

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

A. GENERAL INFORMATION

Permit No. 36-8329

Exam Date: 6/19/2014

1. Current Owner: CLEAR LAKE RANCH P U D MASTER ASSN INC
313 CLEAR LAKE LN
BUHL ID 83316
(208)543-4056

2. **Accompanied by:** Mike Cowan, David Brush, Clay Bingham
Phone No: 543-2970, after 3:00PM
Address: 223 Clear Lake Lane, Buhl, ID 83316
Relationship to Permit Holder: Water System manager, residents of subdivision

3. SOURCE

TRIBUTARY

SPRINGS

CLEAR LAKE

B. OVERLAP REVIEW

1. Other water rights with the same place of use: 36-16236 – irrigation right for subdivision; 36-10155 – Culinary inside club house; 36-8369 – culinary inside club house, restrooms, and RV, trailer area; 36-8370 – Heating and cooling inside club house; 36-10150 – old, apparently unused domestic right inside subdivision.

2. Other water rights with the same point of diversion: 36-16236

C. DIVERSION AND DELIVERY SYSTEM

1. LOCATION OF POINT(S) OF DIVERSION:

SPRINGS

L5 SE1/4NE1/4

Sec. 2, Twp 09S, Rge 14E, B.M.

GOODING County

Method of Determination: ArcMap aerial imagery and site visit

2.

PLACE OF USE: DOMESTIC

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
09S	14E	1									X	X	X	X					
											L 13	L 13	L 12	L 15					
09S	14E	2													X			X	
															L 9			L 9	
09S	14E	11	X																
			L 5																

PLACE OF USE: COMMERCIAL

Twp Rge Sec	NE				NW				SW				SE				Totals
	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
09S 14E 1									X L 13								
09S 14E 2														X L 7	X L 9		

PLACE OF USE: FIRE PROTECTION

Twp Rge Sec	NE				NW				SW				SE				Totals
	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	<u>NE</u>	<u>NW</u>	<u>SW</u>	<u>SE</u>	
09S 14E 1								X L 13	X L 13	X L 12	X L 15						
09S 14E 2													X L 9	X L 7	X L 9		
09S 14E 11	X L 5																

Method of Determination: ArcMap aerial imagery. **NOTE:** The labeling of the QQs in ArcMap appears to be inaccurate in T09S, R14E, Section 2. The SWSE and the SESE are switched.

3. ☒ Delivery System Diagram Attached (required). Indicate all major components and distances between components. Indicate weir size/pipe as applicable.
- ☒ Map Attached Showing Location(s) of point(s) of diversion and place(s) of use (required). Scale must be 1:24,000 or greater.
- ☒ Aerial Photo Attached (required for irrigation of 10+ acres).
- ☒ Photo of Diversion and System Attached

4.

<u>Well or Diversion ID No.*</u>	<u>Motor Make</u>	<u>Hp</u>	<u>Motor Serial No.</u>	<u>Pump Make</u>	<u>Pump Serial No. or Discharge Size</u>
----------------------------------	-------------------	-----------	-------------------------	------------------	--

A0004453 Diversion from spring, gravity flow to pump house. 15 and 40 HP booster pumps in pump house.

*Code to correspond with No. on map and aerial photo

D. FLOW MEASUREMENTS

1.

<u>Measurement Equipment</u>	<u>Type</u>	<u>Make</u>	<u>Model No.</u>	<u>Serial No.</u>	<u>Size</u>	<u>Calib. Date</u>
Flowmeter	Sonic	Fuji				

2. Measurements: Performed a 15 minute flow test with Fuji meter.

E. FLOW CALCULATIONS X Additional Computation Sheets Attached

Measured Method: Maximum recorded flow rate was 951.4 gpm or 2.12 cfs. See *Attachment A, Flow and Volume Calculations* for further information.

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation: NA

$$V_{I.R.} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$$

$$V_{D.R.} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation season}) \times 1.9835 =$$

$$V = \text{Smaller of } V_{I.R.} \text{ and } V_{D.R.} =$$

2. Volume Calculations for Other Uses: See *Attachment A, Flow and Volume Calculations*.

G. NARRATIVE/REMARKS/COMMENTS

The Beneficial Use Field Exam for permit 36-8329 was completed on June 19, 2014 with Mike Cowan, who is a resident of the subdivision, in addition to being the person in charge of the subdivision water system, present. The Clear Lake Subdivision is located in the Snake River Canyon, west of the Clear Lake Grade, and is surrounded by the Clear Lake Country Club Golf Course. Water for this permit is collected in a 15 inch by 30 foot perforated collection pipe just below the old Clear Lake grade road and is fed into a 12 inch delivery pipeline which runs 1650 feet, both above and below ground, to a 15,000 gallon storage tank. Water right 36-16236, which is the irrigation water right for the subdivision, is also delivered through this pipe. The storage tank helps to even out flow variations in the system to assure a consistent availability of water. Inside the pump house, there is a 15 HP booster pump for the domestic portion and a 40 HP booster pump for the irrigation water for the subdivision. A Badger magnetic flowmeter is installed in the pump house and was accurate to within 6% of the calibrated IDWR Fuji meter on the day of the exam. The maximum recorded flow rate during the field exam, was 951.4 gpm or 2.12 cfs, so sufficient flow was available to satisfy the permit.

After exiting the pump house, the permit water is piped throughout the subdivision to 28 existing homes and another 57 bare lots with water line stub-outs. Three fire suppression hydrants are located within the subdivision and allow fire hoses to be hooked directly; or if necessary, to fill fire trucks on site.

On the commercial side of the permit, two golf course restrooms are supplied with water from this system. One is located on the far eastern end of the golf course, and the other is located adjacent to the RV/trailer court parking area on the western edge of the facility. The golf course maintenance shed uses water from this permit for a toilet and sink for employees. The club house for the Clear Lake Country Club is also supplied with water from this system for culinary purposes inside the building. On the west end of the golf course, the RV-trailer court water is furnished by this permit. There are 17 RV parking spots, all of which have faucets.

I spoke with Michael Kinyon, the assistant superintendent of the golf course, about water use in the club house area, as it appeared there was some duplicate use. The club house uses water from a nearby well for heating and cooling under a separate water right, 36-8369 (0.07 cfs, commercial). This right was licensed for culinary use in the club house, and for use in the restroom, cook shack, and the RV-trailer court, but according to Mr. Kinyon, it is undrinkable. The water right that was licensed for heating and cooling was right 36-8370 (0.08 cfs) from an unnamed stream. Mr. Kinyon says this right is no longer used and has been unhooked from the source. A water right transfer involving a change in nature of use should be recommended to the Country Club. Water right

36-10155 (spring, 0.05 cfs) also evidently supplied water to the club house, but was never a reliable source, and is no longer used.

Right 36-10150 (ground water, 0.04 cfs, domestic) was apparently for a house located on the property before the subdivision was developed, and according to David Brush, whose family developed the subdivision, has been capped.

The flow rate for the domestic portion should be maintained at 0.70 cfs,, the permitted amount. I recommend a flow rate of 0.12 cfs for the commercial portion of permit (see calculations in measurement section of Field Report). Fire protection portion should be licensed at the permitted rate of 1.50 cfs.

The volume recommendation for the domestic portion will be 51.0 AF, based on 0.6 AF/lot for in-house use only, as the subdivision has an existing irrigation right, as mentioned above. The volume for the commercial use is 28.2 AF (see volume calculations in Field Report), and the fire protection portion is exempt from a volume assignment, per Beneficial Use Exam Rules.

An amendment of the permit will be necessary due to a change in the place of use from the permitted place of use. All of the conditions of the permit appear to have been complied with.

After the amendment was sent out and subsequently returned with the fee, Mr. Bingham, who is the president of the PUD Master Association, contacted me and said that there were errors in the information given to me during the field exam and the Owner's Association wanted to submit more accurate data. They brought in the new information and the license has been amended to reflect the new information. A second amendment will be sent out.

Have conditions of permit approval been met? ☒ Yes ☐ No

H. RECOMMENDATIONS

1. Recommended Amounts

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL VOLUME</u>
DOMESTIC	01/01 to 12/31	0.700 CFS	51.00 AF
COMMERCIAL	01/01 to 12/31	0.120 CFS	28.20 AF
FIRE PROTECTION	01/01 to 12/31	1.500 CFS	
<u>Totals:</u>		1.500 CFS	79.20 AF

2. Recommended Amendments

☐ Change P.D. as reflected above ☐ Add P.D. as reflected above ☐ None

☒ Change P.U. as reflected above ☒ Add P.U. as reflected above ☐ Other

I. AUTHENTICATION

Field Examiner's Name

[Signature]

Date

4-20-15

Reviewer

[Signature]

Date

9/1/15

Attachment A, Flow and Volume Calculations

Based on Exhibits 12 and 14, IDWR Field Examiner's Handbook and information obtained during the Field Exam on 6/19/14.

Flow rate and volume for domestic use

A flowmeter test was performed and yielded a maximum flow rate of 951.4 gpm or 2.12 cfs, so the permitted flow rate of 0.70 cfs for domestic use is recommended.

The volume for the domestic portion will be based on 0.6 AF/lot for in-house use only, because the subdivision has an irrigation right 36-16236 (0.9 cfs, 44.7 acres). Therefore, 85 lots at 0.6 AF/lot = 51.0 AF.

Flow rate and volume for commercial use

Commercial use under this permit was found for the following facilities: the golf course club house, the golf course maintenance shed, two golf course restrooms, and the RV/trailer park.

Club House

Use in the club house was estimated at 8 months at 16 hours/day and 4 months at 10 hours/day for a total of 5040 hours/year. Club house contains 6 bathroom sinks, 2 urinals, 5 toilets, 4 showers, 2 outdoor faucets, 3 kitchen sinks, and 1 dishwasher for a total of 23 fixtures.

The flow rate is calculated by: $23 \text{ water using fixtures (fixtures)} \times 0.65 \text{ gpm/fixture (hotels/clubs rate)} = 15.0 \text{ gpm}/448.8 \text{ gal} = 0.03 \text{ cfs}$

$\text{Volume} = 15.0 \text{ gpm} \times 60 \text{ min/hour} = 900 \text{ gal/hour} \times 5040 \text{ hours/year} = 4536000 \text{ gal}/325850 \text{ gal/AF} = 13.9 \text{ AF}$

Maintenance Shed

Use in the maintenance shed is estimated at 8 months at 8 hours/day and 4 months at 6 hours/day for a total of 2640 hours/year. Shed contains 1 toilet and 1 sink and an outside faucet.

$\text{Flow rate} = 3 \text{ fixtures} \times 1.1 \text{ gpm/fixture (office rate)} = 3.3 \text{ gpm}/448.8 \text{ gal} = 0.01 \text{ cfs}$

$\text{Volume} = 3.3 \text{ gpm} \times 60 \text{ min/hour} = 198 \text{ gal/hour} \times 2640 \text{ hours/year} = 522720 \text{ gal}/325850 \text{ gal/AF} = 1.6 \text{ AF}$

RV/Trailer Camping Area

Use in the camping area is estimated at 8 hours/day for 6 months for a total of 1440 hours/year. Assumed each RV or trailer had a kitchen sink, bathroom sink, toilet, and shower- 68 fixtures.

$\text{Flow rate} = 68 \text{ fixtures} \times 0.35 \text{ gpm/fixture (apartment/hotel rate)} = 23.8 \text{ gpm}/448.8 \text{ gal} = 0.05 \text{ cfs}$

$\text{Volume} = 23.8 \text{ gpm} \times 60 \text{ min/hour} = 1428 \text{ gal/hour} \times 1440 \text{ hours} = 2056320 \text{ gal}/325850 \text{ gal/AF} = 6.3 \text{ AF}$

Golf Course Restrooms

Restroom use is estimated at 8 months at 8 hours/day and 4 months at 8 hours/day for a total of 2880 hours. The restrooms have a total of 2 urinals, 5 toilets, and 4 sinks for 11 fixtures total.

Flow rate = 11 fixtures x 1.1 gal/fixture (office rate) = 12.1 gpm/448.8 gal = 0.03 cfs

Volume = 12.1 gpm x 60 min/hour = 726 gal/hour x 2880 hours = 2090880 gal/year/325850 gal/AF = 6.4 AF

Commercial flow rate and volume:

<u>Location</u>	<u>Flow Rate</u>	<u>Volume</u>
Club house	0.03 cfs	13.9 AF
Maintenance Shed	0.01 cfs	1.6 AF
RV/Trailer Area	0.05 cfs	6.3 AF
Restrooms	0.03 cfs	6.4 AF
Totals	0.12 cfs	28.2 AF

LD04

No. 04

6/19/2014 15:55 Clear Lakes Ranch PUD Master Ass'n

LOG NAME:MAXFLW

+1.019E+1 ft/s

Max flow = 951.4 gpm or 2.12 cfs

START :06-19 15:45

+9.410E+2 gal/m

END :06-19 16:05

+TOTAL 0005295 gal

INTERVAL:00:01:00

NORMAL

6/19/2014 15:45

6/19/2014 15:56

+1.156E+0 ft/s

+1.025E+1 ft/s

+1.067E+2 gal/m

+9.473E+2 gal/m

+TOTAL 0000000 gal

+TOTAL 0006237 gal

NORMAL

NORMAL

6/19/2014 15:46

6/19/2014 15:57

+1.011E+0 ft/s

+7.389E+0 ft/s

+9.340E+1 gal/m

+6.824E+2 gal/m

+TOTAL 0000101 gal

+TOTAL 0007163 gal

NORMAL

NORMAL

6/19/2014 15:47

6/19/2014 15:58

+1.047E+0 ft/s

+7.820E+0 ft/s

+9.676E+1 gal/m

+7.222E+2 gal/m

+TOTAL 0000200 gal

+TOTAL 0007883 gal

NORMAL

NORMAL

6/19/2014 15:48

6/19/2014 15:59

+3.828E+0 ft/s

+7.786E+0 ft/s

+3.535E+2 gal/m

+7.190E+2 gal/m

+TOTAL 0000325 gal

+TOTAL 0008605 gal

NORMAL

NORMAL

6/19/2014 15:49

6/19/2014 16:00

+4.168E+0 ft/s

+6.713E+0 ft/s

+3.849E+2 gal/m

+6.199E+2 gal/m

+TOTAL 0000703 gal

+TOTAL 0009322 gal

NORMAL

NORMAL

6/19/2014 15:50

6/19/2014 16:01

+4.135E+0 ft/s

+7.595E-1 ft/s

+3.818E+2 gal/m

+7.014E+1 gal/m

+TOTAL 0001084 gal

+TOTAL 0009707 gal

NORMAL

NORMAL

6/19/2014 15:51

6/19/2014 16:02

+7.309E+0 ft/s

+1.125E+0 ft/s

+6.750E+2 gal/m

+1.039E+2 gal/m

+TOTAL 0001657 gal

+TOTAL 0009798 gal

NORMAL

NORMAL

6/19/2014 15:52

6/19/2014 16:03

+1.030E+1 ft/s

+1.057E+0 ft/s

+9.514E+2 gal/m

+9.762E+1 gal/m

+TOTAL 0002447 gal

+TOTAL 0009901 gal

NORMAL

NORMAL

6/19/2014 15:53

6/19/2014 16:04

+1.029E+1 ft/s

+1.049E+0 ft/s

+9.505E+2 gal/m

+9.692E+1 gal/m

+TOTAL 0003399 gal

+TOTAL 0010004 gal

NORMAL

NORMAL

6/19/2014 15:54

6/19/2014 16:05

+1.018E+1 ft/s

+1.109E+0 ft/s

+9.409E+2 gal/m

+1.024E+2 gal/m

+TOTAL 0004351 gal

+TOTAL 0010105 gal

NORMAL

NORMAL



A. Point of Diversion at Spring- Underground Collection Pipe

B. Twelve Inch Delivery Pipe After Leaving Point of Diversion





09S14E

2

SENE 8

NESE 6

NESE 4

36-8329



C. 15,000 Gallon Storage Tank Adjacent to Pump House

D. Pump House



36-8329

Idaho Department of Water Resources

System Diagram



Clear Lake Ranch
36-8329



Pipelines



Fire Suppression Hydrant





E, Plumbing Inside Pump House

F, Flowmeter

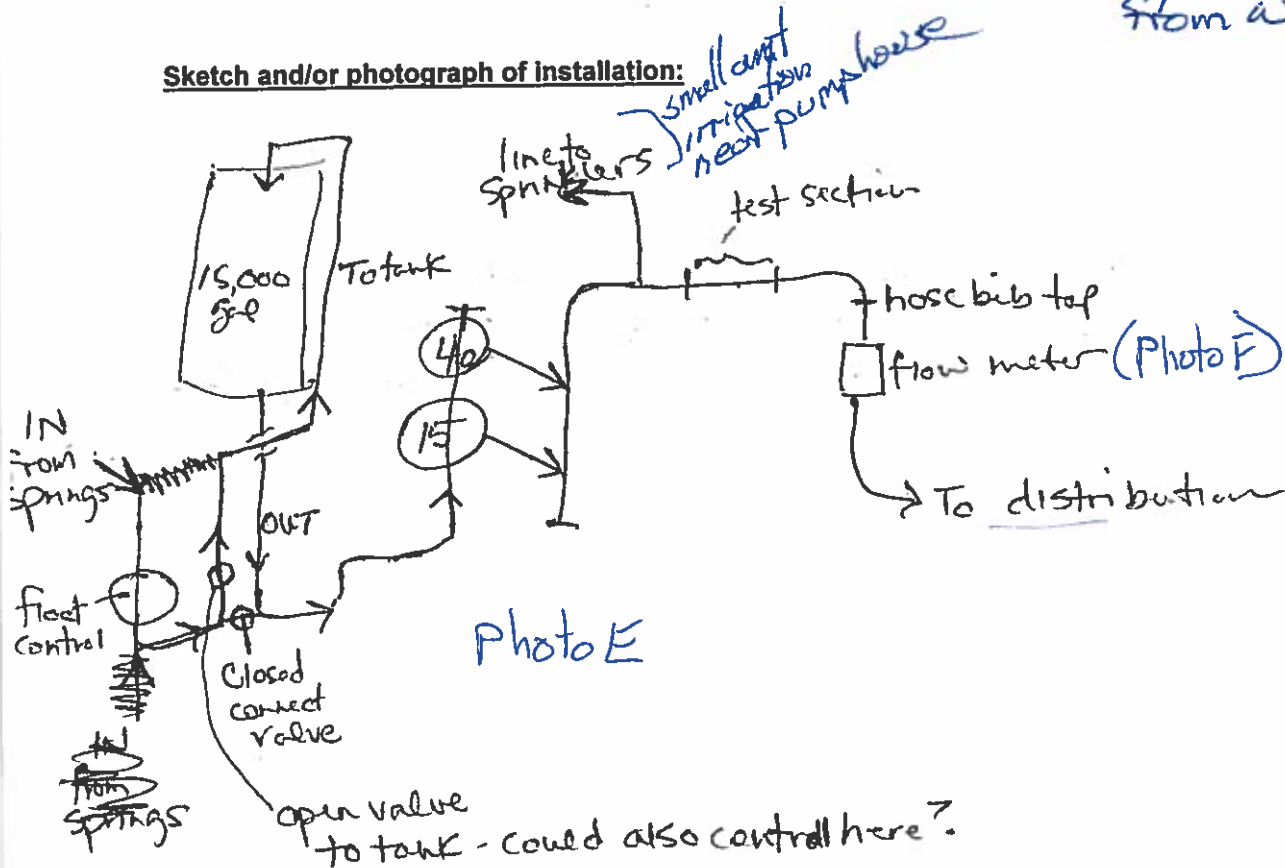


36-8329

WATER LEVEL DATA	
Does the well have access to measure water levels? ~ Yes ~ No (check one)	
Is this well part of USGS, IDWR, or another network of water level monitoring wells? ~ Yes ~ No (check one)	
Static Water Level _____ ft Date _____	Pumping Water Level _____ ft (at condition _____) Date _____

System Schematic
from WD130 file

Sketch and/or photograph of installation:



I certify that the above information is true and correct to the best of my knowledge and ability and the measurements taken and recorded are in accordance with the standards and specifications of the equipment used.

Signature

C. J. Carter

(person performing measurements)

Date 8-07-06

Meas. Rpt
2009 4/15

Calib
2006 0.21 ft
2014 0.29 ft

CLEAR LAKE HATCH PUD - SUBDIVISION DIVISION FROM CLEAR SPRINGS

LOG NAME: A0004453
START : 08-07 13:46
END : 08-07 14:08
INTERVAL: 00:01:00

36-8329



Stub-out at Empty Lot

Typical Home at Subdivision

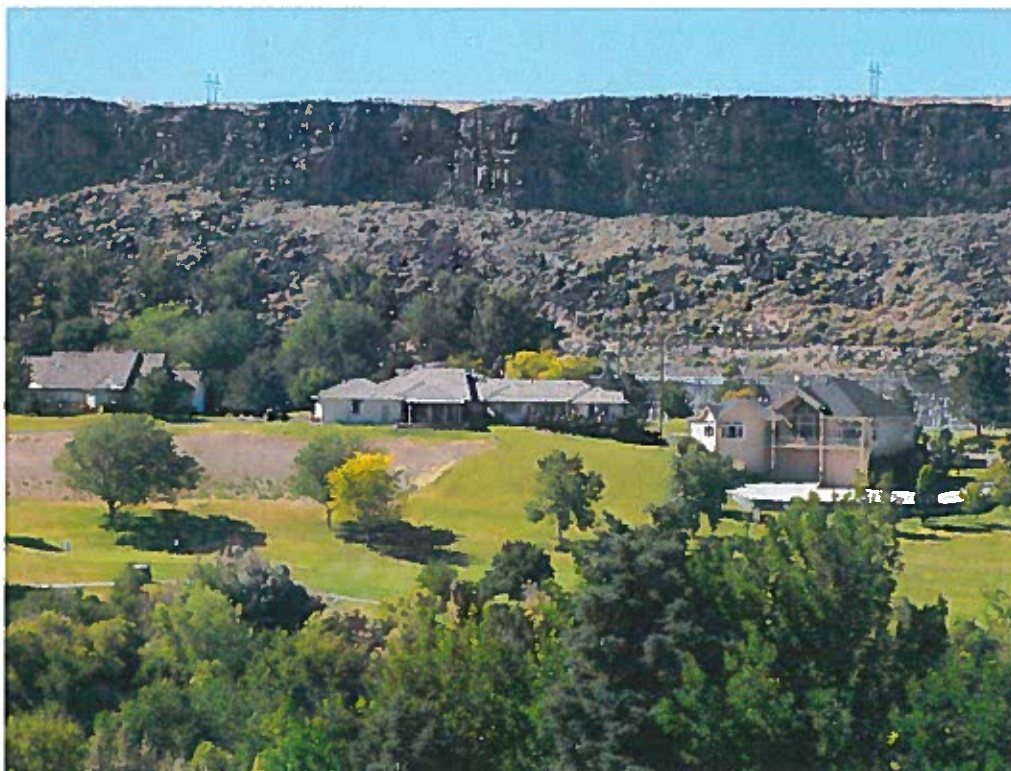


36-8329



One of the Homes in the Subdivision

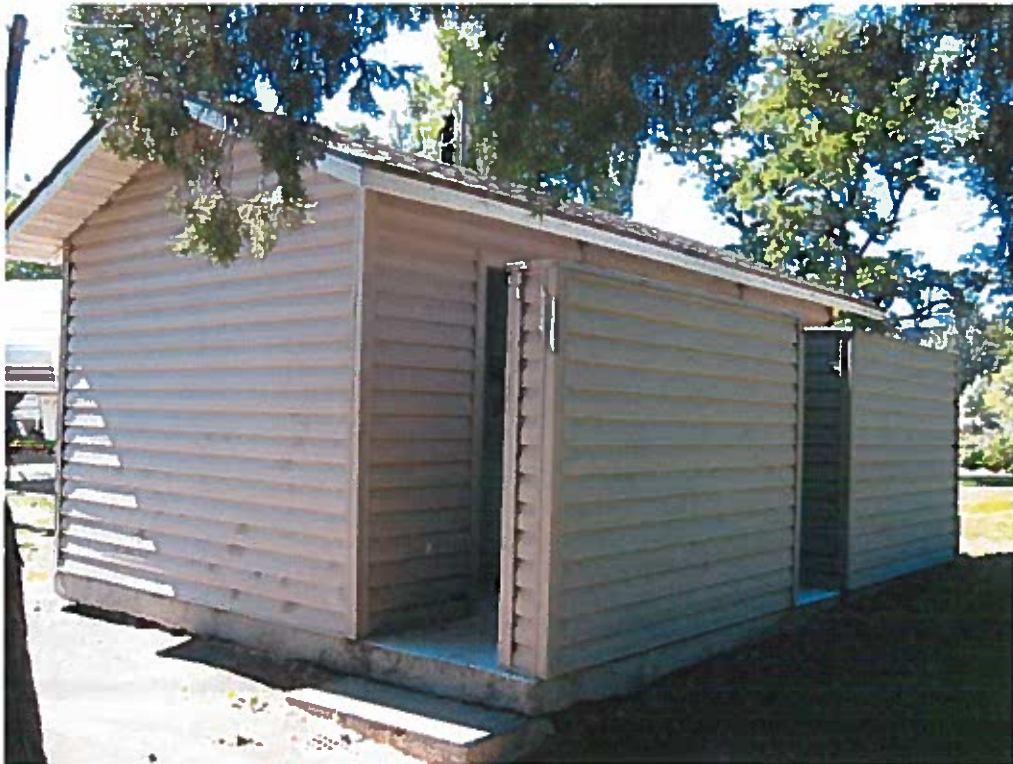
Homes in the Clear Lake Subdivision





Water Faucet at Trailer Park at the Clear Lake Country Club

One of Two Restroom Facilities at the Clear Lake Country Club





The Club House at Clear Lake Country Club

The Maintenance Building at Clear Lake Country Club

