

State of Idaho
Department of Water Resources
Water Right License
WATER RIGHT NO. 63-32016

PRIORITY: February 16, 2017

Maximum Diversion Rate: 1.12 CFS
Maximum Diversion Volume: 374.0 AF

It is hereby certified that:

PARADISE HOMEOWNERS ASSN INC 1088 E PARADISE DRIVE PINE ID 83647

has complied with the terms and conditions of the permit, issued pursuant to Application for Permit dated December 06, 2004, and has submitted Proof of Beneficial Use on February 16, 2017. An examination confirms water is diverted from:

SOURCE:
SPRINGS

TRIBUTARY:
GROUSE CREEK

and a water right has been established as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>DIVERSION RATE</u>	<u>ANNUAL DIVERSION VOLUME</u>
HEATING	01/01 to 12/31	1.12 CFS	374.0 AF

LOCATION OF POINT(S) OF DIVERSION:

SPRINGS SW¼SW¼NE¼ Sec. 33, Twp 03N, Rge 10E, B.M. ELMORE County
SPRINGS L4 (NE¼SE¼NW¼) Sec. 33, Twp 03N, Rge 10E, B.M. ELMORE County

PLACE OF USE: HEATING

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
03N	10E	33		X	X		X L 1			X L 4									

CONDITIONS OF APPROVAL

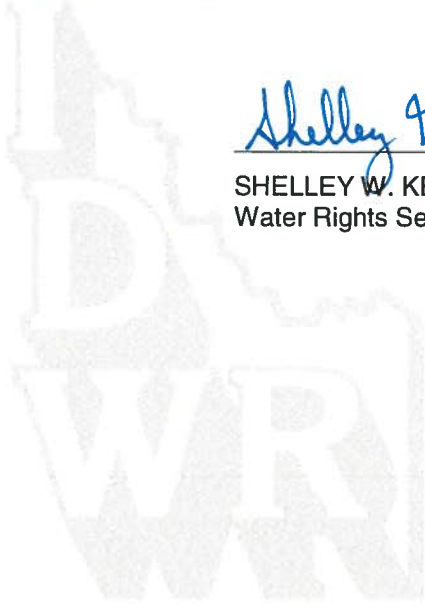
1. Use of water under this right shall be non-consumptive.
2. Heating use is for buildings on lots 1-35 and lots 38-53 of Willis Carrie's Paradise subdivision and Lots 2-7 of Paradise Pines subdivision, on a parcel locally known as the Wagon Town parcel, for the upper and lower pump houses at the points of diversion, and for the PHOA pool dressing room.
3. Water diverted and used under this right shall be returned to the natural channel of Grouse Creek.
4. Rights 63-10560, 63-12316 and 63-32016 when combined shall not exceed a total diversion rate of 1.12 cfs.
5. The right holder shall maintain a measuring device and lockable controlling works of a type approved by the Department in a manner that will provide the watermaster suitable control of the diversion(s).

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WATER RIGHT NO. 63-32016

6. Use of water under this right will be regulated by a watermaster with responsibility for the distribution of water among appropriators within a water district. At the time of this approval, this water right is within State Water District No. 63.

This license is issued pursuant to the provisions of Section 42-219, Idaho Code. The water right confirmed by this license is subject to all prior water rights and shall be used in accordance with Idaho law and applicable rules of the Department of Water Resources.

Signed this 31st day of October, 2017.

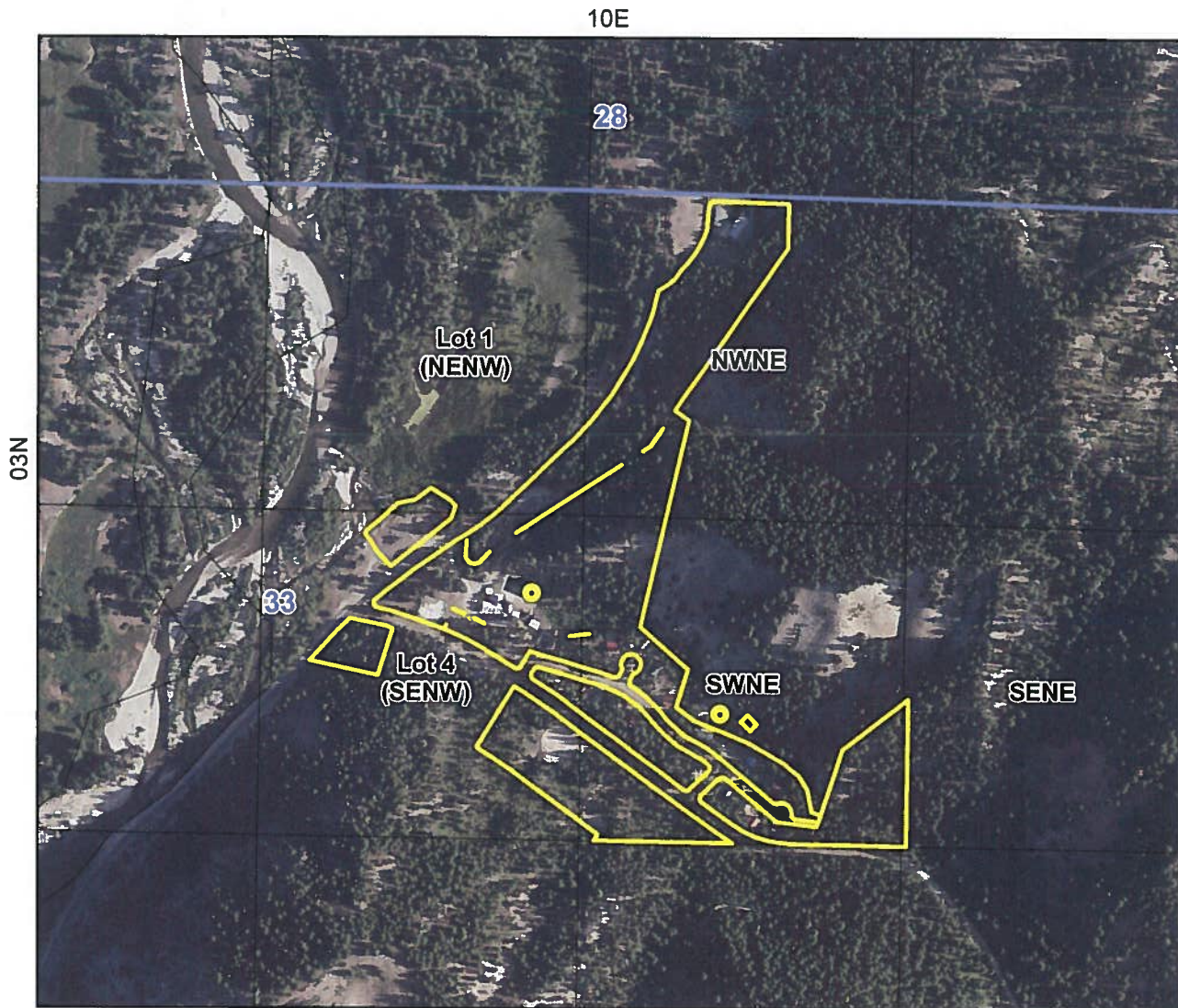


Shelley W. Keen

SHELLEY W. KEEN
Water Rights Section Manager

State of Idaho
Department of Water Resources
Attachment to Water Right License
63-32016

This map depicts the HEATING place of use boundary for this water right at the time of this approval and is attached to the approval document solely for illustrative purposes.



-  Point of Diversion
-  Place Of Use Boundary
-  Townships
-  PLS Sections

0 0.075 0.15 0.3 Miles





State of Idaho

DEPARTMENT OF WATER RESOURCES

322 East Front Street • P.O. Box 83720 • Boise, Idaho 83720-0098

Phone: (208) 287-4800 • Fax: (208) 287-6700 • Web Site: www.idwr.idaho.gov

GARY SPACKMAN
Director

C.L. "BUTCH" OTTER
Governor

November 2, 2017

PARADISE HOMEOWNERS ASSN INC
1088 E PARADISE DRIVE
PINE ID 83647

RE: License No. 63-32016

Issuance of License

Dear Water Right Holder(s):

The Department of Water Resources has issued the enclosed Water Right License confirming that a water right has been established in accordance with your permit. Please be sure to thoroughly review the conditions of approval and remarks listed on your license.

Also enclosed is the order that reinstated the permit, since proof and the license examination fee were submitted after the proof deadline. Please note that the priority date has been advanced to February 16, 2017, as provided in section 42-218a (1), Idaho Code.

The license is a PRELIMINARY ORDER issued by the Department pursuant to section 67-5243, Idaho Code. It can and will become a final order without further action by the Department unless a party petitions for reconsideration or files an exception and/or brief within fourteen (14) days of the service date as described in the enclosed information sheet.

Please note that water right owners are required to report any change of water right ownership and/or mailing address to the Department within 120 days of the change. Failure to report these changes could result in a \$100 late filing fee. Contact any office of the Department or visit the Department's homepage on the Internet to obtain the proper forms and instructions.

If you have any questions, please contact me at 208-287-4951.

Sincerely,

Pamela Skaggs, Water Rights Supervisor
Water Right Permits Section

Enclosure(s)

c: WATER DISTRICT #63

CERTIFICATE OF SERVICE

I hereby certify that on November 3, 2017 I mailed a true and correct copy, postage prepaid, of the foregoing PRELIMINARY ORDERS (**Approved License**) & (**Preliminary Order Reinstating a Permit**) to the person(s) listed below:

RE: WATER RIGHT NO.

63-32016

**PARADISE HOMEOWNERS ASSN INC
1088 E PARADISE DRIVE
PINE ID 83647**

**WATER DISTRICT #63
REX BARRIE
PO BOX 767
STAR ID 83669-0767**



Darla Block
Technical Records Specialist

EXPLANATORY INFORMATION TO ACCOMPANY A PRELIMINARY ORDER

(To be used in connection with actions when a hearing was not held)

(Required by Rule of Procedure 730.02)

The accompanying order or approved document is a "Preliminary Order" issued by the department pursuant to section 67-5243, Idaho Code. **It can and will become a final order without further action of the Department of Water Resources ("department") unless a party petitions for reconsideration, files an exception and brief, or requests a hearing as further described below:**

PETITION FOR RECONSIDERATION

Any party may file a petition for reconsideration of a preliminary order with the department within fourteen (14) days of the service date of this order. **Note: the petition must be received by the department within this fourteen (14) day period.** The department will act on a petition for reconsideration within twenty-one (21) days of its receipt, or the petition will be considered denied by operation of law. See Section 67-5243(3) Idaho Code.

EXCEPTIONS AND BRIEFS

Within fourteen (14) days after: (a) the service date of a preliminary order, (b) the service date of a denial of a petition for reconsideration from this preliminary order, or (c) the failure within twenty-one (21) days to grant or deny a petition for reconsideration from this preliminary order, any party may in writing support or take exceptions to any part of a preliminary order and may file briefs in support of the party's position on any issue in the proceeding with the Director. Otherwise, this preliminary order will become a final order of the agency.

REQUEST FOR HEARING

Unless a right to a hearing before the Department or the Water Resource Board is otherwise provided by statute, any person aggrieved by any final decision, determination, order or action of the Director of the Department and who has not previously been afforded an opportunity for a hearing on the matter may request a hearing pursuant to section 42-1701A(3), Idaho Code. A written petition contesting the action of the Director and requesting a hearing shall be filed within fifteen (15) days after receipt of the denial or conditional approval.

ORAL ARGUMENT

If the Director grants a petition to review the preliminary order, the Director shall allow all parties an opportunity to file briefs in support of or taking exceptions to the preliminary order and may schedule oral argument in the matter before issuing a final order. If oral arguments are to be heard, the Director will within a reasonable time period notify each party of the place, date and hour for the argument of the case. Unless the Director orders otherwise, all oral arguments will be heard in Boise, Idaho.

CERTIFICATE OF SERVICE

All exceptions, briefs, requests for oral argument and any other matters filed with the Director in connection with the preliminary order shall be served on all other parties to the proceedings in accordance with IDAPA Rules 37.01.01302 and 37.01.01303 (Rules of Procedure 302 and 303).

FINAL ORDER

The Director will issue a final order within fifty-six (56) days of receipt of the written briefs, oral argument or response to briefs, whichever is later, unless waived by the parties or for good cause shown. The Director may remand the matter for further evidentiary hearings if further factual development of the record is necessary before issuing a final order. The department will serve a copy of the final order on all parties of record.

Section 67-5246(5), Idaho Code, provides as follows:

Unless a different date is stated in a final order, the order is effective fourteen (14) days after its service date if a party has not filed a petition for reconsideration. If a party has filed a petition for reconsideration with the agency head, the final order becomes effective when:

- (a) The petition for reconsideration is disposed of; or
- (b) The petition is deemed denied because the agency head did not dispose of the petition within twenty-one (21) days.

APPEAL OF FINAL ORDER TO DISTRICT COURT

Pursuant to sections 67-5270 and 67-5272, Idaho Code, if this preliminary order becomes final, any party aggrieved by the final order or orders previously issued in this case may appeal the final order and all previously issued orders in this case to district court by filing a petition in the district court of the county in which:

- i. A hearing was held,
- ii. The final agency action was taken,
- iii. The party seeking review of the order resides, or
- iv. The real property or personal property that was the subject of the agency action is located.

The appeal must be filed within twenty-eight (28) days of this preliminary order becoming final. See section 67-5273, Idaho Code. The filing of an appeal to district court does not itself stay the effectiveness or enforcement of the order under appeal.

**BEFORE THE DEPARTMENT OF WATER RESOURCES
OF THE STATE OF IDAHO**

IN THE MATTER OF PERMIT NO. 63-32016	)	PRELIMINARY ORDER
IN THE NAME OF	)	REINSTATING A PERMIT
PARADISE HOME OWNERS ASSN INC	)	
_____	)	

This matter having come before the Idaho Department of Water Resources ("Department"), the Department finds, concludes and orders as follows:

FINDINGS OF FACT

1. On August 3, 2005, the Department issued Permit No. 63-32016 ("permit") in the name of Paradise Homeowners Assn Inc. ("permit holder") with the condition that proof of construction of works and application of water to beneficial use ("proof of beneficial use") be submitted to the Department on or before August 1, 2010. On July 29, 2010 the Department approved a Request for Extension of Time filed by the permit holder, extending the time to submit proof of beneficial use to August 1, 2015.
2. On May 29, 2015 the Department notified the permit holder by certified mail that proof of beneficial use was due and instructed the permit holder of the steps to be taken to submit proof of beneficial use or to request an extension of time.
3. On August 2, 2015 the permit lapsed because the Department had not received an acceptable proof of beneficial use statement or extension request form. On August 6, 2017 the Department mailed a lapse notice to the permit holder.
4. Idaho Code § 42-218a.(2) provides as follows:

In connection with a proof of beneficial use statement submitted more than sixty (60) days after such notice of lapsing, the director shall require all of the following items to be submitted to the department:

(a) A report prepared by a certified water right examiner as a result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with the permit during the time authorized by the permit and any extensions of time previously approved. The report shall be on a form or forms specified by the director and shall provide the information specified in section 42-217, Idaho Code, for confirming beneficial use and such other information as may be required by the director.

(b) A statement of reasonable cause for filing a late proof of beneficial use.

(c) A reinstatement fee of two hundred fifty dollars (\$250).

5. On February 16, 2016, the Department received a request to reinstate the permit along with a beneficial use field report prepared by a certified water right examiner, a statement of completion for submitting proof of beneficial use, a statement of reasonable cause for filing a late proof of beneficial use, and the required reinstatement fee.

CONCLUSIONS OF LAW

1. The permit holder has provided a reasonable showing why the permit should be reinstated by submitting an acceptable proof of beneficial use statement on February 16, 2017, and evidence that beneficial use of the water occurred during the period when the permit was active.
2. The Department should reinstate Permit 63-32016 with the priority advanced to the date that proof of beneficial use was received.

ORDER

IT IS HEREBY ORDERED that the permit is **REINSTATED** with an advance in priority to February 16, 2017.

Dated this 31st day of October, 2017.



Shelley W. Keen, Manager
Water Rights Section

MEMORANDUM

TO: Water Right File 63-32016

From: Manuel Rauhut – Staff Engineer

Date: October 20, 2017

Subject: Licensing Review of Water Right 63-32016

This field exam was performed by Certified Field Examiner Scott King of SPF Engineering. In the field report, SPF determined that this permit should be licensed for 1.12 cfs/374.4 (374) AFA for heating. This memo was updated after several items of additional information were requested on multiple occasions from Mr. King and the Paradise Home Owners Association (PHOA).

Overlap Review:

The Place of Use (POU) consists of 68 lots, which are part of the Paradise HOA. SPF's memo identifies the following water rights that overlap with the POU under this permit:

- 63-10560: Heating use is for: a lodge, a shop, 11 cabins and 43 homes known as Lots 1-35 and 39-46, Willis Carrie's Paradise Subdivision. Domestic use is for a lodge. Recreation use is for a swimming pool.
- 63-12316: Heating use is for 1 home and a changing room associated with soaking pool. Place of use is located within Lots 3-6, Blk. 1, Paradise Pines Subdivision.
- 63-31526: Recreation use is for a pool.

The water rights overlap with the POU are not discussed in the field report. Water from the following water rights are not tied into the same distribution system as the water associated with rights 63-10560, 63-12316, 63-31526, and 63-32016:

- 63-4221: This groundwater irrigation right overlaps with the POU partially.
- 63-5268: Irrigation/Stock water diverted from Grouse Creek.
- 63-10559: Domestic/commercial use from groundwater. Commercial use is for a lodge, shop and irrigation of surrounding grounds (1/2 acre); domestic use is for 51 homes
- 63-30437: Domestic from groundwater (Lot 4).
- 63-27144: Recreation diverted from Grouse Creek.
- 63-31976: Domestic and heating for one home (Lots 29 & 30, Block 1) diverted from an adjacent spring (different POD). This water right (63-32016) had the following condition:
This water right shall be subject to senior valid water rights. To the extent that this right authorizes the diversion of water from any of the same sources asserted under SRBA Claim No. 63-31976, the diversion and use of water under this right is specifically subject to the SRBA determination with respect to Water Right No. 63-31976. Since the POD is not the same for these rights I did not subtract diversion rate or volume from 63-32016.
- 63-12317: Stock water/Domestic from groundwater.
- 63-34140: This heating right for 18 cabins mostly overlaps with POU under this permit. Based on an October 28, 2016 email from Phil Hummer (IDWR) to Lori Graves (SPF) the three PODs for that permit are different than the PODs associated with other water rights. Ray Ligenza also provided additional information by email indicating that this water right has not been developed. See attached email for further details.

POU:

The field report indicates that there are "68 lots" that are connected to the system. The PHOA provided additional information clarifying the place of use occurs on 58 taxlots and 11 additional uses as follows (email attached):

- Tax lots 1-35 (per plat Paradise)
 - Lot 16 on the Paradise plat has 2 hot water uses (A & B).
- Tax lot 39-53 (per plat Paradise)
- Tax lot 38 (per plat Paradise)
 - Lot 38 has 5 additional uses in addition to the lodge.
- Tax lot 2-7 (per plat PPI)
- Wagon Town Parcel
 - The Wagon Town parcel has 2 uses (WTP 2&3 on Figure).
 - The domestic water pump house on the Wagon Town parcel is heated (WTP 1 on Figure).
- The upper and lower pump houses are heated.
- The PHOA pool dressing room is heated.

Annual Volume:

SPF did not provide a volume calculation in their original field exam, but provided it in a follow-up letter dated August 3, 2017. SPF recommends basing the annual volume on the system capacity. Based on previous calculations during the application review (heating requirement excel sheet), the diversion rate that would be required is well above the existing system capacity of 1.12 cfs.

Note, I did not include the 5 gpm SPF estimated in the system capacity calculation, which reduces the system capacity from 1.13 to 1.12.

Annual Volume (AFA) = $1.12 \text{ cfs} * (1.9835 \text{ acre-feet per day} / 1 \text{ cfs}) * 240 \text{ days} = 533 \text{ AFA}$.

This annual volume is based on the understanding that reportedly the subdivision generally turns on all the pumps from mid-September through mid-May. This information was provided by the homeowners association during the application process and by SPF.

The December 16, 2004 Permit Review IDWR addresses the instantaneous and annual diversion rate that would be required for the proposed place of use. The calculated amount is well above the amount the springs producer. Therefore I recommend the measured diversion rate and annual volume that the two springs produce.

Water rights 63-10560 (0.64 cfs; 152 AFA), 63-12316 (0.02 cfs; 6.6 AFA), and 63-31526 (0.1 cfs; 59.8 AFA) share at least one of the two PODs of this water right. Water right 63-31526 is for recreation (water for pool).

Recommended Annual Volume:

533 AFA – 152 AFA – 6.6 AFA = 374.4 (374) AFA

Note, the annual volume of 59.8 AFA associated with water right 63-31526 was not subtracted above because the springs can produce 278 AF during the remaining 125 days. (Season of use is all year vs 240 days; $1.12 \text{ cfs} \times (1.9835 \text{ acre-feet per day} / 1 \text{ cfs}) \times 125 \text{ days} = 278 \text{ AFA}$).

POD/Pump Capacity:

SPF did not provide sufficient information to perform a theoretical flow rate calculation, but provided data associated with their measurement at the Lower Spring using a portable Ultrasonic Time Flight Liquid Flow Meter (Attachment C of the field report). The initial field report did not include data to verify the flow calculations associated with the Upper Spring. This flowrate was measured using the trajectory method. The Trajectory Method, as described in the USBR Water Measurement Manual, Chapter 14.13.b for horizontal pipes was used for this measurement (https://www.usbr.gov/tsc/techreferences/mands/wmm/chap14_13.html). The pipe is 6-inch diameter and the measurements are X=0", Y=4" corresponding to a flow of 110 gpm (see the attached Trajectory Figure).

Diversion Rate:

The maximum diversion rate under the permit is 1.76 cfs. Based on the flow measurements conducted in the field (described above) the Lower Spring capacity is 393 GPM and the Upper Spring capacity is 110 GPM for a combined 503 GPM (1.12 cfs). Note, this does not include the estimated 5 GPM of unmeasured flow which leaks into the pool from the Lower Spring.

The December 16, 2004 Permit Review IDWR addresses the instantaneous and annual diversion rate that would be required for the proposed place of use. The calculated amount is well above the amount the springs producer. Therefore I recommend the measured diversion rate and annual volume that the two springs produce.

Recommended Diversion Rate on License = 1.12 cfs

Priority Date:

On February 16, 2017 SPF submitted the Statement of Completion, a beneficial use exam, a Request to reinstate a permit lapsed more than 60 days, and a \$250 reinstatement fee. Accordingly, the priority date was advanced from December 6, 2004 to October 13, 2017.

Conditions:

Condition x35 is included with a combined rate use limit, but a combined rate use limit is not needed since the volumes for the three water rights for the heating system are additive. The additive volume amount from the two points of diversion is 592.8 AFA: System Capacity = 533 AFA; therefore: heating system rights - 63-10560: 152 AFA; 63-12316: 6.6 AFA; and 63-32016: 374 AFA; water rights associated with the pool - 63-31526: 59.8 AFA. Note, the pool system accounts for the volume from a separate pipe than the heating system for the cabins.

Heating use is for 69 individual buildings. Some of the areas where water is used is not on well-defined taxlots, so I did not specify which lots are included. The map and spreadsheet attached to this report provide a detailed breakdown of the POU.

Water is returned to grouse creek through the pool.

Rauhut, Manuel

From: Scott King <SKing@spfwater.com>
Sent: Friday, October 13, 2017 11:28 AM
To: Rauhut, Manuel; Paradise HOA
Cc: Randy & Becky Fowers; Harold Johnson
Subject: RE: Paradise HOA
Attachments: BUFE Photo Rev1.pdf

Hello Manuel,

Thank you for looking at this. Attached is a revised place of use map that corresponds with PHOA's October 1 email that I forwarded to you on October 4 describing the various lots and uses.
Lot 16 is added as it appears we inadvertently left this off the prior map.
PPI lots 2-7 are shown as new for Permit 63-32016. In reality, one of these is covered by the prior license, but to me it is unclear which one was covered by the license.

Please let me know if you have any questions on this.
Thank you,
Scott
208-383-4140

From: Rauhut, Manuel [mailto:Manuel.Rauhut@idwr.idaho.gov]
Sent: Thursday, October 12, 2017 4:02 PM
To: Paradise HOA <paradisehoa2017@gmail.com>; Scott King <SKing@spfwater.com>
Cc: Randy & Becky Fowers <rbfowers@msn.com>; Harold Johnson <vmhljohn@cableone.net>
Subject: RE: Paradise HOA

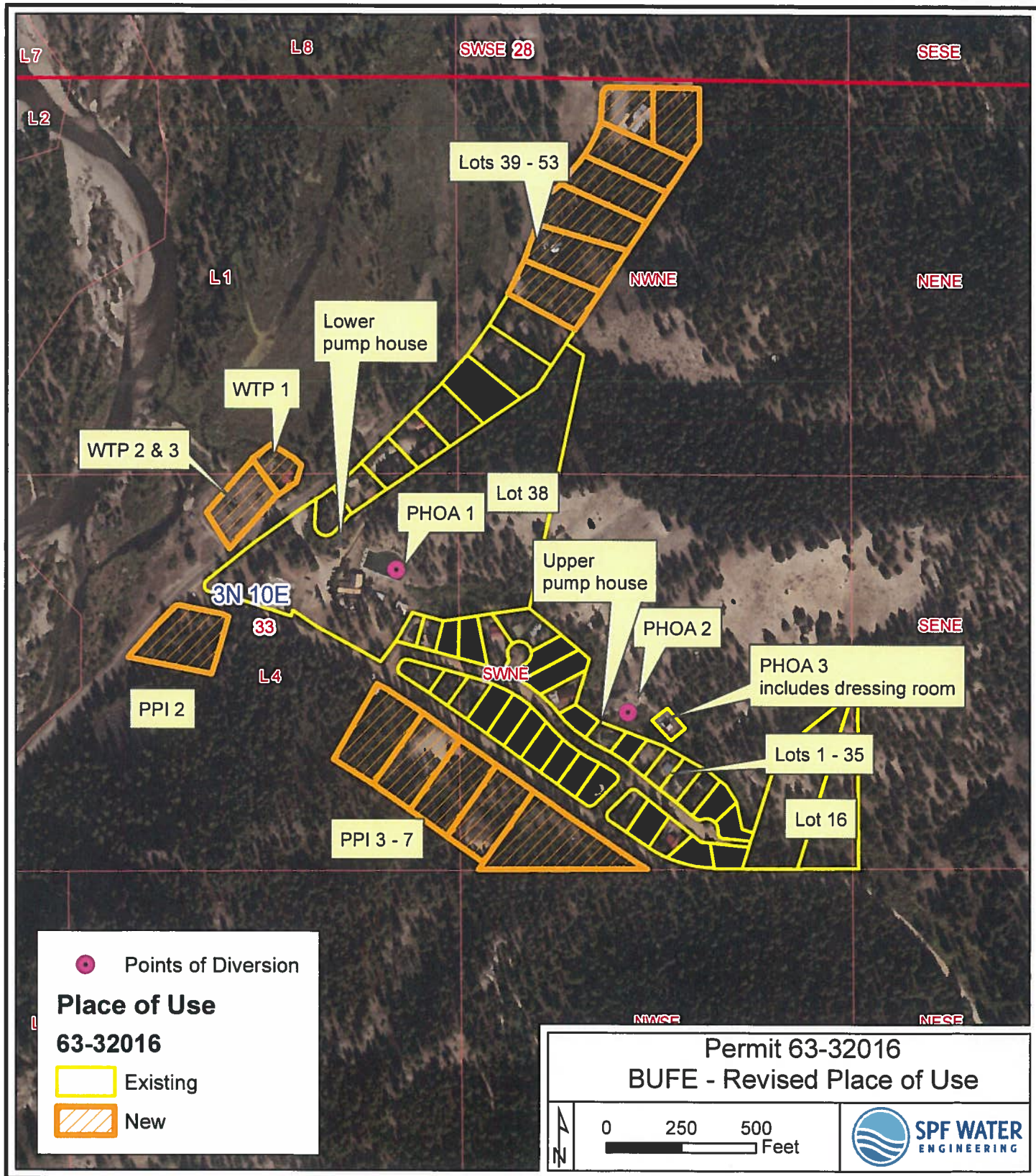
Hi Ray and Scott –

Thank you for providing a breakdown of the lots and cabins that will be the place of use under this water right. Combined with the additional information Scott provided we can move forward with our review of the beneficial use exam. As outlined in our August 28, 2017 letter we will need a revised Place of Use Figure that matches the information PHOA submitted. I am assuming Scott is preparing that.
If I have additional questions I will get in touch with you as quickly as possible.

Thanks,
Manuel

*Manuel Rauhut, PE
Staff Engineer
Idaho Department of Water Resources
322 E Front St, PO Box 83720
Boise, ID 83720-0098
208-287-4846 (office)*

From: Paradise HOA [mailto:paradisehoa2017@gmail.com]
Sent: Thursday, October 12, 2017 10:19 AM
To: Rauhut, Manuel <Manuel.Rauhut@idwr.idaho.gov>



First Name	Last Name	Lot #	Improved	Main Sq Ft	Upper Sq Ft	Lower Sq Ft	Attached Garage	Detached Garage	Change since 2004	Not Licensed/ Permitted
Norma	Weaver	1	Yes	1316	0	0	0	0		
Brad & Kelly	Christiansen	2	Yes	600	600	0	0	0		
Mac & Gale	Brown	3	Yes	864	432	0	0	0		
David & Kellie	Smith	4	Yes	600	600	600	0	0		
Micheal & Mary Lou	Koelch	5	Yes	1025	650	0	0	0		
Micheal & Mary Lou	Koelch	6	No	0	0	0	0	0		
Jerry & Carol	Davis	7	No	0	0	0	0	0		
Jerry & Carol	Davis	8	Yes	1200	600	0	0	484		
Jerry & Carol	Davis	9	No	0	0	0	0	0		
Robert & Diana	Bennett	10	Yes	1050	1650	0	600	0		
Terry	Reinke	11	Yes	1000	400	1000	0	0		
Richard & Sherry	Bloom	12	No	0	0	0	0	0		
Rob & Sherri	Ellis	13	Yes	900	450	600	0	0	Major add/snow melt	
Mike & Jennifer	Marcus	14	Yes	0	0	0	0	0	New cabin	
Dan & Marry	Cruser	15	No	0	0	0	0	0		
Gary & Karen	Boehike	16	No	0	0	0	0	0		
Gary & Karen	Boehike	16b	No	0	0	0	0	0		
Brad & Leslie	Hobbs	17	Yes	1024	1140	0	0	512		
Brad & Leslie	Hobbs	18	No	0	0	0	0	0		
Jim & Julene	Walker	19	Yes	1000	600	0	0	0		
James	Holesinsky	20	Yes	1200	1200	0	0	0	Major add/	
Conley	Cruser	21	Yes	720	720	0	0	0		
Wes & Joyce	Farris/Cruser	22	No	0	0	0	0	0		
Wes & Joyce	Farris	23	Yes	1000	600	0	500	0		
Norman & Donna	Garlington	24	Yes	830	600	0	0	0	Major add/	
	PHOA	25	No	0	0	0	0	0		
Wendy	St. Jean	26	Yes	0	0	0	0	0	New cabin	
Richard	Starkey	27	No	0	0	0	0	0		
Joe & Joan	Pavkov	28	Yes	520	1040	0	520	0		
Richard & Kris	Boesigner	29	Yes	1200	1000	0	0	600		
Richard & Kris	Boesigner	30	No	0	0	0	0	0		
Tom & Kim	Faulkner	31	Yes	860	0	860	0	0		
Larry & Joanne	Johnson	32	No	0	0	0	0	0		
David	Johnson	33	No	0	0	0	0	0		
Charlie	Vines	34	Yes	1364	256	0	0	0		
Doug	Heikkila	35	Yes	1000	0	0	0	240	Major add/Radiator	
Lodge	Trinity	38	Yes	3450	2570	0	0	750		
Cabin 1	Trinity	38	Yes	600	0	0	0	0		
Cabin 2	Trinity	38	Yes	1200	0	0	0	0		
Cabin 3	Trinity	38	Yes	560	0	0	0	0		
Cabin 4	Trinity	38	Yes	550	180	0	0	0		
Cabin 5	Trinity	38	Yes	600	0	0	0	0	Shop on PPI2	
Jim & Glenyss	Paulson	39	No							
Jim & Glenyss	Paulson	40	Yes	1080	1080	1080	0	0		
Don & Pat	Davis	41	Yes	1200	775	0	0	0		
Grant & Sharon	Starley	42	Yes	500	1200	0	600	0		
	PHOA	43	No	0	0	0	0	0		
David	Knowlton	44	No	0	0	0	0	0		
Dowell	Demaray	45	Yes	1200	600	0	0	0		
Harold & Vonda	Johnson	46	Yes	960	660	960	0	0	Major add/	
Harold & Vonda	Johnson	47	No	0	0	0	0	0		Yes
Randy & Becky	Fowers	48	Yes	1200	900	1200	0	0	Major add/snow melt	Yes
Dale & Carla	Pippitt	49	Yes	1155	155	0	0	480		Yes
Dale & Carla	Pippitt	50	No	0	0	0	0	0		Yes
John & Stephanie	Holland	51	No	0	0	0	0	0		Yes
Jed & Cindy	Roeser	52	Yes	900	600	0	0	0		Yes
Jim & Karen	Sirucek	53	Yes	3400	3400	0	0	0		Yes
Gary	Miller	PPI 2	No	0	0	0	0	0		Yes
Norma	Weaver	PPI 3	No	0	0	0	0	0		Yes
Mel & Jasmine	Moeller	PPI 4	No	0	0	0	0	0		Yes
Jake & Jennifer	Traugher	PPI 5	No	0	0	0	0	0		Yes
Robert & Vicki	Brinegar	PPI 6	No	0	0	0	0	0		Yes
New Lourdes LLC		PPI 7	No	0	0	0	0	0		Yes
Gunther	DeVincent	WTP1	Yes	1350	400	0	0	0		Yes
Grouse Creek 1		GC1							Removed	
Grouse Creek 2		GC2							Removed	
Grouse Creek 3		GC3							Removed	
Grouse Creek 4		GC4							Removed	
Grouse Creek 5		GC5							Removed	
Grouse Creek 6		GC6							Removed	
Cold Water Wells	Wagon Town Prop	WTP2	Yes	200						
Hot Springs 1	Pump House (Lower)	PHOA1	Yes	240						Yes
Hot Springs 2	Pump House (Upper)	PHOA2	Yes	200						Yes
PHOA Pool	Pool House	PHOA3	Yes	200						Yes
Wagon Town Property	Old store	WTP3	No	0	0	0	0	0	Old store	yes
TOTALS				40018	25058	6300	2220	3066		

Rauhut, Manuel

From: Paradise HOA <paradisehoa2017@gmail.com>
Sent: Thursday, October 05, 2017 10:02 AM
To: Scott King; Randy & Becky Fowers; Harold Johnson
Cc: Rauhut, Manuel
Subject: Re: FW: POU for 63-32016 Reinstatement

Thank you Scott and Manuel:

I hope not to muddy the waters regarding permit 63-34140 but I feel it's important to state the following:

Manuel, if you can recall at the August meeting we discussed this permit and that it was taken out by Dale Pippitt. There is a letter from Dale in the back file of License 63-10560 that states that these three (3) springs are not developable. These 3 springs are located in the base of Grouse Creek posing logistic problems for development and potentially we could effect the flow rate from the existing Upper Spring. We would need to have a feasibility study prepared before any further action can be taken on this permit.

The permit taken out by Dale Pippitt was a result of him lapsing permit 63-32016, which is the permit we are now attempting to reinstate with your assistance.

It's likely that PHOA will allow permit 63-34140 to lapse for the following reasons: (1) No feasibility report identifying costs and impact of development of the 3 springs, (2) the springs are located within the physical boundaries of property owned by the PHOA limiting outside access, and (3) reinstatement of permit 63-32016 is our best recourse to correct the shortcomings of License 63-10560, and uses the two points of diversion currently developed, plumbed and in use under our License.

Manuel, if you would like to come and see our operation for yourself, we would be pleased to show you all aspects of it. Let us know if you would like to schedule a site visit.

Regards,

Ray Ligenza

On Wed, Oct 4, 2017 at 7:47 PM, Scott King <SKing@spfwater.com> wrote:

Manuel,

Rauhut, Manuel

From: Scott King <SKing@spfwater.com>
Sent: Wednesday, October 04, 2017 7:47 PM
To: Rauhut, Manuel
Cc: Randy and Becky Fowers; Paradise HOA; Scott King
Subject: FW: POU for 63-32016 Reinstatement

Manuel,

Here is place of use information supplied by Paradise HOA.

I may need to check my map and will do this next week.

See also below that permit 63-34140 proposes three NEW undeveloped springs as points of diversion. I misunderstood and thought that two proposed PODs were the existing springs. If developed, my understanding is that the place of use will be the existing geothermal heating system.

Thank you,
Scott

From: Randy and Becky Fowers [mailto:RBFOWERS@msn.com]
Sent: Sunday, October 1, 2017 6:13 PM
To: Scott King <SKing@spfwater.com>
Subject: POU for 63-32016 Reinstatement

Scott.

Here is an explanation of the POU information involved in the reinstatement request for permit 63-32016. This information was taken from the updated spreadsheet provided with the reinstatement request.

Place of use, heating

- 35 - Tax lots 1-35 (per plat Paradise)
- 15 - Tax lot 39-53 (per plat Paradise)
- 1 - Tax lot 38(per plat Paradise)
- 6 - Tax lot 2-7(per plat PPI)
- 1 - Wagon Town Parcel

58 - Total Tax lots

Uses identified by PHOA per agreements within the identified POU.

- (+1) Lot 16 on the Paradise plat has 2 hot water uses(A & B).
- (+5) Lot 38 on the Paradise plat has 5 additional uses in addition to the lodge.
- (+1) The Wagon Town parcel has 2 uses.
- (+1) The domestic water pump house on the Wagon Town parcel is heated.
- (+2) The 2 hot water pump houses are heated.
- (+1) The PHOA pool dressing room is heated.

11 - Total additional uses

Total uses administratively acknowledged by PHOA

$$58 + 11 = 69$$

Note, GCC lots were removed because beneficial use could not be proven.

Of the 69 uses, 17 of which are not covered by any other active license/permit. These same 17 had been covered by lapsed permit 63-32016. They are now included in the beneficial use study that has been submitted with the reinstatement request.

1. Paradise sub lot 47
2. Paradise sub lot 48
3. Paradise sub lot 49
4. Paradise sub lot 50
5. Paradise sub lot 51
6. Paradise sub lot 52
7. Paradise sub lot 53
8. Paradise Pine lot 2
9. Paradise Pine lot 3
10. Paradise Pine lot 4
11. Paradise Pine lot 5
12. Paradise Pine lot 6
13. Wagon Town 1
14. Wagon Town 2 cold water pump house
15. Wagon Town 3
16. Lower hot water pump house
17. Upper hot water pump house

Permit 63-34140 uses three undeveloped springs not used in any other PHOA permit/licenses. It does not reference our two main springs as a point of diversion.

PHOA does link each of our identified heating uses to a permit or license and can provide that information if needed. We currently administrate the use of the geothermal resource as domestic, heating, and recreational uses.

Let me know if you need more information.

Thanks,

Randy Fowers

Rauhut, Manuel

From: Scott King <SKing@spfwater.com>
Sent: Friday, September 29, 2017 11:48 AM
To: Rauhut, Manuel
Cc: Paradise HOA
Subject: Additional information for Paradise HOA
Attachments: IDWR Letter 2017.08.28.pdf; Trajectory_F14_14AL.GIF

Hi Manuel,

Here is some additional information on the Paradise HOA beneficial use exam as you requested. I'm hoping the HOA can provide some additional information on your place of use questions as I may have been incorrect in my map. Please let us know if you have any other questions.

Overlapping Water Rights:

63-10560 diverts from the same two springs into the same system. See the 63-10560 backfile and beneficial use field examination report.

63-31526 diverts from the same two springs into the same system. See Vicky Music's March 8, 2014 Interoffice Memorandum describing the system.

63-12316 diverts from the same two springs into the same system. See Vicky Music's March 4, 2014 Interoffice Memorandum describing the system.

Permit 63-34140 describes three points of diversion. The place of use/system and two of these diversions are the same as developed and described by the above water rights and permit 63-32016. One additional diversion is proposed for development, but during my site visit this additional development had not commenced.

Place of Use:
(Need HOA input)

Upper Spring Flow Measurement

The Trajectory Method as described in the USBR Water Measurement Manual, Chapter 14.13.b for horizontal pipes was used for this measurement (https://www.usbr.gov/tsc/techreferences/mands/wmm/chap14_13.html). The pipe is 6-inch diameter and the measurements are X=0", Y=4" corresponding to a flow of 110 gpm (see the attached Trajectory Figure).

Thank you,
Scott

Scott N. King, P.E. | Supervising Engineer

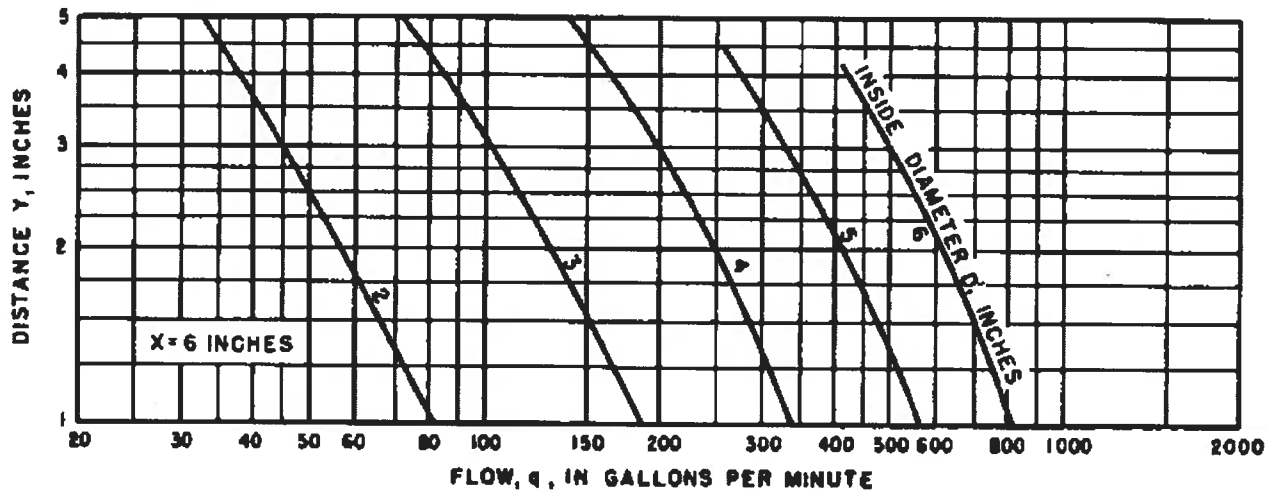
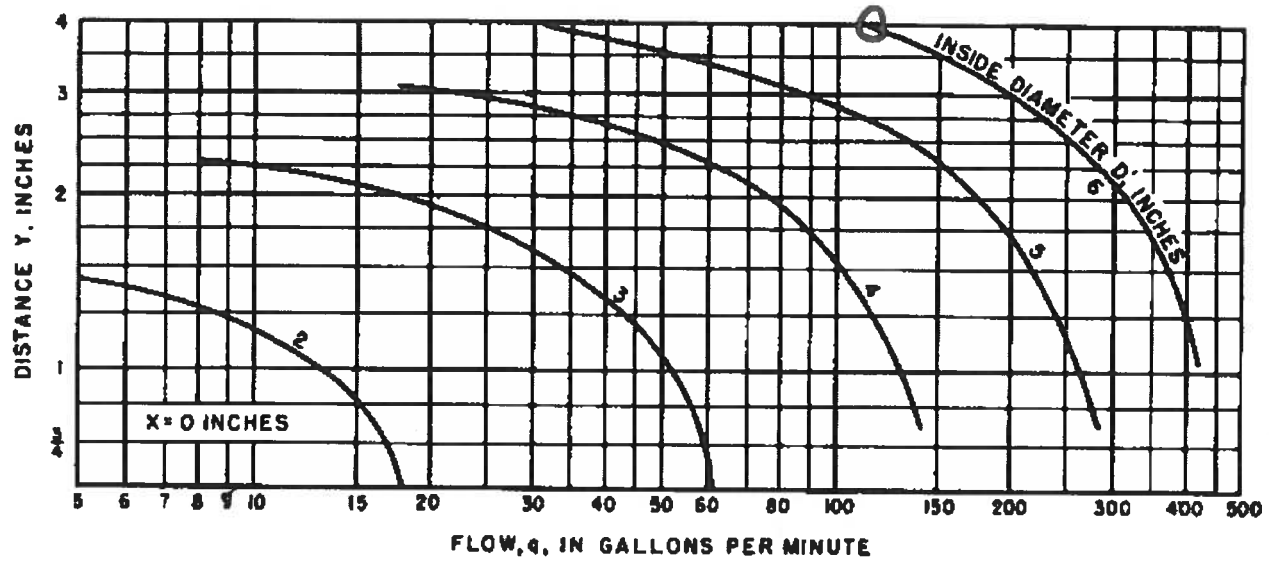
SPF Water Engineering, LLC

300 E Mallard Drive, Suite 350 | Boise, ID 83706

phone 208.383.4140 | fax 208.383.4156

email sking@spfwater.com | web www.spfwater.com

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State of Idaho

DEPARTMENT OF WATER RESOURCES

322 East Front Street • P.O. Box 83720 • Boise, Idaho 83720-0098

Phone: (208) 287-4800 • Fax: (208) 287-6700 • Website: www.idwr.idaho.gov

C.L. "BUTCH" OTTER
Governor

GARY SPACKMAN
Director

August 28, 2017

SPF WATER ENGINEERS
ATTN SCOTT KING
300 E MALLARD DR., SUITE 300
BOISE, ID 83706

RE: Field Exam Report for water right permit 63-32016

Dear Mr. King:

Thank you for submitting the additional requested information that you submitted August 3, 2017 in response to our March 2, 2017 letter. After further review of the information you provided to date, there is still some information missing that would allow us to license this water right or re-instate the permit as requested.

System Information and Overlapping Water Rights:

The information you submitted in response to our March 2, 2017 letter regarding a description of the diversion, conveyance and usage systems does not allow for a complete understanding of the overall system and how it overlaps with other water rights. You identify that the point of diversion (POD) associated with this water right overlaps with multiple other water rights (63-10560, 63-12316, and 63-31526; note, the permit 63-34140 also appears to overlap with this water right). Please provide a more detailed discussion as outlined in IDAPA Beneficial Use Examination Rules 37.03.02.035.01d.:

"Any interconnection of the water use being examined with other water rights or with other conveyance systems shall be described on the field report. Interconnection includes, but is not limited to, sharing the same point of diversion, distribution system, place of use, or beneficial use. The examination report shall also include an evaluation of how the water use being examined is distinct from prior existing water rights and provides an alternate source of water or increment of beneficial use not authorized by prior existing water rights."

Place of Use:

You specify that the place of use (POU) consists of 68 "lots". Based on the POU map included with your field report, there are 58 taxlots within the POU. It is not clear if Lot 16, which is included in the water use spreadsheet in Appendix B, but not shown on the POU figure is part of the POU. Lot 38 includes 6 cabins on one taxlot. The two points of diversion and a pool house are also included. (58+5 extra cabins, 2 PODs, and 1 pool house=66 locations of use). Please provide a detailed description of the locations of the POU and provide a spreadsheet that directly corresponds to a labeled POU figure. Additionally, please confirm that the vacant lots that are included with the POU are stubbed in.

Upper Spring Flow Measurement:

Your field report indicates that you measured the flow at the upper spring using the trajectory method. Please provide backup data and calculations that support your flow measurement results as outlined in IDAPA Beneficial Use Examination Rules 37.03.02.040.03.

"Water measurements may be made by vessel, weir, meter, rated flume, reservoir capacity table or other standard method of measurement acceptable to the Director. The field report shall describe the method used in making the measurement, the date when made, the name of the person making the measurement, the legal description of the location where the measurement was taken and shall include sufficient information, including current meter notes, rating tables, and/or calibration information to enable the Director to check the quantity of water measured in each case."

Now that flow meters are installed at this facility, you could request the owner to submit photographs showing the flow meter readings at system capacity as well.

The Department has concluded that this field report is not completed as required by the IDAPA Beneficial Use Rules. Therefore we are returning the field report to you for completion. Please submit the requested information within thirty (30) days. If the additional information is not submitted within thirty (30) days or within the time specified in the written notice, the priority date of the permit will be advanced one (1) day for each day the information submittal is late (IDAPA 37.03.02.035.02). As you are aware, the Paradise Homeowners Association, Inc. is interested in having this permit reinstated, so your timely response is appreciated.

Respectfully,



Manuel Rauhut
Staff Engineer



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AUG 07 2017

DEPARTMENT OF
WATER RESOURCES

August 3, 2017

Idaho Department of Water Resources
PO Box 83720
Boise, ID 83720-0098

Attn: Dan Nelson

Subject: Permit 63-32016

Dan,

This letter is in response to your March 2, 2017 letter regarding the field exam for the above-referenced permit.

Paradise HOA has installed flowmeters on both diversions, thereby meeting the permit's measurement device condition. Photos and spec sheets are attached. Based on our phone conversation earlier, I understand that these photos and documentation are sufficient and it is not necessary for me to return to the site to verify flowmeter installation.

Except for recent flowmeter installation, the pumping systems have been unchanged for years and are as described in earlier water right files 63-10560 and 63-12316. Included with this letter are selected documents from those files that should answer your questions on pump details. The pumps are 2.5-hp centrifugal units. Geothermal water collected from the springs is piped to the pumphouses where the pumps pressurize the water for circulation through the subdivision's heating system. The upper pump house uses three and the lower pump house six of the same model Sta-Rite pumps.

As I understand, when the heating season begins, all the pumps are turned on and the system is run at full capacity for the entire heating season, usually from mid-September through mid-May (240 days). Therefore, the volume pumped is $1.13 \text{ cfs} \times 1.9835 \text{ af/cfs-day} \times 240 \text{ days} = 538 \text{ acre-feet}$. If the 5 gpm estimated flow (see below) is discounted, this volume is 533 acre-feet. I understand that this may not be

the same volume calculated by using the more detailed methodology detailed in your letter. However, this is the volume that is actually being diverted, circulated through the heating system, returned to the pool and finally discharged to Grouse Creek. Right 63-10560 provides 152 afa and right 63-12316 provides 6.6 afa. Therefore, I recommend that permit 63-32016 be licensed at 379.4 afa ($538 - 152 - 6.6 = 379.4$).

Regarding the estimated 5 gpm flow that was not measured during my exam, this flow is water discharging from the lower springs that would be available to be pumped by the lower pump station had the pool been full. This estimated rate is based on my experience measuring small flows, typically by filling a five-gallon bucket from a faucet or garden hose. The volume of flow appeared to be similar to that produced by a 5/8-inch garden hose under moderate pressure, which I have measured with typical range of 4 to 6 gpm. Figure 1 is a photograph of this flow running off the tarped area on left and flowing through the open gate valve on right. If my estimate is insufficient, then this flow can be neglected from the licensed amount as emptying the pool and returning for a measurement is not worth the effort.



Figure 1: Unmeasured flow from lower spring.

August 4, 2017

I hope this letter provides an adequate response to your letter. Paradise HOA is looking forward to having this permit reinstated and licensed. Please let me know if you have any questions.

Sincerely,



Scott N. King, P.E.
Supervising Engineer

cc: Paradise HOA

File: 1314.0010

Flowmeter installation photos provided by Paradise HOA







INSTALLED July 8/17

Calibration Certificate

Certificate No.: 16121153

Instrument name Electromagnetic Flowmeter

Specification MFE100D8110A055ER1401111S

Instrument S.N. 16121153

Rating of Accuracy 0.5

Imported By Instrumart

Approved by: Chen Hong

Checked by: Zhou Bing

Calibrated by: Yao Jian Zhen

Calibration date: 2017-2-15

Company address: 35 Green Mountain Dr, S Burlington, VT 05403

Tel: 1-802-863-0085

Certificate No.: 16121153

Technology document based by calibration:

Q/LY JZGF-01-2012 《Calibration Criterion of Electromagnetic Flowmeter》;

1、Standard calibration device

Device name: Static volumetric standard device by measuring water

Rating of Accuracy/Deviation: U=0.06% (k=2)

Measure range: DN15 ~ DN1200

Expire Date: 2017-12-19

2、Calibration condition

Liquid: Water

Liquid pressure: 0.4MPa

Liquid Temp.: 64.4 °F

3、Calibration result:

3.1 Inspection of appearance and function: visual inspection for obvious defects in the appearance of the flow meter and verification of normal operation.

3.2 Leak Test: Verify that there aren't any leaks at the connection of the flow meter.

3.3 Calibration data:

Test points	10%			50%			100%		
Flow (Gal/m)	43.25	46.02	46.82	212.86	222.52	222.03	444.17	447.73	442.89
Basic Deviation(%)	0.13	0.20	0.03	0.05	-0.16	-0.11	-0.06	0.00	-0.01
Repeatability (%)	0.09			0.11			0.03		
Max. Disp. Deviation (%)	0.20			Max. Repeatability Deviation (%)			0.11		

4、Accuracy Rating: 0.5 ;

Instrument coefficient:

FACT1: 0.9218

FACT2: 0

FACT3: 0

5、Others:

Environment condition:

Environment Temp.: 62.6 °F

Relative humidity: 55%RH

Transmitter S.N.: 16120737

Output: Pulse;

Circuit board coef.: 0.8523

Remark: 1. These calibration results are only valid for this individual flow meter.

2. Unauthorized reproduction of this calibration certificate is prohibited, with the exception of reproduction in whole for private use.



INSTALLED JUNE 22-2017

Calibration Certificate

Certificate No.: 16121157

Instrument name Electromagnetic Flowmeter

Specification MFE100D8110A055ER1401111S

Instrument S.N. 16121157

Rating of Accuracy 0.5

Imported By Instrumart

Approved by: Chen Hong

Checked by: Zhu Bin

Calibrated by: Jim zhen

Calibration date: 2017-2-14

Company address: 35 Green Mountain Dr, S Burlington, VT 05403
Tel: 1-802-863-0085

Certificate No.: 16121157

Technology document based by calibration:

Q/LY JZGF-01-2012 《Calibration Criterion of Electromagnetic Flowmeter》;

1、Standard calibration device

Device name: Static volumetric standard device by measuring water

Rating of Accuracy/Deviation: U=0.06% (k=2)

Measure range: DN15 ~ DN1200

Expire Date: 2017-12-19

2、Calibration condition

Liquid: Water

Liquid pressure: 0.4MPa

Liquid Temp.: 64.4 ℉

3、Calibration result:

3.1 Inspection of appearance and function: visual inspection for obvious defects in the appearance of the flow meter and verification of normal operation.

3.2 Leak Test: Verify that there aren't any leaks at the connection of the flow meter.

3.3 Calibration data:

Test points	10%			50%			100%		
Flow (Gal/m)	46.31	46.42	46.47	221.64	220.58	221.79	439.86	442.66	441.15
Basic Deviation(%)	0.20	-0.01	0.00	-0.24	0.05	0.10	-0.06	-0.06	-0.07
Repeatability (%)	0.12			0.18			0.01		
Max. Disp. Deviation (%)	-0.24			Max. Repeatability Deviation (%)			0.18		

4、Accuracy Rating: 0.5 ;

Instrument coefficient:

FACT1: 0.9216

FACT2: -31

FACT3: 0

5、Others:

Environment condition:

Environment Temp.: 62.6 ℉

Relative humidity: 61%RH

Transmitter S.N.: 16120706

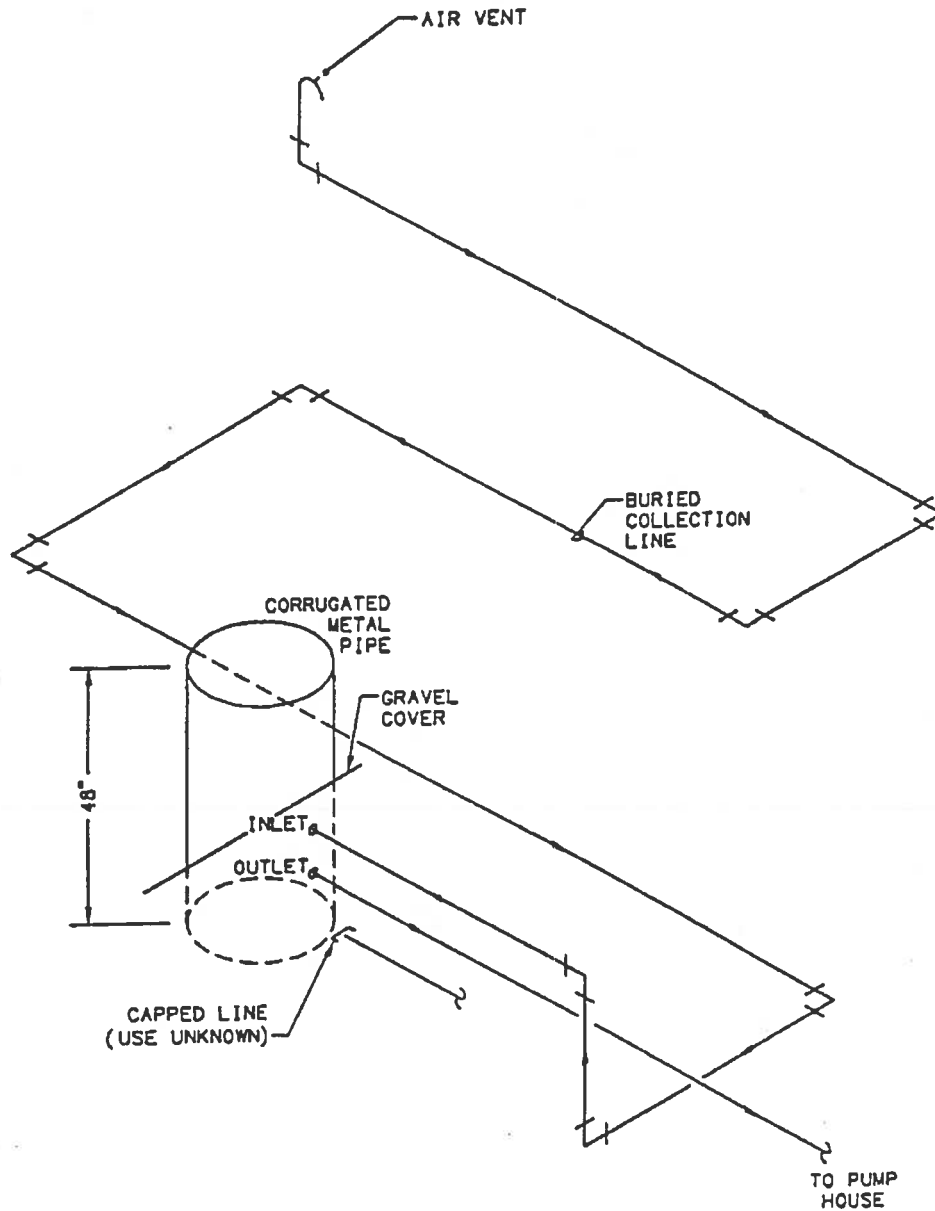
Output: Pulse;

Circuit board coef.: 0.851

Remark: 1. These calibration results are only valid for this individual flow meter.

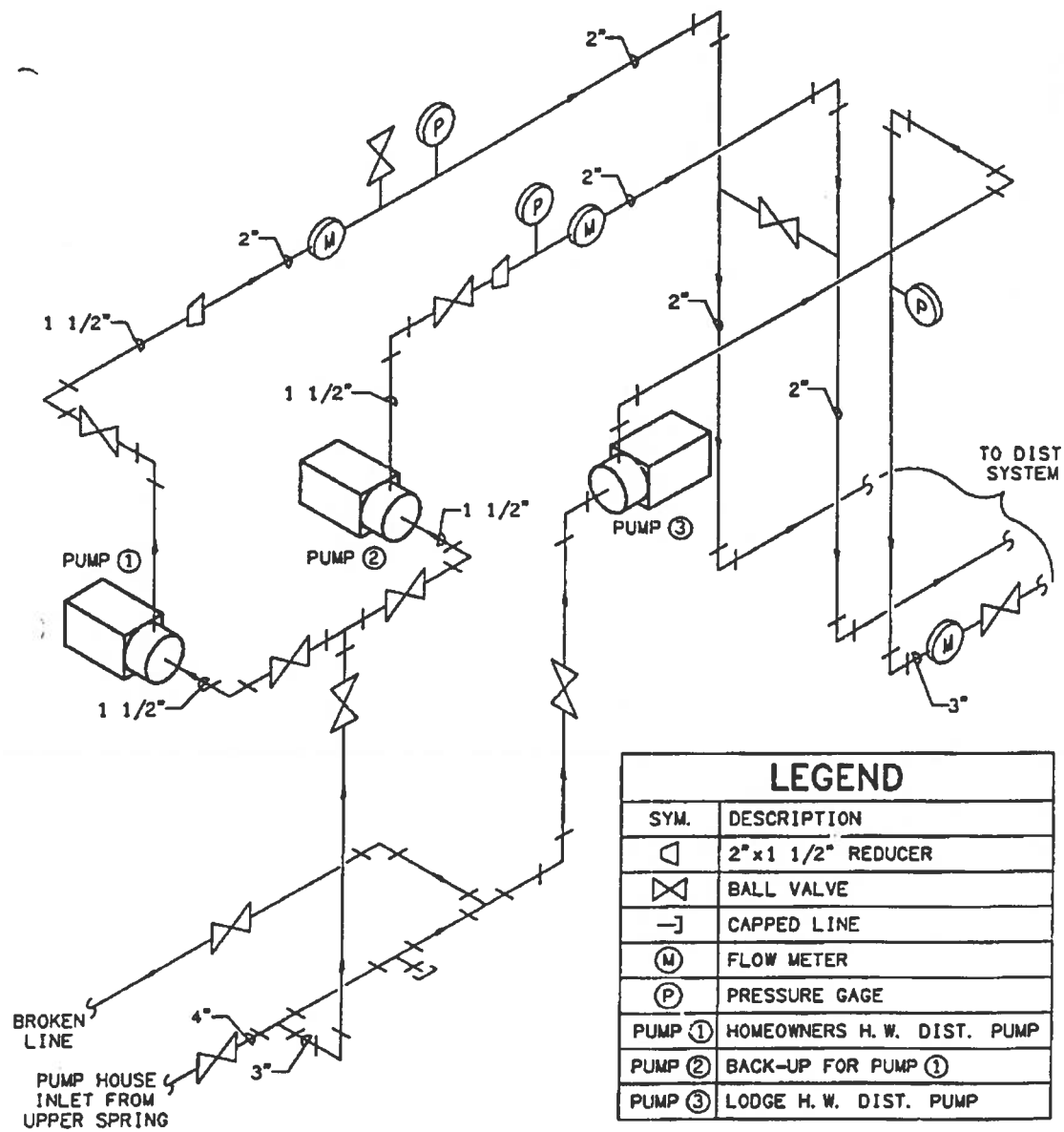
2. Unauthorized reproduction of this calibration certificate is prohibited, with the exception of reproduction in whole for private use.

Enclosure One
Page 1



HOT WATER COLLECTION SYSTEM AT UPPER SPRING

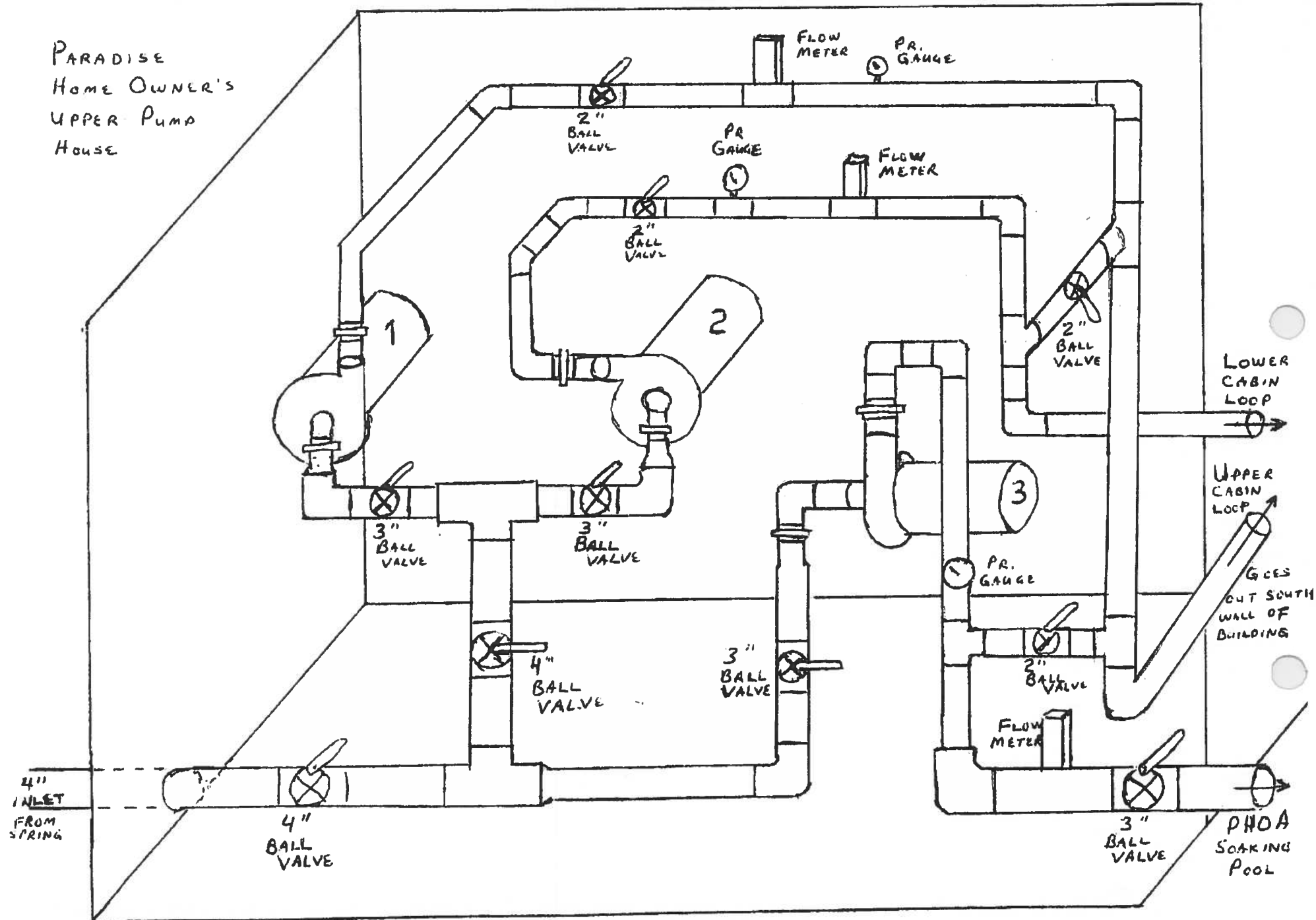
NTS
MEASURED FLOW - 114 GPM

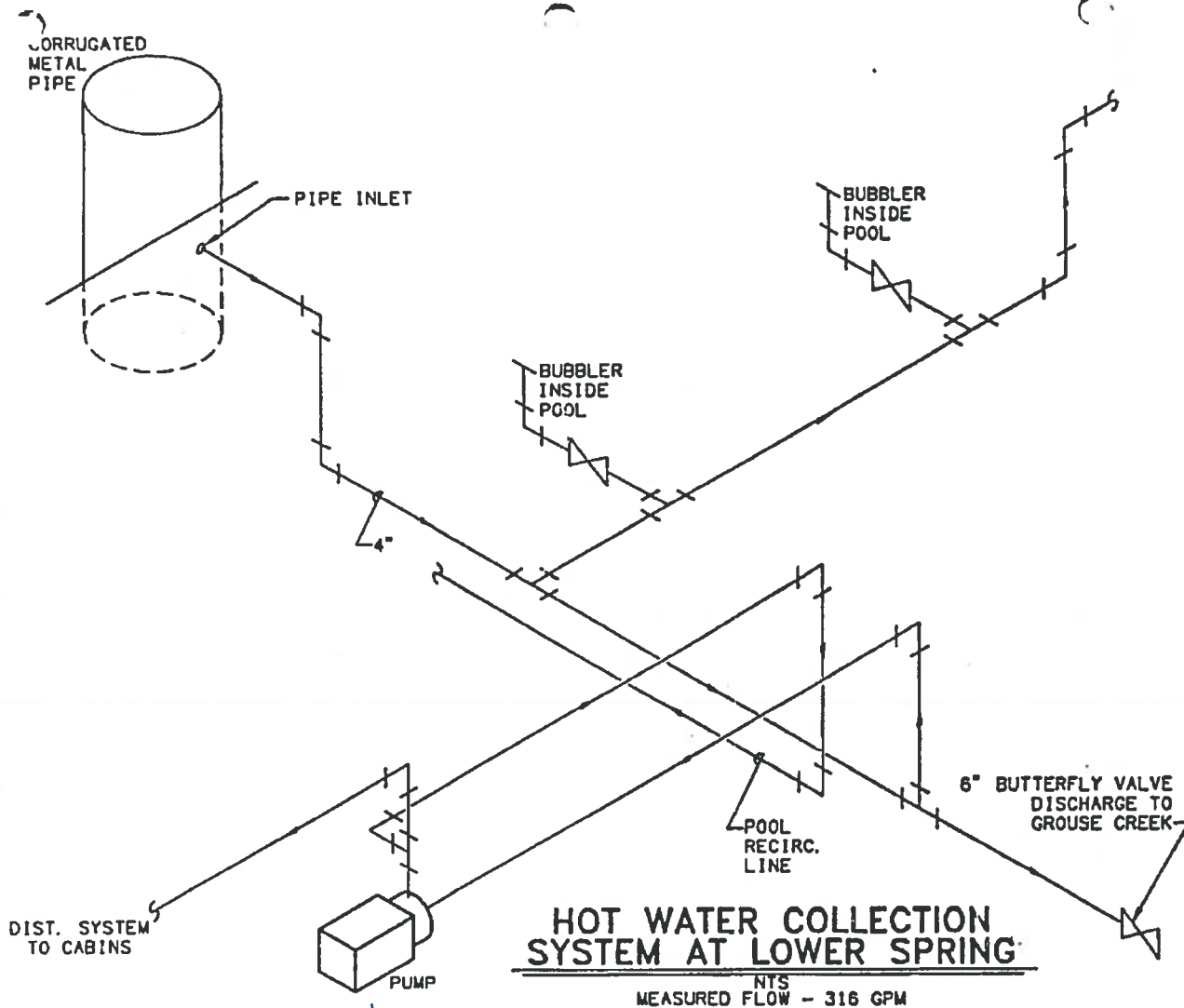


UPPER SPRING PUMP HOUSE SYSTEM

NTS

PARADISE
HOME OWNER'S
UPPER PUMP
HOUSE





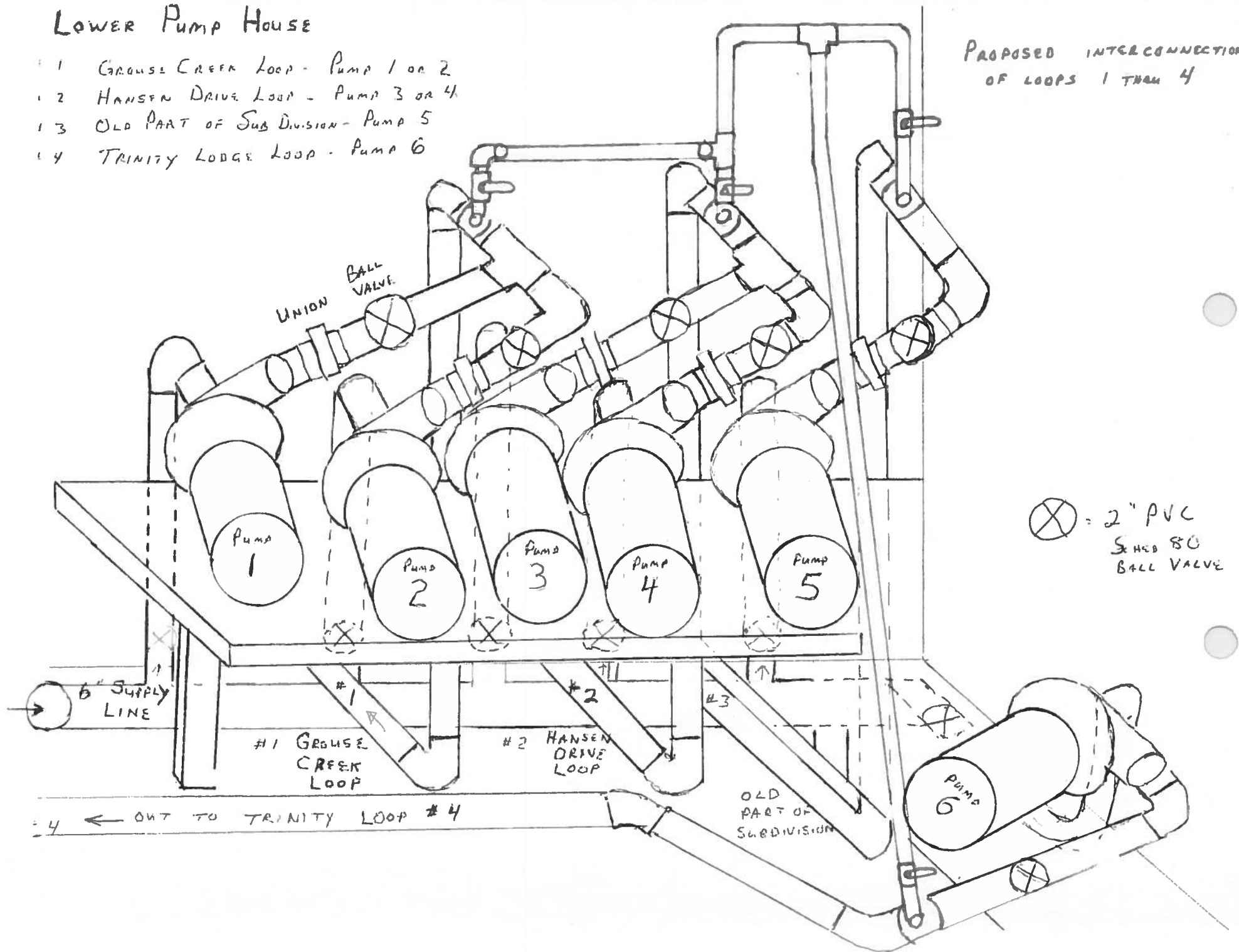
multiple pumps

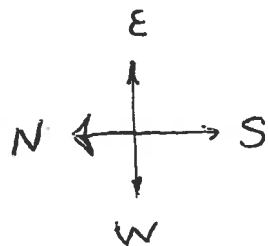
See "Lower Pump House" diagram with six pumps

Lower Pump House

- 1 Grouse Creek Loop - Pump 1 or 2
- 2 Hansen Drive Loop - Pump 3 or 4
- 3 Old Part of Sub Division - Pump 5
- 4 Trinity Lodge Loop - Pump 6

PROPOSED INTERCONNECTION
OF LOOPS 1 THRU 4





PARADISE
HOMEOWNER'S ASSOCIATION
GEOTHERMAL WATER
SYSTEM

16 CABINS ON
UPPER
LOOP

LEGEND:

HOT WATER
RETURN

Pump 1 or 2
UPPER
LOOP

PHOA
POOL
CROSSOVER
VALVE

UPPER PUMP
HOUSE

Pump 3
PHOA POOL
AND WEST CABIN
LOOP
NEW
SPRING
NEW
CONNECTION
LINE

OLD PART
LOWER
SUBDIVISION

EXISTING
LINE - NEW
CONNECTION

TRINITY
PARADISE
POOL

TRINITY
PARADISE
LOOP

LOWER
HOT WATER
SOURCE

LOWER
PUMP
HOUSE

GUTHRIE
HOUSE

GRANITE CREEK ROAD

PINE - FEATHERVILLE ROAD

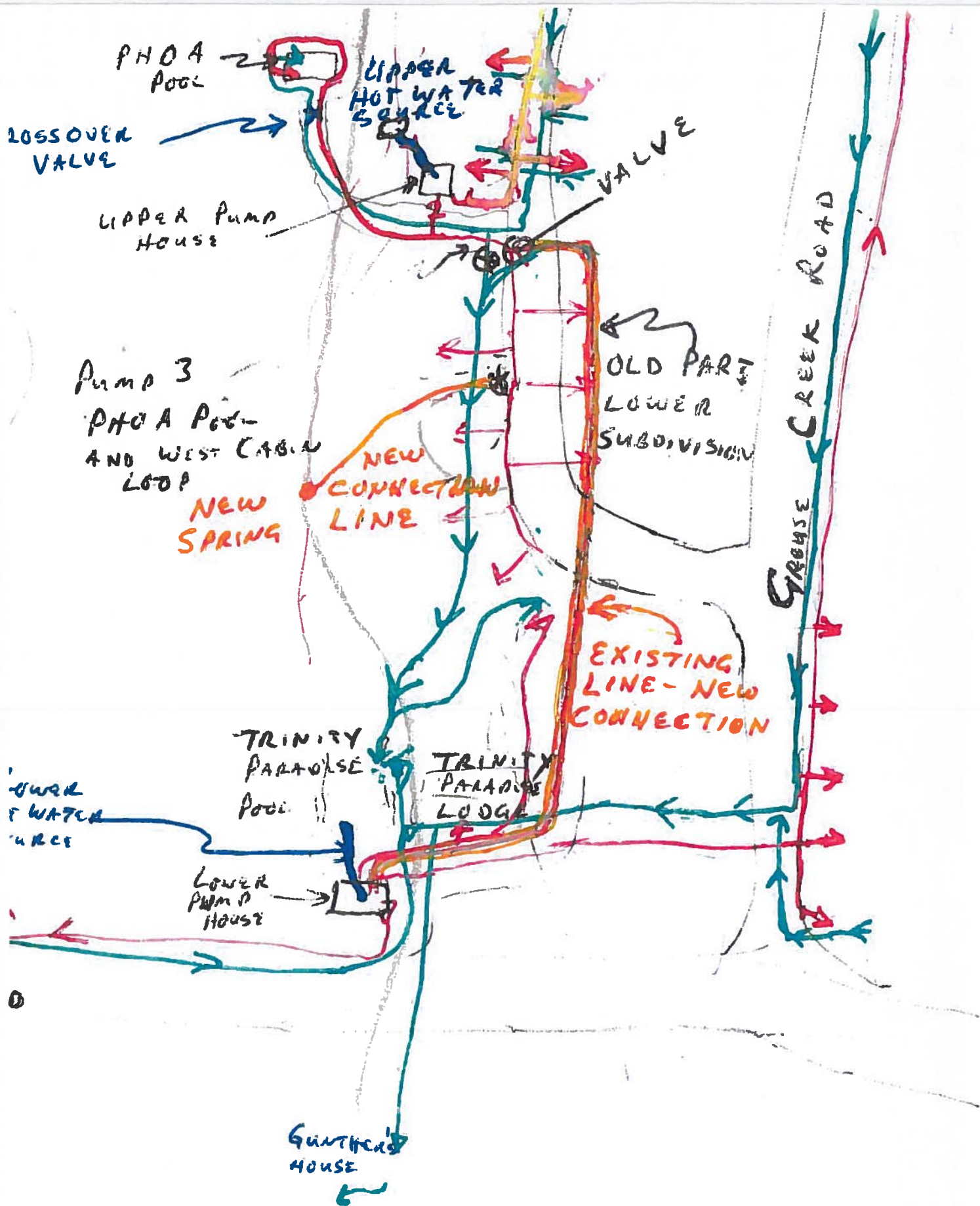
SHUT OFF

9 CABINS
HANSEN
DAVE LOOP

HANSEN DA. LOOP

SHUT OFF
@ JOHNSON'S

THURSDAY
DAVE





general purpose centrifugal pumps



The J/JB Series Pumps have a heavy-duty cast iron construction and are offered in high and medium head models, with Noryl® or silicon bronze impeller.

APPLICATIONS

- Water systems and sprinkling... for homes, farms and industry.

SPECIFICATIONS

Body and Seal Plate – Close-grained cast iron
Base – Steel 12 gauge
Impeller – J Series – Noryl
Impeller – JB Series – Silicon bronze
Shaft – 416 stainless steel
Mechanical Seal – Carbon/ceramic, Buna-N

J/JB SERIES

FEATURES

1/3 through 2-1/2 HP – High head and medium head models, with heavy-duty motors, easy service design and four-position discharge.

Drain Port – Provided for easy winterizing.

Medium Head Models – Deliver up to 110' of head with capacities to 140 GPM.

High Head Models – Deliver up to 140' of head with capacities to 90 GPM.

Easy Serviceability – All models include replaceable wear ring and feature back pull-out design.

J Series with Noryl Impellers – Abrasion-resistant for normal applications with working temperatures to 140°F.

JB Series with Silicon Bronze – JB pumps equipped with shaft seals rated for temperatures to 225°F.

ORDERING INFORMATION

HIGH HEAD

Catalog Number	Noryl® Impeller	Silicon Bronze Impeller	HP	Pipe Tapping Sizes		Motor Voltage	Phase	Approx. Wt. Lbs.
				Suct.	Disch.			
JHB	JBHB		1/3	1-1/4"	1"	115	1	38
JHC	JBHC		1/2	1-1/4"	1"	115/230	1	39
JHC3	JBHC3			1-1/4"	1"	208-230/460	3	39
JHD	JBHD		3/4	1-1/4"	1"	115/230	1	42
JHD3	JBHD3			1-1/4"	1"	208-230/460	3	42
JHE	JBHE		1	1-1/4"	1"	115/230	1	45
JHE3	JBHE3			1-1/4"	1"	208-230/460	3	45
JHF	JBHF		1-1/2	1-1/4"	1"	115/230	1	49
JHF3	JBHF3			1-1/4"	1"	208-230/460	3	49
JHG	JBHG		2	1-1/2"	1-1/4"	115/230	1	69
JHG3	JBHG3			1-1/2"	1-1/4"	208-230/460	3	69
JHHG	JBHHG		2-1/2	2"	1-1/2"	115/230	1	74
JHHG3	JBHHG3			2"	1-1/2"	208-230/460	3	74

MEDIUM HEAD

Catalog Number	Noryl® Impeller	Silicon Bronze Impeller	HP	Pipe Tapping Sizes		Motor Voltage	Phase	Approx. Wt. Lbs.
				Suct.	Disch.			
JMB	JBMB		1/3	1-1/4"	1"	115	1	38
JMC	JBMC		1/2	1-1/4"	1"	115/230	1	39
JMC3	JBMC3			1-1/4"	1"	208-230/460	3	39
JMD	JBMD		3/4	1-1/4"	1"	115/230	1	42
JMD3	JBMD3			1-1/4"	1"	208-230/460	3	42
JME	JBME		1	1-1/2"	1-1/4"	115/230	1	43
JME3	JBME3			1-1/2"	1-1/4"	208-230/460	3	43
JMF	JBMF		1-1/2	1-1/2"	1-1/4"	115/230	1	54
JMF3	JBMF3			1-1/2"	1-1/4"	208-230/460	3	54
JMG	JBMG		2	1-1/2"	1-1/4"	115/230	1	66
JMG3	JBMG3			1-1/2"	1-1/4"	208-230/460	3	66
—	JBMMG		2-1/2	2"	1-1/2"	115/230	1	74
—	JBMMG3			2"	1-1/2"	208-230/460	3	74

Noryl® is a registered trademark of General Electric Co. PRO-Source™ is a trademark of Pentair Water. In order to provide the best products possible, specifications are subject to change.



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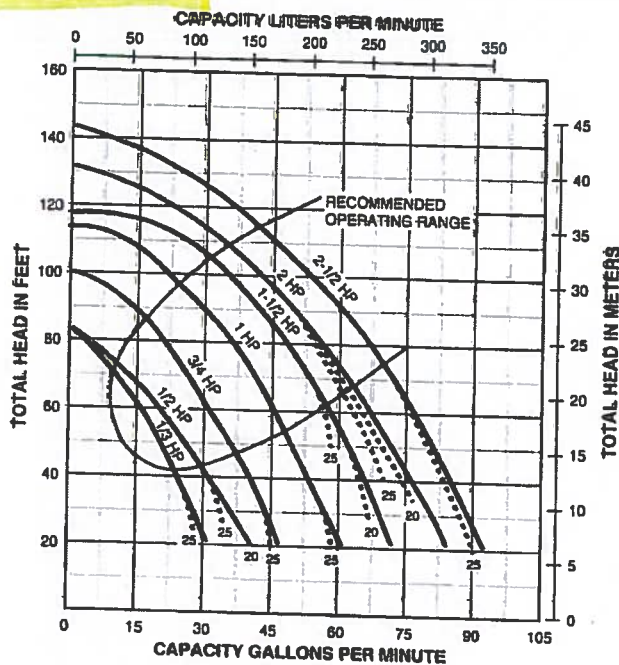
MAY 16 2013

WATER RESOURCES
WESTERN REGION

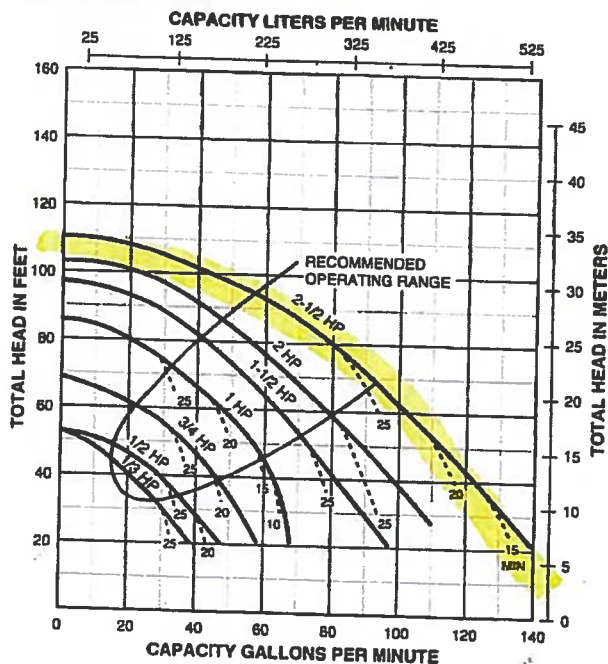
general purpose centrifugal pumps

PUMP PERFORMANCE

High Head



Medium Head



NOTE: Dotted lines indicate performance reduction at high suction lift.

PUMP PERFORMANCE Capacity in Gallons Per Minute

HIGH HEAD

HP	Discharge Pressure		Dynamic Section Lift				
	PSI	Feet Head	5'	10'	15'	20'	25'
1/3	10	23.1	—	26	24	22	20
	20	46.2	20	18	15	11	10
	30	69.3	6	—	—	—	—
1/2	10	23.1	—	34	32	29	26
	20	46.2	25	21	18	15	11
	30	69.3	10	—	—	—	—
3/4	10	23.1	—	—	42	39	37
	20	46.2	35	32	30	28	26
	30	69.3	24	22	19	15	10
1	20	46.2	48	46	45	43	40
	30	69.3	38	35	31	28	25
	40	92.4	23	20	15	—	—
1-1/2	20	46.2	62	60	58	55	52
	30	69.3	50	48	44	40	37
	40	92.4	37	32	29	22	—
2	20	46.2	71	68	66	62	60
	30	69.3	60	57	52	59	45
	40	92.4	45	40	36	31	24
2-1/2	50	115.5	22	15	—	—	—
	20	46.2	81	79	76	74	71
	30	69.3	69	67	63	60	56
2-1/2	40	92.4	56	51	47	44	38
	50	115.5	33	30	22	15	—

Tested and rated in accordance with Water Systems Council Standards.

NOTE: Pumps installed with a PRO-Source™ tank require a 100 PSI relief valve. Pumps with a conventional tank require a 75 PSI relief valve. Relief valve must be capable of relieving entire flow of pump at relief pressure.