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WATER DIVISION THREE**

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March 6, 1998

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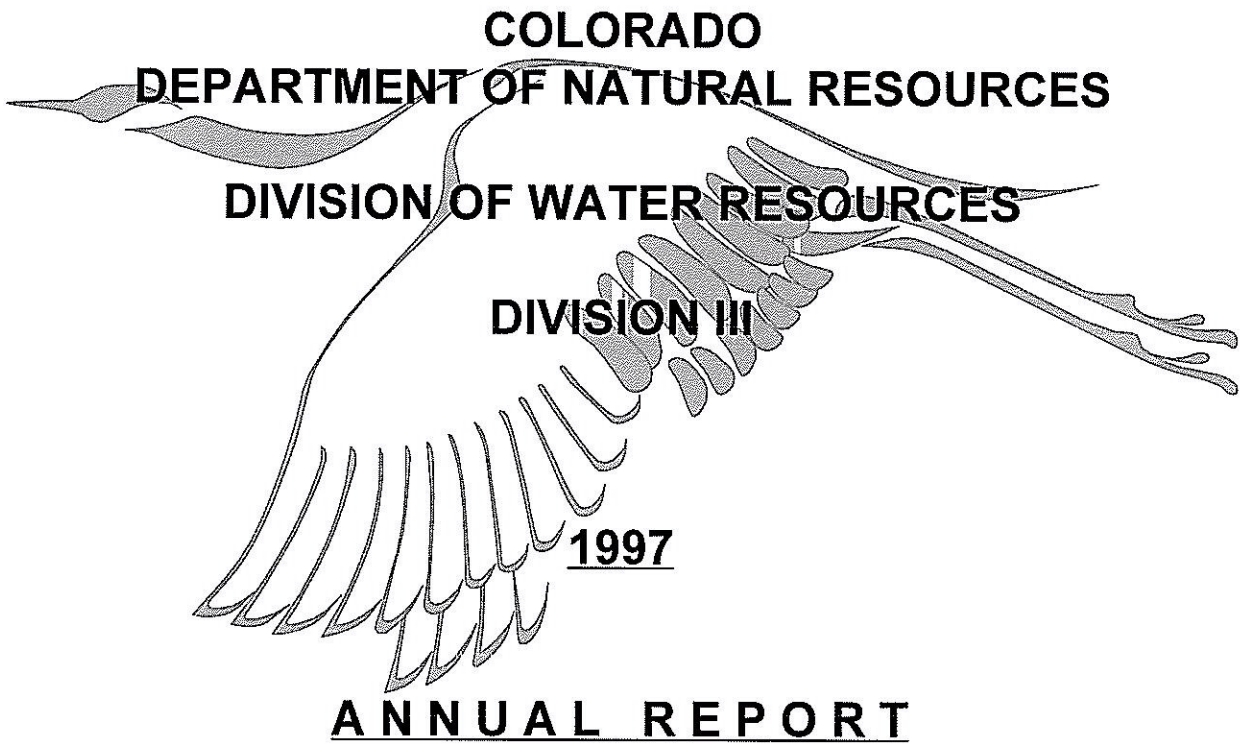
Dear Hal:

On behalf of the staff of Division III, I submit herein the Annual Report for 1997.

I would like to express special thanks to the Division III staff, as well as you and your staff for the help and support in fulfilling the various responsibilities of water administration in our division.

Respectfully submitted,

Steven E. Vandiver, Division Engineer  
Division III



**COLORADO  
DEPARTMENT OF NATURAL RESOURCES**

**DIVISION OF WATER RESOURCES**

**DIVISION III**

**1997**

**ANNUAL REPORT**

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## I. WATER ADMINISTRATION

### A. Current Water Year - 1997

#### 1. Accomplishments

##### a. Water Administration

Water administration in Division III in 1997 was similar in scope to the last several years in that the year turned out to be much different than what we forecast it would be. The administration of both water rights and the Compact were dynamic, at the very least. We experienced one of the higher years in the history of measured stream flow at the Rio Grande near Del Norte gage and had an excellent water year throughout the basin. The snowpack at the beginning of the year was much above normal and that continued through the spring. The forecast was downgraded on two occasions and ended up about 110 to 120 percent of normal on May 1. The administration of the Compacts was perhaps the most problematic area in 1997. The forecast was very accurate for the Conejos drainage, but as it turned out, the April through September forecast for the Rio Grande mainstem was approximately 140,000 acre-feet less than what was actually experienced. This, coupled with untimely and unexpected precipitation in September and October, provided the need to change Compact administration dramatically throughout the fall and early winter months. As the runoff proceeded, we did not see the river drop as was expected and as the forecast might have indicated. This caused us to raise curtailments frequently and caused much added work to keep up with the index flows and what deliveries had to be made to meet our obligation. During the late summer it was obvious that we would not be able to meet our Compact obligation on the Rio Grande mainstem without severe curtailment to very senior pre-Compact rights. This solution was undesirable under the

set of circumstances we were in. The decision was made by the State Engineer, and agreed to by the Water Users, to apply large curtailments and to attempt to under-deliver a modest volume, knowing that we would still be in compliance with the Compact. The situation continued to worsen throughout the fall and early winter, wherein large storm events in the upper basin created much above normal flows at Del Norte and continued to raise the index supply and the obligation. It drove the index to the point that the incremental obligation got to be a one for one relationship with the index and any increase in the index supply related to the corresponding similar raise in the obligation. The situation created by the much above normal runoff in addition to the forecasted supply, the release of carry-over water from pre-Compact reservoirs, and the late summer and early fall rains dictated that in order to stay within a reasonable amount of under delivery, the curtailment would have to be increased to 100 percent in mid- to late October. This meant no diversions from the Rio Grande after that time. The water users understood that this action had to be taken and it was accepted; though not well liked. The resulting delivery, which was complimented by additional precipitation runoff, ended up approximately 7,300 acre-feet short of the obligation on the Rio Grande mainstem. At the same time, the Conejos over-delivered approximately 8,000 acre-feet. This resulted in the State of Colorado over delivering the obligation under the Compact by just 700 acre-feet. The Conejos situation developed throughout the year as was anticipated with no abnormal changes in the obligation. Return flows developed and it ended up the Conejos could not use all of the late season water that they had available. It was felt at the time that the water should have been diverted, but as it turned out, it covered the under-delivery on the Rio Grande and eliminated any concerns about the State of Colorado being in a debit status. With the resolution of the 1996 spill situation not forth-coming with Texas and New Mexico, this situation

will put Colorado in a neutral situation as far as any future negotiations.

The runoff, even though it was extremely large, came off in a way that did not allow the water rights on the Rio Grande mainstem to be served in their entirety. We were only able to store priority water in two of the pre-Compact reservoirs in the basin during the runoff. This was a function of Compact curtailment, as well as the river not achieving the higher levels necessary to do more. The surface rights owners did enjoy a very good and extended water supply situation and the resulting diversions were certainly good for most every ditch. One of the most difficult issues to deal with in the 1997 season was the fact that the antecedent conditions from the extremely dry year in 1996 prevented the development of return flows on the lower portion of the Rio Grande in Colorado, and caused additional curtailments to senior mainstem surface rights that we have not seen in some time. As was explained in the previous annual report, 1996 not only had an extremely low snowpack and resulting runoff, but virtually no precipitation during the summer months that would help that situation. As a result, the return flows and tributary inflow below Alamosa tailed off dramatically and that did not change until well into the runoff in 1997. The impacts from 1996 were felt not only in the stream systems, but in the aquifers as well. Groundwater levels and storage decreased dramatically during 1996 and only partially recovered in 1997. This situation is certainly one that must be addressed and we must be very cognizant of in the future.

The most junior priority served on the Rio Grande was the Rio Grande Reservoir decree, Priority No. 1916-63A, which was in priority for just a few days. On the Conejos River system, all rights were served for a period during the spring runoff. The other streams in and around the San Luis Valley received an above normal water supply and water rights on each of these streams were well served.

The following sections will focus on the major areas which impacted our water administration duties in 1997.

**1. Rio Grande Compact**

The lower portion of the Basin in New Mexico and Texas did not share the below-average runoff during 1996 throughout the Rio Grande Basin in Colorado. Precipitation events throughout 1996 and 1997 left Project storage in Elephant Butte and Caballo Reservoirs at a much above normal level throughout the period. However, there was little opportunity to spill Project storage in 1997, which would have eliminated any obligation for the year. On January 1, 1997, there were 1,688,700 acre-feet of usable water in Project storage and, under Colorado's interpretation of the 1996 events, there were no accrued credits or debits for the State of Colorado because of the position we took on spill in 1996. No resolution has been accomplished in trying to resolve the controversy concerning the operation of Rio Grande Project storage in 1996. The State Engineer's office in Colorado and the Engineer Adviser continued discussions with Texas throughout the year and no concrete resolution has been reached. Negotiations continue and the concerns of all parties have been thoroughly discussed. Since Colorado took the position that there was a spill in 1996, and realizing that there was very little opportunity for a spill in 1997, we curtailed water rights throughout the late winter and early spring. A call for water occurred quite early from the Rio Grande Canal, which wanted to start diversions in the middle of March. Knowing that we would have a fairly high Compact obligation, the position was taken that since no unanimous agreement could be reached with all water users for the date to allow diversions, it was determined that any diversions prior to April 1, 1997, would have to be paid back sometime later in the season in full. Two ditches took advantage of that program, the Rio Grande Canal

and the Chicago Ditch. The reason this was done was to prevent the shifting of any Compact burden from one ditch to others by allowing early season diversions, and thereby diminishing the deliveries that would have been made during that period. This certainly created an equitable solution and does allow for ditches that want to lengthen their diversion season to do so, but still be limited to the amount of water they would have diverted during the normal irrigation season. It had strong agreement from the Rio Grande Water Users and it may well be the basis for operations in the future concerning the date we allow diversions to begin each season. As was discussed earlier in this report, Compact curtailment varied throughout the year on both the Conejos and the Rio Grande. The curtailments on the Conejos were quite high, but the Water Commissioners in District 22 made significant improvement in their ability to get water to many ditches which wouldn't have otherwise gotten water in a very strictly administered river. There was much work done between many of the larger senior canals and the Water Commissioners to accomplish a managed system. Those practices allowed more water to be delivered to more ditches than would have been allowed normally. On the Rio Grande, curtailment increased throughout the summer and early fall, until diversions were totally curtailed on October 20, 1997, in an attempt to not drive ourselves into debt anymore than was considered acceptable. Usable water in Rio Grande Project storage ended the year with 1,903,300 acre-feet in storage. Therefore, dual accounting will most likely take place again in 1998 unless people come to the table much more dedicated to resolving this controversy.

The range of curtailment on the two rivers during the irrigation season were from 20 to 51 percent on the Conejos and from 8 to 100 percent on the Rio Grande. Again, these were a result of changes in the index supply and the resulting need for additional deliveries on the Rio Grande and on the Conejos. We recognized excellent



deliveries during the beginning of the season and the development of return flows on the lower part of the Conejos that helped reduce the actual curtailment to ditches. For the second year in a row, large rainfall events in New Mexico helped create a credit for New Mexico. As of this writing, the credit, as calculated by Colorado, is in the range of 40,000 to 45,000 acre-feet. Approximately 799,000 acre-feet were released from Project storage.

## **2. Closed Basin Project**

The Closed Basin Project was utilized fully in 1997 because of the large runoff and exceptionally high obligation. As irony would have it, now that we experienced a year that Closed Basin production was needed very badly, the Project has suffered a large decrease in its production capability, primarily due to iron bacteria contamination and growth in many of the wells in the Project. This has reduced the output capacity of those wells by a large percentage and as a result, the Closed Basin Project was able to produce only 39,000 acre-feet to the Rio Grande for credit at the state line. This was the largest annual delivery to the Rio Grande by the Project since its development. However, it was expected to produce a greater volume in 1997. Deliveries of 60 cfs were about as much as the Project could achieve during the major portion of the year. Water quality levels were maintained so that all of the water met the requirement under the Compact. The allocation was set at an 80/20 percentage by the Allocation Committee for water that reached the river from the Project in 1997. The Rio Grande felt that with the sizeable runoff supply they would need all the help they could get and elected to take the higher percentage. The Conejos had been ahead in the over-all running average and this will help greatly in evening up the overall long-term average. A total of 39,000 acre-feet of creditable water reached the river and was split between the Rio Grande and

Conejos River according to the 80/20 allocation, resulting in approximately 31,200 acre-feet delivered for the Rio Grande and 7,800 acre-feet for the Conejos. As was stated previously, the Project was pumped at its full production level throughout the year and was unable to produce water that had been counted on earlier in the year. A summary of the Rio Grande Compact administration can be found in Table II.F.

Project deliveries made during 1997 were as follows:

1,513 acre feet to the Blanca Wildlife Habitat Area  
3,262 acre feet to the Alamosa National Wildlife Refuge  
39,000 acre feet (creditable) to the Rio Grande

### **3. Reservoirs**

Due to the excellent snow pack, many of the irrigation reservoirs in the Division were able to fill or come very close during the 1997 season. The Compact curtailments impacted the Rio Grande reservoirs to a large degree, but they still were able to store some water. Table B in Section II lists the maximum and minimum storage levels for the major irrigation reservoirs in the San Luis Valley. As shown in this table, most of the reservoir storage levels varied throughout the year as they gained during the irrigation season and then released large amounts of water through the remainder of the season.

Rio Grande Reservoir, on the mainstem of the Rio Grande, experienced a problem with cavitation that damaged the area in the outlet downstream of the gates. Steel plating and concrete reinforced walls on the sides of the gates were extensively damaged and created a situation which forced the San Luis Valley Irrigation District to empty the reservoir at the end of the year and do repairs to that damage into the month of December. Difficulty was had employing a contractor and this work was completed the first part of

December and therefore, storage was forgone which would have normally been stored in the late fall. This will create a difficult situation for the San Luis Valley Irrigation District if a good snow pack does not occur for the 1998 season. With limited storage and junior decrees, the District may well have a short supply for the coming year.

#### **4. Stream Administration**

With the unusually high water year came the opposite kind of administration problems that we had faced in 1996. There was adequate water for the most part on most streams throughout the irrigation season. Compact administration certainly effected deliveries on the Rio Grande and the Conejos River, but most ditches did have an adequate supply well into the summer. Base flows stayed up well on all streams and coupled with reservoir storage and wells; it is estimated that most people in the San Luis Valley had a full water supply for the season.

The addition of new complex decrees for change in water rights continues to complicate our administration. Direct flow storage, exchanges and augmentation plans continue to complicate how the rivers are run and how we handle the accounting. On the Rio Grande, the daily water administration sheet continues to get more and more complicated and takes more and more time for the District 20 staff to complete. This slows down the normal administrative process and it appears river administration will continue to get increasingly complicated.

Because of the difficulties with Compact deliveries and the early shutoff of diversions, no winter recharge was allowed on the Rio Grande throughout the early fall and winter months. On the Conejos River, stock water was delivered to any ditch that

wanted it throughout the fall and early winter.

I would like to acknowledge all of the efforts of my staff in this past year. It was a year of adequate supply, but again full of new experiences and I believe water rights were administered well during the entire year.

## **5. Water Court**

The activity in Water Court was slightly lower this year compared with 1996. There were a total of 35 cases filed in 1997 versus 56 cases filed in 1996. Appendix A contains a breakdown of the Court activity for 1997.

This year we continued to modify our procedures for handling new applications. Pat McDermott handled the bulk of the day to day activity with Bob Plaska and Craig Cotten handling some of the caseload. They reviewed the applications and supplied recommendations to the Division Engineer for inclusion into the Consultation Report to the Referee. The Water Court clerk continued to do less and less of the work historically done in tracking cases and ensuring their correctness. That burden has fallen on to the Division Engineer's staff. This has greatly increased the amount of time we spend in all Water Court activities.

We continue to have excellent working relations with the Water Referee, William Martinez and the Water Court and feel that, although we have increased our workload in this area, the job is well done.

One of the pending cases is the U.S. Forest Service application for reserved rights on the Rio Grande National Forest. The original cases were filed in 1981 and have been held in abeyance for some time. All of the parties have been negotiating a settlement of these

cases and as of this writing the proposed decree has been drafted, reviewed and edited for factual content. This proposed decree also identifies existing water rights that may effect the U.S. reserved rights. In most cases, quantification points were moved to avoid conflict with existing private water rights. All that is left is the negotiation over the legal consequence of settling this case and what the final decree would say.

As was promised on several occasions, the application for Stockman's Water Development Project was not filed in 1997. It now appears it will be filed in 1998 after the legislature is through with their session.

**b. Dam Safety**

Frank Kugel, the Dam Safety Field Engineer shared with Division VII, conducted dam safety inspections in Division III. Twenty-six dams had annual safety inspections performed by the Field Engineer. The Sanchez Ditch and Reservoir Company performed a major rehabilitation of the Sanchez Dam outlet system. The original outlet intake structure, built in 1908, includes a 150-foot reinforced concrete tower. Six pair of 30-inch sluice gates at varying elevations control flow into the tower. Three 48-inch valves control releases from the tower into the outlet tunnel.

The contractor restored two of the three 48-inch valves, and replaced the third valve with a 30-inch fixed-cone valve. The three lower interior 30-inch valves were replaced with new knife-edged valves. Hydraulic operators were used instead of the original valve stem system. The new remote operator system will ultimately allow the dam tender to make outlet releases from the dam, instead of having to ride a cable car to the gate tower.

The repair work on Rio Grande Reservoir was previously mentioned.

**c. Hydrographic Program**

**1. Duties**

The Hydrographic Branch in Division 3 is constantly striving to produce the most accurate records possible of flows in the Rio Grande Basin. To that end the branch operates, produces records, and/or maintains equipment in 49 gaging stations in and around the San Luis Valley. In order to increase the accuracy and usability of the flow data, we have equipped 39 of those stations with satellite monitoring equipment that allows water users, the general public, and ourselves to receive data in near real time. We also publish a record of daily flows each year for 43 of the stations.

This past year we worked with a landowner to establish three new gaging stations on small streams that had previously not been gaged. These stations will benefit the landowner/water user, the Division of Water Resources, and future generations in quantifying previously unknown flows. The streams involved were Big and Little Spring Creeks and Zapata Creek.

We are also looking forward to the possibility of having a fully funded Rio Grande Decision Support System in the near future. This system would, along with many other benefits, allow us to establish new gaging stations on currently ungaged streams, primarily on the east range. It would also allow us to upgrade several existing stations. This system would help us to greatly increase our knowledge of the hydrologic system in Division 3 and produce a broader base of data for future water related endeavors.

**2. Closed Basin Project**

Division III is involved in a cooperative agreement program with the U. S. Bureau of Reclamation regarding the bureau's Closed Basin Project. This project

consists of a 42-mile long canal, batteries of salvage and observation wells, and various other components. The main purpose of this project is to deliver salvaged groundwater to the Rio Grande to aid in Colorado's compact delivery to downstream states. Under the cooperative agreement, the Division of Water Resources provides streamflow measurements at various control structures, maintains flow records of the canal water, and provides technical assistance to Bureau of Reclamation personnel.

### **3. Construction Projects**

Several construction projects were completed by the Hydrographic staff during 1997. A new inlet was added to the North Channel Conejos River near La Sauses gage. This work was completed in order to help to assure quality of records by maintaining a hydraulic connection with the river. A V-notch weir was installed at the South Channel Conejos River near La Sauses Gage to provide a stable control, which will improve the accuracy of records during low flow periods. Riprap was placed around the Rio Grande at County Line Road gage to protect the gage house from erosion during high flows. Gage pools at the Trinchera Creek above Mountain Home Reservoir, Trinchera Creek below Smith Reservoir, and Culebra Creek at San Luis gaging stations were cleaned to prevent the inlets from becoming buried. New inlets were also installed in the Culebra Creek near Chama gage and county workers, in the process of constructing a new bridge upstream from the gage, destroyed extensive work done on the gage pool and control. Modifications to the approach to the gage pool at North Crestone Creek near Crestone, Colorado were completed in an attempt to slow the velocities through the gage pool.

#### **4. Satellite Monitoring Repair Facility**

The Satellite Monitoring System Repair Facility in Division III is responsible for the maintenance, repair, and calibration of all electronic data collection and telemetry equipment in Divisions III, IV, and VII. The facility provides technical support and assistance to field engineers and technicians in these divisions for system installation, field maintenance, and modifications. Approximately 30 percent of one full-time position is spent operating the facility.

In addition to the everyday repair and maintenance duties, several other functions were performed by the facility. In Division III, state owned Sutron 8004D systems were installed at Norton Drain (South Channel) near La Sauses and at Tarbell Trans-mountain Diversion near Cochetopa Pass. An existing system was upgraded to a new Sutron 8200A system at Conejos River below Platoro Reservoir and a new satellite monitoring system was installed for the Colorado Division of Wildlife at Beaver Creek below Beaver Creek Reservoir.

In Division VII, one state-owned Sutron 8004D system was installed at the La Plata River near Farmington, N.M. station and several other sites were visited to install or upgrade grounding systems.

#### **d. Ground Water and Well Permitting**

In 1997, 470 well permits were issued from the Division III office under the decentralized permitting program. The average turn around time was less than six days. Nearly all members of the office staff are now competent to assist the public with



permit applications and with researching permits and court cases.

In addition to permitting, over 100 field inspections were performed. Many of these were in order to verify historic use of irrigation and domestic wells. Other inspections pertained to Water Court applications and to administration of court decrees.

A continuing concern is the expansion of use of registered and/or adjudicated irrigation wells. In the early 1970s, hundreds of irrigation wells were adjudicated for 1000 gpm or more. Many of these wells were not then and are not now capable of producing those quantities. Most, but not all, of these wells have seen limited use. With the rise in value of agricultural land and products, these wells are now being used to their fullest extent and alternate points of diversion and supplemental well permits are being applied for. At present, each of these requests is dealt with individually and it seems that we must reinvent the wheel each time. We badly need a set of consistent policies to deal with this issue of expanded use.

**e. Water Records and Information**

The information age continues to affect the staff of Division III. As our water commissioners continue to be presented with new ways to perform their duties through the use of computers, our office staff has become teachers and problem solvers. The result of this is that all of our employees are becoming more computer literate and are willing to try more new things.

We are pleased to report that our diversion records for 1997 were the first to be received in Denver. Because of the use of the water commissioner tool kits, the process

of entering these records has become a much simpler process. For the most part, by the time the information is delivered to the Division Office, it is ready for final checking and printing. This year we once again copied our diversion records in the Division Office, which resulted in the information being available to the public by early January, 1997. I would like to thank all of our commissioners for their efforts in data entry and checking of the data prior to submitting it for final review. Their efforts have made a tremendous difference in the time requirements needed to complete this annual task.

We are also pleased to report that in 1997, all of the deadlines for submittal of hydrographic records to the US Geological Survey, the Denver Office, and the Rio Grande Compact Commission were met. Our hydrographic staff, with the help of selected water commissioner, does a great job of getting the records compiled and checked.

The lack of public access to our well database was very noticeable this year. The public computer that had been used before wasn't capable of accessing our network and this added to the workload of the office staff. We are looking forward to the time when the public will have access to our well database again. We are hoping to utilize our Wide Area Network to give the public access to more of the information they need.

The one area that did not see much progress again this year was the QA/QC program dealing with our historic data. Many of the water commissioners checked information about the owners of the water rights in their districts, but there was no coordinated plan to do a systematic check of our data. This is one area that we hope to work on, as discussed later in this report.

**f. Special Projects**

Other special projects that continue in the Division include involvement in several Interstate issues. The Division Engineer continues to be the Colorado Engineer Adviser on both the Rio Grande and Costilla Creek Compacts. The time required for these Compacts was substantial this year, especially with respect to the Rio Grande Compact.

The Rio Grande Silvery Minnow Recovery Team continued to demand the attention of the Division Engineer in 1997. While serving on the recovery team, the Division Engineer made several trips to meetings in New Mexico to work on the draft recovery plan. The draft recovery plan was released in late 1997. The final should be released in the summer of 1998.

The Rio Grande National Water Quality Assessment program continues on, but at a much slower pace. With the field investigations completed, the report was the major emphasis during 1997. Our office had minimal involvement in this project this year.

Another special project dealing with interstate issues included attending meetings regarding the development of an Upper Rio Grande Water Operations Model, being put together by several Federal agencies. This model will be used to look at water storage and delivery operation in the Upper Rio Grande Basin. Brian Ahrens from the Denver office has been very involved in the project and has been a great help.

The Division Engineer was also involved in the Rio Grande Project Operations study, authorized by the Colorado Water Conservation Board, to determine the data requirements for a study of the historic practices of water use below Elephant Butte Reservoir. This project required travel to both Denver and El Paso, Texas, as well as a considerable amount of coordination with the consulting engineer who was in charge of this study. Because

of the lack of response from the Bureau of Reclamation in providing the data necessary, the report is still being worked on, the final gathering of the data and the analysis is taking place.

Other special projects included advisory involvement in the Western Water Policy Advisory Commission Study on the Rio Grande and the New Mexico Water Resources Research Institute Rio Grande Drought Study. The Commission Study was concluded and a report was generated that the State of Colorado took great exception to. No conclusive report has been generated which directly addresses the Rio Grande other than the report that the contractor did. Many objections from every area were filed with the Commission on this report and there has been no response to those comments.

On the Division level, the year went by so fast and everyone seemed so busy that it is hard to believe that there was any time for special projects, but there was. Another project undertaken by the water commissioners in District 20 was to systematically locate the headgates of all the active ditches using GPS. By the end of the year, this was close to being completed. The data collected has been saved in a format that can be loaded directly into our GIS databases.

We participated again this year, in a consulting capacity, in the San Luis Valley Wetlands Focus Group. This is a group of Federal, State and private interests, who wish to protect, enhance and develop wetlands in the Valley. We served as technical advisors on proposed projects that will require acquisition or change of water rights.

Division III continued to participate in the project with the manager of the San Luis Valley Water Conservancy District. Over the years, the District has issued certificates to people who have had wells drilled under the District's augmentation plan. Many of the certificates incorrectly identified aquifers or well locations. We worked with the District to help

identify problems based on comparisons of our databases and theirs.

## **2. Water Issues**

The biggest water issue again in the Valley in 1997 was the anticipated Water Court application of Stockman's Water. It was widely believed that the application would be filed before the end of the year. This did not happen, again, despite repeated rumors that Stockman's Water was prepared to file. We anticipate that the application will be submitted to the Court sometime in 1998.

A continuing issue in Water Court in 1997 was the application of the Commonwealth Irrigation Company to store part of their direct flow water right. After repeated meetings and concessions by the Commonwealth Company, resolution was reached. The final decree contained many terms and conditions to ensure no injury to vested rights.

One of the issues reported in 1996 was resolved this past year. The application filed by the U.S. Forest Service for an instream flow right on East Middle Creek was withdrawn by the applicant. A compromise was reached with the Colorado Water Conservation Board whereby the Colorado Water Conservation Board filed for an instream flow that satisfied the needs of the Forest Service.

The litigation between the Trinchera Irrigation Company and the State Engineer's Office over administration practices on Trinchera Creek continued through the beginning of 1997. This case progressed in a very strange fashion since the State has not been a party to the negotiations that have taken place. In April the case was finally decided by the Court, helping us to administer the creek.

Direct flow storage on the Conejos River system moved even closer to judicial

recognition in 1997. The model developed by HydroSphere to analyze impacts was used to determine any measurable impacts. The Conejos Water Conservancy District submitted an amended application to the Water Court in late 1996 to clear up some minor notice problems, but the case should be completed in 1998 with no other major problems being foreseen.

### **3. Involvement in the Water User Community**

As always, we strive to be as involved as possible in the Water User Community. Our staff regularly attends the meetings of the Rio Grande Water Users Association, the San Luis Valley Water Conservancy District, the Conejos Water Conservancy District, the Rio Grande Water Conservation District, and the Closed Basin Operating Committee.

In addition, our staff has given presentations to classes at Adams State College, and various elementary and high schools around the Valley. Our water commissioners make themselves available and attend many of the ditch company meetings held in their districts.

We have actively participated in the San Luis Valley Wetlands Focus Group, in the review of the revision to the Rio Grande National Forest Plan, and in the Rio Grande Silvery Minnow Recovery Plan.

### **4. Workload Changes/Administration/Personnel**

There were no changes in our personnel in 1997. Table III-A lists the employees assigned to Division III and their work locations. Tables III-B and III-C are summaries of the activities for the Division for the calendar and fiscal years respectively. However, the upcoming year promises to be a challenge since Bob Plaska has been promoted to the Division Engineer position in Division 6 and left in January, 1998.

In 1997, we saw a significant shift in workload in two areas, both dealing with the Alamosa Office. The first was in the area of the evaluation of Water Court applications. In an effort to provide career-training opportunities and to also distribute the workload, we decided to reorganize how Water Court applications were evaluated in the office. Additional personnel were assigned the responsibility of reviewing cases and formulating recommendations to the Water Court. This delegation of responsibility not only affected the people directly involved, but also filtered down to their subordinates. While causing some scheduling problems at certain times of the year, overall the results have been very good. We seem to be getting recommendations to the Court in a timely manner and the goal of providing experience in the Water Court process is being met. In this past year, two of our engineers have both offered testimony for the first time in front of the Water Referee.

The second area that has impacted our workload has been the well permitting decentralization. As discussed previously, we continue to have to shift some job duties in order to make the program work. We were able to use the additional man-months allocated for this program so one of our part-time water commissioners could help with field inspections and permit evaluation. This has worked very well, to date.

As always, budgets are of concern. With the well permitting program came an operating budget. It appears the budget is adequate, but we will continue to monitor it as we move through the year.

With respect to our normal operating budget, not much has changed. Costs continue to creep up, but our budget stays approximately the same. We did receive additional money this year to help cover water commissioner mileage for groundwater related activities and we greatly appreciate it. Since most of our operating costs are non-discretionary, it is very

difficult to cut corners. We continue to strive to operate within our budget and feel we are accomplishing that goal.

In the area of administration, we are actively trying to implement the Principle Centered Leadership program that was initiated in our organization by the State Engineer. We look forward to the long-term rewards that this program offers both to the individuals and the organization.

Training was provided to several staff members in 1997. The Water Commissioners and Hydros participated in a Leopold-Stevens Data Recorder training seminar in Alamosa. Paul Clark and Jim Horton attended an NRCS Westwide Snow Survey Training School January 12 through January 17. The training was Winter Safety and Survival Avalanche Awareness and the proper techniques for snow sampling. Jerri Baker took advantage of the Discovery Program to spend August 25 through August 29 with the Denver computer team, Deb Bell in particular, to learn to be a trainer and to learn Access.

#### **B. Key objectives and goals**

The following are key objectives for the coming year. While many of these are ongoing from year to year, they form the basis for what we do and how we do it.

1. Administer the Rio Grande Compact in a manner that ensures Colorado's obligation is met and that the entitlements of the Colorado users under the Compact are fully utilized.
2. Operate the Division III office in a manner that allows us to stay within our budget, including the development of a budget process acceptable to the State Engineer for the utilization of Compact funds for Compact related expenses.



3. Implement the provisions of the Long Range Plan.
4. Develop and implement a quality assurance/quality control program for Division III data, including historic diversion records, water rights information and ownership information.
5. Provide training to our staff in the use of the computer applications available to us; in particular word processing, spreadsheets, communications and databases.
6. Issue well permits on a timely basis under the well permit decentralization program.
7. Constantly improve the quality of our hydrographic and diversion records and meet all deadlines for the completion and submittal of final records.
8. Coordinate with water user groups, individuals and other State and Federal agencies on issues such as endangered species, instream flows, Compact administration, and Water Court applications, in order to maximize cooperation and minimize disputes.
9. Implement, to the extent possible, Principle Centered Leadership in the Division III office.

**C. Major Activities for 1998**

There are several activities that we anticipate will affect our workload in the coming year. Foremost is the continued full implementation of the well permitting program in Division III. The year went well with 470 permits being issued. The process requires many steps with many people being involved.

Another major activity in 1998 will be Compact Administration. We consider this to be

one of our most important responsibilities. After a very wet year in 1997, we expect that 1998 may offer a below average runoff. These alternating high and low years cause a great deal of difficulty in administering the Compact.

In the human resource area, we are hoping to implement Principle Centered Leadership skills in Division III in 1998. We hope to be able to provide continuing training to our employees to help them understand Principle Centered Leadership and to obtain as much buy-in from our employees as possible. We are still working on formulating a plan on how we can best provide this training.

A carry-over activity from 1997 is preparation for the filing of the Stockman's Water Company application. We anticipate that once the application is filed, our office will be heavily involved in the review of the engineering data. By the time the application is filed, we hope to have reviewed as much of our historic data as possible to ensure its accuracy so we can evaluate the application in a timely manner.

A major activity in 1998 will be familiarizing ourselves with the new level of technology for both our water commissioners and the Alamosa Office. All commissioners have tool kits that can connect to the Intranet and are enjoying using these new tools. We anticipate that these advances as implemented will require additional training to utilize this new technology to its full potential.

#### **D. Acknowledgements**

I would like to acknowledge all the efforts of my entire staff in 1997 to keep the office functioning well and serving the public in a helpful and professional manner. I want to thank each Water Commissioner for a job well done in a difficult year while facing a number of

complex administrative issues.

I would single out Dennis Felmlee, Joe McCann, Bob Plaska and Jerri Baker for their dedication to ensuring the well permitting program was run properly.

Paul Clark and Jim Horton were chosen as the 1997 Water Commissioners of the Year for their outstanding efforts in support of water administration in District 22. Their diligent efforts in managing the Conejos system should be an example to all and their dedication to the administration of the Compact is commendable.

Hisa and Kris Ota were chosen as Water Managers of the Year for their leadership in water utilization on the Medano and Zapata drainages in District 35. Gary Sandoval, from the San Juan/San Rafael, the Sisneros, and the Gabriel Martinez ditches in District 22, was chosen as Ditch Superintendent of the Year.

II. WATER ADMINISTRATION DATA SUMMARIES

A. Transmountain Diversion Summary - Inflows/Outflows

1. TRANSMOUNTAIN DIVERSION SUMMARY - INFLOWS

Recipient												
WD	ID	Name	Stream	10-Year Average		Current Year		Source				
				AF	Days	AF	Days	WD	ID	Stream		
20	N/A	Weminuche Pass Ditch	Weminuche	666	40	1094	70	31	4,637	Rincon LaVaca		
20	N/A	Pine River	Weminuche	482	70	1068	121	31	4,638	N.F. Los Pinos		
20	N/A	Williams Creek Squaw Pass	Squaw Creek	302	70	421	70	78	4,672	Williams Creek		
20	N/A	Tabor	Trib Clear Creek	791	151	1412	170	62	774	Cebolla Creek		
20	N/A	Don LaFont #1 Ditch	Trib Red Mtn Creek	47	37	0	0	78	4,670	Trib Piedra River		
20	N/A	Don LaFont #2 Ditch	Trib Red Mtn Creek	230	77	64	29	78	4,671	Trib Piedra River		
20	N/A	Treasure Pass Ditch	S.F. Rio Grande	98	28	245	34	29	4,669	Wolf Creek		
26	N/A	Tarbell	Saguache Creek	252	44	803	108	28	4,656	Cochetopa Creek		

2. TRANSMOUNTAIN DIVERSION SUMMARY - OUTFLOWS

16	N/A	Hudson Branch Ditch	Huerfano	117	35	185	54	35	657	Medano
16	N/A	Medano Ditch	Huerfano	1,067	62	587	54	35	658	Medano

II. WATER ADMINISTRATION DATA SUMMARIES

B. Storage Water

RESERVOIR STORAGE SUMMARY  
IRRIGATION YEAR - 1997

WD	ID	RESERVOIR NAME	SOURCE STREAM	Amount in Storage (AF)					
				MINIMUM		MAXIMUM		DATE	END OF YEAR
				AF	DATE	AF	DATE		
20	3532	Beaver Park	Beaver Creek	3,956	11/08/97	4,434	4/05/97	4,047	
20	3554	Rio Grande	Rio Grande	1,768	9/18/97	49,191	6/26/97	1,992	
20	3558	Santa Maria	North Clear Creek	4,383	5/14/97	11,601	6/10/97	6,304	
20	3536	Continental	North Clear Creek	967	8/20/97	9,321	5/15/97	991	
21	3583	Terrace	Alamosa River	4,987	9/20/97	11,007	6/20/97	6,963	
21	3582	La Jara	La Jara Creek	3,646	10/17/97	5,053	5/28/97	3,646	
22	3574	Platoro	Conejos River	21,135	11/1/97	46,743	6/23/97	27,158	
24	3576	Sanchez	Culebra Creek	30,247	1/6/97	41,814	6/30/97	32,212	
35	3529	Mt. Home	Trinchera Creek	1,597	11/1/97	9,665	7/2/97	4,419	
35	3530	Smith	Trinchera Creek	1,204	11/1/97	5,729	6/8/97	2,300	

II. WATER ADMINISTRATION DATA SUMMARIES

C. Water Diversions

WATER DIVERSION SUMMARY  
IRRIGATION YEAR -- 1997

WD	Structures Reporting			Others			To Irrigation				
	With Record	No Water Available	No Water Taken	No Information Available	Ditches and Reservoirs with No Record	Estimated Number of Water Commissioner Visits	Total Diversions -AF-	Total Diversions to Storage -AF-	Total Diversions	Number of Acres Irrigated	Average AF per Acre
20	239	12	26	53	7,499	10,513	773,055	35,550	698,208	333,042	2.10
21	99	1	3	3	932	5,271	207,141	11,300	160,566	60,517	2.65
22	129	0	13	5	1,594	5,572	303,525	24,550	270,761	87,004	3.11
24	77	0	5	6	373	4,793	78,765	13,981	63,310	27,667	2.29
25	71	11	12	44	582	1,007	65,437	0	65,437	16,123	4.06
26	82	49	36	0	1,329	1,311	44,939	0	44,939	17,605	2.55
27	30	30	9	6	1,213	1,135	18,645	0	16,941	4,806	3.52
35	75	2	36	7	594	6,767	116,048	14,224	80,783	32,905	2.46
<b>Totals</b>	<b>802</b>	<b>105</b>	<b>141</b>	<b>124</b>	<b>14,116</b>	<b>36,369</b>	<b>1,607,555</b>	<b>99,605</b>	<b>1,400,945</b>	<b>579,669</b>	

II. WATER ADMINISTRATION DATA SUMMARIES

D. Water Diversion Summaries For Various Uses - IRRIGATION YEAR 1997

WD	TRANS-MOUNTAIN OUTFLOW	TRANS-BASIN OUTFLOW	MUNICIPAL	COMMERCIAL	INDUSTRIAL	RECREATION	FISHERY	DOMESTIC & HOUSEHOLD	STOCK
20	0	30,640	7,432	156	0	0	1,075	141	0
21	0	0	0	0	0	0	0	0	0
22	0	0	2,272	0	0	0	0	5,941	0
24	0	0	123	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
35	772	0	214	33	0	0	0	90	228
<b>Total</b>	<b>772</b>	<b>30,640</b>	<b>10,041</b>	<b>189</b>	<b>0</b>	<b>0</b>	<b>1,075</b>	<b>6,172</b>	<b>228</b>

WD	AUGMENTATION	EVAPORATION	GEOTHERMAL	SNOW-MAKING	MINIMUM STREAMFLOW	POWER GENERATION	WILDLIFE	RECHARGE	OTHER
20	2,744	97	0	0	0	890	7,645	24,402	42,781
21	10	0	0	0	0	0	0	148	35,146
22	350	0	0	0	0	0	0	141	0
24	115	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	2,558	0
35	190	0	0	0	0	0	0	338	16,162
<b>Total</b>	<b>3,409</b>	<b>97</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>890</b>	<b>7,645</b>	<b>27,587</b>	<b>94,089</b>

## II. WATER ADMINISTRATION DATA SUMMARIES

### E. RIVER CALLS

#### IRRIGATION YEAR - 1997

District	Most Senior Priority Curtailed	Most Junior Priority Served	Calling Right in Spring
20 Rio Grande	#204 Rio Grande San Luis	1916-63A Rio Grande Reservoir	#216A Rio Grande Canal
21 La Jara	#7 McCunniff Ditch	#1957-18 L.E. Shawcroft & Sons Ditch	#25 Le Mita Ditch #1
21 Alamosa	#9 Valdez Ditch	#110 Terrace Reservoir	#1 El Viejo Ditch
22 Conejos	#4.5 Garcia Ditch	Platoro Reservoir	#1 Guadalupe Ditch
22 San Antonio	#11 Sinecero Ditch	#196 Eight Mile Ditch	#4 Llano Ditch
24 Culebra	#34 Antonio Sanchez	#1951-2 Lobato Ditch No. 2	#11 Cerro Ditch
26 Saguache	#9 Ashley Proffitt Ditch	1997 Ortega Ditches	#14 Hearn Ditch
27 LaGarita	#8 Home Ditch No. 1	All Rights	#13 Biedell Ditch No. 10
27 Carnero	#11 Shown Ditch	1988 Green Ditch 1	#11 Shown Ditch
35 Trinchera and Tributaries	#18.5 Newton Ditch	#95 Smith Reservoir	#381/4 Notley Ball Ditch

Because of the idiosyncrasies of the administration scheme in District 25, no such information could be obtained which made sense.



**II. WATER ADMINISTRATION DATA SUMMARIES**

**F. Compact Administration**

**1997 RIO GRANDE COMPACT REPORT  
Preliminary Figures**

1. Adjusted Rio Grande Index ..... 946,700 a.f.  
 \*Adjusted Rio Grande Delivery ..... 364,700 a.f.  
 Required Rio Grande Delivery ..... 377,000 a.f.  
 Less Paper Credit per agreement ..... 5,000 a.f.  
 Net Required Rio Grande Delivery ..... 372,000 a.f.
  
2. Adjusted Combined Conejos Index ..... 401,500 a.f.  
 \*\*Adjusted Conejos Delivery ..... 192,300 a.f.  
 Required Conejos Delivery ..... 189,300 a.f.  
 Less Paper Credit per agreement ..... 5,000 a.f.  
 Net Required Conejos Delivery ..... 184,300 a.f.
  
3. \*\*\*Total Delivery at Lobatos ..... 557,000 a.f.  
 Total Required Delivery at Lobatos ..... 566,300 a.f.  
 Less Paper Credit (See Compact) ..... 10,000 a.f.  
 Net Required Delivery at Lobatos ..... 556,300 a.f.  
 Margin ..... 700 a.f.

**4. Rio Grande Curtailment**

Delivery Target	% of Index	Estimated Curtailment of Ditches	% of Index
January 1 – March 20	100	January 1 – March 20	100
March 21 – March 31	100	March 21 – March 31	50
April 1 – April 8	22	April 1 – April 8	10
April 9 – May 7	18	April 9 – May 7	8
May 8 – June 3	19	May 8 – May 21	9
June 4 – August 5	20	May 22 – June 5	14
August 6 – October 6	43 + inc diff	June 6 – August 5	11
October 7 – October 19	73	August 6 – October 6	28 + inc diff
October 20 – December 31	100	October 7 – October 19	60
		October 20 – December 31	100

**5. Conejos Curtailment**

Delivery Target	% of Index	Estimated Curtailment of Ditches	% of Index
January 1 – April 2	100	January 1 – April 2	100
April 3 – April 8	44	April 3 – April 8	51
April 9 – May 7	32	April 9 – May 7	44
May 8 – June 20	38	May 8 – June 2	48
June 21 – July 2	35	June 3 – June 25	0
July 3 – August 5	27	June 26 – July 2	25
August 6 – October 31	20	July 3 – August 5	20
November 1 – December 31	Stockwater	August 6 – October 31	20
		November 1 – December 31	Stockwater

\*Includes 31,198 a.f. of the creditable Closed Basin Project production.

\*\*Includes 7,799 a.f. of the creditable Closed Basin Project production.

\*\*\*Includes all the creditable Closed Basin Project production (38,997 a.f.)

III. OFFICE ADMINISTRATION AND WORKLOAD MEASURES  
A. PERSONNEL

1997  
DIVISION III  
Office Staff

Steven E. Vandiver	Division Engineer Professional Engineer IV
Robert M. Plaska	Assistant Division Engineer Professional Engineer III
Jerri L. Baker	Administrative Assistant III
Patrick J. McDermott	Engineer-in-Training II
Craig W. Cotten	Professional Engineer I
D. Scott Veneman	Engr/Physical Science Tech II
Dennis L. Felmlee	Engr/Physical Science Tech II
Stanley J. Ditmars	Engr/Physical Science Tech I

Water Commissioners and Deputies

Steve Baer	Engr/Physical Science Tech III, District 20
Ben Cannon	Engr/Physical Science Tech II, District 20
Perry Alspaugh	Engr/Physical Science Tech II, Districts 20/27
Jim Sellers	Engr/Physical Science Tech II, District 21
Joe McCann	Engr/Physical Science Assistant II, District 21
Paul Clark	Engr/Physical Science Tech III, District 22
Jim Horton	Engr/Physical Science Tech II, District 22
Charlie Quintana	Engr/Physical Science Tech II, District 24
Art Rivale	Engr/Physical Science Tech I, District 25
Timothy Lovato	Engr/Physical Science Tech I, District 26
Wayne Williams	Engr/Physical Science Tech II, District 35

III. OFFICE ADMINISTRATION AND WORKLOAD MEASURES

B. ACTIVITY SUMMARY

WATER DIVISION III

1997 CALENDAR YEAR

ACTIVITY SUMMARY

<u>ACTIVITY</u>	<u>TOTALS</u>
Professional and Technical Staff	7.00
Clerical Staff	1.00
Water Commissioner FTE (Full/Part-Time)	4/5.75
Decreed Surface Water Structures	2,516
Surface Rights Administered (water diverted this year)	900
Number of Decreed Wells	12,642
Consultations with Referee	412
Water Court Appearances	73
Meetings with Water Users	304
Meetings to Resolve Water Related Disputes	56
Contacts to Give Public Assistance on Water Matters	31,522

III. OFFICE ADMINISTRATION AND WORKLOAD MEASURES

C. ACTIVITY SUMMARY

WATER DIVISION III

1996-97 FISCAL YEAR

ACTIVITY SUMMARY

<u>ACTIVITY</u>	<u>TOTALS</u>
Professional and Technical Staff	7.00
Clerical Staff	1.00
Water Commissioner FTE Assigned (Full/Part-time)	4/5.75
Decreed Surface Rights	*
Surface Rights Administered	*
Wells	*
Consultations with Referee	326
Water Court Appearances	72
Meetings with Water Users	282
Meetings to Resolve Water Related Disputes	96
Contacts to give Public Assistance on Water Matters	29,454

\*See Calendar Year Activity Summary

**APPENDIX A**  
**WATER COURT**  
**ACTIVITIES**

**1997**

**WATER COURT ACTIVITIES**  
**January 1 Through December 31, 1996**

Number of applications received from January 1, 1997, through December 31, 1997: 97CW01 through 97CW35.

Types of claims received:

34	Wells
24	Ditches
5	Springs
0	Reservoirs
4	Storage
0	Canals
0	Gravel Pit
0	Power Plant
2	Snowmaking Diversions
1	Pipelines
1	Creek
<u>1</u>	<u>Ponds</u>
72	TOTAL

Number of cases terminated: 30

Number of cases pending as of December 31, 1997: 94