

Method of Determination:

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</u> <u>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</u> <u>Size</u>
--	-------------------	-----------	-------------------------	------------------	--

D0041236 A0003219 WELL #4

D0045051 A0003220 WELL #6

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

D. FLOW MEASUREMENTS

- Well #4 = 0.07 cfs Well #6 = 0.08 cfs total of 0.15cfs
- Measurements: MAG MEASURING DEVICE ON THE SYSTEM AT EACH WELL LOCATION.

E. FLOW CALCULATIONS

____ Additional Computation Sheets Attached

Measured Method:

F. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

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

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

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

2. Volume Calculations for Other Uses: 17 HOMES AT 900 GAL PER DAY = 17.1 AF COMMON AREA 100 GAL PER DAY = 0.1 AF TOTAL VOLUME FOR THIS WATER RIGHT 17.2 AF

G. NARRATIVE/REMARKS/COMMENTS: PWS ID 1280338. The annual volume is derived from the conditions of approval permitted on December 27, 2005. 174,000 gallon tank with two, 5 hp buster pumps and a fire pump of 40 hp. All 17 lots are stubbed with water and power in the Fernan Estates. Well #4 and Well #6 are working and on line.

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>
MUNICIPAL	01/01 to 12/31	0.150 CFS	17.20 AF
<u>Totals:</u>		0.150 CFS	17.20 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 Eric J. [Signature] Date 11-14-2013

Reviewer Beeth E. [Signature] Date 11/21/2013

FERNAN LAKE ESTATES FIRST ADDITION

A PORTION OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER AND
PORTIONS OF GOV'T LOT 1, GOV'T LOT 4 AND GOV'T LOT 5
IN SECTION 16, TOWNSHIP 30 NORTH, RANGE 3 WEST, B.M.,
ROOTENHAY COUNTY, IDAHO

Book _____ Page _____
No. _____



1"=100'

BASIS OF BEARING

UNLESS OTHERWISE NOTED, THE MONUMENTED WEST LINE OF THE NORTHWEST 1/4 OF SECTION 16, TOWNSHIP 30 NORTH, RANGE 3 WEST, B.M., ROOTENHAY COUNTY, IDAHO, ACCORDING TO RECORD OF SURVEY RECORDED IN BOOK 24, AT PAGE 392, BEARING NORTH 06°12'22" EAST.

LEGEND

- SECTION CORNER - FOUND MONUMENT AS DESCRIBED
- QUARTER SECTION CORNER - FOUND MONUMENT AS DESCRIBED
- FOUND ZINC CAP, 2 1/2" DIAMETER, AS DESCRIBED
- FOUND 5/8" REBAR, 30" IN LENGTH, WITH PLASTIC CAP MARKED "J-U-B ENGINEERS PLUS 11280"
- FOUND 1/2" REBAR WITH PLASTIC CAP MARKED "3014"
- SET 1/2" REBAR, 30" IN LENGTH, WITH PLASTIC CAP MARKED "J-U-B ENGINEERS PLUS 13419"
- 15' DRAINAGE, UTILITY AND ROADWAY EASEMENT ADJOINING RIGHT-OF-WAY AS SHOWN HEREIN, UNLESS OTHERWISE INDICATED

CURVE	DELTA	RADIUS	LENGTH	CHORD	CHORD BEG.
C1	36°45'01"	38.14	68.08	68.23	107°11'00"E
C2	100°22'55"	20.00	38.22	31.83	340°02'13"W
C3	75°37'05"	20.00	28.61	24.61	148°57'47"W
C4	28°43'36"	230.00	107.59	108.32	100°22'30"E
C5	28°43'36"	200.00	83.39	84.43	100°22'30"E
C6	28°43'36"	170.00	78.30	78.51	100°22'30"E
C7	73°24'32"	20.00	23.82	23.91	104°28'48"E
C8	88°04'13"	20.00	30.64	27.30	148°48'50"W
C9	37°17'43"	230.00	133.53	132.25	107°22'41"W
C10	87°13'28"	20.00	33.84	30.01	538°37'12"W
C11	107°03'16"	20.00	37.38	32.17	538°48'14"E
C12	70°27'52"	280.00	24.80	24.89	217°10'29"W
C13	36°11'00"	200.00	38.24	38.03	200°42'00"E
C14	73°00'33"	230.00	31.40	31.42	31°32'34"E
C15	37°42'02"	230.00	151.40	148.89	538°48'14"E
C16	88°32'51"	200.00	147.75	150.07	308°11'47"E
C17	88°32'51"	170.00	128.30	130.74	308°11'47"E
C18	24°37'32"	230.00	88.85	88.00	228°16'12"E
C19	28°28'05"	230.00	116.22	116.82	100°00'00"E
C20	77°11'25"	237.00	30.43	30.41	107°21'25"E
C21	15°43'34"	237.00	65.04	64.83	100°00'00"E
C22	177°38'38"	281.00	821.32	812.89	104°41'10"W
C23	177°38'38"	177.00	335.21	333.13	104°41'10"W
C24	15°24'55"	237.00	63.76	63.67	140°30'34"E
C25	18°31'05"	237.00	72.87	72.82	123°22'53"E
C26	17°48'37"	237.00	73.87	73.37	100°00'00"E
C27	18°48'02"	237.00	77.88	77.53	104°30'34"E
C28	18°28'01"	237.00	98.18	87.85	103°30'34"E
C29	24°11'01"	237.00	100.04	98.20	101°15'32"E
C30	27°43'03"	237.00	114.63	113.54	107°21'25"E
C31	8°38'17"	237.00	30.73	30.88	538°48'14"E
C32	67°18'32"	470.00	68.30	68.24	100°00'00"E
C33	8°48'17"	300.00	78.01	78.01	100°00'00"E
C34	8°48'17"	300.00	81.81	81.33	100°00'00"E

SURVEYOR'S NOTE

ALL CURVE PLAT BEARINGS AND DISTANCES MATCH RECORD OF SURVEY OF USABILITY AND RECORD, RECORDED IN BOOK 25 OF SURVEYS, PAGE 392.

LINE	BEARING	LENGTH
11	100°22'30"E	3.44
12	100°22'30"E	4.28
13	100°22'30"E	30.10
14	100°22'30"E	30.10
15	100°22'30"E	2.62
16	100°22'30"E	32.03
17	100°22'30"E	61.62
18	100°22'30"E	13.30
19	100°22'30"E	48.17

FERNAN LAKE ESTATES FIRST ADDITION

A PORTION OF THE SOUTHWEST QUARTER OF THE NORTHWEST QUARTER AND PORTIONS OF GOV'T LOT 1, GOV'T LOT 4 AND GOV'T LOT 5 OF SECTION 16, TOWNSHIP 30 NORTH, RANGE 3 WEST, B.M., ROOTENHAY COUNTY, IDAHO

J-U-B ENGINEERS, INC.
7823 MIDLANDWAY WAY SUITE A
COEUR D'ALENE, IDAHO 83816
PHONE: 208-762-8787



DWG FILE: 20-08-040 FP.dwg
DES. DR. SKI CH. GJR SHEET 2 OF 4
DATE: JANUARY 2009 PROJ. NO. 20-08-040

SCALE: 1"=100'



IDAHO DEPARTMENT OF WATER RESOURCES WELL DRILLER'S REPORT

Office Use Only		
Well ID No.		
Inspected by		
Twp	Rge	Sec
1/4	1/4	1/4
Lat:	:	Long:
:	:	:

1. WELL TAG NO. D CD45051
 DRILLING PERMIT NO. 340966 Well ID# 411248
 Water Right or Injection Well No. WR 95-09323

2. OWNER: Scott or Randy McKahan
 Name Fernan Lake Estates, Inc.
 Address PO Box 2581
 City Coeur d'Alene State Id. Zip 83814

3. LOCATION OF WELL by legal description:

You must provide address or Lot, Blk, Sub. or Directions to well.

Twp. 50 North ☒ or South
 Rge. 3 East ☐ or West ☒
 Sec. 16 1/4 SE 1/4 NW 1/4
 Gov't Lot _____
 County Kootenai
 Lat: _____ Long: _____

Address of Well Site 5349 E. Fernan Lk. Rd.
 (Well #7, site #6) City Coeur d'Alene
 (Give at least name of road - Distance to Road or Landmark)

Lt. _____ Blk. _____ Sub. Name _____

4. USE:

☐ Domestic ☒ Municipal ☐ Monitor ☐ Irrigation
☐ Thermal ☐ Injection ☐ Other _____

5. TYPE OF WORK check all that apply (Replacement etc.)
☒ New Well ☐ Modify ☐ Abandonment ☐ Other _____

6. DRILL METHOD:

☒ Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

Seal Material	From	To	Weight / Volume	Seal Placement Method
Bentonite	0	146 1/2	900 lbs	4" over bore

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 146 1/2

Was drive shoe seal tested? ☒ Y ☐ N How? Air pressure

8. CASING/LINER:

Diameter	From	To	Gauge	Material	Casing	Liner	Welded	Threaded
6"	1 1/2'	146 1/2	280	Steel	☒	☐	☒	☐
4"	- 6	526	220	PVC.	☐	☒	☐	☐

Length of Headpipe _____ Length of Tailpipe _____

Packer ☐ Y ☒ N Type _____

9. PERFORATIONS/SCREENS PACKER TYPE

Perforation Method Sawcut

Screen Type & Method of Installation N/A

From	To	Slot Size	Number	Diameter	Material	Casing	Liner
306	386	1/8 x 7	240	4"	PVC.	☒	☒
406	446	1/8 x 7	120	4"	PVC.	☒	☒
486	526	1/8 x 7	120	4"	PVC.	☒	☒

10. FILTER PACK N/A

Filter Material	From	To	Weight / Volume	Placement Method

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

104 ft. below ground Artesian pressure _____ lb.

Depth flow encountered _____ ft. Describe access port or control devices: _____

6" Bolted Well Cap

12. WELL TESTS:

Pump ☐ Bailor ☒ Air ☐ Flowing Artesian

Yield gal./min.	Drawdown	Pumping Level	Time
50			

Water Temp. Cool Bottom hole temp Cool

Water Quality test or comments: Good

Depth first Water Encounter 195'

13. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Dia	From	To	Remarks: Lithology, Water Quality & Temperature	Water	Y	N
10"	0	146 1/2				
6"	146 1/2	526				
			0 12 Fill Dirt & Cobbles			
			12 127 Brown Shale & Clay			
			127 137 Soft Blue shale			
			137 146 Firm Blue shale			
			146 255 Blue Shale		X	
			255 263 Soft Spot of Blue Shale			
			263 501 Blue Shale		X	
			501 526 Hard Blue Shale with Fractured Shale		X	

RECEIVED

NOV - 9 2006

IDWR/North

AQUA DRILLING
& EXPLORATION INC.
PO BOX 2850
HAYDEN ID 83835-2850

Completed Depth 526' (Measurable)

Date Started 9-11-06 Completed 9-18-06

14. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name AQUA DRILLING & EXPLORATION INC. Firm No. 163

Principal Driller Scott M. Braumiller Date 10/6/06

and Driller or Operator II Wayne Miller Date 9-20-06

Operator I _____ Date _____

Principal Driller and Rig Operator Required
Operator I must have signature of Driller Operator II

IDAHO DEPARTMENT OF WATER RESOURCES
WELL DRILLER'S REPORT

Office Use Only			
Well ID No. _____			
Inspected by _____			
Twp _____	Rge _____	Sec _____	
1/4 _____	1/4 _____	1/4 _____	
Lat: _____		Long: _____	

1. WELL TAG NO. D 0045050
 DRILLING PERMIT NO. 84096 Basin NO17717
 Water Right or Injection Well No. _____

2. OWNER: Scott or Randy McKahan
 Name Fernan Lake Estates, Inc.
 Address P.O. Box 2581
 City Coeur d'Alene State Id. Zip 83814

3. LOCATION OF WELL by legal description:

You must provide address or Lot, Blk Sub or Directions to well

Twp. 50 North ☒ or South ☐
 Rge. 3 East ☐ or West ☒
 Sec. 16 1/4 NE 1/4 SW 1/4
 Gov't Lot _____ County Kootenai
 Lat: _____ Long: _____

Address of Well Site NEAR 5349 E. Fernan Lake Rd.
 City Coeur d'Alene

Lt. _____ Blk. _____ Sub. Name _____
Well #6 Site #7

4. USE: ☒ Domestic ☒ Municipal ☐ Thermal ☐ Injection ☐ Monitor ☐ Irrigation ☒ Other Test Well
10/06/06 up graded to municipal by McKahan's

5. TYPE OF WORK check all that apply (Replacement etc.)
☒ New Well ☐ Modify ☐ Abandonment ☐ Other _____

6. DRILL METHOD:
☒ Air Rotary ☐ Cable ☐ Mud Rotary ☐ Other _____

7. SEALING PROCEDURES

Seal Material	From	To	Weight / Volume	Seal Placement Method
<u>Bentonite</u>	<u>0</u>	<u>79</u>	<u>3300 lbs</u>	<u>6" over bore</u>

Was drive shoe used? ☒ Y ☐ N Shoe Depth(s) 79'

Was drive shoe seal tested? ☒ Y ☐ N How? air pressure

8. CASING/LINER:

Diameter	From	To	Gaug	Material	Casing	Liner	Welded	Threaded
<u>6</u>	<u>+1</u>	<u>-79</u>	<u>280</u>	<u>Steel</u>	☒	☐	☒	☐
<u>4</u>	<u>-6</u>	<u>587</u>	<u>220</u>	<u>PVC</u>	☐	☒	☐	☐

Length of Headpipe _____ L ngth of Tailpipe _____

Packer ☐ Y ☒ N Type _____

9. PERFORATIONS/SCREENS PACKER TYPE

Perforation Method Sawcut

Screen Type & Method of Installation N/A

From	To	Sl t	Nu	D a ier	Material	Casing	Liner
<u>587</u>	<u>567</u>	<u>3/4x5"</u>	<u>36</u>	<u>4"</u>	<u>PVC</u>	☐	☒
<u>547</u>	<u>527</u>	<u>" "</u>	<u>36</u>	<u>4"</u>	<u>PVC</u>	☐	☒
<u>507</u>	<u>467</u>	<u>" "</u>	<u>72</u>	<u>4"</u>	<u>PVC</u>	☐	☒

10. FILTER PACK N/A

Filter Material	From	To	Weight / Volume	Placement Method

11. STATIC WATER LEVEL OR ARTESIAN PRESSURE:

112 ft. below ground Artesian pressure _____ lb.

Depth flow encountered _____ ft Describe access port or control devices: _____

6" Bolted Well Cap

50N 3W 16

12. WELL TESTS:

Yield gal min.	Drawdown	Pumping Level	Time
<u>Approx. 18</u>			

Water Temp. Cool Bottom hole temp. Cool

Water Quality test or comments: Good - No Smell

Depth first Water Encounter 175'

13. LITHOLOGIC LOG: (Describe repairs or abandonment)

Bore Da	From	To	Remarks: Lithology, Water Quality & Temperature	Y	N
<u>12</u>	<u>0</u>	<u>79</u>			
<u>6</u>	<u>79</u>	<u>653</u>			
	<u>0</u>	<u>28</u>	<u>Broken Fractured Shale</u>		
	<u>28</u>	<u>79</u>	<u>Solid Blue Shale</u>		
	<u>79</u>	<u>120</u>	<u>Blue with Streaks of Brown Shale</u>		
	<u>120</u>	<u>517</u>	<u>Blue Shale</u>	☒	
	<u>517</u>	<u>522</u>	<u>Broken area of Shale</u>	☒	
	<u>522</u>	<u>560</u>	<u>Shale</u>	☒	
	<u>560</u>	<u>651</u>	<u>Hard Shale</u>	☒	

RECEIVED
AUG 25 2006
NDV 29 36
IDWR/North

AQUA DRILLING
& EXP
P 50
HAYDEN ID 8383 50

Completed 587' (Measurable)
 Date Started 7-24-06 Completed 7-28-06

14. DRILLER'S CERTIFICATION

I/We certify that all minimum well construction standards were complied with at the time the rig was removed.

Company Name AQUA DRILLING & EXPLORATION INC. Firm No. 163

Principal Driller Scott M. Brumby Date _____

Driller or Operator II Wayne Miller Date 7-31-06

Operator I _____ Date _____

Principal Driller and Rig Operator Required.
 Operator I must have signature of Driller Operator II.



WELL# 6.jpg



174 K.JPG



GEN POWER.JPG



HOME #1.JPG



HOME BY LAKE.JPG



NEW HOME.JPG



POWER #4.JPG



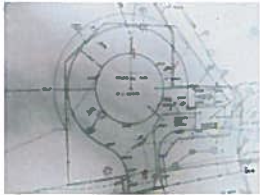
POWER WELL #7 .JPG



PUMP STA.JPG



STUB OUT.JPG



SYSTEM.JPG



TAG WELL#4.JPG



TOTAL METER .JPG



WELL 4.JPG



WELL #6.JPG

95- 9323



