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WATER RESOURCES
STATE ENGINEER
D.P.O.

ANNUAL REPORT
1989 Water Year
Irrigation Division IV

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1989 ANNUAL DIVISION ENGINEER' S REPORT

IRRIGATION DIVISION IV

I. CURRENT WATER YEAR

A. 1989 Accomplishments--Summary

Nineteen eighty-nine was a severe drought year in Water Division IV. As this report is written, the drought conditions continue and our greatest concern at the closing of irrigation year 1989 is whether we will gain sufficient precipitation this winter to bring an end to this drought. Also this year, statutory requirements for the water rights tabulation and abandonment lists demanded our attention. Some changes in staff and periodic vacancies required that the staff respond to changing priorities.

Briefly, 1989-90 accomplishments are as follows:

Water rights administration was much more complex due to the drought situation this year. A warm period during March shrank the available snow pack, resulting in about 65-70 percent of the average annual irrigation season stream flow being available in much of Division IV. In some places this meant only the most senior water rights were able to divert water.

The low stream flow was aggravated by less than normal precipitation. The May through September precipitation in Montrose and many of the other lower valley areas was around 70 percent of normal.

The dry season caused a need for administration in several areas not normally administered. Most notable was a brief 3-day period when we curtailed junior water rights to meet a main stem call on the Gunnison River placed by the Redlands Canal for their 670 cubic feet of water per second decreed for irrigation and power use. The Redlands Canal had not been short of water since 1977. However, last year the flow at the Redlands Canal nearly reached the low 670 cfs.

Division IV has taken steps to become more involved in ground water and well drilling following an incident regarding an oil exploration hole near Crawford. The Division staff, together with the Denver staff of the Division of Water Resources, was involved and assisted the Oil and Gas Commission in an investigation aimed at having a driller correct problems in that area.

In 1989 Division IV restructured its program for control over water well construction. First contact responsibility for overseeing well construction is now with the District Water Commissioners. This has been at least partially successful. Some additional training and encouragement will be necessary to gain more interest on behalf of water commissioners.

The dam safety program is showing real effectiveness now that it has been operated from the division office for two and one-half inspection seasons.

I would particularly like to note that nine dams (25%) have been removed from the restriction list as a result of repair or remedial actions by the owners.

Significant progress has been made toward improving our water rights data base and developing information for the 1990 abandonment list as required by statute.

These accomplishments are but a few highlights of the many that have been made. Individual program summaries and accomplishments are included in the paragraphs that follow.

B. 1989 Water Year Administrative Summary

Nineteen eighty-nine was an extremely dry water year in Water Division IV. The runoff was much lower than normal in Water District 28 located on the south side of the upper Gunnison basin. Upper Cochetopa Creek required administration this year as did Pass Creek. The administration of Tomichi Creek is particularly difficult because it rarely requires administration and had not been administered since 1977; however this year it was necessary to curtail junior rights on Tomichi Creek between July 3 and July 18. Most of the ditches are not equipped with headgates.

The North side of the Upper Gunnison basin was also significantly drier than normal. In Water District 59, Ohio Creek was put under a management system starting on June 28. The East River was water-short, but the same rancher operated the land under both the calling and historically called-out ditches this year, and chose not to call. Some administration was required on Cement Creek. Many of the smaller streams in Districts 59 and 62 that drain into Blue Mesa Reservoir became nearly dry as the irrigation season progressed. Blue Mesa Reservoir did not fill this year. In the upper Gunnison basin hay production varied; rains in late July resulted in better yields for those who waited until later than normal to cut their hay.

Water District 40 had a shortage in available streamflow. Early in the season there was conflict within some ditch companies over whether to call out storage to fulfill direct flow decrees. Quite a bit of water was able to be stored, in part because the many owners of the storage rights elected not to call out their own storage by exercising surface rights. In April and May many surface decrees were being filled, but by July 1 only the most senior water right on Surface Creek was able to get any water. This number one water right on Surface Creek was the only right which remained in priority through the rest of the summer months. On other creeks in District 40 the situation was much the same. Only the most senior water rights were able to get direct flow water once we got into the middle of the summer.

On top of Grand Mesa in District 40 the amount of water in storage in reservoirs at the beginning of this summer was 84 percent of capacity. Carry-over from the prior irrigation season was 32 percent of capacity. The 1989 crop production in Water District 40 was fairly good because reservoir water was available. There was a little apple damage due to hail and frost. Those depending on direct flow water had very little water available to them.

At this time The greatest concern of the drought in Water District 40 is that as of October 31, 1989, only 14 percent of reservoir capacity was being carried over. Between October 31, 1989 and January 1, 1989, there has been no measureable gain in the reservoirs. Thus it will take a good snow pack just to get the reservoir storage back to a safe amount.

The Uncompahgre valley including Water Districts 41 and 68 had about 70 percent of average stream flow this year. Since 1961 April-September stream flow at Ridgway was lower only in 1977. May-September precipitation at Montrose was 64 percent of normal. Also this year, the U.S. Bureau of Reclamation was trying to obtain a partial filling of Ridgway Reservoir for purposes of testing the safety of this newly constructed dam. In the upper part of the Uncompahgre basin, Dallas Creek was on call in early June. On June 29 the Uncompahgre Valley Water Users Association placed a call on the Uncompahgre River effectively calling out junior water rights on the Uncompahgre River and on Cow Creek. The call by the UVWUA controlled the river from June 29 through the remainder of the summer. We were able to turn some water rights in District 68 back on after rains near the end of July helped in supplying water to meet the UVWUA decrees.

In Water District 60 the April 1 snow pack was about 70 percent of normal. However, stream flows remained surprisingly good through the summer despite the very low snow pack. The San Miguel River was not placed on call until August 31. That call lasted until the end of the irrigation season. Maverick and Naturita Creeks went on call on August 1. One of the larger irrigated areas in Water District 60 is Wrights Mesa around Norwood which is fed by several smaller streams which fill reservoirs. In that area our water commissioner estimates that the hay crop was about 75 percent of normal.

The Paradox Valley, Water District 61, had one of its driest year in history according to our water commissioner's report. The Water Commissioner has indicated that people purchased seed based upon early indications of a good snow pack, however that snow pack was lost during March, and as a result there was an extreme water shortage. Some fields were abandoned as limited water supplies were concentrated on keeping more important fields alive. He reports a small grain yield between 25-35 percent of normal and a corn yield of 65 percent normal. Many of the irrigation wells in the valley which are not used during average years were pumped for the first time in many years.

Located on the main stem of the Gunnison River near Grand Junction, the Redlands Power Canal notified this office early in the season that they wanted to exercise their water rights at such time as they became short of their 670 cfs decreed rights. The river sank below this amount on Friday, July 21, 1989. Because the North Fork of the Gunnison River and the Uncompahgre River were already under administration from senior calls, the call by the Redlands Canal only affected the lowest portion of those streams.

At the time the Redland's call went into effect, the Bureau of Reclamation was releasing approximately 1400 cubic feet per second from Blue Mesa Reservoir. Of this about 1100 cubic feet of water per second was being diverted by the senior right of the Uncompahgre Valley Water Users to the Gunnison tunnel. Three hundred cfs remained in the Gunnison River. The 1400 cfs was considerably in excess of the inflow to the reservoir.

Because of upstream administration and operations, only those water rights in downstream areas needed to be curtailed in the administration of the Redlands call.

The Redlands Canal Company was short of water beginning July 21, 1989. Junior ditches in this area were curtailed beginning Friday afternoon and Saturday morning, July 21 and 22, 1989. During that weekend, there was a good rainstorm which increased the river flow and junior ditches in the lower end of the Gunnison were allowed to turn back on July 24, 1989. For the rest of the season, rainfall and return flow were sufficient to meet the 670 cubic feet per second demand at the Redlands Power Canal.

C. Dam Safety Program

The Dam Safety program in Division IV is showing significant accomplishments in terms of actual dam improvements and public acceptance. As noted earlier, nine dams have been removed from the restriction list as a result of repair or remedial actions. This leaves 27 dams remaining on the restriction list. There were 100 dam inspections conducted by the field engineer, 38 dam inspections by water commissioners and a few by division office staff. A major repair was undertaken on the Onion Valley Dam in Water District 40. Review of plans for repair by the Division IV dam safety engineer has helped dam owners expedite needed repairs.

D. Hydrographic Program and Satellite Monitoring

A major 1989 accomplishment in the hydrographic program has been the relocation of a gaging station on the South Canal with a satellite link which transmits data from two separate measurement points. The hydrographic program was extremely important in administration of water rights during this drought year. In addition we were able to train two water commissioners to make current meter water measurements. We are hoping to further develop our hydrographic program in future years.

E. Division Information Systems Activities

Division IV now has a Wang computer and an IBM compatible Signature AT computer in Montrose plus a Signature XT computer in Cedaredge. We are hoping to obtain a state owned computer for our Grand Junction office in the very near future. A high level of use is made of all Division IV computers. During 1989, Division IV made a major effort to clean up the tabulation of water rights. The water rights data base and structure information file is now accurate enough to use for many administrative tasks, including daily water administration, the abandonment program, and training new water commissioners.

F. Division Involvement With Water User Community

In 1989, much of the divisions involvement with the water user community revolved around administration during this drought year. In addition to the contact the water commissioners had directly with water users, this office issued news releases whenever significant calls affected a large portion of the stream. These news releases helped greatly since junior water users

anticipated that their ditches would be called out and were prepared for the water commissioner's visit. We have had various meetings with water users groups and public officials, however our program in this area has not been as great as we would desire due to other demands. The development of springs and small reservoirs for fish ponds is becoming more and more of a problem in Division IV in the eyes of holders of downstream senior water rights. Early this spring we issued a letter to approximately 50 excavation contractors throughout the Division informing them of statutory requirements for the construction of small nonjurisdictional dams and the development of springs. Late this summer we spent considerable time dealing with water users in the Cedaredge area who were concerned about upstream development of ponds in the Horse Creek and Young Creeks areas.

G. Water Court Activities

Division IV water officials continue to conduct an individual field inspection for each new water right claim. A field inspection of each new application is necessary to assure valid rulings. One hundred eighty-five applications were filed in 1988, and we expect about 250 applications to be filed in 1989. We continue to resolve most cases through consultation with the referee. Statements of Opposition and involvement of the Attorney General is required in very few cases each year.

H. Staff Actions and Changes

The appointment of Division Engineer Tom Kelly to the position of Assistant State Engineer in the summer of '89 was perhaps the most significant personnel change that Division IV has had. Tom's leadership and smiling face are certainly missed in Division IV. Becky Nichols was hired in April of '89 to serve as a water commissioner-at-large operating out of the Montrose office. Delays in filling the vacancies for water commissioner in District 68 required that we ask Becky to start her duties by overseeing District 68 while we continued our search for a replacement. Becky continued in that function until we rehired Roger Noble. Ms. Nichols served in Division IV until October of '89 at which point in time she accepted a position as water commissioner for District 10 in Water Division II. The position Ms. Nichols occupied is now vacant and we are hoping to fill it soon.

Wes Robinson was hired in the fall of 88 to train for the water commissioner position for District 28. This season, he served his first full season of duty. Ed Hofmann retired as water commissioner for Water District 62 during the past winter. Although Ed is retired, he is now working for us on a part time basis and served as the deputy water commissioner in Lake City during the summer. Steve Mansker retired from the Division of Water Resources this past winter after many years of service.

I. Continuing Challenges in Division IV

There are several continuing problems in Division IV which need to be further addressed in future years. First, is the matter of the small encroachments upon senior water rights occurring through the development of dams and springs. This is a problem which is being noticed by the water users in the more water-short areas. The problem exists as a result of people buying

tracts of land, generally over 35 acres, in upstream mountain areas, and immediately putting in a dam or developing a spring without consideration of statutory requirements to notify this office, and without provisions for administration within the priority system. When this office learns of the structure, we often take enforcement action. This office has written a letter to excavation contractors and has worked with the Soil Conservation Service and other people and agencies to try to explain the statutes in this regard. We hope to do more to gain cooperation so that people will get the approval required by statute from this office prior to construction of these dams, or prior to excavation in the development of a spring.

In Ouray competition for geothermal resources continues with the city proposing to begin testing on some of their geothermal wells. Hotel owners with rights to hot springs are concerned of possible injury. There is some possibility that a stipulation will be reached in this matter, and yet it would appear that geothermal issues will continue to be important in Ouray.

Aurora and Arapahoe Counties have now reached an agreement on certain aspects on their proposals to withdraw water from Taylor Park for transfer to the Eastern Slope. It is expected that these cases will be ongoing but that there will be an increase in momentum due to increased political and economic feasibility of the project resulting from the Aurora-Arapahoe cooperation.

J. Problems Which Were Not Addressed During the 1989 Irrigation Year

Division IV was able to address most of the important problems during this irrigation year. Two areas show potential for improvement in future years. First, we would like to obtain more records for more structures and to administer our water more closely. We are also hoping to improve our performance in policing water well construction. Also, we will have to do more in the administration of augmentation plans.

I am looking toward additional training and motivation to improve performance in some of the areas which are beyond the traditional water commissioner's duty of surface water administration. Some areas for increased training include: well permitting requirements and well construction, reporting on field inspections for applications to the water court, and continued training in the water rights data base.

K. Workload

This has been a very demanding year in terms of work load because of a number of factors. Most noteworthy is the work done toward bringing the tabulation up to date and the preparation toward the 1990 abandonment list. Because of timetables set forth by statute, both of these tasks were required during the same year. The tabulation involved checking water right decrees, and making sure they were correctly entered in the water rights data base. The abandonment program involved reviewing decrees in the water rights data base, and then field checking to verify if the structure being considered for abandonment was serviceable and had been used, and could carry the amount of water decreed as absolute. The dry water year required considerably more time be spent on administration, particularly prior to July 15.

Additional duties are being asked of the water commissioners each year. In prior years we have asked for more water commissioner involvement in the field inspections for proposed applications for water rights. This has been particularly effective in preventing improper filings. It has however, demanded some additional time. Water commissioners are required to inspect low hazard dams in their districts. This year we are asking the water commissioner to have a more active role inspecting wells. Because of an increasing need to document our activities, each water commissioner is also expected to do more paper work each year.

The result of the increased water commissioner responsibilities are twofold. First, we are not able to do as thorough a job as we would like in some areas. We were not able to increase our records by adding additional structures this year. More time could have been spent on the abandonment list. I think that the program of having the water commissioners be the principal contact for water well enforcement was not entirely successful due to other demands on the water commissioners time. In each of these areas, I believe a more thorough job could have been done, and I am hoping this will be accomplished in future years.

The second impact of increased water commissioner responsibility is the need for additional skills and a higher level of skill. Our need to have a report for field inspection of a water court application, or for a proposed structure for abandonment, or for a field inspection of a well, requires each water commissioner to be able to write a clear, concise, narrative report. We now expect the water commissioner to have a good understanding of the fairly complex codes and mechanisms we use in the tabulation and records. Division IV now also has at least four water commissioners who have a good understanding of the basics of operation of the personal computer, and many more are involved in data input for their records. Division IV has computer facilities available in the Montrose and Cedaredge offices, and the water commissioner's own computers have been used for state purposes in Grand Junction and Gunnison. We need to begin to recognize the need for new and advanced skills in the writing of PC8 job descriptions in job announcements, and in defining job requirements, and in the classification grouping assigned by the Department of Personnel.

In summary, the effect of the increased workload, and a demand new skills has caused an evolution among the staff. The water using world is becoming more highly technical, and our water commissioners are responding as the demand requires. Although this may mean some lessening or simplification in other duties, I feel that we have a better program each day, and that each day our personnel is learning more and doing a better job.

L. Impact of the Budget

Allocated operating and travel monies were not sufficient for us to conduct our jobs to the best of our abilities. Review of historical budget information indicates that the budget has remained nearly the same for the past eight years; however, there has been a number of increases in costs. Division IV has welcomed the dam safety program and is continually expanding its involvement in wells, satellite monitoring and hydrography, water court activities, and public relations and community involvement. The operating and

travel budget has not kept up with increased responsibilities, increased workload and inflation.

Telephone expenses represent approximately 11 percent of the Division IV budget. Those telephone costs have nearly doubled in the past six years. Another area that has shown a significant increase is the operational cost for state vehicles. These operational costs include repairs and fuel on state owned vehicles and mileage fees for state leased vehicles. These expenses have increased from \$4000 to \$7000 over the past 8 years, and are expected to increase even more as two additional leased vehicles are brought on line. Those new vehicles are desperately needed since the two old Dodges which will be replaced are no longer serviceable.

II. THE COMING WATER YEAR

A major concern for the coming water year is that if we do not get an abundant snowfall, we will have a continued drought. Reservoir carry-over on Grand Mesa is only 14 percent of capacity; this is an insufficient amount to offer any security for the upcoming water year. Additional tasks and items to be considered for the upcoming water year are: 1) review the list of critical streams, 2) continue work on the determination of irrigated acres so that we may better know the consumptive use of water occurring in Division IV, 3) develop a better public relations program, communicate more with the public and let the public know what we do, and 4) develop a better hydrographic program.

A. Hydrographic Program

To improve the hydrographic and satellite monitoring programs, additional support from Denver will be needed. In future years we would hope to obtain final records from U. S. Geological Survey to overwrite preliminary data in the satellite system. In addition we would like to dump data to an ASCII or dBase compatible file from the satellite monitoring system. We have identified four stations we would like to add to the satellite program either for administration use, or for purposes of developing better accounting on the Gunnison River.

We would also like to provide better hydrographic support to the water users during the upcoming year by rating more diversion structures. One of the long term goals of the division has been to develop an accounting system for the Gunnison River at Gunnison. After reviewing the information, we find that most of the data we need is currently published by USGS and/or contained on our satellite system and there is only a small need for development of additional monitoring. The critical need at this time is to be able to draw data from the satellite system to an ASCII file.

B. Increased Water Commissioner Activities

During irrigation year 1990, we hope to continue to improve the program of having the water commissioners being directly responsible for ground water enforcement within their districts, and intend to support them from the Montrose office providing information, training, and project coordination.

C. Records

Although obtaining more records has long been a goal of Division IV, we believe that only a slight increase in the number of records we collect or the number of structures we visit will be possible for irrigation year 1990. This is partly due to budgetary constraints requiring limits on mileage.

D. Training

Division IV is planning a training meeting for water commissioners to be held with the spring water commissioner meeting. The major focus of this training session will be hydrographic training including how to set up and install a Parshall flume, stream measurement basics, maintenance and use of water level recorders and standards for measurement of transmountain diversions. In addition to this major focus, we would expect to spend some time on ground water, dams, and possibly records.

E. Personnel

Significant changes in the organizational structure in Division IV were made last year and it is not anticipated that there will be structural changes during 1989. Rather, it is hoped that we will fill vacancies left by the transfer of Division Engineer Tom Kelly to Assistant State Engineer and the transfer of Becky Nichols to Water Division II.

F. Water Administration Goals--Recommendations

This office will be hoping to work on at least two areas of development of our water administration policy beginning in the very near future. The first will be the revision of the critical stream list to include some additional streams in Water District 62 which are water-short much of the time. Secondly, we hope to do some work on solutions to water availability problems, especially the availability of well permits. As an example, several of the conservancy districts in Division IV have water which could be made available in water-short areas to support wells, should they be needed. The main stem of the Gunnison River will require additional administration and record keeping should one of the projects to divert water from Taylor Park to Aurora or Arapahoe County be developed. This will affect water administration throughout Division IV and we expect that now is the time to begin thinking about the additional administrative needs. One of those future requirements may be development of a greater ability for river accounting on the main stem of the Gunnison.

G. Administration

Division IV's primary administrative goal is to work with the Denver office toward obtaining an adequate operating budget. Within Division IV we will need to further develop adequate controls for staying within the budget without having the financial burden for operating and mileage shift to our employees. This is further discussed under "budget".

Division IV seeks two administrative goals during the upcoming year. The first is to investigate possibilities for relocating the office, and the

second is to replace two state vehicles which are no longer serviceable. The vehicle situation is discussed under "budget".

The Division IV office is located on the 3rd floor of the courthouse building in Montrose and the office is not accessible to handicapped persons. This office space is too small. We believe we could be more productive in a space which had at least one more private office. The county has not been making repairs as the building is no longer structurally sound and they anticipate having to replace it.

H. Budgetary Priorities

The budget is an area which needs a lot of work and I am hoping that under the direction of the new Assistant State Engineer we can attain an adequate operating and travel budget. Our immediate needs are a computer for the Grand Junction office, replacement of two state vehicles, and adequate operating and travel monies to remove restrictions on private vehicle miles, and allow for a reasonable level of training and professional development.

An immediate need for the upcoming water year is to replace two old Dodge pickups which are worn out to the point they are no longer serviceable. One of the vehicles has not operated for the latter part of this irrigation season and the other vehicle is in such poor condition that I don't believe it is worth making repairs to. The replacement of these vehicles has been mentioned in prior annual reports and I hope that we can accomplish this before irrigation starts this spring as the vehicles are not useable at this time.

Because of increase in costs, Division IV exceeded its available budget during the last fiscal year ending July 1, 1989. In order to control expenditures for the current fiscal year, it was necessary to impose a mileage limitation and a maximum percentage of miles that could be charged as four wheel drive. The mileage limit on personal vehicle miles was a 10 to 15 percent reduction in the mileage which individual water commissioners travel. This reduction will result in a slight reduction in services to the water using public in terms of administration and records. We are hoping to still do our basic jobs; however it is clear that limitations are necessary if we are to remain within the budget during the current fiscal year. Eighteen of twenty-three full and part time water commissioners use their private vehicles for their work.

I feel that the severely limited operating and travel budget has the potential to negatively affect morale and productivity. While this has not been critical thus far, I feel that it will become a problem if it continues into future years. Water commissioners do not feel that they are paid an adequate rate for private vehicle mileage. In addition I believe we need to spend more money for training. Each year we set a higher level of expectation, both at the water commissioner level and the professional level. This higher level of expectation needs to be complimented with more training and professional development.

APPENDIX A

HYDROLOGIC ANALYSES OF 1989 WATER YEAR

UNCOMPAHGRE RIVER NR RIDGWAY, CO

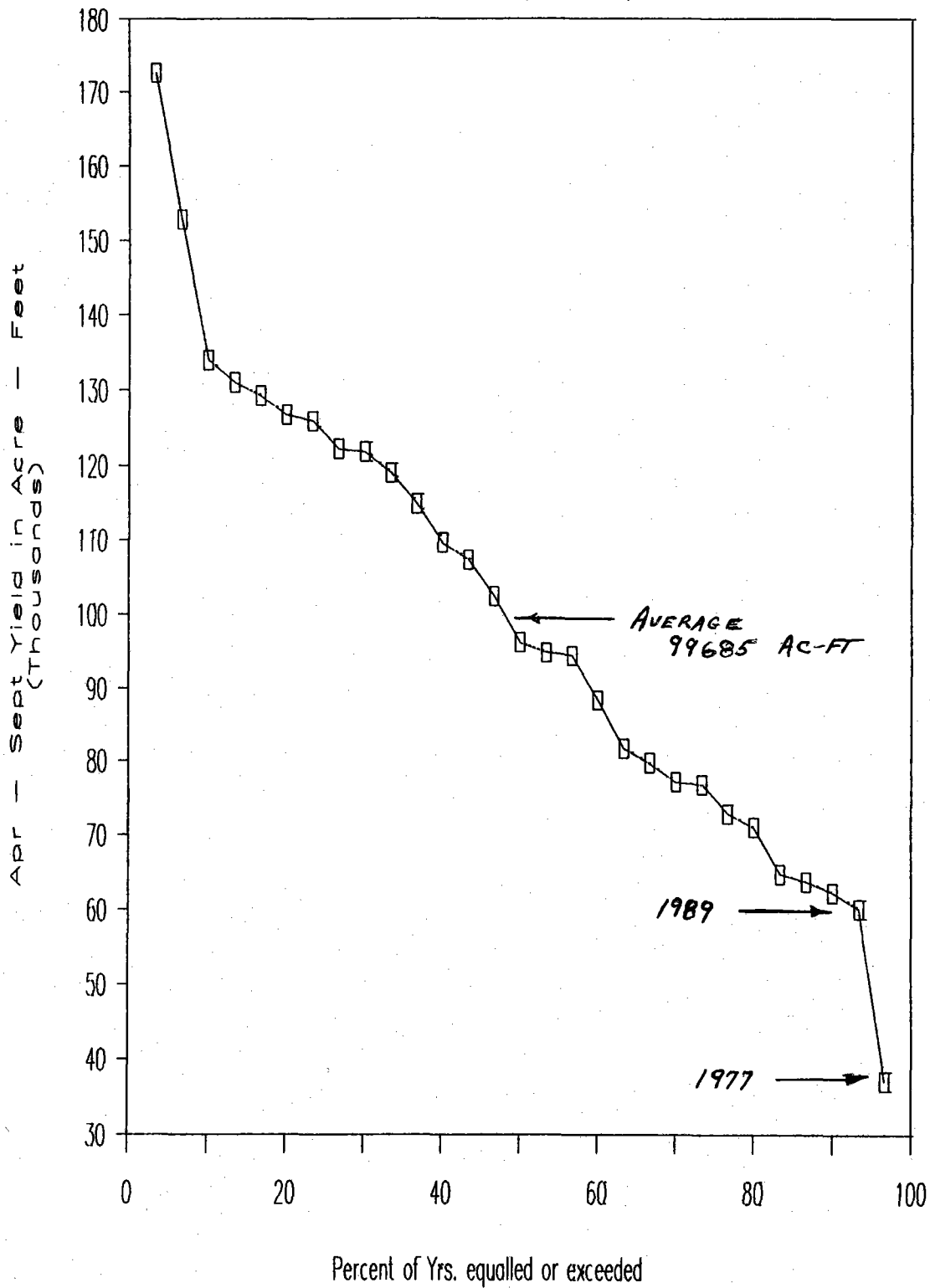
YEAR	ACRE - FEET							APR-SEP TOTAL	PERCENT OF YEARS EQUALLED RANK OR EXCEEDED	
	APR	MAY	JUN	JUL	AUG	SEP	RANK		OR EXCEEDED	
1984	9610	47060	54390	34080	18150	9390	172680	1	3	
1983	5180	17770	54250	52160	16790	6740	152890	2	7	
1985	11200	25780	52950	25950	10410	7700	133990	3	10	
1965	8810	19620	39250	38840	14470	10040	131030	4	13	
1975	4040	15850	44640	45900	13040	5790	129260	5	17	
1986	6640	21580	45800	29120	11310	12260	126710	6	20	
1979	6540	23500	49080	31490	11160	4100	125870	7	23	
1973	4020	20860	46350	33000	11790	6140	122160	8	27	
1982	5730	17190	38620	29010	18540	12780	121870	9	30	
1978	7170	16950	53380	28550	8430	4590	119070	10	33	
1970	4750	27640	36180	19290	12100	14890	114850	11	37	
1987	10760	25990	38390	18480	9430	6560	109610	12	40	
1968	4380	16350	48170	17750	15870	4880	107400	13	43	
1962	10450	19560	35480	23340	8450	5190	102470	14	47	
1964	6130	24610	30620	16870	12370	5650	96250	15	50	
1969	9240	23960	24980	21280	8380	7010	94850	16	53	
1971	9050	13240	35890	20220	8530	7570	94500	17	57	
1961	6150	23040	32190	10170	8760	7980	88290	18	60	
1980	5120	13120	36430	16130	6900	3930	81630	19	63	
1974	5910	23810	26580	14130	5890	3400	79720	20	67	
1966	7260	24780	23110	11870	6270	3900	77190	21	70	
1988	5890	13900	30310	11660	7430	7680	76870	22	73	
1967	4320	17210	22020	15050	9680	4580	72860	23	77	
1976	4590	16050	26690	13010	6720	3940	71000	24	80	
1963	6410	19350	16920	10160	6480	5430	64750	25	83	
1981	4650	8680	22930	16550	6130	4780	63720	26	87	
1972	5400	14210	24020	8840	4520	5260	62250	27	90	
1989	8310	13960	17640	9760	6870	3530	60070	28	93	
1977	5110	7510	9990	5440	4500	4500	37050	29	97	

TOTAL 2890860

AVERAGE 99685

Uncomphagre River near Ridgway

Flow Duration Curve (1961-1989)



SURFACE CREEK NEAR CEDAREEDGE

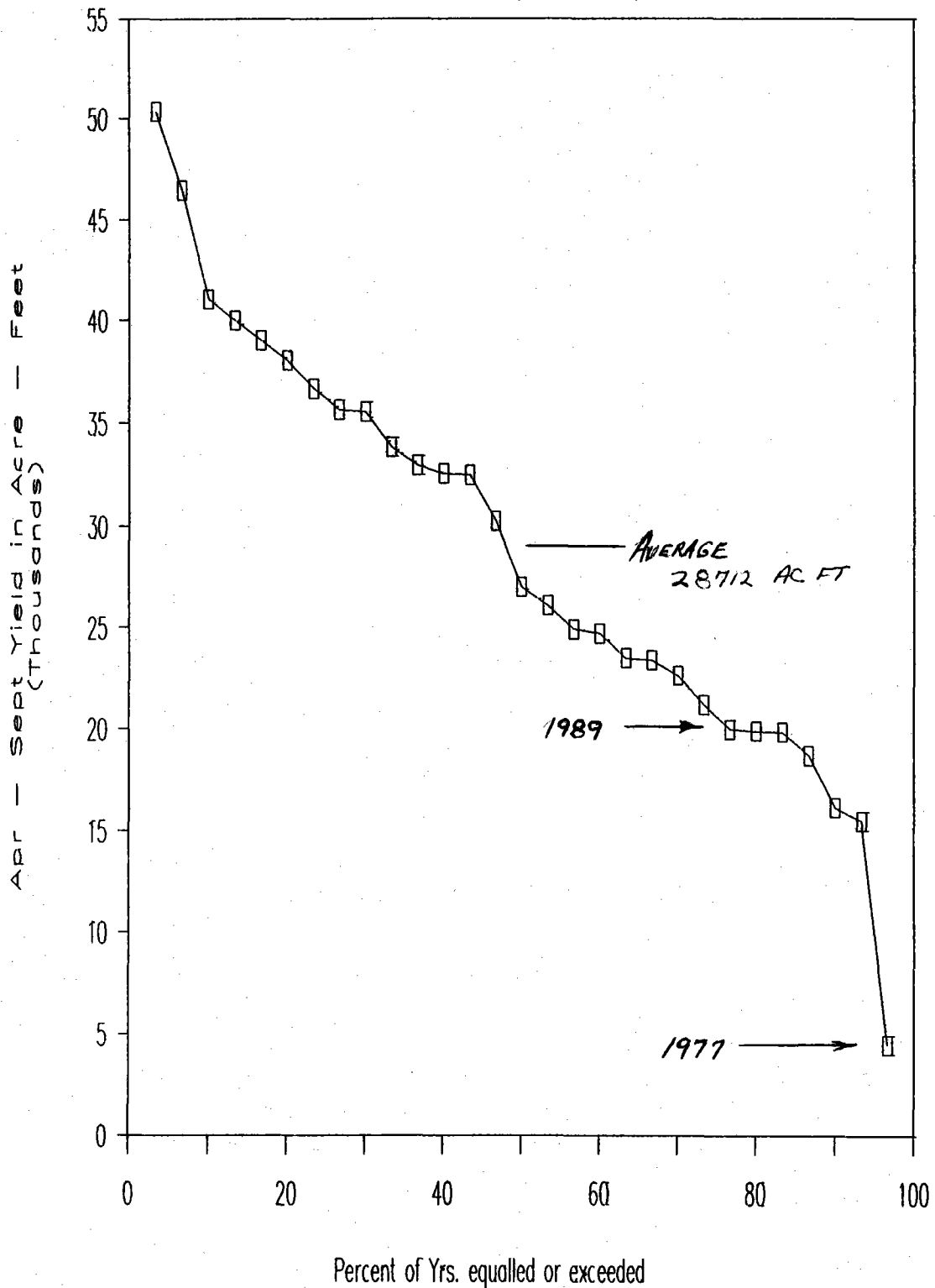
YEAR	ACRE - FEET						APR-SEP TOTAL	RANK	PERCENT OF YEARS EQUALLED OR EXCEEDED
	APR	MAY	JUN	JUL	AUG	SEP			
1983	1410	7180	20400	11720	5740	3900	50350	1	3
1986	3650	13010	15630	6570	4650	2970	46480	2	7
1984	1140	14500	12430	5810	4730	2450	41060	3	10
1973	849	11490	14530	6390	4240	2520	40019	4	13
1985	3240	11870	11130	5350	4890	2530	39010	5	17
1980	1400	8480	15260	6140	4300	2470	38050	6	20
1982	2530	8340	11110	6880	4330	3500	36690	7	23
1987	4540	11170	9230	4990	3480	2260	35670	8	27
1969	4080	12330	8280	4520	4720	1620	35550	9	30
1979	1470	8640	11600	5390	4210	2530	33840	10	33
1962	3850	7700	10330	5220	3870	1970	32940	11	37
1975	616	5820	11120	6920	5140	2930	32546	12	40
1978	1170	8050	12250	5020	3530	2450	32470	13	43
1965	1110	7470	9440	5650	4090	2490	30250	14	47
1970	709	8190	7750	4190	4010	2140	26989	15	50
1971	2780	5560	8100	4330	3350	1970	26090	16	53
1966	3020	8250	4930	4150	3020	1540	24910	17	57
1968	608	6510	7960	4130	2600	2880	24688	18	60
1967	1200	6340	5930	3890	3550	2570	23480	19	63
1988	2200	6390	6240	4110	3460	982	23382	20	67
1974	2040	8480	4870	3190	2500	1540	22620	21	70
1972	2700	6470	4790	3240	2720	1250	21170	22	73
1989	3490	5240	4470	3550	2040	1170	19960	23	77
1976	823	6000	5560	3500	2380	1590	19853	24	80
1964	543	5790	4460	4000	2990	2030	19813	25	83
1961	790	5170	5000	3400	2820	1490	18670	26	87
1981	2010	4520	3530	2710	1910	1460	16140	27	90
1963	1730	5130	2530	2560	2050	1470	15470	28	93
1977	1060	1750	525	366	539	238	4478	29	97

TOTAL 832638

AVERAGE 28712

Surface Creek near Cedaredge

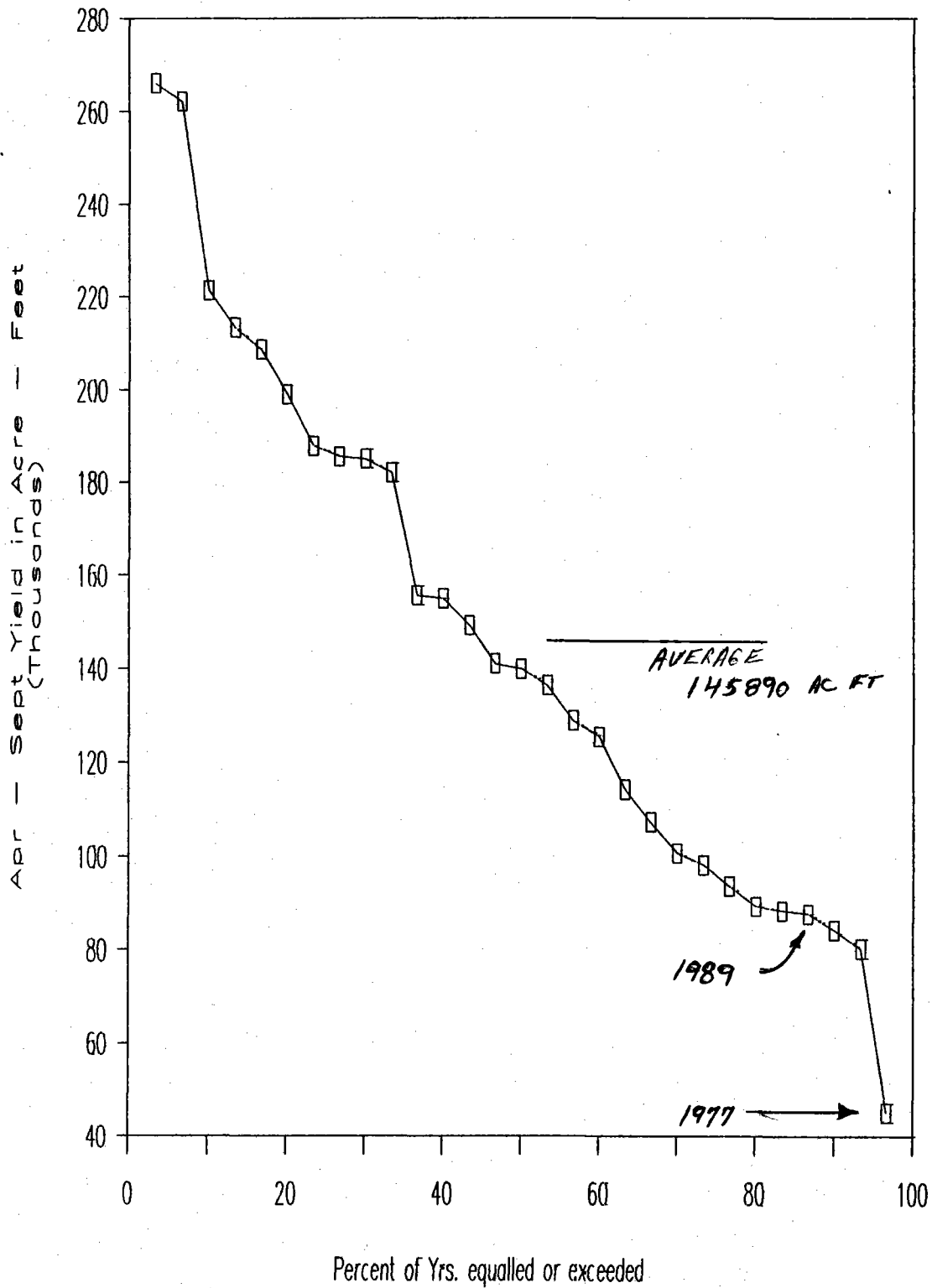
Flow Duration Curve (1961 - 1989)



SAN MIGUEL RIVER NEAR PLACERVILLE									
ACRE - FEET									
YEAR	APR	MAY	JUN	JUL	AUG	SEP	APR-SEP TOTAL	RANK	PERCENT OF YEARS EQUALLED OR EXCEEDED
1983	10100	52650	90930	73580	29730	9130	266120	1	3
1984	23520	91740	70740	44280	20750	11180	262210	2	7
1985	31660	48530	75540	37830	14870	12970	221400	3	10
1987	33110	58120	63150	33700	17350	7990	213420	4	13
1973	8900	49360	75380	50300	17210	7630	208780	5	17
1965	19980	35400	50220	56350	23400	13690	199040	6	20
1975	570	38060	60780	64610	16320	7550	187890	7	23
1986	15810	37990	64110	40620	14400	12650	185580	8	27
1979	13720	38100	72110	41140	14190	5760	185020	9	30
1982	15600	32690	51230	38420	25280	18850	182070	10	33
1970	8860	47030	40920	23480	14910	20330	155530	11	37
1980	10580	32080	62910	29620	12560	7130	154880	12	40
1978	15860	28880	64460	27770	7550	4620	149140	13	43
1962	21940	32070	41560	28260	10350	6750	140930	14	47
1961	14800	41620	46560	13870	11320	11730	139900	15	50
1968	6180	25190	55740	22060	20560	6650	136380	16	53
1971	15890	24130	46100	23100	11510	8080	128810	17	57
1969	14390	32580	29320	27060	12260	9830	125440	18	60
1964	10490	36410	34940	14550	11660	6280	114330	19	63
1988	9730	18980	40380	17190	10630	10310	107220	20	67
1966	12550	33510	28660	13380	7550	5090	100740	21	70
1974	13230	32880	29250	12870	5930	3900	98060	22	73
1976	8870	21670	36100	14310	7030	5510	93490	23	77
1967	5990	23100	24220	15820	12250	7810	89190	24	80
1981	8160	12290	31020	19620	8260	8860	88210	25	83
1989	14560	22580	22390	13940	9780	4350	87600	26	87
1963	10860	25580	19200	9900	10360	8150	84050	27	90
1972	9970	19040	30080	9740	5130	6280	80240	28	93
1977	6210	8380	13350	6370	5560	5260	45130	29	97
TOTAL							4230800		
AVERAGE							145890		

San Miguel River near Placerville

Flow Duration Curve (1961-1989)



GUNNISON RIVER NEAR GUNNISON

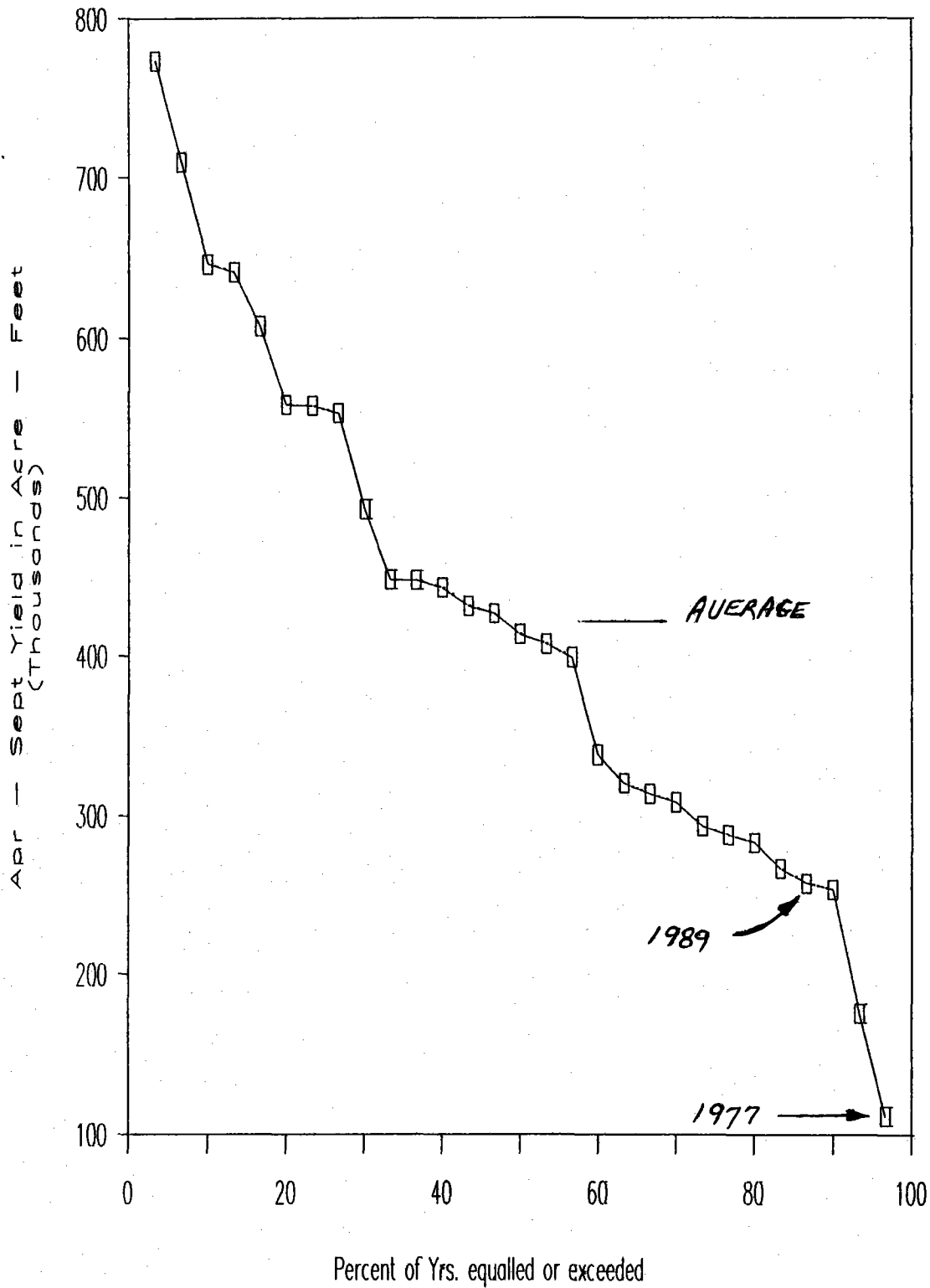
YEAR	ACRE - FEET						APR-SEP TOTAL	PERCENT OF YEARS EQUALLED OR EXCEEDED	
	APR	MAY	JUN	JUL	AUG	SEP		RANK	
1984	41530	208000	249900	154400	75270	44050	773150	1	3
1965	64630	137800	202500	184100	70900	50180	710110	2	7
1986	63000	138600	197500	125500	68570	52970	646140	3	10
1962	82180	171400	183900	103500	55010	45000	640990	4	13
1985	71120	176500	172400	88500	45110	54030	607660	5	17
1979	39130	156800	177100	112400	41860	31790	559080	6	20
1980	59070	140400	192000	80040	42150	44460	558120	7	23
1970	58370	180400	151700	78490	36160	48400	553520	8	27
1983	30150	70220	181700	106100	66890	37970	493030	9	30
1978	32970	83630	183900	83750	38830	25480	448560	10	33
1971	56740	87710	137500	84510	56150	25260	447870	11	37
1987	67680	128300	116700	55300	42480	32840	443300	12	40
1969	50830	132900	97090	79440	42450	28810	431520	13	43
1982	36870	91480	141200	71810	45350	39950	426660	14	47
1968	19380	86110	151200	50810	68320	37570	413390	15	50
1975	20010	59640	144500	114900	45420	23230	407700	16	53
1973	15800	87110	127800	100600	42960	24610	398880	17	57
1972	31660	59800	120400	36990	43600	45340	337790	18	60
1967	26800	69350	105100	55100	35810	28110	320270	19	63
1974	25340	109400	85730	39950	34360	18710	313490	20	67
1976	31400	67480	82430	53190	40880	33040	308420	21	70
1988	31150	72450	91280	45230	31320	21900	293330	22	73
1964	12710	72090	78100	44670	43420	36940	287930	23	77
1966	35860	77800	80630	33200	34170	21640	283300	24	80
1963	31890	61420	54850	48910	47960	21810	266840	25	83
1989	47530	64000	64650	32260	31770	17150	257360	26	87
1961	15360	61970	59650	47320	45030	23870	253200	27	90
1981	14880	26350	56080	30330	25470	22850	175960	28	93
1977	16660	17370	25290	17710	19520	14810	111360	29	97

TOTAL 12168930

AVERAGE 419618

Gunnison River near Gunnison

Flow Duration Curve (1961 - 1989)



APPENDIX B

RECORD OF STREAM CALLS

DIVISION IV
1989 RIVER CALLS

Water District 28

<u>DATE OF CALL</u>	<u>DURATION OF CALL</u>	<u>NAME OF CALLING STRUCTURE</u>	<u>PRIORITY DATE</u>	<u>STREAM AFFECTED</u>	<u>PERSON PLACING CALL</u>
5/26/89	8/30/89	Smithford #2	1904	Cochetopa	D. Flickinger
6/3/89		Smithford #2	1904	Cochetopa	D. Flickinger
6/8/89		Funk #5 Ditch	1918	Pass Creek	Jim Warner
7/5/89		Pass Creek D.	1904	Pass Creek	Debbie Coleman
7/8/89		Funk #5 Ditch	1918	Pass Creek	Jim Warner
7/3/89	7/18/89	S. Davidson Ditch	1894	Tomichi	Roger Cole

Water District 40

<u>DATE OF CALL</u>	<u>DURATION OF CALL</u>	<u>NAME OF CALLING STRUCTURE</u>	<u>PRIORITY DATE</u>	<u>STREAM AFFECTED</u>	<u>PERSON PLACING CALL</u>
7/22/89	7/24/89	Redlands Power		Alum Gulch	
4/17/89	10/31/89	N. Fork Orchard	6/17/1889	Bell Cr	Chick Michenk
6/24/89	29 days	Larson Ditch	5/28/1937	Cow Cr.	F. Jardine
6/07/89	10/31/89	Oak Park Ditch	4/25/1912	Currant Cr	Harry Vaughn
6/14/89	10/31/89	Currant Cr #1 D	4/25/1912	Currant Cr	Roy Wolf

Water District 40 cont'd

<u>DATE OF CALL</u>	<u>DURATION OF CALL</u>	<u>NAME OF CALLING STRUCTURE</u>	<u>PRIORITY DATE</u>	<u>STREAM AFFECTED</u>	<u>PERSON PLACING CALL</u>
8/29/89	11/1/89	Clipper Ditch	6/17/1889	Daisy Ditch	
4/17/89	10/31/89	Fruitgrowers Res	5/28/1937	Dry Cr	Alan Comerer
5/03/89	10/31/89	Fruitgrowers Res	5/28/1937	Dry Cr	Alan Comerer
5/31/89	8/24/89	Fuller #2 Ditch	4/25/1912	Dry Cr	Gary Tharp
6/03/89	10/31/89	Morton Ditch	4/25/1912	Dry Cr	Lynn Hilsen
9/07/89	11/1/89	McMillan Ditch	6/17/1889	EagleNestSp	R. Hauelsen
7/22/89	2 days	Redlands Canal	7/22/1912	Forked Tongue	RedlandPowrCo
7/22/89	2 days	Redlands Canal	7/22/1912	Forked Tongue	Redlnd Powr Co
4/17/89	10/31/89	Granby Ditch	9/28/1907	George Cr	G. Bertram
5/08/89	10/31/89	Granby Ditch	9/28/1907	George Cr	G. Bertram
7/22/89	2 days	Redlands Canal	7/22/1912	George Cr	RedlandPowrCo
8/28/89	10/31/89	Blake Ditch	9/28/1889	George Cr	C. Hawkins
9/09/89	10/31/89	Cedar Park Ditch	6/17/1889	George Cr	Lynn Sanburg
4/12/89	10/31/89	Happy Hollow D	9/28/1907	Happy Hollow	John Alward
5/03/89	2 days	Happy Hollow D	9/28/1907	Happy Hollow	John Alward
5/17/89	10/31/89	Pumpkin Swag Ditch	9/28/1907	Happy Hollow	Clyde Owens
7/22/89	2 days	Redlands Canal	7/22/1912	Happy Hollow	Redlnd Powr Co

Water District 40 cont'd

<u>DATE OF CALL</u>	<u>DURATION OF CALL</u>	<u>NAME OF CALLING STRUCTURE</u>	<u>PRIORITY DATE</u>	<u>STREAM AFFECTED</u>	<u>PERSON PLACING CALL</u>
7/21/89	60 days	Deertrail Ditch	4/12/190	Hubbard Cr.	Anderson
4/14/89	10/31/89	Kiser-Roseberry	6/19/89	Kiser Cr	Fogg & Mooney
4/14/89	10/31/89	Japan Scraboak	9/28/1907	Kiser Cr	Kissner, Bacheim
4/22/89	10/31/89	Serule Oak	#48	Kiser Cr	F. Mooney
6/02/89	10/31/89	Roseberry	#22	Kiser Cr	C. Fogg
7/22/89	2 days	Redlands Canal	7/22/1912	Kiser Cr	RedlandPowrCo
6/02/89	10/31/89	Lake Fork	#8	Kiser & Ward	W. Bull
7/22/89	7/24/89	Redlands Power		Larson Bros.	
5/10/89	5/17/89	Overland Ditch	3/20/1908	Leroux Cr.	Pete Kasper
5/17/89	6/19/89	Stull Ditch	3/20/1908	Leroux Cr.	John Hawkins
6/20/89	6/29/89	#4 decree (for res)	6/17/1889	Leroux Cr.	IC Water User
6/29/89	7/21/89	Cow Creek Ditch	6/17/1889	Leroux Cr.	Bill Ogden
7/21/89	11/1/89	Highline Ditch	6/27/1889	Leroux Cr.	Roy Wolf
7/21/89	11/1/89	Currant Creek D.	6/27/1889	Leroux Cr.	Sheldon Smith
5/05/89	4 days	Minn Canal	4/12/1901	Minn Cr	Neil Thompson
5/18/89	6 days	Minn Canal	4/12/1901	Minn Cr	G. Farnsworth
6/19/89	10/31/89	Minn Canal	4/12/1901	Minn Cr	G. Farnsworth

Water District 40 cont'd

<u>DATE OF CALL</u>	<u>DURATION OF CALL</u>	<u>NAME OF CALLING STRUCTURE</u>	<u>PRIORITY DATE</u>	<u>STREAM AFFECTED</u>	<u>PERSON PLACING CALL</u>
7/17/89	10/31/89	Creek	1914	Minn Cr	Creek call
7/17/89	10/31/89	Creek	1901	Minn Cr	Creek call
8/17/89	10/31/89	Creek	6	Minn Cr	Creek call
9/08/89	10/31/89	Creek	1-2	Minn Cr	Creek call
7/22/89	9/14/89	Fire Mtn. Canal	6/23/1914	Muddy Cr.	Chuck Farmer
7/22/89	7/24/89	Redland P & C	A-101	N. Fork of Gunn	
7/03/89	11/1/89	Daisy Ditch	6/17/1889	Needle Rock	
7/07/89	11/1/89	Clipper Ditch	6/17/1889	Needle Rock	
9/14/89	45 days	Stewart Ditch	2/20/1904	North Fork	
7/22/89	7/24/89	Redlands Power		Owl Ditch	
6/25/89	season	Deer Ditch	3/20/1954	Ragged Cr.	J. Norris
7/22/89	7/24/89	Redlands Power		Smith Fk Canyon	
4/02/89	10/31/89	Gurney Ditch	4/1/1892	Surface Cr	Ingval Hanson
4/13/89	10/31/89	Gurney Ditch	4/01/1892	Surface Cr	Ingval Hanson
4/17/89	10/31/89	Cedar Mesa Ditch	9/15/1894	Surface Cr	Bob Phillips
4/18/89	10/31/89	Lone Pine Ditch	9/15/1898	Surface Cr	W. McPherson
4/20/89	10/31/89	Cedar Mesa Ditch	9/15/1894	Surface Cr	Bob Phillips

Water District 40 cont'd

<u>DATE OF CALL</u>	<u>DURATION OF CALL</u>	<u>NAME OF CALLING STRUCTURE</u>	<u>PRIORITY DATE</u>	<u>STREAM AFFECTED</u>	<u>PERSON PLACING CALL</u>
4/21/89	10/31/89	Lone Pine Ditch	9/15/1898	Surface Cr	W. McPherson
4/23/89	10/31/89	Cedar Mesa Ditch	9/15/1894	Surface Cr	Bob Phillips
4/26/89	10/31/89	Fogg Ditch	4/13/1891	Surface Cr	Alan Comerer
4/27/89	10/31/89	Paradise Ditch	7/1/1886	Surface Cr	Gary Anson
4/28/89	10/31/89	Carbonate Comp D	10/31/1885	Surface Cr	M. Peterson
4/29/89	10/31/89	Eric Johnson D	12/2/1885	Surface Cr	Jene Young
4/30/89	10/31/89	Butte Ditch	11/24/1885	Surface Cr	Alan Comerer
5/04/89	10/31/89	Eric Johnson D	12/2/1885	Surface Cr	Jene Young
5/05/89	10/31/89	Old Reliable D	12/31/1886	Surface Cr	Moad Horn
5/06/89	10/31/89	Trickle Ditch	3/1/1887	Surface Cr	Jim Hillis
5/07/89	10/31/89	Orchard Ranch D	2/21/1883	Surface Cr	N. Kehmeier
5/12/89	10/31/89	Fogg Ditch	4/13/1891	Surface Cr	Alan Comerer
5/13/89	10/31/89	Horseshoe Ditch	4/11/1887	Surface Cr	W. McPherson
5/14/89	10/31/89	Paradise Ditch	7/1/1886	Surface Cr	Gary Anson
5/15/89	10/31/89	Forrest Ditch	4/7/1885	Surface Cr	Jim Vela
5/16/89	10/31/89	Butte Ditch	11/24/1885	Surface Cr	Alan Comerer
5/19/89	10/31/89	Horseshoe Ditch	4/11/1887	Surface Cr	W. McPherson

Water District 40 cont' d

<u>DATE OF CALL</u>	<u>DURATION OF CALL</u>	<u>NAME OF CALLING STRUCTURE</u>	<u>PRIORITY DATE</u>	<u>STREAM AFFECTED</u>	<u>PERSON PLACING CALL</u>
5/21/89	10/31/89	Orchard Ranch D	2/21/1883	Surface Cr	N. Kehmeier
5/22/89	10/31/89	Pellezzini Ditch	4/1/1892	Surface Cr	Bill Kissner
5/23/89	10/31/89	Cedar Mesa Ditch	9/15/1894	Surface Cr	Bob Phillips
5/25/89	10/31/89	Gurney Ditch	4/1/1892	Surface Cr	Ingval Hanson
5/26/89	10/31/89	Horseshoe Ditch	4/11/1887	Surface Cr	W. McPherson
5/27/89	10/31/89	Paradise Ditch	7/1/1886	Surface Cr	Gary Anson
5/28/89	10/31/89	Trickle Ditch	3/1/1887	Surface Cr	Jim Hillis
5/30/89	10/31/89	Orchard Ranch D	2/21/1883	Surface Cr	N. Kehmeier
6/03/89	10/31/89	Paradise Ditch	7/1/1886	Surface Cr	Gary Anson
6/05/89	10/31/89	Eric Johnson D	12/2/1885	Surface Cr	Jene Young
6/19/89	10/31/89	Forrest Ditch	4/7/1885	Surface Cr	Steve Tuck
6/21/89	10/31/89	Stillwater	1/21/1885	Surface Cr	Jim Turner
6/22/89	10/31/89	Settle	3/25/1884	Surface Cr	Bud Hawkins
7/01/89	10/31/89	Alfalfa	12/17/1881	Surface Cr	Alan Comerer
7/22/89	2 days	Redlands Canal	7/22/1912	Surface Cr	RedlandPowrCo
6/19/89	60 days	Holybee Ditch	6/17/1889	Terror Cr.	B. Buetter
4/04/89	10/31/89	Pratt Ditch	5/28/1937	Ward Cr	Dale Parker

Water District 40 cont'd

<u>DATE OF CALL</u>	<u>DURATION OF CALL</u>	<u>NAME OF CALLING STRUCTURE</u>	<u>PRIORITY DATE</u>	<u>STREAM AFFECTED</u>	<u>PERSON PLACING CALL</u>
4/18/89	10/31/89	Surface Cr Ditch	6/17/1889	Ward Cr	Charles Lutje
4/18/89	10/31/89	Surface Cr Ditch	6/17/1889	Ward Cr	Charles Lutje
4/28/89	10/31/89	Granby Rowell D	9/28/1907	Ward Cr	G. Bertram
5/01/89	10/31/89	Pratt Ditch	5/28/1937	Ward Cr	Dale Parker
6/17/89	10/31/89	Carbon Ditch	9/28/1907	Ward Cr	L. Mattive
6/17/89	10/31/89	Carbon Ditch	9/38/1907	Ward Cr	L. Mattive
6/17/89	10/31/89	Todd Ditch	9/28/1907	Ward Cr	Carl Toothaker
6/24/89	10/31/89	Lake Fork Ditch	6/17/1889	Ward Cr	Phil Starr
7/22/89	2 days	Redlands Canal	7/22/1912	Ward Cr	RedlandPowrCo
7/21/89	11/1/89	Clipper Ditch	6/17/1889	Wilson Pankey	
4/26/89	fl incrs	I. E. Baker	G42	Youngs Cr	C. Kinter
5/11/89	10/31/89	Lookout	#48	Youngs Cr	R. Morris
5/11/89	10/31/89	Cherokee	#38	Youngs Cr	E. Reed
6/15/89	10/31/89	Santa Fe	#17&25	Youngs Cr	1st Nat. Bank
6/20/89	10/31/89	Broncho	#6	Youngs Cr	D. Frost
7/09/89	10/31/89	Childs	#4	Youngs Cr	W. Bull

Water District 41

<u>DATE OF CALL</u>	<u>DURATION OF CALL</u>	<u>NAME OF CALLING STRUCTURE</u>	<u>PRIORITY DATE</u>	<u>STREAM AFFECTED</u>	<u>PERSON PLACING CALL</u>
6/18/89	10/31/89	Welch Ditch	4/25/1912	Curran Cr	Bud Burgess
7/23/89	3 days	Redlands P. C.	DPN 739	Gunnison	Owner
5/10/89	10/31/89	Albush Ditch	DPN 143	Horsefly	Mrs. Sanders
5/31/89	10/31/89	C. A. Palmer	DPN 173	Spring Cr.	Mr. McCulloch
5/30/89	10/31/89	S. E. Dillon	DPN 20	Spring Cr.	Mr. McCulloch
5/30/89	10/31/89	Shavano Valley	DPN 76	Spring Cr.	Wayne Brown
5/09/89	10/31/89	Weir & Johnson	3/15/1886	Surface Cr	Jim Vela
5/24/89	10/31/89	Weir & Johnson D	3/15/1886	Surface Cr	Jim Vela
6/02/89	10/31/89	Trickle Ditch	3/1/1887	Surface Cr	Jim Hillis
6/21/89	48 days	UVWUA System	DPN 111	Uncompangre	Jim Hockit
6/20/89	10/31/89	Williams #2 Ditch	6/17/1889	Ward Cr	Paul Fenton

Water District 42

<u>DATE OF CALL</u>	<u>DURATION OF CALL</u>	<u>NAME OF CALLING STRUCTURE</u>	<u>PRIORITY DATE</u>	<u>STREAM AFFECTED</u>	<u>PERSON PLACING CALL</u>
4/1/89	10/31/89	Unaweeep Ditch	2/7/1890	East Creek	Oscot Massey
7/21/89	3 days	Redlands Canal	7/31/1905	Gunnison	Official
4/28/89	10/31/89	Brown & Campion	11/14/1885	Kannah Cr.	Bill Blair

Water District 59

<u>DATE OF CALL</u>	<u>DURATION OF CALL</u>	<u>NAME OF CALLING STRUCTURE</u>	<u>PRIORITY DATE</u>	<u>STREAM AFFECTED</u>	<u>PERSON PLACING CALL</u>
7/5/89		Carbon Creek Ditches		Carbon Cr	
6/28/89		Ohio Creek Ditches		Ohio Creek	
6/5/89		Bismark Ditch	9/14/1906 DPN45	Willow Cr	Jim Loken
6/14/89		Bismark Ditch	9/14/1906 DPN45	Willow Cr	Jim Loken
8/7/89		Tim & Helen Morgan D	6/20/57 DPN522		Dennis Krueger

Water District 60

<u>DATE OF CALL</u>	<u>DURATION OF CALL</u>	<u>NAME OF CALLING STRUCTURE</u>	<u>PRIORITY DATE</u>	<u>STREAM AFFECTED</u>	<u>PERSON PLACING CALL</u>
6/10/89		Hastings Ditch	1911	Alder	Wayne Wolf
8/01/89	10/31/89	Maverick Draw D	1897	Maverick	Leroy Khab
8/01/89	10/31/89	Amiggler Ditch	1897	Maverick	Rheemes&Pattorf
8/01/89	10/31/89	Maverick Draw D	1897	Naturita	Rheemes&Pattorf
8/31/89	10/31/89	Highline Canal	1911, 1929 1939	San Miguel	Ditch Board of Highline D

Water District 61

<u>DATE OF CALL</u>	<u>DURATION OF CALL</u>	<u>NAME OF CALLING STRUCTURE</u>	<u>PRIORITY DATE</u>	<u>STREAM AFFECTED</u>	<u>PERSON PLACING CALL</u>
4/01/89	10/31/89	All Structures		Paradox Creek	

Water District 62

<u>DATE OF CALL</u>	<u>DURATION OF CALL</u>	<u>NAME OF CALLING STRUCTURE</u>	<u>PRIORITY DATE</u>	<u>STREAM AFFECTED</u>	<u>PERSON PLACING CALL</u>
6/7/89	10/31/89	McKinley	DPN 61	Little Cimmaron	Keith Lewis
6/7/89	10/31/89	Collier	DPN 97&98	Little Cimmaron	Doc Orme

Water District 63

<u>DATE OF CALL</u>	<u>DURATION OF CALL</u>	<u>NAME OF CALLING STRUCTURE</u>	<u>PRIORITY DATE</u>	<u>STREAM AFFECTED</u>	<u>PERSON PLACING CALL</u>
8/7/89	10/31/89	Bartholemew & H	2/1/1900	West Cr.	W. Schaffer

Water District 68

<u>DATE OF CALL</u>	<u>DURATION OF CALL</u>	<u>NAME OF CALLING STRUCTURE</u>	<u>PRIORITY DATE</u>	<u>STREAM AFFECTED</u>	<u>PERSON PLACING CALL</u>
6/02/89		Johnson	6/1/1884	Beaver Cr	Dave Wolford
6/07/89		Hyde Sneva	10/1/1880	Dallas	Wayne Wolf
6/29/89		UVWUA	Ami.n#12442	Uncompahgre	Jim Hockit
6/12/89		Reed Overman	5/1/1878	W. Dallas	Larry Iuke
6/15/89		Reed Overman	5/1/1878	W. Dallas	Larry Iuke
6/30/89		Mayol Sision	4/15/1877	W. Dallas	Wayne Wolf
6/30/89		Reed Overman	5/1/1879	W. Dallas	Larry Iuke

Water District 73

<u>DATE</u> <u>OF CALL</u>	<u>DURATION</u> <u>OF CALL</u>	<u>NAME OF</u> <u>CALLING STRUCTURE</u>	<u>PRIORITY</u> <u>DATE</u>	<u>STREAM</u> <u>AFFECTED</u>	<u>PERSON</u> <u>PLACING CALL</u>
4/18/89	10/31/89	Mooreland Ditch	6/1/1916	Coate Cr.	Miles Keogh

APPENDIX C

TRANSMOUNTAIN DIVERSION RECORD

<u>FROM</u>	<u>TO</u>	<u>STRUCTURE</u>	<u>AMOUNT</u>
WD-28	Div. 2	Larkspur	30.0 AF
WD-28	Div. 3	Tarbell	344 AF
Div. 5	WD-40	Leon Lake	1589.8 AF
WD-40	Div. 5	Divide Creek Highline Feeder	2140 AF
WD-42	Div. 5	City Pipeline	2195 AF
WD-42	Div. 5	New City Pipeline	4499 AF
WD-42	Div. 5	Redlands Canal	496,500 AF
WD-62	Div. 3	Tabor	487 AF
Div. 7	WD-68	Carbon Lake Ditch	98 AF
Div. 7	WD-68	Mineral Point Ditch	no record kept, water flowed into Div 4, not delivered to specific user
Div. 7	WD-68	Red Mountain Ditch	100 AF diverted to delivered specific user
Div. 7	WD-68	St.	78 - Gun 3 28 - Sag 3 40 - Dalt 5 40 - Gun 4 42 - near 5 (Pinner) 62 - Hirs 2 68 - near 6
WD-73	Div. 5	Fruit	used for this year

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APPENDIX D
DIVERSION SUMMARY

WATER DIVISION IV IRRIGATION SUMMARY 1989 ACRE FEET

<u>WD</u>	<u>STREAM TO IRRIGATION</u>	<u>STORAGE TO IRRIGATION</u>	<u>ALL OTHER SOURCES TO IRRIGATION</u>	<u>TOTAL TO IRRIGATION</u>	<u>ESTIMATED ACREAGE</u>	<u>AVERAGE AF PER ACRE</u>
28	252,528	5,743		258,251	14,955	17.00
40	364,850	62,154	15	427,019	128,701	3.30
41	55,881	180	516,650	572,711	109,890	5.20
42	13,621	2,361		15,982	4,964	3.21
59	294,640			294,640	35,220	8.30
60	85,910	12,388	987	99,285	29,750	3.30
61	5,141	647	5,705	11,493	4,525	2.50
62	115,608	20,253		135,861	39,250	3.46
63	22,979	1,387		24,366	3,006	8.1
68	90,443	41	4,600	95,084	14,722	6.45
73	<u>3,486</u>	<u>25</u>	<u>126</u>	<u>3,637</u>	<u>2,825</u>	1.30
	1,305,087	104,179	528,083	1,938,329	287,808	

APPENDIX E

SUMMARY OF VISITATIONS AND STRUCTURES

1989

Water District	Number of Observations	Structures With 89 Record	Total Structures	Total Active Structures	Inactive Historic Structures	Average # of Observ. per Structure w/Record	% of Total Active Structures w/89 Record
28	3785	236	760	452	278	16	.52
40	28406	779	2416	1794	591	36	.43
41	2552	78	548	286	219	33	.27
42	5782	150	349	267	61	39	.56
59	1999	198	1465	910	130	10	.22
60	2268	269	1187	972	153	8	.28
61	3343	53	138	101	37	63	.52
62	1427	174	952	838	77	8	.21
63	1555	140	212	170	38	11	.82
68	1702	151	896	665	214	11	.23
73	152	70	116	91	24	2	.77

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52,971

APPENDIX F

WATER COURT ACTIVITIES

No. Applications for Decrees		256
No. Consultations with Referee		360
No. Decrees Issued by Water Court		185
Type of Decree		
Surface Water	137	
Ground Water	22	
Reservoir	25	
Transfer	0	
Alternate Point	7	
Change of Use	2	
Plan Augmentation	1	
In-Stream Flow	2	
Cancelled	43	
No. Structures in Decrees		340
Types of Structures		
Ditches and Springs	219	
Reservoirs	48	
Wells	73	

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IV. TABLE OF ORGANIZATION - PERSONNEL

IRRIGATION DIVISION NO. 4

Division Engineer - Vacant
 Acting Division Engineer - Keith C. Kepler
 Secretary - Jean Kurtz
 Typist A - Bonnie Trujillo
 Hydrographer - Charles G. David
 Resident Dam Safety Engineer - James G. Norfleet

Water District 28

WATER COMMISSIONER
 Wesley Robinson

Water District 40

PR. WATER COMMISSIONER
 *Richard Drexel

 SR. WATER COMMISSIONER
 *Robert H. Starr

Water District 41

WATER COMMISSIONER
 Crandall Howard

Water District 42

SR. WATER COMMISSIONER
 Richard Belden

 WATER COMMISSIONER
 Jack Carter

WATER COMMISSIONERS

Jimmie Boyd
 Merritt Denison
 Henry LeValley
 Albert Mahannah
 Kenneth Mahannah
 John L. McHugh
 James Miller
 L. Gregg Scott
 Charles Stein
 Stephen Tuck
 Keith Waibel

Water District 59

WATER COMMISSIONER
 Robert Drexel

Water District 60

WATER COMMISSIONER
 Lyman D. Campbell

Water District 61

WATER COMMISSIONER
 Clinton L. Oliver

Water District 62

WATER COMMISSIONER
 Crandall Howard

Water District 63

SR. WATER COMMISSIONER
 *Richard Belden

Water District 68

WATER COMMISSIONER
 H. Roger Noble

Water District 73

SR. WATER COMMISSIONER
 *Richard Belden

WELL COMMISSIONER
 **Becky Nichols

*Annual
 **Transferred out