.

If diversion point is a well, please provide the Well Permit No. Well Permit No. 178974.

Is the well operational/active? Yes, _____ No

Is there currently an operating well meter? _____ Yes, _____ No

- Unknown

Notice: A valid well permit with operating well meter will be required under the contract.

Name of Diversion N/A.

Type of Diversion Pond (e.g., a well, spring, ditch, pipeline, etc.)

Legal Description: _____ Quarter, _____ Quarter, Section _____, Township _____, Range _____, of the 6th Principal Meridian, at a location _____ feet from the _____ Section line and _____ feet from the _____ Section line.

UTM Coordinates (NAD 83):

 Northing: 39.38316.

 Easting: -106.80743.

 _____ Zone 12 / x _____ Zone 13

6. Legal Water Supply: (please check one)

X Applicant requests consideration by the District to be included in the District's Umbrella Plan for Augmentation decreed in Case No. 02CW77.*

*Note: Certain applicants may qualify to be included in the District's Umbrella Plan at the District's discretion. In order to be included in the District's Umbrella Plan, the Applicant's depletions must occur within the District's defined "Area A" and the Applicant must reimburse the District its *pro rata* share of the District's expenses in obtaining the Umbrella Plan decree. Costs of reimbursement are contingent upon location and intensity of the uses, and range from \$1,200 for contractees with less than 2 units (EQRs) in certain areas, to \$5,000 for more than 8 EQRs in Area A-3 (generally the Roaring Fork drainage above its confluence with the Fryingpan Rivers).

_____ Applicant will obtain its own plan for augmentation by applying to the Water Court, Water Division 5 within 2 years of this application. If Applicant

has already applied for its own change/approval of plan for augmentation, the Water Court Case Number is: _____.

7. Proposed waste water treatment system: (please check)

- Tap to central waste water treatment facility
 Septic tank/leachfield system
 Evapotranspiration system
 Other:

8. Proposed use of water (please check)

- Domestic/Municipal (single family home(s), duplex(s), condominium(s), mobile home(s), apartment). Please complete page four of this application.
 Commercial (hotel, office, warehouse, restaurant, bar, retail). Please complete page five of this application.
 Industrial (gravel pit, manufacturing). Please complete page six of this application.
 Agricultural (crop irrigation, stock watering). Please complete page seven of this application.

Date on which the county or other applicable governmental entities approved the land use for which you seek legal water service: N/A. (Note: Copy of the Resolution of other documentation evidencing such approval should be submitted with application.)

9. What other water rights are associated with or used on the property? N/A

10. What other uses of water occur on the property? N/A

11. Please complete the section below if you selected domestic/municipal use on Page 3, No. 8

DOMESTIC/MUNICIPAL WATER USES

My commission expires: 05/25/2024