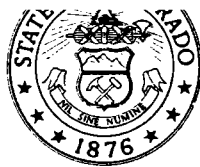


Records

ANNUAL REPORT

1991 Water Year

Irrigation Division IV



DIVISION OF WATER RESOURCES
WATER DIVISION IV

Keith C. Kepler
Division Engineer
1540 East Niagara
P.O. Box 456
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(303) 249-6622

January 18, 1991

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 Water Division IV, I am pleased to submit this Annual Report for 1991.

The personnel of Division IV have conducted their duties in a most professional manner during the 1991 water year. I would like to recognize their diligent efforts which have resulted in this Annual Report, and this year's diversion records.

Sincerely,

Keith C. Kepler
Division Engineer

KCK: jk

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DIVISION IV 1991 ANNUAL REPORT

I. 1991 WATER YEAR

A. Summary

The 1991 water year was a good year for most of Division IV. Although snowpack was only about average, timely rains beginning in mid and late July kept streamflow into the valleys fairly good. The rains which aided streamflow in the lower elevations delayed haying in many of the mountain meadows.

B. Uncompahgre Valley

The snowpack contributing to the Uncompahgre River was determined to be about average as we approached spring runoff. Spring runoff proceeded normally. Streamflow resulting from snow melt and a few rains kept the flow in the Uncompahgre River sufficient to meet demand until about the 2nd of August. At that time, supplies to the Uncompahgre Valley Water Users Association fell short and a call was placed on the stream. Shortly after upstream junior water rights were curtailed, rainfall in the mountain areas brought streamflows back up and we were able to turn on junior upstream rights after only four days of administration. Upstream rains continued until the time irrigation demand dropped off in mid to late August. Flows in the river were further supplemented by a drawdown of Ridgway Reservoir for reservoir operations goals. There was not much need for delivery of reservoir water. Smaller streams held up fairly well this year after several years minimal run. This was especially true for smaller streams off the Uncompahgre Plateau.

C. Upper Gunnison Basin

The Upper Gunnison Basin had a good runoff resulting from an average snowpack this year. As a result there was minimal administration. There were no calls for administration in Water District 59. In Water District 28, Hot Spring Creek went on call as of June 18, and remained on call until the first of August. August was very wet in the Upper Gunnison Basin, with scattered rainfall on many days of the month continuing into September. As a result, ranchers found it very difficult to harvest their hay crop and the haying season lasted well into the fall. Yields appear to be near average.

D. South Slope of Grand Mesa and North Fork of the Gunnison River

The Grand Mesa had a near normal snowpack at the end of winter. However, hot, dry winds in the spring brought the snowpack down to slightly below normal and runoff was slightly below average. Nonetheless, this was a much improved year over the past three drought years. Reservoir carryover, going into the fall of 1990, was 17% of capacity as compared to a long term average carryover of 35% of capacity. Through the winter and spring, reservoirs filled to 78% of capacity as compared to a long term average of 86% of capacity (see appendix). Senior water rights on the south side of the Grand Mesa received a fairly good water supply. Juniors once again found themselves quite short. Reservoir supplies were slightly less than normal. Thus, while the south side of Grand Mesa had a slightly less than average water year, it was far better than the last three years.

Kannah Creek in Water District 42 also comes off of Grand Mesa. It also had a much better water year than in prior years. The runoff was sufficient so that Kannah Creek was a free stream (not under administrative call) from May 9 to June 28. Thus, it was a fairly good year for Kannah Creek.

In the North Fork area, 1991 was very close to a normal year. Natural flow was up considerably over the prior two years and rainfall in August helped keep the streamflow up. Reduced reservoir storage due to siltation in Paonia Reservoir is becoming a matter of concern to some water users.

E. San Miguel

For the San Miguel River and Water District 60, streamflows were good and river flow adequate for most users. The call on the main stem of the San Miguel only lasted for a few days in early September. Other creeks with lower drainages were on call in July. The yield of all creeks was significantly higher than in the past few years.

F. Paradox Creek and Dolores River Tributaries

Water District 63 includes the lower end of the Dolores River and many of its tributaries. Tributaries entering the Dolores River from the east run off the Uncompahgre Plateau. This area apparently had a significantly lower than average snowpack this year. The result is that West Creek was on call beginning June 26. Little Dolores Creek, Water District 73, drains off of the north and west sides slopes of the Uncompahgre Plateau and experienced the same drought as Water District 63. As a result there was water shortage in Glade Park and other areas in Water District 73 causing the abandonment of several fields.

Water District 61 includes the Paradox Valley. This area is principally supplied by runoff from the LaSalle Mountains in Utah. This area also suffered somewhat drier than average conditions, although much better than the prior two years. Reduced yields in small grains are blamed on the cool, dry windy conditions through the spring. The salinity control project at Bedrock is progressing and the Bureau of Reclamation has started test pumping their salt wells at that location. The brine is then pumped down a 16,000 foot disposal well, about one mile upstream from Bedrock.

II. 1991 PROGRAMS AND ACTIVITIES

As is apparent from the 1991 water year summary, this was an uneventful year from a hydrologic perspective. This was fortunate as many other activities which involved the Division IV staff were quite time consuming. Most time consuming was the abandonment list which was required to be completed under the statutes this year. Also this year, Division IV gave half of Chuck David's time to the statewide satellite maintenance center. Chuck set up and tested all the new satellite equipment purchased under the statewide expansion program. The Division IV dam safety engineer has developed a sled to send through reservoir outlets and which can be used to take still photographs inside the conduit. Finally, the division engineer and assistant have devoted

considerable time to the development of an accounting spreadsheet in cooperation with several other agencies. Thus, while 1991 was a fairly uneventful water year, it was a very active year in terms of programs, activities, and special projects.

A. Water Court Landmarks/Water Development Issues

1. Taylor Park Reservoir Second Filling: The Taylor Park reservoir second filling decree in 86CW203 was the first major event in water court water development activities this year. Issued September 18, 1990, considerable time was spent by this office and other entities trying to understand and interpret that decree. Although it is beyond the scope of this report to analyze, it is worth noting that this decree recognized a 1975 operating agreement between the U.S. Bureau of Reclamation, Uncompahgre Valley Water Users Association, and Upper Gunnison Water Conservancy District. Under that agreement, Uncompahgre, which was the operational owner of Taylor Park Reservoir, could allow water which they were entitled to store in Taylor Park, pass through Taylor Park and be captured in the downstream Blue Mesa Reservoir. Uncompahgre gained credit for this amount of water in Blue Mesa reservoir. This operational plan worked since the river was not on call. The Upper Gunnison Water Conservancy District sought a second fill decree for waters which were stored after the senior decree had been exhausted either by bypassing water to downstream storage or actual partial filling. This decree has been appealed and is now before the State Supreme Court.

2. Arapahoe County: Arapahoe County sought to divert water out of the Upper Gunnison Basin to the East Slope in case numbers 86CW227 and 88CW178. Arapahoe County succeeded Natural Energy Resources Company (NECO) in case number 86CW226, then independently filed 88CW178 following some adverse decisions in the prior case. These cases were most recently amended following the Taylor Park Reservoir second filing decree. The amendment included a proposal to divert water from the Taylor Basin plus tributaries of the Gunnison as far away as the East River, with a pipeline intercepting many streams along the way. The City of Aurora withdrew its application to take water from the Upper Gunnison Basin.

A trial on the Arapahoe County application was held for approximately six weeks, beginning June 3. The ruling of the court, issued October 21, 1991, found that approximately 20,000 acre feet of unappropriated water was physically, and legally available on an average annual basis at the points of diversion claimed. If Arapahoe determined that this amount of water was sufficient to go forth, this matter would have gone to a phase two trial, which would have considered feasibility of the project. However, Arapahoe County said that this was insufficient water to proceed and that they wished entry of a final decree. Such a decree was entered December 30, 1991 and it is anticipated that this matter will go before the Supreme Court. Perhaps the most interesting aspect of this ruling is the court's findings on the various federal acts governing operation of the Aspinall Unit and the interrelation of the United States requirements under those acts to the several Colorado water rights decrees for the Aspinall Unit.

3. Blue Mesa Subordination: Following construction of the Blue Mesa Reservoir, discussions were held on the meaning of an allowance of 60,000 acre feet for upstream development which was considered in an earlier economic analysis. This allowance for upstream development was further recognized in an October 26, 1984 memorandum from the regional solicitor of the Bureau of Reclamation to the regional director of the Bureau of Reclamation which stated an intent to subordinate Blue Mesa to 60,000 acre feet of junior upstream consumptive use. In a responding memorandum dated November 15, 1984, the State Engineer for Colorado stated he considered the Aspinnall Unit to be subordinated by the Bureau's memorandum and thus the most junior right in the system.

The decree in the Arapahoe County case and several orders preceding that decree, developed the position that the United States had not formally contracted for that water and thus could not so dispose of this federal property. For this reason the subordination was not recognized by the court. The effect of the court's interpretation is to throw the issue of Blue Mesa subordination back to an undetermined status. The Bureau of Reclamation is trying to develop their policy and plans on this matter.

4. Black Canyon Instream Flows: As of the date of this writing the Colorado Water Conservation Board continues to consider the issue of the donation of Pittsburg & Midway conditional water rights for instream flow purposes. To date they have not filed a water court application or formerly decided to proceed on this matter. However, that action is pending and a decision is expected very soon.

Also, as of this date, the National Park Service has not quantified the instream flow that they claim as a reserved water right under the partial decision in case No. W-437. The decree resulting from that case, U.S. vs. Denver, required the Park Service to make a determination within a specified period of time. However, due to the apparent lack of finalization of that case, the clock has apparently not begun to run on the deadline for the Park Service.

5. AB Lateral Project: This project sponsored by Uncompahgre Valley Water Users Association would divert water through the Gunnison Tunnel for power purposes as well as for the current irrigation use. Recently the Bureau of Reclamation completed an environmental impact statement and made the decision to allow this proposed use subject to several conditions relating to environmental and streambank protection. The AB Lateral Project already has conditional water rights.

6. Routine Water Court Applications Were Down in 1991: This appears to be the result of two factors. First, legislation a year ago extended the diligence cycle from four years to six years, resulting in a period of two years with nearly no diligence applications. Secondly, the local economy appears to be fairly slow. Although there appears to be quite a bit of sales of large ranches and other scenic property to investors, this does not appear to be stimulating the local economy.

B. Abandonment List

As required by statute, the Division Engineer's Abandonment List was made available July 1, 1990. In that abandonment list there were 216 entries. One hundred eleven of the 216 were protested during the protest period. The protests were entered by 68 individuals or parties. Thus, most of the protests involved more than one line item. During the summer of 1991, we visited each of the structures for which a protest was filed. Typically the inspection party included the assistant division engineer or the division engineer and the water commissioner. The protestant was invited on each inspection and we allowed the protestants to submit any information they had as to why the water right should not be abandoned in accordance with the published list.

Following this review and field inspection, we published a revised abandonment list on December 31, 1991. There were 182 line entries remaining on the revised abandonment list, 34 entries had been removed entirely from the list and 10 line entries remained on the list but were modified from the first list. Sixty-nine percent of the protested line items from the division engineer's list remain on the final abandonment list submitted to the court.

The abandonment process was a difficult part of our duties, but at the same time a learning process. In many cases water users did not understand the concept of partial abandonment. These water users had much more water decreed to their ditch than what they were actually using and they seemed unable to understand that we were only trying to abandon the portion of water which was not being put to beneficial use. The problem was particularly noticeable in Gunnison County where a misunderstanding of water rights, combined with the Arapahoe County trial, created an emotional reaction rather than a logical perspective of our mission. At the same time the abandonment program was a very important learning process. We learned the importance of checking records with the water users. We also learned the importance of keeping good information on irrigated acreage. Finally, I believe our program of having one of the engineers go out with the water commissioner and seeing the ditch together with the water user brought us a lot of understanding and credibility.

C. Gunnison River Accounting Spreadsheet and Model

Another major project has been participating in the development of a Gunnison River accounting spreadsheet and planning model. This project came together when several of the planning and development agencies serving this area saw a need. The participating agencies are the Colorado River Water Conservation District, the U.S. Bureau of Reclamation, the Upper Gunnison Water Conservancy District, Uncompahgre Valley Water Users Association, Tri-County Water Conservancy District, and the Colorado Division of Water Resources. The focus of interest of the Colorado Division of Water Resources is in the development of an accounting spreadsheet since this can greatly assist our development of records. It would be very useful if we are asked to administer the Gunnison River in future years. The objective of the current modeling study is to develop a computer model of the basin which could be run by anyone and is accessible to anyone interested in running the study.

This office has entered into a Memorandum of Understanding with several other sponsoring agencies and has been participating in a number of meetings with the other sponsors concerning administration and existing decrees on the river for development of the accounting spreadsheet. Also, meetings have been held seeking public input for the modeling efforts.

D. Hydrographic Program and Satellite Monitoring

A new satellite equipped gaging station was established on the Uncompahgre River near Olathe. Also, satellite equipment was installed in a City of Grand Junction gage on Kannah Creek near the Juniata Enlargement. Having the data from these two stations available in "real time" greatly assists the administration on the respective streams.

As part of the satellite network expansion, Division IV replaced the satellite equipment at nine gaging stations with the new generation equipment. Division IV is acting as a test area for the new hardware and freeing up as much of the more experienced equipment as possible for other divisions.

In September, Chuck David and Jerry Thrush attended a records development seminar at the USGS facility in Lakewood. Several procedures new to state personnel were presented and are being adopted. This training was very helpful and we hope seminar sessions will be done on a continuing basis.

The Division IV hydrographer participated with several agencies to resolve measurements at Ridgway Reservoir.

E. SMS Maintenance Management

During the 1991 calendar year, 38 data collection platforms and three shaft encoders have been repaired and/or recalibrated to original factory specifications at a part cost of \$170.40. Net savings to the state of Colorado on these repaired units is in excess of \$10,300.00. The efforts to increase the utilization of the repair facility have been successful. There is currently a backlog of nine units waiting for repair.

Chuck David also fabricated cable assemblies and miscellaneous items for the network expansion at a net savings to the state in excess of \$9,000.00.

The 40 new data collection platforms received for the network expansion were charged and subjected to preliminary testing before distribution to other divisions. Six units were found to be nonoperative and repaired in-house with parts furnished by Sutron at no charge. Two units had to be returned to Sutron for more extensive testing and repair under warranty.

As part of the testing and installations done in Division IV, programming standards for the new equipment were developed and submitted to the project manager and system analyst for distribution to other participating divisions.

In April, the Montrose Repair Facility hosted a two day training seminar on the new Sutron 8200 DCP equipment presented by Lew Ross of Sutron.

This meeting was attended by fourteen hydrographers representing six divisions, three Denver staff, and one person from USBR.

F. Dam Safety

In 1991, 89 dam inspections were conducted by the Dam Safety Engineer, Jim Norfleet. The water commissioners completed observation reports for 29 low hazard dams. Other areas of emphasis for the dam safety program were as follows:

1. Emergency Preparedness Planning: We have continued to encourage the owners to submit updated EPP's in accordance with the rules and regulations. Delta County has been the primary focus of our efforts for EPP's and for our own studies. In April we participated in a test of the EPP for Beaver Reservoir in conjunction with a statewide test of the emergency response to a flood alert.
2. Design Review: One project, the enlargement of Overland #1 was jointly reviewed by the division and the Denver office. The process was smooth and resulted in a satisfactory design. The work is now completed and scheduled to be inspected during the 1992 annual SEED inspection of the dam.
3. Outlet Inspection Device: Jim Norfleet developed a sled device to insert into a pipe for taking snapshot photos of the interior of an outlet. This has proven quite successful in various tests. We believe the sled will save dam owners several thousand dollars they would otherwise pay a contractor to make a video tape inspection. We have contacted a small manufacturing firm to make two metal sleds.

G. Groundwater

Groundwater remains a fairly quiet area in Division IV. Jerry Thrush, Engineering Technical Assistant, is assigned to spend approximately half his time on groundwater. With this time, he assists the public in applying for permits and either conducts or coordinates field inspections. In years past, Division IV has put quite a bit effort in enforcing problems where wells were constructed by unlicensed drillers or without permits. We continued our vigilance in this area, however, our prior efforts seem to be paying off as we have less reported problems.

The focus of our groundwater activities this year is better service to the public. In an effort to do this, we held a few public meetings discussed elsewhere in this report, and we formed a groundwater quality management team to prepare ourselves for the task of taking on certain permit analysis duties which are to be transferred to the division in the very near future.

We feel that the problem of unregistered and unpermitted wells, or wells constructed by unlicensed contractors is coming under control. At the same time, we have some concern about the many wells which are drilled under test hole authorizations and the need to get permits for these. It is our hope that reassignment of the permitting process, or at least part of the permitting process to the division office, can relieve the need for test hole authorizations and we can simply get permits for the wells in the first place.

H. Division IV Information Systems, Tabulation, and Records

Division IV did not meet its objectives with regard to information systems in 1991. We had hoped to make a lot of progress toward the goal of getting a computer on each engineer or technician's desk this year. Unfortunately we have received no computers for administrative purposes for 1991 with a great remaining need in this area. Administrative personnel continue to be burdened with the problem of leaving their desks and going to the central computer in order to use computer functions. A LAN (network) system was promised us this year and we continue to await its arrival.

Although administrative personnel were unable to obtain computers this year, I would note that Chuck David was able to obtain a computer through the satellite monitoring system. Also Jim Norfleet was able to obtain a computer through the NAT dams program. We would intend to tie these two computers into the LAN once it becomes available.

At this point in time, Division IV administrative personnel have one Signature 286 computer for engineering, records, and water rights functions. We also have a CompuAdd 286 computer which was purchased for groundwater purposes. Unfortunately our utilization of that machine is limited since it is not yet tied to a printer. Clerical activities and several other functions continue to be performed on the obsolete Wang system.

1991 was an off year for the tabulation and only minor efforts were made in that area this year. Division IV continues to work to have the best diversion records possible and is attempting to implement a greater level of quality control in this area.

I. Involvement With the Water User Community

The Division Engineer and the Assistant Division Engineer were fairly active between November, 1990 and November 1991 in communications with water users and other governmental agencies. We have attempted to regularly attend meetings of the Colorado River Water Conservation District, the Southwest Colorado Water Conservation District, and the Upper Gunnison Water Conservancy District. We also participate in at least one or two meetings per year of the Uncompahgre Valley Water Users Association. Probably the most prominent event this year was the Colorado Next 100 Years meeting held in Montrose, October 27, 1991, put together by Barbara Preskorn of Front Range Community College. This event was publicized throughout the region. We attended a regular meeting of the Delta County Commissioners to communicate our various duties, etc. with them.

Perhaps one of the most productive events were two meetings in the San Miguel area, Water District 60. A meeting was held in Redvale to discuss well permit availability, and procedures for gaining authorization for small nonjurisdictional dams and stock tanks. This was a very popular information session with about 50 people in attendance. I feel that we made a lot of progress at that meeting in getting people to advise us prior to construction of dams and in clarifying well permit issues, and preventing construction of non-permitted wells. The Telluride meeting

was aimed at the realtors and the same issues were discussed with a greater emphasis on wells. The realtors meeting was well attended and many questions were asked. Also, in 1991 this office attended a few meetings regarding the Ouray geothermal situation and the Division Engineer and the Assistant Division Engineer were able to attend the water workshop sponsored by Western State College in Gunnison. The Dam Safety Engineer met with representatives of the B. L. M. and Forest Service on stock water impoundments. Although not involved as a participant, this office hosted a meeting of Department of Natural Resources Director Ken Salazar with several conservancy districts and Representative Acquafresca concerning the statutes relating to cloud seeding.

III. 1991 INTERNAL ISSUES

A. Staff Actions and Changes

Division IV is fortunate in having a very stable staff. At the close of the water year, the table of organization remained the same as in last year's annual report. Following the close of the 1991 water year, however, we had two retirements effective December 31, 1991. Richard Drexel, Principal Water Commissioner for Water District 40 retired after 39 years of service to the Division of Water Resources, and we all wish Dick the best in future years. Also, Jim Miller, Deputy Water Commissioner for the North Fork, Muddy, and Anthracite Creeks retired effective December 31, 1991. Jim Boyd who was Surface Creek deputy water commissioner in Water District 40, was assigned to take over Dick's duties. Thus, we have two vacancies in Water District 40.

B. Training

Most of the training activities in 1991 focused on the technical staff. The Division Engineer and Assistant were able to attend the Western State College Water Workshop, the CSU Conference, and some routine meetings. The Dam Safety Engineer was able to attend some of the ASDSO workshops. The groundwater Technical Assistant Jerry Thrush was able to take a trip to Denver and attend a few other meetings in order to develop technical know-how in the groundwater area. Division IV Hydrographers Chuck David and Jerry Thrush either hosted or attended training sessions put on by other groups.

We hope to expose the water commissioners to more outside training or outside sources of training. While we have had our traditional in-house training at the spring and fall meetings, outside training has been limited to two events. First, we were able to allow Dick Drexel to attend the Western State College Water Workshop. Also, we were able to bring Sue Currey, a local communications instructor with Mesa State College, to our fall meeting. Her one hour seminar with interpersonal communications was most well received.

C. Impact of the Budget

Division IV personnel are to be thanked for saving money during the 1991 water year. We continue to watch our mileage on a voluntary basis. As a result we were able to function within our allocated budget.

D. Continuing Challenges

Continuing problems in Division IV appear to be: First, control over small water development and keeping that consistent with the laws of the State of Colorado. People often want to develop springs into wells or create ponds, dams, etc. Often times this is done by the individual or backhoe operator before we have a chance to become involved. A major communication problem and public relations problem we have is to make water development activities consistent with the laws of the state and administerable. The second area of continuing challenge is better administration including more thorough administration of augmentation plans, exchanges, etc., and better record keeping for each of these areas.

IV. THE COMING WATER YEAR - PLANS FOR THE 1992 WATER YEAR

At the time of writing it appears as though the major challenge for the 1992 water year will be to do our job within budget. A current proposal by the JBC is to reduce the allocated fund for this year for travel purposes by 25%. The effect is to reduce our budget available for travel by 50% since the year is half over. This situation will create a major reduction in our activities unless it is changed.

A. Water Commissioner Activities

If the budget reduction plan is not implemented, we will try to keep better records of our diversions and try to visit more structures this year than in years past. If severe travel restrictions are implemented, we will need to limit our travel to administration during call situations and not much more.

B. Groundwater

Division IV is currently implementing plans to take over the program of screening groundwater well permit applications and making a preliminary analysis. In this manner we hope to provide a better service tool for those who seek well permits and decrease the turn around time for well permit processing.

In addition, Division IV plans to continue its efforts over the past few years of trying to reduce the number of illegal wells which are constructed and trying to prevent the construction of wells, shallow wells by backhoes without a permit, etc., and the development of springs into wells.

C. Objectives

At the time of writing, our major objectives for the coming water year are:

1. Develop the best tabulation of water rights we can.
2. Implement the Division IV permit acceptance and screening role and properly communicate groundwater issues to the public.
3. Plan to hold a dam safety seminar in the area in the spring.

4. Participate in statewide efforts in training and develop some training opportunities for the water commissioners.

5. Continue the development and hopefully the implementation of the Gunnison River Accounting Spreadsheet.

6. Maintaining the best operation that we can under threats of significant budgetary cutbacks through prioritization of duties, and recognition of more economical ways to perform those duties.

V. TABLE OF ORGANIZATION - PERSONNEL

IRRIGATION DIVISION NO. 4

Division Engineer - Keith C. Kepler
Assistant Division Engineer - Kenneth W. Knox
Secretary - Jean Kurtz
Typist B - Bonnie Trujillo
Hydrographer - Charles G. David
Resident Dam Safety Engineer - James G. Norfleet
Engineering Tech. Assist. Aide - Jerry Thrush

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
Gail Brooks

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
**Ed Hofmann

Water District 63

SR. WATER COMMISSIONER
*Richard Belden

Water District 68

WATER COMMISSIONER
H. Roger Noble

Water District 73

SR. WATER COMMISSIONER
*Richard Belden

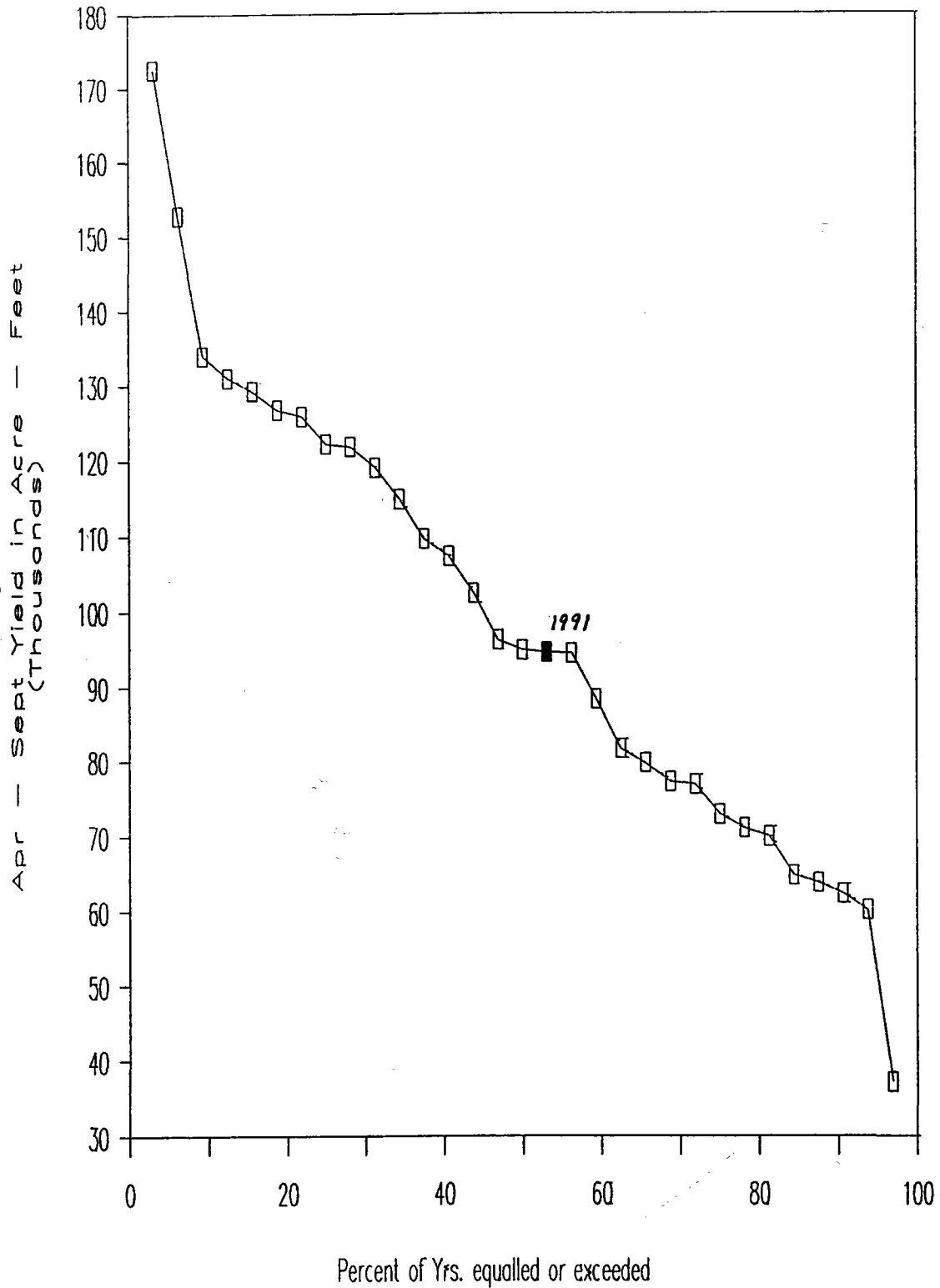
*Annual

**Temporary

(BIV) 416

Uncomphagre River near Ridgway

Flow Duration Curve (1961-1991)



UNCOMPAHGRE RIVER NR RIDGWAY, CO ✓

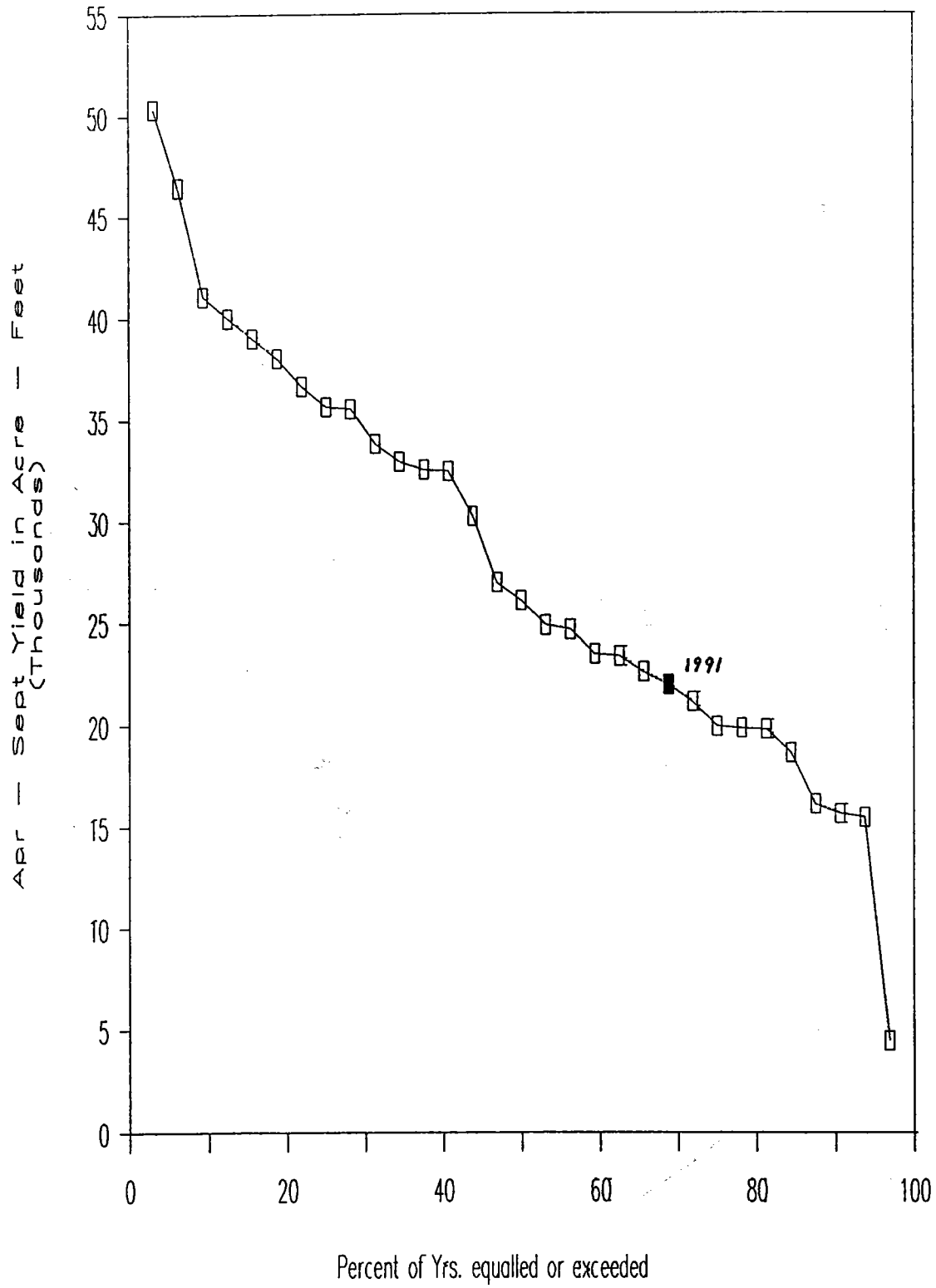
YEAR	ACRE - FEET							PERCENT OF YEARS EQUALLED	
	APR	MAY	JUN	JUL	AUG	SEP	APR-SEP TOTAL	RANK	OR EXCEEDED
1984	9610	47060	54390	34080	18150	9390	172680	1	3
1983	5180	17770	54250	52160	16790	6740	152890	2	6
1985	11200	25780	52950	25950	10410	7700	133990	3	9
1965	8810	19620	39250	38840	14470	10040	131030	4	13
1975	4040	15850	44640	45900	13040	5790	129260	5	16
1986	6640	21580	45800	29120	11310	12260	126710	6	19
1979	6540	23500	49080	31490	11160	4100	125870	7	22
1973	4020	20860	46350	33000	11790	6140	122160	8	25
1982	5730	17190	38620	29010	18540	12780	121870	9	28
1978	7170	16950	53380	28550	8430	4590	119070	10	31
1970	4750	27640	36180	19290	12100	14890	114850	11	34
1987	10760	25990	38390	18480	9430	6560	109610	12	38
1968	4380	16350	48170	17750	15870	4880	107400	13	41
1962	10450	19560	35480	23340	8450	5190	102470	14	44
1964	6130	24610	30620	16870	12370	5650	96250	15	47
1969	9240	23960	24980	21280	8380	7010	94850	16	50
→ 1991	5560	22600	35480	16700	8610	5600	94550	17	53 ←
1971	9050	13240	35890	20220	8530	7570	94500	18	56
1961	6150	23040	32190	10170	8760	7980	88290	19	59
1980	5120	13120	36430	16130	6900	3930	81630	20	63
1974	5910	23810	26580	14130	5890	3400	79720	21	66
1966	7260	24780	23110	11870	6270	3900	77190	22	69
1988	5890	13900	30310	11660	7430	7680	76870	23	72
1967	4320	17210	22020	15050	9680	4580	72860	24	75
1976	4590	16050	26690	13010	6720	3940	71000	25	78
1990	5070	14720	28540	12290	4820	4520	69960	26	81
1963	6410	19350	16920	10160	6480	5430	64750	27	84
1981	4650	8680	22930	16550	6130	4780	63720	28	88
1972	5400	14210	24020	8840	4520	5260	62250	29	91
1989	8310	13960	17640	9760	6870	3530	60070	30	94
1977	5110	7510	9990	5440	4500	4500	37050	31	97

TOTAL 3055370

AVERAGE 98560

Surface Creek near Cedaredge

Flow Duration Curve (1961 - 1991)



SURFACE CREEK NEAR CEDAREIDGE

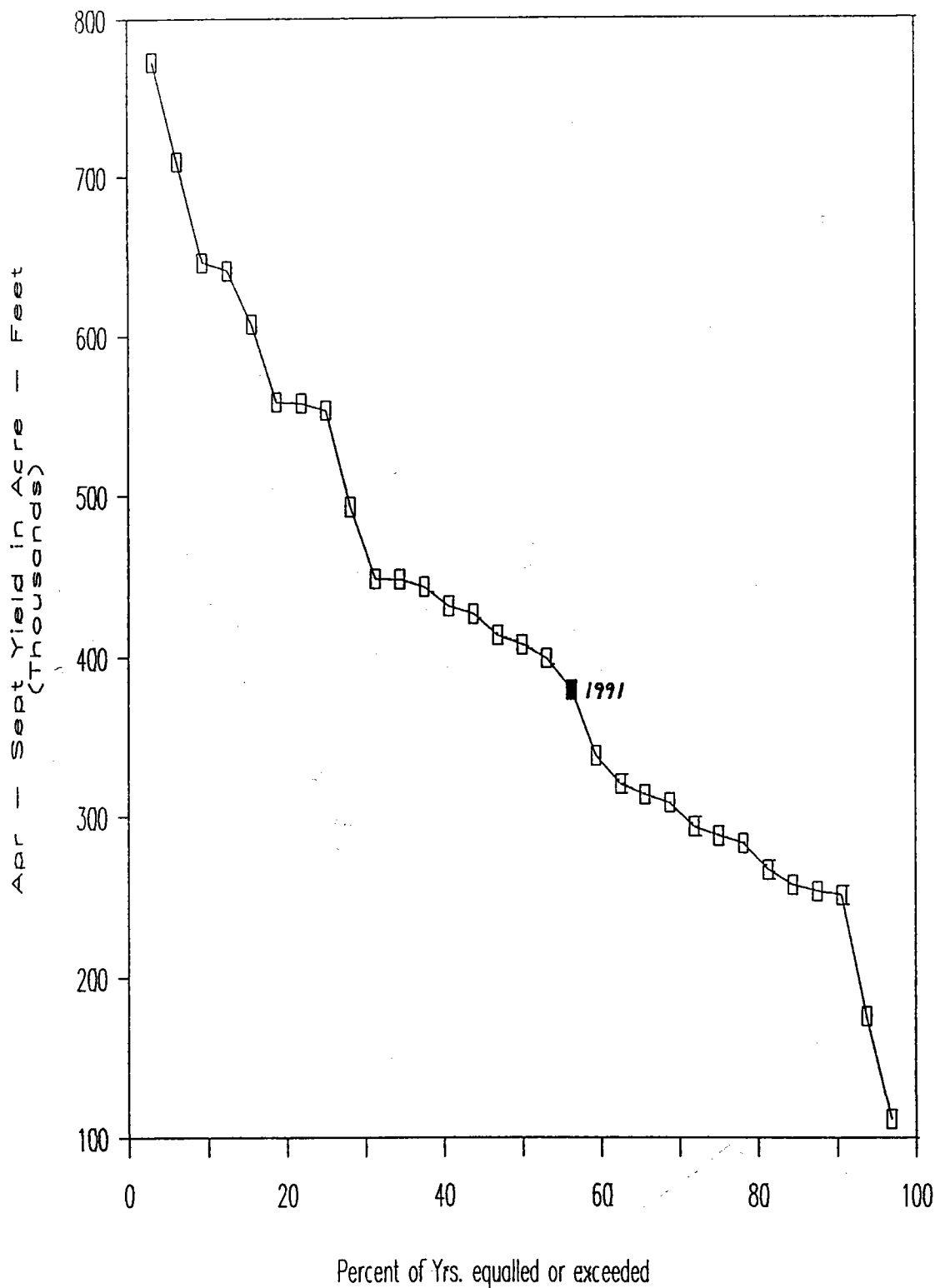
YEAR	ACRE - FEET							APR-SEP TOTAL RANK	PERCENT OF YEARS EQUALLED OR EXCEEDED
	APR	MAY	JUN	JUL	AUG	SEP	SEP		
1983	1410	7180	20400	11720	5740	3900	50350	1	3
1986	3650	13010	15630	6570	4650	2970	46480	2	6
1984	1140	14500	12430	5810	4730	2450	41060	3	9
1973	849	11490	14530	6390	4240	2520	40019	4	13
1985	3240	11870	11130	5350	4890	2530	39010	5	16
1980	1400	8480	15260	6140	4300	2470	38050	6	19
1982	2530	8340	11110	6880	4330	3500	36690	7	22
1987	4540	11170	9230	4990	3480	2260	35670	8	25
1969	4080	12330	8280	4520	4720	1620	35550	9	28
1979	1470	8640	11600	5390	4210	2530	33840	10	31
1962	3850	7700	10330	5220	3870	1970	32940	11	34
1975	616	5820	11120	6920	5140	2930	32546	12	38
1978	1170	8050	12250	5020	3530	2450	32470	13	41
1965	1110	7470	9440	5650	4090	2490	30250	14	44
1970	709	8190	7750	4190	4010	2140	26989	15	47
1971	2780	5560	8100	4330	3350	1970	26090	16	50
1966	3020	8250	4930	4150	3020	1540	24910	17	53
1968	608	6510	7960	4130	2600	2880	24688	18	56
1967	1200	6340	5930	3890	3550	2570	23480	19	59
1988	2200	6390	6240	4110	3460	982	23382	20	63
1974	2040	8480	4870	3190	2500	1540	22620	21	66
→ 1991	677	6610 ⁷¹⁵	5590 ⁶²²⁰	3550 ⁶²⁵⁰	3730 ⁴⁰³⁰	1850 ⁴¹⁴⁰	22007 ¹⁸⁷⁰	22	69 ←
1972	2700	6470	4790	3240	2720	1250	21170	23	72
1989	3490	5240	4470	3550	2040	1170	19960	24	75
1976	823	6000	5560	3500	2380	1590	19853	25	78
1964	543	5790	4460	4000	2990	2030	19813	26	81
1961	790	5170	5000	3400	2820	1490	18670	27	84
1981	2010	4520	3530	2710	1910	1460	16140	28	88
1990	2500	3190	4090	2418	2307	1170	15675	29	91
1963	1730	5130	2530	2560	2050	1470	15470	30	94
1977	1060	1750	525	366	539	238	4478	31	97

TOTAL 870320

AVERAGE 28075

Gunnison River near Gunnison

Flow Duration Curve (1961 - 1991)



GUNNISON RIVER NEAR GUNNISON

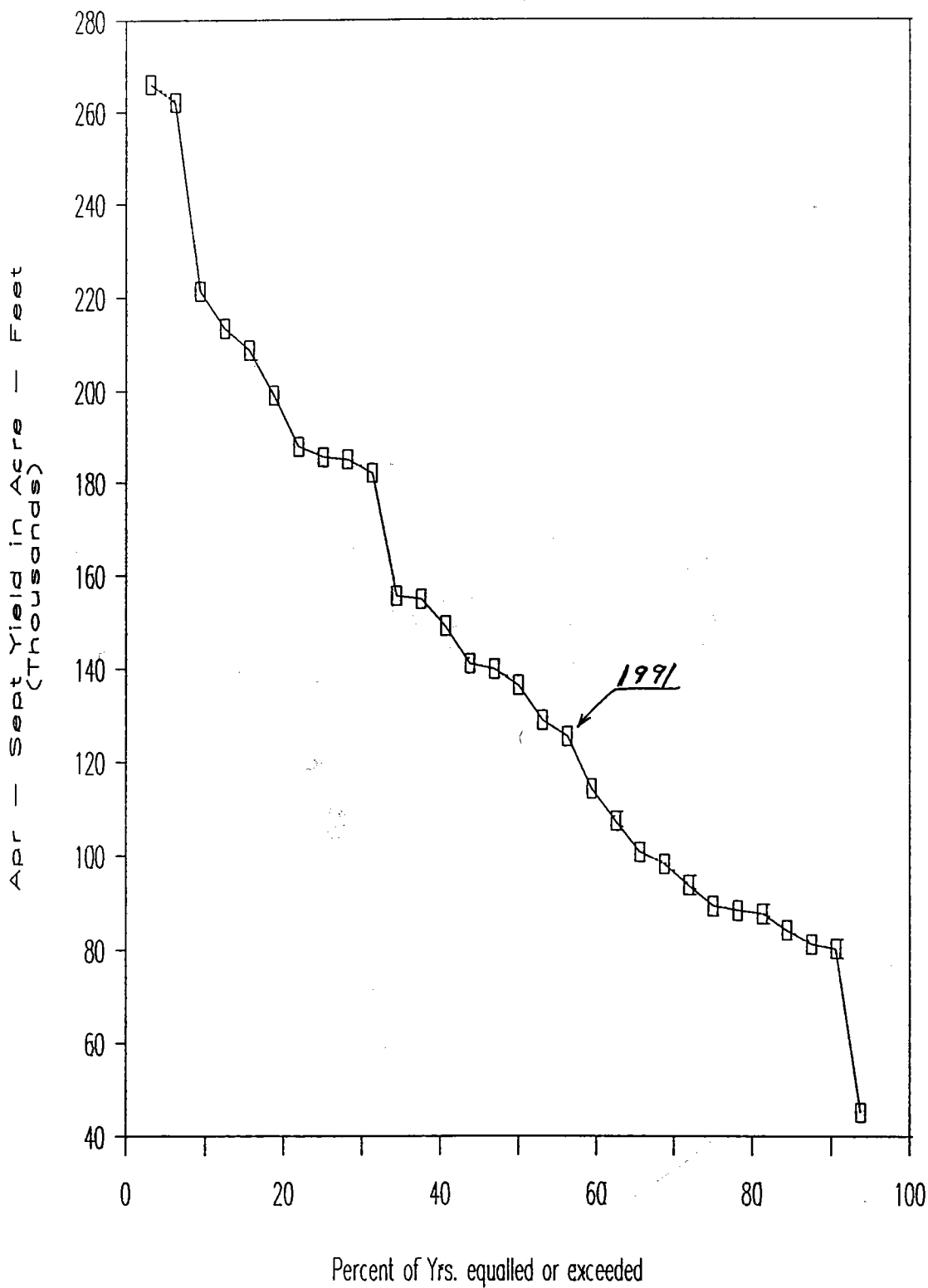
YEAR	ACRE - FEET							PERCENT OF YEARS EQUALLED	
	APR	MAY	JUN	JUL	AUG	SEP	APR-SEP TOTAL	RANK-	OR EXCEED
1984	41530	208000	249900	154400	75270	44050	773150	1	3
1965	64630	137800	202500	184100	70900	50180	710110	2	6
1986	63000	138600	197500	125500	68570	52970	646140	3	9
1962	82180	171400	183900	103500	55010	45000	640990	4	13
1985	71120	176500	172400	88500	45110	54030	607660	5	16
1979	39130	156800	177100	112400	41860	31790	559080	6	19
1980	59070	140400	192000	80040	42150	44460	558120	7	22
1970	58370	180400	151700	78490	36160	48400	553520	8	25
1983	30150	70220	181700	106100	66890	37970	493030	9	28
1978	32970	83630	183900	83750	38830	25480	448560	10	31
1971	56740	87710	137500	84510	56150	25260	447870	11	34
1987	67680	128300	116700	55300	42480	32840	443300	12	38
1969	50830	132900	97090	79440	42450	28810	431520	13	41
1982	36870	91480	141200	71810	45350	39950	426660	14	44
1968	19380	86110	151200	50810	68320	37570	413390	15	47
1975	20010	59640	144500	114900	45420	23230	407700	16	50
1973	15800	87110	127800	100600	42960	24610	398880	17	53
→ 1991	28860	99360	120800	64740	41940	23610	379310	18	56 ←
1972	31660	59800	120400	36990	43600	45340	337790	19	59
1967	26800	69350	105100	55100	35810	28110	320270	20	63
1974	25340	109400	85730	39950	34360	18710	313490	21	66
1976	31400	67480	82430	53190	40880	33040	308420	22	69
1988	31150	72450	91280	45230	31320	21900	293330	23	72
1964	12710	72090	78100	44670	43420	36940	287930	24	75
1966	35860	77800	80630	33200	34170	21640	283300	25	78
1963	31890	61420	54850	48910	47960	21810	266840	26	81
1989	47530	64000	64650	32260	31770	17150	257360	27	84
1961	15360	61970	59650	47320	45030	23870	253200	28	88
1990	15870	29230	83910	41090	62050	18940	251090	29	91
1981	14880	26350	56080	30330	25470	22850	175960	30	94
1977	16660	17370	25290	17710	19520	14810	111360	31	97

TOTAL 12799330

AVERAGE 412882

San Miguel River near Placerville

Flow Duration Curve (1961-1991)



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	6
1985	31660	48530	75540	37830	14870	12970	221400	3	9
1987	33110	58120	63150	33700	17350	7990	213420	4	13
1973	8900	49360	75380	50300	17210	7630	208780	5	16
1965	19980	35400	50220	56350	23400	13690	199040	6	19
1975	570	38060	60780	64610	16320	7550	187890	7	22
1986	15810	37990	64110	40620	14400	12650	185580	8	25
1979	13720	38100	72110	41140	14190	5760	185020	9	28
1982	15600	32690	51230	38420	25280	18850	182070	10	31
1970	8860	47030	40920	23480	14910	20330	155530	11	34
1980	10580	32080	62910	29620	12560	7130	154880	12	38
1978	15860	28880	64460	27770	7550	4620	149140	13	41
1962	21940	32070	41560	28260	10350	6750	140930	14	44
1961	14800	41620	46560	13870	11320	11730	139900	15	47
1968	6180	25190	55740	22060	20560	6650	136380	16	50
1971	15890	24130	46100	23100	11510	8080	128810	17	53
1969	14390	32580	29320	27060	12260	9830	125440	18	56
1991	14160	28520	41670	18940	9840	9370	122500	19	59
1964	10490	36410	34940	14550	11660	6280	114330	20	63
1988	9730	18980	40380	17190	10630	10310	107220	21	66
1966	12550	33510	28660	13380	7550	5090	100740	22	69
1974	13230	32880	29250	12870	5930	3900	98060	23	72
1976	8870	21670	36100	14310	7030	5510	93490	24	75
1967	5990	23100	24220	15820	12250	7810	89190	25	78
1981	8160	12290	31020	19620	8260	8860	88210	26	81
1989	14560	22580	22390	13940	9780	4350	87600	27	84
1963	10860	25580	19200	9900	10360	8150	84050	28	88
1990	5930	17020	33630	12230	6260	6030	81100	29	91
1972	9970	19040	30080	9740	5130	6280	80240	30	94
1977	6210	8380	13350	6370	5560	5260	45130	31	97

TOTAL 4434400

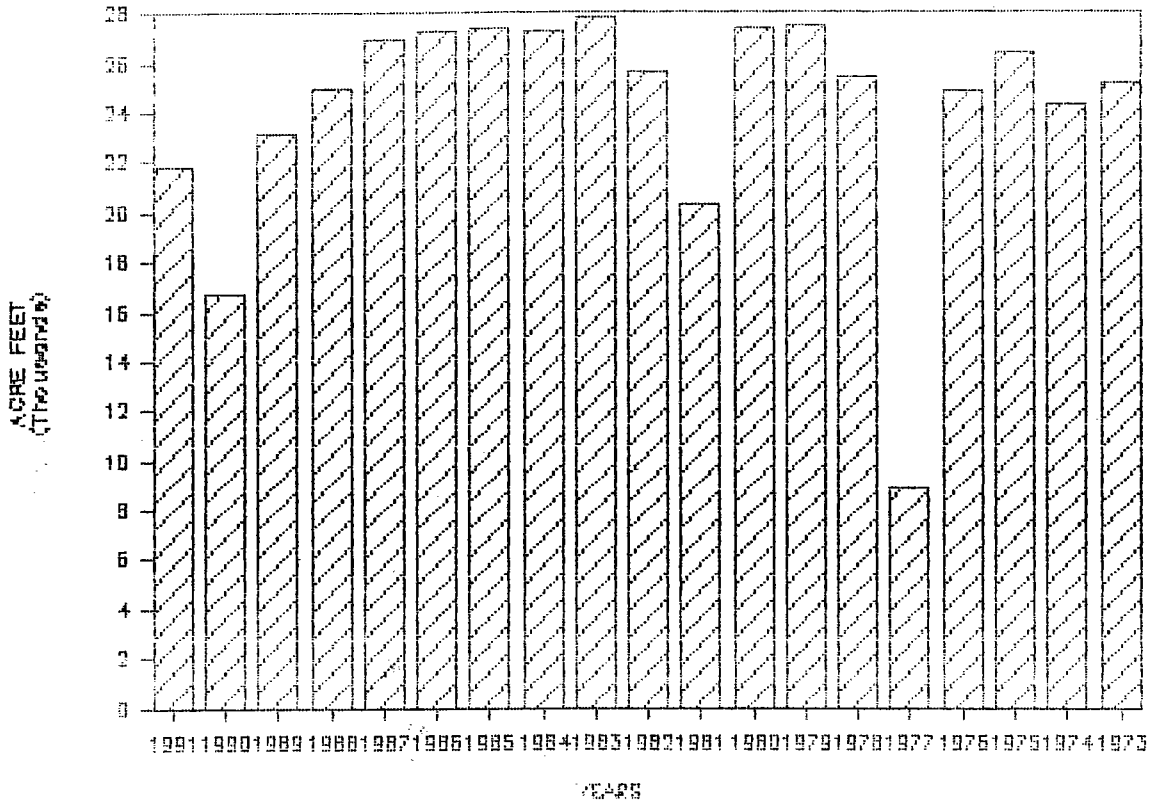
AVERAGE 143045

APPENDIX B

Grand Mesa Reservoir Storage

GRAND MESA RESERVOIR STORAGE — D40

ANNUAL PEAK STORAGE — AF



YEARLY TOTAL RESERVOIR STORAGE FOR GRAND MESA WATER USERS

YEAR	PEAK STORAGE AF	% OF TOTAL CAPACITY	CARRY OVER AF	% OF THIS YR STORAGE	% OF TOTAL CAPACITY
1991	21830	78.31%	4882	22	17
1990	16718	59.97%	3853	23	13
1989	23089	82.83%	3979	17	14
1988	25037	89.82%	8490	34	30
1987	26933	96.62%	10020	38	36
1986	27279	97.86%	21794	80	78
1985	27349	98.11%	15701	58	56
1984	27292	97.91%	15964	58	57
1983	27876	100.00%	16442	59	59
1982	25587	91.79%	17345	68	62
1981	20273	72.73%	6865	34	25
1980	27439	98.43%	10292	37	37
1979	27480	98.58%	9433	34	34
1978	25390	91.08%	7858	31	28
1977	8837	31.70%	2304	26	8
1976	24861	89.18%	3653	15	13
1975	26445	94.87%	7864	30	28
1974	24365	87.40%	5076	21	18
1973	25185	90.35%	12023	48	43

APPENDIX C

DIVISION IV
1991 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>
6/18/91	8/01/91	Hot Springs 1 & 2	1904	Hot Springs	L. Stephenson

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>
5/6/91	season	Flemming Ditch	8/28/1920	Big Gulch	G. Stengel
7/11/91	120 days	Fire Mtn	G 83	Clear Fork	Fire Mtn
6/23/91	120 days	Larson	H 73	Cow Creek	Columbine Rnch
7/11/91	season	CCIS Ditch	10/24/1884	Crystal Creek	Dave Hooker
5/8/91	season	Blake Ditch	9/28/1907	Dirty George Cr	C. Hawkins
5/8/91	season	Cedar Park Ditch	6/17/1889	Dirty George Cr	Lynn Sanburg
5/13/91	season	West Ditch	6/17/1889	Dirty George Cr	Rolf Sanburg
6/26/91	season	Burt & Thompson D	10/1/1886	Dry Creek	Pipher
6/26/91	season	Fuller #1 Ditch	10/31/1890	Dry Creek	Gary Tharp
6/10/91	season	Fuller #2 Ditch	2/28/1899	Dry Creek	Gary Tharp
6/2/91	season	Morton Ditch	4/1/1895	Dry Creek	Lynn Hilsen

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>
6/01/91	season	Welch Ditch	6/1/1883	Dry Creek	Burgess
6/28/91	season	Park Ditch	6/17/1889	Forked Tongue Cr	G. Burton
5/08/91	season	H. J. Neighbors	6/23/1914	Happy Hollow Cr	Clyde Owens
4/10/91	season	Happy Hollow Ditch	9/28/1907	Happy Hollow Cr	John Alward
5/08/91	season	Lucky No. 1 Ditch	9/28/1907	Happy Hollow Cr	Darrel Geyer
5/08/91	season	Pumpkin Swag Ditch	5/10/1896	Happy Hollow Cr	Clyde Owens
7/01/91	120 days	Deer Trail	25	Hubbard	Coor
6/28/91	season	Edgar Ditch	8/28/1920	Kiser Creek	L. Cadwell
6/18/91	season	Lake Fork	7/26/1886	Kiser Creek	W. Bull
6/28/91	60 days	#4 decree	6/17/1889	Leroux Creek	L. C. W. U. A.
8/27/91	11/1/91	Currant Creek Ditch	6/17/1889	Leroux Creek	Roy Wolf
5/02/91	13 days	Highline Ditch	6/17/1889	Leroux Creek	Sheldon Smith
6/19/91	9 days	Highline Ditch	3/20/1908	Leroux Creek	Sheldon Smith
6/01/91	18 days	Stull Ditch	3/20/1908	Leroux Creek	Dan Hawkins
6/28/91	season	Minn Canal	6, 7, 11, 18, 20	Minn Creek	G. Farnsworth
8/15/91	90 days	Fire Mountain	33 B	North Fork	Fire Mtn
6/04/91	season	Oak Valley	4/8/1886	Oak Creek	Sperry Rnch

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>
7/23/91	120 days	Deer Ditch	J 30	Ragged Creek	BearPaw Rnch
6/18/91	season	Orchard Ditch	8/28/1920	Rowell Gulch	Art Glaser
6/28/91	season	Clipper Ditch	4/10/1884	Smith Fork	Wtr Commission
6/22/91	6 days	Grandview Ditch	3/28/1895	Smith Fork	Grandview D.
1/01/91	season	Alfalfa Ditch	12/17/1881	Surface Creek	R England
4/8/91	flow change	Butte Ditch	11/24/1885	Surface Creek	R Schroder
5/31/91	flow change	Coldwater Ditch	5/20/1890	Surface Creek	F. McPherson
7/7/91	flow change	Cook Ditch	3/1/1882	Surface Creek	Cedaredge
6/24/91	flow change	Eric Johnson Ditch	12/2/1885	Surface Creek	Jene Young
6/28/91	flow change	Fogg Ditch	4/2/1885	Surface Creek	R. Schroder
4/19/91	flow change	Horseshoe Ditch	5/1/1889	Surface Creek	W. McPherson
5/20/91	flow change	Klondyke Ditch	6/10/1899	Surface Creek	Daryll Geyer
5/9/91	flow change	Lone Pine Ditch	9/15/1898	Surface Creek	W. McPherson
7/02/91	flow change	Orchard Ranch Ditch	3/21/1883	Surface Creek	N. Kehmeier
6/20/91	flow change	Paradise Ditch	7/1/1886	Surface Creek	G. Anson
4/22/91	flow change	Rose Ditch	4/1/1895	Surface Creek	W. Bruton
7/01/91	flow change	Shephard Ditch	3/25/1884	Surface Creek	C. Lutz

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>
6/18/91	flow change	Trickle Ditch	3/01/1887	Surface Creek	C. Hamilton
6/25/91	120 days	Holybee		Terror Creek	B. Beauter
6/15/91	season	B & M Ditch	6/17/1889	Ward Creek	J. Perryman
6/21/91	season	Bryson Ditch	8/28/1920	Ward Creek	W. Gilmore
5/01/91	season	Carbon Ditch	6/17/1889	Ward Creek	Art Glaser
8/8/91	season	Eckert Ditch	5/28/1937	Ward Creek	E. Buchheim
4/07/91	season	Granby Rowell Ditch	9/28/1907	Ward Creek	G. Bertram
5/18/91	season	Hansen Ditch	5/28/1937	Ward Creek	Steve Morris
5/18/91	season	Lone Friday	5/28/1937	Ward Creek	Beryl Himes
5/18/91	season	Parker Ditch	5/28/1937	Ward Creek	N. Wagner
5/14/91	season	Pratt Ditch	5/28/1937	Ward Creek	Mary Parker
6/15/91	season	Sessions Ditch	06/17/1889	Ward Creek	J. Perryman
5/14/91	season	Stillwater #1	5/28/1937	Ward Creek	Bill Otto
5/04/91	season	Sunrise Ditch	9/28/1907	Ward Creek	A. Peterson
5/4/91	season	Todd Ditch	9/28/1907	Ward Creek	Dale Parker
5/06/91	season	Williams Ditch	9/28/1907	Ward Creek	Paul Fenton
6/21/91	season	Childs Ditch	12/23/1885	Youngs Creek	W. Bull
6/24/91	season	Santa Fe	6/17/1889	Youngs Creek.	Betz

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>
4/23/91	season	Albush	7/3/1929	Horsefly	M. Sanders
8/02/91	4 days	U. V. W. U. A.	5/8/1913	Uncompahgre	Jim Hokit

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>
4/15/91	10/31/91	Lurvey Ditch #1	6/1/1916	East Creek	Ron Tipping
4/23/91	5/9/91	Kannah Cr Ext Ditch	7/25/1888	Kannah Creek	Ed Gardner
6/28/91	10/31/91	Brown & Campion	7/25/1888	Kannah Creek	Bill Blair

Water District 59

NO CALLS

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>
7/5/91	7/10/91	Smuggler	1897	Maverick	Leroy Khal
7/19/91	7/29/91	Maverick Draw	1897	Maverick & Naturita	Neil Reems
9/03/91	9/06/91	Highline Canal	1911	San Miguel	CC Ditch Co

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>
4/08/91	10/17/91	All Structures		Paradox Creek	Paul Swain

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>
8/1/91	season	Collier Ditch	5/8/1913	Little Cimmaron	Doc Orme
7/08/91	season	Schneff Highline	11/1/1905	Powderhorn	W. Wilson

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>
6/26/91	9/16/91	Bartholemew & H	2/11/1939	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>
4/10/91	4/15/91	Albush Ditch	7/3/1929	Horsefly Creek	Mrs. Saunders
4/16/91	4/17/91	Maynard	2/26/1920	McKenzie	Bob Voss
5/13/91	season	North Branch Miles	2/26/1920	McKenzie	Gene Hallenbeck
5/14/91	season	Albush Ditch	7/31/1929	Horsefly Creek	Mrs. Saunders

Water District 73

<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>
5/10/91	10/31/91	Moorland Ditch	7/25/1941	Coate Creek	Joy Van Loan
7/17/91	9/25/91	Chiquito Dolores #2	5/02/1901	Little Dolores	Joy Van Loan

APPENDIX D
DIVERSION SUMMARY

WATER DIVISION IV IRRIGATION SUMMARY 1991 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	215,893	3,447		219,340	13,815	15.88
40	381,448	64,662	4	446,114	128,701	3.47
41	68,368	379	582,927	651,674	109,890	5.93
42	16,790	2,719		19,509	4,428	4.41
59	270,443		4,803	275,246	35,220	7.82
60	88,739	14,328	811	103,878	24,080	4.31
61	4,014	920	3,671	8,605	1,961	4.39
62	117,087	9,200		126,287	16,561	7.63
63	20,357	768	163	21,288	2,777	7.67
68	102,050		4,508	106,558	16,548	6.44
73	<u>6,773</u>	<u> </u>	<u>87</u>	<u>6,860</u>	<u>1,495</u>	4.59
	1,291,962	96,423	596,974	1,985,359	355,476	

XVII SUMMARY

APPENDIX E

SUMMARY OF VISITATIONS AND STRUCTURES

1991

<u>Water District</u>	<u>Number of Observations</u>	<u>Structures With 90 Record</u>	<u>Total Structures</u>	<u>Total Active Structures</u>	<u>Inactive Historic Structures</u>	<u>Average # of Observ. per Structure w/Record</u>	<u>% of Total Active Structures w/91 Record</u>
28	3222	275	772	469	268	12	59
40	26248	1193	2467	1778	605	22	64
41	4500	105	573	286	220	43	34
42	6355	207	358	274	61	31	66
59	2455	218	1487	910	132	11	24
60	2250	284	1230	1043	157	8	39
61	3627	93	141	98	40	39	94
62	711	143	981	839	77	5	35
63	1605	168	218	170	38	10	85
68	1619	139	904	687	217	12	24
73	213	99	117	92	24	2	78

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APPENDIX F

WATER COURT ACTIVITIES

No. Applications for Decrees	133
No. Consultations with Referee	197
No. Decrees Issued by Water Court	175

Type of Decree

Surface Water	150
Ground Water	39
Reservoir	56
Transfer	0
Change of Point of Diversion	8
Alternate Point	7
Change of Use	7
Plan Augmentation	4
In-Stream Flow	0
Cancelled	9

No. Structures in Decrees	500
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Types of Structures

Ditches and Springs	224
Reservoirs	78
Wells	198

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APPENDIX G

TRANSMOUNTAIN DIVERSION RECORD

<u>FROM</u>	<u>TO</u>	<u>STRUCTURE</u>	<u>AMOUNT</u>
WD-28	Div. 2	Larkspur	95 AF
WD-28	Div. 3	Tarbell	Water available, no diversion to Div. III
Div. 5	WD-40	Leon Lake	1,495 AF
WD-40	Div. 5	Divide Creek Highline Feeder	796 AF
WD-42	Div. 5	City Pipeline	1524 AF
WD-42	Div. 5	New City Pipeline	5017 AF
WD-42	Div. 5	Redlands Canal	523,700 AF
WD-62	Div. 3	Tabor	995 AF
Div. 7	WD-68	Carbon Lake Ditch	407 AF
Div. 7	WD-68	Mineral Point Ditch	165 AF
Div. 7	WD-68	Red Mountain Ditch	78 AF
WD-73	Div. 5	Fruita Pipeline	118 AF

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