

ANNUAL REPORT
1988 Water Year
Irrigation Division Four

ROY ROMER
Governor



JERIS A. DANIELSON
State Engineer

DIVISION OF WATER RESOURCES
WATER DIVISION IV

Thomas A. Kelly
Division Engineer
P.O. Box 456
Montrose, Colorado 81402
(303) 249-6622

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Mr. Jeris A. Danielson, State Engineer
Division of Water Resources
1313 Sherman Street, Room 818
Denver, CO 80203

Dear Mr. Danielson:

On behalf of the office and field personnel of Irrigation Division Four, I submit herewith the Annual Report for 1988. It is important to identify special recognition for the water officials and staff of Irrigation Division Four who have attended to their responsibilities as employees of the Division of Water Resources in a highly professional manner.

Respectfully submitted,



Thomas A. Kelly
Division Engineer

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ANNUAL DIVISION ENGINEER'S REPORT

IRRIGATION DIVISION FOUR

CURRENT WATER YEAR

This report outlines Irrigation Division Four's water administration activities for the 1988 irrigation year. This report also speaks to routine and anticipated new water administration activities for 1989. It is intended to highlight various functions considered to be beyond the normal day-to-day responsibilities of the Division Four staff. During 1988, water administration and all associated activities were met or attended to in such a way to meet the overall duties of the division.

There are several highlights that will be identified as special accomplishments for the 1988 season. The following briefly speaks to these items.

Again, as in 1987, one of the achievements of the 1988 season is the emphasis that has been placed by the water users and the division personnel on the repair and upgrading of jurisdictional dams within Division Four.

A special activity in Division Four in 1988 involves the ongoing use of the Division Four personal computers and the assignment of an additional "Signature" IBM compatible computer for the division.

Highlights of 1988 would involve the total water supply for Division Four. The total available water supply was considerably less than the past few years. An extra effort was directed in the area of Gunnison-Uncompahgre River administration and management as it related to the Uncompahgre River and also as tributary to the main stem of the Gunnison River.

The Aurora/Neco (Arapahoe County) filings for trans-mountain diversions out of the Upper Gunnison Basin continue to generate the most activity in water court litigations. A number of court hearings have been held and the future years promise to bring even greater activity in this area.

Ongoing personnel activities in Division Four include a number of retirements, one resignation, and three new water commissioners during this past year.

Work with the Division Four Water Court remains a highlighted activity within the division. The case load during 1988 was somewhat less than previous years; however, the association with the water court continues to be an activity of significant accomplishment.

The above listed activities can be considered, in most instances, accomplishments for the 1988 year and highlights of the activities that have been addressed by the Division Four staff.

Division Four activities relative to the State Engineer's Dam Safety Program during 1988 has been successful. The division resident Dam Safety Inspector has worked closely with many different reservoir owner groups and along with the constant contact and work with the field Water Commissioners, has shown continued improvement in the jurisdictional structures in Division Four. Some of the structures that have begun total rehabilitation involve Gurley Reservoir (now awaiting final inspection), Weir and Johnson, Gould or Onion Valley Reservoir, Monument, Trout Lake, Beaver, Doughty, Brockman, Carson Lake, Purdy Mesa, Casto, and Gobbo No 2 Reservoirs. In cooperation with the local reservoir owners, private engineers and the Dam Safety Section, great progress has been made in terms of rehabilitating and repairing, and reclassifying many structures within the division. The outlet systems in a good many of the old structures are still a matter of concern; however the Leroux Creek and Surface Creek water users are slowly making the necessary repairs to the structures in greatest need. There is considerable evidence to indicate the willingness of these reservoir owners to upgrade their structures in such a way that they will be able to use full storage capacity during the coming years. The reservoir owners are heavily dependent upon their stored water for late summer irrigation, especially in the apple orchards along the North Fork valley and Cedaredge areas. Apple orchard irrigation is required at least two times after the normal high water runoff has occurred and usually the only source of water for this irrigation is stored water.

1988 began the second year of the three-year storage plan for Ridgway Reservoir. The Bureau of Reclamation plans to store water in Ridgway Reservoir in three annual increments of approximately one-third, one-third and one-third. In 1988 their target storage was approximately 65,000 acre feet; however, because of the limited runoff on the Uncompahgre River, this level was not reached. The cooperation between the Bureau of Reclamation, the Uncompahgre Valley Water Users Association and the Water Commissioners in Water Districts 68 and 41 greatly enhanced the amount of water stored in Ridgway Reservoir during this irrigation season. Daily monitoring of the satellite systems allowed the Water Commissioners to adjust diversions in such a way to maximize the storage benefits and still take care of the decreed water rights downstream from Ridgway Reservoir. The water users called for only sufficient water to take care of their day by day needs. Very little water was wasted at the lower end of the project and Ridgway Reservoir was able to store additional water on several occasions during the irrigation season. The Uncompahgre Valley Water Users called on the Uncompahgre River quite early in the irrigation season; however, with exceptional local cooperation impact on the Bureau of Reclamation for storage in Ridgway Reservoir was minor and the reservoir did reach an elevation of 6843 feet = 57,343 acre feet. Late during the season, the water users association found it necessary to call the entire Uncompahgre River system to meet their irrigation needs. This was accomplished with a minimum amount of difficulty and it was reported that this was the first instance in the memory of some of the water users that a significant amount of water was brought down through Water District 68. The "call" was on about two weeks with many concerns raised by junior water users in Water District 68. Then late summer rains and cessation of some irrigation allowed the upper District 68 to resume diversions under their junior priorities.

Early in the irrigation season the division office undertook several studies to determine the status of the diversion structures on the Uncompahgre River used by the Uncompahgre Valley Water Users Association. These studies related to direct flow, imported water, and return flow. A preliminary table was developed to indicate the location where return flow to the Uncompahgre River from the project irrigation was sufficient to make up the senior decrees of the association, and at that point it was agreed upon and determined that the "call" for water from the upstream rights would not be exercised. The ability to calculate this management process should be credited in part to the acquisition of the new Signature computer and the calculations that were analyzed and completed by Keith Kepler, Assistant Division Engineer. This first season was considered successful under this program and with additional refinement during 1989, it is felt that better use of Uncompahgre project water will result from this activity.

During the spring of 1988, a Dam Safety Clinic was given in Division Four. In excess of 150 invitations were sent to various reservoir owners and reservoir associations, consulting engineers, state and local government officials involved with dams and reservoirs, and Division of Water Resources personnel from Division Four and from adjacent water divisions. This seminar was coordinated by Jim Norfleet, Division Four Dam Safety Engineer and was sponsored by the Association of State Dam Safety Officials and the Federal Emergency Management Agency. Speakers were selected from the private sector to talk on a wide variety of subjects relative to care and maintenance, repair, and rehabilitation of dams. The quality of the instruction was good and this was a free seminar with an exceptional turnout--perhaps as much as 80 to 90 percent of those invited attended. They received notebooks with copies of the different speakers' reports. Participants came from the San Luis Valley, the Colorado River drainage, the Animas and San Juan drainage and throughout the entire Gunnison drainage area. This training was successful and should be beneficial in future years.

Computer equipment in Division Four continues to be an important resource and by mid year a Signature IBM compatible computer was added to the division's inventory. The division now has two computer systems that are used on a nearly constant basis. The Wang PC is the main source of satellite monitoring access and it was used with great intensity during the low flow times of the division river system. It is important to note that during the early part of the winter, I advised Colorado-Ute Electric Association that some type of plan would have to be initiated for Trout Lake (a Colorado-Ute power reservoir) in order to comply with the reservoir restriction. Their Engineers along with consultants worked closely with the division office. I was able to have a satellite monitoring system installed at Trout Lake Reservoir to determine the daily elevation. A workable plan was presented and approved by this office to monitor the reservoir storage in Trout Lake during the runoff season. This was the first instance in which Colorado-Ute Association was introduced to the satellite monitoring programs offered by the State Engineer's office. Colorado-Ute has ordered and is installing eight satellite systems to monitor various activities within their electrical generating systems, and a contract has been signed with the State Engineer's office to process data from these stations for this next year.

I believe the opportunity to show the management of Colorado-Ute the value of the satellite real time data access was instrumental in these arrangements. Particular commendation should be made to Chuck David who spent many hours with the Colorado-Ute personnel in installation of the original loan system for Trout Lake, and then working with their technicians and engineers in the main office in helping them to set up the process and programs to access the satellite system. Colorado-Ute is interested in water diversion and water rights in a number of locations in Division Seven, Division Four and Division Six. They also have interest in flows in other areas of the state, and it would seem this is the ideal method for the central office to monitor the activities of a number of locations on a real time basis.

Computer activity in the division has only been utilized to a limited extent, considering its potential. Some of the accomplishments for 1988 were the revision and publication of the 1988 Water Rights Tabulation. This is the most accurate tabulation that has been produced out of Division Four. Although there are still errors remaining, the work that was done to complete this warrants recognition for Chuck David and all the division full time water commissioners and several of the part time water commissioners. The job was accomplished on schedule and these individuals are to be commended for their support in this area.

In addition to the use of the computer in the tabulation and water rights data update, the computers were actively involved in the development of the annual diversion records for 1988, and I am pleased to report that all the Division Four diversion records were completed, signed and transmitted to Denver well before the Christmas holiday. Keith Kepler, Assistant Division Engineer, supervised this work. One last note relating to computers: it is interesting to note that throughout the division we have two water commissioners with computers in their homes who can access the satellite monitoring systems (Richard Belden and Robert Drexel). Other division staff (Chuck David, Keith Kepler and the Division Engineer) have PC's in their homes and are able to look at all types of water administration activities that are available in the division office from their home computer systems.

The 1988 winter snows on the different snowsheds in Division Four were less than average in most cases, and considerably less than normal water content. These conditions were a matter of concern for all water users and water officials in Division Four during the entire irrigation season. However, with the help of summer rains and mild weather, water flows on most of the drainages remained very constant for a long period of time and only isolated shortages appeared, with the exception of chronically short drainages where insufficient water supplies were experienced. Toward the end of July, The Gunnison River reached a near critical point at the intake for the Redlands Power Canal near the mouth at Grand Junction. There were two or three days of flow below their senior diversion right. However, because of rains, irrigation changes and uses, Redlands power and irrigation canal did not exercise a "call" on the Gunnison River and major administration on the main stem of the Gunnison River was not initiated. This particular water right continues to cloud the main stem of the Gunnison and the division office has been actively speaking to different groups hoping that one of the water

conservancy districts or a group of conservancy districts might contract with the Ridgway Reservoir in order to augment the flow of the Gunnison River during future times of potential "call" by the Redlands power and irrigation canal. During this season, interpretation of the statutes 37-92-401(1)(b) by the Division Engineer indicated that the Uncompahgre River water decree for the Uncompahgre Valley Water Users Association in excess of 1100 cfs absolute was senior to the Redlands Power Canal. It is anticipated this particular position would be challenged if administration was necessary. There has been an ongoing concern to the division as to how the management of a basin-wide administration would be accomplished given the prospect of a mid summer "call" by the Redlands Power Canal. Several meetings were held with division staff and water users to discuss the prospects of this activity and considerable information was made available to the public in order to not surprise any water users.

A specific study of the Uncompahgre River water decrees between Colona and Delta, Colorado was made this summer in order to try to determine the point at which return flow to the Uncompahgre River was sufficient to make up the senior water rights on the Water Users Association system. By making this determination, the water commissioners were able to allow diversion of junior water rights in the upper reaches of the Uncompahgre River to continue to divert. This is a different way of administering the Uncompahgre River and was required for several reasons. First, the dry year and shortage of water helped to begin this study, and by having the ability to catalog and use the computer to classify and determine the total decrees in priority rank, and evaluating these water rights as they relate to the supply and return flow patterns on the Uncompahgre system allowed maximum use of the water resources. It is expected that the activities of this year will be a good beginning, but additional refinement will be necessary in future years to better determine return flows and at what point the return flows make up the senior water rights. Additional spinoff from this activity is the upgrading of the project diversion structures and measuring stations for the canals from the Uncompahgre River into the project ditches. An inventory was made by the division hydrographer and a meeting was held with the Uncompahgre Valley Water Users manager. The Water Users are cooperating fully and upgrading their measuring locations in order that a better determination can be made of the return flows, diversions and overall general improvement of diversion records of the association's water rights.

In 1988 the main activity of importance with water right applications and the water court continue to center around the Aurora/Neco filings for trans-mountain diversions of water out of the Gunnison basin. These applications continue to slowly work their way through the water court. The Water Judge allowed several items of his initial ruling which involved public value, public trust and instream flow authority to be appealed to the Supreme Court. The Supreme Court in its answer indicated they would not address any of the items until such time as a complete decree was issued, and at that time the various items could be brought before the Supreme Court. Probably the two most significant aspects of the Judge's ruling involve the allowing of the Upper Gunnison Conservancy District to make filings for instream flow and not allowing the public worth or value issue to be an item of consideration in the

determination of the water rights that would be issued to Aurora or Neco. Late in 1988 the bulk of the interest of Neco Company was sold to Arapahoe County. Neco itself retained one small pumpback powerplant site, but their Union Park Reservoir and all the associated aspects of their earlier conditional decree, I understand, were transferred to the Arapahoe County. Trans-mountain diversion of Gunnison River water has been an issue of concern for most of Division Four citizens, especially the upper Gunnison basin water users and public. The court is now awaiting a report by the Water and Power Authority on the development of water resources in the Upper Gunnison basin. It is understood this report should be available by mid spring and at that time the court will continue to set schedules for hearings and various aspects of these filings. An additional interesting aspect of these filings involve the introduction of the Two Forks Project for the City of Denver as a tangent part of this application. One of the proposals made is that the upper Gunnison water storage facility can adequately take care of the Two Forks proposed use. The City of Denver has been sent several dozen letters from Dave Miller, President of Neco, criticizing Two Forks and encouraging the Union Park Reservoir System as an alternative for the Two Forks construction.

Division Four Water Judge Robert Brown has recently issued an order regarding summary judgment motions which sought to dismiss the Neco/Arapahoe County water rights on the ground that they were speculative. This order briefly agrees to many of the issues that challenged the legitimacy of the Neco application, and Judge Brown did allow much of the petition to dismiss the application of Neco by summary judgment. This was dismissed with prejudice except with some limited changes of the conditional decree which added in-place uses of recreation, fish and wildlife propagation and evaporation replacement. This order was issued the latter part of December and on the last day of December, Arapahoe County filed a complete new application under the 1988 filing date for water storage rights, surface rights and change of water rights addressing the same sources of water that were identified in the original Neco filing of 1986. Arapahoe County has also inferred that the summary judgment action by the Water Court will be appealed to the Supreme Court and one of the most evident results of this action is the litigation time before much water court activity can take place regarding the Aurora filings.

Additional activities with the water court remain very positive. The water court continues to be receptive to input from the division office. The Division Four Water Referee always requests the comments of the division office and the District Water Commissioners in almost all cases. Members of the Division Four staff have made site inspections of all proposed water right applications and have written comments available for the Water Referee and the water court. In several instances during 1988 the Division Engineer has been a participant in an evidentiary hearing to determine the validity of due diligence on conditional water filings, or the transfer of water rights. In some of these cases the Referee's ruling has been appealed and the division office has been allowed to represent their position in water court. In all cases to this point, the position of the Division Engineer and the Water Referee have been upheld by the water court. It is thought that this will continue to be a part of the activities as far as the division office is

concerned, and in most cases the division has been able to handle these activities through the water court without asking for assistance from the Attorney General's office. As in past years, the activities of the water court have been one of the highlights of the year. Water right applications for 1988 are approximately one-third less than 1987; however, there still seems to be a sufficient number to keep all Division Four staff busy. Probably the main reason for the lesser number this past year is the absence of filings by the Water Conservation Board on minimum streamflows and only a few filings by the U.S. Government on the appropriative rights for the Bureau of Land Management and Forest Service lands. The division is still uncertain as to the status of the appropriative rights filed in the early seventies regarding the thousands of small seeps, springs, and ponds by the Forest Service. At this time the ability to locate and confirm the existence of these structures cannot be accomplished by the division office. It is necessary that additional data be furnished by the U. S. Forest Service in order to better identify these locations.

Personnel activities in Division Four during 1988 continue to be an ongoing concern. Two new regular part-time water commissioners were appointed in Water District 40. Merritt Denison was appointed to the area on Minnesota Creek and tributaries near Paonia. Merritt had worked as a temporary employee in 1987, was tested in early 1988, and was high on the eligible list. In addition to that Jimmie Boyd was appointed to Water Commissioner in the Surface Creek Valley area. This is a position that was formerly held by Willard Bull and Mr. Boyd was able to train with Willard during the month of June and Willard's retirement was effective the first of July. It is important to note that this position was consolidated several years back with the Upper and Lower Surface Creek jobs into one regular part-time job with approximately eight months allocated. This year was also the first year Charley Woolley (retired November 1, 1987) was not involved with the administration of water in Water District 40. Chuck Stein is now attending to the responsibilities that Charley Woolley had on Dry Creek and Currant Creek, and also the lower Gunnison River to Water District 42 boundary. Both of these jobs appear to have been adequately attended to during this past year and it would seem that this reallocating of time and location has been received by the water using public without any great concern, and the quantity and quality of the work remain at a high level. John Garber, Water Commissioner for the past eleven years in Water District 28 retired at the first of November of 1988. John's job was filled by Wesley Robinson and Wes was able to spend a little over a month of on-site training with John prior to his retirement.

At the conclusion of 1988, three other personnel actions have taken place. Water Commissioner Roger Noble for Water District 68 resigned effective December 1st, 1988. Water Commissioner Steve Mansker retired effective January 1st, 1989, and Water Commissioner Ed Hofmann for Water District 62 will be retiring February 1st, 1989. With the resignation and retirement of these Water Commissioners, considerable restructuring of the Montrose area office is being accomplished. Ed Hofmann's replacement will involve the combining of Water Districts 41 and 62 under the full-time attention of Crandall Howard. This combining of districts will require a three-month part-time water

commissioner located in the Lake City area of Water District 62. At this writing the position vacated by retiring Commissioner Steve Mansker is being announced throughout the state with hopes that an experienced commissioner can come in and take over this responsibility. This particular job will have a redefining of the responsibilities and will function as a general utility commissioner who can work in a number of different areas that are needed anywhere in the division.

Finally, with the resignation of Roger Noble of Water District 68 at Ridgway, this office will be asking for an announcement of a part-time six to eight-month commissioner job to be located in the Ridgway area to attend to the Water Commissioner duties. The net result of all this activity in the Montrose office has been the moving of part-time Crandall Howard to a full-time water commissioner job combining District 62 with the District 41 and the changing of the District 68 to a part-time position with a net gain of one FTE, and the appointment of a three-month part-time commissioner for the Lake City area in District 62. After careful consideration by the division staff, it was concluded that one FTE in Division Four is now surplus and has been identified as such to the State Engineer.

The Division Four office is the principal source for diversion data and water decree information. Water user groups, conservancy districts, large canal companies, state and federal governments, land developers, attorneys, and consulting engineers are regular visitors to the field commissioner homes and the division office. Their requests concern all aspects of water administration and water use throughout the division. The division staff is involved in "water meetings" with various entities concerning administration, dam safety, groundwater needs, water diversion control structures, and other miscellaneous activities.

It is impossible to visit all diversion structures in Division Four during the irrigation season. It is necessary that water user reports be identified as an official record, and in some instances, the water official must make choices as it relates to securing diversion records, or attending to other water administrative concerns. Water Commissioners continue to experience increased demands, and very often, insufficient time to attend to all the responsibilities of their jobs, and the water-using public is requiring better diversion records. During 1988, the division was able to make some progress in the mapping of irrigated acreage, and an inventory of the amount of irrigated acreage was made finding the division close to completion in a number of water districts.

Again, as in past years, the water commissioners were requested to continue identifying new decrees and diversion records. In 1988 there were modest increases in several districts. However, many of the water rights have only a minimal type of diversion record. From 1982 to 1986, average, or above average water supply was available. Early or late administration needs are during the dryer years. The 1988 season water supply was less than 1987; however, when the season ended, we found there was sufficient personnel resources to complete the year without any undue hardship. In the event of a much less-than-average year, certain adjustments would be necessary to manage

the responsibilities of the division and also remain within the allocations for Division Four.

1989 WATER YEAR

Water right filings continue to have time and budget impact throughout Division Four. This is not considered a negative impact; however, it requires planning and setting of work priorities by all employees. These activities affect the majority of the division staff and require additional field attention in the areas where heavy filings take place, i.e., Upper Gunnison Basin, parts of San Miguel drainage (Telluride area), upper Uncompahgre drainage, and many areas throughout District 40. The required special attention and administration of water right augmentation plans are adding additional workload to field personnel and division office staff.

The completion of Ridgway Dam and Reservoir was an administrative concern this past year and continues to be a potential problem. The Bureau of Reclamation has constructed a gaging station below the reservoir and it is to be operated by the U.S.G.S. It will have a satellite station which will allow this office to retrieve real time discharge data. This is important in terms of additional studies involving the administration of the Uncompahgre River along with the imported water from the Gunnison River as it relates to the Uncompahgre Valley Water Users Association. As mentioned earlier in the report, a study of the water rights of Uncompahgre Valley Water Users Association will be an ongoing activity of the division in trying to develop as good a data base as possible to determine the management and administration of water rights owned by the association.

Additional attentions during the 1988 water year will be the continued monitoring of the dam safety activities within the division. Division Four still has nearly forty restricted reservoirs and this office will be monitoring these reservoirs regularly in order to determine their compliance with the restriction. Communicating with the reservoir owners and encouraging correction of these deficiencies will continue to be a high priority. In most instances the reservoir owners are willing to make repairs and rehabilitation. Reservoir owners have experienced several years of poor revenue and have difficulty raising resources to make repairs. There appears to be a commitment on the part of most reservoir owners to continue to improve their structures. Good communications with reservoir owners and water users will have a high priority for the division staff in 1989.

Additional public meetings will be held as necessary when a problem or concern is brought up and communication is constantly urged to continue between the water users, the division staff and the dam safety engineer. Division Four will continue to work toward an ongoing improvement of measuring devices and diversion structures. Improvements are appropriate in many areas throughout the division and a higher quality diversion record is demanded. In addition the division will continue to work toward improvement of water administration and to keep as current as possible in the ongoing review and consultation of the new water right applications with the water court. We plan to pick up and conclude the few water cases that are outstanding. Division Four continues

ongoing instruction with the field personnel concerning water administration, record keeping responsibilities, being sensitive to the public concerns as they relate to water users' needs, and responding in an accurate and timely fashion.

Activities for the coming water year include a more active role in identifying non-permitted wells, non-jurisdictional dams, and reviewing and determining the sources of water that are applied for in water right applications. During 1988, the office had two general staff meetings of full-time and near full-time employees. They were held in a private environment and each individual was encouraged to be very candid in all aspects of the discussion. A ten or fifteen item agenda was developed by myself and all of the water commissioners were encouraged to participate in every aspect of this meeting. The input given through this type of meeting has been extremely useful in planning and weeding out certain thoughts and ideas in establishing new directions and programs. The division will continue this type of meeting and plan to have one prior to the beginning of the irrigation season, and a second one at the conclusion of the irrigation season.

New work projects that are planned for 1989 involves the development of a general methodology for the Gunnison basin as far as daily real time accounting of the diversions and storage of water from the headwaters above Taylor Reservoir and Crested Butte down through the Curecanti systems, and on past the Delta area to the confluence of the Colorado River. It is hoped that a computer program can incorporate all these activities and generate a better picture of the overall use of water and movement of water throughout the main stem of the Gunnison River.

Division Four is already in the process of generating potential structures to be considered for the 1990 abandonment tabulation. On-site inspections and research of diversion records and ownership for notice will be part of the 1989 activities. In addition to the on-site inspections, polaroid photos will be made of all the structures or non-structures and adequate data bases will be assembled in order to have an acceptable and defensible abandonment list ready for the 1990 abandonment.

Additional projects for 1989 involve training needs of the special water commissioner to be assigned to the Montrose office and also to the new replacement commissioners in the vacant water commissioner slots. The division is already recommending a one-day dam safety class with the prospects of approximately ten members of Division Four staff attending. At least five of the commissioners that will be attending have never had an opportunity to attend a dam safety class.

The PACE evaluation has been a less-than-successful activity. Hopefully, this will become more meaningful to the division office and the field water commissioners. It is understood that a more simplified system will be ready by mid summer and if this is the case, this office particularly welcomes this reassessment of the evaluation system. It is certainly important that an adequate evaluation system be initiated. The present PACE evaluation has something lacking in terms of specific identification to the unique jobs of the water commissioners.

RECOMMENDATIONS

As I have identified in previous reports, the ability to meet unforeseen personnel budget needs with such a structured allocation of time is very difficult. At the present time, this office has been able to adequately take care of the part-time water commissioner needs during the spring and fall period; however, given a particularly short water year, or early spring, or late fall administration, shortages may occur that might impact the ability to adequately administer the water resources of Division Four. Water District 40 would be the most vulnerable to this type of activity because of their large number of part-time employees. To date we have been able to allocate the resources in such a way to meet the unexpected demands; however, it is recommended that some consideration be given to special demands and conditions.

Along with budget needs, the consideration for replacement of several of the older state operated vehicles continues to have a high priority. The new position of Crandall Howard almost dictates the need of a dependable four-wheel drive vehicle to be available by April 1, 1988. At present, Crandall Howard's vehicle is an old Dodge pickup which has over 120,000 miles on it. Crandall and Clint Oliver have two of these old pickups each of which are past their dependability stage. Through their own efforts, they have replaced certain parts and have made their own repairs on them. Neither of the pickups are of sufficient value to warrant any great expenditures. The pickup located in the Paradox area of Clint Oliver's is used primarily to access the Buckeye Reservoir which most often requires four-wheel drive. Crandall Howard's new job will require a four-wheel drive vehicle to travel approximately 20,000 miles or more a year. It is thought that even a used vehicle with half the mileage would be more appropriate at this time, and more dependable than his present one.

LITIGATION

This has been identified in an earlier part of the report and requests have been made of the State Engineer to be a party of the Aurora case (which he is), as well as recent filings on the Dominguez Reservoir. These are considered precautionary measures where the Attorney General can be a party. The Dominguez filing appears to be speculative in nature and I believe the Water Referee will address that; however it is recommended the State Engineer be a party to these activities in case they become more legally complex. As indicated earlier, the Water Judge has allowed the Division Engineer to represent the Division of Water Resources in several evidentiary hearings. However, he continues to urge the Division Engineer to be represented by the Attorney General in any matter that is considered legally complex.

MISCELLANEOUS

As indicated in last year's report, the Division Four office has been contacted intermittently concerning construction or leasing of a state office building in Montrose. It was finally concluded on my part that this was not going to take place. Therefore, I contacted the Montrose County Commissioners concerning some remodeling work on the division office in the Montrose County

Courthouse. Additional work was accomplished this past year with another air conditioning system installed. The offices are somewhat cramped; however, they are adequate for the present time. Office rent in the courthouse is \$6.50 per square foot which is considered a reasonable cost for office space in Montrose. With the reduction of one FTE position in the Montrose office, there should be sufficient space for several years to come. It should be noted that Montrose County elected two new County Commissioners who may have a different philosophy in office space. The District Attorney's office for the Seventh Judicial District is located across the hall from the division office and they continue to make encroachments on office space located on the third floor of the courthouse. It is not certain as to how the new Commissioners and new District Attorney will impact the present office status.

During 1988, efforts were made to contact various legislators who represent the areas of Division Four. It was a pleasure of the division office to tour with the Joint Budget Committee during the summer months. Their particular interest was in the reservoir inspection activities, and the time spent with these legislators was beneficial. Contact has been made with various members of the State Legislature. Telephone calls have been made and all Legislators have been invited to visit the division office and some personal contact has been made with local House Representative persons at different water related meetings in the Division Four area.

Governor Romer held a "Capital-for-a-Day" program in Ouray this past fall. This office was represented and meetings were held with the Governor, Director of Natural Resources, the City of Ouray and interested geothermal water users in the Ouray area. The City of Ouray has been involved in testing for geothermal fluid resources and there is considerable concern by several of the present water right decree holders who own and operate motels utilizing the geothermal fluid, one instance being a well known health spa. This is an activity that will be ongoing and continue to require attention from the State Engineer's office and groundwater office. It is considered to be of sufficient importance to urge continued attention by the State Engineer's groundwater section.

OTHER

During the past year, the division has attended a number of local meetings concerning Division Four water-related matters. Meetings have been held primarily in Gunnison, Montrose, Delta, and Norwood. Some of these meetings have dealt directly with ongoing studies of water resources in the Upper Gunnison Basin or the San Miguel Basin. The Division Engineer is on the advisory committee of the Upper Gunnison Study and has attended the majority of those meetings as well as several meetings regarding the changing of the Black Canyon National Monument to a national park. Generally, any type of water related activity has a representative from the division office attending. The Upper Gunnison Study has required several trips to Gunnison and it is anticipated it will be completed by mid to late spring.

During 1988 several additional plans of augmentation were decreed. However, because of general sufficient water supply, there was a minimal amount of

administration of these plans throughout the division. Each water district spent some time in identifying and inventorying these plans and the ability to administer them when the necessary call comes on the river. One of the early activities of the division staff in mid spring will be to review the status of each of the augmentation plans and see that necessary structures exist in order to properly allow administration during times of "call".

In 1988 many of the tributary streams to the Gunnison River placed "calls" on their stream systems. Specifically, Surface Creek area, Kannah Creek area, and individual tributaries to the Gunnison River along the North Fork of the Gunnison, and some areas tributary to the San Miguel had "calls". Water administration in many cases continued to the first of November or at such time as irrigation is curtailed. "River calls" are kept individually on all tributaries and a file is kept for future reference in the division office.

Division Four activities for 1988 were wide and varied. The division experienced below-average water supply, high demand for available water resources, above average turnover in division personnel, and a number of unique administrative and legal activities. The division staff has adequately attended to all of the responsibilities required, and in many instances potential problems were anticipated and met with successful results. 1988 was a good year for Division Four. The division staff worked with a high level of competency and at the writing of this report it has been considered a successful year.

1988 TRANSMOUNTAIN DIVERSIONS SUMMARY

<u>WD</u>	<u>NAME</u>	<u>SOURCE</u>	<u>RECIPIENT AND/ OR CLAIMANT</u>	<u>AMOUNT A.F.</u>
28	Outflow Larkspur Ditch	Tr. Tomichi Creek	Catlin Canal Co.	60
28	Outflow Tarbell	Cochetopa	Cochetopa Land & Wtr. Saguache, CO	195
40	Inflow Leon Lake	Leon Creek	Floyd McPherson Cedaredge, CO	1,617
40	Outflow Divide Cr.Highline Feeder Ditch	Clear Fk. Muddy Cr.	F.M. Starbuck, Mgr. Silt, CO	1,357
42	Outflow City Pipeline	Kannah Creek	City Grand Junction	930
42	Outflow New City Pipeline	Kannah Creek	City Grand Junction	2,534
42	Outflow Redland Canal	Gunnison River	Redlands Water & Power	541,342
62	Outflow Tabor	Tr. Cebolla Cr.	Colo. Div. Wildlife Monte Vista, CO	384
68	Inflow Red Mountain Ditch	Mineral Creek	Ouray Ditch Co. Montrose, CO	No Diversion
68	Inflow Carbon Lake Ditch	Mineral Creek	Pinon Ditch Co. Colona, CO	No Diversion
68	Inflow St. John Ditch	E. Fk. Animas River	Charles, Gunn & Worley c/o W. Worley Olathe, CO	No Diversion Structure Not Usable
68	Inflow Mineral Pt. Ditch	Burrows Creek, tr. N. Fk. Animas River	W. Gibbs Ouray Co.	No Diversion
73	Outflow Fruita Pipeline	Little Dolores Cr.	Fruita	No Diversion

WATER DIVISION FOUR IRRIGATION SUMMARY 1988 ACRE FEET

W D	STREAM TO STORAGE (1)	STREAM TO IRRIGATION	STORAGE TO IRRIGATION	ALL OTHER SOURCES TO IRRIGATION	TOTAL TO IRRIGATION	ESTIMATED ACREAGE	AVERAGE AF PER ACRE
28	921	144408	0	0	144408	34391	4.20
40	3936	355015	61644	20	416679	120210	3.47
41	0	61768	158	477904(4)	539830	109890	4.91
42	7901	18141	2034	0	20175	8352	2.42
59	75653(2)	280031	155	0	280186	35220	7.96
60	11010	87688	9439	1285	98412	29750	3.31
61	69	6907	1022	3940	11869	3644	3.26
62	249118(3)	113031	9454	229	122714	39250	3.13
63	50	21930	1245	0	23175	2887	8.03
68	763	97936	0	4328	102264	23686	4.32
73	48	7571	0	143	7714	2553	3.02
TOTALS	349469	1194426	85151	487849	1767426	409833	

(1) Includes storage for all uses.

(2) Primary storage facility is Taylor Park Reservoir, releases not charged to irrigation in Water District 59.

(3) Includes storage in Curecanti Unit.

(4) Includes both natural streamflow and Gunnison Tunnel diversions to Uncompahgre Valley Water Users Association.

DIVISION FOUR NON - IRRIGATION SUMMARY										1988		ACRE FEET		
W D	STREAM OR RESERVOIR TO MUNICIPAL	GROUNDWATER TO MUNICIPAL	GROUNDWATER TO IND COMPL.	OR	IND COMPL.	STREAM OR RESERVOIR TO COMPL.	OR	IND COMPL.	GROUNDWATER TO IND.	STREAM TO POWER	RESERVOIR TO POWER	STREAM TO POWER	RESERVOIR TO POWER	STREAM TO OTHER USES
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	5237	0	0	0	0	0	0	0	126	0	0	0	0	39471
41	3815	0	0	0	0	0	0	0	0	0	0	0	0	24112
42	329	0	0	328	0	0	0	0	0	0	0	0	0	541855
59	0	1500	0	0	0	0	0	0	0	0	0	0	0	0
60	84	24	22	0	0	0	0	0	0	0	0	0	0	81
61	0	0	0	0	0	0	0	0	0	0	0	0	0	1120
62	0	0	0	0	0	0	0	0	0	1144970	390724	11531	11531	11531
63	0	0	0	0	0	0	0	0	0	0	0	0	0	2220
68	0	0	0	0	0	0	0	0	0	0	0	0	0	1102
73	0	0	35	0	0	0	0	0	0	0	0	0	0	150
TOTAL	9465	1524	385	126	1144970	390724	621642	621642	621642	621642	621642	621642	621642	621642

WATER DIVISION FOUR

SUMMARY OF VISITATIONS AND STRUCTURES

WATER DISTRICT	NUMBER OF OBSERVATIONS	TOTAL STRUCTURES	STRUCTURES WITH 88 RECORD (2)	AVERAGE # OF OBSERVATIONS PER STRUCTURE WITH RECORD	% OF TOTAL STRUCTURES WITH 1988 RECORD	TOTAL ACTIVE STRUCTURES	INACTIVE HISTORIC STRUCTURES
28	2,029	729	219	9.26	30	401	327
40	27,671	2,374	776	35.6	32	1788	582
41	4,458	508	76	58.6	15	285	220
42	5,686	328	153	17.3	47	227	61
59	1,313	1,041	195	6.7	19	885	154
60	2,011	1,161	261	7.7	22	967	154
61	1,559	138	45	34.6	33	98	37
62	(1)3,186	919	205	15.5	22	838	77
63	1,137	210	147	7.73	70	139	46
68	1,476	879	139	10.6	16	669	210
73	208	120	74	2.8	61	91	16
TOTALS	50,734	8,407	2,290	206.39		6388	1,884

(1) Includes U.S.B.R. records for Curecanti Units

(2) Several of these structures have more than one type of record

WATER COURT ACTIVITIES

No. Applications for Decrees 183

No. Consultations with Referee 508

No. Decrees Issued by Water Court 294

Type of Decree

Surface Water 203

Ground Water 42

Reservoir 46

Transfer 1

Alternate Point 5

Change of Use 1

Plan Augmentation 6

In-Stream Flow 11

Cancelled 26

No. Structures in Decrees 567

Types of Structures

Ditches 339

Reservoirs 92

Wells 136

TABLE OF ORGANIZATION - PERSONNEL

IRRIGATION DIVISION NO. 4

Division Engineer - Thomas A. Kelly
Assistant Division Engineer - Keith C. Kepler
Secretary - Jean Kurtz
Typist A - Betty Pottberg
Hydrographer - Charles G. David
Resident Dam Safety Engineer - James G. Norfleet

<u>Water District 28</u>	<u>Water District 40</u>	<u>Water District 41</u>
WATER COMMISSIONER ** John S. Garber Wesley Robinson	PR. WATER COMMISSIONER *Richard L. Drexel SR. WATER COMMISSIONER *Robert H. Starr	WATER COMMISSIONER Crandall Howard
<u>Water District 42</u>	WATER COMMISSIONERS Jimmie Boyd **Willard N. Bull Merritt Denison Henry LeValley Albert Mahannah Kenneth Mahannah John L. McHugh James Miller L. Gregg Scott Charles E. Stein Stephen W. Tuck	<u>Water District 59</u>
SR. WATER COMMISSIONER * Richard Belden WATER COMMISSIONER Jack Carter		WATER COMMISSIONER Robert Drexel
<u>Water District 60</u>	<u>Water District 61</u>	<u>Water District 62</u>
WATER COMMISSIONER Lyman D. Campbell	WATER COMMISSIONER Clinton L. Oliver	WATER COMMISSIONER ** Edwin S. Hofmann
<u>Water District 63</u>	<u>Water District 68</u>	<u>Water District 73</u>
SR. WATER COMMISSIONER * Richard Belden WELL COMMISSIONER ** Dwayne Mansker	WATER COMMISSIONER ***H. Roger Noble	SR. WATER COMMISSIONER *Richard Belden

*Annual
**Retired
***Resigned
****Retire January 31, 1989