

MEMO

DATE: January 28, 2009

TO: File

FROM: Mat Weaver

RE: Background and considerations pertaining to the licensing of permit 72-16625

The purpose of this memo is to identify and discuss some of the contradictions in permit 72-16625 and to provide background and in some instances justification for the strategies behind the creation of the license.

DISCUSSION

PERMIT 72-16625 DIVERSION RATE CONTRADICTION – 0.20 CFS vs. 0.40 CFS

The official record of water right permit 78-16625 declares a maximum diversion rate of 0.40 cfs and a diversion rate of 0.40 cfs for aesthetic use. However, condition number five on the permit states the following: *“The Diversion rate under this right shall not exceed 0.20 cfs.”*

Since these numbers appear to be in contradiction with each other, in order to determine which number is the correct number we must try to understand and determine the intent of the permit. On the application for permit a diversion rate of 0.40 cfs was requested. The 0.40 cfs diversion rate was discussed in the hearing for this permit and the following is an excerpt from the Analysis section of the Amended Preliminary Order for this permit dated September 3, 2004.

Some flow through the pond is needed to prevent stagnation of the pond, but a flow rate of 0.40 cfs is excessive for this purpose. A flow rate of 0.20 cfs is sufficient to provide turnover of water in the pond and is a more reasonable rate of flow.

Furthermore, the Preliminary Order ordered that the diversion rate for permit 72-16625 could not exceed 0.20 cfs. It is possible that the intent was to establish a permitted diversion rate of 0.20 cfs, but the relic diversion rate of 0.40 cfs from the application was not updated on the permit following the issuance of the Preliminary Order.

PERMIT 72-16625 CONDITIONAL LANGUAGE CONTRADICTION – NO. 9 vs. 10

Condition number nine on permit 72-16625 states the following:

This permit does not constitute a new appropriation of water from Garden Creek and instead authorizes an additional use to be made of water (for aesthetic purposes) that is

diverted for use under the applicants (sic) existing water rights provided that (sic) applicant mitigates the evaporative loss from the pond.

Condition number ten of permit 72-16625 states the following:

The right holder is not authorized to divert water to its pond for aesthetic purpose when the applicants (sic) irrigations rights are not being delivered unless the applicant provides suitable mitigation to compensate for system losses.

Condition number nine refers to the permit holder's existing water rights, all of which are for irrigation. This condition could be interpreted to suggest that the permit holder can only use the aesthetic use of this permit, and by extension the pond itself, when they were actively using surface water for irrigation. Conversely, when they were not diverting water for irrigation they would not be entitled to the aesthetic use of the pond.

However, condition number ten appears to clearly indicate that the permit holder can divert water to their pond, regardless of the active use of their irrigation rights, as long as the consumptive losses from the pond are adequately mitigated.

Although the overall intent of the permit may undoubtedly be in question, it can not be doubted that conditions number nine and ten, as worded in the final permit, are at cross purposes to each other.

AESTHETIC USE OF THE POND WHEN IRRIGATION WATER IS IN THE POND

When irrigation water passes through the pond, with a maximum diversion of 1.49 cfs, the pond can fill in 24 hours, and no storage component is needed in association with the pond.

Pond Volume/Flow Rate = Fill Time

$$[(0.75 \text{ ac-ft}) * (43,560 \text{ sf/ac-ft})] / [(1.49 \text{ ft}^3/\text{s}) * (3,600 \text{ s/hr})] = 6.1 \text{ hours}$$

In this scenario mitigation water is only required for the evaporative losses associated with the pond. This requirement is recognized and memorialized in the Amended Preliminary Order and in condition number four of the approved permit.

A mitigation plan was prepared and submitted by ERO Resources in which the evaporative losses associated with the pond and a fountain feature in the pond were estimated at 0.62 ac-ft/year. To offset these evaporative losses the mitigation plan proposes the desiccation of 0.20 acres of irrigated pasture land and the non-use of 0.04 cfs of water associated with the following water rights:

Right No.	Use Changed to Mitigation	Mitigation Rate (CFS)	Mitigation Acres
72-106J	Irrigation	0.01	0.20
72-109J	Irrigation	0.01	0.20
72-4174C	Irrigation	0.01	0.20
72-10486C	Irrigation	0.01	0.20

The land that will no longer be irrigated under these rights is located within the Government Lot 3 (NE¼NW¼) Section 2, Township 13 North, Range 18 East, B.M.

To accomplish the changes in use associated with the above water rights, ERO has submitted transfer document 75253 to IDWR for review and approval. This mitigation plan is acceptable to IDWR but is only valid for those times when the irrigation rights are in priority. When the irrigation rights are not in priority ERO provides alternate mitigation plans, which are discussed later in this memo.

AESTHETIC USE OF THE POND WHEN NO IRRIGATION WATER IS IN THE POND

In a letter from ERO dated January 5, 2009 it was brought to the attention of IDWR that *“the irrigation system has been revised so that water currently is not diverted through the pond...”*. A schematic of the diversions, conveyance lines, and irrigation system included with the Field Exam appears to reinforce this fact, and imply that this was the condition at the time of exam.

The implications of this fact impact the permit and subsequent issuance of the license in two ways: (1) if the irrigation water is no longer in the pond, how does the pond receive it's fill; and (2) does the conditional language of the permit imply that the validity of an aesthetic use in the pond is intrinsically dependant upon the diversion of irrigation water through the pond.

POND FILL

When preparing a permit for an “off stream reservoir” or off stream pond, you must address both a diversion and storage component of the permit. The diversion component establishes the rate of water that is diverted to the pond. The storage component establishes a volume of water that encompasses the capacity of the pond and any losses such as seepage and evaporation that are attributable to the pond. One way in which you can be exempt from the requirement of having a storage component associated with your pond water right, is if meets the “24 hour fill” requirement. Processing Memo No. 67 discusses the concept of the 24 hour fill volume in association with Regulation/Distribution Ponds. Under this allowance, if your pond is part of a system used to distribute and use water in accordance with a valid water right, and the pond does not impound a volume of water larger than authorized for diversion in a 24 hour period by the water right, no water right is required for the storage component of the pond.

In regards to permit 72-16625, if the irrigation usage of the pond is removed, and thus the designation of an irrigation distribution pond, would the permit holder still be entitled to

an exemption from having to provide, and in this case mitigate, for the storage component of the pond?

If you believe that the irrigation water is required to meet the 24 hour rule a water right established for the aesthetic use of the pond, when that represents the sole use of the pond, would require a diversion rate of 0.20 cfs and a storage volume of 1.37 ac-ft (0.75 ac-ft + 0.62 ac-ft). Furthermore, the mitigation plan would need to be modified to accommodate the additional volume deprived from the watershed due to the capacity of the pond.

Idaho Code §42-211 only allows for the approval of an amendment to a permit when it will not result in the diversion and use of more water than was originally permitted. Therefore, from a strict interpretation of Processing Memo 67 (as written) and §42-211, one could conclude that permit 72-16625 can not be sufficiently amended to accommodate the addition of a storage component to the water right and should be cancelled. The permit holder could however, relinquish the permit and file for a new permit that included a storage component, and submit with the future application the existing mitigation plan modified slightly to accommodate the additional required mitigation volumes.

ASETHETIC USE LINKED TO IRRIGATION USE

Condition number nine of permit 72-16625 states the following:

This permit does not constitute a new appropriation of water from Garden Creek and instead authorizes an additional use to be made of water (for aesthetic purposes) that is diverted for use under the applicants (sic) existing water rights provided that (sic) applicant mitigates the evaporative loss from the pond.

As previously acknowledged the complete intent of this condition is not all together clear. Clearly this condition is trying to convey the concept that this permit is intrinsically tied to the permit holders existing irrigation water rights, and is in fact merely an additional use associated with those existing rights. Furthermore, the permit does not represent an additional diversion rate of water beyond those established under the previous irrigation rights. However, is the intent of this condition to (1) limit the aesthetic use of the permit to those times that irrigation water is diverted through the pond, or (2) to merely limit the aesthetic use of the permit to those times that the irrigation water is diverted in general? I.e. during the irrigation season when the water rights are in priority.

If in fact irrigation water is no longer diverted to the pond, the interpretation of this condition has a profound impact on permit 72-16625. Interpretation one above implies that if irrigation water did not pass through the pond at the time of the field exam, then the permit should be cancelled because the conditions of the permit were not met. Interpretation two would allow for the aesthetic use of the pond and the possible perfection of the permit into a license.

ALTERNATE MITIGATION STRATEGIES WHEN EXISTING IRRIGATION WRs
ARE OUT OF PRIORITY

ALTERNATE METHOD 1

ERO Resources' mitigation plan for permit 72-16625 recognizes two scenarios. In the first scenario the permit holder's irrigation rights are in priority and evaporative losses from the pond will be mitigated by the desiccation of an appropriate amount of irrigated pasture land and the non-use or non-diversion of a proportionate rate of water. The second scenario represents the mitigation of evaporative losses from the pond when the irrigation rights are out of priority, and the irrigation rights would not represent a legitimate means of mitigation. In this scenario ERO has proposed diverting water from a nearby spring to the pond to make up evaporative losses. Recognizing that Water District 72B uses the "futile call" principal, ERO proposes that in those times when the spring does not flow all the way to Garden Creek, the Watermaster, as in all futile call situations, will determine that the flow is in fact not reaching the creek, and would allow the new-junior permit to deliver the spring flow directly to the pond or stream, even when downstream senior surface water users are potentially being curtailed. To accommodate this new appropriation of water from the spring, ERO has submitted an application for approval and issuance of a permit.

ALTERNATE METHOD 2

Another alternate method proposed by ERO, but identified as being less desirable than alternate method one, would be to draft down the pond when the irrigation rights are out of priority. In this situation the flow out of the pond would be greater than the flow into the pond by some additional amount that would compensate for evaporative losses.

In the mitigation plan a consumptive loss rate from the pond of 1.7 gpm or 0.00385 cfs is identified; this value has been rounded up to 0.01 cfs in the following calculations. The following calculations quantify the theoretical time associated with drafting the pond at 0.01 cfs to a depth of 2 feet and 5 feet below the maximum water surface elevation.

2 feet:

$$\frac{\left(\frac{2}{5}(0.80\text{acres})\left(\frac{43,560\text{sf}}{1\text{acre}}\right)\right)}{\left(\frac{0.01\text{cf}}{s}\right)\left(\frac{86,400\text{seconds}}{\text{day}}\right)} = 16.1\text{days}$$

5 feet:

$$\frac{\left(\frac{5}{5}(0.80\text{acres})\left(\frac{43,560\text{sf}}{1\text{acre}}\right)\right)}{\left(\frac{0.01\text{cf}}{s}\right)\left(\frac{86,400\text{seconds}}{\text{day}}\right)} = 40.3\text{days}$$

CONCLUSIONS/RECOMMENDATIONS

Following my review of the file I believe, depending on your interpretation of the amended preliminary order, permit, and appropriate codes and guidelines, in moving forward a case could be made for following two extreme paths: (1) move forward with an approved license for the diversion of 0.40 cfs associated with the aesthetic use of the pond, or (2) cancel the permit entirely. It is my intent in composing this license to find a middle ground between each of the extremes, that relies on the Department's best efforts to realize the spirit and intent of the order and permit, while at the same time doing all it can to limit the principal concern of the protestants at the hearing - namely the potential injury to senior surface water users by issuance of the license.

Diversion Rate

It seems clear that the intent of the order and permit was to allow for the aesthetic use of the pond. However, once irrigation practices were divorced from the pond, the pond no longer had a means to fill. Therefore, in an effort to honor both flow rates on the permit, and to allow the intent of the order to come through, I propose preparing the license with the following diversion rates.

0.40 cfs will be used as the diversion rate for filling the pond and will be recognize under the beneficial use "diversion to storage". To limit the potential impact this larger diversion rate will have on surface water users, the season of use will be limited to a time period that encapsulates spring runoff (3/1-4/30).

For the remainder of the irrigation season the permit holder will be limited to a diversion rate of 0.20 cfs for "aesthetic" use. In this manner the impact of the aesthetic use of the pond is minimized during those times it is most likely to have a detrimental impact on Garden Creek surface water users.

Beneficial Use

With the irrigation practices of the land no longer tied to the pond, a beneficial use must be established that allows for the filling of the pond. To accommodate this requirement I recommend adding the beneficial use of "diversion to storage" with a rate of 0.40 cfs. To accommodate the flow of Garden Creek water through the pond to avoid stagnation during the irrigation season, the beneficial use of "aesthetics" at a diversion rate of 0.20 cfs is recommended. Finally, there seems to be no previous discussion addressing the state of the pond in the non-irrigation season. Technically, under the concept of a 24 hour fill with irrigation water, the pond would be drained during the non-irrigation season. To address the fact that no accommodations were previously in place to provide water during the non-irrigation season, I propose an "aesthetic storage" beneficial use for 0.80 ac-ft with a year round season of use. Finally, to honor the concept that the license is a new beneficial use associated with previous irrigation rights, delivery of water to the pond is limited to the irrigation season only, plus the month of March so that the pond can be filled prior to the start of the irrigation season.

Mitigation Plan

As discussed previously in the memo there are two scenarios in which mitigation of the consumptive losses of the pond must be considered, (1) when the irrigation rights are in priority, and (2) when they are not. As proposed by ERO the mitigation of consumptive losses by the desiccation of 0.2 acres of previously irrigated land, and the non-diversion of 0.04 cfs from Garden Creek, when the irrigation rights are in priority is acceptable.

For those times when the irrigation rights are not in priority ERO presented two possibilities. The first is the drafting of the pond in such a manner that the flow rate out of the pond is equal to or greater than the consumptive losses and the combined flow rates into the pond. From the calculation presented previously in the "Discussions" section, it can be seen that drafting the pond two and five feet, results in a drawdown time of 16 and 40 days respectively. From these results we can conclude that the drafting of the pond represents an ability by the water user to meaningfully prolong the diversion of water through the pond, as such, this alternate mitigation plan should be considered a viable approach and accommodated on the license.

The second alternate option presented by ERO was the establishment of a new water right with a spring as the source that would be diverted to the pond to make up consumptive losses when the irrigation rights are out of priority. The main objection I see to this approach is its disregard of the recognized interconnectedness of the groundwater and surface water system. The assumption that because the spring does not flow via the surface all the way to Garden Creek, it must therefore not influence or intercept Garden Creek at all, would seem to be false in light of conclusions of law item nine from the Amended Preliminary Order. Therefore I would recommend this option not be considered, and I am not adding conditional language on the license that will accommodate this concept.