

# **Division 1 Annual Report**



North St Vrain Creek near Allenspark (photo by Russell Stroud)

## **Irrigation Water Year 2007**

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## CURRENT WATER YEAR

### Accomplishments

For the first time in several years, water conditions in 2007 returned to more of an historic average. With this, the amount of conflict was reduced within the basin. Water commissioners did an excellent job in assuring that water rights were administered in priority 7 days a week every week all year round. While commissioners have always been asked to administer water extensively over half the year, the tight water situation, population growth along with its new water rights and changes of water rights, and the explosion of new recharge sites has dramatically increased the workload for commissioners during the non-irrigation season.

As described in detail further in the Innovative Administration Section of the report, the commissioners are meeting this challenge with cooperative efforts to increase the use of technology. As also described in the Innovative Administration Section, the Division has developed protocols to make clear the requirements on water users and provide consistent, transparent river administration. The protocols are included in Appendix A of this report.

Well issues remain a primary focus of administration. In this regard, staff continues to field inspect decreed and/or permitted wells that are not in an augmentation plan or substitute water supply plans (SWSP) to determine if these wells exist. Staff will issue orders (tag) if a well does exist that is not in a plan. Staff is also becoming more active in reviewing SWSP accounting for well user groups and verifying field data for the operation of wells. Division 1 has been able to do this because of a request for additional staff approved by the legislature in 2007.

As described later in this report, the Division continues to have a successful hydrography

and dam safety program. The staff in Division 1 also continue to provide support to planning efforts associated with Basin Roundtables, the South Platte Decision Support System and the Endangered Species Act.

While the Denver office has taken the lead in many areas associated with the Republican River, Division 1 provided field staff and support for the administration of surface diversions and the measurement of flows within this basin. The Division also continues to enforce the limitations of the Wyoming v Colorado decree on the Laramie River and the Sand Creek agreement.

### South Platte Task Force

The governor issued an executive order on June 8, 2007 forming the South Platte Task Force in response to concerns expressed by users whose wells had been ordered not to pump the last several years in response to Colorado Supreme Court decisions, growth and dry conditions. The Mission and Scope of the Task Force was:

The Task Force is charged with clearly articulating the problems faced by water users in the South Platte River Basin and recommending potential solutions. Specifically, the Task Force is to consider whether there are any changes to current water law or policy that will provide relief to junior ground water users without injuring senior water right holders.

The Task Force included members of the legislature, water users and employees of the Department of Natural Resources and Agriculture. State Engineer Dick Wolfe participated on the Task Force as did Division 1 Engineer Jim Hall, both of whom provided support to the Task Force. The Task Force met six times over a four month period. The first two meetings were devoted to gathering public comment and information regarding

the well issues in the South Platte basin. During the last four meetings, the Task Force deliberated over issues and recommendations. While the Task Force realized early on that global solutions to the issues were not feasible because of the shortfall in water supply, the Task force ended up recommending approval of several items including:

1. Support of new water storage as an essential component of resolving water shortfalls.
2. Continued support of the South Platte Decision Support System (SPDSS) to provide necessary background information for decision makers.
3. Legislation that would provide more flexibility for the use of excess augmentation credits.
4. Request of the Colorado Supreme Court to undertake a study to identify possible ways to achieve efficiencies, while still protecting quality outcomes.
5. Support of the entities pursuing a Federal CREP or EQIP program to set aside land from irrigation.
6. Legislation which would exempt replacement requirements for well pumping that occurred prior to 1974 since the rules on the South Platte did not go into effect until that time.
7. Encourage federal funding of the reallocation space study for Chatfield Reservoir.
8. Expansion of the Water Banking concept to include sources other than stored water. These might include changed water, transbasin water etc...
9. Continued support of the Senate Bill 07-122 study looking at alternatives to dry up.

While it may be difficult to approve any legislation associated with these recommendations, it is likely that support for

SPDSS will continue and it also probable that there will be a review of the Water Court system.

### **Water Supply Conditions**

**M**any irrigation storage reservoirs were near empty as we entered the new irrigation year in November 2006 as a result of the dry 2006 conditions. Fortunately for the water supply, two widespread extremely heavy storm systems hit the South Platte basin during December providing relief to the dry conditions and increasing soil moisture for the winter wheat crop. However, the storms did not initially produce significantly more flow in the South Platte due to the cold conditions. In fact, the cold weather and snow actually slowed down the filling of reservoirs due to ice conditions and filling of inlet ditches with snow. The snow also created an immediate negative impact on agriculture in areas where cattle were stranded without food.

The cold conditions in December and January also created periods of free river on the South Platte due to the limited ability of reservoirs to fill. The ability to store water improved in February as weather conditions warmed during the month. Nevertheless, some users still were unable to take their full decreed amounts due to ice conditions. Flow the latter part of February significantly increased due to the melting of low elevation snow.

Reservoir and municipal users continued to place the main demand on supplies in March and April. With the wet weather, the flow at the Kersey gage, the key gage for measuring overall flow conditions, exceeded the average in February, March, and April for the first time since 2001 (see attached figure of Kersey Flows). This above average flow allowed the major irrigation reservoirs on the South Platte to fill despite the fact that many of these reservoirs were either near or totally empty going into this water year in November, 2006. As shown in the attached picture, 2007 even

had some limited flooding along the South Platte between Denver and Greeley for a short period.



Isolated Flooding in Dist. 2 in April

The free river conditions and high flows in April allowed irrigation well users to recharge significant amounts of water in addition to water storage. The river credits associated with this recharge were an invaluable source of replacement water for well user groups to replace out-of-priority depletions in 2007 from well pumping. Recharge accretions will also aid in meeting replacement needs in future years.

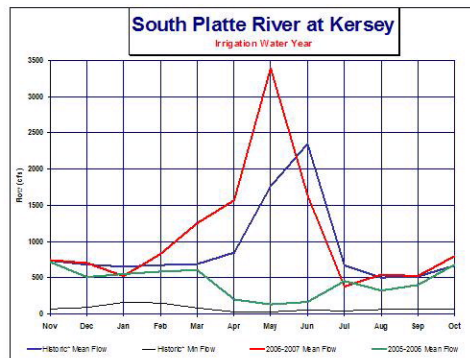
The only tributary basin with significantly below average flows and storage was the Poudre basin. Like the remainder of the South Platte basin downstream of Denver, the Poudre suffered a very dry year in 2006. Unlike the southern part of the South Platte basin, there were not significant storms in the Poudre basin in 2007 adding to the flow.

Wet conditions continued in the South Platte basin through the month of May. This allowed for continued free river conditions for the river throughout the month. The seven weeks of free river in April, May, and June 2007 on the South Platte exceeded total number of days of free river that existed between May 2002 and April 2007. With the wet conditions, reservoir levels along the whole South Platte and on most tributaries continued in very good shape.

As another indicator of the better conditions this spring, the flow at the Julesburg gage exceeded average flow for a significant part of May for the first time in the last several years. The amount passed at the state line exceeded compact requirements of 120 cfs during free river conditions by over 500 cfs most of the month and over 1000 cfs towards the end of the month

Because of the wet conditions, the water level in both Cherry Creek and Chatfield Reservoirs was into the flood pool for much of May. When this happens the US Army Corps of Engineers takes over operation of the reservoirs for flood control purposes. Generally, these on-stream reservoirs are operated below the flood pool as part of the priority system.

As can be seen in the attached figure of Kersey flows, the flow in the South Platte dropped dramatically in June as snow melt runoff ended, weather conditions on the plains became drier, and irrigation demand increased. With these changes, demand finally outstripped supply and there was a direct flow call for irrigation water on the river beginning on June 12, 2007. By the end of June, some irrigation users along the mainstem and tributaries had also begun using their reservoir supplies, though reservoirs remained near full. Municipal users also generally still had full reservoir supplies.



The flow in the South Platte and tributaries continued to decline in July as almost always is the case, even in good years. These declines in flow lead to more senior calls for water along the South Platte and tributaries. Nevertheless, the call on the South Platte was more junior than most years during July due to the overall wet conditions in 2007. Helping the situation, rains in July increased the flow enough to allow some brief refilling of storage rights on the main stem and tributaries by the end of the July.

The positive flow conditions continued in August on the South Platte and tributaries with a couple of significant rain storms that helped keep the flows above average. With above average flow in August, the call for water on the mainstem and tributaries continued more junior than in most years and certainly more junior than the last several years.

September and October were fairly uneventful as the irrigation season wound down. As October proceeded, the call on the river for water first changed from irrigation to the refill of storage rights and eventually to recharge use as the demand for irrigation water declined. The water year ended in October with both municipal and irrigation reservoirs having above average storage. This will provide a good start for 2008's water supply.

### **Innovative Administration**

#### **Data Logger and Telemetry Installation**

The installation of data loggers and telemetry in District 1 and 64 has been a huge success. District 1 and 64 Water Commissioner Brent Schantz has been particularly responsible for the implementation of this program along with support from the Northern Colorado Water Conservancy District (NCWCD) and Lower South Platte Water Conservancy District (LSPWCD). The installation of data loggers

has been the only way to handle the explosion of data requirements associated with construction of several hundred new recharge facilities. With the information from data loggers, both users and Division 1 staff have been able to turn around recharge information within a matter of days, allowing users to obtain credit for recharge accretions immediately when appropriate. The increase in diversion and stream flow data on the web has improved administration because users and DWR staff are immediately aware of any problems associated with diversion quantities. It also has improved trust between users by providing real time information and confirmation that all users are operating in accordance with their water rights.



Stage Discharge Recorder

As a result of the success of the data logger program, the Division, along with NCWCD and LSPWCD successfully obtained approval of \$48,800 of funding from the South Platte Roundtable and Colorado Water Conservation board for the installation of additional data loggers and cell phone modems. The principle focus of this effort will be major structures diverting from the mainstem of the South Platte downstream of Denver and upstream of Kersey (District 2) in 2008. The only cost associated with this grant will be to purchase equipment. As in-kind service, purchased equipment will be installed in coordination with the various ditch companies by DWR, LSPWCD and/or NCWCD representatives. In the next annual report the



Division will follow up with the successes and difficulties associated with this project.

Associated with the data logger program, Division 1 staff provided support to LSPWCD in setting up a new website which provides background information such as a point flows to show what is happening on the lower end of the South Platte river.

### **Protocols**

To administer augmentation plans in a fair, consistent, and transparent way, Division 1 has developed several protocols including one for accounting for plans for augmentation, one for the delivery of replacement water using the natural streams, one for dry up of irrigated land, one for recharge, one for data loggers, one for exchanges of excess water credits, and one for alternate point of diversion wells. Some, but not all of these protocols also apply to municipal plans. All of these protocols are attached to this report. Division 1 staff member Scott Cuthbertson should be particularly credited for his work on the development of the protocols.

It is important to stress that these protocols are not meant to replace decree conditions, but rather supplement the decrees. The protocols are often attached to SWSPs as a term and condition prior to a plan for augmentation being decreed. In at least one case, the Water Judge required a protocol be included in a decree.

### **Plum Creek Wastewater Authority Website**

The District 8 Water Commissioner, Mark Trivisonno, continues to work with the Plum Creek Wastewater Authority (PCWA) and the water users that lease effluent from their plant on an innovative website developed in August 2006 for reusable effluent lease accounting. The water commissioner uses this website to confirm that there is enough reusable effluent being released from the plant in order to satisfy all of the leased water being claimed downstream and to inform the

users when there is live flow in Plum Creek or if futile call conditions exist due to the periodic dry up at Titan Road. A dry up at Titan Road prevents delivery of water past this location. Although not directly involved in the leases, PCWA originally set up the website to provide daily accounting on the water they treat for the water districts that lease this water out. Up until this year, the data was collected at a common website hosted by Jehn Water Consultants with each interested party entering their own information into the online spreadsheet without being able to manipulate data entered by any other user. This concept of website accounting has a lot of appeal due to the efficiency of entering daily data for real time water administration. Therefore, the Division of Water Resources took over hosting this website in July 2007 as a case study to determine if the concept could be applied to other similar situations. The website can be viewed at <https://www.dwr.state.co.us/pcwa/welcome.asp>. Some of the water users who lease the effluent would like to expand the scope of this website to include daily amounts that non-PCWA members are diverting or delivering in the reach upstream and downstream of the PCWA plant. However, this has not been done to date because the costs associated with IT maintenance of this system and disagreements on who should pay for this.

### **Activities of New Staff**

Division 1 has found that water commissioners do not always have adequate resources to assure that accounting is in compliance with decrees for complicated augmentation and change of water right plans. As discussed more in the Personnel Section, our office successfully requested funding from the legislature for 4.5 people. Four of these five will provide field checking of augmentation information or be specifically involved in assuring that users are complying with the decree conditions in their accounting. The review of each users accounting will be completed periodically on an audit basis. The last 0.5 FTE will allow for making a full time position in the Republican River basin.

## **Augmentation Plans**

**A** number of large augmentation plans in the division continued to develop, principally along the main stem from Denver to the state line with Nebraska. The addition of an augmentation plan coordinator, one of the four people approved by the legislature for this year, has added a significant auditing resource as well as providing better coordination on inter-district deliveries of replacement water.

The Sterling office team, in coordination with the LSPWCD and NCWCD, continues to develop some innovative tools to track out-of-priority depletions, replacement supplies, and river status. A goal for the upcoming year will be to incorporate some of these developments into the diversion record process.

All in all, the division made good progress toward more timely review of augmentation plan accounting and review of augmentation operations.

Of note, the Court had a trial and ruled on the Central Colorado Water Conservancy District, Well Augmentation Subdistrict (WAS) augmentation plan application. This will be discussed more fully in the Court Decisions section.

## **Court Decisions**

### **Well Administration**

**T**he state and division engineers brought only six complaints in water court against well owners in 2007 as opposed to more than two dozen in each of the several years prior. Of those six complaints, two were for meter tampering. The drop in complaints is attributed to the market settling out and the implementation of self-administering rules required by the plans that have been decreed in the last several years.

As the division's primary focus transitions from one of shutting down wells that are not in plans of augmentation to maintaining the wells, we have recognized a need for measurement rules. Rules are needed to guide the maintenance of meters, provide uniform guidance to the certification of meters and provide a more efficient mechanism to pursue over-pumping issues.

### **North Sterling Reservoir vs. State and Division Engineer – Administration of “Water Year” (05CW125)**

**N**orth Sterling Reservoir Company filed a complaint against the State and Division Engineers with takings and due process claims related to their contention that their one fill year began at the low point of the reservoir. The low point of the reservoir usually occurs in September or October as opposed to the tradition November 1 reservoir start of fill date. The issue was brought to a head several years ago when North Sterling tried to place a call for water prior to November 1 but after they had fully filled their storage right once since the previous November 1. North Sterling's attempted call was denied.

North Sterling's position evolved, but ultimately it claimed that it was entitled to "low-point administration," i.e., that it would be able to begin a new storage year, and thus place a call, once it determined that it had reached its "low point" for the year. The "year" under the one-fill rule could thus begin at a different date each calendar year, and vary in length. The Engineers took the position that a year under the one-fill rule should be a 365-day period (except in leap years) and that it should begin on the same date each year.

A five day trial before the Water Court was held from September 10 through 14, 2007. Numerous parties appeared at trial including additional Plaintiffs City of Boulder,

Centennial Water and Sanitation District, and Pawnee Ditch Company. The State and Division Engineers were joined by Central Colorado Water Conservancy District, Western Mutual Ditch Company, Farmers Mutual Ditch Company, City of Aurora, Riverside Irrigation Company, Fort Morgan Irrigation Company and Jackson Lake Irrigation Company.

The trial mainly turned on the issue of historic administration. The record was not exactly clear due to the fact that there had generally not been an irrigation reservoir call on the mainstem until recently and the fact that some municipal reservoirs use a beginning date other than November 1. However, Judge Klein's ruling essentially maintained the status quo on irrigation reservoir administration. An appeal of the ruling to the Colorado Supreme Court is expected.

The key to the case was Judge Klein's ruling:

"In summary, the court determines that North Sterling's storage rights have not been administered under low-point administration and the North Sterling lacks the right to low-point administration. Consequently, injury would result from the imposition of such administration. See *City of Sterling*, 125P.3d at 434."

Once Judge Klein determined this basic principle, the rest of the case followed logically.

### **Central WAS Plan of Augmentation (03CW99)**

This case, involving some 215 large capacity wells, was the subject of a thirty-day trial before the Water Court was held between February 5, 2007 and May 3, 2007. On October 17, 2007, the court issued a 101 page Ruling directing WAS to submit a proposed decree in compliance with the Ruling. While the Court has issued several clarifying rulings as of the writing of this report, the fact that the Applicant just submitted their **tenth** Draft Decree will give

you a sense of the contentious nature of this case.

While there have obviously been a number of developments in this case, two bear mentioning in the context of this report. The Court deferred to the State and Division Engineers proposed terms on many issues, though not on the key issue of delayed non-irrigation season replacement. Central had asked for the Court to allow the division engineer to either project or wait and see if reservoirs fill before making winter replacement, but the Court determined the wells must make replacement any time the depletions are out-or-priority, including winter.

A second change to the historic administration was the Court's ruling that the wells were required to replace depletions associated with all pumping since the construction of the wells. Other plans of augmentation and the division engineer had only required replacement of out-of-priority depletions associated with pumping since the inception of the Amended South Platte Rules in March 1974.

It is likely many of the parties will appeal parts of the eventual decree of the Water Court to the Colorado Supreme Court.

### **Republican River Basin**

#### **Compact Compliance**

Surface and ground water within the Republican River basin is governed by the 1942 Republican River Compact, with current administration of the Compact under the Final Settlement Stipulation in *Kansas v. Nebraska and Colorado* accepted by the US Supreme Court in October 2003. The Settlement Stipulation sets a 5 year running average compliance period for each state's compact entitlement.

As reported last year, the Republican River Water Conservation District is the local body within Colorado working with the State to

assure compliance with the Compact. The District has been able to retire approximately 30,000 irrigated acres through the Federal EQIP and CREP programs in the basin. However, despite this effort Colorado, due in large part to the on-going drought, has been overusing its Compact entitlement by an average of about 10,600 acre-feet per year in the first 5 year compliance period (2003-07). Because of this problem, the State initiated 3 steps and the District initiated another step to bring Colorado into Compact compliance. The steps initiated are:

- A) Funds were appropriated by the legislature to change the existing part-time Deputy Water Commissioner position in the basin into a full time combination Hydrographer/ Deputy Water Commissioner position effective July 1, 2007. As will be discussed in next year's report, this position was filled in November 2007 and is expected to greatly assist Colorado in its Compact compliance efforts.
- B) Colorado began the process of promulgating Well Measurement Rules applicable to all large capacity wells in the basin in August 2007. Though this process has not been completed as of press time for this report, it is expected these rules will be adopted and be enforced in irrigation year 2009.
- C) Also in August 2007, Colorado began the process of promulgating Compact Compliance Rules applicable to all water rights, surface and groundwater, in the basin. These rules are quite severe in that they could require the curtailment of all surface and groundwater rights within three miles of any point of live flow on the North and South Forks of the Republican River, the Arikaree River and any of their tributaries if Colorado's Compact obligations are not met. This process has also not been completed as of press time for this report, but is expected to be completed eventually. It is hoped that the provisions of these rules will only have to be implemented as a last resort when all

other attempts at Compact compliance have failed.

- D) The Republican River Water Conservation District formulated a plan to dry-up approximately 9,500 acres currently irrigated by Ogallala Aquifer groundwater located in the sand hill area north of the North Fork of the Republican River and pipe this water approximately 13 miles to a point on the North Fork located just above the Colorado-Nebraska border to bring Colorado into Compact compliance. This pipeline could provide as much as 15,000 acre-feet per year and is projected to allow up to 25 years of Compact compliance. The District has aggressively pursued this project and, as of press time, has secured the approximately 72 million dollars in funding needed for this project. The projected completion date for this pipeline is July 2009.

### **North Fork of the Republican River Designation Effort**

As reported for the last several years, the Pioneer Irrigation District, Colorado Board, some owners of the Laird Ditch, and the Colorado Division of Wildlife, Wray Fish Hatchery, have filed a petition for hearing and appeal of a decision of the State Engineer to the Colorado Ground Water Commission. The petition, if successful, would essentially de-designate all groundwater within 15 miles of a point of live flow that is hydraulically connected to the surface flows in the North Fork of the Republican River. A three week hearing before the Colorado Ground Water Commission's Hearing Officer is scheduled for June 2008.

### **DAM SAFETY**

The dam safety branch in Greeley is staffed with three engineers to perform periodic dam inspections, and receives inspection support in the upper reaches of the Platte basin from a field engineer assigned to the Division 2 office, and from personnel in

the Design Review office in Denver. In calendar 2007, the retirement of one dam safety engineer required some adjustments to the assignments to adequately assure all necessary inspections would be made. This position was filled at the beginning of August.

The dam safety engineers performed 220 periodic dam safety inspections, and continued to assist with design review and construction inspection activities. An additional 12 inspections were conducted by local consultants for dams located on Rocky Flats, where limited access is available for dam safety personnel. In addition to the periodic inspections, dam safety personnel performed 10 construction inspections, and made 59 additional site visits in support of dam safety activities.

The completion of the Extreme Precipitation Analysis Tool (EPAT) under the oversight of the Denver office has resulted in the resumption of the spillway review process for dams at higher elevations, which had been placed in abeyance a number of years ago. The EPAT provide a means to model extreme storms under site-specific conditions for the analysis of the high mountain dams.

Significant new construction projects completed include the new 100' high roller-compacted concrete Genesee Dam in Jefferson County, and Dry Creek Dam in Larimer County. The latter structure will impound 9,000 AF.



Empire Dam

Significant wind events in the spring of 2007 resulted in severe upstream slope erosion of Empire Dam, requiring Division 1 dam safety personnel to respond to the emergency, and assist with repairs to the slope.

## HYDROGRAPHY

### Staffing

Currently Division one is staffed with 6½ FTE:

Lead PE II	Bob Cooper
PE I	Lee Cunning
EPS Tech III	Russell Stroud
EPS Tech II	Steve Barrett
EPS Tech II	Patrick Tyler
EPS Tech II	Mike Wild (South Park, ½ FTE)
EPS Tech I	Bob Erosky (Sterling, ½ FTE)
EPS Tech I	Devin Ridnour (Wray, ½ FTE)

For most of 2007 Division One was short 2 FTE's. By the end of the year, Division 1 had filled all vacant positions, using this process to create greater flexibility in the Hydrographic work group.

To meet demands for a higher level of technical skills, Division 1 attempted to

reclassify George Sievers' vacant position as a PSRS I. This was disallowed, but we were able to establish the position as a Tech III. Russell Stroud successfully promoted into this position.

Russell's vacant Tech II chair was filled with the transfer of Patrick Tyler from the Denver Office. Patrick will continue to work part time for Tom Ley in Denver until Tom hires a replacement for him.

Division 1 filled the vacant Tech II position in South Park with Mike Wild, who was the Superintendent of Aurora's Spinney Reservoir. A new water commissioner-hydrographer position was created in Wray to address the State's compliance issues with the Republican River Compact. This Tech I position was filled by Devin Ridnour who came to the State with extensive experience in well testing.

The percentage of hydro work done by part-time hydrographers varies with location. Mike Wild performs about 90% hydro work; Bob Erosky does about 80%, and Devin Ridnour currently does about 20%. These positions receive technical supervision from the lead hydro, and personnel supervision from their lead water commissioner.

In addition to regular staff, Division One has received assistance from the following individuals:

Mark Simpson, deputy in District 3, has taken on some hydrographic responsibilities with the district 3 transmountain gages;  
Jan Ash, from the Denver Office, has been operating South Platte River gages involved with municipal water supply.

### **New Office Space**

The hydrographic section moved to larger offices downstairs from the main Division One office. When everyone does come to Greeley, we have space for all 10 bodies, and a

conference room for group discussion. The Hydrography group has used locally stationed people very effectively to increase our efficiency. The 3 hydrographers in Sterling Wray and Fairplay work from their homes or district offices to maintain gages in their localities. Division 1 also has 2 full time staff, Steve Barrett and Patrick Tyler, who live in the Denver area, operate Denver Area gages, and connect via VPN software to the Division server.

### **Gaging Station and Hydrographic Operations**

There are a total of 249 gaging stations are monitored by Division 1. At 188 gages, Division One hydrographers are responsible for reported data accuracy, making measurements, and updating the rating. Division 1 is only involved in monitoring the other 61 (mostly USGS) sites. Many cooperators are involved who maintain the gages, the telemetry equipment, or both. So in some cases, gage 'operation' involves only monitoring the data, and making an occasional measurement or calibration visit. The number of gages where Division 1 staff are responsible for maintaining the gage itself, maintaining the satellite equipment, working a published record, or conducting regular measurement and rating update activity is about 154.

### **Stream flow Measurements and Published Records**

In water year 2007, Division One Hydrographers made 1253 measurements, including 1071 measurements for web-reported gages and approximately 182 measurements for local (non-telemetry) sites. A total of 80 stream flow records are being prepared, including two stations that are new this year-- Fall River near Idaho Springs, and Stateline Ditch Return at Julesburg.

### **New Gaging Stations**

Division One established two new gaging stations, and added Division satellite telemetry to 5 new sites. These include:

South Platte River at Crook—A new installation funded by the South Platte Decision Support project.

Fall River near Idaho Springs—A new installation funded by CWCB to track minimum stream flows.

Prewitt Reservoir Outlet, Prewitt Reservoir release to Highline Canal, Prewitt Reservoir delivery to the South Platte ditch—These 3 structures were serviced with a single DCP with the cooperation of the Reservoir company who ran buried cables for the project.

Prewitt Reservoir Inlet Canal—Radio Link to Prewitt outlet DCP.

Jackson Lake Outlet—DCP was installed to support the South Platte Flow Monitoring project.

### **Gage Construction Projects**

Lightning protection measures were installed at Hoosier Pass Tunnel-- including a ground bed, and new enclosures for the DCP and encoder.

Sutron SDR datalogger encoders were installed on 4 transmountain gages. These were the only remaining 'chart-only' (non-DCP) published record gages in Division One. This list included Straight Creek (water) Tunnel at the East Portal of Eisenhower (I-70) Tunnel. Straight Creek was a tricky and expensive project because the flume was in a vault. A confined space man-hoist had to be purchased, and a special enclosure had to be built to withstand the wet environment.

An SDR and an electric tape gage were installed on Chief Creek below the Wray Fish Hatchery. The equipment was purchased by DOW as a compliance measure for the

Republican River Compact. Another project for the Republican River Compact involved building a new concrete weir control at the North Fork of the Republican River at the Colorado-Nebraska Stateline. This was a co-op project with the Nebraska USGS.

An earth and block platform was built for the cableway at South Platte River Below Chatfield Reservoir. The rented Bob Cat loader was also used to remove rocks from beneath the cableway to improve the accuracy of high water measurements.

### **Equipment Upgrades**

Eleven DCP's were upgraded to High Data Rate (Hourly transmission) in Division One last year. 13 State-owned Low Data Rate Data Collection Platforms remain in the field. Completing the update process has been slowed by the ongoing turnover of cooperator low data rate DCP's to State operation. Four low data rate DCP's were transferred by the USACOE last year, and one from the USBR. An additional 24 low data rate DCP's owned and operated by cooperators are still being used in Division One, some of them in critical locations.

### **Training Activities**

A flagger certification class was conducted by Jana Ash for Division One office staff so that they can assist hydrographers with bridge measurements. A basic gage operation class—shifts, inlet flushing, common mistakes, etc -- was conducted by Bob Cooper for Division One office staff and Ditch personnel from District 2.

### **Miscellaneous Operations:**

Measuring storm peaks has taken on a higher priority. Ditch companies who want recharge water are looking closely at the Kersey gage figures whenever it storms in Denver. With traffic flagging, a bridge measurement requires a minimum of 4 people. Division One office staff are regularly drafted to assist

Hydrographers with measurements at Henderson and Kersey.

Chatfield Reservoir accounting issues created a need for the best possible accuracy for figures from river gages at Waterton and below Chatfield and Strontia Springs Reservoirs.

The Chatfield spreadsheet has shown greatest inconsistencies when these gages require cable measurements. This could be due to flow timing, errors in the Chatfield capacity table, and problems with diversion figures as well as the measurement errors inherent in cable measurements. To help eliminate gages from the error investigation, the hydrography team has been taking steps to improve the accuracy of our high water measurements.

This involved increased the frequency of measurements. Next, the Division used rental equipment and contractors to remove the larger rocks beneath cable sections at the Chatfield and Waterton gages. The Division also successfully petitioned for the purchase of an ADCP instrument to use at these sites as a check on standard current meter techniques. Finally, the hydrography team is investigating the use of Denver's Conduit 20 diversion dam (below the Strontia gage), as a potential gaging site to verify flows recorded at the Strontia gage.



Patrick Tyler at Last Chance Ditch

Notable USBR Liaison activities in 2007 included assistance with installation of USBR-

purchased SDR recorders at 8 sites, assistance with DCP rewiring to facilitate the USBR's SCADA system operation, and numerous levels conducted as the USBR rebuilds the flume on the Big Thompson River above Lake Estes. Division 1 also conducted a day of cable measurements on a canal to assist with a USBR (Denver Lab) study comparing two types of acoustic Doppler instruments, the Teledyne/RDI StreamPro, and the Ott Qliner. Both instruments showed about 5% less water than meter measurements. The USBR paper concluded that the StreamPro may measure velocity more accurately while the Qliner does a better job with flow area.



Patrick Tyler at Chatfield Reservoir

Russell Stroud developed a new spreadsheet tool which compares the data from an SDR log with the reported DCP record. The program highlights days on which the two data sets have any significant difference in mean, maximum or minimum values. For satellite gages with SDR encoders installed, the basic data check for records purposes is greatly facilitated.

## COMMUNITY INVOLVEMENT

Division One personnel continue in their attendance and participation in Conservancy District and Ditch Company meetings as well as meetings of water user, realtor, and homeowner groups.



In addition, in 2007 several special efforts related to community involvement included:

1. Continued to work closely with the NCWCD and the LSPWCD on the Stage Discharge Data Logger and Telemetry Installation Project in Water Districts 1 and 64 to evaluate a variety of electronic data collection and transmission devices and combinations thereof to determine which devices and specific combinations of devices gave the best combination of reliability, functionality and accuracy for the least cost.
2. Co-Sponsoring two water user tours of significant structures in Water District 2 in August and September 2007 with the NCWCD and the LSPWCD.
3. Participating in a number of studies related to water and water use in Division 1 including the South Platte Task Force, the Alternatives to Agricultural Transfer Methods Grant Program advisory group, and the Lower South Platte Irrigation Research and Demonstration Project advisory committee

The Division of Water Resources sponsored a booth at the Greeley Farm Show for the eighth consecutive year. This show occurs in late January every year and again in 2007, the staffs of both the Denver and Greeley offices coordinated shifts at the booth. The booth provides a great opportunity to distribute information and answer questions in an informal public setting.

## **FRONT RANGE WATER SUPPLY DEVELOPMENT**

### **Interbasin Compact – Water for the 21<sup>st</sup> Century and Statewide Water Supply Initiative (SWSI)**

The Colorado Water for the 21st Century Act sets up a framework that provides a permanent forum for broad-based water discussions. It creates two new structures: 1) The Interbasin Compact Committee (IBCC), a state-wide committee that will address issues between basins; and 2) The Basin Roundtables. Division 1 staff and the State Engineer have participated as support to two Roundtables – the South Platte basin and the Denver Metro Area roundtable.

As discussed in the Innovative Administration Section, Division 1 in cooperation with NCWCD and LSPWCD were able to secure \$48,800 from the South Platte Roundtable for purchase of data loggers and telemetry equipment. The equipment will be installed on diversion and return flow structures along the South Platte river and its tributaries, increasing the availability of near real time flow information on the Internet.

The South Platte Roundtable has also approved funding for a feasibility study for Ovid Reservoir. This reservoir would be used for augmentation and potentially Endangered Species Recovery Plan Purposes. The Roundtable also approved funding for the Chatfield reallocation study to change the flood pool level for Chatfield, increasing available storage in the basin. In addition, the Roundtable approved funding for a Clear Creek Water Bank/Reservoir Storage to augment small uses, the Lower South Platte Wetland Initiative, and for an Upper Colorado River Fish Recovery Alternative Analysis.

The Metro Roundtable also approved funding for the Upper Colorado River Fish Recovery Alternative Analysis and the Chatfield reallocation study. In addition, the Metro Roundtable approved funding for a study by CSU and others to investigate methods to allow the partial transfer of irrigation water to municipal use while maintaining some agricultural base on the land. Finally, the Metro Roundtable approved funding for a Zero Liquid Discharge Treatment Pilot

Program by East Cherry Creek Valley Water and Sanitation District.

All funding approvals by the Roundtable were also confirmed by the Water Conservation Board prior to funding being made available.

In addition to funding projects, the Roundtables have been involved in discussions with each other at certain times to examine the feasibility and advisability of projects which impact more than one basin.

Statewide Water Supply Initiative (SWSI).

The Statewide Water Supply Initiative (SWSI) group continued their future water supply evaluation efforts in 2007. The purpose of SWSI Phase 2 was to further evaluate supply alternatives and work toward consensus on further action. In order to do this, Technical Roundtables (TRTs) were formed to continue the dialogue in a facilitated meeting forum and conduct technical work around four key areas:

- Water Efficiency (Agricultural and Municipal & Industrial [M&I])
- Alternative Agricultural Transfers to Permanent Dry-up
- Prioritize and Quantify Recreation and Environment Needs
- Addressing the 20 Percent M&I Gap, Agricultural Shortages, and Environmental and Recreational Needs Including Development of Alternatives

The Phase II work was completed and a final report was issued on November of 2007. The report can be found on line at the Colorado Water Conservation Board website. <http://cwcb.state.co.us/IWMD/SWSITechnicalResources/SWSIPhaseIIReport/SWSIPhaseIIReport.htm>

### **South Metro Water Supply Authority**

The South Metro Water Supply Authority (SMWSA) was formed in 2004 as a collaborative effort of water suppliers in the South Metro Denver Area to work together in providing long term renewable resources for their communities. South Metro Water members include Arapahoe County Water & Wastewater Authority, Castle Pines Metropolitan District, Castle Pines North Metropolitan District, Centennial Water & Sanitation District, Cottonwood Water & Sanitation District, East Cherry Creek Valley Water & Sanitation District, Inverness Water & Sanitation District, Meridian Metropolitan District, Parker Water & Sanitation District, Pinery Water & Wastewater District, Roxborough Park Metropolitan District, Stonegate Village Metropolitan District, and the Town of Castle Rock. In 2007, SMWSA funded and directed a regional water master plan that outlines the transition from nonrenewable bedrock groundwater supplies from the Denver Basin to sustainable and more economical surface sources. Released in June and available at [www.SouthMetroWater.org](http://www.SouthMetroWater.org), the 128-page master plan represents a collaborative and comprehensive effort of all 13 members to acquire long-term sustainable water supplies now and into the future. When implemented, the plan will provide a permanent and economical solution to reduce the south metro area's dependency on ground water while expanding the role of renewable water supplies. Aligned with the master plans of Douglas and Arapahoe Counties, the South Metro master plan is a roadmap to maximize the use of existing infrastructure, to partner with other water entities for new water sources, to lease or acquire water rights and to establish structural projects for a more sustainable supply.

SMWSA and Denver Water are working cooperatively to promote water conservation and efficiency and test the feasibility of a future operations agreement between the two water entities via a pilot project that will exist through 2011. The pilot project builds on a study SMWSA's predecessor, the South

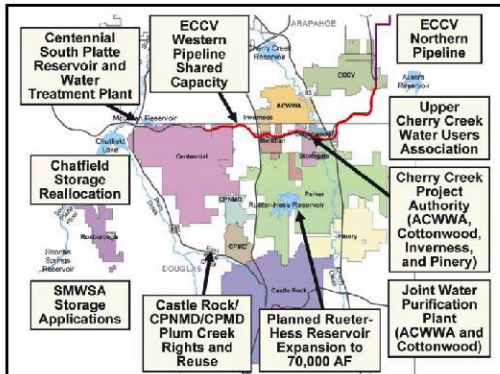
Metro Water Supply Study Board, conducted with the Colorado River Water Conservation District and Denver Water in 2004 and is another step toward regional cooperation.

Parker Water & Sanitation District and Colorado State University, with funding from SMWSA, are teaming up to conduct a major study on ways to sustain irrigated agriculture while meeting increasing water demands. The results of the three-year, \$1 million-plus project will be used in both agricultural and urban water policy development. Parker Water & Sanitation District is also leading area water providers in the expansion of the Rueter-Hess Reservoir. Once complete, the reservoir will provide 72,000 acre-feet of water storage capacity. SMWSA is also negotiating with the East Cherry Creek Valley Water & Sanitation District to acquire excess capacity in its Northern pipeline. This pipeline is an important component to supply water directly to Rueter-Hess Reservoir and SMWSA members.

through Centennial Water & Sanitation District's existing infrastructure. Centennial Water & Sanitation District celebrates 15 years of successfully injecting potable water into the Denver Basin aquifers, making it available for future production and helping to sustain aquifer water levels. This management program is a significant management tool for implementing a conjunctive-use program and expanded regional cooperation. In 2007, Centennial's 6,400-acre-foot South Platte Reservoir was constructed as a component of a long-term plan that will help capture yields from many existing rights in Chatfield Reservoir and other surface sources. The reservoir can hold surface water and return flows, delivered through Chatfield Reservoir outlets, to supply SMWSA providers.

**Chatfield Storage Reallocation Project**

Due to increasing demand for water supply in the Denver metro area and the difficulty in getting approval for new water supply reservoirs, the Colorado Water Conservation Board (CWCB) along with upstream and downstream water users and in-stream interests are studying the possibility of converting existing flood control storage space to water supply space for municipal, agricultural, ecosystem and recreational benefits. This feasibility study, started in 1994, includes analysis of existing and two alternative operations of Chatfield Reservoir: 1) a raise to 5437 feet, providing 7700 acre-feet of storage, and 2) a raise to 5444 feet providing 20,600 acre-feet of storage. The end product will be a Feasibility Report (FR), including an Environmental Impact Statement (EIS), U.S. Fish and Wildlife Coordination Act Report, archeological assessment, public notice, and exhibits and supporting appendixes for the study. Based on this end product, the US Army Corps of Engineers (USACE) will determine if it should reallocate some flood control storage capacity in Chatfield Reservoir and, if so, how much.



SMWSA is participating in the reallocation of Chatfield Reservoir, which will provide approximately 10,000 acre-feet of additional storage to SMWSA members. Several SMWSA providers are also developing plans and designs for diverting return flows from Plum Creek at Chatfield Reservoir. This water source will be treated and delivered to Castle Rock, Castle Pines North Metropolitan District and Castle Pines Metropolitan District

## Windy Gap FIRMING Project (WGFP)



The final FR/EIS is currently scheduled for release in late 2008 and a Record of Decision (ROD) from the Assistant Secretary of the Army is expected during early 2009. Regular coordination and progress meetings are well attended, and project interests have been steadfast in their determination to achieve a successful outcome. Following the issuance of a ROD, mitigation work and revisions to the reservoir operating manual will need to be completed before water can be stored in the reallocated space.

## Northern Integrated Supply Project (NISP)

Northern Colorado Water Conservancy District (NCWCD) in conjunction with northern Front Range municipalities and water districts created the Northern Integrated Supply Project (NISP) to evaluate ways of increasing the quantity and reliability of their water supplies in order to help meet future projected demand. The goal of this regional project is to provide 15 towns and communities in Larimer, Weld and Boulder Counties with up to 40,000 acre-feet annually of new reliable municipal water supply to help meet a portion of their near and longer term needs. The planned facilities include Glade and Galeton Reservoirs, a pumping facility and pipeline to deliver water for exchange with two irrigation companies and needed improvements

to an existing canal to fill Glade Reservoir.



The preferred NISP alternative will use a Poudre River water right to divert and store water in the proposed Glade Reservoir (with a capacity slightly larger than Horsetooth Reservoir) located about a mile north of the junction of US Highway 287 and CO Highway 14, northwest of Fort Collins. Construction of Glade Reservoir requires the realignment of Highway 287. The South Platte Water Conservation Project will pump winter and spring flows from an existing structure on the South Platte River into the proposed Galeton Reservoir located five miles northeast of Galeton.

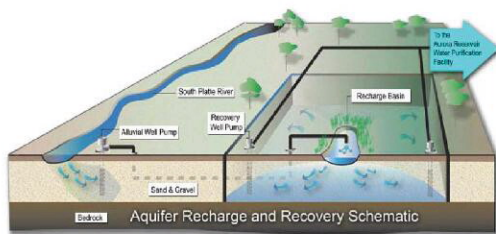


NISP is currently undergoing an environmental impact study (EIS) led by the U.S. Army Corps of Engineers (USACE). This four year, \$5 million EIS contains an analysis by recognized experts in the fields of water quality, aquatic biology, socioeconomics and hydrology. The draft EIS, expected to be released to the public in

early 2008, will contain information needed for the USACE to make a NISP permit decision.

### **Aurora's Prairie Waters Project**

A critical element of the City of Aurora's plan for a sustainable water supply is their \$750 million water reuse project called Prairie Waters. After evaluating 54 possible projects, Aurora Water selected the Prairie Waters Project as the recommended strategy for providing a reliable, high quality water supply to the city. The project emerged as the most cost-effective, environmentally friendly and immediate way to meet the city's water needs.



The Prairie Waters Project begins at the North Campus, which is located along the South Platte River in north Adams and south Weld counties. Water that the City of Aurora already owns is indirectly diverted from the South Platte River by wells along the river's bank. The wells slowly pull the water through the riverbank during a process known as riverbank filtration. Following this initial stage, water is then pumped into protected aquifer recharge and recovery basins (see schematic above). While in these basins, the water further percolates through the area's natural sand and gravel, resulting in additional natural purification. After the innovative natural purification process, the water will be pumped through collector wells. Approximately 34 miles of buried pipeline will be installed to transport the naturally purified water from the North Campus to a planned purification facility near the Aurora Reservoir. The pipeline will begin near the City of Brighton in Adams County, continue

southeast along the E-470 corridor and end in the City of Aurora. Measuring approximately 60 inches in diameter, the pipeline has the capacity to deliver up to 50 million gallons of water per day. The City of Aurora will construct three pumping stations strategically placed along the alignment to allow water to be pumped through the next segment of pipeline. Changes in elevation along the route to Aurora make the pump stations a vital part of the program so that the water can move efficiently through the conveyance pipeline. The proposed Aurora Reservoir Water Purification Facility located on an 80-acre site north of the Aurora Reservoir will treat the water before it is mixed into the city's regular distribution system.



## PLATTE RIVER ENDANGERED SPECIES RECOVERY PROGRAM

### Background

The United States Fish and Wildlife Service (USFWS) listed the whooping crane, piping plover, least tern, and pallid sturgeon under the federal Endangered Species Act. The USFWS also designated critical habitat for the whooping crane pursuant to the Endangered Species Act. These species, and the designated critical habitat, are located in the Central Platte Region of the State of Nebraska. In response to this, the Governors of the States of Colorado, Nebraska, and Wyoming signed an agreement in 1997 with the Department of Interior to improve and/or study the habitat of these four endangered species in the Central Platte River in Nebraska. As a result of these studies, the parties developed a proposed Platte River Recovery Implementation Program.

The Bureau of Reclamation issued a Final Environmental Impact Statement, and the U.S.F.W.S. issued a final Biological Opinion, analyzing the Platte River Recovery Implementation Program ("Program"). The Governors of Wyoming, Colorado and Nebraska, along with the Secretary of the Interior signed the Platte River Recovery Implementation Program Agreement (Agreement) in 2006. Federal authorization legislation was approved in the House in 2007. Participants are awaiting consideration of similar legislation in the Senate.

Work under the program has been done to start adaptive management and to develop a centralized and integrated database management system to monitor the whooping cranes as well as other threatened and endangered species. Future work includes a water stage study of the Lower Platte River, a study of the North Platte channel capacity, and a water management study to analyze the routing and timing of pulses from Lake

The Prairie Waters Project is expected to increase Aurora's water supply by 20 percent by reusing water the city already owns. It will deliver up to 10,000 acre feet of water to Aurora homes and businesses by 2010 and up to 15,000 acre feet by 2012 and is projected to provide enough additional water to meet the city's demands into the 2020s.

McConaughy. Dr. Jerry Kenny is the executive director for the Platte River Recovery Implementation Program, replacing Dale Strickland. Dr. Kenny has set up an office in Kearney, Nebraska.

### **Colorado's Obligations**

Colorado has obligations to provide money and water for implementation of the Program. Colorado is responsible for \$24 million (2005 dollars, final cash contributions would have to be adjusted for inflation). This money will be used to acquire water and restore habitat for the target species. Additional money would be necessary to satisfy Colorado's water obligations, as described below. With regard to Colorado's cash obligation, the General Assembly passed House Bill 1311, which recapitalized the Species Conservation Trust Fund with an additional \$12.8 million, and which authorized the expenditure of up to \$5 million for the Platte River Program in fiscal year 2006-07. Colorado's water obligations would include: 1) 10,000 acre-feet annually to be retimed during times of target flow shortages by the end of year 4 of the Program (5,000 acre-feet by the end of year 2 of the Program) (often referred to as "Tamarack I"); and, 2) water to cover future depletions related to the South Platte River (new depletions from 1997 established as a baseline), which is approximately 1800 acre-feet/year of water per 100,000 additional people in the South Platte River Basin in Colorado, retimed during times of target flow shortages.

With regard to Tamarack I, Colorado has approximately \$2 million authorized for a new position with the Division of Wildlife and satisfying this water obligation through drilling and operating wells and recharge pits to retime water. Hopefully, another 7.5 million will be made available toward meeting Colorado's 24 million dollar obligation through Colorado's Species Conservation Trust Fund. This project is expected to net approximately 4200 acre-feet annually towards Colorado's

10,000 acre-feet annual requirement. Colorado will need additional water projects or leases and money to fully satisfy our 10,000 acre-feet annual obligation, as well as the future depletions associated with growth in the South Platte River Basin within Colorado.

A new non-profit organization has been formed to help satisfy the Platte River Program responsibilities, to the extent that the State is unable to fully meet these obligations. This organization is called the South Platte Water Related Activities Program ("SPWRAP"). The State and SPWRAP have developed an MOU to define responsibilities and roles regarding the financial, water, and accounting obligations associated with the Program. SPWRAP obtains its funds from its water users. SPWRAP members will receive streamlined approvals through coordination with the State, from the FWS.

SPWRAP and the Department of Natural Resources will be undertaking several tasks in 2008 including; projects to meet Colorado's water obligation, assisting the Department of Wildlife in funding a full time employee, developing an operating plan, and in meeting all reporting obligations. The Division 1 staff has and will continue to assist SPWRAP and the Department of Natural Resources in meeting the obligations of the Program. In this regard, Jim Hall is an acting member on the Water Advisory Committee. Of note, assistance will be technical as the program specifically will not include administration of water such that it reaches the Endangered Species Reach in Nebraska. Water which reaches the endangered species will be that which exceeds the demands of users in Colorado.

## **PERSONNEL/WORKLOAD**

### ***Personnel Changes***

Irrigation Year 2007 continued the recent theme of adding more employees to address the ever increasing water

administration needs of Division 1. Division 1 grew to a total of 53 full or part-time positions when the Legislature approved a Decision Item adding 4.5 full time employee positions effective July 1. The following is a more or less chronological summary of the changes between November 1, 2006 and October 31, 2007.

Shanna Sandridge started December 11, 2006 as the Administrative Assistant in the Sterling office. Shanna previously served as the Director for the Domestic Violence Program in Sterling for over eight years. She also worked as an administrative assistant for the Sterling Police Department and 5th Judicial District Attorney's Office.

Mike Eytel resigned as the District 23 (South Park) Lead Water Commissioner on January 19, 2007 to take a position with the Colorado River Water Conservation District. Mike started working for Water Division 1 in May 1997 as the part-time Deputy Water Commissioner for the Republican River basin in Wray, Colorado. From there Mike moved up to South Park, first as the Deputy Water Commissioner then as the Lead Water Commissioner in 1999.

Garver Brown was selected as the new District 23 Lead Water Commissioner on February 1, 2007. Garver started working for Water Division 1 in the South Park area as the part-time Deputy Water Commissioner in February 2001. Since then Garver worked his way up the ranks to full-time Deputy Water Commissioner, then Deputy Water Commissioner and Hydrographer and finally to full time Hydrographer before taking over as Lead Water Commissioner after Mike Eytel's departure.

Michael Hein started as the Division 1 Groundwater Engineer on January 31, 2007. Mike's previous work experience included being a project manager with a local consulting engineering firm involved in both land development and irrigation ditch company work. When he was going to CSU,

Mike also worked for Division 1 on the well location program during the summer of 1997.

David Rebis resigned as the District 49 and 65 (Republican River basin) Deputy Water Commissioner on April 5, 2007 to pursue other employment in the Wray, Colorado area. David started working for Water Division 1 in May 2000.

Michael Wild was hired as a full time Hydrographer and Deputy Water Commissioner for District 23 (South Park) on May 25, 2007. Mike will spend most of his time on hydrographic work but will also work as the Deputy Water Commissioner in South Park. Mike comes to us with a lot of water work experience including spending the last 5 years working for the City of Aurora on their raw water system in South Park. He has also worked for the Colorado Rural Water Association, the Town of Breckenridge, and the Cities of Woodland Park and Colorado Springs.

"Les" Dalby retired on May 31, 2007 after working for Water Division 1 for 28 years. Les started as a "1042" Well Commissioner in the Greeley office in 1979. In the 1980's Les shifted duties into the area of diversion records and water rights tabulation to eventually become the "guru" of those areas for Division 1. Les was an outstanding member of the Division One staff as evidenced by a number of internal awards including being named the Division of Water Resources Technical Staff of the Year in both 1996 and 2005.

George Roark joined the Division 1 staff as a temporary employee working on groundwater issues in early May and became a full-time Deputy Groundwater Commissioner based in Greeley on August 29, 2007. George has a BS in Geography/GIS from UNC and has experience working on an irrigated sod farm. David "Duke" Ellington resigned his Engineer In Training position with Division 1 effective September 6, 2007 to pursue opportunities in the field of renewable energy. Duke started



with Division 1 on June 28, 2000 working in the areas of Hydrography, Dam Safety, and Information Technology. As time went on the IT duties consumed more and more of Duke's time and he was able to do less and less of the traditional engineering type work he really wanted.

Stephanie Hamburg became a full time Deputy Groundwater Commissioner for Division 1 on September 10, 2007. Stephanie is based in Greeley and will spend her time primarily doing field work on well enforcement and augmentation plan issues. She has a BS in Outdoor Recreation from CSU – Pueblo with a minor in biology. Stephanie previously spent a little over 3 years with the USBLM doing Land Health Assessments and about 1 year with the City of Pueblo as a GIS Technician.

Tony Arnett was hired as a full time Deputy Well and Surface Water Commissioner for District 8 (Cherry and Plum Creeks) on September 24, 2007. Much of the development that has occurred in this district is based on pumping either Denver Basin or alluvial groundwater, so Tony will spend much of his time on groundwater issues but will also be involved in surface water administration. Tony has a BS in Geology from Oregon State University and has worked for consulting firms in the geotechnical and storm water management areas. Tony also worked for the Brook Forest Water District and spent 10 years with the USGS doing both surface and groundwater work.

Robert "Bob" Stahl was promoted to the Division 1 Municipal Water Operations Specialist position on October 3, 2007. Bob started with Division 1 in April 1989 as a Deputy Water Commissioner for both Boulder Creek and Clear Creek. Bob then steadily advanced through the ranks to become the Water Commissioner for District 2 in 1994 and the Metro Area Water Commissioner in 2005. Bob has also been named Division 1 Water Commissioner of the Year three times.

### **Decision Item**

**A**s referenced at the beginning of this section, the Legislature approved a Decision Item adding 4.5 full time employee positions to Division 1 effective July 1, 2007. These 4.5 FTE were added to allow for adequate administration of well augmentation plans (1 Physical Science Research Scientist I position and 2 Engineering Physical Sciences Assistant III positions); deal with the increasingly complex issues associated with municipal change of water right decrees (1 Physical Science Research Scientist I position); and provide for increased surface water measurement in the Republican River and lower South Platte River basins to assist in assuring interstate compact compliance (0.5 Engineering Physical Sciences Technician II (Hydrographer) position). Three of the 4.5 positions were filled prior to October 31, 2007 and the other 1.5 positions were filled in November 2007. The 4 new full positions are based out of the Greeley Office. The 0.5 FTE Hydrographer position was combined with an existing 0.5 FTE Deputy Water Commissioner position to create 1 full time position based out of Wray, Colorado.

### **Employee Recognition**

**T**he Division 1 Water Commissioner of the Year for 2007 was Roger Mlodzik. Roger is the Lead Water Commissioner in both Water District 9 (Bear and Turkey Creeks) and Water District 80 (North Fork of the South Platte River). Roger was nominated by several of his peers for his work in these two districts that have seen significant changes during the 20 years that Roger has worked in one or both Districts. Though some areas of these Districts are still very rural, much of the area is becoming increasingly suburban with a greatly increased complexity of water administration.

Over the years Roger has done an excellent job of resolving administration issues that have arisen in his area despite the increasing workload. Roger is very involved and passionate about water issues in his districts, having served on a number of non-state groups examining various water problems. Roger has always been willing to pass on his knowledge and expertise to co-workers and anyone else who is interested, all the while still seeking to further his own knowledge of water administration.

Russell Stroud also deserves recognition for his technical expertise and dedication to Water Division 1. Even though he had a full work load as a Hydrographer, he willingly accepted additional IT duties on a temporary basis with the resignation of David Ellington. Russell went way above and beyond the call of duty on several occasions when IT problems kept him at the office well into the night or weekend. His willingness to take on this additional workload kept the Division 1 office going when it would otherwise have come to a screeching halt. His work is greatly appreciated.

SOUTH PLATTE RIVER BASIN  
Reservoir Storage (1000 AF) - End of January

RESERVOIR	USABLE CAPACITY	USABLE STORAGE		
		THIS YEAR	LAST YEAR	AVERAGE
ANTERO	19.9	19.9	17.0	16.4
BARR LAKE	30.1	25.9	23.1	24.0
BLACK HOLLOW	6.5	2.2	2.3	3.9
BOYD LAKE	44.0	20.7	12.8	32.1
BUTTON ROCK	16.2	14.4	15.2	13.0
CACHE LA POUFRE	10.1	5.7	3.6	7.2
CARTER	108.9	15.2	28.5	84.6
CHAMBERS LAKE	8.8	1.8	2.0	3.0
CHEESMAN	79.0	68.7	72.7	59.7
COBB LAKE	22.3	2.8	3.4	13.9
ELEVEN MILE	98.0	99.2	99.8	95.9
EMPIRE	36.5	13.4	13.1	22.8
FOSSIL CREEK	11.1	3.8	7.6	6.8
GROSS	42.0	29.9	23.7	26.0
HALLIGAN	6.4	3.7	3.8	4.3
HORSECREEK	14.7	13.8	7.5	11.6
HORSETOOTH	149.7	108.4	100.2	99.0
JACKSON	26.1	24.0	19.4	26.1
JULESBURG	20.5	16.2	17.6	18.8
LAKE LOVELAND	14.0	11.4	10.9	8.7
LONE TREE	9.0	6.8	5.8	6.4
MARIANO	6.0	1.5	3.9	4.2
MARSHALL	10.0	4.8	4.2	5.1
MARSTON	13.0	8.5	9.3	12.8
MILTON	23.5	18.0	14.1	15.5
POINT OF ROCKS	70.6	45.1	30.9	57.0
PREWITT	28.2	22.2	6.1	19.3
RIVERSIDE	55.8	42.5	36.7	41.7
SPINNEY MOUNTAIN	49.0	36.1	31.7	33.3
STANDLEY	42.0	37.7	40.0	33.1
TERRY LAKE	8.0	5.8	5.7	5.3
UNION	13.0	11.9	8.1	10.6
WINDSOR	15.2	9.7	1.3	10.8

Information taken from Colorado Basin Outlook Report, February 1, 2008

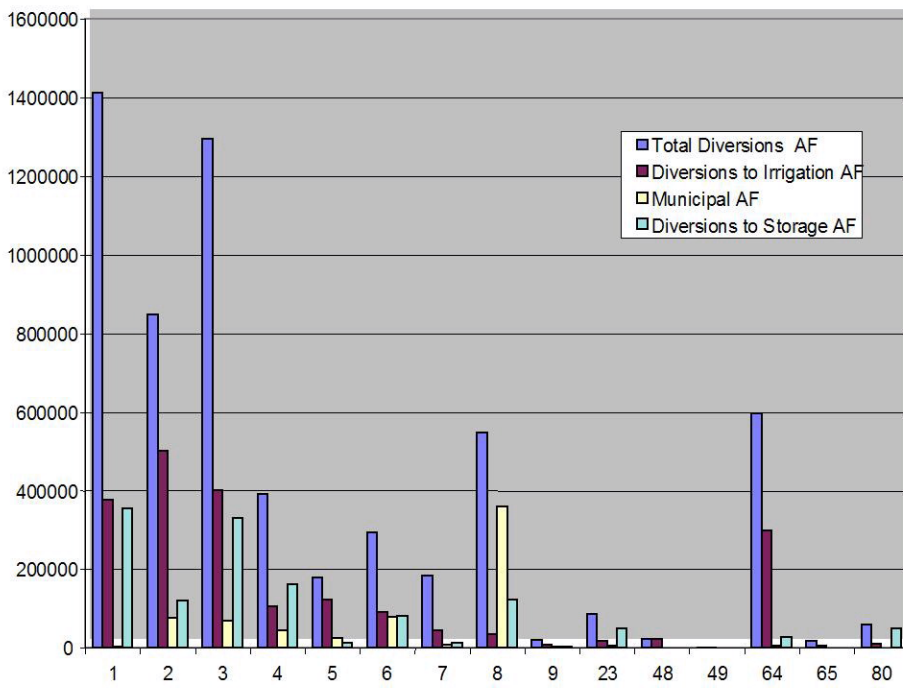
SOUTH PLATTE RIVER BASIN  
WATER SNOWPACK

WATERSHED	NUMBER OF DATA SITES	THIS YEAR AS % OF	
		LAST YEAR	AVERAGE
BIG THOMPSON BASIN	7	83	91
BOULDER CREEK BASIN	5	68	88
CACHE LA POUFRE BASIN	8	84	98
CLEAR CREEK BASIN	4	91	109
SAINT VRAIN BASIN	4	82	88
UPPER SOUTH PLATTE BASIN	15	92	104

\*Information taken from Colorado Basin Outlook Report, February 1, 2008.

DIVERSION GRAPH

Figure 1 - 2007 Diversions by Water District



**2007 TRANSMOUNTAIN DIVERSION SUMMARY - INFLOWS**  
**(November 2006 - October 2007)**

RECIPIENT								SOURCE		
WD	ID	NAME	STREAM	10 YEAR AVG		CURRENT YEAR		WD	ID	STREAM
				AF	DAYS	AF	DAYS			
3	4604	WILSON SUPPLY DITCH	CACHE LA POUFRE RIVER	1166	60	1777	66	48	4604	SAND & DEADMAN CR.
3	4608	DEADMAN DITCH	CACHE LA POUFRE RIVER	292	44	606	71	48	4608	DEADMAN CREEK
3	4606	BOB CREEK DITCH	CACHE LA POUFRE RIVER	82	43	162	49	48	4606	NUNN CREEK
3	4607	COLUMBINE DITCH	CACHE LA POUFRE RIVER	0	0	0	0	48	4607	DEADMAN CREEK
3	4600	LARAMIE-POUDRE TUNNEL	CACHE LA POUFRE RIVER	8861	90	9248	87	48	4600	LARAMIE RIVER
3	4605	SKYLINE DITCH	CACHE LA POUFRE RIVER	231	12	0	0	48	4605	LARAMIE RIVER
3	4602	CAMERON PASS DITCH	CACHE LA POUFRE RIVER	55	28	48	49	47	4602	MICHIGAN RIVER
3	4603	MICHIGAN DITCH	CACHE LA POUFRE RIVER	2612	320	2893	365	47	4603	MICHIGAN RIVER
3	4601	GRAND RIVER DITCH	CACHE LA POUFRE RIVER	10877	156	10420	181	51	4601	COLORADO RIVER
4	4634	ADAMS TUNNEL	BIG THOMPSON RIVER	141099	330	118220	326	51	4634	COLORADO RIVER
6	4655	MOFFAT TUNNEL	SOUTH PLATTE RIVER	32895	365	22568	365	51	4655	FRASER RIVER
7	4625	BERTHOUD PASS DITCH	CLEAR CREEK	377	65	363	95	51	4625	FRASER RIVER
7	4626	VIDLER TUNNEL	CLEAR CREEK	307	74	360	51	36	4626	MONTEZUMA CREEK
7	4682	STRAIGHT CREEK TUNNEL	CLEAR CREEK	179	329	113	365	36	4682	STRAIGHT CREEK
8	653	ROBERTS TUNNEL	SOUTH PLATTE RIVER	48112	283	18573	144	36	4684	BLUE RIVER
23	4611	BOREAS PASS DITCH	SOUTH PLATTE RIVER	99	65	94	55	36	4685	INDIANA CREEK
23	4612	HOOSIER PASS DITCH	ARKANSAS RIVER	5254	173	3085	212	36	4683	BLUE RIVER
23	4490	AURORA HOMESTAKE	SOUTH PLATTE RIVER	18163	244	7889	258	37	4644	HOMESTAKE CREEK

**2006-2007 RESERVOIR STORAGE SUMMARIES BY DISTRICT**

**WATER DISTRICT 1**

WD	ID	RESERVOIR NAME	SOURCE STREAM	AMOUNT IN STORAGE (AF)				
				MINIMUM		MAXIMUM		END OF YEAR
				AF	DATE	AF	DATE	
1	3400	VAN CIL	SOUTH PLATTE	676	2/28/07	3,127	10/31/07	3,127
1	3570	BIJOU #2	SOUTH PLATTE	115	8/31/07	2,170	05/31/07	115
1	3651	RIVERSIDE	SOUTH PLATTE	27,562	8/31/07	57,856	06/30/07	27,562
1	3816	EMPIRE	SOUTH PLATTE	6,744	11/30/06	27,709	04/30/07	8,733
1	3817	JACKSON	SOUTH PLATTE	7,792	11/30/07	27,257	04/30/07	13,841
1		TOTALS		42,889		118,119		53,378

**2006-2007 RESERVOIR STORAGE SUMMARIES BY DISTRICT**

**WATER DISTRICT 2**

WD	ID	RESERVOIR NAME	SOURCE STREAM	AMOUNT IN STORAGE (AF)				
				MINIMUM		MAXIMUM		END OF YEAR
				AF	DATE	AF	DATE	
2	3351	BULL CANAL #8	CLEAR CREEK	961	08/31/07	3,625	05/31/07	1,484
2	3375	QUINCY RESERVOIR	SOUTH PLATTE	1,613	12/31/06	2,583	04/30/07	1,716
2	3592	HORSE CREEK	SOUTH PLATTE	2,320	11/30/06	15,522	03/31/07	8,674
2	3609	PROSPECT	SOUTH PLATTE	0	11/30/06	5,914	05/31/07	3,134
2	3699	WEST GRAVEL LAKES COMBINED	SOUTH PLATTE	2,470	03/31/07	2,761	07/31/07	2,699
2	3700	TANI LAKES COMBINED	SOUTH PLATTE	12,311	02/28/07	14,059	08/31/07	13,675
2	3837	OASIS RES/BARR	SOUTH PLATTE	1,455	11/30/06	30,057	04/30/07	14,808
2	3858	LOWER LATHAM	SOUTH PLATTE	5,363	07/31/07	6,212	11/30/06	6,020
2	3861	GREAT WESTERN	WALNUT CREEK	1,811	11/30/06	2,401	04/30/07	2,198
2	3876	MILTON	SOUTH PLATTE	2,919	11/30/06	22,684	05/31/07	7,440
2	3903	STANDLEY	WOMAN CREEK	37,814	11/30/06	42,619	07/31/07	37,928
2		OTHERS		2,761		5,666		3,212
2		TOTALS		71,818		154,103		102,968



**2006-2007 RESERVOIR STORAGE SUMMARIES BY DISTRICT**

**WATER DISTRICT 3**

WD	ID	RESERVOIR NAME	SOURCE STREAM	AMOUNT IN STORAGE (AF)				
				MINIMUM		MAXIMUM		END OF YEAR
				AF	DATE	AF	DATE	
3	3676	LONG DRAW/GRAND RIVER	LONG DRAW CREEK	1,245	9/30/07	9,587	06/30/07	1,748
3	3678	MOUNTAIN SUPPLY RESERVOIR #20	JOE WRIGHT RESERVOIR	4,048	10/31/07	7,070	05/31/07	4,048
3	3679	CHAMBERS	JOE WRIGHT CREEK	648	08/31/07	6,682	06/30/07	2,551
3	3683	BARNES MEADOW RESERVOIR	BARNES MEADOWS CREEK	1,161	04/30/07	2,349	08/31/07	2,317
3	3686	COMANCHE RESERVOIR	BIG BEAVER CREEK	0	11/1/06	2,122	06/30/07	0
3	3697	NORTH Poudre #2/DEMME LAKE	N FK Poudre RIVER	2,378	06/30/07	3,524	04/30/07	2,951
3	3698	NORTH Poudre #5/BEE LAKE	N FK Poudre RIVER	2,940	11/1/06	3,936	06/30/07	3,464
3	3699	NORTH Poudre RESERVOIR #6	N FK Poudre RIVER	2,279	9/30/07	3,614	07/31/07	2,323
3	3702	NORTH Poudre #3/HACKEL LAKE	N FK Poudre RIVER	2,080	10/31/07	2,739	07/31/07	2,080
3	3704	NORTH Poudre #4	N FK Poudre RIVER	410	07/31/07	613	04/30/07	479
3	3707	INDIAN CREEK/MTN SUPPLY #16	INDIAN CREEK	0	11/1/06	1,343	05/31/07	460
3	3708	MOUNTAIN SUPPLY RESERVOIR #18	BOX ELDER CREEK	240	11/30/06	773	03/31/07	592
3	3712	HALLAGAN/NORTH Poudre #16	N FK Poudre RIVER	1,328	09/30/07	6,428	05/31/07	2,100
3	3713	SEAMAN/MILTON SEAMAN	N FK Poudre RIVER	5,008	11/01/06	5,008	11/01/06	5,008
3	3715	PARK CREEK	PARK CREEK	323	11/01/06	6,957	05/31/07	3,502
3	3716	NORTH Poudre #15	N FK Poudre RIVER	1,142	11/01/06	4,822	06/30/07	3,064
3	3725	DOUGLASS	CACHE LA Poudre RIVER	2,763	11/01/06	5,134	06/30/07	6,588
3	3726	WORSTER	SHEEP CREEK	101	08/31/07	3,789	05/31/07	313
3	3727	WINDSOR RESERVOIR #8	CACHE LA Poudre RIVER	0	11/01/06	6,986	10/31/07	6,986
3	3728	NO. 8 ANNEX	CACHE LA Poudre RIVER	0	11/01/06	2,831	10/31/07	2,831
3	3730	COBB LAKE	CACHE LA Poudre RIVER	2,827	10/31/07	3,450	01/31/07	2,827
3	3732	HORSETOOTH	DIXON CANYON CREEK	61,825	10/31/07	123,816	05/31/07	61,825
3	3735	CURTIS	CACHE LA Poudre RIVER	344	06/30/07	509	08/31/07	489
3	3736	ROCKY RIDGE/WATER SUPPLY #1	CACHE LA Poudre RIVER	2,013	04/30/07	3,503	05/31/07	3,203
3		SUBTOTALS		95,103		217,585		121,749

**2006-2007 RESERVOIR STORAGE SUMMARIES BY DISTRICT**

**WATER DISTRICT 3 (CONTINUED)**

WD	ID	RESERVOIR NAME	SOURCE STREAM	AMOUNT IN STORAGE (AF)				
				MINIMUM		MAXIMUM		END OF YEAR
				AF	DATE	AF	DATE	
		BALANCE FROM PREVIOUS PAGE		95,103		217,585		121,749
3	3737	WATER SUPPLY #2 & #3	CACHE LA POUFRE RIVER	394	04/30/07	1,431	05/31/07	704
3	3738	WINDSOR RESERVOIR	CACHE LA POUFRE RIVER	3,193	11/01/06	13,071	05/31/07	11,807
3	3739	WATER SUPPLY #4	WATER SUPPLY RES #2 & #3	0	02/28/07	375	06/30/07	271
3	3740	KLUVER	CACHE LA POUFRE RIVER	64	04/30/07	189	11/01/06	64
3	3742	LONG POND/WATER SUPPLY #5	CACHE LA POUFRE RIVER	2,012	11/01/06	3,358	06/30/07	2,557
3	3744	BLACK HOLLOW	CACHE LA POUFRE RIVER	3,267	10/31/07	6,663	07/31/07	3,267
3	3745	DOWDY LAKE RESERVOIR	SOUTH PINE CREEK	574	12/31/06	885	06/30/07	779
3	3751	SOUTH GRAY RESERVOIR	BOX ELDER CREEK	177	11/01/06	450	08/31/07	435
3	3770	WINDSOR LAKE	CACHE LA POUFRE RIVER	118	12/31/06	3,009	04/30/07	2,273
3	3772	SEELEY	CACHE LA POUFRE RIVER	915	11/01/06	1,133	08/31/07	1,101
3	3774	FOSSIL CREEK	FOSSIL CREEK	912	10/31/07	10,857	04/30/07	912
3	3775	TIMNATH	DUCK SLOUGH	1,115	11/01/06	9,662	05/31/07	3,650
3	3780	CLAYMORE	CACHE LA POUFRE RIVER	74	08/31/07	851	05/31/07	606
3	3786	WOOD	ROLLARD DRAW	73	03/31/07	1,589	09/30/07	1,560
3	3804	WARREN	CACHE LA POUFRE RIVER	1,157	09/30/07	2,101	06/30/07	1,428
3	3805	TERRY/LARIMER WELD	CACHE LA POUFRE RIVER	1,068	09/30/07	7,728	05/31/07	2,215
3	3814	PANHANDLE RESERVOIR	PANHANDLE CREEK	1,017	11/01/06	1,017	11/01/06	1,017
3	3952	RAWHIDE	CACHE LA POUFRE RIVER	14,586	11/01/06	15,751	05/31/07	14,634
3		OTHERS		4,196		9,402		6,536
3		TOTALS		130,015		307,107		177,565

**2006-2007 RESERVOIR STORAGE SUMMARIES BY DISTRICT**  
**WATER DISTRICT 4**

WD	ID	RESERVOIR NAME	SOURCE STREAM	AMOUNT IN STORAGE (AF)				
				MINIMUM		MAXIMUM		END OF YEAR
				AF	DATE	AF	DATE	
4	3659	LOVELAND MUNICIPAL	BIG THOMPSON	3,112	04/30/07	6,788	09/30/07	6,487
4	4110	BOYD LAKE	BIG THOMPSON	12,622	11/30/06	29,758	06/30/07	20,449
4	4116	DONATH	BIG THOMPSON	712	10/31/07	1,105	06/30/07	712
4	4123	HORSETOOTH RESERVOIR	BIG THOMPSON	2,706	11/30/06	7,415	06/30/07	5,991
4	4131	LOVELAND GREELEY RESERVOIR	BIG THOMPSON	9,640	08/31/07	11,633	05/31/07	11,217
4	4133	LOVELAND LAKE	BIG THOMPSON	575	11/30/06	584	04/30/07	584
4	4134	BOEDECKER LAKE/MARINO	BIG THOMPSON	764	09/30/07	5,415	05/31/07	764
4	4136	LON HAGLER	BIG THOMPSON	2,127	08/31/07	3,695	03/31/07	4,606
4	4137	LONE TREE	BIG THOMPSON	3,316	10/31/07	8,769	05/31/07	3,316
4	4146	WELCH LAKE	BIG THOMPSON	2,299	07/31/07	3,858	09/30/07	3,789
4	4156	BOULDER & LARIMER/MSH	LITTLE THOMPSON	492	11/30/06	6,752	05/31/07	2,570
4	4166	HERTHA RESERVOIR	DRY CREEK HERTHA	1,006	09/30/07	1,932	02/28/07	1,006
4	4513	CARTER	BIG THOMPSON	14,140	10/31/2007	83,065	04/30/07	14140
4		OTHERS		1,172		2,853		1,794
				54,683		173,622		77,425

**2006-2007 RESERVOIR STORAGE SUMMARIES BY DISTRICT**

**WATER DISTRICT 5**

WD	ID	RESERVOIR NAME	SOURCE STREAM	AMOUNT IN STORAGE (AF)				
				MINIMUM		MAXIMUM		END OF YEAR
				AF	DATE	AF	DATE	
5	3905	UNION	ST. VRAIN	7,809	02/28/07	12,768	05/31/07	12,099
5	4010	BUTTON ROCK	ST. VRAIN	12,235	04/30/07	16,398	06/30/07	16,197
5	4020	BEAVER POND	BEAVER CREEK	230	11/30/06	2,400	06/30/07	320
5	4032	HIGHLAND #2	ST. VRAIN	1,404	12/31/06	3,660	05/31/07	2,255
5	4037	HIGHLAND #1	ST. VRAIN	475	10/31/07	1,033	04/30/07	475
5	4038	HIGHLAND #3	ST. VRAIN	712	11/30/06	1,670	04/30/07	778
5	4063	PLEASANT VALLEY	ST. VRAIN	2,492	09/30/07	3,076	01/31/07	2,492
5	4065	MCCALL RESERVOIR	ST. VRAIN	367	11/30/06	484	05/31/07	479
5	4067	OLIGARCHY RESERVOIR #1	ST. VRAIN	1,230	11/30/06	1,737	05/31/07	1,425
5	4071	FOOTHILLS	ST. VRAIN	1,651	08/31/07	4,239	05/31/07	2,420
5	4072	CLOVER BASIN RESERVOIR	ST. VRAIN	435	11/30/06	635	12/31/06	635
5	4073	MCINTOSH	ST. VRAIN	705	11/30/06	2,305	05/31/07	1,745
5	4076	LEFT HAND PARK	LEFT HAND CREEK	1,194	11/30/06	1,549	06/30/07	1,499
5	4081	LAGERMANN	LEFT HAND CREEK	647	10/31/07	763	05/31/07	647
5	4379	NEW THOMAS RESERVOIR	HOWLETT GULCH	1,890	12/31/06	2,335	04/30/07	2,052
5	4488	LEFT HAND VALLEY	LEFT HAND CREEK	332	10/31/07	1,626	01/31/07	332
5		TOTALS		33,808		56,678		45,850

**2006-2007 RESERVOIR STORAGE SUMMARIES BY DISTRICT**

**WATER DISTRICT 6**

WD	ID	RESERVOIR NAME	SOURCE STREAM	AMOUNT IN STORAGE (AF)				
				MINIMUM		MAXIMUM		END OF YEAR
				AF	DATE	AF	DATE	
6	4172	BARKER	BOULDER CREEK	6,615	02/28/07	11,868	05/31/07	7,265
6	4173	BASELINE	BOULDER CREEK	3,579	09/30/07	5,326	04/30/07	3,579
6	4178	HILLCREST	BOULDER CREEK	2,075	10/31/07	2,207	04/30/07	2,075
6	4180	LEGGETT	BOULDER CREEK	1,502	10/31/07	1,601	04/30/07	1,502
6	4185	PANAMA	BOULDER CREEK	1,200	08/31/07	4,250	04/30/07	1,450
6	4187	SIX MILE	BOULDER CREEK	280	09/30/07	1,400	03/31/07	750
6	4199	GROSS	SOUTH BOULDER CREEK	22,851	03/31/07	41,642	06/30/07	34,914
6	4212	MARSHALL	SOUTH BOULDER CREEK	3,298	11/30/06	9,641	04/30/07	4,184
6	4230	VALMONT	SOUTH BOULDER CREEK	7,126	10/31/07	7,426	04/30/07	7,126
6	4238	SILVER	NORTH BOULDER CREEK	2,632	04/30/07	4,000	08/31/07	3,894
6	4489	GOOSE	NORTH BOULDER CREEK	0	11/30/06	1,036	05/31/07	1,036
6	4515	BOULDER	BOULDER CREEK	7,794	02/28/07	9,194	07/31/07	8,244
6		OTHERS		573		2,102		1,878
6		TOTALS		59,525		101,693		77,897

**2006-2007 RESERVOIR STORAGE SUMMARIES BY DISTRICT**

**WATER DISTRICT 7**

WD	ID	RESERVOIR NAME	SOURCE STREAM	AMOUNT IN STORAGE (AF)				
				MINIMUM		MAXIMUM		END OF YEAR
				AF	DATE	AF	DATE	
7	3018	WELTON RESERVOIR	CLEAR CREEK	9,017	12/31/06	9,750	06/30/07	9,528
7	3308	BLUNN	CLEAR CREEK	5,200	03/31/07	6,297	05/31/07	5,532
7	3324	RALSTON	RALSTON CREEK	7,271	02/28/07	10,628	06/30/07	9,741
7	3406	COORS B #3	CLEAR CREEK	1,427	03/31/07	3,075	06/30/07	2,954
7	3407	COORS B #4	CLEAR CREEK	3,595	02/28/07	4,000	11/30/06	4,000
7	3702	FAIRMOUNT	CLEAR CREEK	824	05/31/07	991	02/28/07	966
7	4030	GOLDEN RESERVOIR/WEST	CLEAR CREEK	1,543	09/30/07	1,784	04/30/07	1,586
7	4411	MAPLE GROVE	SOUTH CLEAR CREEK	851	03/31/07	1,108	07/31/07	1,106
7	4415	LONG LAKE RESERVOIR UPPER	RALSTON CREEK	800	11/30/06	1,481	05/31/07	1,144
7		OTHERS		1,189		2,050		1,339
7		TOTALS		31,717		41,164		37,896

**2006-2007 RESERVOIR STORAGE SUMMARIES BY DISTRICT**

**WATER DISTRICT 8**

WD	ID	RESERVOIR NAME	SOURCE STREAM	AMOUNT IN STORAGE (AF)				
				MINIMUM		MAXIMUM		END OF YEAR
				AF	DATE	AF	DATE	
8	3514	CHATFIELD	SOUTH PLATTE	16,099	10/31/07	26,879	06/30/07	16,099
8	3532	CHERRY CREEK	CHERRY CREEK	11,653	11/30/06	14,017	04/30/07	12,281
8	3832	MCLELLAN	DAD CLARK DITCH	4,193	06/30/07	5,665	03/31/07	5,292
8	3983	STRONTIA SPRINGS DVR DAM	SOUTH PLATTE	6,484	07/31/07	7,296	05/31/07	7,004
8		TOTALS		38,429		53,857		40,676

**2006-2007 RESERVOIR STORAGE SUMMARIES BY DISTRICT**

**WATER DISTRICT 9**

WD	ID	RESERVOIR NAME	SOURCE STREAM	AMOUNT IN STORAGE (AF)				
				MINIMUM		MAXIMUM		END OF YEAR
				AF	DATE	AF	DATE	
9	3501	MARSTON	SOUTH PLATTE	13,765	08/31/07	19,567	04/30/07	16,141
9	3815	SODA #1, #2	BEAR CREEK	1,419	09/30/07	1,465	11/30/06	1,461
9	3999	BEAR CREEK RESERVOIR	BEAR CREEK	1,712	11/30/06	2,289	04/30/07	1,874
9	4281	BOWLES	BEAR CREEK	840	10/31/07	2,062	04/30/07	840
9	4314	PATRICK	BEAR CREEK	1,161	11/01/06	1,170	1/31/07	1,161
9		OTHERS		2,198		3,533		2,382
9		TOTALS		21,095		30,086		23,859



**2006-2007 RESERVOIR STORAGE SUMMARIES BY DISTRICT**

**WATER DISTRICT 23**

WD	ID	RESERVOIR NAME	SOURCE STREAM	AMOUNT IN STORAGE (AF)				
				MINIMUM		MAXIMUM		END OF YEAR
				AF	DATE	AF	DATE	
23	3904	ANTERO	S FK SOUTH PLATTE	16,494	11/30/06	20,081	07/31/07	20,213
23	3962	MONTGOMERY	MID FK SOUTH PLATTE	587	04/30/07	4,919	07/31/07	4,854
23	3965	ELEVEN MILE	MID FK SOUTH PLATTE	99,246	09/30/07	101,559	06/30/07	99,452
23	3981	JEFFERSON LAKE RESERVOIR	JEFFERSON LAKE	822	3/21/07	1,946	06/22/07	868
23	4013	SPINNEY MOUNTAIN	MID FK SOUTH PLATTE	36,306	2/28/07	53,402	06/30/07	46,326
23		TOTALS		153,455		181,907		171,713

**2006-2007 RESERVOIR STORAGE SUMMARIES BY DISTRICT**

**WATER DISTRICT 64**

WD	ID	RESERVOIR NAME	SOURCE STREAM	AMOUNT IN STORAGE (AF)				
				MINIMUM		MAXIMUM		END OF YEAR
				AF	DATE	AF	DATE	
64	3551	NORTH STERLING	SOUTH PLATTE	8,560	9/30/07	74,160	05/31/07	11,430
64	3552	PREWITT	SOUTH PLATTE	3,951	11/30/06	28,597	03/31/07	20,369
64	3906	JULESBURG	SOUTH PLATTE	10,414	9/30/07	22,814	04/30/07	10,905
64		TOTALS		22,925		125,571		42,704

**2006-2007 RESERVOIR STORAGE SUMMARIES BY DISTRICT**

**WATER DISTRICT 80**

WD	ID	RESERVOIR NAME	SOURCE STREAM	AMOUNT IN STORAGE (AF)				
				MINIMUM		MAXIMUM		END OF YEAR
				AF	DATE	AF	DATE	
80	3550	CHEESMAN	S FK SOUTH PLATTE	60,351	10/31/07	79,596	06/30/07	60,351
80	3828	ALTURA RESERVOIR	GENEVA CREEK	0	11/01/06	573	06/29/07	0
80	3829	WELLINGTON	N FK SOUTH PLATTE	2,634	11/01/06	4,507	05/24/07	4,075
80		TOTAL		62,985		84,678		64,426

**WATER DIVERSION SUMMARIES 2006-2007**

WD	DITCHES REPORTING			OTHERS		ESTIMATED NUMBER OF STRUCTURE VISITS	TOTAL DIVERSIONS (AF)	TOTAL DIVERSIONS TO STORAGE	TO IRRIGATION	
	WITH RECORD	NO WATER AVAIL.	NO WATER TAKEN	NO INFO AVAIL	NO RECORDS				TOTAL DIVERSIONS (AF)	NO. OF ACRES IRRIGATED
1	158	22	27	155	0	8,983	1,411,062	355,861	375,698	138,707
2	177	19	73	47	0	14,780	847,989	119,478	500,216	142,038
3	201	1	10	17	0	28,388	1,293,873	330,730	401,929	174,212
4	101	24	5	0	0	7,924	390,780	160,668	105,200	60,634
5	103	5	9	33	0	9,517	178,267	13,016	123,644	49,974
6	115	1	15	68	0	10,998	293,717	82,058	91,552	32,987
7	69	0	10	6	0	11,463	184,609	13,847	43,700	4,756
8	464	1	201	306	0	6,823	546,476	122,251	34,405	2,348
9	48	0	18	1	0	477	20,160	2,345	8,606	1,627
23	131	0	23	41	0	4,103	87,193	48,395	18,421	5,120
48	50	0	4	0	0	2,950	23,085	0	23,085	3,977
49	5	0	1	0	0	206	1,107	0	1,107	0
64	403	10	61	112	0	10,369	597,268	28,572	297,815	64,562
65	13	0	5	0	0	672	17,893	0	4,961	0
76	0	0	0	0	0	0	0	0	0	0
80	68	19	16	8	0	827	59,026	48,324	9,681	978
TOT	2106	102	478	794	0	118,480	5,952,505	1,325,545	2,040,020	681,920

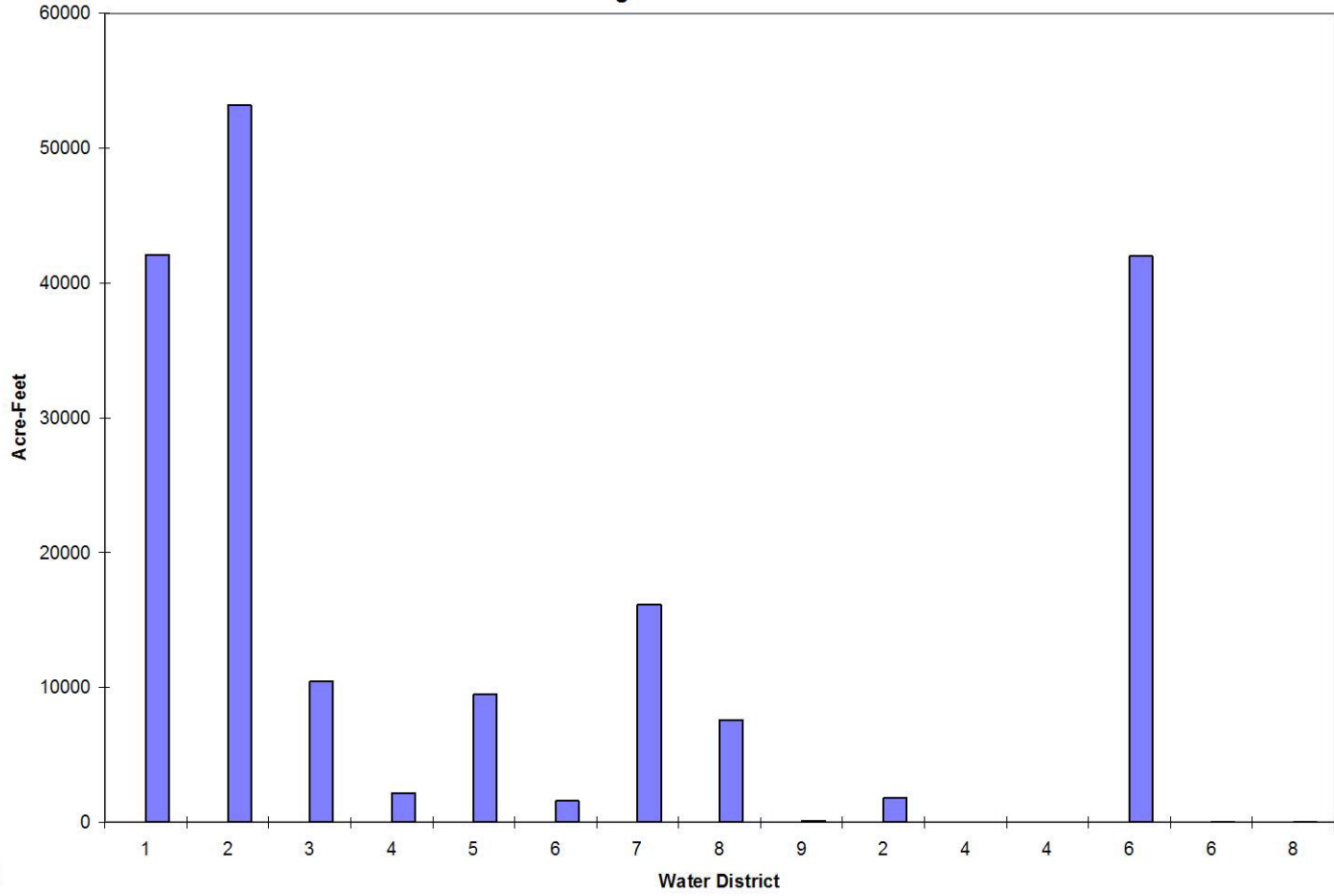
\*DISTRICT 48 DITCH VISITS COMBINED WITH DISTRICT 76

**TABLE 1 – WATER DIVERSION SUMMARIES TO VARIOUS USES**

South Platte River Basin

WD	Trans- mountain Outflow	Tranbasin Outflow	Mun	Comm	Ind	Rec	Fish	Dom & HHU O	Stock	Aug	Evap	Sno w	Min Fl	Powe r	Rchg
1	0	0	3,041	2,987	8,722	0	0	72	129	42,062	0	0	0	0	118,423
2	0	0	76,553	816	9,034	367	0	0	7	53,182	50	0	0	0	23,490
3	0	0	69,444	1	5,712	0	0	24	0	10,442	6,269	0	0	0	1,821
4	0	540	43,760	44	0	0	0	9	0	2,173	0	0	0	0	1,799
5	0	1,559	24,272	8	0	0	0	26	0	9,505	0	0	1,000	0	0
6	0	935	78,656	66	1,291	0	0	0	0	1,576	0	0	10,872	7,319	0
7	0	32,268	8,153	1	51,467	0	0	0	112	16,132	492	171	0	0	1,682
8	0	6,950	361,028	1,109	3,903	0	2,860	324	0	7,589	3,163	0	0	0	0
9	0	0	3,090	15	0	0	0	0	0	111	217	0	0	0	0
23	8,727	0	6,724	0	693	0	3,620	7	113	1,803	0	0	0	0	200
48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
64	0	0	4,585	327	0	0	111	4	78	41,973	0	0	0	0	107,459
65	0	0	0	0	0	0	1,376	0	0	17	0	0	0	0	0
76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	0	0	86	0	0	0	0	0	0	21	0	0	0	0	0
TOT	8,727	42,252	679,392	5,374	80,822	367	7,967	466	439	186,586	10,191	171	11,872	7,319	254,874

Figure 2 - Augmentation Releases by Water District  
2007  
Augmentation Releases



WATER COURT ACTIVITIES

Calendar Year 2007

New Applications made to water court this year.....	338
Consultations with Referee this year.....	279
Decrees Issued by Court this year.....	346
Dismissals & Withdrawals.....	56

TYPES OF RULINGS

TYPE OF RULING	NUMBER OF CASES	NUMBER OF STRUCTURES
Findings of Diligence on Conditional Rights	82	201
Exchanges Adjudicated	29	55
Conditional Rights Made Absolute	26	31
Surface Water Rights Adjudicated	9	11
Underground Water Rights Adjudicated	125	415
Water Storage Rights Adjudicated	18	34
Plans for Augmentation Adjudicated	67	492
Changes of Water Rights Adjudicated	61	290
Abandoned Water Rights	11	21
Consent Decrees	9	15
Recharge Sites	3	31
Instream Flow Adjudications	2	2
Corrected Decrees	7	15

CALLING PRIORITY 2006-2007

Date Call Initiated	Date Call Released	Source	WDID	Structure Name	Appropriation Date	Administration Number	Amount	Districts Affected	Set Comments
2006-10-17 12:00	2006-11-04 08:00	SOUTH PLATTE RIVER	200802	BURLINGTON D RIVER HG	1909-01-13	21562.00000	900.0000 CFS	2,8,9,80,23	
2006-10-28 08:00	2006-11-01 08:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1977-06-30	47847.46567	69.00 CFS	1,64,2,3,4,5,6,7	BYPASS CALL FROM 0100519 - TREMONT DITCH
2006-11-01 08:00	2006-11-04 08:00	SOUTH PLATTE RIVER	6403906	JULESBURG RES	1972-05-19	44699.00000	197.90 CFS	64,1,2,3,4,5,6,7	BYPASS CALL FROM 0100514 - FT MORGAN CANAL
2006-11-04 08:00	2006-11-21 08:00	SOUTH PLATTE RIVER	100513	JACKSON LAKE INLET DITCH	1905-05-18	20226.00000	37709.00 AF	1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0103816 - EMPIRE RES
2006-11-04 08:00	2006-11-07 08:00	SOUTH PLATTE RIVER	100687	NORTH STERLING CANAL	1915-08-01	26302.23953	411.0000 CFS	1	
2006-11-04 08:00	2006-11-10 08:00	SOUTH PLATTE RIVER	6403906	JULESBURG RES	1974-03-15	45364.00000	26.80 CFS	64,1	BYPASS CALL FROM 6400535 - SOUTH PLATTE DITCH
2006-11-07 08:00	2006-12-22 08:00	SOUTH PLATTE RIVER	100687	NORTH STERLING CANAL	1908-06-15	21350.00000	300.0000 CFS	1	
2006-11-10 08:00	2006-12-18 08:00	SOUTH PLATTE RIVER	6403906	JULESBURG RES	1910-05-25	22059.00000	695.00 CFS	64,1	BYPASS CALL FROM 0100829 - PREWITT INLET CANAL
2006-11-21 08:00	2006-12-22 08:00	SOUTH PLATTE RIVER	100513	JACKSON LAKE INLET DITCH	1907-08-01	21031.00000	740.00 CFS	1,2,3,4,5,6,7,8,9	BYPASS CALL FROM 0100503 - RIVERSIDE CANAL



CALLING PRIORITY 2006-2007 (CONTINUED)

Date Call Initiated	Date Call Released	Source	WDID	Structure Name	Appropriation Date	Administration Number	Amount	Districts Affected	Set Comments
2006-12-18 08:00	2006-12-19 08:00	SOUTH PLATTE RIVER	6403906	JULESBURG RES	1974-03-15	45364.00000	26.80 CFS	64	BYPASS CALL FROM 6400535 - SOUTH PLATTE DITCH
2006-12-19 08:00	2006-12-22 08:00	SOUTH PLATTE RIVER	100829	PREWITT INLET CANAL	1910-05-25	22059.00000	695.0000 CFS	1	
2006-12-22 08:00	2006-12-25 08:00	SOUTH PLATTE RIVER	100829	PREWITT INLET CANAL	1910-05-25	22059.00000	695.0000 CFS	1,2,3,4,5,6,7,8,9,80	
2006-12-27 12:00	2007-01-02 08:00	SOUTH PLATTE RIVER	803514	CHATFIELD DAM	1977-12-28	46748.00000	10785.0000 AF	8,80	
2007-01-02 08:00	2007-01-18 08:00	SOUTH PLATTE RIVER	100829	PREWITT INLET CANAL	1910-05-25	22059.00000	695.0000 CFS	1,2,3,4,5,6,7,8,9,80	
2007-01-19 08:00	2007-01-27 08:00	SOUTH PLATTE RIVER	803514	CHATFIELD DAM	1977-12-28	46748.00000	10785.0000 AF	8	
2007-01-26 08:00	2007-01-27 08:00	SOUTH PLATTE RIVER	801002	DENVER CONDUIT NO 20	1910-12-06	22254.00000	42.7200 CFS	8,80,23	
2007-01-27 08:00	2007-02-05 08:00	SOUTH PLATTE RIVER	100829	PREWITT INLET CANAL	1910-05-25	22059.00000	695.0000 CFS	1,2,3,4,5,6,7,8,9,80	
2007-02-05 08:00	2007-02-12 08:00	SOUTH PLATTE RIVER	801002	DENVER CONDUIT NO 20	1910-12-06	22254.00000	42.7200 CFS	8,80,23	
2007-02-05 08:00	2007-02-12 08:00	SOUTH PLATTE RIVER	803514	CHATFIELD DAM	1977-12-28	46748.00000	10785.0000 AF	8	
2007-02-12 08:00	2007-03-07 08:00	SOUTH PLATTE RIVER	100829	PREWITT INLET CANAL	1910-05-25	22059.00000	695.0000 CFS	1,2,3,4,5,6,7,8,9,80	

CALLING PRIORITY 2006-2007 (CONTINUED)

Date Call Initiated	Date Call Released	Source	WDID	Structure Name	Appropriation Date	Administration Number	Amount	Districts Affected	Set Comments
2007-02-20 08:00	2007-02-22 08:00	SOUTH PLATTE RIVER	100513	JACKSON LAKE INLET DITCH	1909-05-29	21698.00000	510.00 CFS	1,2,3,4,5,6,7,8,9,80	BYPASS CALL FROM 0200817 - EVANS NO 2 DITCH
2007-03-07 08:00	2007-03-19 08:00	SOUTH PLATTE RIVER	100829	PREWITT INLET CANAL	1905-05-18	26302.20226	612.4800 CFS	1,2,3,4,5,6,7,8,9,80	BYPASS CALL FROM 0100501 - EMPIRE DITCH
2007-03-11 08:00	2007-03-25 08:00	SOUTH PLATTE RIVER	6403906	JULESBURG RES	1974-03-15	45364.00000	26.80 CFS	64	BYPASS CALL FROM 6400535 - SOUTH PLATTE DITCH
2007-03-19 08:00	2007-03-21 08:00	SOUTH PLATTE RIVER	100829	PREWITT INLET CANAL	1911-03-17	22355.00000	400.00 CFS	1,2,3,4,5,6,7,8,9,80	BYPASS CALL FROM 0200802 - BURLINGTON D RIVER HG
2007-03-21 08:00	2007-03-23 08:00	SOUTH PLATTE RIVER	103551	NORTH STERLING RES	1915-08-01	26298.23953	11954.0000 AF	1,2,3,4,5,6,7,8,9,80,23	
2007-03-23 08:00	2007-03-25 08:00	SOUTH PLATTE RIVER	103552	PREWITT RES	1972-06-12	44723.00000	52.0000 CFS	1,2,3,4,5,6,7,8,9,23,80	BYPASS CALL FROM 0100518 - LOWER PLATTE BEAVER D
2007-03-25 08:00	2007-03-26 08:00	SOUTH PLATTE RIVER	6403906	JULESBURG RES	1986-06-17	49841.00000	1000.0000 CFS	1,2,3,4,5,6,7,8,9,23,80,64	BYPASS CALL FROM 0100503 - RIVERSIDE CANAL
2007-03-26 08:00	2007-03-26 12:00	SOUTH PLATTE RIVER	6403906	JULESBURG RES	1985-03-11	50769.49378	150.0000 CFS	1,2,3,4,5,6,7,8,9,23,80,64	BYPASS CALL FROM 0100503 - RIVERSIDE CANAL
2007-03-27 08:00	2007-03-27 12:00	SOUTH PLATTE RIVER	100829	PREWITT INLET CANAL	1985-03-11	50769.49378	150.0000 CFS	1,2,3,4,5,6,7,8,9,23,80	BYPASS CALL FROM 0100503 - RIVERSIDE CANAL

CALLING PRIORITY 2006-2007 (CONTINUED)

Date Call Initiated	Date Call Released	Source	WDID	Structure Name	Appropriation Date	Administration Number	Amount	Districts Affected	Set Comments
2007-03-27 12:00	2007-03-30 08:00	SOUTH PLATTE RIVER	103552	PREWITT RES	1972-06-12	44723.00000	52.0000 CFS	1,2,3,4,5,6,7,8,9,23,80	BYPASS CALL FROM 0100518 - LOWER PLATTE BEAVER D
2007-03-30 08:00	2007-03-31 08:00	SOUTH PLATTE RIVER	103552	PREWITT RES	1986-06-17	49841.00000	1000.0000 CFS	1,2,3,4,5,6,7,8,9,23,80	BYPASS CALL FROM 0100503 - RIVERSIDE CANAL
2007-03-31 08:00	2007-04-04 08:00	SOUTH PLATTE RIVER	103552	PREWITT RES	1985-03-11	50769.49378	150.0000 CFS	1,2,3,4,5,6,7,8,9,23,80	BYPASS CALL FROM 0100503 - RIVERSIDE CANAL
2007-04-01 08:00	2007-04-04 08:00	SOUTH PLATTE RIVER	6499999	SOUTH PLATTE RIVER COMPACT	1897-06-14	17332.00000	120.0000 CFS	64	
2007-04-04 08:00	2007-04-05 08:00	SOUTH PLATTE RIVER	6402004	SOUTH PLATTE SMART R A	1986-06-17	49841.00000	1000.00 CFS	64,1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0100503 - RIVERSIDE CANAL
2007-04-04 08:00	2007-04-05 08:00	SOUTH PLATTE RIVER	6499999	SOUTH PLATTE RIVER COMPACT	1995-04-24	53074.00000	0.00 CFS	64	BYPASS CALL FROM 6400530 - SPRINGDALE DITCH
2007-04-05 08:00	2007-04-06 08:00	SOUTH PLATTE RIVER	103552	PREWITT RES	1977-06-30	47847.46567	69.00 CFS	1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0100519 - TREMONT DITCH
2007-04-05 08:00	2007-04-11 08:00	SOUTH PLATTE RIVER	6499999	SOUTH PLATTE RIVER COMPACT	1995-12-22	53316.00000	77.00 CFS	64	BYPASS CALL FROM 6400533 - PAWNEE DITCH
2007-04-06 08:00	2007-04-13 08:00	SOUTH PLATTE RIVER	100829	PREWITT INLET CANAL	1929-12-31	31423.29219	695.0000 CFS	1,2,3,4,5,6,7,8,9,80,23	

CALLING PRIORITY 2006-2007 (CONTINUED)

Date Call Initiated	Date Call Released	Source	WDID	Structure Name	Appropriation Date	Administration Number	Amount	Districts Affected	Set Comments
2007-04-13 08:00	2007-04-16 08:00	SOUTH PLATTE RIVER	100829	PREWITT INLET CANAL	1977-06-30	47847.46567	69.00 CFS	1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0100519 - TREMONT DITCH
2007-04-16 08:00	2007-04-25 08:00	SOUTH PLATTE RIVER	100687	NORTH STERLING CANAL	1915-08-01	26302.23953	411.0000 CFS	1	
2007-04-16 08:00	2007-04-24 08:00	SOUTH PLATTE RIVER	100829	PREWITT INLET CANAL	1929-12-31	31423.29219	695.0000 CFS	1	
2007-04-23 08:00	2007-04-25 08:00	SOUTH PLATTE RIVER	100518	LOWER PLATTE BEAVER D	1907-05-31	20969.00000	417.0000 CFS	1,2,3,4,5,6,7,8,9,23,80	BYPASS CALL FROM 0100503 - RIVERSIDE CANAL
2007-06-12 08:00	2007-06-14 08:00	SOUTH PLATTE RIVER	6400520	LIFF PLATTE VALLEY D	1914-05-27	26302.23522	460.00 CFS	64,1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0100687 - NORTH STERLING CANAL
2007-06-18 08:00	2007-06-19 08:00	SOUTH PLATTE RIVER	6400535	SOUTH PLATTE DITCH	1914-05-27	26302.23522	460.00 CFS	64,1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0100687 - NORTH STERLING CANAL
2007-06-19 08:00	2007-06-20 08:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1914-05-27	26302.23522	460.00 CFS	64,1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0100687 - NORTH STERLING CANAL
2007-06-20 08:00	2007-06-22 08:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1907-05-31	20969.00000	417.00 CFS	64,1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0100503 - RIVERSIDE CANAL
2007-06-22 08:00	2007-06-24 08:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1904-02-12	19765.00000	450.0000 CFS	64,1,2,3,4,5,6,7,8,9,80,23	

CALLING PRIORITY 2006-2007 (CONTINUED)

Date Call Initiated	Date Call Released	Source	WDID	Structure Name	Appropriation Date	Administration Number	Amount	Districts Affected	Set Comments
2007-06-24 08:00	2007-07-28 08:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1895-07-11	16628.00000	16.0000 CFS	64	BYPASS CALL FROM 6400522 - BRAVO DITCH
2007-06-24 08:00	2007-06-27 08:00	SOUTH PLATTE RIVER	6499999	SOUTH PLATTE RIVER COMPACT	1897-06-14	17332.00000	120.0000 CFS	64	
2007-06-27 08:00	2007-06-30 08:00	SOUTH PLATTE RIVER	6499999	SOUTH PLATTE RIVER COMPACT	1976-04-03	46114.00000	5000.0000 AF	64	BYPASS CALL FROM 6402514 - CHAMBERS CONDON RCHRG A
2007-06-29 08:00	2007-06-30 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1888-10-01	14154.00000	450.00 CFS	64,1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0100507 - BIJOU CANAL
2007-06-30 08:00	2007-07-06 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1888-04-15	13985.00000	284.00 CFS	64,1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0100518 - LOWER PLATTE BEAVER D
2007-06-30 08:00	2007-09-24 08:00	SOUTH PLATTE RIVER	6499999	SOUTH PLATTE RIVER COMPACT	1897-06-14	17332.00000	120.0000 CFS	64	
2007-07-06 08:00	2007-07-09 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1886-07-19	13349.00000	62.2750 CFS	1,2,3,4,5,6,7,8,9,23,80,64	BYPASS CALL FROM 6400530 - SPRINGDALE DITCH
2007-07-09 08:00	2007-07-13 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1882-10-18	11979.00000	323.0000 CFS	1,2,3,4,5,6,7,8,9,80,23,64	BYPASS CALL FROM 0100514 - FT MORGAN CANAL
2007-07-13 08:00	2007-07-14 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1886-07-19	13349.00000	62.28 CFS	64,1,2,3,4,5,6	BYPASS CALL FROM 6400530 - SPRINGDALE DITCH

CALLING PRIORITY 2006-2007 (CONTINUED)

Date Call Initiated	Date Call Released	Source	WDID	Structure Name	Appropriation Date	Administration Number	Amount	Districts Affected	Set Comments
2007-07-13 08:00	2007-07-17 16:00	SOUTH PLATTE RIVER	200825	HEWES COOK DITCH	1885-11-20	13108.00000	350.00 CFS	2,7,8,9,80,23	BYPASS CALL FROM 0200802 - BURLINGTON D RIVER HG
2007-07-14 08:00	2007-07-17 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1888-04-15	13985.00000	284.00 CFS	64,1,2,3,4,5,6	BYPASS CALL FROM 0100518 - LOWER PLATTE BEAVER D
2007-07-16 08:00	2007-07-28 12:00	NO FK REPUBLI CAN RIV	6500506	HAIGLER LAND CATTLE CO D	1890-04-04	14704.00000	50.0000 CFS	65	
2007-07-17 08:00	2007-07-18 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1886-07-19	13349.00000	62.28 CFS	64,1,2,3,4,5,6	BYPASS CALL FROM 6400530 - SPRINGDALE DITCH
2007-07-17 16:00	2007-07-18 12:00	SOUTH PLATTE RIVER	200825	HEWES COOK DITCH	1882-04-29	11807.00000	38.00 CFS	2,7,8,9,80,23	BYPASS CALL FROM 0200821 - MEADOW ISLAND 1 DITCH
2007-07-18 08:00	2007-07-23 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1882-10-18	11979.00000	323.00 CFS	64,1,2,3	BYPASS CALL FROM 0100514 - FT MORGAN CANAL
2007-07-18 12:00	2007-07-19 08:00	SOUTH PLATTE RIVER	200825	HEWES COOK DITCH	1881-01-15	11338.00000	63.30 CFS	2,7,8,9,80,23	BYPASS CALL FROM 0200809 - BRANTNER DITCH
2007-07-19 08:00	2007-07-22 08:00	SOUTH PLATTE RIVER	200825	HEWES COOK DITCH	1876-07-08	9686.00000	74.25 CFS	2,7,8,9,80,23	BYPASS CALL FROM 0200808 - FULTON DITCH

CALLING PRIORITY 2006-2007 (CONTINUED)

Date Call Initiated	Date Call Released	Source	WDID	Structure Name	Appropriation Date	Administration Number	Amount	Districts Affected	Set Comments
2007-07-19 08:00	2007-07-28 08:00	SOUTH PLATTE RIVER	6400503	SOUTH DITCH	RESERVATION 1895-03-01	17846.16496	164.00 CFS	64	BYPASS CALL FROM 6400504 - PETERSON DITCH
2007-07-19 16:00	2007-07-23 08:00	SOUTH PLATTE RIVER	200834	LOWER LATHAM DITCH	1877-11-14	10180.00000	97.6800 CFS	2,4,5,6	
2007-07-22 08:00	2007-07-23 08:00	SOUTH PLATTE RIVER	200825	HEWES COOK DITCH	1876-11-20	9821.00000	85.40 CFS	2,7,8,9,80,23	BYPASS CALL FROM 0200824 - FARMERS INDEPENDENT D
2007-07-23 08:00	2007-07-24 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1882-09-04	11935.00000	38.0000 CFS	64,1,2,3	BYPASS CALL FROM 0100518 - LOWER PLATTE BEAVER D
2007-07-23 08:00	2007-07-24 08:00	SOUTH PLATTE RIVER	200834	LOWER LATHAM DITCH	1881-01-15	11338.00000	63.3000 CFS	2,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0200809 - BRANTNER DITCH
2007-07-24 08:00	2007-07-27 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1882-06-22	11861.00000	126.00 CFS	64,1,2,3	BYPASS CALL FROM 6400533 - PAWNEE DITCH
2007-07-24 08:00	2007-07-28 08:00	SOUTH PLATTE RIVER	200834	LOWER LATHAM DITCH	1881-11-02	11629.00000	84.03 CFS	2,4,5,6	BYPASS CALL FROM 0200828 - UNION DITCH
2007-07-25 08:00	2007-07-28 08:00	SOUTH PLATTE RIVER	200825	HEWES COOK DITCH	1873-10-15	8689.00000	94.25 CFS	2,7,8,9,80,23	BYPASS CALL FROM 0200813 - PLATTEVILLE DITCH
2007-07-27 08:00	2007-07-28 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1882-07-01	11870.00000	20.00 CFS	64,1,2,3	BYPASS CALL FROM 0100525 - TETSEL DITCH

CALLING PRIORITY 2006-2007 (CONTINUED)

Date Call Initiated	Date Call Released	Source	WDID	Structure Name	Appropriation Date	Administration Number	Amount	Districts Affected	Set Comments
2007-07-28 08:00	2007-07-29 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1888-04-15	13985.00000	284.0000 CFS	1,2,3,4,5,6,7,8,9,80,23,64	BYPASS CALL FROM 0100518 - LOWER PLATTE BEAVER D
2007-07-29 08:00	2007-07-31 08:00	SOUTH PLATTE RIVER	103552	PREWITT RES	1929-12-31	31423.29219	34960.0000 AF	1,2,3,4,5,6,7,8,9,80,23,64	
2007-07-31 08:00	2007-08-02 08:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1929-12-31	31423.29219	695.00 CFS	64,1,2,3,4,5,6	BYPASS CALL FROM 0100829 - PREWITT INLET CANAL
2007-08-01 08:00	2007-08-03 08:00	SOUTH PLATTE RIVER	200825	HEWES COOK DITCH	1885-11-20	13108.00000	350.00 CFS	2,7,8,9,80,23	BYPASS CALL FROM 0200802 - BURLINGTON D RIVER HG
2007-08-02 08:00	2007-08-03 16:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1895-07-11	16628.00000	16.0000 CFS	64,1,2,3,4,5,6	BYPASS CALL FROM 6400522 - BRAVO DITCH
2007-08-03 16:00	2007-08-06 16:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1929-12-31	31423.29219	695.0000 CFS	64,1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0100829 - PREWITT INLET CANAL
2007-08-06 16:00	2007-08-12 08:00	SOUTH PLATTE RIVER	6400504	PETERSON DITCH	1929-12-31	31423.29219	695.0000 CFS	64,1,2,3,4,5,6	BYPASS CALL FROM 0100829 - PREWITT INLET CANAL
2007-08-11 08:00	2007-08-12 08:00	SOUTH PLATTE RIVER	200825	HEWES COOK DITCH	1909-01-13	21562.00000	900.0000 CFS	2,7,8,9,80,23	BYPASS CALL FROM 0200802 - BURLINGTON D RIVER HG
2007-08-12 08:00	2007-08-22 08:00	SOUTH PLATTE RIVER	200825	HEWES COOK DITCH	1885-11-20	13108.00000	350.0000 CFS	2,7,8,9,80,23	BYPASS CALL FROM 0200802 - BURLINGTON D RIVER HG



CALLING PRIORITY 2006-2007 (CONTINUED)

Date Call Initiated	Date Call Released	Source	WDID	Structure Name	Appropriation Date	Administration Number	Amount	Districts Affected	Set Comments
2007-08-12 08:00	2007-08-18 08:00	SOUTH PLATTE RIVER	6400504	PETERSON DITCH	1895-03-01	17846.16496	164.0000 CFS	64	
2007-08-13 08:00	2007-08-14 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1888-10-01	14154.00000	450.0000 CFS	64,1,2,3,4,5,6	BYPASS CALL FROM 0100507 - BIJOU CANAL
2007-08-14 08:00	2007-08-17 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1887-06-18	13683.00000	20.0000 CFS	64,1,2,3,4,5,6	BYPASS CALL FROM 0100519 - TREMONT DITCH
2007-08-15 08:00	2007-08-16 08:00	NO FK REPUBLICAN RIV	6500506	HAIGLER LAND CATTLE CO D	1890-04-04	14704.00000	50.0000 CFS	65	
2007-08-17 06:00	2007-08-25 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1888-04-15	13985.00000	284.0000 CFS	64,1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0100518 - LOWER PLATTE BEAVER D
2007-08-18 08:00	2007-08-22 08:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1895-07-11	16628.00000	16.0000 CFS	64	BYPASS CALL FROM 6400522 - BRAVO DITCH
2007-08-22 08:00	2007-08-26 08:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1895-04-28	16554.00000	252.0000 CFS	64	
2007-08-25 08:00	2007-08-26 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1929-12-31	31423.29219	695.0000 CFS	64,1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0100829 - PREWITT INLET CANAL
2007-08-26 08:00	2007-08-29 08:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1929-12-31	31423.29219	695.0000 CFS	64,1,2,3,4,5,6,7	BYPASS CALL FROM 0100829 - PREWITT INLET CANAL

CALLING PRIORITY 2006-2007 (CONTINUED)

Date Call Initiated	Date Call Released	Source	WDID	Structure Name	Appropriation Date	Administration Number	Amount	Districts Affected	Set Comments
2007-08-27 08:00	2007-08-29 08:00	SOUTH PLATTE RIVER	200802	BURLINGTON D RIVER HG	1909-01-13	21562.00000	900.0000 CFS	2,8,9,80,23	
2007-08-28 08:00	2007-08-29 08:00	SOUTH PLATTE RIVER	200825	HEWES COOK DITCH	1909-06-09	21709.00000	0.0000 CFS	2,7	BYPASS CALL FROM 0200817 - EVANS NO 2 DITCH
2007-08-29 08:00	2007-09-14 08:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1895-07-11	16628.00000	16.0000 CFS	64,1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 6400522 - BRAVO DITCH
2007-08-30 08:00	2007-09-10 08:00	SOUTH PLATTE RIVER	200825	HEWES COOK DITCH	1885-11-20	13108.00000	350.0000 CFS	2,7,8,9,80,23	BYPASS CALL FROM 0200802 - BURLINGTON D RIVER HG
2007-09-14 08:00	2007-09-15 08:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1902-01-17	19009.00000	175.0000 CFS	64,1,2,3,4,5,6,7	BYPASS CALL FROM 0100519 - TREMONT DITCH
2007-09-14 08:00	2007-09-18 08:00	SOUTH PLATTE RIVER	200802	BURLINGTON D RIVER HG	1885-11-20	13108.00000	350.0000 CFS	2,8,9,80,23	
2007-09-15 08:00	2007-09-17 08:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1907-05-31	20969.00000	417.0000 CFS	64,1,2,3,4,5,6,7	BYPASS CALL FROM 0100503 - RIVERSIDE CANAL
2007-09-17 08:00	2007-09-24 08:00	SOUTH PLATTE RIVER	100688	UNION DITCH	1907-05-31	20969.00000	417.0000 CFS	1,2,3,4,5,6,7	BYPASS CALL FROM 0100503 - RIVERSIDE CANAL
2007-09-21 08:00	2007-10-03 08:00	SOUTH PLATTE RIVER	200802	BURLINGTON D RIVER HG	1885-11-20	13108.00000	350.0000 CFS	2,8,9,80,23	
2007-09-24 08:00	2007-09-25 16:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1907-08-01	21031.00000	740.0000 CFS	64,1,2,3,4,5,6,7	BYPASS CALL FROM 0100503 - RIVERSIDE CANAL

CALLING PRIORITY 2006-2007 (CONTINUED)

Date Call Initiated	Date Call Released	Source	WDID	Structure Name	Appropriation Date	Administration Number	Amount	Districts Affected	Set Comments
2007-09-25 16:00	2007-09-26 08:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1929-12-31	31423.29219	695.0000 CFS	64,1,2,3,4,5,6,7	BYPASS CALL FROM 0100829 - PREWITT INLET CANAL
2007-09-26 08:00	2007-09-26 16:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1915-08-01	26302.23953	411.0000 CFS	64,1,2,3,4,5,6,7	BYPASS CALL FROM 0100687 - NORTH STERLING CANAL, TO JID 1904
2007-09-26 16:00	2007-09-27 08:00	SOUTH PLATTE RIVER	100687	NORTH STERLING CANAL	1915-08-01	26302.23953	411.0000 CFS	1,2,3,4,5,6,7	
2007-09-26 16:00	2007-10-03 12:00	SOUTH PLATTE RIVER	6499999	SOUTH PLATTE RIVER COMPACT	1897-06-14	17332.00000	120.0000 CFS	64	
2007-09-27 08:00	2007-10-06 08:00	SOUTH PLATTE RIVER	6400511	HARMONY DITCH 1	1915-08-01	26302.23953	411.0000 CFS	64,1,2,3,4,5,6,7	BYPASS CALL FROM 0100687 - NORTH STERLING CANAL
2007-10-03 08:00	2007-10-07 08:00	SOUTH PLATTE RIVER	200802	BURLINGTON D RIVER HG	1899-05-01	18018.00000	38.0800 CFS	2,8,9,80,23	BYPASS CALL FROM 0801002 - DENVER CONDUIT NO 20
2007-10-06 08:00	2007-10-07 08:00	SOUTH PLATTE RIVER	6400528	STERLING IRR CO DITCH 1	1915-08-01	26302.23953	411.0000 CFS	64,1,2,3,4,5,6,7	BYPASS CALL FROM 0100687 - NORTH STERLING CANAL
2007-10-07 08:00	2007-10-15 08:00	SOUTH PLATTE RIVER	100687	NORTH STERLING CANAL	1915-08-01	26302.23953	411.0000 CFS	1,2,3,4,5,6,7	
2007-10-07 08:00	2007-10-14 08:00	SOUTH PLATTE RIVER	200802	BURLINGTON D RIVER HG	1885-11-20	13108.00000	350.0000 CFS	2,8,9,80,23	

CALLING PRIORITY 2006-2007 (CONTINUED)

Date Call Initiated	Date Call Released	Source	WDID	Structure Name	Appropriation Date	Administration Number	Amount	Districts Affected	Set Comments
2007-10-10 08:00	2007-10-16 08:00	SOUTH PLATTE RIVER	6499999	SOUTH PLATTE RIVER COMPACT	1897-06-14	17332.00000	120.0000 CFS	64	
2007-10-15 08:00	2007-10-17 08:00	SOUTH PLATTE RIVER	100829	PREWITT INLET CANAL	1929-12-31	31423.29219	695.0000 CFS	1,2,3,4,5,6,7,8,9,80,23	
2007-10-17 08:00	2007-10-19 08:00	SOUTH PLATTE RIVER	100829	PREWITT INLET CANAL	1986-06-17	49841.00000	1000.0000 CFS	1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0100503 - RIVERSIDE CANAL
2007-10-19 08:00	2007-10-23 08:00	SOUTH PLATTE RIVER	103552	PREWITT RES	1929-12-31	31423.29219	34960.0000 AF	1,2,3,4,5,6,7,8,9,80,23	
2007-10-23 08:00	2007-10-25 08:00	SOUTH PLATTE RIVER	100829	PREWITT INLET CANAL	1986-06-17	49841.00000	1000.0000 CFS	1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0100503 - RIVERSIDE CANAL
2007-10-25 08:00	2007-11-01 08:00	SOUTH PLATTE RIVER	100829	PREWITT INLET CANAL	1990-08-10	51356.00000	120.0000 CFS	1,2,3,4,5,6,7,8,9,80,23	BYPASS CALL FROM 0100503 - RIVERSIDE CANAL

**Table 9 - Staffing**

Dam Safety Engineers	3
Water Resource Engineers	7
Engineering/Physical Science Techs/Assistants (Includes 3 Hydrographers)	8
Program Asst 1, Admin II & Technician II	3
Physical Science Researcher/Scientist 1	2
Full-Time Water Commissioners	24
Permanent Part-Time Water Commissioners	<u>4</u>
<b>TOTAL STAFF</b>	<b>51</b>

**Table 10 - Statistics**

Number of Well Permits	2,115
Number of Plans for Augmentation	973
Number of Dams routinely inspected	220
Number of Active Substitute Supply Plans	214
Number of Contacts to give Public Assistance	79,569

## ADMINISTRATION PROTOCOL Augmentation Plan Accounting DIVISION ONE – SOUTH PLATTE RIVER

This protocol establishes the accounting and reporting process required to enable the division engineer to confirm that depletions from all out-of-priority diversions are being replaced so as to prevent injury to vested water rights. The accounting must comport with established “cradle to grave” accounting standards, which allow an audit of the information to track exactly how the data is manipulated as it is translated from raw input data to the resultant impact on the river. While this protocol is subordinate to any decreed language addressing specific accounting requirements, it generally addresses the minimum requirements of such accounting.

The accounting must use the standard convention where a depletion is “negative” and an accretion or other replacement source is “positive”. The sum of the impacts will then result in either a “negative” or “positive” impact on the stream.

Wells in plans that have a negative stream impact must provide additional replacement water, curtail pumping or both until the impact is no longer negative. Plans with a negative stream impact that fail to curtail pumping will be ordered to stop pumping until such time as the projected impact of the wells is no longer negative.

1. Accounting must be submitted electronically to the water commissioner ([call 970-352-8712 to obtain email address](tel:970-352-8712)) and division engineer at [Div1Accounting@state.co.us](mailto:Div1Accounting@state.co.us) within 30 days of the end of the month for which the accounting is being submitted.
2. The accounting must provide the **contact information** including name and address for:
  - a. the owner(s) of each well
  - b. the person responsible for submitting the accounting
  - c. the plan administrator and/or the plan attorney.
3. All **input data** must be in one location, such as an “Input” worksheet, etc. The accounting must show all pumping since March 15, 1974. Input data includes the information listed below.
  - a. The required input data for each **well** is:
    - i. the monthly meter reading for wells that use a **presumptive depletion factor** (PDF) to determine the associated consumptive use (CU); or
    - ii. the monthly CU in acre-feet (AF) for wells that have a decree or approved SWSP that allows the wells to use a **water balance methodology** to determine the CU of the well. The analysis used to determine the CU must be included with the accounting.

- iii. Wells that are decreed as an **alternate point of diversion** (APOD) to a surface water right **must report pumping on a daily basis** if any of the diversion during the month is claimed as being "in priority". (See *Administration Protocol – APOD Wells* for more details.)
  - b. Each **recharge site** must comply with the *Administration Protocol - Recharge* and must report the:
    - i. daily volume in AF diverted into the site;
    - ii. monthly volume in AF released from the site;
    - iii. monthly net evaporative loss in AF;
    - iv. volume of water in AF remaining at the end of the month.
  - c. The accounting must identify each source of **fully consumable replacement water** actually delivered to the location impacted by the depletions. To demonstrate the water was actually delivered to the required location will require the following information:
    - i. the originating source of the water, date released and volume of water released;
    - ii. transportation losses to point of diversion or use, if any, using stream loss factors approved by the water commissioner;
    - iii. the volume of water actually delivered on a daily basis past any surface water diversion that was sweeping the river as corroborated by the water commissioner.  
  
(See *Administration Protocol – Delivery of Water* for more details on delivering water.)
  - d. For each source of **replacement water that has been "changed"** for use as a source of augmentation, such as changed reservoir shares, ditch bypass credits or credits from dry-up, etc., the following input information must be reported:
    - i. the basis and volume of the return flow obligation;
    - ii. the location the changed water was historically used; this will be the location used to determine the timing of the return flow impact on the river.
- 4. The accounting must include a monthly **projection** of the plan's operation at least through March 31 of the next calendar year.
- 5. The accounting must include all input and output files associated with **modeling the delayed impact** of diversions. The output from the modeling must report to a summary table that shows, by month, the ongoing depletions associated with pumping, return flow obligations, etc. and accretions from recharge operations.

6. A **net impact** summary must show the out-of-priority depletions, accretions from each recharge site, volume of replacement water actually delivered to the location of the depletions and the resultant net impact on **a daily basis**. If necessary, the net impact must be done by river reach.

While **modeling** may use a **monthly step function** to determine the depletions from pumping and accretions from recharge, the monthly result must then be **divided by the number of days in the month** in order to **simulate a daily impact**, as water rights are administered on a daily and not monthly basis.

Replacement water must be provided such that the **daily net impact** (using the simulated daily numbers from the modeling) **is not negative**. If a well is out-of-priority for 15 days during a month, replacement must be made only for the 15 days the well is out-of-priority. The replacement must be made, however, on a daily basis as opposed to, for instance, making an aggregated release equal to the volume of the out-of-priority depletions. Likewise, the simulated daily accretion will only count toward replacing the depletion on the days the well is out-of-priority. The accretions that report to the river when the well is in priority can not be used to replace the out-of-priority depletions.

The **accretions that impact the river when the well is in priority** are not considered “excess” unless the cumulative net impact of the well is not negative for the entire irrigation year to date. (The irrigation year for this purpose is April 1 thru the following March 31.) Until such time as the cumulative net impact is not negative, the accretions must simply be released to the river and can not be leased to other plans or recaptured. Plans that show a positive cumulative net impact are still required to make replacements on a daily basis; the cumulative analysis only effects whether or not accretions reporting to the river when the well is in priority are considered “excess” and are, therefore, able to be recaptured.

7. The basis for determining that the depletions are **out-of-priority** must be clearly established and all steps in the calculation included in the accounting. The analysis may be done, unless otherwise limited by decree, for each well or groups of wells provided the most junior water right associated with the group of wells is used as the reference water right for the group’s out-of-priority status.
8. Accounting must include **actual information** for the irrigation year through the month for which the accounting is being submitted **AND projections** of the plan operation through March 31 of the next calendar year.
9. The following **naming convention** must be used for all files submitted pursuant to item 1:

“Plan**WDID**\_YYMMDD”

where: PlanWDID is the WDID assigned by the division engineer’s office  
YYMMDD corresponds to the date the accounting is submitted.

As an example, the assigned WDID for the former GASP plan was 0103333. If accounting using Excel® was submitted for that plan on May 15, 2004, the file name would be:

“0103333\_040515.xls”



**The name of the file must be in the subject line of the email.**

10. All accounting must be reported using the **WDID** for the structure, at a minimum. Other information such as well name, permit number, etc. may also be included as desired. All wells must be decreed by the water court, permitted by the state engineer or included in a decreed plan for augmentation. Unregistered wells for which there is no decree cannot, in the opinion of the division engineer, be effectively administered because of the need to know the location, allowable diversion rate and use of the well; information that is only available from the decree or permitting process.

# ADMINISTRATION PROTOCOL

## Delivering Water Using the Natural Stream

### DIVISION ONE – SOUTH PLATTE RIVER

This document outlines the actions water users must take in order for the Division of Water Resources to deliver water by means of the natural stream. This protocol is subordinate to any contradicting decreed language addressing specific water rights.

#### Access

The language of section 37-84-113, C.R.S., *implicitly acknowledges that a natural stream may be used as a conduit.*<sup>1</sup>

#### Notification

The water user must notify the water commissioner **at least 48 hours and not more than 7 days prior to the release of water** being delivered via a natural stream system unless the water commissioner specifically approves a different notice requirement in advance of the release. Advance notice is necessary in order to provide the water commissioner the time required to confirm that the delivery can be made under the current stream conditions.

#### Measurement Structures

In accordance with §37-84-113, C.R.S., water users seeking to use the natural stream to deliver water

*“shall construct suitable and proper measuring flumes or weirs, equipped with self-registering devices if required by the state engineer, for the proper and accurate determination of the amount and flow of water turned into, carried through, and diverted out of said natural stream.”* (underline emphasis added)

In short, water users are responsible for the construction of all measurement structures required to administer their water. This may include measurement structures required, in the opinion of the water commissioner or division engineer, to deliver their water past intervening water rights that are drying or “sweeping” the river.

**If the water commissioner is unable to corroborate that water was delivered past a structure that was sweeping the river, none of the water released will be available for diversion or replacement credit below the sweeping structure.**

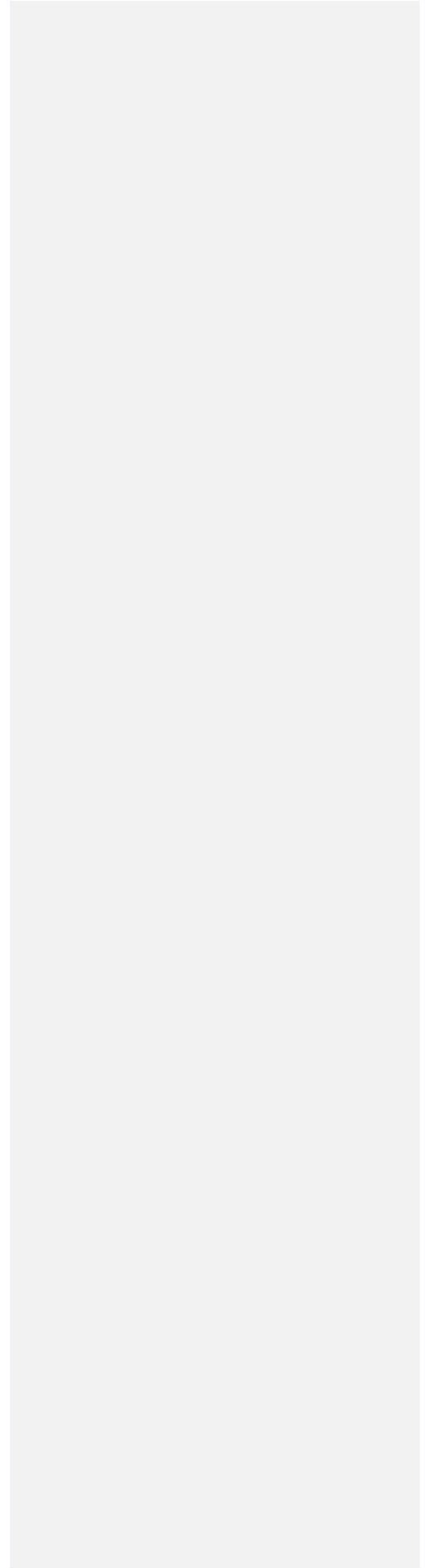
#### Transit Loss

The volume of water available for diversion or replacement credit is the volume released to the stream less transit loss. The transit loss will:

- comply with any specific court decree covering the delivery;
- be based on current conditions and shall be determined by the water commissioner or division engineer;
- be the same for all water users in the same reach of the river or stream at the time of the delivery

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<sup>1</sup> Trail's End Ranch, LLC v. CO DWR, 91 P.3d 1058 (Colo. 2004).



## **ADMINISTRATION PROTOCOL**

### **Dry-Up of Irrigated Land**

### **DIVISION ONE – SOUTH PLATTE RIVER**

As required by either a decreed change of water rights or a substitute water supply plan, a source of irrigation water may be either permanently or temporarily removed from a parcel of land in order to make the historical consumptive use portion of that water supply available for other uses, typically augmentation. This protocol addresses the documentation required to administer the effective “dry-up”. To the extent that one or more of the following directives are in direct contradiction with a decree of the court, the terms of the decree must be followed.

#### **Permanent Dry-up Covenant**

1. Must be decreed by the court.
2. Must be filed with clerk and recorder’s office for the county wherein the land is located.
3. Must address the issue of noxious weeds as required by § 37-92-305(4.5)(a), C.R.S. and/or other county or local ordinances. (DWR is not authorized to administer the issue of noxious weeds; this statement is, therefore, simply informational.)

#### **Temporary Dry-up Agreement**

1. May be made for a term that is not less than one irrigation season.
2. The division engineer and water commissioner must be notified in writing prior to April 1 of the each irrigation season covered by the agreement.
3. Once written notice has been made to the division engineer and/or water commissioner, the dry-up requirement is irrevocable during the current irrigation season regardless of whether or not the water associated with the historical consumptive use is actually used.

# ADMINISTRATION PROTOCOL

## Recharge

### DIVISION ONE – SOUTH PLATTE RIVER

The purpose of a “recharge structure” as referenced in this document is to introduce water to the river alluvium that will result in accretions to a live stream. For the purposes of this document, a recharge structure does not include a well that is used to artificially recharge a Denver Basin bedrock aquifer. With that qualification, a recharge structure is defined as:

- A section of ditch, the losses from which can be reasonably modeled as a single source of water.
  - A pond or group of ponds that receive water from the same delivery location and can be reasonably modeled as a single source of water.
11. A written notification for each recharge structure must be provided to the water commissioner and division engineer. **The Division of Water Resources will not acknowledge any recharge activity conducted without the knowledge of the water commissioner.** The notification must include:
- a. a map showing the location of the structure and the court case number of the plan for augmentation authorized to use the structure;
  - b. a map showing the location of the diversion point and the court case number for the decree authorizing the diversion, if any;
  - c. a map showing the location of and all information for the metering location;
  - d. the maximum water surface area of the structure;
  - e. for ditch structures, if the ditch is divided into more than one recharge reach, an explanation of how the volume diverted will be allocated to the various sections.
12. Upon receiving written notification or decree by the water court, the division engineer will assign the structure a WDID number. The WDID number is the identification number that will be used for the administration of the structure and must be included in all correspondence and accounting reports. **(For structures that were included in a decreed plan for augmentation but were not physically constructed at the time of the decree, a written notification of the intent to construct the structure must be provided.)**
13. Any structure that intercepts groundwater must be permitted as a well and included in a plan for augmentation or substitute water supply plan approved by the state engineer. The division engineer strongly recommends avoiding recharge structures that intercept groundwater, in order to simplify the accounting process.

14. The flow into **EVERY** recharge structure **MUST** be metered and equipped with a continuous flow recorder unless the water commissioner in conjunction with the division engineer determines adequate records may be kept without such equipment. If the recharge structure is designed to discharge water via a surface outlet, such discharge must also be metered and equipped with a continuous flow recorder. The water commissioner **MUST** approve the use of the recharge structure **BEFORE** any credit will be given for water placed into recharge.
15. All recharge ponds must have a staff gauge installed such that the gauge registers the lowest water level in the pond. The staff gauge must be readable from a readily accessible location adjacent to the pond.
16. All recharge areas must be maintained in such a way as to minimize consumptive use of the water by vegetation. **No recharge area may be used for the planting of crops during the same irrigation year that it is used as a recharge site without prior approval from the water commissioner or division engineer.**
17. The amount of water recharged to the alluvial aquifer is determined by measuring the amount of water delivered to the recharge structure and subtracting:
  - a. the amount of water discharged from the recharge structure,
  - b. the amount of water lost to evaporation (see item 18, below),
  - c. the amount of water lost to consumptive use due to vegetation located within the recharge structure, and
  - d. the amount of water retained in the recharge structure that has not yet percolated into the ground.
18. Net evaporative losses from the recharge structure must be subtracted from the volume of water delivered to the pond. Evaporative losses must be taken every day the pond has a visible water level. If the pond does not have a stage-surface area curve approved by the water commissioner, the maximum surface area of the pond must be used to determine the evaporative losses. Monthly loss factors prorated for the number of days the pond had a visible water level may be used as may real time evaporation data from NOAA or a local weather station. If the pond is not inspected on a routine basis through the month, no prorating of monthly factors will be allowed.
19. The amount of accretions from the recharge structure will be credited only in accordance with a decreed plan of augmentation or substitute water supply plan approved by the State Engineer.
20. All water delivered for recharge must be fully consumable:
  - a. changed reservoir rights or the CU portion of changed senior ditch rights;
  - b. transbasin water that has been imported into the South Platte River basin;
  - c. nontributary water;

- d. excess (unused) accretions from the previous recharge of fully consumable water;
  - e. water diverted in priority after "notice" of intent to fully consume the water;
  - f. water diverted under free river.
21. Water may be delivered to recharge only if the net impact of the associated plan for augmentation is not negative. Water must first be delivered or exchanged to offset negative impacts of the plan for augmentation before it may be diverted for recharge.
22. Accounting must be performed on a daily basis with reports submitted at least monthly and within 30 days of the end of the month for which the accounting is being made. The volume of water diverted into recharge must be provided to the water commissioner weekly when requested by the water commissioner.

# ADMINISTRATION PROTOCOL

## Data Logger Criteria

### DIVISION ONE – SOUTH PLATTE RIVER

This protocol addresses the minimum standards required for all new installations of flow recording devices used to document diversions and releases in the South Platte River basin, unless:

- another type of flow recorder is specifically required by the water commissioner; or,
- the water user obtains the expressed written consent of the division engineer or water commissioner to install a nonconforming flow recording device.

This protocol also applies to existing installations as required by the water commissioner.

The data logger must:

1. be able to communicate via Pocket PC compatible handheld device (Windows CE Operating System) and Windows based Laptop;
2. be capable of recording data at a minimum of 15 minutes intervals;
3. have a local display that shows current stage and battery voltage;
4. have a permanent, non-erasable log capable of holding a minimum of 180 days of 15 minute data before overwriting (log wrapping) or download;
5. have a real time, internal clock with battery backup;
6. use off-the-shelf batteries commonly available at the local hardware store.

The user must provide, at no cost to the state or water commissioner, any software required to setup and download the data from the data logger. In the event the division engineer authorizes the use of a nonconforming data logger, all devices and software required to communicate with the data logger must be provided to the water commissioner at no cost.

Data loggers that have the following capability are preferred, but such capabilities are not required in order to comply with the protocol:

- be able to be interrogated from the front panel and NOT require a Laptop or handheld device to be set up;
- have a local display that shows instantaneous discharge rate and daily discharge volume; and,
- have an event log that shows changes to the set up.



# ADMINISTRATION PROTOCOL

## Alternate Point of Diversion Wells

### DIVISION ONE – SOUTH PLATTE RIVER

This document outlines the actions alternate point of diversion (APOD) well operators must take in order for the Division of Water Resources to administer the wells. For the purposes of this protocol, a well is an APOD if and only if it is decreed as such to a surface water right. This protocol is subordinate to any contradicting decreed language addressing specific wells.

#### In-priority Diversions

1. APOD wells must record all diversions on a daily basis, just like a ditch. (This, inherently, requires that the well is equipped with at least a totalizing flow meter.)
2. APOD wells may divert water under the surface water right only on days the surface water right is in priority<sup>2</sup> **and** the water commissioner has approved the diversion. (The total diversions from the head gate and all associated APODs must not exceed the decreed limits of the surface water right.<sup>3</sup>)
3. APOD diversions made in accordance with condition 2 are effectively “in priority” and do not require augmentation. Such diversions, therefore, should not be included as out-of-priority diversions in any associated augmentation plan accounting for the well.
4. Accounting must be submitted to the water commissioner by email as frequently as requested by the water commissioner but, at a minimum, within 30 days of the end of the month the diversion is made. The accounting must show all individual well diversions and must differentiate between in-priority and out-of-priority diversions on a daily basis.<sup>4</sup>

**Multiplying the total monthly pumping by the percentage of time the APOD right was “in-priority” during the month is not acceptable. The APOD right must be operated in exactly the same manner as the surface water right, which requires a daily analysis and accounting.**

#### Out-of-priority Diversions

5. Diversions made by the well that, in combination with all other diversions by the surface water right, exceed the decreed flow of the surface water right or made when the surface water right is out-of-priority are out-of-priority diversions.

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<sup>2</sup> The surface water right is “in priority” whenever there is no “call” for water that is senior to the subject right from a location downstream of the decreed head gate location. “Call” data can be retrieved from the Colorado Division of Water Resources website: <http://water.state.co.us/>.

<sup>3</sup> As an example, a surface water right is decreed for 10 cfs and has 5 APOD wells. The ditch diverts 8 cfs and the 5 wells divert 1 cfs, each. Only 2 cfs of the well diversions are in priority; the remaining 3 cfs must be included in a plan of augmentation.

<sup>4</sup> Failure to comply with reporting requirements may result in an order to install a data logger on the well.

6. All out-of-priority diversions must be covered by and included in a plan for augmentation or substitute water supply plan.
7. Excess water available pursuant to the surface water right and APOD decrees cannot be used to cover other diversions or depletions occurring in the plan for augmentation without the specific authority of a decree or substitute water supply plan to do so.

# ADMINISTRATION PROTOCOL

## Augmentation Plan Exchanges

### DIVISION ONE – SOUTH PLATTE RIVER

Many of the plans for augmentation operating along the South Platte River include recharge operations where fully consumable water is placed in recharge sites and then timed back to the river. Some plans include decreed exchanges whereby excess return flows may be exchanged back up to a headgate or well and re-diverted. This document provides the protocol water user's must follow in order to operate the exchange. This protocol may also be used as a general guideline for the administration of all exchanges on the South Platte River, however, is specifically designed to address both decreed and water commissioner approved exchanges associated with plans for augmentation. This protocol is subordinate to any decreed language addressing specific exchange operations.

#### River condition below the exchange: No Call or Free River

No exchange may operate unless:

- | F1-23. The water commissioner has been given at least 48 hours and not more than 7 days **advance** notice of the intent to operate the exchange.
- | F2-24. The water commissioner determines there is sufficient exchange potential to operate the exchange.
- | F3-25. The water commissioner has current accounting and is able to verify that there are excess return flows reporting to the river.

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#### River condition below the exchange: Storage Call

In addition to the requirements in F1 thru F3, above, no exchange may operate unless:

- S1. The water commissioner determines that the exchange can be operated without injuring water rights that are senior to the exchange.
- S2. The storage-season-to-date<sup>5</sup> (November 1 to the day the return flows report to the river) net impact of the augmentation plan operation on the river is not negative; or, in the opinion of the water commissioner, there is a reasonable expectation the impact will be non-negative by the start of the irrigation season (typically, April 1).
- S3. The timing of the exchange is limited to the day the excess return flow reports to the river unless the water commissioner agrees that return flows can be consolidated such that a larger diversion over a shorter period of time is made without injuring the calling or other senior water rights. If an aggregated diversion is allowed, the volume of the aggregated diversion cannot exceed the volume of excess return flow reporting to the river during the month the exchange takes place; i.e. excess return flow credits may **not** be carried over from one month to the next.

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<sup>5</sup> The expectation regarding the time period during which the net impact analysis is made is that storage season deficits are reconciled before the start of the irrigation season. Plans that do not reconcile storage season deficits **may not** be allowed to make additional out-of-priority diversions or exchanges until such time as the deficits are made up.

River condition below the exchange: Direct Flow Call

In addition to the requirements in F1 thru F3, above, no exchange may operate unless:

- D1. The water commissioner determines that the exchange can be operated without injuring water rights that are senior to the exchange.
- D2. The irrigation-season-to-date<sup>1</sup> (April 1 to the day the return flows report to the river) net impact of the augmentation plan operation on the river is not negative.
- D3. The timing of the exchange is limited to the day the excess return flow reports to the river. Excess return flows occurring over multiple days may **not** be aggregated into a single exchange and diversion.

Figure 3 – Organizational Chart

