

MEMO

TO: File 65-13738 and 65-23452

FROM: CPalmer

DATE: April 6, 2012

RE: Licensing Review Memo and 3 Attachments (ET calc., seepage calc., and Order for 65-13452)

Timeline for 65-23452 (previously 65-13704):

Application Received: November 4, 1996

Permit Issued: June 3, 1999

Proof of Beneficial Use: October 17, 2001 (timely)

Field Examination: July 30, 2010

Split Permit: May 17, 2011. Two systems were developed and this right was split off of 65-13704. This right covers Betsey Pond and 65-13704 covers Whitetail Pond.

Timeline for 65-13738:

Application Received: July 18, 1997

Permit Issued: October 23, 1997

Proof of Beneficial Use: October 17, 2001 (timely)

Field Examination: July 30, 2010

Betsey Pond: Betsey Pond covers 1.5 acres and has a total capacity of 14.4 af pursuant to the field examiners calculations. This pond was originally constructed in the unnamed stream's channel but has been modified and now the unnamed stream is bypassed. The pond is only fed by groundwater that is pumped under rights 65-13738 and 65-23452 and there is no outlet on the pond so no flow-thru right is necessary.

Point of Diversion and Overlap Analysis: The well that that serves 65-23452 and 65-13738 is known as Well #1 and has a capacity of 0.25 cfs. A combined limit will be added to both licenses that limits the rights to 0.25 cfs. It takes 29 days to fill Betsey Pond at 0.25 cfs. Note that the well independently operates for a dual purpose, to irrigate and to fill the pond.

POU: The place of use is Betsey Pond and 1 acre of the pond's perimeter is irrigated by 65-23452. The POU is located within the Whitetail Golf Course in McCall.

Overlap Analysis of POU: There are no overlaps for the irrigation component of 65-23452. The annual fill of Betsey Pond is provided by 65-23452 and seepage losses are covered by 65-13738.

Seepage Calculation and Evaporation for Betsey Pond:

E= 1.7 afa (precipitation deficit, see attached spreadsheet from ET Idaho)

$S^1 = Q_{in} + P - ET$

S = 181 afa - 3.4 = 178 afa

¹ * $\Delta S = Q_{in} + P - ET - S$ where:

ΔS = Change in storage (if there is no outflow you can eliminate this from the equation—in this case the field examiner found no outflow when the $Q < 0.4$ cfs)

Q_{in} = Flow going into the pond

P = precipitation

ET = actual evapo-transpiration

S = seepage

S = $Q_{in} + P - ET$ or S = 181 afa - 1.7 afa (1.5 acres) = 178 afa (if pump running 24/7/365)

As a secondary check, I used the department permit section's pond calculator and found a total of 166 afa for seepage (attached); the range established by the tools I have available for seepage = 166 afa - 178 afa.

Note that the seepage calculation assumes that the pump is operated 365 days/year. The field examiner made some calculations using 365/yr so I think that this is a safe assumption to make.

Volume and Diversion Rate: The diversion rate for 'diversion to storage' on both rights will be 0.25 cfs with a combined limit condition on the rights. Based on seepage and conditions on permit 65-13738 I recommend the following:

<u>65-13738</u>		<u>65-23452</u>	
Aesthetic Storage	20.0 af	Recreation Storage	14.4 af**
Wildlife Storage	20.0 af	Irrigation	3 afa
Recreation Storage	20.0 af		
Total	20.0 afa*	Total	17.4 afa

*the volume under 65-13738 will cover 20.0 af of seepage losses

**the volume under 65-23452 will cover 14.4 afa for the initial fill of the pond

A condition will be added to the licenses that acknowledge that the storage is for one pond that has a capacity of 14.4 af.

Explanation of Conditions:

Losses in the pond due to evaporation are not covered under either permit for a couple of reasons. First, evaporation is not covered under 65-13738 because conditions #9 and #10 state:

#9 Prior to impoundment under terms of this right the right holder shall annually rent 4.0 AF of water from the Water District 65 Rental Pool to mitigate evaporation losses from the pond. If the right holder does not replace evaporation losses until all prior downstream storage rights are filled the requirement for mitigation is waived.

#10 The groundwater source identified on this right shall be used to replace seepage use only and not used to replace evaporation.

Background of Conditions #9 and #10: Right 65-13738 was filed to replace lapsed permit 65-13452 for surface water that was approved by order. When 65-13738 was filed with the department, the groundwater development was meant to be supplemental to surface water via an unnamed stream. However, the unnamed stream was never developed. It appears that the conditions from original permit 65-13452 were carried over, in some form, to 65-13738 under the understanding that surface water would be developed and the purpose of the conditions were to protect senior right holders that appropriate water from the unnamed stream. Since surface water had not been developed; the unnamed stream bypasses the pond, condition #9 is no longer applicable. In a meeting with Shelley Keen and Craig Saxton, we agree that condition #10 should still be met, to ensure that happens right 65-13738 will cover seepage losses only.

And secondly, right 65-23452 cannot cover evaporative losses in Betsey Pond because the volume available under that right is only enough to provide a one-time fill. There is no way to draw out more volume so evaporation will have to go uncovered. Note that we contemplated to use more volume from parent right 65-13704 to cover the evaporation, however, there is not extra volume between all the rights appurtenant to that right's POU (Whitetail Pond) either.

65-13738 (conditions that were not met)

#8 The permit holder shall install permanent measuring devices as approved by the department in a manner to assure that water in the channel upstream from the pond will not be impounded when prior downstream water rights are not being filled. The right holder shall provide reasonable access to the pond and measuring devices.

Action: Measuring devices have not been installed pursuant to condition #8. It appears that the devices are no longer applicable because the rights have been developed differently than contemplated in the permits. Right 65-13738 is no longer using surface water and there is no outlet on the pond so the condition is not applicable. Condition 01M will replace this condition at licensing.

#9 (as listed above)

Action: Remove condition during licensing right 65-13738 since this right is for ground water only.

65-23452 (conditions that were not met)

#5 The right holder shall use the full allotment of appurtenant surface water rights in conjunction with groundwater diverted for irrigation purposes under this right and shall only divert groundwater under this right for irrigation purposes when water from the appurtenant surface water rights cannot be delivered to the right holder.

Action: Surface water is not available to the acre that is irrigated by 65-23452. It appears that surface water was never available so the condition does not apply to this right. Both conditions #5 and #6 will be removed at licensing.

#6 This right shall not be used for irrigation purposes if the surface water right(s) appurtenant to the place of use is sold, transferred, leased or used on any other place of use.

Action: Remove condition (see above)

#8 The right holder shall install/maintain permanent measuring devices in such a manner that the amount of water entering the reservoir and the amount of water released from the reservoir can be measured.

Action: Measuring devices have not been installed pursuant to condition #8. It appears that the devices are no longer applicable because the rights have been developed differently than contemplated in the permits. There is no outlet to the pond so this condition is not applicable. Condition #7 on the permit that states that measuring devices shall be installed upon specific notification will be carried over to each license in place of conditions #8.

Season of Use: The current season of use for this area is 4/15-10/31.

Amendment?: No. Legal descriptions for the place of use and point of diversion have been included in the permits.

Pond Spreadsheet (Water Permit Section)

POND

SURFACE AREA (SQFT) ----- 65340

SEEPAGE RATE (FT/DAY) ----- 0.25*

SUGGESTED VALUES FOR DIFFERENT SOIL TYPES:

0 = NATURALLY FILLED FROM GW, OR LINED

0.5 = CLAY SOILS

1.5 = LOAMS

3.0 = GRAVELS

CONVERT TO GPD -- 122185.8 GPD

FORMULA: $SA * SEEPAGE LOSS = POND SEEPAGE (CUFT/D)$

CONVERSION: 1 CUFT = 7.48 G

NOTE: ASSUMES CONTINUOUS REPLACEMENT RATE

TOTAL 148036.7 GPD or 0.45 af/day or 166 af/a

*0.25 was used for seepage rate because the pond is adjacent to a stream that may diminish the seepage
the stream may be seeping from the stream to the pond further the vadose zone may cause the water table to be shallow near the pond

Attachment 1

ET Idaho 2009: Evapotranspiration and Consumptive Irrigation Water Requirements for Idaho

Please send suggestions for improving this site to robison@kimberly.uidaho.edu Copyright 2010, University of Idaho.

Attachment 2

McCall (NWS --105708) Statistics based on thirty

For a different land cover or crop click on the above link.

You can highlight this table and copy via the clipboard to a Microsoft Excel or OpenOffice spreadsheet to plot or otherwise work with this data.

Open water - shallow systems (ponds, streams)															
Precipitation Deficit (Click here for a graph)															
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Growing Season ^a	Non Growing Season ^b	Annual
Mean	mm/day												mm		
Monthly ^c	-2.13	-1.78	-0.91	0.34	0.96	2.02	3.34	2.76	1.43	0.18	-2.08	-2.45	53	0	53
15-Day Moving Average ^d	-2.04	-2.18	-0.88	0.35	0.97	2.09	3.45	2.60	1.26	0.25	-1.98	-2.26	333.5 mm/annually 333.5 = 1.13 af/acre x 1.5 acres 1.7 af/a		
7-Day Moving Average ^e	-2.08	-1.98	-0.95	0.31	0.95	2.02	3.42	2.68	1.31	0.20	-2.07	-2.34			
3-Day Moving Average ^f	-2.12	-1.81	-0.91	0.33	0.94	1.99	3.37	2.75	1.40	0.19	-2.10	-2.42			
Standard Deviation	mm/day												mm		
Monthly	1.69	1.53	1.53	1.09	1.97	1.12	1.17	1.47	1.38	1.65	1.34	2.01	169	0	169
15-Day Moving Average	1.73	1.97	1.50	1.35	1.93	1.44	1.09	1.49	1.83	1.48	1.69	1.89			
7-Day Moving Average	2.45	2.60	2.06	1.95	2.44	2.19	1.47	1.90	2.31	2.14	2.37	2.68			
3-Day Moving Average	3.17	3.43	2.86	2.73	3.26	3.09	2.17	2.40	2.91	2.86	3.20	3.70			
20% Exceedance	mm/day												mm		
Monthly	-0.85	-0.58	-0.15	0.98	1.99	3.10	4.19	3.64	2.58	1.10	-1.07	-1.53	185	0	185
15-Day Moving Average	0.27	0.39	1.02	2.04	3.46	4.02	4.63	4.06	3.08	1.92	0.24	0.01			
7-Day Moving Average	0.51	1.07	1.65	3.12	4.49	4.65	4.84	4.35	3.45	2.31	0.75	0.27			
3-Day Moving Average	0.60	1.25	2.11	3.50	4.78	5.00	5.07	4.58	3.73	2.55	0.99	0.34			

Attachment 3

State of Idaho
Department of Water Resources
Permit To Appropriate Water

NO. 65-13452

Proposed Priority: May 10, 1993

Maximum Storage Volume: 13.8 AF

This is to certify, that **M RESORTS LIMITED**
AN IDAHO LIMITED PARTNERSHIP
PO BOX 1006
MCCALL ID 83638-1006

has applied for a permit to appropriate water from:

UNNAMED STREAM
POND

tributary of WILLIAMS CREEK
tributary of WILLIAMS CREEK

and a permit is APPROVED for development of water as follows:

<u>BENEFICIAL USE</u>	<u>PERIOD OF USE</u>	<u>RATE OF DIVERSION</u>	<u>ANNUAL VOLUME</u>
STOCKWATER STORAGE	01/01 to 12/31		13.8 AF
WILDLIFE STORAGE	01/01 to 12/31		13.8 AF
AESTHETIC STORAGE	01/01 to 12/31		13.8 AF
	Totals		13.8 AF

LOCATION OF POINT(S) OF DIVERSION:

NESE, Sec. 12, Township 18N, Range 02E
VALLEY County

PLACE OF USE: STOCKWATER STORAGE

TWN RGE SEC

18N 02E 12 NESE

CONDITIONS/REMARKS:

1. See Final Order for additional conditions of approval.

This permit is issued pursuant to the provisions of Section 42-204, Idaho Code.
Witness the signature of the Director, affixed at Boise, this

4th day of March, 1994.

for A. Keith Higginson
R. Keith Higginson, Director

Order for 65-13452

Right 65-13738 filed in place of 65-13452

BEFORE THE DEPARTMENT OF WATER RESOURCES

OF THE

STATE OF IDAHO

IN THE MATTER OF APPLICATION)
FOR PERMIT NO. 65-13452 IN THE)
NAME OF M RESORTS LIMITED)

RECOMMENDED ORDER

This matter having come before the Idaho Department of Water Resources (department) in the form of a protested application for permit, the department having held a conference and a hearing in the matter, the Director of the department makes the following Findings of Fact, Conclusions of Law, Analysis and Order:

FINDINGS OF FACT

1. On May 10, 1993, M Resorts Limited (applicant) filed Application for Permit No. 65-13452 with the department proposing the diversion and storage of 13.8 acre feet (AF) of water of an Unnamed Stream and Pond tributary to Williams Creek to be used for stockwater, wildlife and aesthetic purposes in Valley County, Idaho.

2. The department advertised the application which was subsequently protested by Bezates Land & Cattle Company (protestant).

3. On February 2, 1994, the department held a hearing in the matter. The applicant was represented by Steven J. Millemann. The protestant was present and represented himself.

4. Issues identified by the protestant include the following:

a. The proposed use will reduce the quantity of water under existing water rights.

b. The water supply is insufficient for the purpose for which it is sought to be appropriated.

c. The application is not made in good faith, is made for delay or speculative purposes.

d. The application will conflict with the local public interest.

e. The application is contrary to conservation of water resources within the state of Idaho.

5. Exhibits offered and accepted as a part of the record include the following:

a. Applicant's Exhibit No. 1 - A copy of a U.S. Geological

RECOMMENDED ORDER - Pg 1

Quadrangle sheet showing the general location of springs and points of diversion near the applicant's planned project.

b. Applicant's Exhibit No. 2 - Copy of a letter dated October 19, 1993 to Edward Elam from Barry S. Semple.

c. Applicant's Exhibit No. 3. - A copy of an agreement between Shore Lodge Club and Toothman-Orton Engineering Company, said agreement being entitled "Toothman-Orton Engineering Company, Agreement for Professional Services"

d. Applicant's Exhibit No. 4. - Affidavit of Marvin Whiteman dated January 12, 1994.

e. Applicant's Exhibit No. 5. - Affidavit of A.W. Effinger, Jr. dated January 18, 1994.

f. Applicant's Exhibit No. 6 - Summary of the education and work experience of J. Evan Merrell.

6. In late 1992, the applicant constructed a water impoundment structure across an Unnamed Stream tributary to Williams Creek upstream from land owned by the protestant. The on-stream impoundment known as Betsey's Pond or Betsey Lake has a capacity to store about 13.8 AF of water and has a surface area of about 1.6 acres. Due to concerns of the parties over adequacy of the embankment of Betsey's Pond and the right to store water in the pond, the applicant has breached the dam embankment to a point three (3) feet below the existing outlet pipe for the duration of the contested water right application matter.

7. The protestant diverts water under terms of decreed water right no. 65-09523 from the same source of water which has been used to fill Betsey's Pond. Betsey's Pond is approximately one-half (1/2) mile upstream from the uppermost diversion point of the protestant.

8. Decreed right no. 65-09523 provides the following:

Priority:	June 1, 1907
Source:	Unnamed Streams tributary to Williams Creek
Rate of diversion:	0.16 cubic feet per second (cfs)
Annual Volume:	9.4 AF
Use:	Stockwater
Season of use:	Year-round
Points of div:	NW1/4SE1/4, NW1/4SE1/4, SW1/4SE1/4 - Sec. 11, T18N, R2E, BM.

9. The primary source of water in the Unnamed Stream is snow melt which provides water during the spring run-off in excess of the bank full discharge capacity of the channel which has been estimated to be about 7.0 cfs. Flow in the channel then diminishes to almost no flow in late summer.

10. During November 1993, flow in the channel upstream from

Betsey's Pond which was being impounded in the pond was observed to result in no discharge in the channel below the pond.

CONCLUSIONS OF LAW

1. Section 42-203A, Idaho Code, provides in part as follows:
in all applications whether protested or not protested where the proposed use is such (a) that it will reduce the quantity of water under existing water rights, or (b) that the water supply is insufficient for the purpose for which it is sought to be appropriated, or (c) where it appears to the satisfaction of the director that such application is not made in good faith, is made for delay or speculative purposes, or (d) that the applicant has not sufficient financial resources with which to complete the work involved therein, or (e) that it will conflict with the local public interest, where the local public interest is defined as the affairs of the people in the area directly affected by the proposed use, or (f) that it is contrary to conservation of water resources within the state of Idaho; the director of the department of water resources may reject such application and refuse issuance of a permit therefor...
2. The protestant has a prior water right to water in the Unnamed Stream and is entitled to protection of his prior right.
3. The proposed use of water will not reduce the quantity of water under existing water rights if the approval of the protested application is properly conditioned.
4. The water supply is sufficient to fill Betsey's Pond during times of excess run off, but not to maintain an undiminished water level in the pond throughout the summer and fall.
5. The application was not made for delay or speculative purposes.
6. The application will not conflict with the local public interest if the use of water proposed under the application is properly conditioned to protect prior water rights.
7. The application is not contrary to the conservation of water resources within Idaho.

ANALYSIS

While the applicant did not initially comply with permitting requirements before constructing Betsey's Pond and impounding water in it, the applicant has since shown good faith in obtaining necessary approvals and by breaching the dam embankment until the contested matter is resolved.

There is water early in the season to fill the pond without injury to other water rights. The applicant, however, should not be allowed to continue to impound flows later in the summer and

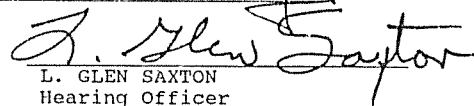
fall to maintain the level in the pond which will diminish by both evaporation and seepage. Such diminished flows should either be passed through the impoundment or diverted around the impoundment when the right of the protestant and other downstream prior rights are not being filled.

ORDER

IT IS THEREFORE, hereby ORDERED that Application for Permit No. 65-13452 is APPROVED subject to the following conditions:

1. Proof of construction of works and application of water to beneficial use shall be submitted to the department on or before the date shown in the Final Order of the department in this matter.
2. Use of water under this permit is subject to all prior water rights.
3. Prior to impoundment of water under terms of this permit, the permit holder shall submit to the department for review and approval a plan to either mitigate any potential injury to the protestant caused by impoundment of water in Betsey's Pond or a plan to assure that impoundment of water will not injure the prior rights of the protestant. Any plan proposing a structural solution such as a by-pass pipeline shall also provide for future maintenance of the system and the consequence of system failure.
4. The permit holder shall submit a plan for approval by the department for water measurement and for permanent measuring device installation and maintenance to assure that water in the channel upstream from the pond will not be impounded (added to the water already stored) when the prior right of the protestant is not being filled. The plan may need to provide for reasonable limited access to Betsey's Pond or to the measuring devices.
5. The protestant will be allowed to participate fully in the plan review required in Condition of Approval No. 4. above. The applicant shall provide copies of the plans and supporting documents to the protestant.
6. Use of water under this right is subject to control by the watermaster of State Water District No. 65, the Payette River and tributaries.
7. The place of use is locally known as Betsey's Pond or Betsey Lake.
8. Stockwater storage is for eight (8) horses.

Signed this 8th day of February, 1994.


L. GLEN SAXTON
Hearing Officer