Public Works Memo

To: Members of the Hailey Planning and Zoning Commission

CC: Heather Dawson, City Administrator;

Lisa Horowitz, Community Development Director;

Ned Williamson, City Attorney;

Sam Stahlnecker, City Engineer; and

Cole Balis, Water Division Manager

From: Mariel Miller, Public Works Director

Date: 4/19/2017

Re: City water right status, options and requirements for irrigation of new developments

---

The Water System Master Plan shows the City has enough water rights for about 20 years; however, this evaluation, done by the consulting firm that completed the plan, considered all City water rights to be available for use by the City for municipal delivery. The City has several types of water rights. Hailey's water rights include groundwater rights and surface water rights. Depending on the water right, a water right may be used for irrigation only or for municipal purposes, which includes both irrigation and domestic use. The water that is delivered to homes and business throughout the City's well system are groundwater rights designated as municipal use. Without converting surface water rights to groundwater or transferring some of the groundwater rights to a different point of diversion (City wells) and/or converting uses from irrigation to municipal use, the City is more limited than what the Master Plan states (i.e. enough water rights for 20 years of projected growth).

Without applications to and approvals from the Idaho Department of Water Resources (IDWR) for these various transfers and conversions, the City is currently limited to 6400 gallons per minute (gpm) with our current groundwater rights for municipal uses at our City wells. We use about 5300 gpm during our peak demand. This leaves 1100 gpm of existing rights to be used at our existing wells. Due to the City being very near it's firm capacity (redundancy of a system, measured by the ability of the water system to sustain peak demand when the highest producing well is offline), a new well is recommended in the Master Plan. The City would either need to 1) acquire new water rights, 2) not exceed 1100 gpm at the new well, or 3) successfully transfer and convert existing unused water rights to groundwater rights with preferably a municipal use designation. As demand increases, the need for an additional well could become more critical, especially if irrigation is occurring and increases the peak demand (irrigation is what adds to the peak demand in the City and accounts for approximately 73% of the City's overall water usage). When a new well is determined necessary, water rights of the right type will also be necessary.

As described above, several options exist to provide the type of water rights needed for a new well. Converting an irrigation water right acquired from an annexation to a municipal water right could have some merits, but would require approval from IDWR.

1. Conversion of Groundwater Right to Municipal Right. An excerpt from an email received from Brockway Engineering on March 31, 2017 is provided below, describing two options to consider when converting a groundwater right used for irrigation to a municipal right:

> *There are two options when a municipality acquires an irrigation right:*
>
> *Option 1: Transfer it into the city system and convert them to municipal use. This allows the water right to be used for all of the usual things under the "municipal" umbrella, including residential, commercial, and irrigation. However, in the change of use IDWR will only allow the consumptive use volume to be transferred (because they assume all municipal uses to be 100% consumptive, which is not true, but it's their policy). This means that about 25% of the annual volume allowance is lost in the transfer, but the diversion rate is not affected. This is often acceptable because cities typically are short on peak diversion rate more than annual volume.*
>
> *Option 2: Transfer it into the city system but keep it as an irrigation right. This is a relatively new hybrid approach that IDWR has allowed – they call it "municipal irrigation." In this case, the full water right volume is preserved, but the right can only be used for irrigation within the service area. In essence, the right would replace some of the irrigation occurring under the existing municipal rights, freeing that amount up for other municipal uses. For this option IDWR requires that the city demonstrate that there is in fact at least as much irrigation occurring within the service area than the irrigation right allows (which should not be a problem with Hailey), and that the city provide an update every five years that this is still the case (also should not be a problem).*
>
> *The second option is beneficial because it allows more irrigation to be replaced than Option 1, but it does come with more strings and is less flexible than the straight municipal option. Also, a significant factor is the threat of conjunctive management, whether by water call or otherwise, which makes the priority date of the irrigation right important. Option 2 would explicitly tie the water right to a certain number of acres, so that if it were a late-priority right and were curtailed, those acres could be in greater jeopardy.*
>
> *In either case, a transfer application would be required to change the place of use to the city's service area, and make all wells points of diversion on the water right. The above analysis applies for primary groundwater only; if the land also has surface water, things get much more complicated.*

2. Conversion of Surface Water Right to a Municipal Right. Converting a surface water right to a groundwater right is more complicated. It requires an application to IDWR to show that 50% of the water pumped from a well (groundwater) site will return to the surface water body where the water right is from within 24 hours. Brockway stated that from what they have seen, the well usually must be within 200-250 feet from the surface water body.

An alternative to using a surface water right in the City's water system, that could also be beneficial, is using it for recharge into the aquifer. Surface water rights used for recharge could be good to have to provide mitigation or defense against a water call. The challenge in this case is finding the land area to place the recharge water. The land would need to be owned or leased by the City, in close proximity to the surface water source or means of conveyance and would need to land area large enough to accommodate the amount of water in the right. Typically, a recharge area looks like a large pond.

Another point to consider when evaluating water rights under the context of an annexation application is Idaho Code Section 67-6537, which requires annexed properties to provide their own irrigation water, if available. A drawback to this requirement could be that water meters may not be installed at individual properties for irrigation use and as a result, property owners would not be charged for usage based on the gallons of water consumed. This could lead to excessive water use and less incentive for individuals to conserve. In addition, a private system like this would not allow the City the ability to impose watering restrictions during certain times of day or days of the week, which improves water conservation. The following excerpt from Idaho Code explains this in greater detail:

> *USE OF SURFACE AND GROUND WATER. (1) The intent of this section is to encourage the use of surface water for irrigation. All applicants proposing to make land use changes shall be required to use surface water, where reasonably available, as the primary water source for irrigation. Surface water shall be deemed reasonably available if:*
>
> *(a) A surface water right is, or reasonably can be made, appurtenant to the land;*
>
> *(b) The land is entitled to distribution of surface water from an irrigation district, canal company, ditch users association, or other irrigation delivery entity, and the entity's distribution system is capable of delivering the water to the land; or*
>
> *(c) An irrigation district, canal company, or other irrigation delivery entity has sufficient available surface water rights to apportion or allocate to the land and has a distribution system capable of delivering the water to the land.*

In summary, water rights are a complicated topic and there are many things to consider. If a property can provide their own surface irrigation water, it is required by Idaho Code that they do so. If there are groundwater rights available, it is recommended that the City acquire them if the City is to provide municipal water from the City's water system to the properties. It is recommended that the City provide all City properties with water from the City's system, excluding irrigation water, when feasible. If additional irrigation water is needed for annexed properties, the need for additional water rights and a new well, to meet peak demand and Idaho Department of Environmental Quality's recommendation for systems at or beyond firm capacity to have more redundancy, is needed.