Memorandum

To: IWRB – Streamflow Enhancement and Minimum Streamflow Committee

From: Morgan Case

Date: November 18, 2013

Re: Water Transactions Program – 2013 Update

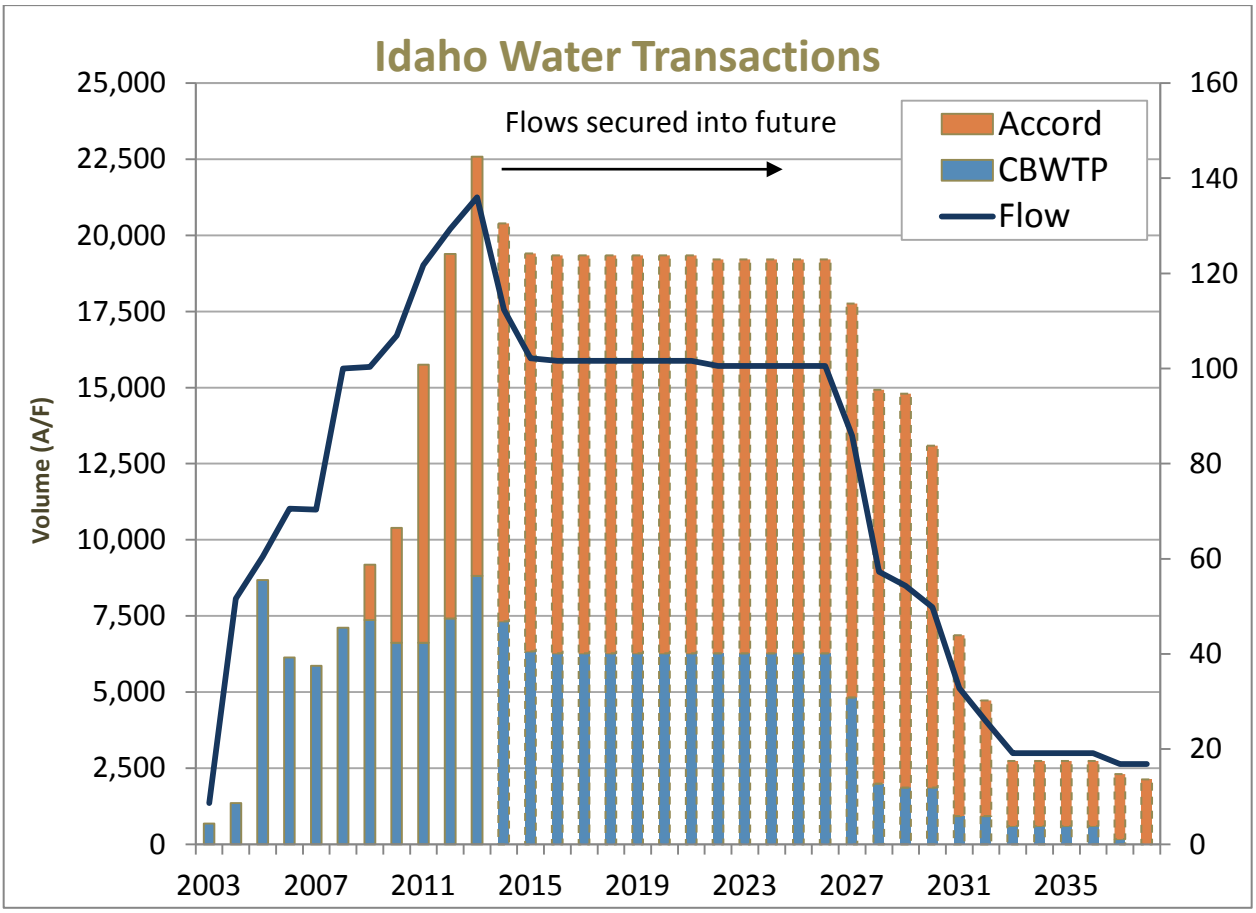
Annual Summary

September 31st, 2013 marked the end of the Federal fiscal year, the end of the FY 2013 contract with the Columbia Basin Water Transactions Program (CBWTP), and the end of the FY 2012 & FY 2013 Idaho Fish Accords (IFA) contract. With the support of the CBWTP and the IFA, the Board's 2013 water transactions added 29.4 cfs to the previously secured 107.6 cfs in tributaries in the Upper Salmon River and Teton River Basins.

The Board's partnership with Friends of the Teton River was successful, in the fact that FTR was able to complete 4 transactions. Using an adaptive approach, we will improve communication to ensure that the partnership continues to be beneficial to flow restoration efforts.

The 2013 irrigation season was an extremely dry one. In the Lemhi River basin, the watermaster was regulating to maintain the minimum flow targets for 86 days. That is the longest on record, with the previous maximum being 62 days and the previous average 19 days.

Transaction Name	Type	Term (Yr)	Flow (cfs)	AF/Yr	Price
Lower Lemhi 2013	Minimum Flow Agreement	1	16.21	822	$33,431.86
Lemhi - Big Springs	Source Switch	20	4.64	1620.9	$69,438.50
Kenney Creek Source Switch	Source Switch	20	0.14	41.7	$28,106.06
Pole Creek 2013	Minimum Flow Agreement	1	6	893	$50,000.00
Lower Lemhi Permanent - JP	Subordination Easement	Permanent	0.6	119	$58,500.00
Spring Creek - RE Beard	Lease	5	0.17	29.75	$3,725.15
Spring Creek - L Beard	Lease	5	0.11	20.3	$2,541.85
Spring Creek - City of Tetonia	Lease	5	1.5	262.5	$0.00
Spring Creek - Smaellie	Lease	5	0.07	12.25	$0.00



Upcoming Activity for 2014

The Board has secured programmatic funding in the form of a $209,127 contract through the CBWTP for FY 2014 and a $234,844 contract through the Idaho Fish Accords for FY 2014 and FY 2015. Efforts will once again be focused on the Lemhi and Pahsimeroi River Basins, with some increased focus on the Stanley basin.

Upper Salmon Position

The State of Idaho has committed to spending over $7 million on water transactions in the Lemhi and Pahsimeroi River basins as part of the Idaho Fish Accords. With only one staff person spending time in the Upper Salmon Basin developing transactions, it is difficult to assess and pursue all transaction opportunities. With the encouragement of the Northwest Power and Conservation Council, staff has proposed amending the CBWTP contract to add an additional staff position to the budget. The proposed position would be based in Salmon, and the primary purpose would be to develop water transactions in the Upper Salmon Basin. We hope to have someone hired by the end of the calendar year.

MEMORANDUM

To: **Streamflow Enhancement and Minimum Stream Flow Committee**

From: **Sarah Rupp**

Date: **November 7, 2013**

Re: **Teton River Basin – Annual Summary and Program Overview**

Annual Summary

In 2013 Friends of the Teton River worked in partnership with the Idaho Water Resource Board to advance four water transactions on Spring Creek. These were the first formal (i.e. – paid) water transactions implemented in the Teton Basin. Spring Creek was selected because the legal and social hurdles which have made it challenging to work on restoring flow in other tributaries are not present on Spring Creek. Additionally, there is broad based support for the deal and, by consequence, Friends of the Teton River believed that the deals presented the perfect opportunity – improved biologic conditions for Yellowstone cutthroat trout, low cost, and positive public perception.

As you will recall, two of the water right owners – the City of Tetonia and Mitchell Smaellie – donated their rights to the IWRB to put into the Water Supply Bank for a term of five years. The other two water right owners – Richard LaVere Beard and Richard & Ella Beard – leased their rights into the Water Supply Bank for a term of five years. All of the water rights are diverted at a single headgate referred to as the Tetonia Canal. In total, the leases secured an additional 4.35 cfs instream.

In 2013, the four water transactions were monitored for compliance. The headgate associated with the point of diversion for these water rights was ~~be~~ monitored on a weekly basis by Friends of the Teton River, in its capacity as hydrographer, to ensure that the water rights remained instream. Further, all other diversions on the source were monitored on a weekly basis as well, to ensure that the water was not simply re-appropriated by another user. In addition, occasional site visits were conducted by Friends of the Teton River. The water right owners were found to be in compliance at all times. Funding has been requested from the Columbia Basin Water Transactions Program and payments to certain water right holders are expected to be distributed in early December.

However, monitoring efforts revealed some interesting issues which were not previously anticipated. There are seven diversions on Spring Creek which do not have functional headgates or staff gages. Additionally, it appears that some of the water right owners on Spring Creek have engaged in the practices of marshaling water when not permitted to do so under their water rights. Both of these issues made it challenging to shepherd leased water to the mouth of Spring Creek for delivery to the Teton River minimum streamflow reach. Both of these issues have been raised with Water District 01 and efforts are being made to remedy the situation.

Some individuals expressed concern for what happen to the ground when the leases were implemented. Positively, two of the four water right owners chose to produce a dryland hay crop, thereby serving to keep the land in production and reduce the risk of invasive weed issues. The other two water right owner fallowed their ground, occasionally grazing a few horses and 4-H animals.

2013 was an extremely dry year. The impacts to Spring Creek, as with all tributaries in the region, were significant. For the first time ever Spring Creek was deemed futile by Water District 01. The result was a series of approximately 30 days with sporadic stream connectivity, including an approximate two week time period in which Spring Creek was completely disconnected from the Teton River. However, it is plausible that the lack of seven headgates, and associated staff gages, and the unauthorized marshaling of water contributed to the futile call determination.

Overall, it appears that the water transactions were successful. From an ecological perspective, additional water was kept instream during a very dry summer, serving to decrease stream temperatures and increase valuable habitat for fish and wildlife. Additionally, conversations with participating water right holders indicate overall satisfaction with the program and, in many cases, gratitude for the opportunity to participate. Further, implementation of these leases in the Teton Basin has helped address and assuage the concerns many water users expressed about the program, ultimately served to catalyze interest in the program and help generate additional opportunity.

Program Overview and 2014 Planning

A. Teton Basin Program Overview

Over the past year Friends of the Teton River has been working diligently to identify other tributaries in the Teton Basin which may be appropriate for flow restoration. As an outgrowth of that work, I began to realize just how unique the Teton Basin really is, and how its unique characteristics dictate the type of flow restoration work which will be achieved.

i. Development Trends and the Associated Impact on Water

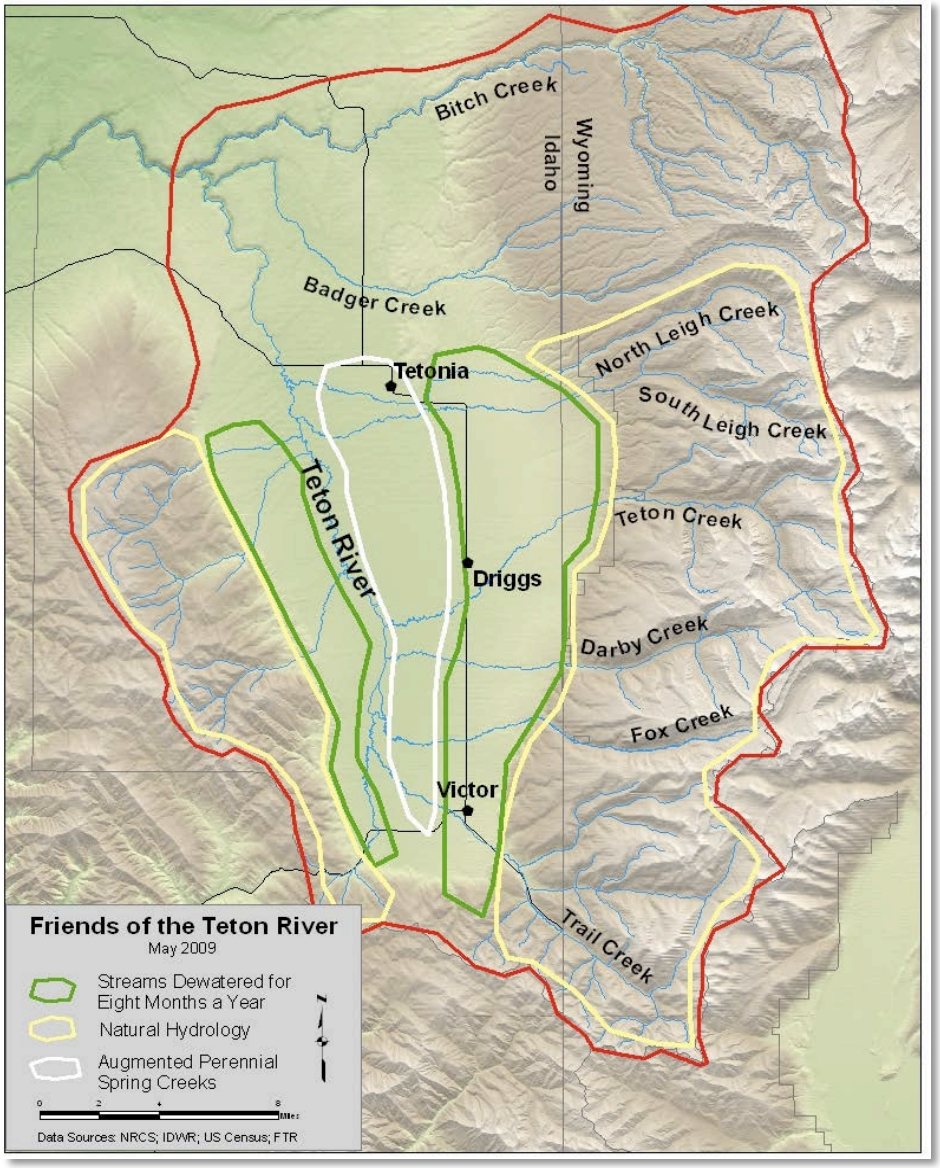
Teton County's economy has historically been based on agriculture. However, it has transitioned over the past 10 to 15 years toward more of a "New West" economy driven by real estate, recreation, and quality of life. The high quality of life in the Teton Valley is strongly tied to its rich natural resources. The nearby national parks, wilderness areas, and clear mountain rivers are all magnets for new development. The qualities that make it an attractive place to live are also sensitive to the impacts of growth and development. This, in turn, creates a delicate balancing act for the region as it plans for the future.

Teton County's population has more than doubled over the past 15 years and now stands at over 7,600 people. Most of the growth has been in the formerly agricultural areas of the county. While Victor has grown by nearly 1,000 people and Driggs has grown by roughly 300, over 4,000 people have moved into unincorporated areas throughout the county since 1990.

The impact of an increased population has translated to a reduction in the number of working farms and ranches in the region. Throughout Teton County, significant parcels of previously irrigated agricultural land have been developed to make way for residential housing. And the water rights appurtenant to those lands have, by consequence, been split and fragmented as well. On South Leigh, for example, there are approximately 200 irrigation water rights. The result is a series of many, small water rights on a stream. On the other hand, on some streams the most senior water rights are controlled by large canal companies. This presents a unique set of challenges.

ii. Teton Basin Hydrology

At the start of the twentieth century Teton River tributaries flowed from high-elevation headwaters to the Teton River in all but the driest years and supported both fluvial and resident life history forms of Yellowstone cutthroat trout. As organized agriculture developed in the Teton Valley, irrigation canals and ditches were built throughout the valley to divert and distribute streamflow according to agricultural needs. Over the past century land use has dramatically changed both the landscape and hydroscape of the Teton Valley (Van Kirk and Jenkins 2005). Tributary streams now have three distinct hydrological regimes: an unaltered snowmelt-driven hydrology in the headwater portions above diversions on U.S. Forest Service land; the middle portions are dewatered eight months of the year due to irrigation diversions; and the lower streams that flow perennially and are augmented by groundwater return flows and have a spring creek hydrology (attenuated peak flows and higher winter flows).



The tributaries of the Teton River are large, snow melt dominated systems. This means they are large, flashy systems. It is routine to see tributary flows ranging between 650 cfs to 30 cfs in a single year. By consequence, flow restoration of these systems requires working with significant quantities of water.

Initial flow targets on many of these systems range from 25-35 cfs. Attaining such flow targets requires a long-term commitment.

iii. Water Delivery Constraints

The historic practice of futile call presents challenges to flow restoration in the Teton Basin. Irrigators in Teton Valley rely heavily on the practice of Futile Call. When the flow in a tributary drops so low that the tributary does not flow to the main stem river, the tributary is deemed "futile." The water users on that tributary are then permitted to divert the water, when they would not otherwise be entitled to it. The practice of Futile Call serves to exacerbate stream dewatering problems. Understandably, irrigators perceive stream flow restoration efforts as jeopardizing their Futile Call practice, since the goal of these efforts is to keep tributaries connected to the Teton River.

iv. Working for a Non-Listed Fish Species

Yellowstone cutthroat trout (YCT) are considered a species of special concern in the State of Idaho and the condition of YCT populations are often an indication of the overall health of the watershed. Between 1999 and 2003, Idaho Fish and Game observed a 95% decline in Yellowstone cutthroat trout populations, while both brook trout and rainbow trout populations increased by 300%. Historically, YCT occupied much of the Greater Yellowstone Ecosystem (GYE), which encompasses parts of Idaho, Montana, Wyoming, and small regions of Nevada and Utah. Currently, YCT exist in just 27% of their historic range. The Teton River Watershed is one of three remaining stronghold systems for YCT in the entire GYE. Given the range-wide decline in YCT abundance and distribution, experts believe it is likely that the species will be petitioned for listing under the ESA in the future unless significant progress is made towards stabilizing and increasing populations throughout the region.

v. Summary

Given the unique challenges discussed above, it is likely that the flow restoration strategy in the Teton Basin will look a bit different than other places. Specifically:

- It is likely that several small water right deals will be advanced in any given year, as there are very few large agricultural operations in the region. By intentionally targeting water rights appurtenant to small ranchettes, it is possible to restore stream flow in many streams without impacting working family farms.
- On those streams with organized canal companies, energy will be invested in developing flow restoration strategies which work for the unique needs of the specific company. Development of such strategies may take many years to finalize.
- Flow restoration must be coordinated closely with IDF&G to ensure that the work is positively impacting fish populations.
- Due to the large flow targets associated with many streams, the flow restoration effort in the Teton Basin must be couched in the long-term.
- Energy will be invested in determining how the practice of futile call can be harmonized with the flow restoration program, and I welcome input as to how that may achieved.

B. 2014 Planning - Bureau of Reclamation Watershed Planning Grant

Friends of the Teton River was awarded a sizable Bureau of Reclamation WaterSMART 2013, Watershed Planning grant. Through this grant FTR will form a diverse working group, called the Teton River Advisory Council (TRAC), which will identify, review, vet, prioritize, and endorse watershed restoration activities in the Teton River watershed. The goal of the TRAC is to: (1) engage diverse stakeholders in a

process (2) to develop a comprehensive watershed restoration plan (3) which can be implemented to improve stream conditions, water quality, and flows in the Teton River Watershed (4) while also meeting the needs of agricultural, residential, and municipal interests, thereby reducing conflicts over water. It is FTR's intention that this group will help guide the development of flow restoration work in the Teton River Basin, thereby ensuring that the various water transactions developed in the Basin are aligned with community goals and needs, and are thereby supported by the community as a whole.

Over the next several months FTR will be working to identify appropriate workgroup members to participate in the TRAC. FTR is committed to recruiting a broad range of workgroup members to participate in this effort, including a significant number of individuals from the irrigation community, including representatives from the major canal companies in the region (Grand Teton Canal Company, Fox Creek Canal Company, Trail Creek Sprinkler and Irrigation Company), as well as individual ranchers, farmers and landowners with water rights.

Once work group members have been recruited, FTR will be working with each individual workgroup member to clearly define and understand the unique water related needs and challenges facing him or her. This will be done through a series of interviews with each workgroup member or group so as to characterize current water use and develop specific water management related goals.

You may recall that the ~~IDWR~~ IWRB provided a letter of support for this grant application. Thank you very much for your support, and for helping to make this possible.