

ANNAUL SUMMARY

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Introduction

This report summarizes the activities of the Division 6 office of the Colorado Division of Water Resources in 2010. It presents an overview of the administration activities that took place during both the calendar and irrigation year 2010 and statistical data for both the water and irrigation year 2010.

Year 2010

Basin Hydrology

Snow Pack

Table 1 below shows the snow water equivalent for various months within water year 2010. In general the snow water equivalent was below average.

TABLE 1

**End of Month Snow Water Equivalent as Percent of Average
Water Year 2010**

Drainage	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
North Platte River	149	71	81	75	75	74	83	90
White River	83	56	83	75	76	72	72	75
Yampa River	85	54	73	72	76	76	78	67

Despite the fact that the snow pack throughout the winter season was grim, precipitation in the months of April, May and June helped relieve some concerns of a busy summer of administration. Precipitation for the month of June, as measured at the SNOTEL sites operated by the Natural Resources Conservation Service (NRCS), was reported at approximately 105% of average for the Yampa/White River basins and 109% of average for the North Platte River basin. Precipitation for the combined Yampa, White, and North Platte River basins was up to 95% of average for the water year up through the end of June. The remaining snowpack at the NRCS SNOTEL sites were mostly melted by the end of June however.

Despite the below average snowpack the actual runoff ended up being near or above average depending on the basin as a result of the substantial precipitation in the months of April, May and June. Table 2 shows the January 1st, March 1st and May 1st runoff forecasts developed by

the NRCS in comparison to the actual runoff as measured at the selected USGS gauging stations.

TABLE 2

2010 Total Runoff Forecast in 1000's of Acre-Feet

<u>Station Name</u>	<u>1-Jan</u>		<u>1-Mar</u>		<u>1-May</u>		<u>Actual</u>	
	Runoff	% Avg	Runoff	% Avg	Runoff	% Avg	Runoff	% Avg
North Platte nr Northgate (Apr-Jul)	182	74	133	54	170	83	281	119
White River nr Meeker (Apr-Jul)	240	83	215	74	215	74	232	83
Little Snake River nr Lily (Apr-Jul)	315	86	265	73	330	90	461	133
Yampa River nr Maybell (Apr-Jul)	790	80	695	70	700	71	898	95

Precipitation

Table 3 below shows the monthly precipitation data for the towns of Walden, Meeker and Steamboat Springs. Table 4 shows the NRCS SNOTEL site precipitation for all three basins combined (North Platte, White and Yampa Rivers).

Table 3

**Monthly Precipitation Data for Selected Sites
Water Year 2010**

Site	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Walden (inches)	1.23	0.57	0.77	0.19	0.27	0.21	1.24	1.65	1.30	0.50	0.79	0.14	8.86
% Avg	138	69	131	31	44	26	116	109	123	39	75	12	77
Meeker (inches)	0.98	0.85	1.29	0.43	0.72	0.80	3.41	1.51	0.89	1.00	2.0	0.56	14.44
% Avg	59	77	143	54	96	59	244	101	89	77	160	47	102
Steamboat (inches)	2.88	0.81	1.62	1.18	1.48	1.23	3.04	3.61	2.07	1.81	2.39	0.58	22.7
% Avg	150	34	68	46	69	60	142	156	145	124	164	34	95

**Monthly Precipitation Data for Selected Sites
Calendar Year 2010**

Site	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Walden (inches)	0.19	0.27	0.21	1.24	1.65	1.30	0.50	0.79	0.14	2.11	0.68	1.01	10.09
% Avg	31	44	26	116	109	123	39	75	12	237	82	171	88
Meeker (inches)	0.43	0.72	0.80	3.41	1.51	0.89	1.00	2.0	0.56	2.04	1.61	1.78	16.75
% Avg	54	96	59	244	101	89	77	160	47	124	146	198	118
Steamboat (inches)	1.18	1.48	1.23	3.04	3.61	2.07	1.81	2.39	0.58	4.84	2.33	3.14	27.7
% Avg	46	69	60	142	156	145	124	164	34	252	99	132	116

Table 4

**Basin-Wide Monthly Precipitation Data from NRCS SNOTEL Sites
Water Year 2010**

	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Total
Inches	98.1	44.2	96.5	68.1	74.1	73.6	157.8	108.6	46.2	39.5	52.5	53.9	913.1
% Avg	145	48	90	65	78	68	156	128	104	98	129	51	92

Stream Flows

Provided in Table 5 below are the total runoff for the water year for various stations as well as the peak flow for that station.

Table 5

Total Runoff for Water Year 2010

Station Name	Total Flow (AF)	Average (AF)	% of Average
North Platte River near Northgate	323,900	308,400	105
White River below Boise Creek	431,300	523,600	121
Little Snake River at Lily	514,100	410,900	125
Yampa River near Maybell	1,017,000	1,124,000	90

Peak Flow Rate and Date of Occurrence

Station Name	Peak Flow (cfs)	Date
North Platte River near Northgate	5,020	June 14, 2010
White River below Boise Creek	3,680	June 9, 2010
Little Snake River at Lily	6,370	June 15, 2010
Yampa River near Maybell	12,100	June 9, 2010

Water Administration

Water administration in water year 2010 was as usual with the Bear River, Middle Hunt Creek, South Hunt Creek, Little Bear Creek, Talamantes Creek, Trout Creek and Soda Creek going under administration. In addition to these standard calls there were a handful of other calls, the most significant of which was a call on the Elk River by the Colorado Water Conservation Board for their minimum instream flow water right. The one system that typically goes under administration, but did not in 2010 was Piceance Creek.

Administration on Talamantes Creek presented a substantial amount of problems and required a lot of time to administer with the water commissioner visiting the site located two and one-half hours from the Craig office approximately 23 times. The office learned a lot however and was able to develop guidelines for future administration on Talamantes Creek to ease the efforts by the water commissioner. Additionally a new gauging station was recently installed which will hopefully reduce the amount of time invested by the water commissioner in administering this stream system which has only two water users on it.

Administration of the Elk River call also presented its own difficulties. First, the call encompassed the entire Elk River system which is a very large system and second it was the first call on the system that required on the ground administration. This system does not have any area wide augmentation water and very few people (less than a handful) have obtained augmentation water to protect the uses of their water rights.

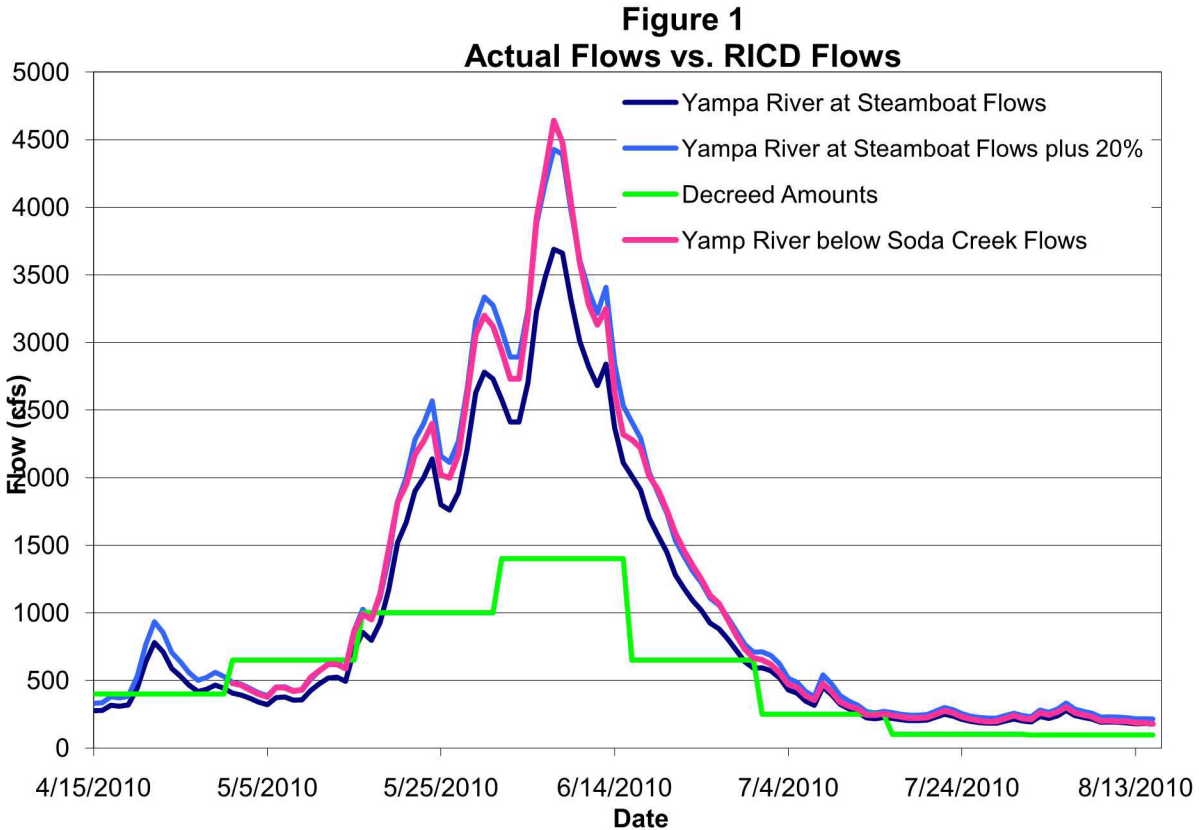
After the call was placed and honored by this office on the Elk River, this office recommended to the State Engineer that the Elk River basin in its entirety be designated as critical. A report

supporting and justifying such designation was submitted to the State Engineer and was ultimately confirmed. Because such designation was likely going to affect numerous people, a public meeting was held to inform them of what this designation meant and how it might affect them. In total, there were over 50 people that attended the meeting. As of January 1, 2011, the basin has been considered critical.

As in years past, releases were made from Elkhead Creek Reservoir for which this office is responsible for protecting. Releases were made in accordance with the Upper Colorado River Endangered Fish Recovery Implementation Program (Recovery Program) as a result of flows in the Yampa River at the Maybell gage station dropping to as low as 160 cfs in August and 88 cfs in September.

In March 2006 the Water Court decreed the City of Steamboat Springs' Recreational In-Channel Diversion (RICD) water right and in previous annual reports, this office has reported on the flows through this reach and this office constantly tracks such flows in the event they drop below the decreed amount. In 2010, the Yampa River started out below the decreed amount for the month of April and had several days at the beginning of May where the flows were below the decreed amount. The decreed amounts for this water right are: 400 cfs from April 15 to April 30, 650 cfs from May 1 to May 15, 1000 cfs from May 16 to May 31, 1400 cfs from June 1 to June 15, 650 cfs from June 16 to June 30, 250 cfs from July 1 to July 15, 100 cfs from July 16 to July 31 and 95 cfs from August 1 to August 15.

Figure 1 below shows the average daily flows at the Yampa River at Steamboat Springs gage station; these daily flows plus an additional 20% assumed by the City of Steamboat Springs in the Water Court application as being those flows contributing from Soda and Butcherknife Creeks between the Yampa River at Steamboat Springs gage and the RICD structures; flows at the Yampa River below Soda Creek gage and the decreed flows.



The Upper Yampa Water Conservancy District began construction of a 4-foot raise to the spillway of Stagecoach Reservoir in September 2010. Prior to beginning construction, the District had to lower the water level in the reservoir to 15-feet below the original spillway elevation. The storage capacity of the reservoir prior to construction was 33,275 acre-feet and after construction it is approximately 36,460 acre-feet

Groundwater and Well Permitting

There were no unusual groundwater administrative issues in 2010. However as a result of the Elk River being designated as critical, this office received over 30 new well permit applications in the month of December 2010, immediately prior to when such designation was going to take effect. When a stream system is considered to be critical the well permitting processes changes and will trigger the need for augmentation water in many cases. When a stream system is not considered to be over-appropriated or critical, exempt wells can be permitted pursuant to CRS 37-92-602(3)(b)(I) and when a system is considered to be over-appropriated or critical, exempt wells can only be permitted pursuant to CRS 37-92-602(3)(b)(II) and are subject to denial pursuant to 37-92-602(3)(b)(III). Also, when a stream system is not considered to be over-

appropriated or critical, non-exempt well permits can be issued absent an augmentation plan or substitute water supply plan whereas when a stream system is considered to be over-appropriated or critical, non-exempt well permits cannot be issued absent one of these plans being in place.

Compacts and Inter-State Agreements

Following is a description of the interstate compacts and agreements administered by Division 6.

Upper Colorado River Compact

Under Article XIII (a) of the Upper Colorado River Compact, the State of Colorado will not cause the flow of the Yampa River at the Maybell gage to be depleted below an aggregate amount of 5,000,000 acre-feet for any period of ten consecutive years. The annual runoff for water year 2010 at this gage was 1,017,000 acre-feet and the ten year (2001 to 2010) aggregate flow was 9,793,300 acre-feet, obviously well above that required under Article XIII (a).

The Little Snake River is administered jointly with the State of Wyoming during times of shortage pursuant to Article XI of the Upper Colorado River Compact. There were no calls placed on the Little Snake River in water year 2010.

North Platte River (Nebraska v. Wyoming, U.S. Supreme Court Decree)

Under the North Platte River Decree, Colorado is limited to a total of 145,000 acres of irrigation, no more than 17,000 acre-feet per year of storage for irrigation purposes and no more than 60,000 acre-feet of transmountain diversions in any period of ten consecutive years from the North Platte drainage of Colorado. In water year 2010, a total of 115,110 acres were irrigated and 9,620 acre-feet were stored for irrigation use. Transmountain diversions out of the basin totaled 3,634 acre-feet. The ten-year total transmountain diversions out of the basin were 45,537 acre-feet. None of the limitations of the Supreme Court Decree were exceeded in 2010. No Division 6 representative was able to attend the two meetings of the North Platte Decree Committee held in April 2010 and October 2010.

Pot Creek

Pot Creek is a small tributary of the Green River; the headwaters of which are in Utah and enter the Green River in Colorado. Pot Creek water is apportioned among the users of Utah and

Colorado under a Memorandum of Understanding (MOU) last updated and signed by the State Engineers of Utah and Colorado on March 1, 2005. Pot Creek was administered in 2010 pursuant to the MOU with no substantive issues.

Projects

This office continued the operation and maintenance of the lysimeter program in Division 6 which consists of two sites - CYCC and ANWR. Each site is equipped with two lysimeter plots which contain grass on top of soil and a layer of gravel. Measured amounts of water are added to the plots once or twice a month; enough to prevent drought stress to the grass. Precipitation gages and temperature recorders exist at each site, and there is an evaporation pan at the CYCC site. An evaporation pan exists about 10 miles north of the ANWR site near Walden, which is also maintained by Division 6 staff.

The gross evapotranspiration (gross ET) is measured at each site by totaling the amount of water added to each pan plus the precipitation at the site. Using SCS TR-21, the monthly Blaney-Criddle crop coefficients are determined based on the measured gross ET. The Blaney-Criddle crop coefficients along with temperature and precipitation data are used to predict local potential irrigation consumptive use.

In June 2010, DWR entered into a contract with Dan Smith to evaluate the data collected by this office and determine its accuracy and validity. Based on the observations and analysis presented, Mr. Smith conclude that the monthly crop coefficients from the Division 6 lysimeter program conducted at the CYCC site are questionable, especially for the months of May, June, and July, while the observations from the ANWR site appear to be more consistent with measurements from previous studies. It was believed however that these studies have produced a valuable database of temperatures and precipitation that could be used in recalibrating the existing results.

Several changes to the program were recommended: alter the design and location of the lysimeters within the Yampa River basin; install a weather station capable of providing continuous measurements of temperature, humidity, wind speed, solar irradiance, and precipitation near the site; and changing the framework of consumptive water use measurements from Blaney-Criddle methods to estimates of grass-reference ET with the application of appropriate of reference-based crop coefficients (ASCE, 2005). Additionally, it

was recommended that the design change include the use of weighing lysimeters rather than compensating lysimeters. This would allow for developing conditions within the lysimeters that more accurately reflect the irrigation environment that exists for irrigated pastures within the basin.

As a result of the outcome of this evaluation, the Division 6 office teamed up with the Colorado Climate Center to submit a grant application to the Yampa/White Roundtable for funds, in the amount of approximately \$20,000, to install new lysimeter plots and a weather station. The grant application was approved and installation of the plots and weather station is to occur in the summer of 2011. The lysimeter plots and weather station are to be located on the Carpenter Ranch owned by The Nature Conservancy. This site is located just east of the Town of Hayden along the Yampa River.

Problems Solved

This office continues to work with the water users on Talamantes Creek to resolve conflicts over water and administration thereof. Just recently a guideline for administration of the system was written by this office and provided to the water users.

Abandonment Process

The Division 6 staff was successful in completing the Division Engineer's 2010 Abandonment List (List) before July 1, 2010. All certified letters were mailed to those known water right holds of the water rights included on the List by July 31, 2010 per statutory requirement and the lists were published in all local newspapers per statutory requirement. The List is comprised of all absolute surface water rights and water storage rights which have been determined to have been abandoned in whole or in part. Failure for a period of ten years or more to apply to a beneficial use the water available under a water right when deeded by the person entitled to use same shall create a rebuttable presumption of abandonment of a water right with respect to the amount of such available water which has not been so used. Table 6 below shows the number of water rights per District included on the List either in whole or in part. Under the directive of the State Engineer, all water rights within the Colorado River basin having an appropriation date prior to November 24, 1922 (pre-1922) were removed from each Division's abandonment list. Also, shown in Table 6 are the numbers by District of pre-1922 water rights removed from the abandonment list.

Table 6
Number of Water Rights on Abandonment List and
Number of Pre-1922 Water Rights Removed from List

<u>Water District</u>	<u>Number of Water Rights on List</u>	<u>Approximate Number of Pre-1922 Water Rights Removed from List</u>
43	16	55
44	17	33
47	85	N/A
54	6	6
55	3	2
56	6	2
57	27	37
58	58	92
Total	218	227

As of December 31, 2010 this office had received 33 statements of objection (objections) to the inclusion of a particular water right on the List. The majority of the objections filed were for water rights that have been included on the List in part and the common argument by the objectors concerning the abandonment is that they have always diverted water and as such there has been no abandonment. It is believed that these owners are not aware of the fact that though they have diverted water, they have not diverted water up to or even near the decreed amount of their water right(s).

Important Court Cases

Water Court Case No. 03CW53

In Division 6 Water Court Case No. 03CW53, the Upper Yampa Water Conservancy District (District) requested a new conditional water right in the amount of 50 cfs for a multitude of uses that were to occur subsequent to filling Stagecoach Reservoir. This case went to trial in January 2009 and the Court ultimately dismissed the District's application arguing that the District did not prove a need for its claimed conditional water rights to meet a future demand for water from Stagecoach Reservoir, above its current supply. The Water Court also found that the District's existing water rights are sufficient to meet its existing and future demands for

hydropower at the dam. The District appealed the Courts decision to the Supreme Court which was assigned Case No. 09SA118. Oral arguments before the Supreme Court were held on June 9, 2010 in this case and the Supreme Court just recently rendered their opinion on the matter. The Supreme Court ruled that because the applicant's evidence of existing demands included contracts for stored water that had admittedly not yet been put to beneficial use and for which no specific plan for beneficial use was offered, and because the applicant failed to adequately demonstrate a reasonably anticipated future need based on projected population growth, its evidence was insufficient to establish that it had made the required "first step" to obtain a conditional water right. The judgment of the Water Court was therefore affirmed.

Water Court Case No. 06CW43

In Division 6 Water Court Case No. 06CW43, the Upper Yampa Water Conservancy District filed an application to make absolute in part some of their Four Counties conditional water rights. The Four Counties water rights were conditionally decreed by the Routt County District Court in Civil Action Nos. 3538 and 3926. All of the Four Counties water rights that were decreed in Civil Action No. 3538 share priority 40, based on an appropriation date of June 2, 1958. The cumulative rate of diversion decreed under these rights is 915 cfs. All of the Four Counties water rights that were decreed in Civil Action No. 3926 share priority 45, based on an appropriation date of May 20, 1963. The cumulative rate of diversion decreed under these rights is 864 cfs. The total rate of diversion conditionally decreed to the Four Counties water rights under both priorities is 1,779 cfs. Stagecoach Reservoir is decreed as an alternate point of diversion for all of the Four Counties water rights and all of the Four Counties water rights are decreed for use in the Yampa River drainage for domestic, municipal, irrigation, industrial, generation of electric power and energy, mining, recreation and all other beneficial uses.

In previous cases, the District was successful in making absolute 151 cfs under the Four Counties water rights with priority 40. In the subject case, the District seeks to make more of the Four Counties water rights absolute based on diversion into and storage of 108 cfs in Stagecoach Reservoir which presumably occurred on June 9, 2006. The District admits that its claimed rate of filling on that date was less than the rate of diversion already decreed absolute under the Four Counties water rights. The conditional Four Counties water rights are decreed for the same uses at the same locations as the portions already decreed absolute. In addition, the conditional Four Counties water rights that the District seeks to make absolute share the same priority (3), or are junior to (2), the Four Counties water rights that the District has already

made absolute. Although the District disagreed with the Water Court's legal conclusions in its Order dated June 17, 2009, it did not dispute that on June 9, 2006 it did not divert and use water in excess of its existing absolute Four Counties water rights.

On June 17, 2009 an Order Denying Motion for Summary Judgment was issued by the Water Court for Water Division 6. In its Order, the Water Court held, consistent with fundamental principles of Colorado water law, that the District may not make absolute vested water rights until the District has proven a need to divert those rights for, and until the District has applied those rights to, actual beneficial use.

The Water Court first held that the District could not claim new vested absolute rights unless the District could prove a need to divert water for beneficial use under these rights. The Water Court held that, to make its conditional rights absolute, the District must first demonstrate a need for more water than that available under its existing vested absolute storage rights diverting at the same location, for the same purposes, and under the same priority. Second, the water court held that the District may not claim absolute storage water rights until the District can show both actual storage and actual beneficial use of a specific amount of water. None-the-less, the Water Court denied the Motion for Summary Judgment to allow the District to produce quantifiable evidence of actual beneficial use in excess of its existing absolute decrees. Subsequent to this Order, the District filed a confession of judgment providing that it could not meet its burden of proof based upon the law of the case and the Water Court issued an order denying the application based on said confession.

Subsequent to the order denying the application, the District filed an appeal with the Supreme Court and said appeal was assigned Case No. 09CW352. In their appeal the District requests that the Supreme Court reverse the Water Court's holdings. The District argues that the water court had no authority to require the District to prove a need to divert more water than that available under its existing vested absolute storage rights, or to require the District to demonstrate any actual use of the water right beyond placing that right into storage.

Oral arguments in the case were heard by the Supreme Court on November 30, 2010 and the Court promptly remanded the case back to the Water Court to clarify whether its Order was intended to grant summary judgment based on undisputed facts in favor of the Opposers or as a mere recognition of the Applicant's confession of judgment. The Water Court responded to this

request and provided that they had reconsidered its prior denial of the Opposer's Motion for Summary Judgment and granted it in light of the Applicant's confession that it could not produce evidence to establish that water rights in excess of the its existing absolute water rights were diverted and put to beneficial use. The case now appears to be back before the Supreme Court.

The State and Division Engineers were/are parties in both the above cases.

Involvement in the Water User Community

The Division 6 staff continues to assist the public in preparing Water Court and well permit applications, provide water right and diversion record information, assist water users with the proper selection and installation of water measuring devices, and provide assistance to dam owners with completing Notices of Intent to Construct Non-Jurisdictional Dams, Livestock Water Tank Permits and Emergency Action Plans. The Division 6 field office in Craig continues to be a vital aspect of our public relations.

Following is a list of meetings attended by Division staff in 2010.

- Annual meeting of the Pot Creek Distribution System
- All meetings held by the Upper Yampa Water Conservancy District
- Bear River Irrigators annual meeting
- Stillwater Ditch Company annual meeting
- The majority of the HB1177 Roundtable meetings for the Yampa/White River and North Platte River
- Two employees attended the CWOA annual meeting in Greeley

Following is a list of meetings held by Division 6 staff in 2010:

- Public meeting concerning the designation of the Elk River as being critical. December 2010.

