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DEPARTMENT OF  
WATER RESOURCES

**WM JOURNAL**

**COLD SPRINGS CREEK**

**2014**

Feb. 14, 2014: Kelly Riggs called and had some questions on what he thought John McCallum was doing with his water system. We looked at McCullum's system and this satisfied Kelly for the time being.

March 3, 2014: I checked Charter Mnt. Gates at the head of Cold Springs Creek and found them to be using all of the 92 inches of the early water rights for stock water and irrigation. I checked the Double Anchor gate and weir and although there wasn't anything running past Ross Road their weir measured 0.5 cfs, or 25 inches. The main channel was dry at their weir site.

March 10, 2014: Kelly Riggs called and was concerned that with all the rain we were getting they weren't receiving any water. He didn't outright ask for a call out but I could tell from his concern that it would be best if I made a call on Charter Mnt. and Double Anchor gates and weirs.

March 12, 2014: Due to the amount of rain and warm temperatures I Checked Cold Springs Crk. Again. There was considerable more water in the stream. McCallum was using 1.3 CFS through his main line and only 0.2 CFS for stock water. The Double Anchor weir was running 3.25 CFS and I called Harley to cut it back to 2.25 CFS. The extra water was insufficient to supply down stream users but I don't think the amount of flow will last more than several days.

March 20, 2012: I responded to Harley Riggs' call and found the following. Double Anchor's weir measured 4 ¼ inches and was exceeding their early rights (2.8 cfs, allotted 2.26 cfs). The creek was dry below their diversion. Harley said their weir read 3 ¾ inches the day before. Charter Mountain wasn't using water at their lower magnetic meter. The valves above and below were shut. The upper mainline magnetic meter was reading 1003 gpm or 2.23 cfs. The stock water weir

read less than 0.2 cfs. Double Anchor has their early rights so Charter Mountain can use some of their 1875 water.

March 25, 2014

I responded to Harley Riggs' call yesterday. There was considerably less water at the head of Cold Springs Creek. With the warm weather (70 degrees today) it might pick up again in the short term. There is still a small amount of visible snow on Bennett Mnt. As of today 95 percent of the water is going into Charter Mountains main line. The magnetic flow meter read 900 gpm or 2.0 cfs. The stock water weir was still shut down and measured less than 1 cfs (0.2 cfs). The lower magnetic meter was still shut.

The Double Anchor weir read 3 ½ inches or 2.08 cfs. Much of their water is ground water resurfacing as there was no water passing under Ross Road. I explained to Harley about the confusion over the McGinness water rights. I also asked Rob Whitney to clarify usage of Charter Mountain's early stock water right.

April 1, 20014

I answered Double Anchors's water call. They said their weir was down to 1 inch and that is the same reading that I took. The Cipolletti chart only measures to 1 3/16".

The Charter Mnt. Lower magnetic meter is still shut. There isn't any way to tamper with the butterfly valve. It is definitely shut. No water is running under Ross Road but resurfaces farther down stream. There is considerable water running back into the stream through Charter Mountain's lower pond. The main magnetic meter read 825 GPM or 1.83 CFS. I received a chart to measure the amount of water going over the bubble screen but it only went up to a 12" pipe diameter. The Charter Mnt. Bubble screen is 18" to 20". I will get help today to use the formula given and then can compare the bubble screen to the magnetic

meter. The diversion at the head of the creek has about 45" to 50" of flow. The rest is feeding Charter Mnts. Mainline. Which measures the 1.83 CFS above.

4/8/2014

I answered the Double Anchor call out and found the following: The Double Anchor weir read just under 1". A beaver had damned off their ditch just below the head gate and also stuffed sticks under the gate. I removed the damn and opened the gate so it could clear itself. With all the water running through the gate the weir measured 4" or 2.64 cfs. I told Harley to check it in the morning and adjust it according to their early rights of 2.34 cfs.

At Charter Mnt. The lower meter is still shut. The lower pump was running and feeding a main line. The main meter was reading 980 gpm or 2.0 cfs. This is exceeding their 1.84 cfs early irrigation rights but they are allowed an additional 13,000 gal/day stock water. The bubble screen dimensions are pipe = 20" and the head was 4 ½". Using the formula given me there is 1,988 gpm going through the bubble screen. With John Westra's advice I will go by the meter at Charter Mnt. He was somewhat evasive on the status of Charter Mnt's stock water rights but said they were allowed to run up to an additional 13,000 gpd in the mainline. Cold Springs Crk. was running about the maximum amount of water that it has all Spring.

4/16/2014

My weekly call out went as follows: There is more water in Cold Springs Creek than it has had all Spring. Double Anchor's weir read 5 ¼ inches or 3.87 cfs. Their early rights are for 2 ¾ cfs.

At Charter Mnt. The lower meter is still off. The channel was running water clear through the ranch. The main meter read 1060 gpm or 2.16 cfs. This is ok as there is water in the creek, both Dbl. Anchor and Chtr. Mnt are exceeding early rights but there isn't enough to think anybody with early rights further downstream could benefit. So I didn't make any changes. Chtr. Mnt's bubble screen was still at 4 ½ inches vertical head.

4/22/2014

The amount of water in Cold Springs Creek has increased even more. It is furnishing all early water rights to both the Dbl Anchor and Charter Mnt. Plus enough to fill most of Charter Mnt.'s 2<sup>nd</sup> water rights. The Dbl. Anchor weir was clear up to 6 ½ inches or 5.26 cfs. almost 3 cfs above their early rights. The Chtr. Mnt. main meter read 1180 or 2.63 cfs. With full 2<sup>nd</sup> rights this could be as high as 2182 gpm. The bubble screen now reads 6". The excess water is backing up and returning to the creek through the bubble screen. I told John to take more of his 2<sup>nd</sup> rights. I won't be able to check the stream again until next Tuesday the 29<sup>th</sup>.

4/29/14

No meaningful readings today as Charter Mnt. was repairing a leak and had the mainline shut down (read 280 gpm). This put Anchor up to 7" on their weir. The creek is still running a lot of water.

5/2/2014

Ann Wilson called and said they were using their water rights. Since the stream is dry past the Double Anchor they must be picking up ground water and leakage from the King Hill Irrigation Company ditch. I'll look into that on my next call out. They are the end of the ditch so can use whatever comes their way.

The Double Anchor weir read 7" or 6.01 cfs. This exceeds their early and second rights a small amount but their isn't sufficient water to benefit downstream users so they might as well use it.

Charter Mnt. still has the lower meter shut off. The main meter reads 1145 gpm or 2.6 cfs. There is sufficient water for them to use most of their 2<sup>nd</sup> rights which total 6.06cfs with their first rights. I called John and told him the situation if he wanted to increase his use.

5/6/2014 Received a \$900.00 check from Paula for the above 12 call outs

5/6/2014

Checked the lower end of the creek and there is water at the lower end although the stream is dry past the Double Anchor. No time today but will try to identify where this water comes into the stream later.

As requested by John McCallum, I made my first call out of the week and found Double Anchor's weir to measure  $5 \frac{1}{2}$ ". Harley placed a measuring device at the side of the weir and it was within  $\frac{1}{2}$ " of what I measured in the center. This is 4.14 cfs. This is within their 1<sup>st</sup> and 2<sup>nd</sup> rights. The excess willows had been removed and made the weir much more accessible.

The Charter Mountain lower meter is still shut. The main meter was reading 1506 gpm or 3.1 cfs, well within their 1<sup>st</sup> and 2<sup>nd</sup> rights. The bubble screen wasn't running over and measured approximately 6".

5/9/2014

Today the Double Anchor weir read  $3 \frac{3}{4}$ " or 2.3 cfs. Harley said they are just using their first rights and want to see how far down the stream the extra water will flow. This is water in excess of Charter Mountains using their 1<sup>st</sup> and part of their 2<sup>nd</sup> rights.

Charter Mountain's lower meter is still off. There is a substantial amount of water running back into the main stream from the lower pond overflow. This water appears to be coming from the upper pond.

The main meter reads 1420 gpm or 3.2 cfs. The bubble screen remains at 6" and the gate stem is 17". This allows for the usage to be adjusted at the main meter and the excess overflows at the bubble screen back into the creek.

5/13/2014

Double Anchor is still just running their 1<sup>st</sup> rights and excess water is still flowing down the main channel. The weir reads  $3 \frac{3}{4}$ " or 2.3 cfs.

Charter Mountains lower meter is still off. The main meter reads 862 gpm which is just under their 1<sup>st</sup> rights. John was leaving for Alaska and said to leave his use

at his 1<sup>st</sup> rights if there is sufficient water. The bubble screen had a large overflow back into the stream.

5/15/2014

Double Anchor received an e-mail from their water engineer that it wasn't necessary to continue trying to wet the stream channel as the water was actually receding. However the stream has dropped about 6" from two days ago and there is just 3 ½" at the weir now and the water isn't even touching their headgate.

Charter Mountain's lower meter is unchanged (0). The main meter reads 935 gpm or 2.1 cfs. The 1<sup>st</sup> rights are 1.84 cfs. The bubble screen is returning excess water back into the stream.

5/19/2014

I started today's call out at the end of the creek as I needed to know where Wilson was getting water to irrigate at the end of the ditch when it is dry past the Double Anchor. It must be coming from the King Hill Irrigation Co. canal that parallels the Mule Shoe ranch road. Once you get above where it siphons across the valley Cold Springs Creek is pretty much dry again.

Double Anchor is still receiving their 1<sup>st</sup> rights. The weir measured 4" or 2.6 cfs. That's all the water in the ditch at their head gate.

Charter Mountain's magnetic meter reads 854 gpm or 1.9 cfs. Lots of excess water in the main line is returning to the creek at the bubble screen.

5/23/2014

Stream level has dropped since last Monday the 19<sup>th</sup>. Double Anchor weir read 3 1/4" or 1.87 cfs and their head gate is allowing all available water down their ditch. Ed Squires fellow was taking measurements on the creek also.

Charter Mountain isn't using their lower magnetic meter. Always before there was return water into the creek from the lower pond. This has dried up. The main meter read 900 gpm or 2.0 cfs. Since their 1<sup>st</sup> rights are 1.84 cfs I shut the valve

back to an avg. reading of 1.9. The bubble screen is returning ample water back into the stream.

5/27/2014

Double Anchors water has dropped below their early rights to 3" on their cipolletti weir. This is just 1.67 cfs or 83.5".

Charter Mountain still isn't using the lower magnetic meter. Although the stream is dry at Ross Road there is probably about 75" (estimated) in the main channel down at the lower meter.

The main meter is reading 746 gpm or 1.7 cfs. Since their 1<sup>st</sup> rights are 1.84 cfs there isn't any additional water to send on down the stream. Any excess water in the mainline is returning to the stream at the bubble screen.

5/31/2014

The Double Anchor weir has dropped to 2 ½" or 1.29 cfs.

Charter Mountain lower meter is unchanged (off) and there isn't any return to the main channel. The main meter reads 740 gpm. This is less than their 1.84 cfs 1<sup>st</sup> rights but there really isn't enough water to play with when it is fairly close. There needs to be some overflow at the bubble screen to ensure the line is full and there is a small amount.

6/2/2014

Double Anchor weir is back up to 3 ½" or 2.08 cfs, close to their 2.34 early rights. There is a return flow again out of the Charter Mountain lower pond back into the main stream. This plus a pivot end that extends over the creek bed and dumps water are the only two things that might contribute to this increase at the Double Anchor weir.

Charter Mountain has one pump running in the SW pond and the pump at the lower pond seems to always be running. I don't know enough about the Charter Mountain system to know where this water comes from or goes to, but the main

meter reads 870 gpm or 1.94 cfs. This is within .1 cfs of their rights. With the fluctuation that is occurring I see no reason to change anybody's settings.

6/5/2014

Double Anchor weir reads  $1 \frac{15}{16}$ " or .860 cfs. Harley can run a pivot for 12 hours on this. If the water drops below a specific level the float shuts it off so Harley feels this amount is very significant.

Charter Mnt. is shut down due to a pivot mainline leak. The lower pond pump was also off.

6/8/2014

Double Anchor weir still reads  $1 \frac{15}{16}$ " or .860 cfs. Harley is running the  $\frac{3}{4}$  pivot.

Charter Mnt. main meter reads 824 gpm or right at the early rights of 1.84 cfs. There are at least 3 pivots and a couple wheel lines operating so they are supplementing with well water. The water at the diversion has dropped so low there isn't even any leakage. Everything is going down the mainline. The bubble screen is at 3" height. There is no return water at the bubble screen. I contacted both Harley and John that I had been out.

6/12/2014

Water is still running into the Double Anchor's pond and the weir reads  $1 \frac{3}{16}$  or 0.429 cfs. Harley says it takes all day to fill the pond that feeds the pivots but he can run a pivot for 4 hours every night. He feels my monitoring the stream benefits this.

At Charter Mountain there isn't any use at the lower meter. All the stream is being diverted into the mainline. The main line magnetic meter reads 769 gpm or 1.7 cfs. The bubble screen's rise above the 20" vertical pipe is 3". Using the Lawrence and Braunworth formula  $Q = 6.17d(1.25 \text{ power}) \times h(1.35 \text{ power})$ . Q= rate of flow in gpm, d= diameter of pipe and h= height of jet or rise, the bubble screen is supposedly delivering 1150 gpm to the main line. There is no return at the bubble



screen. I need an answer for this discrepancy for Harley and the water expert Ed Squire.

6/16/14

Double Anchor is still at  $1 \frac{3}{16}$ " or 0.429 cfs. The weather has cooled and may help maintain this rate which is just barely measureable on the tables. Cold Springs Creek is dry from Charter Mountain's diversion to the lower end of the ranch where water returns to the channel and furnishes Double Anchor their meager flow.

Charter Mountain is channeling all the water into the mainline and has the magnetic meter set at 827 gpm or 1.84 cfs. The number of pivots and other lines running indicates he is also using well water. There isn't any spilling at the bubble screen which still measures 3" rise or 1151 gpm.

6/21/2014

The Double Anchor weir is now at  $1 \frac{1}{16}$ ". This still allows Harley some pivot use. He is haying and said he might put the water on the upper pasture.

Charter Mountain lower meter is still off. The lower two pivots and the one by his house are running plus a couple of wheel lines so John is running wells as well as using his 1<sup>st</sup> rights on Cold Springs Creek. The main meter is reading 656 gpm or 1.5 cfs. The bubble screen measures  $2 \frac{1}{2}$ " inches which calculates out to 2 cfs. The stream is running just slightly more than Charter's 1<sup>st</sup> rights.

Water Expert, Ed Squires, has instructed Double Anchor that as long as they have a trickle of water over their weir than Charter Mountain can't exceed their 1<sup>st</sup> rights. When the creek drops below 1.84 cfs it will be confusing for the WM when he is still being called out.

Double Anchor weir is up some to  $1 \frac{3}{8}$ ".

Charter Mountain's lower meter is still off. The main meter is reading 660 GPM = 1.47 cfs. The bubble screen is unchanged at  $2 \frac{1}{2}$ " or 2 cfs. All stream water is flowing down the mainline.

7/1/2014

The Double Anchor is at a trickle. It measures  $\frac{1}{2}$ " over the weir. Water still runs into the pond.

Charter Mnt. is now using some stream water at the barrel diversion that feeds the lower meter which reads 107.6 gpm or 0.24 cfs. The main meter reads 585 gpm or 1.3 cfs. Together that is 1.54 cfs which is less than the early right of 1.84 cfs. The bubble screen still measures 2.5 inches which calculates to 2 cfs. There isn't sufficient water to back flow over the bubble screen.

7/7/2014

There isn't any water running over the Double Anchor Weir.

At Charter Mnt. the lower meter reads 247 gpm or 0.55 cfs, but there isn't any creek water feeding through the barrel weir.

The main meter reads 486 gpm or 1.1 cfs. Together they are 1.65 cfs. Charter Mnts. Early rights are 1.84 cfs.

The bubble screen only reads 2 inches which calculates to 668 gpm or 1.5 cfs. I told Harly that I considered today's callout a futile call. He wants to continue making futile calls until the water expert says we should stop. I will make another call out and take pictures of the weir, the pond entrance and head gate. Also the head of the creek and the bubble screen.

7/11/2014

The IDWR people came today. It was Rob Whitney and a fellow from headquarters named Nick ?????. Their major concern was the head of the creek so we went to Charter Mnts. Main meter which was measured with IDWR equipment. It tested within 8% of the meter's reading and is considered accurate. We then went to the head of the creek where Rob considered other possibilities of measuring the stream there. The 4 mile ditch was discussed and the stock water weir inspected. We then proceeded to the lower meter and the status of the diversion down there. No water was flowing at this time.

From there we checked the Double Anchor weir for level and position. Sam Blackwell's gate and weir still needs replaced after last year's burn out. The Ark diversion was inspected and the two noncompliant laterals that don't have controls.

Half Moon's diversion and weir were inspected. They also have a meter at the pump. It wasn't necessary to go to the Mule Shoe as they are in the process of developing a system through Sliman, Butler in Gooding.

The Wilson Diversion and Elliot's setup were checked. Some of my questions on what is a futile call, how many futile calls can be made, the status of the waters in the lower end of the ditch (Spring water and King Hill seepage) were answered or being looked into.

7/15/2014

I went to the Charter Mnt. Ranch first this morning and found the following: The bubble screen was down to  $1 \frac{3}{4}$ ". The main meter read 448 gpm and the lower meter 66 gpm. There was just a trickle of water running through the barrel diversion but this was enough to dry up the creek. There wasn't any stream water leaving the Charter Mnt. Ranch.

At the Double Anchor Ranch weir the water level was at least 2" below the lip of the weir. There is nothing to measure here. This is definitely a futile call. Although the stream is dry leaving the Charter Mnt. Ranch there is some water running through the Double Anchor head gate from springs or creek water resurfacing.

\* Paid \$1,350 for 18 call outs (5/6 to 7/15)

- On August 6, 2014 Rob Whitney and Korby Knowles (IDWR) and myself toured the main weirs on Cold Springs Creek. Following are my results:

# **REPORT ON WEIR INSPECTIONS**

**August 6, 2014**

On August 6<sup>th</sup> I joined Rob Whitney and Korbin Knowles from the Idaho Department of Water Resources (IDWR) to inspect the weirs on Cold Springs Creek (District 61E). Following is a report on the findings from that inspection.

## **CHARTER MOUNTAIN RANCHS (Chrtr. Mnt.)**

It was strongly recommended that some measuring device be placed at the head of the creek above the bubble screen. A constant head orifice turnout would make it easy for the water master to set the required flow and Chrtr. Mnt. could control the amount they want to use. Measuring the flow through the bubble screen as a comparison to the main line magnetic meter hasn't proved to be acceptable. The magnetic meter in the main line isn't a type recommended by IDWR and shouldn't be mounted top dead center nor does it comply to the manufacturers installation requirements. However it has been checked twice by IDWR and both times found to be within a 10% variance which is acceptable. The diversion for the lower meter is ok as long as the two meters don't exceed the water right.

The stock water weir doesn't have sufficient depth between the crest and bottom of the concrete structure.

The meter at the Ark diversion is properly located but the battery is dead and the meter should be turned two bolt holes so it isn't positioned top dead center.

## **SAM BLACKWELL:**

Sam's gate and weir burned last year and as yet hasn't been replaced.

## **DOUBLE ANCHOR:**

The Double Anchor headgate would be better if it had a metal gate instead of boards. Since they are in the process of totally replacing their weir, concerns about its settling and not being quite level is immaterial.

## **HALF MOON:**

The weir doesn't meet several installation requirements. The height of the weir crest above the cement base isn't sufficient. A 4 foot crest should have a channel flow upstream at least 10 times the crest width or 40 feet of channel. This isn't possible at the present weir. The two best alternatives would be to put in a constant head orifice, or better yet install a magnetic meter in their main line, which would be the most accurate.

The Barber-Caven water rights were measured by counting the number of sprinkler heads operating. This will no longer be acceptable since all water users are to have a lockable gate and measuring device acceptable by IDWR.

#### MULE SHOE:

The past several years Mule Shoe has pretty much relied on their King Hill water rights. They recently applied for and were granted a change in point of diversion and at this time haven't completed their planned project. They will need a lockable gate and adequate measuring device.

The Otto Neuer rights of 1922, Wilbur Wilson of 1931 and 1957, and the Ellises Of 1974 would primarily benefit from early high water periods and can utilize King Hill water that leaks into Cold Springs Creek and some lower spring water. Being the end of the ditch before it drains into the Snake River, their use has no effect on the upper stream users.

I am enclosing a copy of a part of Idaho Code-42-701 which lists the requirements that you all must adhere to. (Was included in mailing)

I am currently your Cold Springs Creek Water Master and will always treat each of you with respect and attempt to always supply you fairly with whatever water is in the stream.

Rich Neal, WM District #61E

On August 30<sup>th</sup> I received a call from Chuck Shenk of the Mule Shoe Ranch saying that Sliman Butler had completed their new installation and it was ready for my approval. Mule Shoe has been able to utilize their water rights through their new diversion this Fall utilizing spring water that flows into lower Cold Springs Creek. I will do a better job of documenting this use next year.

Charter Mountain also sent the attached letter:

**Iron Horse Ranch, LLC**

11204 N. Bar 21 Dr.  
Glenns Ferry, Idaho 83623  
366-7931

August 28, 2014

Mr. Rich Neal  
P.O. Box 354  
Glenns Ferry, Idaho 83623

Re: Letter Dated 8/6/2014

Dear Rich,

I have reviewed your letter of August 6, 2014 and taken the following actions.

1. I have sent the Sprinkler Shop the list of approved Magnetic Flow-Meters we just received. Also requested they review our system and come up with a design for measuring devices further up. When I receive their reply I will send you a copy for review.
2. I will correct the stockwater weir.
3. As you are well aware there has been no water at the ARK diversion this season. However, prior to starting up systems we will have a battery installed.

As always if there are any other issues please tell me as soon possible.

Sincerely



John B. McCallum

Richard H. Neal, WM Cold Springs Creek WD 61E

- December 15, 2014

At Double Anchor's request I observed the head of Cold Springs Creek. Charter mountain's head gate was fully closed and there was .3 cfs going over the livestock weir through the elk pens. All other water was going over the diversion. It wasn't sufficient to make it to the Ross Road culverts.

December 23, 2014

Rob Whitney called and asked that I contact John McCallum and find out how he filled his ponds. According to Ed Squires he shouldn't be storing water in the off season.

- December 29, 2014

Today I met with John McCallum and was given a tour of Cold Springs Creek beginning at the upper end at his diversion. Things were the same as I had found them on December 15<sup>th</sup>. The headgate was tightly closed and 0.3 cfs was going to the elk pens for stock water. We next went to the big pond by the main well which is maybe ½ full. The stock water through the elk pens ends in this pond. There has also been about 2" of precipitation over the last couple of weeks which has drained into the ranches drainage ditches and ponds. This was also noticeable in Cold Springs Creek which is now running a steady stream past Ross Road and down to pivot #4. The pond at pivot #4 is about ½ full. No water from Cold Springs Creek has been used to fill the partially filled ponds. His cow herd is being fed just South of Ross Road and they are drinking from the main creek.

Double Anchor still needs to rebuild their weir and headgate. Kelly has rebuilt Sam Blackwell's weir and plans to have it in place by the January 26<sup>th</sup> District #61E annual meeting.

Half Moon is planning to have Sliman-Butler of Gooding put a meter in the main line just North of the pump complex. They are also planning to do the same at the Barber-Caven POU.