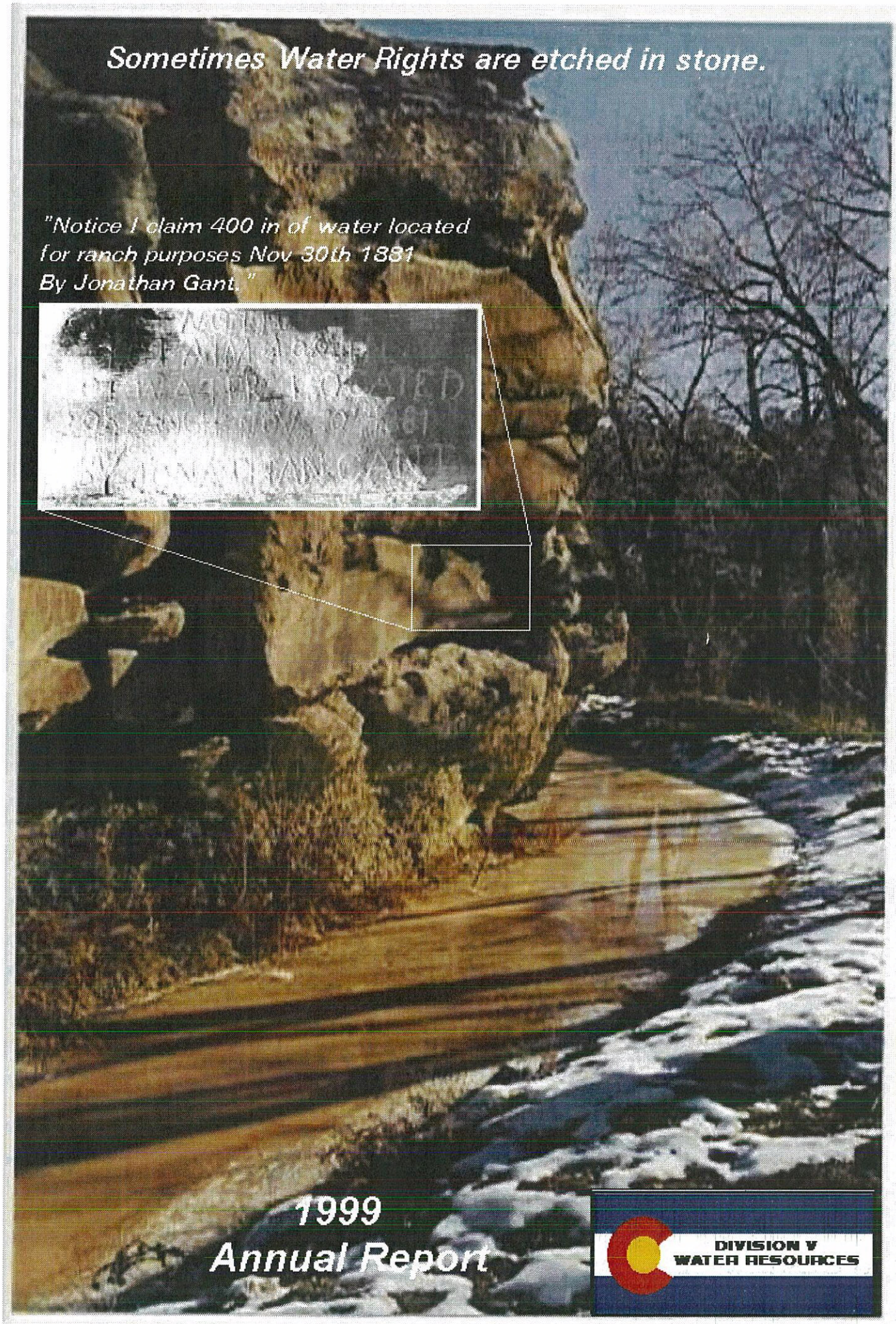


1999 Annual Report

DIVISION V
WATER RESOURCES

STATE OF COLORADO

DIVISION OF WATER RESOURCES
WATER DIVISION FIVE
Office of the State Engineer
Department of Natural Resources

50633 U.S. Hwy. 6 & 24
P.O. Box 396
Glenwood Springs, CO 81602
Phone: (970) 945-5665
FAX: (970) 945-8741 (call first)

http://water.state.co.us/default.htm

March 1, 2000

Hal D. Simpson, State Engineer
Division of Water Resources
1313 Sherman St, Room 818
Denver CO 80203

Dear Hal:

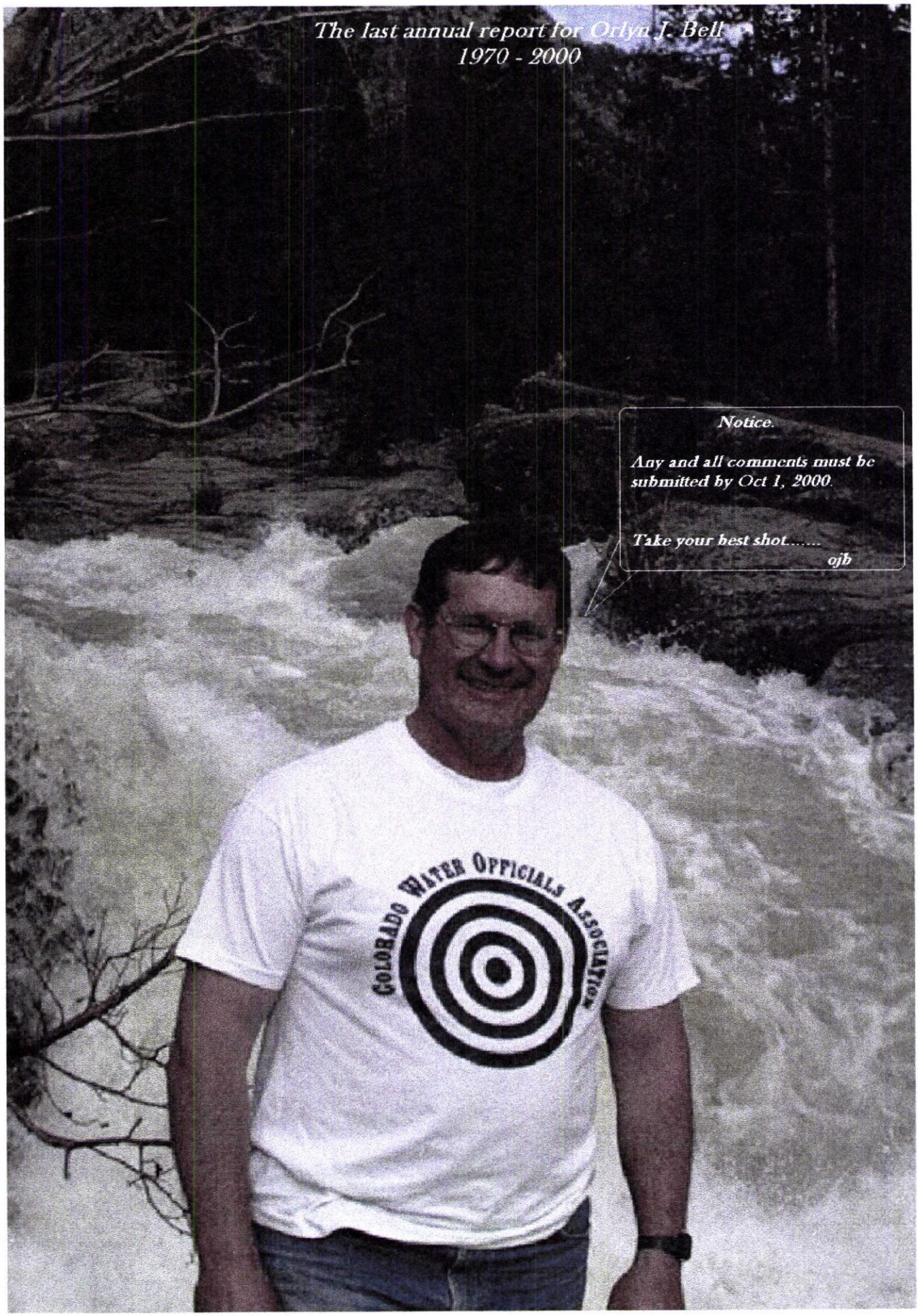
On behalf of the staff of Division 5, I submit the Annual Report for 1999.

I want to express a special THANK YOU to all Division 5 personnel, and to you and your staff for help and support in fulfilling the various responsibilities of water administration in Division 5.

Respectfully submitted,

Orlyn J. Bell
Division Engineer

The last annual report for Orlyn J. Bell
1970 - 2000



Notice.

Any and all comments must be submitted by Oct 1, 2000.

Take your best shot.....
ojb

1999

ANNUAL REPORT

DIVISION 5

DIVISION OF WATER RESOURCES

DIVISION 5
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DIVISION 5
DETAILED TABLE OF CONTENTS
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WATER DIVISION 5

The Colorado River mainstem is referred to as 'Water Division 5" and includes the Colorado River and its tributaries upstream from the state line, but excluding the entirety of the Gunnison River Basin. The average annual natural flow of the Colorado River above Grand Junction is approximately 3.6 million AF/yr. The mainstem provides approximately 600,000 AF/yr each of transmountain diversions and of West Slope consumptive uses -- primarily agriculture.

I. WATER ADMINISTRATION

I.A. 1999 WATER YEAR

Winter snowpack was far short of normal. Plans were being made in March on how to operate with shortages. Reservoir re-operation for endangered fish enhancement was tabled and the April 1 snowpack was at 72% basin-wide. However, it began snowing and by the middle of May precipitation was slightly above normal. A fairly wet summer followed and crops were generally good with excellent water supplies. On the down side, a series of late freezes all but wiped out most fruit crops. 1999 would rank as a very good water year.

1. Accomplishments

a. Water Administration

Calls on heavily administered side tributaries came late and were more junior longer, allowing for a lot of irrigation to occur. For some areas they never occurred because the late summer and fall rains replenished the flows. The Grand Valley never placed a call and Shoshone's was in the fall of 1998 from November 1st to January 4th and in the spring from March 22nd through April 21st.

b. Dam Safety

1999 brought an average snowpack basin-wide. This meant that there were less run-off-related incidences than in past years. However, the trend of reservoirs remaining full for a longer period of time continued as less water was needed from these reservoirs. This was partly due to above average precipitation later in the summer and the ever-increasing trend for changes in usage from irrigation to recreation. Many of these dams are old and were designed and built for irrigation. As a result, the trend for an increase in dam safety problems continues to increase the dam safety engineer's workload, as he has had to funnel more time and expertise into resolving problems and less on "routine" work tasks. Also, due to vacancies in other positions in Division 5, less time by other Division 5 staff was spent on reservoir inspections than in the past few years. This further compounded the workload problems for the dam safety engineer. Luckily, and what can be considered a highlight for 1999, there were no known dam failures in Division 5 this year.

With the need for less reservoir water, an owner of an old Class 1 irrigation reservoir volunteered to release water downstream and coordinated the use of this water with other reservoir owners. This was done as an economical alternative to performing a major upgrade to the dam. Although this action upset a few members of the fishing community, who had become accustomed to having this reservoir full, this action was eventually taken well by all parties with good communication with the Division of Wildlife. This incident and

the cooperation between all parties sets a precedent as an economical alternative for resolving or delaying many dam safety problems. Future communication with the Division of Wildlife over these types of releases -- even from irrigation reservoirs -- is mandatory.

Last year there was a concern regarding completion of the outlet inspections. This year significant headway was made toward completing these as 12 were completed. However, this came at the expense of other items such as doing hazard evaluations and looking for more problems associated with the aging outlets.

This year an increase in reservoir problems became very significant expanding the number of plans and specifications that were reviewed and the number of major repairs that were accomplished. During 1999 **9** dams underwent significant rehabilitation with **7** completions accomplished and **2** restrictions lifted; **6** of these dams required the design review of our dam safety engineer, of which **4** were reviewed during the peak of the inspection season. **The dam safety engineer performed a whopping 30 construction inspections during 1999.** It should be noted that **statewide, during the month of September, there were 6 rehabilitations reportedly started and 5 of these were in Division 5.**

The highlights of the major projects are as follows:

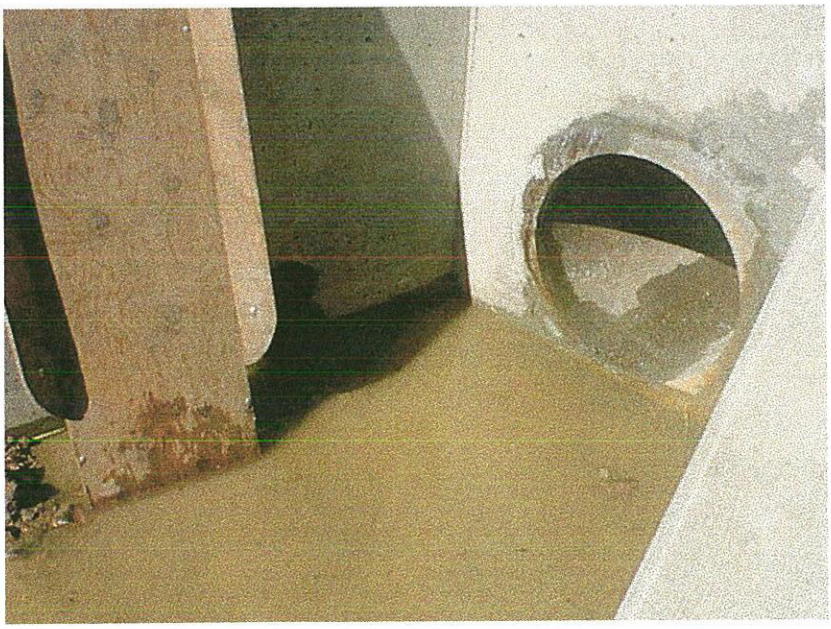
- A significant leak in the wall of the outlet conduit for the Class 1 Spring Park Reservoir in District 38 was discovered to be increasing in February. This leak was promptly repaired with a state-of-the-art polyurethane grout. Follow-up inspections showed this repair to have been successful.
- A new toe drain was installed in October for the Heart Lake Dam owned by the Division of Wildlife in District 53. Besides the drain significantly increasing the safety of this dam, during the construction it was discovered that the majority of the seepage seen below the dam was coming from the north side of the reservoir through natural terrain well away from the dam. This also improves our opinion of the safety of this dam.
- The total rehabilitation of the Thomas Reservoir Dam, which had a slide on its abutment, a large cottonwood tree on the downstream slope die, and an inoperable badly deteriorated outlet, was completed in March of 1999. The subsequent monitoring and inspection of this dam showed the rehabilitation was a success (see picture following).

The completed downstream slope of the Thomas Reservoir Dam on August 27, 1999.
This slope used to be covered with large trees, was very steep, and exhibited seepage.

- Mesa Creek #2, which is owned by the Division of Wildlife in District 72, experienced an outlet failure last year. After a year that showed sustained high inflows to the reservoir, a new outlet was successfully installed in October despite the high inflows (see below).

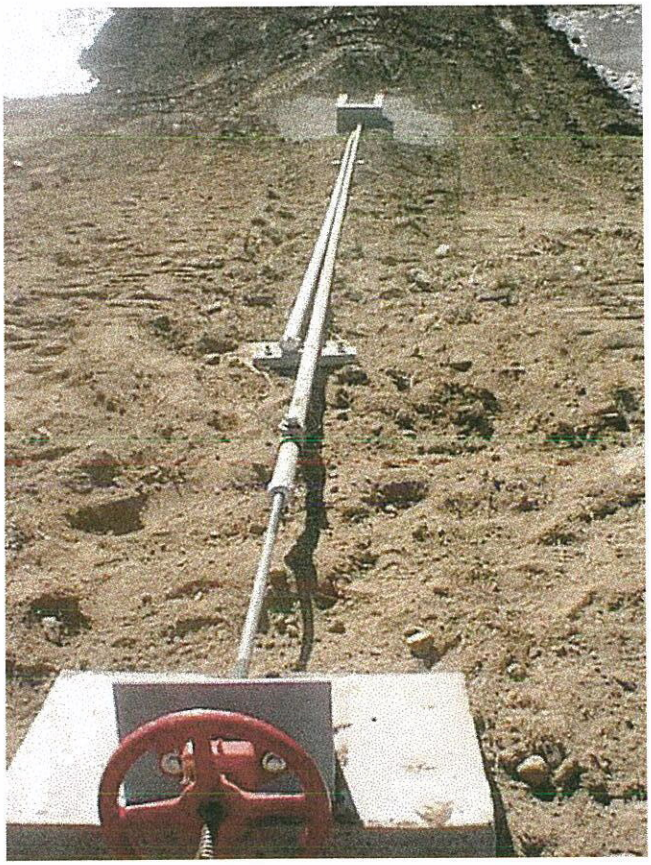
The downstream end of the new 24"RCP outlet at Mesa Creek #2.

- The rapidly deteriorating outlet for McMahon #2 in District 50 was successfully lined with a long-lasting steel pipe after an earlier lining failure that occurred in 1998 (see below).



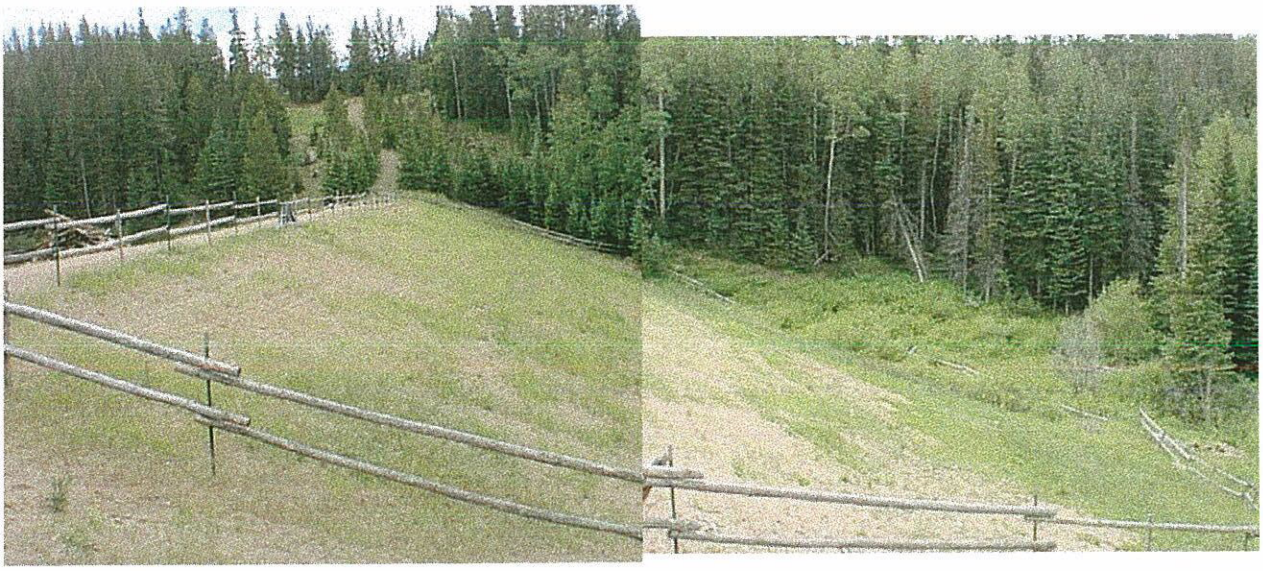
The downstream end of the new steel pipe during the grouting.
This end was completely sealed with a new hydraulically efficient headwall.

- The Bumgarner Reservoir in District 36 had a dysfunctional outlet that was badly deteriorated in sections and some seepage problems at the toe. The outlet was repaired and the conduit properly lined and a toe drain was installed (see picture below).



The new outlet stem and intake structure for Bumgarner Reservoir.

- The Jones Reservoir dam in District 52, which has exhibited increasing seepage on the downstream slope and signs of a potential failure, was repaired with a liner on the upstream slope and an embankment drain. This dam is owned by an individual who protested our past decisions regarding the safety of this dam. He finally agreed that his dam had a problem and had it repaired in the fall of 1998. To this date no seepage has been observed (as shown in the picture below) of the rehabilitated downstream slope.



In summary the total number of inspections performed by Division 5 personnel in 1999 = ***151***, which consisted of the following:

109 Inspections performed by the Dam Safety Engineer:

- 0 Class 4 regular inspections
- 16 Class 1 regular inspections
- 23 Class 2 regular inspections
- 5 Class 3 regular inspections
- 30 Construction inspections
- 23 Follow-up inspections
- 12 Outlet inspections

21 Inspections by other Division 5 staff engineers and technicians:

- 6 Class 1 regular inspections
- 5 Class 2 regular inspections
- 8 Class 3 regular inspections
- 2 Follow-up inspections
- 0 Outlet inspections

Water Commissioners performed 21 Inspections out of 29:

- 8 "Off-year" Class 2 inspections
- 13 Follow-up inspections

c. Ground Water and Well Permitting

Colorado's continued rapid growth and strong economic conditions throughout 1999, continued high work loads for Division 5 staff in the areas of research, planning and educating the general public regarding ground water and well permitting.

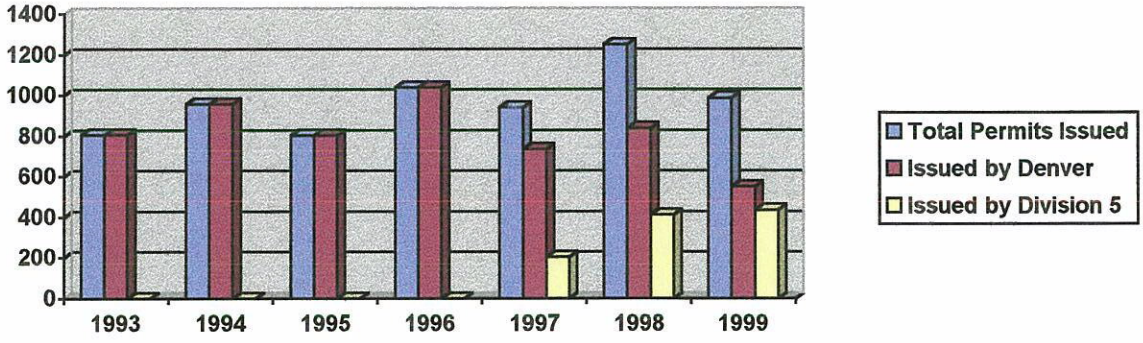
During calendar year 1999 a total of **986 permits were approved** for Division 5 --a decrease by **21% from 1998.** Additionally the number of Monitoring Hole Notices (MH) received by the division also decreased **by 32%** from 549 in 1998 to 369 in 1999. The decrease in monitoring and observation holes is proportionate to the decrease in applications but may be more appropriately attributed to increased efficiency in permit approval time by the Division field office.

A breakdown of permits processed includes:

572 Exempt Permits
280 Non- Exempt Permits
(166 Aug wells & 114 per water conservancy district)
38 Monitoring Wells
59 Exempt Replacements
1 Non – Exempt Replacements
36 Late Registrations

With the decentralized well permitting process in place a total of **436 permits** (323 Exempt & 113 Non-Exempt) **or 44%were issued at the Division level.** In addition, certain types of non-exempt well permit applications; change in ownership applications and well location amendment requests are still preprocessed and forwarded to the Denver office, totaling 238 for calendar year 1999.

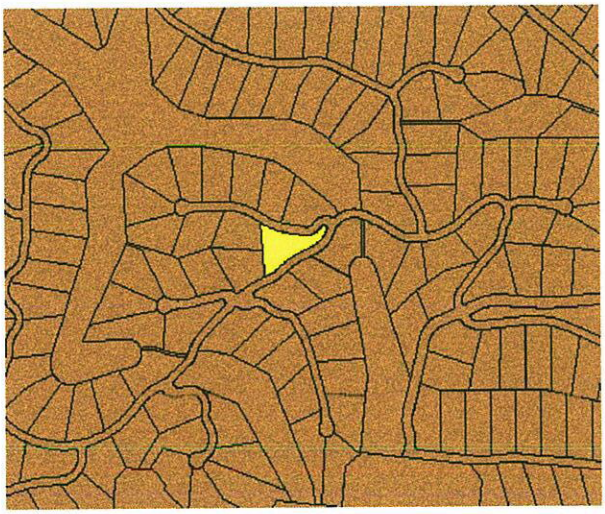
Well Permits for Water Division 5 1993 through 1999:



There was no major legislation that greatly affected Division 5 regarding ground water and well permitting during 1999. However policy 99-1 was approved regarding the location of conditional ground water rights (water wells) in proposed subdivisions within a pending plan of augmentation.

Division 5 is still implementing the well construction and completion observation program by conducting random inspections by water commissioners and completing reports, which are forwarded to the Board of Examiners for review. Ground water training during 1999 consisted of our well commissioners retaining certified status at the Well Testing Certification Workshop in Division 2 Pueblo office.

Advances in technology are being used in the area of GIS by using data acquired from counties and using the internet site, Colorado Counties Inc. regarding Assessor Parcel data in verifying well location, parcel size and proof of parcel creation. Additionally GPS well locations are still being gathered when ever possible, see examples below.



Form No. GWS-25

OFFICE OF THE STATE ENGINEER
COLORADO DIVISION OF WATER RESOURCES

818 Centennial Bldg., 1313 Sherman St., Denver, Colorado 80203
(303) 866-3581

1134

WELL PERMIT NUMBER 051468 - F
DIV. 5 CNTY. 25 WD 61 DES. BASIN MD

Lot: 22 Block: Filing: 2 Subdiv: FAIRWAYS AT POLE CREEK

APPLICANT

BILL JACOBS
76 WEST RANCH TRAIL
MORRISON, CO 80465

(303)697-5554

APPROVED WELL LOCATION
GRAND COUNTY
SW 1/4 NW 1/4 Section 4
Twp 1 S Rng 75 W 6th P.M.

DISTANCES FROM SECTION LINES
3500 Ft. from SOUTH Section Line
4800 Ft. from EAST Section Line

PERMIT TO CONSTRUCT A WELL

ISSUANCE OF THIS PERMIT DOES NOT CONFER A WATER RIGHT

CONDITIONS OF APPROVAL

1) This well shall be used in such a way as to cause no material injury to existing water rights. The issuance of the permit does not assure the applicant that no injury will occur to another vested water right or preclude another owner of a vested water right from seeking relief in a civil court action.

2) The construction of this well shall be in compliance with the Water Well Construction Rules 2 CCR 402-2, unless approval of a variance has been granted by the State Board of Examiners of Water Well Construction and Pump Installation Contractors in accordance with Rule 15.

3) Approved pursuant to CRS 37-90-137(2) on the condition that the well be operated in accordance with the Fairways at Pole Creek Development, LLC, Augmentation Plan approved by the Division 5 Water Court in case no. 98CW175. If the well is not operated in accordance with the terms of said decree, it will be subject to administration including orders to cease diverting water.

4) Approved as the only well on a residential site of ±2.0 acres described as lot 22, filing no. 2, The Fairways at Pole Creek Subdivision, Grand County.

5) The use of ground water from this well is limited to ordinary household purposes inside one single family dwelling and up to 1,000 square feet of lawn and garden irrigation.

6) The maximum pumping rate shall not exceed 15 GPM.

7) The annual amount of ground water to be withdrawn shall not exceed 0.35 acre-foot (114,000 gallons).

8) The return flow from the use of the well must be through an individual waste water disposal system of the non-evaporative type where the water is returned to the same stream system in which the well is located.

9) A totalizing flow meter must be installed on this well and maintained in good working order. Permanent records of all diversions must be maintained by the well owner (recorded at least annually) and submitted to the Division Engineer upon request.

10) This well shall be constructed not more than 200 feet from the location specified on this permit.

11) The owner shall mark the well in a conspicuous place with well permit number(s), name of the aquifer, and court case number(s) as appropriate. The owner shall take necessary means and precautions to preserve these markings.

12) This permit has been approved for the location noted above footage distance from section lines were changed. The proposed location on the permit application did not place the well on the parcel. You are hereby notified that you have the right to appeal the issuance of this permit, by filing a written request with this office within sixty (60) days of the date of issuance, pursuant to the State Administrative Procedures Act. (See Section 24-4-104 through 106, C.R.S.). 4/09/99

NOTE: Parcel Identification Number (PIN): 25-1589-042-18-011
Assessor Tax Schedule Number: 1076063

APPROVED DMW

State Engineer

By

Receipt No.

DATE ISSUED APR 21 1999 EXPIRATION DATE APR 21 2000

PIN	158904216011
SCHEDULE	R076085
SUBNAME	FAIRWAYS @POLE CREEK PH 2
LOT	2-22
BLOCK	
SITEADDRNU	
CORD	
OWNER	JACOBS, WILLIAM L JR &
CAREOF	LEIGH A
MAILINGADD	76 W RANCH TRAIL
CITY	MORRISON
STATE	CO
ZIPCODE	80465

Monday, February 28, 2000

d. Hydrographic Program

The Division is responsible for the following:

- Measuring, recording and publishing the streamflows above Ruedi Reservoir associated with trans-mountain diversions for the Frying Pan-Arkansas Project. There are six manual and two satellite stations.
- Measuring, recording and publishing the streamflows for the Blue River below Breckenridge for the Colorado Water Conservation Board for minimum streamflow compliance.
- Measuring, recording and publishing the streamflows for the Roaring Fork River below Maroon Creek for the Aspen Consolidation District for permit compliance.
- Measuring and recording the streamflows for the Snake River at the Keystone Ski Area for the Colorado Water Conservation Board for minimum streamflow compliance.
- Measuring diversions for water commissioners for administration.
- Maintaining 27 satellite stations used for administrative purposes and monitoring 43 stations that are operated by other entities.
- Maintaining three satellite stations for the Colorado Water Conservation Board.

The responsibility of maintaining the station at Keystone was added this year. The Colorado Water Conservation Board holds a minimum streamflow for the Snake River of 6cfs during the winter. Keystone Ski Area has a junior right for snowmaking whereby they must preserve the 6cfs while pumping. Through the efforts of Keystone's staff and the Division 5 water commissioner and hydrographer, minimum streamflows were maintained throughout the snowmaking season.

Construction projects for the year included major work at the Government Highline Canal's gaging and measurement site. The concrete cross-section in the canal was almost doubled in size to provide a better approach and measuring surface. The new concrete was tied into the old pad that was reinforced for stability. In addition, steel beams were installed on both banks for a bank-operated cableway to be installed in the spring of 2000. This will replace the rickety and wobbly old red walkway that had been the swinging place to measure. The Canal, approximately 75 ft. wide by 15 ft. deep where the work was done, has a decreed capacity of 1640cfs.

The Division 5 hydrographer made 75 river measurements and 44 ditch measurements during the 1999 water year.

e. Water Records and Information

As part of our effort, the following activities occurred:

- **Augmentation Plan Administration**

Continued to develop new or revise existing accounting forms/spreadsheets for several larger augmentation plans within the Division. Worked with water users to improve record-keeping and delivery of user-supplied data. Continued to improve record-keeping for an increased number of small augmentation plans in most water districts in Division 5. Improved overall record-keeping for major augmentation plans or reservoir replacement release programs by refining water rights tabulation, e.g., assigning new administrative structure ID's to help keep track of replacement pools.

- **Diversion Records**

Diversion records were processed, completed, and signed in time to include all statistical data in the annual report. The spreadsheets previously developed for accounting and diversion record production were refined during 1999. Our primary focus this past year was to debug calculation errors and improve consistency

between spreadsheets. Though there continues to be several areas where greater consistency can be accomplished, many improvements were incorporated into the spreadsheets (for additional information, see next section).

Because in 1999 there was not a call from the Grand Valley, the diversion record workload of irrigation users was reduced for Water Districts 38, 39, 45 and 72. This allowed some additional time to acquire data from unresponsive domestic water users. Though we did include previously unobtained data in this year's report, the increase in structures reporting again did not approach the increase in new active structures.

- **Diversion Record Spreadsheets**

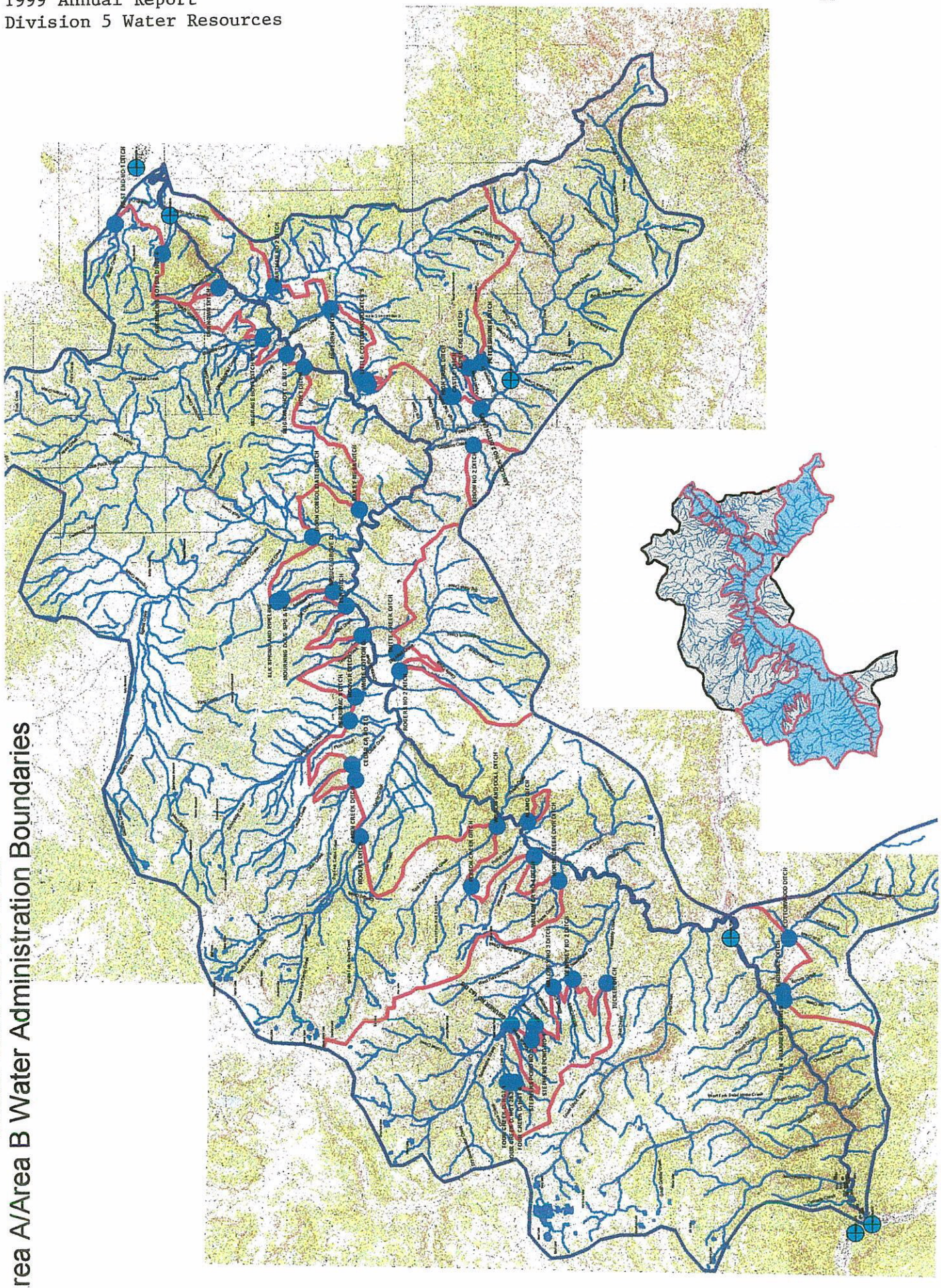
Over the past three years, all spreadsheets generating diversion records for large water users in Division 5 have been converted to MS EXCEL and standardized in several ways. These improvements have led to better quality control, faster data transfer, and a more even-handed approach to reporting reservoir and daily records for large water systems.

Standard Division 5 EXCEL diversion record spreadsheets consist of an input data sheet, monthly data sheets, a storage sheet, and output sheets. The input data sheet is often linked to user supplied spreadsheet(s) and may contain manual input. Monthly data sheets are linked to the input sheet and compute diversion amounts. Storage data sheets compute daily and monthly reservoir fills, releases, evaporation, and days released. Spreadsheets also contain graphs of reservoir storage, a comment sheet showing formulas and comments for all monthly columns, and a flow diagram of the water system. Output sheets are linked to the monthly and storage sheets, and facilitate transfer of diversions to the database. The input and output data transfer sheets will be modified to match data transfer needs of HYDROBASE.

- **Geographic Information Systems**

A variety of GIS projects were developed in 1998 and 1999 for use by Division 5 for water administration and to support engineering studies. One of the more useful types of maps involves the creation of basin augmentation boundaries, based on the identification of Key Water Diversion Structures, and surface drainage controlled by topography. These maps represent areas where out-of-priority diversions can be replaced by releases from on-stream reservoirs without causing injury to a senior diverting right. This area is often referred to as "Area A" in relation to a specific reservoir and downstream call; and the area in which out-of-priority diversions cannot be replaced is referred to as "Area B." Currently we are working toward creating a Division-wide coverage of Colorado River Mainstem "Area A/Area B" boundaries. These boundaries by definition should coincide with augmentation boundaries for the Middle Park, West Divide, and Basalt Water Conservancy Districts.

Last year's report included a map of the West Divide Water Conservancy District. This year's map shows Area A/Area B boundaries in our Water Districts 52 and 53. Diversions within Area A on this map could be augmented with upstream reservoirs such as Wolford or Green Mountain Reservoirs.



Water Districts 52 & 53
rea A/Area B Water Administration Boundaries

f. Substitute Supply Plans

Twenty requests were made for approval of a substitute water supply plan during irrigation year 1999. Of these twenty requests:

- Eighteen were approved, one was denied, and one is pending.

- Eleven were new requests and nine were renewal requests. The new requests included water for use at a bed and breakfast in Grand County; municipal use for the Town of Basalt; domestic water for the Mesa Lakes Ranger Station; pond evaporation in Summit County; exchange potential for the Eagle River basin; gas exploration wells in Garfield County; commercial use in Grand County and neutralization of a soda ash spill tributary to the Eagle River. Renewal requests included water use for an animal shelter in Eagle County; municipal use for the Town of Basalt; commercial use at Berthoud Pass Ski Area and industrial uses in Summit and Eagle Counties near the Continental Divide.

- Four were industrial use for gravel pit plans located in Summit, Eagle and Mesa Counties;

- Two were municipal use for Conservancy Districts - Middle Park and Basalt Water Conservancy Districts. West Divide Conservancy District's plan is pending.

g. Special Projects

- UPCO - (Upper Colorado River Basin Study) In 1998 the Northwest Colorado Council of Governments initiated a collaborative study of water issues in the Upper Colorado River Basin above Kremmling. Participants include Summit County, Grand County, Colorado River Water Conservation District, Middle Park Water Conservancy District, Denver Water, and Northern Colorado Water Conservancy District. Division 5 has participated in an advisory capacity to the study process.

Objectives of the study include assessing current and future needs of in-basin users (including recreation and in-stream uses), evaluating future impacts of increased transmountain diversions, and investigating water quality concerns. This year, a consultant was hired to begin hydrologic analysis of future scenarios and Denver's planning model, PACSM, was selected for use in the analyses. Scenarios will cover several growth assumptions for both the Upper Basin counties and the Front Range.

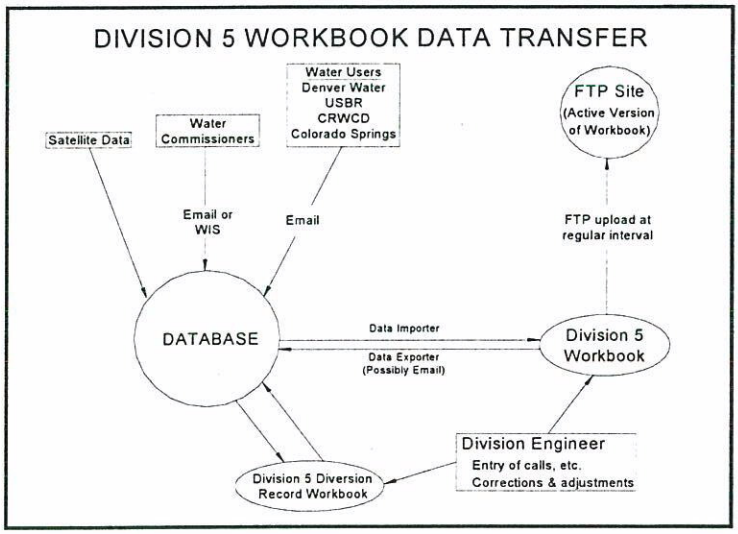
Over the next several years the hydrologic analyses will be completed, supplementary analyses will be performed, e.g., water quality or socioeconomic impacts, and problem situations identified. The final and most important phase of the study will have the participants working collaboratively to attempt to find compromise solutions to the identified problems. The hope is that everyone will be able to avoid lengthy and expensive litigation battles in the future. Division 5 will continue to advise on water administration issues throughout the process.

- CRDSS - (Colorado River Decision Support System) A preliminary version of the Division 5 Workbook portion of the CRDSS was completed during 1998 and should be operational for the 1999 water year. The workbook was designed and constructed by Enartech Inc. of Glenwood Springs, a subcontractor to Boyle Engineering Corp., and should assist the Division 5 office in the administration of the Colorado River.

The new workbook's primary purposes are:
❶ Determine undepleted natural flow of the Colorado River.
❷ Distribute the natural flow to water users in priority.

❸ Determine the Colorado River call and calculate replacement releases from Green Mountain Reservoir.
❹ Revise and update the Colorado River Accounting spreadsheets currently produced on a daily basis by the U.S. Bureau of Reclamation (USBR) to include new projects such as Wolford Mountain Reservoir and new water rights such as Second Fill rights at Green Mountain and Dillon Reservoirs. Integrate the revised Colorado River Accounting spreadsheet into the CRDSS workbook.
❺ Maintain "owed to the river" accounting for certain specified water projects.
❻ Automate the worksheet so that data from water users, water commissioners, streamflow gages, and other sources will be automatically linked to the workbook. This will minimize the manual entry of data that now occurs. Operators of key water diversion projects will e-mail water-user information to the central database on a daily basis or other time period established by the division engineer.
❼ Export diversion and storage data directly from the workbook into the State's diversion record database without the need to keypunch the data.

The Division 5 office staff has expended a great deal of time and effort in working with the contractor and with various water user groups to complete this project and we are looking forward to operating the workbook on a real-time basis. We hope to isolate and repair any errors in logic or bugs in the software that were not discovered during the development phase and have a reliable workbook early in the 2000 irrigation year. The major water users and reservoir operators will have the responsibility to E-mail the required data necessary to run the workbook to the CRDSS database site. The Division 5 office will download this data and enter it into the spreadsheet along with stream gaging records and water commissioner supplied data. The workbook's program will then be processed on a Division 5 computer and then uploaded to an FTP site where it will be available to other interested parties.



Division 5 Workbook and Future Diversion Record Generation

Unfortunately, this is still not a reality as Y2K and the VAX changeovers have consumed State programmers' time and their ability to work with consultants on the project.

• **SWAT** - Members of the Division 5 staff continued to participate in the "SWAT" team discussions involving Colorado River administration. The team consists of city, county, state, and federal officials, and was originally formed as a discussion group to resolve administration of Green Mountain Reservoir.

The SWAT team used these meetings as a forum to resolve some of the longstanding issues regarding Colorado River administration such as accounting methods for second fills in Green Mountain Reservoir and Dillon Reservoir, determining evaporation charges to the various pools in Green Mountain Reservoir, and determining how to administer fish releases to the 15-Mile Reach. The team was forced to reach a consensus on these issues so that the Workbook logic or other modeling efforts could be programmed properly. This year the team met somewhat erratically waiting for breakthroughs on the Division 5 Workbook that never happened. We did, however, review efforts to predict more accurately and farther into the future weather patterns which would be helpful for river operations including timing and volume of peak runoff. Another endeavor was to review work being done with regard to stream channel geomorphology for work in conjunction with habitat enhancement for the endangered fish. The team will schedule monthly meetings next year to closely monitor the operation of the Workbook and to make certain that it is functioning properly.

• **CROPS** (Coordinated Reservoir Operations Study) - 1999 marked the third year of coordinated reservoir operations under the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River. The objective of the program is to coordinate operations of and releases from various reservoirs to enhance habitat in the 15-Mile Reach of the Colorado River below the Grand Valley Irrigation Canal for the benefit of endangered fish species. A workgroup was formed of several governmental agencies and water user groups in order to oversee the coordinated reservoir operations. Division 5 staff served on the workgroup along with representatives of the US Fish and Wildlife Service (USFWS), National Weather Service (NWS), US Bureau of Reclamation (USBR), Colorado River Water Conservation District (CRWCD), Denver Water, Grand Valley Water Users Association (GVWUA), City of Colorado Springs, Orchard Mesa Irrigation District (OMID), Grand Valley Irrigation Company (GVIC). The Division 5 staff was charged with the responsibility to determine in consultation with the USFWS when it was appropriate to begin and end the releases, and to maintain accounting records of the operation.

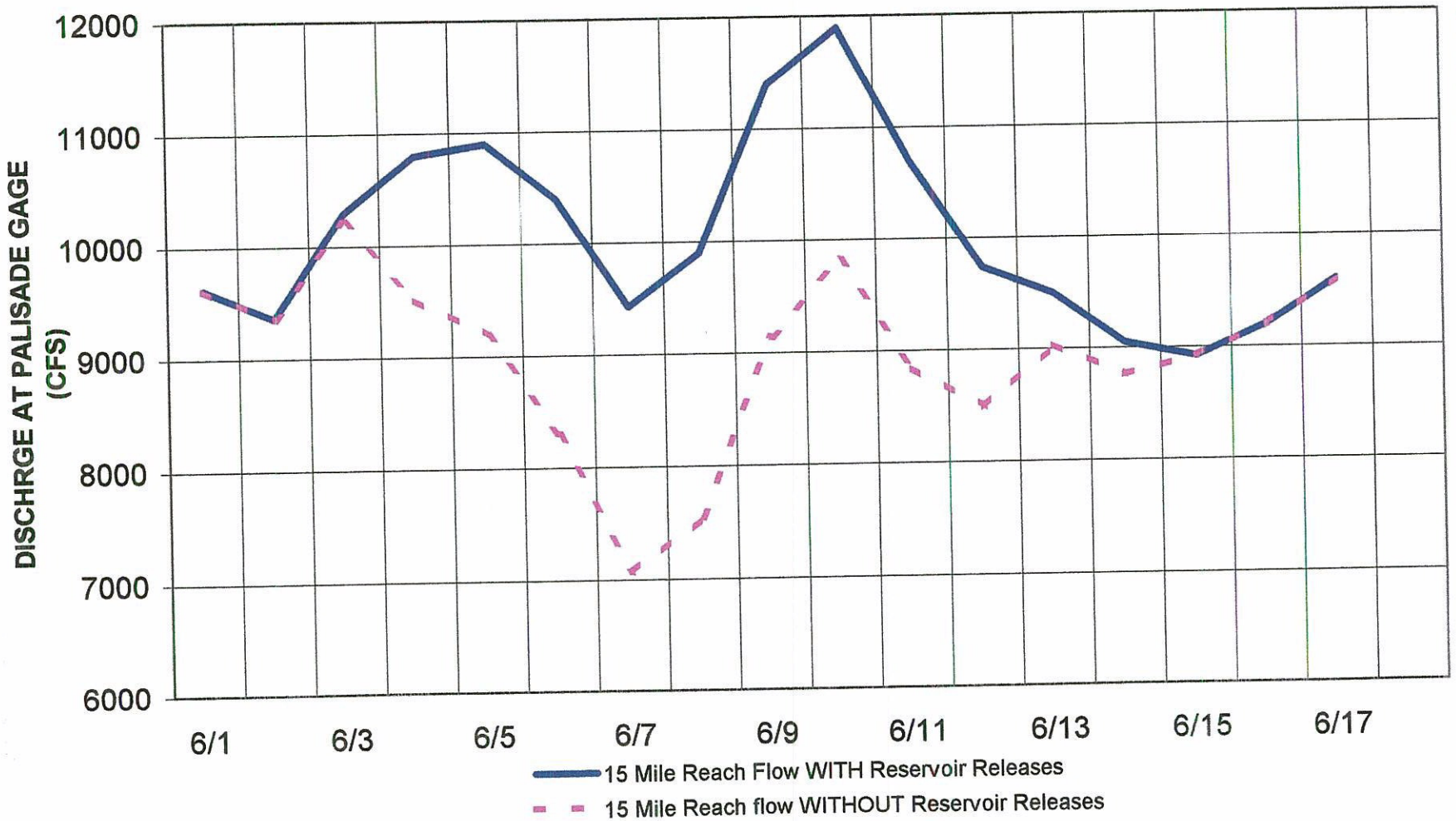
The workgroup began meeting in March to assess spring streamflow, weather, and snowpack conditions and evaluate the potential for augmenting peak flows. Snowpack in the Upper Colorado River Basin was 72% of normal on April 1st and conditions appeared to be unfavorable to enhance peak flows in the Colorado River. By May 17th the snowpack had risen to 118% of normal. The workgroup reversed and made a decision to proceed with the program despite the low early snowpack. On June 1st, weather, snowpack and streamflow conditions were judged favorable to produce an elevated peak in the 15-Mile Reach and coordinated reservoir operations were begun.

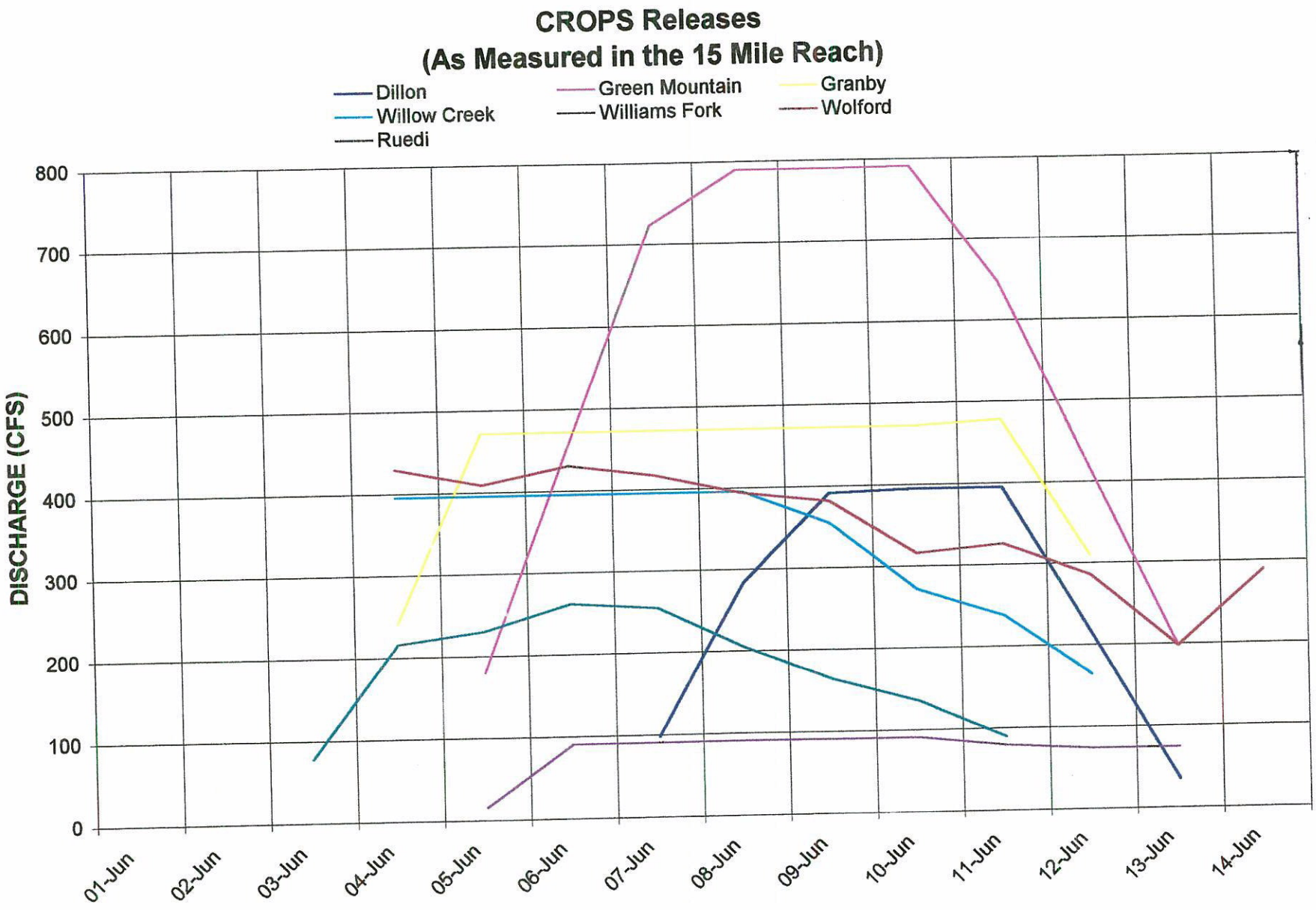
The workgroup decided to discontinue coordinated reservoir operation on June 9th when it was decided that the flows at Palisade were beginning to recede and that cooler weather was expected which would reduce the snowmelt rate. Reservoir operators participating in the program began reducing bypassed water gradually and all enhancements ceased on June 11th.

The workgroup correctly anticipated when peak flows would occur in the 15-Mile Reach and, as a result of the program, these peak flows were enhanced. The peak flow at the Palisade gage would have occurred without the program on June 3rd at an average daily flow of approximately 10,000cfs. The maximum average daily flow at Palisade occurred on June 10th at 11,700cfs, of which approximately 2,000cfs can be attributed to coordinated reservoir operations. The emphasis for the USFWS this year was not to give a higher sharper peak but an extended 10-day peak period.

The GRAPHS and TABLE on pages 15, 16, and 17 summarize the contributions of each of the reservoirs to the coordinated reservoir operations program and graphically depict the impact of coordinated releases on the flows at Palisade.

IMPACT OF EARLY IRRIGATION SEASON RESERVOIR RELEASES TO THE 15 MILE REACH
(As Measured at the Colorado River at Palisade Gage)
1999 LATE SPRING




CROPS Releases
(As Measured in the 15 Mile Reach)
Dillon
Willow Creek
Ruedi
Green Mountain
Williams Fork
Granby
Wolford
DISCHARGE (CFS)
800
700
600
500
400
300
200
100
0
01-Jun
02-Jun
03-Jun
04-Jun
05-Jun
06-Jun
07-Jun
08-Jun
09-Jun
10-Jun
11-Jun
12-Jun
13-Jun
14-Jun

1999 COORDINATED RESERVOIR RELEASES TO 15 MILE REACH(CFS)

RESERVOIR ENHANCEMENTS TO 15 MILE REACH(CFS)							
DATE	GREEN MTN RES (INCLUDES DILLON RES RELEASE)	DILLON RESERVOIR*	WILLOW CR RESERVOIR	GRANBY RESERVOIR	RUEDI RESERVOIR	WILLIAMS FORK RESERVOIR	WOLFORD RESERVOIR
06/01/99			440	268	87		478
06/02/99	200		440	525	240	18	455
06/03/99	505		440	525	256	101	479
06/04/99	805	109	440	525	291	101	464
06/05/99	878	316	440	525	283	101	438
06/06/99	878	435	395	525	227	101	425
06/07/99	879	439	302	525	182	101	351
06/08/99	719	439	264	531	150	89	362
06/09/99	467	239	182	344	100	83	318
06/10/99	220	39				83	220
06/11/99							323
06/12/99							
06/13/99							
06/14/99							
06/15/99							
06/16/99							
06/17/99							
06/18/99							

*DILLON RES RELEASES ARE PASSED THROUGH GREEEN MTN RES.

RESERVOIR ENHANCEMENTS AT 15 MILE REACH AFTER DEDUCTING TRANSPORT LAGS AND LOSSES										
DATE	GREEN MTN RES (INCLUDES DILLON) (3 DAYS-10%)	DILLON RESERVOIR* (3DAYS-10%)	WILLOW CR RESERVOIR (3 DAYS-10%	GRANBY RESERVOIR (3 DAYS-10%	RUEDI RESERVOIR 2 DAYS-10%	WILLIAMS FORK RESERVOIR (3 DAYS-10%)	WOLFORD RESERVOIR (3 DAYS-10%)	CO RIVER @ PALISADE(CFS)	CO RIVER @ PALISADE W/O RES DELIVERIES	15 MI REACH RES ENHANCEMENTS (CFS)
06/01/99								9620	9620	
06/02/99								9360	9360	
06/03/99					78			10300	10222	78
06/04/99			396	241	216		430	10800	9517	1283
06/05/99	180		396	473	230	16	410	10900	9195	1705
06/06/99	455		396	473	262	91	431	10400	8293	2107
06/07/99	725	98	396	473	255	91	418	9430	7074	2356
06/08/99	790	284	396	473	204	91	394	9900	7552	2348
06/09/99	790	392	356	473	164	91	383	11400	9145	2255
06/10/99	791	395	272	473	135	91	316	11900	9823	2077
06/11/99	647	395	238	478	90	80	326	10700	8842	1859
06/12/99	420	215	164	310		75	286	9740	8485	1255
06/13/99	198	35				75	198	9500	9029	471
06/14/99							291	9050	8759	291
06/15/99								8920	8920	
06/16/99								9200	9200	
06/17/99								9600	9600	
06/18/99										
	9907	3598	5966	7662	3241	1388	7697			35862

• GVWMS (Grand Valley Water Management Study) - The US Bureau of Reclamation issued its draft environmental assessment for the Grand Valley Water Management Study in December of 1997. The project, when constructed, will conserve Grand Valley Project water by improving efficiency of Government Highline Canal operations without interfering with delivery of irrigation water. The project is also intended to help recover endangered fish by delivering surplus water in Green Mountain Reservoir to the Grand Valley Power Plant then into the 15-Mile Reach of the Colorado River below the Grand Valley Canal diversion and above the confluence with the Gunnison River, as authorized by the Orchard Mesa Check settlement.

During each irrigation season, demands for water from the 55-mile-long Highline Canal change daily based on crop needs, irrigators' schedules, and weather. Water in the canal that is not delivered to customers is "administratively spilled" into numerous natural washes in the valley, which carry the water back to the Colorado River. Studies based on past years showed that the amount of water spilled in August, September, and October averaged 31,400AF. The goal of the project is to significantly reduce these late summer spills while at the same time maintaining the ability to deliver a reliable supply of irrigation water.

The Division 5 staff submitted comments on the proposed project expressing our concerns to the State Engineer and these comments were forwarded on to the US Bureau of Reclamation (USBR). Chief among our concerns was that any direct flow water conserved by the check structure and directed into the Palisade Pipeline be classified as "saved water." *Saved water can be applied to beneficial use by the original diverter to eliminate or reduce periods of shortage subject to terms of the original decree but may not be transferred to new uses not authorized by the original decree.* The Division Engineer also requested that a continuous recorder be installed in the proposed Palisade Pipeline and discharge records be furnished to the Division Engineer. These records will assist in the administration of the Cameo calls and help prevent unnecessary curtailment of water rights junior to the call. The Division Engineer also requested that the Bureau assess the injury to water users who have historically diverted the spill water from washes located below the Government Highline Canal. The amount of water available for appropriation from these washes will be greatly diminished after the project is operational and that water which is available may be high in salinity. A significant amount of money is in the USBR budget for construction in 2000.

h. Water Court

A total of 325 water right applications were filed in Division 5 Water Court during 1999 (289 for the Colorado River administered by Div. 5 Water Resources and 36 for the White River administered by Div. 6 Water Resources). Of those 289 applications, 52 were applications involving new augmentation plans and 6 were to amend existing aug plans. The State and Division Engineers formally objected in 16 cases, entered 4 protests to referee rulings, and were petitioners in 1 case.

The following three cases are of special note:

1. Miners Creek

A water right application filed by the Town of Breckenridge as Case 97CW283 gained momentum this year. This case has some very interesting issues concerning the appropriation of minimum streamflows, including which flows can be considered for determination [CRS37-92-102 (3)] "...to preserve the natural environment to a reasonable degree."

The application involves a ditch that diverts from Miners Creek, a tributary of the Blue River. Miners Creek terminates at Dillon Reservoir. This ditch delivers water to Barton Creek, a tributary of the Blue River above Dillon Reservoir. Due to the needs of three transmountain diversion, snowmaking at four ski areas, heavy resort development and minimum streamflows, the flow of the Blue River above Dillon Reservoir is the most sought water in the Colorado River Basin. By importing water into the upper Blue from Miners Creek, though Miners Creek is an upper Blue tributary, the minimum streamflows that limit exchanges in this area may be mitigated. At issue is the claimed appropriation date of 1910 and the applicant's request for consideration by the Colorado Water Conservation Board as a prior existing use under CRS 37-92-102(3)(b), "...any such [*min flow*] appropriation shall be subject to the present uses...whether or not previously confirmed by court order or decree." This recognition would give the Town, though their right is junior as a 1997 adjudication, a right which cannot be curtailed when the Miners Creek minimum flow is shorted. Once imported to Barton Creek the applicant argues these waters should not be part of the gage measuring the minimum flow on the Blue River.

As claimed in the application, this ditch has flowed since 1910, forgotten for many years. If this is the situation, the flow was part of the evaluation determining the amounts filed on for the minimum flows on the Blue River from the Barton Creek confluence to Dillon Reservoir. The applicant's claim will take an "acre-foot for acre-foot" from water users upstream of Dillon Reservoir, and directly impact the minimum flows. Water Resources' position in this case is Breckenridge has not provided proof that it has used this right because: (a) its use requires an exchange which necessitates notification of the Water Commissioner; (b) no proof exists that the right was used in priority; and (c) there is no mechanism for Breckenridge to use the water [a physical structure, nor devices to marshal water past structures on Barton Creek to the Blue River]. Further, if the right ever existed, the right -- though never decreed -- may be abandoned by not being used for more than 10 years.

2. Nottingham v. Bell and Schlegel Ranch

A complaint filed in Case 99CW180 disputed the administrative decisions of the Division Engineer on Deer Pen Creek. The major issues in the dispute involved the right of a ditch to all tributaries it intercepts whether decreed points of diversion or not, and if a ditch has the right to call out all water junior and tributary to it. To administer a call by Schlegel Ranch, the Division Engineer ordered the removal of unnecessary dams and obstructions by Nottingham at two locations where the Dry Park Ditch intercepted tributaries of Deer Pen Creek. The Dry Park Ditch is decreed to divert out of Castle Creek and does have a bypass at its crossing of the main fork of Deer Pen. The complaint contended the order was inconsistent with historic practice; the result would be a futile call; and because the calling structure was decreed to divert water from Deer Pen, the unnamed tributary was not subject to the call. The order and administration became moot when Schlegel by Stipulation agreed not to call out these tributaries of Deer Pen and yet Nottingham acknowledged Schlegel's right to call out other tributaries of Deer Pen. Though this is not a situation allowed under strict administration, Nottingham and Schlegel are the only land and water right owners on Deer Pen and their stipulation amounts to a contractual agreement where the Division Engineer does not administer a call by rights originating on Deer Pen.

3. State Engineer and Deak Price v. Sunlight Water Company, et al.

In this case the State Engineer filed a petition to set aside decreed water rights based on fraud. The central issue was to remove water rights that were granted for the purposes of speculation. The water rights include a 444AF storage decree and a 2cfs direct flow right to import water into the heavily overappropriated Four Mile Creek near Glenwood Springs. The owners acquired these rights for use on their own property as well as for sale for augmentation and direct flow purposes. Settlement is expected in early 2000.

i. Tabulation

Over an 18-month period following the cutoff date for the 1998 Tabulation, the backlog of untabulated decrees grew more than 50% to 1658 untabulated decrees. To prevent further growth of this problem and prepare for the 2000 Tabulation, Division 5 has emphasized the Tabulation task by setting goals and implementing a tracking system for accountability. This emphasis includes periods of 3-5 days where a group of office staff and water commissioners are freed from day-to-day duties to focus on Tabulation only. We've designated these periods the "Tabathon."

The TABLE on the following page charts our progress. The first two Tabathons occurred in September and October 1999. With our focus shifting to completion of the diversion records and annual report from November through February, no Tabathons are planned until March 2000. It is our goal to reduce the backlog of untabulated decrees to less than 500 prior to the publication of the 2000 Tabulation.

DIVISION 5 TABATHON RESULTS & GOALS

Period End Date:	9/26/99	10/14/99			11/12/99			12/24/99	Target	Target
District	Net Untabulated Decrees	New (this period) Untabulated Decrees	Completed Decrees This Period	Net Untabulated Decrees	New (this period) Untabulated Decrees	Completed Decrees This Period	Net Untabulated Decrees	New (this period) Untabulated Decrees (est.)	Completed Decrees This Period	Net Untabulated Decrees
36	337	5	0	342	1		343	8	10	34
37	225	9	0	234	3		237	12	22	22
38	744	17	10	751	7		758	30	24	75
39	43	1	3	41	3	6	38	6	47	
45	28	0	0	28		25	3	4	32	
50	10	0	0	10		10	0	1	11	
51	46	1	16	31	2		33	6	37	
52	6	0	0	6	1	6	1	1	7	
53	27	0	0	27			27	3	30	
70	8	0	0	8			8	1	9	
72	184	1	66	119	4	29	94	16	135	
Division 5 Total	1658	34	95	1597	21	76	1542	88	364	132

Notes:

(1) Tabulation of some old decrees, especially aug plans, will need revision.

(2) Approx. 5 NEW lines in tabulation per decree (case study 1/98-11/98); EDITED lines estimated at 50-100% additional.

2. Milestones In Water Issues

a. Eagle-River Memorandum of Understanding (MOU)

In late 1997 the Colorado River Water Conservation District approved the Eagle River MOU. Other parties to the MOU include the Eagle River Water and Sanitation District, the Upper Eagle Regional Water Authority, Vail Associates, Climax Molybdenum Company, and the Cities of Colorado Springs and Aurora. The agreement accomplished three major goals:

1. It removed Colorado Springs' and Aurora's opposition to the water rights applications for the Eagle Park Reservoir. The West Slope parties then purchased Eagle Park Reservoir from Climax. Eagle Park Reservoir has a capacity of 3,100AF and a firm yield of approximately 2,000AF. The River District purchased 200AF (or 1/10th) of the project yield.

2. The MOU identified a process to evaluate alternatives to the Homestake II Project. In the early 1980s the Cities of Colorado Springs and Aurora (the Homestake partners) applied for permits to build Homestake II. Eagle County denied the County 1041 permit. The alternatives include four projects in the Upper Eagle River Basin and the concept of a pumpback from Ruedi Reservoir. In mid-1998 the River District, Colorado Springs and Aurora hired Enartech Inc. to conduct a feasibility study of the Ruedi pumpback concept.

3. Under the MOU, Colorado Springs and Aurora provide (not really a sale) the West Slope parties with 500AF of Homestake Reservoir water with a repayment rate of 8:5. The River District's share of the Homestake water is 100AF. In December 1998 the Eagle River parties began releasing their 400AF of Homestake water for snowmaking (by exchange).

Division 5 personnel will continue to play an advisory role in this process next year as further issues are tackled, including:

- Negotiations with Eagle County with regards to Homestake II alternatives and the 1041 review process.
- Continuing technical analyses of the Homestake II alternatives and administration issues associated with each.
- New water rights applications associated with use of Homestake Reservoir water on the Western Slope and for other new or changed water rights involved in the process.

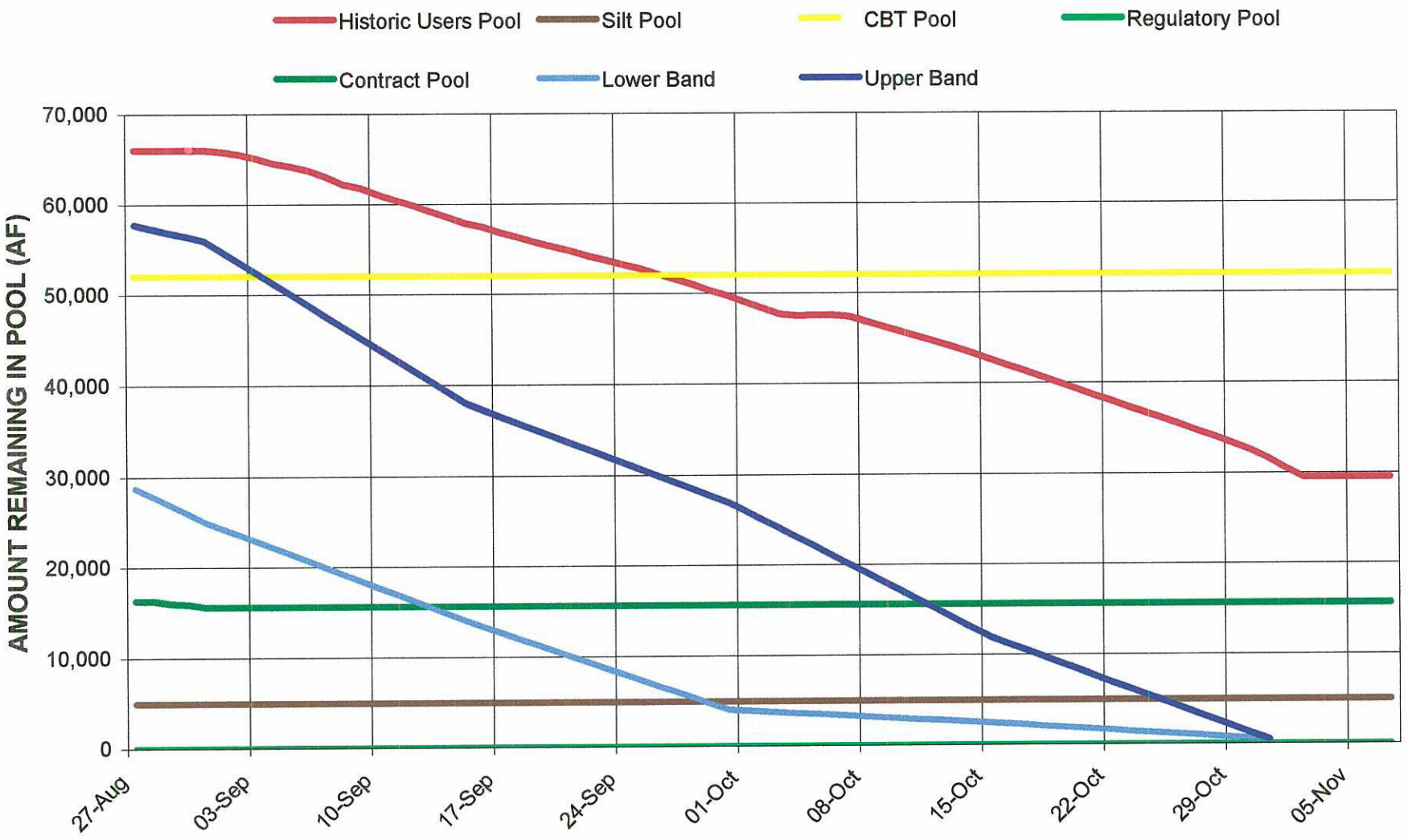
b. Colorado River Administration

The Table under II.E. Colorado River Calls summarizes the calls which occurred on the Colorado River mainstem during the 1999 water year. The fairly typical winter call at Shoshone lasted from November 1st through January 4th at which time Public Service typically took one of their two turbines off-line for maintenance. It came back on-line March 22nd and they placed a call that lasted until spring runoff overtook their demand April 12th. There were no further calls on the river either by Shoshone or Cameo in 1999.

The overall snowpack April 1st was at 72% but increased rapidly right on through April and May. You never know what's going to happen. Certainly a year that looked so dry in the early spring turned out to be an uneventful administrative year.

The GRAPH on page 23 shows the amount of water remaining in each of the Green Mountain pools July-October. Since there were no calls, no replacement releases were made; the only releases were discretionary power releases.

1999 GREEN MOUNTAIN RESERVOIR OPERATIONS
Showing Amounts Remaining in Each Pool when Colorado River Call Was On or Fish Releases Were Being Made



c. OMID Check/HUP Excess Operations

The Grand Valley Water Users Association (GVWUA), the Orchard Mesa Irrigation District (OMID), and the United States of America (USA) filed an application in Case 91CW247 with the Division 5 Water Court for approval of an exchange of water involving the discharge of water from the tailrace of the Orchard Mesa Power Plant into the Colorado River above the Grand Valley Irrigation Company (GVIC) diversion dam by means of a structure known as the "Orchard Mesa Check." After years of litigation, a final decree was issued in this case by the Court on October 1, 1996. The decree included a stipulation and agreement governing the operation of the Green Mountain Reservoir Historic Users Pool.

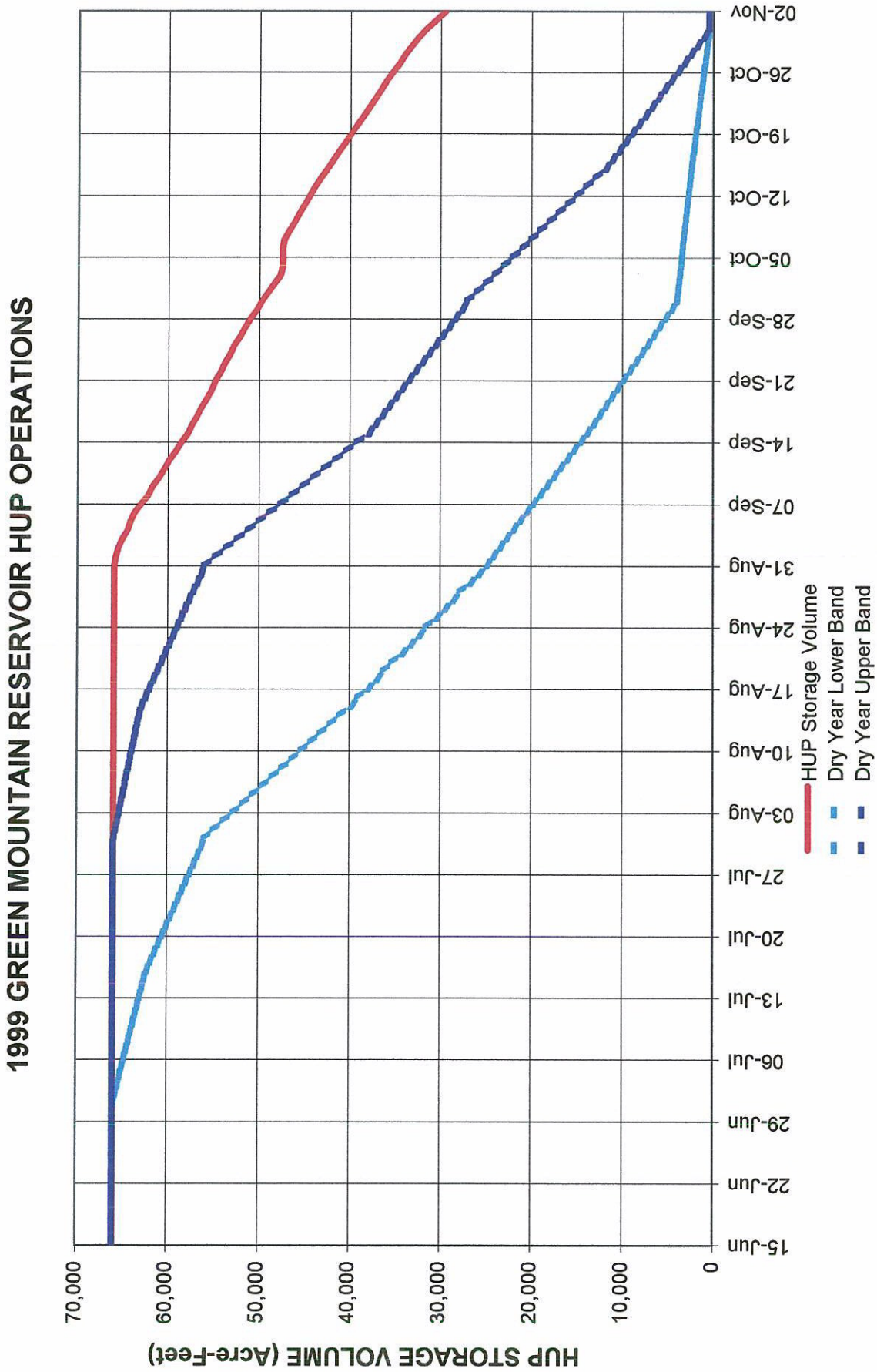
The purpose and objective of this operating criteria is to ensure that a sufficient quantity of water is retained in the HUP (Green Mountain Historic Users' Pool) to meet replacement needs of HUP beneficiaries throughout the year and to define the terms and conditions under which water in the HUP is surplus to the needs of HUP beneficiaries and available for other authorized beneficial uses in Western Colorado. In order to meet the purposes and objectives of the stipulation and agreement in this case, the Bureau of Reclamation (USBR), after direct consultation with the GVWUA, OMID, the GVIC, the **Colorado Division of Water Resources**, Colorado Water Conservation Board, and the U S Fish and Wildlife Service (all are referred to as the "managing entities") is charged with the responsibility of managing the release of HUP water in accordance with the operating criteria. The Colorado River Water Conservation District also participated in all decisions made by the managing entities, since they manage Wolford Mountain Reservoir. Both Wolford Mountain and Ruedi Reservoirs are authorized for fish releases and are an integral part of Colorado River management.

The managing entities met throughout the year in order to review HUP storage conditions, projected runoff forecasts, climatological conditions, projected irrigation demands, 15-Mile Reach flow requirements, and to prepare an annual operating plan. Subsequent meetings were held on a weekly basis throughout the remainder of the irrigation season to review changing supply and demand conditions and to make the reservoir release adjustments determined necessary by the group.

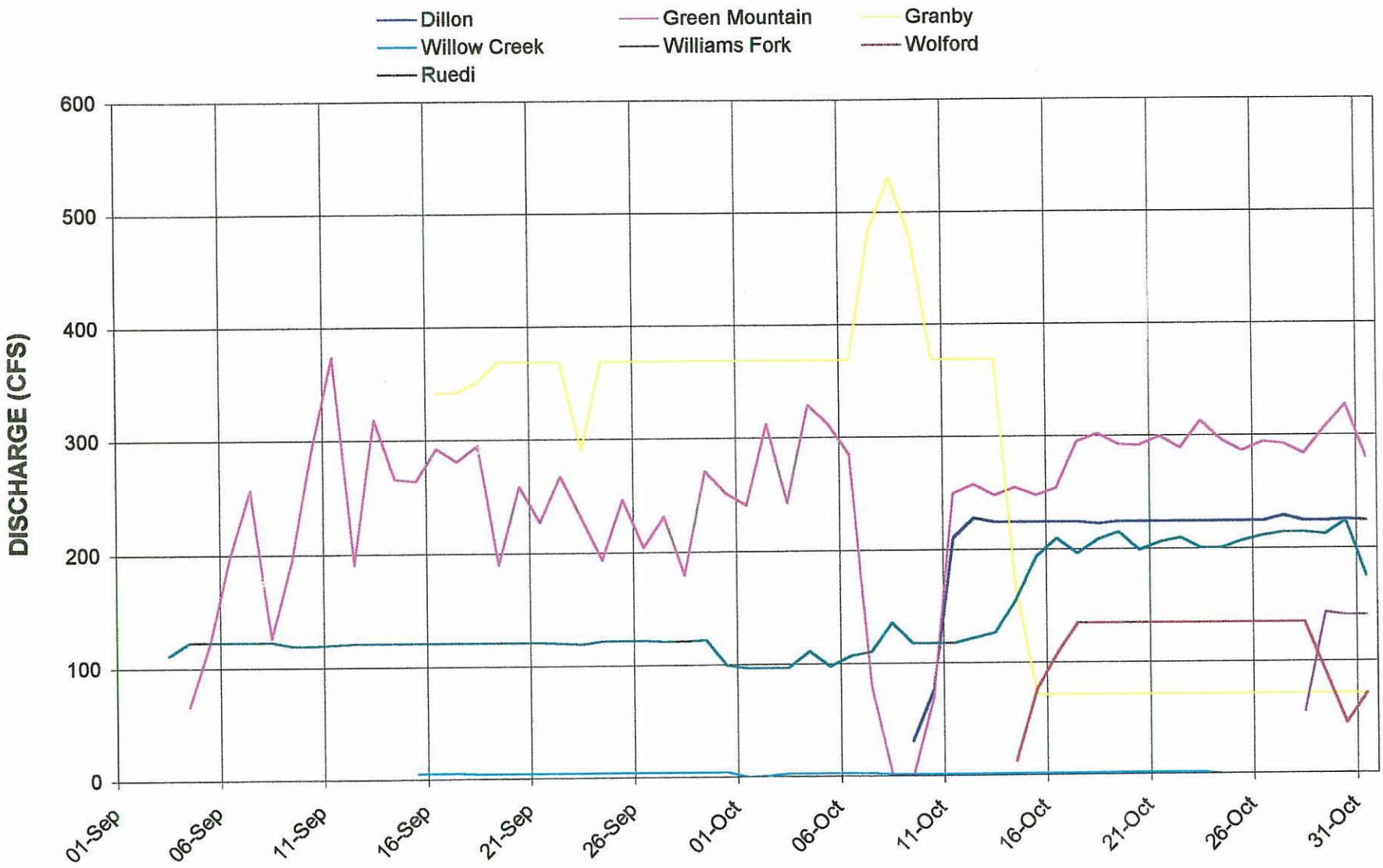
During 1999 the managing entities were authorized to use Green Mountain, Ruedi, and Wolford Mountain Reservoirs to enhance flows in the 15-Mile Reach of the Colorado River for endangered fish species under the terms of the Colorado River Recovery Program. The USFWS was also entitled to use 6,000AF from Wolford Mountain Reservoir for delivery to the 15-Mile Reach. This year additional releases were accounted for from Dillon, Granby, Willow Creek and Williams Fork Reservoirs.

As stated previously, no irrigation season calls ever occurred. However, with excesses in the system and storage dedicated to the fish, the managing entities decided to begin making releases from Ruedi and Green Mountain Reservoirs for flow enhancements to the 15-Mile Reach on September 1st. The USFWS set a target flow of 1680cfs through this Reach for the remainder of the irrigation season.

Water releases to the 15-Mile Reach from Green Mountain Reservoir must comply with the terms and conditions specified in Case 91CW247. The co-applicants and objectors in Case 91CW247 jointly developed the HUP operating criteria which define the terms and conditions under which surplus water is available in Green Mountain Reservoir. This HUP surplus water is available for beneficial use in Western Colorado under contracts developed by the Bureau of Reclamation. This year the Bureau issued a contract to the Fish and Wildlife Service for delivery of HUP surplus water to the 15-Mile Reach. The GRAPH on page 25 shows the amount of surplus water available in Green Mountain Reservoir from July 15th through the end of the irrigation year. Surplus water is the amount of water in the HUP above the upper band. On September 1st, there was 7,573AF of surplus water available in Green Mountain and releases were begun to the 15-Mile Reach on that date. The separate pools are shown in the GRAPH on page 26.


1999 GREEN MOUNTAIN RESERVOIR HUP OPERATIONS
HUP STORAGE VOLUME (Acre-Feet)
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
15-Jun
22-Jun
29-Jun
06-Jul
13-Jul
20-Jul
27-Jul
03-Aug
10-Aug
17-Aug
24-Aug
31-Aug
07-Sep
14-Sep
21-Sep
28-Sep
05-Oct
12-Oct
19-Oct
26-Oct
02-Nov
HUP Storage Volume
Dry Year Lower Band
Dry Year Upper Band

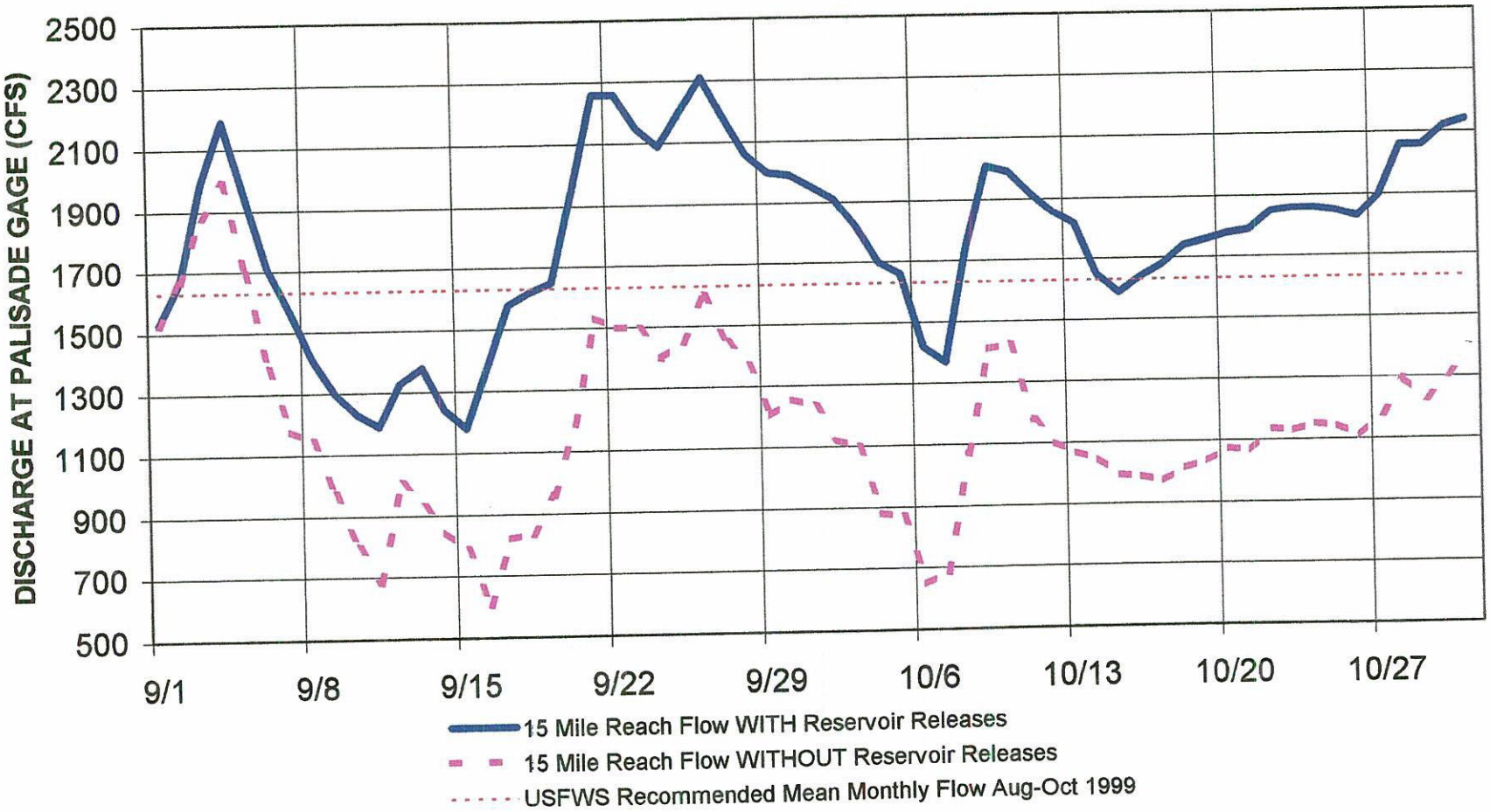
RIPRAP Releases
(As Measured in the 15 Mile Reach)



Last year controversy arose over the Division 5 Engineer's administration of those releases. The USBR and USFWS took the position that Green Mountain Reservoir was decreed for in-stream fish use and that a court proceeding should be prosecuted to clarify that the Green Mountain Reservoir decree's reference to use for "other purposes" includes fish use. The Colorado Attorney General's office and the CRWCD legal staff took the position that Green Mountain Reservoir is neither statutorily authorized nor decreed for fish use. Several possible solutions have been brought forward to resolve the situation including forbearance agreements, modifying the Green Mountain Reservoir decree and operating policy, and contract releases for municipal/recreation purposes to the City of Grand Junction. This issue has been resolved and a contract for municipal use with Fruita is circulating. Deliveries to the 15-Mile Reach from Wolford Mountain and Ruedi Reservoirs can be protected since both of those reservoirs are decreed for piscatorial use. The fish releases from Green Mountain Reservoir were called "discretionary power releases" and totaled 36,530AF during the 1999 water year. Ruedi released 20,401AF and Wolford Mountain Reservoir released 4,939AF for delivery to the 15-Mile Reach. New reservoirs to make releases this year by bypassing inflows when they could have been storing were Granby 26,914AF; Willow Creek 699AF; Dillon 11,478AF; and Williams Fork 1,825AF.

The managing entities were successful in keeping the flows in the 15-Mile Reach above the targeted 1630cfs for most of the period as can be seen on the GRAPH on page 28 depicting the impact of reservoir releases at the Palisade gage. The TABLE on page 29 shows the amount of stored water released from each of the seven reservoirs to the 15-Mile Reach.

IMPACT OF LATE IRRIGATION SEASON RESERVOIR RELEASES IN THE 15 MILE REACH
(As Measured at the Colorado River at Palisade Gage)
1999 LATE SUMMER/FALL



Reservoir Releases and 15 Mile Reach Flows

1999	RESERVOIR RELEASES TO 15 MILE REACH (CFS)							RESERVOIR DELIVERIES AT 15 MILE REACH AFTER TRANSPORT LAGS AND LOSSES(CFS)								15-Mile Reach Flow (cfs)		Target Flows Met? Target flow: 1630 1=no 0=yes			Target line for graph
	Green Mtn HUP Surplus 66,000 AF	Ruedi Fish Pools 31,650 AF	Wolford Fish Pools 6,000 AF	Dillon Reservoir	Williams Fk Reservoir	Granby Reservoir	Willow Ck Reservoir	Green Mtn HUP Surplus 3-day, 10%	Ruedi Reservoir 2-day, 10%	Wolford Reservoir 3-day, 10%	Dillon Reservoir	Williams Fk Reservoir 3-day, 10%	Granby Reservoir 3-day, 10%	Willow Ck Reservoir 3-day, 10%	TOTAL (CFS)	WITH Reservoir Deliveries	WITHOUT Reservoir Deliveries	w/deliveries	w/o deliveries	day count	
09/01/1999	83	124													0	1530	1530		1	1	1630
09/02/1999	144	137													0	1670	1670		0	0	2	1630
09/03/1999	226	137							111		included				111	1990	1879		0	0	3	1630
09/04/1999	298	137						75	123		in releases				198	2190	1992		0	0	4	1630
09/05/1999	154	137						130	123		from				253	1950	1697		0	0	5	1630
09/06/1999	226	137						203	123		Green Mtn				326	1710	1384		0	1	6	1630
09/07/1999	346	133						268	123		Reservoir				391	1570	1179		1	1	7	1630
09/08/1999	428	133						139	123						262	1410	1148		1	1	8	1630
09/09/1999	224	134						203	120						323	1300	977		1	1	9	1630
09/10/1999	364	135						311	120						431	1230	799		1	1	10	1630
09/11/1999	303	135						385	121						506	1190	684		1	1	11	1630
09/12/1999	293	135					6	202	121						323	1330	1007		1	1	12	1630
09/13/1999	340	135				380	6	328	121						449	1380	931		1	1	13	1630
09/14/1999	320	135				380	6	273	121						394	1240	846		1	1	14	1630
09/15/1999	340	135				391	5	264	121					5	390	1180	790		1	1	15	1630
09/16/1999	218	135				410	5	306	121				342	5	775	1380	605		1	1	16	1630
09/17/1999	297	135				410	5	288	121				342	5	757	1580	823		1	1	17	1630
09/18/1999	258	135				410	5	306	121				352	5	784	1620	836		1	1	18	1630
09/19/1999	297	135				410	5	196	121				369	5	691	1650	959		0	1	19	1630
09/20/1999	265	134				323	5	267	121				369	5	762	1950	1188		0	1	20	1630
09/21/1999	216	133				410	5	232	121				369	5	727	2260	1533		0	1	21	1630
09/22/1999	284	136				410	5	267	121				369	5	761	2260	1499		0	1	22	1630
09/23/1999	235	136				410	5	239	120				291	5	654	2150	1496		0	1	23	1630
09/24/1999	263	136				410	5	194	122				369	5	690	2090	1400		0	1	24	1630
09/25/1999	214	135				410	5	256	122				369	5	751	2200	1449		0	1	25	1630
09/26/1999	331	135				410	5	212	122				369	5	707	2310	1603		0	1	26	1630
09/27/1999	290	136				410	5	237	122				369	5	732	2180	1448		0	1	27	1630
09/28/1999	279	111				410	0	193	122				369	5	688	2060	1372		0	1	28	1630
09/29/1999	356	108				410	1	298	122				369	5	793	2000	1207		0	1	29	1630
09/30/1999	278	108				410	3	261	100				369	5	734	1990	1256	1752	0	1	30	1630
10/01/1999	373	108				410	3	251	97				369	0	717	1950	1233		0	1	31	1630
10/02/1999	353	124				410	3	320	97				369	1	787	1910	1123		0	1	32	1630
10/03/1999	323	109				410	3	250	97				369	3	719	1820	1101		0	1	33	1630
10/04/1999	95	119				538	3	336	111				369	3	819	1700	881		0	1	34	1630
10/05/1999	0	123				590	2	318	99				369	3	788	1660	872		0	1	35	1630
10/06/1999	0	151		35		531	2	291	107				369	3	769	1420	651		1	1	36	1630
10/07/1999	85	131		85		410	2	86	111				484	3	683	1370	687		1	1	37	1630
10/08/1999	284	131		234		410	2	0	136				531	2	669	1740	1071		0	1	38	1630
10/09/1999	293	131		253		410	2	0	117				478	2	597	2010	1413		0	1	39	1630
10/10/1999	281	136		249		410	2	77	117				369	2	565	1990	1425		0	1	40	1630
10/11/1999	290	141	15	249		189	2	256	117				369	2	744	1920	1176		0	1	41	1630
10/12/1999	281	173	85	249		80	2	264	123				369	2	757	1860	1103		0	1	42	1630
10/13/1999	288	215	120	249		80	2	253	127				369	2	750	1820	1070		0	1	43	1630
10/14/1999	334	233	150	249		80	2	261	156	14			170	2	602	1650	1048		0	1	44	1630
10/15/1999	343	218	150	247		80	2	253	193	77			72	2	596	1590	994		1	1	45	1630
10/16/1999	332	232	150	249		80	2	259	210	108			72	2	651	1640	989		0	1	46	1630
10/17/1999	331	239	150	249		80	2	301	196	135			72	2	705	1680	975		0	1	47	1630
10/18/1999	340	221	150	249		80	2	309	208	135			72	2	726	1740	1014		0	1	48	1630
10/19/1999	327	229	150	249		80	2	299	215	135			72	2	723	1760	1037		0	1	49	1630
10/20/1999	354	233	150	249		80	2	298	199	135			72	2	706	1780	1074		0	1	50	1630
10/21/1999	335	223	150	249		80	0	306	206	135			72	2	721	1790	1069		0	1	51	1630
10/22/1999	324	223	150	249		80	0	294	210	135			72	2	713	1850	1137		0	1	52	1630
10/23/1999	333	230	150	249		80	0	319	200	135			72	2	728	1860	1132		0	1	53	1630
10/24/1999	331	235	150	254		80	0	302	200	135			72	0	709	1860	1151		0	1	54	1630
10/25/1999	321	238	150	249	62	80	0	292	207	135			72	0	706	1850	1144		0	1	55	1630
10/26/1999	347	238	100	249	160	80	0	300	211	135			72	0	718	1830	1112		0	1	56	1630
10/27/1999	370	236	50	250	157	80	0	298	214	135			72	0	719	1900	1181		0	1	57	1630
10/28/1999	317	249	80	249	157	80	0	289	214	135		56	72	0	766	2060	1294		0	1	58	1630
10/29/1999	350	195	80	249	157	80	8	312	213	90		144	72	0	831	2060	1229		0	1	59	1630
10/30/1999	374	239	80	134	157	80	8	333	224	45		141	72	0	816	2120	1304		0	1	60	1630
10/31/1999	468	247	80	60	70	80	8	285	175	72		141	72	0	746	2140	1394	1817	0	1	61	1630
11/01/1999	567	202		2		37	86	315	215	72		141	72	7	823	2150	1327		0	1	62	1630
11/02/1999	503	175				0	86	337	222	72		141	72	7	851	2200	1349		0	1	63	1630
TOTAL CFS	18,417	10,285	2,490	5,787	920	13,569	327								Avg. (CFS):	1,797	1,168		16	59	
TOTAL AF	36,530	20,401	4,939	11,478	1,825	26,914	649												No. of times target NOT met		

d. Ruedi Reservoir Operations

Ruedi Reservoir is a 102,000AF component of the Frying Pan-Arkansas transmountain diversion project. The first 28,000AF is set aside for use by the Fry-Ark Project to replace out-of-priority diversions. The remaining 74,000AF is considered the "regulatory pool" and is available to the West Slope as compensatory storage. The West Slope is responsible for repaying the United States for the construction costs allocated to the regulatory pool.

The Bureau of Reclamation (USBR) has been marketing Ruedi Reservoir water for nearly 20 years. In the early 1980s the USBR entered into four Round I contracts totaling 7,850AF with Exxon (for Colony Oil Shale Project), Battlement Mesa, West Divide Water Conservancy District, and the Basalt Water Conservancy District.

In the mid-1980s the Bureau of Reclamation began the Round II contracting process. The USBR prepared an Environmental Impact Statement on the Round II project. The USBR determined that a total of 51,650AF of water was available for marketing, which includes the 7,850AF of Round I water. The primary environmental concerns are the impact of water marketing on reservoir levels during the recreation season, and the impact of deliveries on the fishery in the Frying Pan River below Ruedi Reservoir. When the flows in the Frying Pan River below Ruedi exceed 250cfs, it impacts fishing access in the stream.

In 1987 the USBR and the U.S. Fish and Wildlife Service (USFWS) agreed to a biological opinion allocating 10,000AF of Ruedi water for delivery to the 15-Mile Reach. The first 5,000AF is taken from the marketing pool, the second 5,000AF is "rule curve" water and does not impact the project yield. The 1987 biological opinion actually predates the current Upper Basin Recovery Program and was intended to cover both the Ruedi and Green Mountain Reservoir water marketing programs.

In the early 1990s after the razorback sucker was listed and critical habitat designated, the USBR re-initiated Section 7 Consultation and in 1995 the USFWS issued a new biological opinion. Pursuant to the 1995 opinion, an additional 21,650AF of water was set aside on an interim basis for delivery to the 15-Mile Reach. However, since that time, the USBR has only entered into two additional Round II contracts. The process was delayed over how to implement the 1995 opinion, how to repay the United States for the regulatory pool, and how to integrate the Ruedi biological opinion into the 15-Mile Reach biological opinion.

West Slope water users with pending Ruedi contract requests are frustrated because Ruedi deliveries to the 15- Mile Reach have continued, but the contracts have not been issued.

In the mid-1980s the local Roaring Fork Valley governments (Pitkin County, Garfield County, Eagle County, Glenwood Springs, Carbondale, Basalt, Snowmass Village, and Aspen) formed the Ruedi Water Resources and Power Development Authority which represents those governments on Ruedi operational issues. The Authority has a small Ruedi contract request pending on behalf of its members.

1999 Activities of Ruedi Reservoir Operations

In 1999 the USBR completed a Programmatic Biological Opinion on the Round II contract process. The completion of this opinion allowed the USBR to process the pending Ruedi contracts. However, the process has been very slow. With the completion of the 15-Mile Reach PBO in late December, the amount of Ruedi water available for contracting purposes has increased to 17,000AF. In the late summer, the Recovery Program again utilized Ruedi releases for augmenting flows in the 15-Mile Reach. Beginning September 1st and lasting through October, the Bureau released 20,401AF of Ruedi water to the 15-Mile Reach.

3. Involvement In The Water User Community

There seem to be several roles that the Division of Water Resources fills in the community. The first involves the statutory duties of the State Engineer in water administration and dam safety. Another role is as collector of records and data and as keeper of the depository for these. A third would be to act as knowledgeable professionals in planning processes concerning both water supply and legal matters. Finally, our role in public education concerning water is always of utmost importance. Sometimes we take leadership roles and sometimes supporting roles.

The Division office continues to facilitate usage of our records and data by the public. More accurate tabulation, decree books with indexes, updated structure lists, well permit information, organized diversion data, combined with a concerted effort to assist anyone with questions have all added in this facilitation. The office provides a convenient place for them to work.

Specific meetings were held with: Mesa County planning associations, Big Creek water users, Pitkin County and Aspen planners and attorneys, realtor groups, Colorado Water Well Contractors Association, Northwest Colorado Council of Governments, Colorado River Water Conservation District, US Bureau of Reclamation, Denver Water, Colorado Water Conservation Board, Northern Colorado Water Conservancy District, West Divide Water Conservancy District, Collbran Water Conservancy District, Basalt Water Conservancy District, the Silt Conservancy District, and numerous ditch companies.

Bench-Bar Committee involvement UPCO and water SWAT team meetings are water-user community efforts at solving water issues.

4. Water Issues Not Addressed

As the state's largest stream, the Colorado River mainstem has long been the subject of contentious and difficult issues. On the downstream (western) end, the major issues are environmental. The USFWS, USBR, CWCB, environmental representatives, and Division 5 water users are negotiating a Programmatic Biological Opinion covering all historic depletions, plus an increment of new depletions (120,000AF). The USFWS issued the draft biological opinion in February 1999.

Water quality is a significant issue for municipal and agricultural water users on the lower mainstem. Irrigators are concerned that under certain conditions, mainstem salinity already exceeds desirable levels for sensitive crops.

Primary concerns in the headwaters are related to transmountain diversions. The headwaters of the Colorado River mainstem deliver approximately 600,000AF of transmountain water to the Platte River and Arkansas River basins. Recent municipal growth on the Colorado Front Range is increasing the use of existing diversions and creating pressures for new transmountain diversion projects.

The Western Slope has also seen significant population growth. By some estimates, the rate of growth on the Western Slope exceeds that of the Front Range. Additionally, there has been considerable second home/resort home development, especially in the headwaters counties: Eagle, Pitkin, and Summit. However, the impact of Western Slope growth on overall River water demands has not been overwhelming. To the contrary, consumptive use associated with Western Slope municipal and domestic growth is not large and is often offset through the conversion of agricultural lands to residential subdivisions. We have fewer calls on growth streams than 10 or 15 years ago. Streams with CWCB minimum flows will someday be the exceptions.

The real issue for the Division of Water Resources occurring as a result of growth is all the water right/litigation activity. This combined with the break-up of large ranches into smaller lots and the wells

needed to serve them really are taxing our ability to cope. It is paradoxical that in the Colorado River Basin we have more flow and less consumptive use occurring than historically but an increasing requirement to carefully monitor water right applications involving smaller amounts of water.

The following two examples were used last year but merit repeating:

❶ In Summit County, the area above Dillon Reservoir is now home to approximately 1500 wells, most of them in-house use only permits. Twenty years ago this same area contained less than 100 wells. Three hundred sixty-five water rights, mostly for irrigation and mining, existed in 1970. Today, there are 1136, including 43 minimum streamflow rights, with nearly all the mining rights abandoned and the irrigation rights converted to other uses. It is interesting that the total diversion is less now than previously.

❷ The pressure to provide additional water flow for endangered fish has resulted in proposed adjustments in Grand Valley irrigation users' techniques. Eight million dollars in check structures to be installed in one of the irrigation canals can conserve up to 30,000AF of water annually. This water may then be available for release out of Green Mountain Reservoir when needed for the fish.

The Blue, Fraser, Eagle, and Roaring Fork Valleys are transitioning from ranches to small tracts on wells. The next step will be housing densities that displace wells with central water systems. Are the mechanisms we have in place prepared to handle this change? Will they best define and protect the resource, ownership traditions, and water use? The last section of this Annual Report will focus on innovative ways to deal with **our** future.

The Division of Water Resources continued to participate in the process to find solutions to the problem of out-of-compliance exempt well use in Summit County. Summit County and Middle Park Water Conservancy District had consultants analyze the scope of the existing problem and the extent to which Summit County's own water rights/credits could be used in a county-wide augmentation plan or substitute supply plan. These analyses were performed by stream reach throughout the county, assisted by **Division 5's** GIS capabilities.

By the end of IY98 it appeared that solutions had been identified but that Summit County could not make the decision to move forward and solve the problem. Therefore, in IY99 Division of Water Resources proceeded with the development and implementation of an enforcement plan for the out-of-compliance wells under the direction of Assistant State Engineer Ken Knox. At the same time, the Division of Water Resources will continue to work with Summit County and Middle Park to develop a county-wide augmentation solution. A Substitute Supply Plan was issued for Middle Park Water Conservancy District for Grand County.

5. Effects Of Workload Changes And/Or Administrative Limits On Operations

a. Staffing Concerns

There are two major shifts occurring that we have to respond to. We have had quality employees who understood water use, water administration, and were empowered with solving water problems. A significant shift toward water management is taking place as old structures and uses fall to growth and increasing recreational/environmental needs. The second shift is in people management itself, i.e., Colorado Peak Performance (CPP). Both will require more of supervisors and staff in time spent on the training required to adapt and in accountability record-keeping. This will be a percentage priority change for each. Accordingly, some carve back of existing duties must occur. Additionally, Don Meyer (our combination GIS specialist, reservoir inspector, and engineering tech) left the Division in March '99 to work for the River District, and Bob McCabe (our water resource engineer and river administration specialist) retired in December '99. These positions have been hard to fill.

Our part-time Administrative Assistant left the end of May and this position was finally filled mid-December.

b. Impact of the Budgets on Operations

Operating funds were adequate. We had enough to provide for necessary supplies and to pay the telephone and copy machine bills. The type of water year dictated minimal travel needs and, therefore, we had sufficient funds. By having been very frugal and the travel needs working out the way they did, we were able to purchase an additional PC and some capital items at the end of the fiscal year which have been tremendous assets to our operation.

Dam safety expenditures are growing and are being somewhat funded through Division 5 allocations above the $2600 amount originally transferred when Dam Safety was decentralized.

Our hydrographic funds, including the Satellite Monitoring monies, in turn helped offset start-up needs in GIS work (half of the cost of a computer). One of the first layers developed was a Hydrographic Data Layer including gaging station locations.

Finally, SB-200 fund requests were about 50% funded, which got us started in some of the long-range planned projects pertaining to what are now 1.6, 2.1, 2.2, 2.3.1, 2.3.3, 4.3.1, 5.3, 6.1, 6.2, 7.1, and 7.4 of the Long Range Plan.

c. Operational Concerns

Based on what happened in 1999, I believe that toeing the line on expenditures will be more difficult without decreasing service. Training needs of the new employees will be critical and will take time, energy, and training funds.

Field inspections regarding abandonments, water right applications, and well replacements will also be costly, time consuming, and necessary.

Quality control and data handling capability with systems designed for user-supplied data is becoming increasingly important and will receive attention.

For the first time in 18 years, the mileage rate paid for private vehicle mileage increased -- very important in fairness to our employees --with a corresponding increase in operating funds to cover this increased rate. However, I just recently learned that for IY00-01, we will have a 15% cut in travel funds and the loss of 31 lease vehicles with the Department of Natural Resources. The overall effect will be a dramatic decrease in service!

I.B. 2000 WATER YEAR

The Colorado Division of Water Resources strives to be a leader in the water community of Colorado and the western United States. This is accomplished by focusing on the following areas: *people, water and stewardship*. ***People***, because we recognize that the business of water involves our employees and the public. ***Water***, because the administration, safety and use of the State of Colorado's water resources is something we are committed to and care deeply about. ***Stewardship***, because we understand and accept our obligation to the taxpayers and ourselves in using and protecting the resources in the most effective manner possible. This coming year the focus is specifically on a proactive plan on opportunities for innovative water administration techniques to meet the multiple uses of this resource.

1. Key Objectives

Our **mission** is:

- To provide competent and dependable distribution of water in accordance with statutes, decrees and interstate compacts.
- To ensure public safety through safe dams and properly permitted and constructed water wells.
- To maintain and provide accurate and timely information concerning water.
- To promote stewardship of all human, fiscal and natural resources.
- To serve the public through the generation of creative solutions to problems.
- To help the public understand complex water issues.
- To promote stability in the use of the state's limited water resources.
- To apply modern technology to its greatest advantage.

The following "**principle**" statements will guide our actions:

- Treating each other and the public with dignity, respect, honesty and fairness.
- Assuming personal responsibility for individual and organizational actions.
- Fostering continuous improvement, innovative thought, learning and shared leadership.
- Promoting an open and honest communication environment that builds trust, respect and loyalty among us and the diverse community in which we live and work.
- Recognizing our employees and the water community for the professional, competent services they provide.

a. Projected Work Items for 2000

The everyday operations of Division 5 Water Resources will continue to include:

Administration of water rights,
Collecting and recording diversion data,
Performing well inspections,
Inspecting dams and reservoirs,
Reviewing water rights applications.

The special work items will consist of:

- **Decentralized Well Permitting**

As in 1999 our focus in the area of water well permitting will be to continue to minimize the turnaround time on permit application evaluation with the hopes of decreasing the number of MH- notices received, and to provide greater accessibility to the general public and increased education in the permitting process. Efforts still continue to track and sort wells using the counties' parcel identification numbers (PIN).

- **Tabulation**

To prepare for the 2000 Tabulation, Division 5 has emphasized the Tabulation task by setting goals and implementing a tracking system for accountability. This emphasis includes periods of 3-5 days where a group of office staff and water commissioners are freed from day-to-day duties to focus on Tabulation only. We've designated these periods the "Tabathon." The first two "Tabathons" occurred in September and October 1999. With our focus shifting to completion of the diversion records and annual report from November through February, no Tabathons are planned until March 2000. It is our goal to reduce the backlog of untabulated decrees to less than 500 prior to the publication of the 2000 Tabulation.

- **Spreadsheets**

The existing diversion record spreadsheets have been modified to follow a consistent format to allow data transfer from HYDROBASE via the CRDSS Division 5 Workbook. Neither Hydrobase nor the Workbook are functioning. Once completed, the link between them and the spreadsheets will be developed.

- **Large User Accounting**

Many large water users provide diversion and reservoir information in formats or based on assumptions that require major adjustments before diversion/reservoir records are finalized. In a continuing effort, water user meetings will be scheduled so that required data attributes and formats can be established, with negotiations required in some cases. CRDSS and HYDROBASE are both somewhat dependent on this happening. The CRDSS workbook will require Denver and the US Bureau of Reclamation to enter diversion and storage data into a template which is compatible with our diversion record format. The workbook will become operational in 2000.

- **Augmentation Plans**

Division 5 will:

- Investigate several major augmentation plans located throughout the Division. An established team approach will continue to be used, where augmentation plan coordinator staff and water commissioners will share in the research and administration planning duties.
- Fine-tune the existing system where water commissioners regularly administer small pond releases associated with small aug plans.
- Continue to develop augmentation plan accounting templates and standardized water user correspondence needed to assist in aug plan administration..
- Continue to utilize administrative-only structure ID's for reservoir pool releases or exchange pools in diversion record-keeping.

- **Diversion Records**

The CRDSS Division 5 Workbook will collect input via E-mail from the four largest water users in Water Division 5. During 2000 the Workbook should become operational. Once operational we will link data from the Workbook to the Division 5 diversion record spreadsheets. After we acquire some experience in this

area, we will investigate developing a system to obtain data for all our spreadsheet input that relies on user-supplied data. Such a system has many benefits; the greatest benefits are improved efficiencies and the use of the same data by all.

The collection of timely and accurate user-supplied data is one of the most difficult and time-consuming issues involving diversion records. During this coming year we will begin a brainstorming/training process to improve our effectiveness in making requests of all water users. We hope to develop some innovative approaches to this problem.

- **Abandonment List**

The next abandonment list must be completed and a copy mailed to owners of water rights included on the abandonment list by July 31, 2000. Division 5 staff are compiling a tabulation of those water rights thought to be abandoned and the supporting documentation this year.

- **SB-200**

Funding from Senate Bill 200 is continuing to be used for funding each of the line items listed below:

- Upgrade or replace PC's, hardware and software (increase hard drive size, speed and RAM) to allow for large data files such as ARCVIEW and GIS applications;
- Update all county assessor plat maps for nine counties. Also update county assessor databases in tabular format and purchase counties' GIS databases.
- Continued implementation of Division-wide well inventory and augmentation plan administration.
- Continued efforts to reduce the SBU backlog and address 600-ft. spacing issues.
- Digitally photograph water well field inspections and general water court case activity.
- Continued response to public requests for well permit applications packages using increased postage.
- Purchase of file cabinets, wire files and shelving for the Groundwater section.

- **Other Long-Range Plan Items**

2.1 - Effectively use technology to improve data quality, data accessibility and implementing GIS and DSS systems. - Annually

2.3 - The Division will accurately locate and identify every major diversion structure, including all large capacity wells, using GPS technology. - To be completed Dec. 31, 2001.

2.4.2 - The Division Engineer, in coordination with the Public Information Officer, will ensure that the Division continues to participate in environmental education opportunities, annual water festivals, academic opportunities, and Youth in Natural Resources; is also responsible for continuing to provide education and/or information to real estate groups, service organizations, local government agencies, youth groups, and all interested organizations. - Annually

5.1.1 - The Division will hold safety meetings with safety topics annually or more frequently if needed. - Annually

2.4.1 - The Division Engineer, or designee, shall attend and participate in regularly scheduled conservancy district and water user association meetings. - Quarterly

4.3.1 - As part of the Annual Report, the Division Engineer will be proactive in considering and presenting a plan to the State Engineer on opportunities for innovative water administration techniques to meet the multiple uses of this resource. - Annually

1.2.1 - By each annual meeting, each Division Engineer will develop, update and provide descriptive organizational charts to the Deputy State Engineer for distribution to all staff by the annual late summer planning meeting. - Annually

2.6 - The Assistant State Engineer, in coordination with the Division Engineer, will explore issues and develop solutions that improve the construction and administration of small non-jurisdictional dams and reservoirs on overappropriated streams. By July 1, 1999, tactics for this objective will be developed in coordination between the employees as set forth in this objective.

3.6.6 - The Assistant State Engineer for Engineering will ensure that an update of irrigated acreage and other data in CRDSS will occur by the end of 1999.

6.3.3 - Provide customer service comment card surveys in all public offices (prominently displayed). Division Engineers are responsible for ensuring this is accomplished in all field offices and the State Engineer is responsible for ensuring this is accomplished in Denver. Coordination of this activity is through the Public Information Officer. This feedback method will be in place by December 31, 1999.

4.4.2 - The Division Engineer will offer to meet with each Division's legislators annually prior to the beginning of each legislative session. - Annually - Due 12/31/99

2.1.1 - The Information Technology Manager, in coordination with the Division Engineer, is responsible for an annual assessment identifying opportunities for improving water administration, data quality and accessibility through the use of technology and develop a plan for implementation. The plan will be presented at the annual meeting beginning in 2000. - Due 3/1/2000

2.1.2 - The Assistant State Engineer for Water Supply, in coordination with the Division Engineer, is responsible for coordinating the development and implementation of programs for communication, training and education of water commissioners regarding new technology, water use/administration improvements and location/identification procedures. A plan will be presented at the annual meeting beginning in 2000. - Needs done continuously

2.3.1 - The Division Engineer is responsible for developing plans to accomplish this objective in Division 5 by December 31, 2001.

- **Effects of Workload Changes**
  - Water commissioner toolkits, RAS capability, and Windows95 upgrades have increased the man-hours needed for computer support within the Division Office. With more in-house computer expertise, there has been less reliance on Denver computer support staff.

  - Beta testing for HYDROBASE administration tool kits and developing new coding strategies and diversion diagrams for tabulation and record-keeping will require much staff time, pre-empting other tasks.

b. Problems, Concerns, Limitations To Overcome

- *Personnel/Position Upgrades* - The Division 5 Long Range Plan (LRP) begun many years ago included attainment of three needed FTE to provide for extremely important coverages within the Division. Those included a part-time well inspector/part-time water commissioner to handle the decentralization of well permitting, an augmentation plan coordinator/reservoir inspector, and a reservoir inspector/information technology professional. These positions were very adequately filled as was discussed last year but they have never been brought up to the level of the job descriptions. This is serious cause for concern. The filled position needs to be upgraded immediately if at all possible and the vacant position likewise needs upgraded to the level it was intended to be and then the position announced and filled. SUCCESS: One position raised to an EIT-1 level and one raised to an EPS Tech II and filled with a computer-oriented individual.

- *Employee Satisfaction* - A concern is the downward trend in Division 5 employee satisfaction. This in part stems from the inability of the division engineer to provide real quality time with employees on proactive solutions to real problems. Litigation issues are deemed to be more critical. It also stems in part from their increased amount of time spent on accountability issues such as FLSA, timesheets, PACE (in some cases), SMQ's, PDQ's, and soon-to-be CPP's. In many cases these appear to be demoters rather than enhancing employee satisfaction. More available time is spent off the streams and away from water issues.

- *Well Permitting Process - Time Frame Validity* - Support legislative action to extend the length of time for non-exempt well permits being valid for either three years or six years to match water court diligence time frame. This would help reduce workload on re-permitting expired non-exempt well permits and conflicts regarding 600-ft. spacing issues. Additionally, the late registration statute CRS §37-92-602(5) should be reviewed and support omitting it from the Statutes.

- *Well Permitting Process - Statements of Beneficial Use* - Unrealistic time frame within permitting process for Statements of Beneficial Use, wherein build-out cannot occur for many years. This consistently brings controversy between the Division of Water Resources and water users.

- *Technology* - Our recent technology has increased the man-hours needed for computer support within the Division Office. With more in-house computer expertise, there has been less reliance on Denver computer support staff. This will be a concern as the person with that expertise in Division 5 has taken a position with the River District leaving us with a vacancy for now.

The preceding paragraph was from last year's report. The EPS II position referred to above was filled by Brian Romig, who transferred out of the Denver IT Section in a saved-pay situation.

- *Dam Safety - Increasing Workload* - The trend for an increase in ***dam safety*** problems has decreased the amount of time the dam safety engineer can spend on other needed dam safety work. Also, the other staff members to a major degree and the dam safety engineer to a minor degree has been needed on other work items in the Division at an increasing rate, such as the tabulation, augmentation plans, and updating records to make way for HYDROBASE. As a result, about 30 dams identified over the last several years as needing their hazard ratings checked have not been done. It is estimated that it will take about 25 to 30 man-weeks to accomplish this. This does not include training time, if other personnel are to be used. Also, a Legislative audit recommended that designated recreational areas should be considered in the hazard ratings. ***This will increase*** the number of hazard evaluations to do dramatically. ***This will also increase the number of inspections to do as the hazard rating is increased.*** This last year, only one hazard evaluation was accomplished and one started, and these were of newly discovered problem areas not even on the aforementioned list.

- *Dam Safety - Legislative Audit* - Another recommendation by the legislative audit was to curtail routine inspections of dams inspected by the Federal Government and the Denver Water Board. This will have little decrease on the workload in Division 5 as we have not regularly inspected the dams inspected by the Bureau and Denver Water in the past. In reality, there will most likely be a large increase in the future workload, as the Collbran Project ***will most likely be*** turned over to private entities. As it now stands, there are nine Class **1**, one Class **2**, and five Class **3** dams associated with this project that were not regularly inspected by our office in the past because they were the responsibility of the Bureau. In addition many of these dams are very old, which will likely develop problems in the future. Many will also need outlet inspections, hazard evaluations, and other engineering studies as the Bureau has maintained different standards for these dams for several years now.

2. Changes That Will Impact The Division

- *PC Upgrades* - In 1999 several PC's were upgraded to 400 MHz; some now have 8.2 GB hard drives; and some have been upgraded to 128 MB RAM. This is a standard that should be met for all water commissioner PC's. There is no need to upgrade water commissioner PC modems but 56K modems could be attached to the Server if available.

- *Hardware* - The Information Technology (IT) staff upgraded our servers this year. Backup capabilities still need to be improved, perhaps using a writeable CD ROM or tape drives for the server and Water Commissioner Toolkits. A digitizer table would allow for archiving the decreed structure locations that have been hand-plotted on our master topo maps.

We now have eight digital cameras which are being used by water commissioners for logging photos such as potential abandonments and water well inspections. The cameras have paid for themselves several times over already in saved time, film and processing costs but we keep scrambling for color printer supplies. We will need several more GPS units; preferably these units would have differential correction and data logging capabilities.

Division 5 Computer Hardware (and continued on the next page)

Personnel	PC type	RAM	Hard Drive	Printer
Bergquist	GW P5-120	64M	2G+1G	HPOJ520
Brigham	GW P5-90	16M	812M	Canon C3500
Comerer	GW P5-90	32M	740M	HPOJ520
Cox	GW P5-90	32M	503M+1G	HPOJ520
Daxton	GW P5-200	64M	2G+1G	HPOJ520
Gepfert	GW E-4200 400	128M	8.1G	HPOJ600
Greene	GW P4D - 66	32M	2G	HPOJ520
Hummer (SVT Office)	GW E-4200 400	128M	8.1G	HPOJC2890A
Klenda	GW E-4200 400	128M	8.1G	HPOJ520
Lemon	GW P5-90	16M	740M	Canon C3500
Mackey	GW P5-200	64M	740M+695M	HPOJ520
McEwen	GW P5-200	64M	2G+1G	HPOJ520
Schaffner (Div 6)	GW P5-90 (?)	16M	730M	HPOJ520
Thompson	GW P5-200	32M	2G+1G	HPOJ520
Wells (GJ Office)	GW P5-200	32M	2G+1G	HPOJ-R40
Bell	GW E-3000 166	32M	1.6G	
Blair	GW E-4200 500	256M	12.7G	line printer
Hitchcock	GW E-3000 200	64M	1.6G	

Personnel	PC type	RAM	Hard Drive	Printer
Martellaro	AMD-K6 3D+	256M	18G	
Mills	GW P5-90 200	64M	1.5G+2G	
Pope	GW E-3000 200	128M	13G	
Romig	pentium III - on order			hp plotter
river administrator	GW E-4200 450	128M	14G	
Sappington	Omnibook 2100	32M	4G	
Wear	GW E-4200 400	256M	10.6G	HPDJ750C
Whitehead	GW E-4200 400	128M	8.4G	
Misc/Extras				
extra (to be used for wc upgrade)	GW P5-133	64M	1G	
extra (to be used for wc upgrade)	GW P5-120	32M		
Public	GW P5-90	32M	740M	
extra (to be used for wc upgrade)	GW P5-200	64M	none	
McCabe's office	GW P5-133	32M	1G	HP1150C
old Hydro	Omnibook 600			
old GPS	GW CB486 DX33	12M	220M	
Pope at home	GW P5-90			HPOJ520
Servers				
Glenwood1	DELL 4300	512M	4G+13G	
Glenwood2	GW P5-133	96M	2G+2G	
Grand Junction	GW P5-133	64M	2G	
Silverthorne	???			

- *Summit County Well Administration* - In IY99 Division of Water Resources proceeded with the development and implementation of an enforcement plan for the out-of-compliance wells, under the direction of Assistant State Engineer Ken Knox. At the same time the Division of Water Resources will continue to work with Summit County and Middle Park to develop a county-wide augmentation solution. This will continue in IY00.

II.A. TRANSMOUNTAIN DIVERSIONS

II.A.1. Inflows - see page 42

II.A.2. Outflows - see page 43

II.B. STORAGE WATER

Reservoir Storage Summaries by District - see pages 44 thru 58

1999 TRANSMOUNTAIN DIVERSIONS - INFLOWS

RECIPIENT								SOURCE		
WD	ID	Name	Stream	10-Year Average		Current Year		WD	ID	Stream
				AF	Days	AF	Days			
36	4677	ARKANSAS WELL	TENMILE CREEK	229.50	312	212.00	365	11		ARKANSAS RIVER
38	4682	ROARING FORK BYPASS	ROARING FORK	1855.80	333	2335.81	330	11		TWIN LAKES
45	4657	DIVIDE-HIGHLINE FEEDER	DIVIDE CREEK	1009.20	48	1584.90	82	40		CLEAR FORK MUDDY
50	4600	SARVIS CREEK DITCH	RED DIRT CREEK	908.30	126	0.00	0	58		SARVIS CREEK
53	4716	DOME CREEK DITCH	EGERIA CREEK	276.30	68	291.77	115	58		BEAR CREEK
53	4715	STILLWATER DITCH	EGERIA CREEK	2015.30	104	1337.10	59	58		BEAR CREEK
72	4713	REDLANDS POWER CANAL	COLORADO RIVER	540119.40	356	529715.49	349	42		GUNNISON RIVER
72	4711	GRAND JUNCTION	COLORADO RIVER	5880.10	362	6038.80	365	42		KANNAH CREEK
72	4712	FRUITA WATER WORKS	COLORADO RIVER	0.00	0	0.00	0	73		LITTLE DOLORES RIVER
					TOTAL:	541515.87				

1999 TRANSMOUNTAIN DIVERSIONS - OUTFLOWS

RECIPIENT								SOURCE		
WD	ID	Name	Stream	10-Year Average		Current Year		WD	ID	Stream
				AF	Days	AF	Days			
7	4658	STRAIGHT CREEK TUNNEL	CLEAR CREEK	310.80	365	234.00	365	36		STRAIGHT CREEK
7	4626	VIDLER TUNNEL	CLEAR CREEK	671.30	74	580.00	68	36		SNAKE RIVER
23	4685	BOREAS PASS DITCH	TARRYALL CREEK	154.60	53	251.00	67	36		BLUE RIVER
23	4699	HOOSIER TUNNEL	MAIN FORK OF SO. PLATTE	9509.00	150	10302.00	168	36		BLUE RIVER
80	4684	ROBERTS TUNNEL	MAIN FORK OF SO. PLATTE	60897.70	241	40088.00	195	36		BLUE RIVER
11	4641	COLUMBINE DITCH	TENNESSEE CREEK	1786.20	99	933.00	95	37		SO. FORK OF EAGLE RIVER
11	4642	EWING DITCH	TENNESSEE CREEK	1061.90	140	618.00	135	37		SO. FORK OF EAGLE RIVER
11	4614	HOMESTAKE TUNNEL	SO. PLATTE VIA ARKANSAS	27518.50	97	31425.00	111	37		HOMESTAKE CREEK
11	4648	WURTZ DITCH	TENNESSEE CREEK	2750.10	112	1234.00	131	37		SO. FORK OF EAGLE RIVER
11	4625	BOUSTEAD TUNNEL	LAKE FORK CREEK	61531.90	344	43151.00	365	38		FRYING PAN RIVER
11	4613	BUSK-IVANHOE TUNNEL	LAKE FORK CREEK	4739.20	194	5159.00	148	38		FRYING PAN RIVER
11	4617	TWIN LAKES TUNNEL	LAKE FORK CREEK	39973.30	364	16423.00	365	38		ROARING FORK RIVER
3	4601	GRAND RIVER DITCH	CACHE LA POUDRE RIVER	18198.50	109	19444.00	99	51		NO. FORK COLORADO
4	4602	EUREKA DITCH	CACHE LA POUDRE RIVER	34.10	27	0.00	0	51		NO. FORK COLORADO
4	4634	ALVA B ADAMS TUNNEL	BIG THOMPSON RIVER	196388.20	350	164100.00	310	51		NO. FORK COLORADO
6	4655	MOFFAT TUNNEL	BOULDER CREEK	46164.40	344	36596.00	365	51		FRASER RIVER
7	4625	BERTHOUD PASS DITCH	CLEAR CREEK	934.90	90	0.00	0	51		FRASER RIVER
6	505	AUGUST P GUMLICK	BOULDER CREEK VIA FRASER	INCLUSIVE IN MOFFAT TUNNEL				51		WILLIAMS FORK RIVER
6	4603	VASQUEZ PIPELINE	BOULDER CREEK VIA FRASER	INCLUSIVE IN MOFFAT TUNNEL				51		WILLIAMS FORK RIVER
40	758	LEON TUNNEL CANAL	SURFACE CREEK	1529.50	76	1011.00	70	72		LEON CREEK
					TOTAL:	371549.00				

RESERVOIR STORAGE SUMMARIES BY DISTRICT

1999				AMOUNT IN STORAGE (AF)				
WD	ID	RESERVOIR NAME	SOURCE STREAM	Minimum		Maximum		End Of Year
				AF	Date	AF	Date	
36				283,004.8		421,514.6		365,661.4
37				20,719.4		48,728.4		47,706.5
38				70,370.2		111,534.0		88,123.1
39				9,419.9		20,095.5		10,608.2
45				387.5		820.6		390.0
50				50,105.9		76,262.8		52,283.0
51				520,033.3		672,687.9		630,339.4
52				250.3		407.6		280.8
53				4,200.9		6,669.9		4,468.7
70				0.0		0.0		0.0
72				27,855.7		61,801.8		36,650.6
		GRAND TOTAL FOR DIVISION 5		986,347.9		1,420,523.1		1,236,511.7

RESERVOIR STORAGE SUMMARIES BY DISTRICT

1999				AMOUNT IN STORAGE (AF)				
	ID	RESERVOIR NAME	SOURCE STREAM	Minimum		Maximum		End Of Year
				AF	Date	AF	Date	
36	3533	BLACK LAKE	BLACK CREEK	1,997.2	11/01/98	1,997.2	10/31/99	1,997.2
	3535	BUFFEHR ENLG RESERVOIR	TENMILE CREEK	63.5	02/28/99	90.6	11/30/98	76.5
	3538	CATARACT LAKE	CATARACT CREEK	1,652.8	11/01/98	1,652.8	10/31/99	1,652.8
	3575	CLINTON GULCH RESERVOIR	TENMILE CREEK	3,387.0	05/31/99	4,390.0	07/31/99	4,363.0
	4512	DILLON RESERVOIR BRDP	BLUE RIVER	208,996.5	04/03/99	257,502.5	08/07/99	244,713.9
	3542	GOOSE PASTURE TARN	BLUE RIVER	661.2	12/31/98	891.0	11/01/98	891.0
	3543	GREEN MOUNTAIN RES	BLUE RIVER	65,478.0	03/01/99	152,032.0	08/06/99	111,188.0
	3548	HOAGLAND RESERVOIR NO 1	ELLIOTT CREEK	50.0	11/01/98	50.0	10/31/99	50.0
	3643	KEYSTONE POND	SNAKE RIVER	100.0	11/01/98	100.0	10/31/99	100.0
	3606	OFFICER GULCH POND	TENMILE CREEK	100.0	11/01/98	100.0	10/31/99	100.0
	3565	REYNOLDS RESERVOIR	SODA CREEK	NO INFORMATION AVAILABLE				
	3569	UPPER BLACK CREEK RES	BLACK CREEK	273.0	11/01/98	273.0	10/31/99	273.0
	3570	UPPER BLUE LAKE RES	BLUE RIVER	0.0	11/01/98	2,119.3	07/08/99	0.0
	3571	WAY RESERVOIR	BEAVER CREEK	60.0	09/08/99	85.0	05/28/99	65.0
36		Total of All Others < 50 AF		185.6		231.2		191.0
36		Total For District 36		283,004.8		421,514.6		365,661.4

RESERVOIR STORAGE SUMMARIES BY DISTRICT

1999				AMOUNT IN STORAGE (AF)				
WD	ID	RESERVOIR NAME	SOURCE STREAM	Minimum		Maximum		End Of Year
				AF	Date	AF	Date	
37	3600	BENCHMARK LAKE	EAGLE RIVER	125.0	11/01/98	125.0	08/18/99	125.0
	3608	BLACK LAKE	GORE CREEK	135.0	02/27/99	362.0	08/09/99	362.0
	3510	BLACK LAKE NO 2	GORE CREEK	0.0	03/23/99	73.0	11/01/98	73.0
	3513	CHALK MOUNTAIN RESERVOIR	EAGLE RIVER	220.0	11/01/98	220.0	06/28/99	220.0
	3699	CLIMAX MOLY NO 4 RES	EAGLE RIVER	2,414.0	02/28/99	3,148.0	06/14/99	3,148.0
	4516	HOMESTAKE RESERVOIR	HOMESTAKE CREEK	16,302.1	05/17/99	42,447.1	07/24/99	42,172.2
	3520	L E D E RESERVOIR	GYPSUM CREEK	236.0	11/01/98	321.0	06/28/99	271.0
	3516	LOWER GG RESERVOIR	EBY CREEK	0.0	11/01/98	62.0	06/02/99	2.0
	3522	NOECKER RESERVOIR	EBY CREEK	0.0	11/01/98	159.0	07/22/99	35.0
	3524	O Z LAKE (aka Sylvan Lake)	BRUSH CREEK	452.0	11/01/98	452.0	07/28/99	452.0
	3527	ROBINSON RESERVOIR	EAGLE RIVER	684.0	11/01/98	1,164.0	08/01/99	694.0
	3530	WELSH RESERVOIR	ALKALI CREEK	75.0	10/31/99	105.0	06/01/99	75.0
37		Total of All Others < 50 AF		76.3		90.3		77.3
37		Total for District 37		20,719.4		48,728.4		47,706.5

RESERVOIR STORAGE SUMMARIES BY DISTRICT

1999				AMOUNT IN STORAGE (AF)				
WD	ID	RESERVOIR NAME	SOURCE STREAM	Minimum		Maximum		End Of Year
				AF	Date	AF	Date	
38	3711	ALICIA LAKE RESERVOIR	LIME CREEK	673.0	11/01/98	673.0	06/01/99	673.0
	4000	BEAVER LAKE	CRYSTAL RIVER	72.5	11/01/98	72.5	06/01/99	72.5
	3722	CONSOLIDATED RESERVOIR	WEST COULTER CREEK	172.3	09/30/99	866.2	05/31/99	246.3
	3774	CRAWFORD DAM NO 1	BLUE CREEK	160.0	11/01/98	160.0	06/01/99	160.0
	3773	CRAWFORD DAM NO 2	BLUE CREEK	56.0	11/01/98	56.0	06/01/99	56.0
	4087	CRYSTAL SPRING LAKE	CRYSTAL SPRING	80.0	11/01/98	80.0	10/31/99	80.0
	4095	FLANNERY RESERVOIR	THREE MILE CREEK	37.0	11/01/98	84.4	06/30/99	84.4
	3779	GRIZZLY RESERVOIR	LINCOLN CREEK	400.0	11/01/98	400.0	10/31/99	400.0
	3727	HIMMELAND LAKE	FRYING PAN RIVER	92.0	11/01/98	92.0	06/01/99	92.0
	3729	HUGHES RESERVOIR	THREE MILE CREEK	45.0	07/22/99	88.0	05/20/99	75.0
	3732	IVANHOE RESERVOIR	FRYING PAN RIVER	246.0	11/01/98	1,097.0	05/01/99	246.0
	3832	JACOBSON LAKES & PONDS	ROARING FORK RIVER	225.0	11/01/98	225.0	06/01/99	225.0
	4154	KODIAK LAKE & WETLANDS	ROARING FORK	60.0	11/01/98	60.0	10/31/99	60.0
	3736	LAKE ANN RESERVOIR	SOPRIS CREEK	0.0	11/01/98	436.0	06/30/99	0.0
	3955	MCNULTY RESERVOIR #2	SHIPPEE RUN CREEK	0.0	11/01/98	72.0	05/20/99	0.0
	3740	RALSTON RESERVOIR	COULTER CREEK	0.0	11/01/98	53.9	05/31/99	0.0
	3742	SMITH PARK RESERVOIR	SHIPEE RUN CREEK	25.0	11/01/98	70.0	06/07/99	20.0
	3713	RUEDI RESERVOIR	FRYING PAN RIVER	65,503.6	03/20/99	102,553.5	07/29/99	83,037.4
	3744	SPRING PARK RESERVOIR	CATTLE CREEK	263.9	03/17/99	1,723.9	05/10/99	316.8
	3752	VON SPGS RES NO. 2	COULTER CREEK	30.0	11/01/98	124.0	06/01/99	38.0
	3747	THOMAS RESERVOIR	THOMAS CREEK	160.0	11/01/98	160.0	06/01/99	160.0
	3753	UPPER CHAPMAN RES	FRYINGPAN RIVER	119.0	11/01/98	119.0	06/01/99	119.0
	3750	VAN-CLEVE FISHER RES	MESA CREEK	0.0	11/01/98	198.7	05/01/99	0.0
	3759	WILDCAT RESERVOIR	SNOWMASS CREEK	1,100.0	11/01/98	1,100.0	06/01/99	1,100.0
	3760	WOODS LAKE RESERVOIR	LIME CREEK	300.0	11/01/98	300.0	06/01/99	300.0
	3835	LAKE DEBORAH	SNOWMASS CREEK	57.0	11/01/98	57.0	05/31/99	57.0
38		Total of All Others < 50 AF		492.9		611.9		504.7
38		Total for District 38		70,370.2		111,534.0		88,123.1

RESERVOIR STORAGE SUMMARIES BY DISTRICT

1999				AMOUNT IN STORAGE (AF)				
WD	ID	RESERVOIR NAME	SOURCE STREAM	Minimum		Maximum		End Of Year
				AF	Date	AF	Date	
39	3999	CHAMBERS POND NO 1	COLORADO RIVER	100.0	11/01/98	137.0	06/01/99	137.0
	4000	CHAMBERS POND NO 2	COLORADO RIVER	200.0	11/01/98	239.0	06/01/99	239.0
	4002	CHAMBERS POND NO 4	COLORADO RIVER	170.0	11/01/98	180.0	06/01/99	180.0
	3927	CITY OF RIFLE POND NO 1	COLORADO RIVER	0.0	11/01/98	0.0	10/31/99	0.0
	3505	GRASS VALLEY RESERVOIR	RIFLE CREEK	2,940.0	11/01/98	5,800.0	04/01/99	3,864.0
	3506	HARRIS RESERVOIR	WEST RIFLE CREEK	44.0	11/01/98	56.0	06/01/99	56.0
	3940	MEADOW CREEK RESERVOIR	ELK CREEK	885.6	11/01/98	984.0	06/01/99	984.0
	3941	MIDDLE FORK RESERVOIR	PARACHUTE CREEK	85.0	11/01/98	100.0	06/01/99	100.0
	3507	PARK RESERVOIR	WEST ELK CREEK	0.0	10/01/99	164.0	05/31/99	13.0
	3508	RIFLE GAP RESERVOIR	RIFLE CREEK	4,969.0	10/31/99	12,364.0	04/01/99	4,969.0
39		Total of All Others < 50 AF		26.3		71.5		66.2
39		TOTAL FOR DISTRICT 39		9,419.9		20,095.5		10,608.2

RESERVOIR STORAGE SUMMARIES BY DISTRICT

1999				AMOUNT IN STORAGE (AF)				
WD	ID	RESERVOIR NAME	SOURCE STREAM	Minimum		Maximum		End Of Year
				AF	Date	AF	Date	
45	3603	PORTER RESERVOIR	EAST ALKALI CREEK	20.0	10/31/99	206.0	05/13/99	20.0
	3695	ALSBURY RESERVOIR	EAST DIVIDE CREEK	50.0	11/01/98	250.0	06/21/99	50.0
	3524	ANDERSON POND NO.1	COLORADO RIVER	312.7	11/01/98	312.7	10/31/99	312.7
45		Total of All Others < 50 AF		4.8		51.9		7.3
45		TOTAL FOR DISTRICT 45		387.5		820.6		390.0

RESERVOIR STORAGE SUMMARIES BY DISTRICT

1999				AMOUNT IN STORAGE (AF)				
WD	ID	RESERVOIR NAME	SOURCE STREAM	Minimum		Maximum		End Of Year
				AF	Date	AF	Date	
50	3644	ALBERT RESERVOIR	ALBERT CREEK	0.0	11/01/98	125.0	06/01/99	30.0
	3606	ANTELOPE RESERVOIR	ANTELOPE CREEK	10.0	07/10/99	347.0	05/17/99	166.0
	3651	BASIN RESERVOIR	MUDDY CREEK	10.0	09/23/99	118.0	05/10/99	11.0
	3645	BINCO RESERVOIR	ALBERT CREEK	23.0	08/23/99	516.0	06/01/99	25.0
	3618	HINMAN RESERVOIR	PASS CREEK	300.0	06/21/99	611.0	11/01/98	575.0
	3623	LAKE AGNES	MUDDY CREEK	400.0	11/01/98	431.0	06/10/99	400.0
	3646	MARTIN RESERVOIR	COLBURN CREEK	10.0	07/20/99	180.0	05/10/99	90.0
	3625	MATHESON RESERVOIR	TROUBLESOME CREEK	500.0	07/24/99	1,074.0	05/27/99	545.0
	3627	MC ELROY RESERVOIR	PASS CREEK	0.0	09/06/99	240.0	06/01/99	0.0
	3629	MC MAHON RESERVOIR NO 2	RED DIRT CREEK	0.0	07/28/99	3,460.0	06/10/99	15.0
	3655	MILK CREEK RESERVOIR	MILK CREEK	10.0	11/01/98	105.0	05/20/99	50.0
	3656	NORTH MEADOW RESERVOIR (aka Martin Lily	MUDDY CREEK	0.0	11/01/98	150.0	06/10/99	0.0
	3631	OAKS RESERVOIR	MILK CREEK	NO INFORMATION AVAILABLE				
	3632	PARSONS RESERVOIR	CARTER CREEK	25.0	11/01/98	107.0	06/03/99	45.0
	3642	WHITELEY PEAK RESERVOIR	DIAMOND CREEK	475.0	07/23/99	773.0	05/10/99	525.0
	3637	RUDOLPH RESERVOIR	HILL CREEK	10.0	11/01/98	60.0	06/03/99	25.0
	3668	WOLFORD MOUNTAIN RESERVOIR	MUDDY CREEK	48,083.9	02/26/99	67,242.1	06/03/99	49,298.9
	3643	WOODS RESERVOIR	DUNNING CREEK	40.0	08/05/99	60.0	06/03/99	45.0
	3666	DUMONT LAKE	MUDDY CREEK	51.0	11/01/98	220.0	06/01/99	215.0
50		Total of All Others < 50 AF		158.0		393.7		222.1
50		TOTAL FOR DISTRICT 50		50,105.9		76,212.8		52,283.0

RESERVOIR STORAGE SUMMARIES BY DISTRICT

1999				AMOUNT IN STORAGE (AF)				
WD	ID	RESERVOIR NAME	SOURCE STREAM	Minimum		Maximum		End Of Year
				AF	Date	AF	Date	
51	4006	BULL RUN CREEK RESERVOIR	BULL RUN CREEK	120.0	11/01/98	125.0	06/11/99	121.0
	4055	CBT GRANBY RESERVOIR	COLORADO RIVER	418,898.3	05/10/99	537,301.5	06/30/99	509,179.0
	3695	CBT SHADOW MOUNTAIN GRAND LAKE	NO. FORK OF COLO RIVER	17,100.1	06/24/99	17,983.5	12/15/98	17,442.0
	3710	CBT WILLOW CREEK RESERVOIR	WILLOW CREEK	7,224.0	11/21/98	9,973.7	07/12/99	8,867.0
	4012	COTTONWOOD RESERVOIR	GARDINER CREEK	25.8	11/01/98	129.0	10/31/99	129.0
	3715	EAST BRANCH RESERVOIR	UTE CREEK	1,700.0	11/01/98	2,000.0	06/02/99	1,950.0
	3660	F W LINKE NO 2 RESERVOIR	TEN MILE CREEK	15.3	11/01/98	60.0	05/01/99	15.0
	3665	HANKINSON RESERVOIR	FRASER RIVER	116.0	11/01/98	116.0	10/31/99	116.0
	4009	JACK ORR RESERVOIR	COLORADO RIVER	NO INFORMATION AVAILABLE				
	3752	KINGS RESERVOIR	BUFFALO CREEK	194.0	09/16/99	523.0	05/15/99	164.0
	3679	LANGHOLEN RESERVOIR	BATTLE CREEK	8.0	07/22/99	65.0	06/07/99	14.0
	3686	MEADOW CREEK RESERVOIR	MEADOW CREEK	2,336.0	11/01/98	5,534.0	06/17/99	4,563.0
	3687	MOORE RESERVOIR	WILLIAMS FORK RIVER	79.0	11/01/98	180.0	05/28/99	85.0
	3688	MUSGRAVE RESERVOIR	ROCK CREEK	0.0	11/01/98	245.0	06/03/99	0.0
	3693	ROCK CREEK RESERVOIR	ROCK CREEK	0.0	11/01/98	0.0	10/31/99	0.0
	3694	SCHOLL RESERVOIR	CORRAL CREEK	0.0	11/01/98	300.0	06/10/99	0.0
	3734	SNOW MOUNTAIN RESERVOIR NO 1	POLE CREEK	108.0	11/01/98	150.0	10/31/99	150.0
	4051	SUN VALLEY RESERVOIR	NO. FORK OF COLO RIVER	72.0	11/01/98	72.0	10/31/99	72.0
	3701	SYLVAN RESERVOIR	LITTLE MUDDY CREEK	0.0	11/01/98	564.0	06/02/99	15.0
	3738	UTE CREEK RESERVOIR	UTE CREEK	75.0	11/01/98	100.0	08/06/99	93.0
	3709	WILLIAMS FORK RES	WILLIAMS FORK RIVER	71,719.0	04/19/99	96,822.0	07/07/99	87,054.0
51		Total of All Other Reservoirs Less Than 50 AF		242.8		444.2		310.4
51		TOTAL FOR DISTRICT 51		520,033.3		672,687.9		630,339.4

RESERVOIR STORAGE SUMMARIES BY DISTRICT

1999				AMOUNT IN STORAGE (AF)				
WD	ID	RESERVOIR NAME	SOURCE STREAM	Minimum		Maximum		End Of Year
				AF	Date	AF	Date	
52	3940	JONES RESERVOIR	HENRY CREEK	11.0	11/01/98	69.2	08/09/99	42.5
	3982	MARMA LAKE	PINEY RIVER	63.0	11/01/98	63.0	05/25/99	63.0
	3946	OXFORD RESERVOIR	COLORADO RIVER					
	3949	ROCK GAP DAM	HARTMAN GULCH	27.8	10/31/99	51.0	05/13/99	27.8
52		Total of All Others < 50 AF		148.5		224.4		147.5
52		TOTAL FOR DISTRICT 52		250.3		407.6		280.8

RESERVOIR STORAGE SUMMARIES BY DISTRICT

1999				AMOUNT IN STORAGE (AF)				
WD	ID	RESERVOIR NAME	SOURCE STREAM	Minimum		Maximum		End Of Year
				AF	Date	AF	Date	
53	3959	CLYDE RESERVOIR	EGERIA CREEK	0.0	11/01/98	66.0	06/07/99	30.0
	3960	CRESENT LAKE RESERVOIR	DERBY CREEK	0.0	10/29/99	237.0	09/28/99	0.0
	3961	ED W HARPER RESERVOIR	EGERIA CREEK	68.0	10/12/99	216.0	06/01/99	68.0
	3962	EGERIA RESERVOIR	EGERIA CREEK	0.0	11/01/98	120.0	06/24/99	0.0
	3966	GRIMES BROOKS RESERVOIR	RED DIRT CREEK	91.0	10/27/99	381.0	06/25/99	91.0
	3968	HADLEY RESERVOIR	EGERIA CREEK	NO INFORMATION AVAILABLE				
	3971	HEART LAKE RESERVOIR	DEEP CREEK	2,600.0	11/01/98	3,100.0	07/01/99	2,600.0
	3972	HIDDEN SPRINGS RESERVOIR	HORSE CREEK	50.0	11/01/98	50.0	05/18/99	50.0
	3974	JONES NO 1 RESERVOIR	SHEEP CREEK NO 2	27.0	08/09/99	147.0	06/04/99	27.0
	3975	JONES NO 2 RESERVOIR	SHEEP CREEK NO 2	220.0	11/01/98	450.0	06/30/99	265.0
	3978	KELLY RESERVOIR	EGERIA CREEK	45.0	11/01/98	138.0	06/09/99	71.0
	3982	LUARK RESERVOIR	SPRING CREEK	35.0	10/29/99	75.0	06/14/99	35.0
	4020	MACKINAW LAKE RES NO 2	DERBY CREEK	94.0	10/31/99	138.0	07/12/99	94.0
	3986	MORRIS RESERVOIR	TOPONAS CREEK	0.0	11/01/98	70.0	10/29/99	70.0
	3988	NEWTON GULCH RES	KING CREEK	0.0	11/01/98	114.0	06/21/99	0.0
	3992	REID NO 3 RESERVOIR	EGERIA CREEK	10.0	11/01/98	86.0	06/24/99	36.0
	3995	STERNER RESERVOIR	EGERIA CREEK	0.0	11/01/98	195.0	06/28/99	0.0
	3997	SWEETWATER RESERVOIR	SWEETWATER CREEK	490.0	11/01/98	490.0	05/11/99	490.0
	3999	TONIER GULCH RES	TOPONAS CREEK	5.0	11/01/98	60.0	06/16/99	10.0
	4001	TOPONAS ROCK NO 2 RES	TOPONAS CREEK	120.0	10/29/99	196.0	06/16/99	120.0
	4004	WOHLER RESERVOIR	ELK CREEK	80.0	11/01/98	80.0	06/21/99	80.0
53		Total of All Others < 50 AF		265.9		436.9		331.7
53		TOTAL FOR DISTRICT 53		4,200.9		6,845.9		4,468.7

RESERVOIR STORAGE SUMMARIES BY DISTRICT

1999				AMOUNT IN STORAGE (AF)				
WD	ID	RESERVOIR NAME	SOURCE STREAM	Minimum		Maximum		End Of Year
				AF	Date	AF	Date	
70								
70		Total of All Others < 50 AF						
70		TOTAL FOR DISTRICT 70		0.0		0.0		0.0

RESERVOIR STORAGE SUMMARIES BY DISTRICT

1999				AMOUNT IN STORAGE (AF)				
WD	ID	RESERVOIR NAME	SOURCE STREAM	Minimum		Maximum		End Of Year
				AF	Date	AF	Date	
72	3833	ANDERSON BROS RES NO 1	LEON CREEK	NO INFORMATION AVAILABLE				
	3887	BIG BEAVER RESERVOIR	BULL CREEK	0.0	08/24/99	126.7	04/14/99	0.0
	3904	BIG CREEK NO 1 RESERVOIR	BIG CREEK	370.0	04/07/99	701.5	11/13/98	701.5
	3905	BIG CREEK NO 3 RESERVOIR	BIG CREEK	765.7	04/07/99	1,549.6	11/01/98	1,549.6
	3906	BIG CREEK NO 4 RESERVOIR	BIG CREEK	0.0	01/07/99	188.4	11/01/98	188.4
	3907	BIG CREEK NO 5 RESERVOIR	BIG CREEK	0.0	02/23/99	104.6	11/01/98	104.6
	3909	BIG CREEK NO 7 RESERVOIR	BIG CREEK	660.2	02/22/99	1,222.6	05/27/99	702.2
	3841	BOB MC KELVIE RESERVOIR	PLATEAU CREEK	129.0	10/31/99	291.0	11/01/98	129.0
	3888	BULL BASIN NO 1 RES	BULL CREEK	66.8	11/01/98	124.7	05/10/99	124.7
	3889	BULL BASIN NO 2 RES	BULL CREEK	0.0	11/16/98	79.9	06/22/99	0.0
	3890	BULL CREEK NO 1 RES	BULL CREEK	0.0	11/01/98	60.0	04/14/99	60.0
	3891	BULL CREEK NO 2 RES	BULL CREEK	32.7	11/01/98	62.2	04/14/99	62.2
	3892	BULL CREEK NO 3 RES	BULL CREEK	0.0	11/01/98	59.2	05/04/99	0.0
	3893	BULL CREEK NO 4 RES	BULL CREEK	0.0	11/01/98	202.5	04/14/99	3.5
	3894	BULL CREEK NO 5 RES	BULL CREEK	198.0	11/01/98	247.0	04/14/99	224.7
	3834	COLBY HORSE PARK RES	LEON CREEK	202.2	09/05/00	527.2	07/01/99	213.6
	3883	COON CREEK NO 1 RES	COON CREEK	0.0	09/17/99	396.0	06/08/99	9.5
	3884	COON CREEK NO 2 RES	COON CREEK	0.0	09/21/99	179.3	06/22/99	0.0
	3885	COON CREEK NO 3 RES	COON CREEK	0.0	05/04/99	93.8	06/18/99	71.5
	3923	COTTONWOOD LAKES RES NO 1	COTTONWOOD CREEK	730.1	04/07/99	1,939.6	07/12/99	1,470.6
	3924	COTTONWOOD LAKES RES NO 2	COTTONWOOD CREEK	STRUCTURE NOT USEABLE				
	3925	COTTONWOOD LAKES RES NO 4	COTTONWOOD CREEK	89.7	03/30/99	303.7	06/07/99	294.2
	3926	COTTONWOOD LAKES RES NO 5	COTTONWOOD CREEK	11.4	04/07/99	342.3	11/01/99	327.1
	4065	CURRIER RESERVOIR NO 2	BUZZARD CREEK	NO INFORMATION AVAILABLE				
	3910	DAWSON RESERVOIR	BIG CREEK	6.9	03/24/99	213.4	06/07/99	40.4
	3920	ECHO LAKE RESERVOIR	BIG SALT WASH	62.4	05/09/99	95.5	07/21/99	66.9
	3914	GROVE CREEK RESERVOIR NO 1	GROVE CREEK	NO INFORMATION AVAILABLE				
	3915	GROVE CREEK RESERVOIR NO 2	GROVE CREEK	NO INFORMATION AVAILABLE				
72		Subtotal This Page		3,325.1		9,110.7		6,344.2

RESERVOIR STORAGE SUMMARIES BY DISTRICT

1999				AMOUNT IN STORAGE (AF)				
WD	ID	RESERVOIR NAME	SOURCE STREAM	Minimum		Maximum		End Of Year
				AF	Date	AF	Date	
72	3849	HAWXHURST RESERVOIR	HAWXHURST CREEK	0.0	11/01/98	207.0	07/01/99	0.0
	3957	HIGHLINE RESERVOIR	COLORADO RIVER	3,352.0	11/01/98	3,352.0	10/31/99	3,352.0
	3929	JENSEN RESERVOIR	COTTONWOOD CREEK	90.7	07/06/99	90.7	07/12/99	90.7
	3961	JERRY CREEK RESERVOIR NO 1	PLATEAU CREEK	1,036.3	02/19/99	1,134.8	08/01/99	1,121.7
	3962	JERRY CREEK RESERVOIR NO 2	PLATEAU CREEK	6,320.9	11/01/98	6,597.4	05/13/99	6,320.9
	3837	KENDALL RESERVOIR	LEON CREEK	76.0	11/01/98	76.0	10/31/99	76.0
	3838	KIRKENDALL RESERVOIR	LEON CREEK	161.0	11/01/98	161.0	10/31/99	161.0
	3839	LEON LAKE RESERVOIR	LEON CREEK	937.1	10/01/99	1,789.2	07/26/99	979.6
	3895	LOST LAKE RESERVOIR	BULL CREEK	0.0	06/30/99	91.4	06/08/99	0.0
	3871	MESA CREEK NO 1 RESERVOIR	MESA CREEK	34.4	10/15/99	280.2	11/02/98	164.0
	3872	MESA CREEK NO 2 RESERVOIR	MESA CREEK	LESS THAN 50 AF				
	3873	MESA CREEK NO 3 RESERVOIR	MESA CREEK	0.0	11/02/98	178.2	07/02/99	92.7
	3874	MESA CREEK NO 4 RESERVOIR	MESA CREEK	0.0	03/16/99	279.6	06/22/99	77.0
	3842	MONUMENT NO 1 RESERVOIR	LEON CREEK	450.0	11/01/98	450.0	10/31/99	450.0
	3843	MONUMENT NO 2 RESERVOIR	LEON CREEK	254.0	11/01/98	254.0	10/31/99	254.0
	3854	PALISADE CABIN RESERVOIR	RAPID CREEK	878.0	10/28/99	1,021.9	06/04/99	883.7
	3932	PARKER BASIN RESERVOIR NO 1	COTTONWOOD CREEK	67.0	03/09/99	271.6	11/01/98	271.6
	3933	PARKER BASIN RESERVOIR NO 2	COTTONWOOD CREEK	6.7	11/01/98	60.0	06/07/99	48.8
	3934	PARKER BASIN RESERVOIR NO 3	COTTONWOOD CREEK	48.9	01/12/99	229.1	06/10/99	92.3
	3858	RAPID CREEK NO 1 RESERVOIR	RAPID CREEK	408.4	05/04/99	603.2	06/15/99	415.9
	3859	RAPID CREEK NO 2 RESERVOIR	RAPID CREEK	0.0	10/13/98	521.1	06/15/99	269.2
	3901	STUBB McKINNEY CLARK RESERVOIR	SPRING CREEK	136.8	11/01/98	217.4	05/10/99	140.9
	3931	T E KITSON RESERVOIR	COTTONWOOD CREEK	184.3	11/01/98	184.3	05/06/99	184.3
	3902	TWIN BASIN RESERVOIR	BULL CREEK	0.0	08/13/99	119.5	06/18/99	2.6
	3844	VEGA RESERVOIR	PLATEAU CREEK	9,981.0	11/01/98	34,206.0	06/09/99	14,670.0
	3919	Y T RESERVOIR	GROVE CREEK	35.0	04/01/99	99.0	06/01/99	70.2
72		Subtotal This Page		24,458.5		52,474.5		30,189.1
72		Subtotal Previous Page(s)		3,325.1		9,110.7		6,344.2
72		Total of All Other Reservoirs Less Than 50 AF		72.1		216.6		117.4
72		TOTAL FOR DISTRICT 72		27,855.7		61,801.8		36,650.6

DIVISION 5 -- 1996
WATER DIVERSION SUMMARIES

WD	STRUCTURES REPORTING			ALL OTHER STRUCTURES		ESTIMATED NUMBER OF VISITS TO STRUCTURE	TOTAL DIVERSIONS AF	TOTAL DIVERSIONS TO STORAGE AF	TO IRRIGATION		
	WITH RECORD (1)	NO WATER AVAILABLE (2)	NO WATER TAKEN (3)	NO INFO AVAILABLE (4)	NO RECORD (5)				TOTAL DIVERSIONS AF	NUMBER OF ACRES IRRIGATED	AVERAGE AF PER ACRE
36	354	7	122	184	172	7,456	731,931	160,680	78,943	11,727	6.73
37	270	0	287	120	370	4,550	168,733	29,869	79,248	11,564	6.85
38	1,289	7	195	702	299	10,462	596,399	45,269	307,673	32,581	9.44
39	556	4	203	117	196	406	186,685	7,447	132,746	22,047	6.02
45	633	29	148	13	124	3,037	148,025	729	127,823	28,016	4.56
50	268	0	18	2	27	1,007	126,762	29,945	91,457	22,994	3.98
51	696	1	179	236	236	21,588	841,212	186,791	152,938	25,025	6.11
52	182	1	108	16	69	407	19,648	184	16,800	4,991	3.37
53	499	1	153	48	93	1,011	937,151	3,178	66,816	17,008	3.93
70	215	23	40	1	105	666	45,097	49	43,491	6,822	6.38
72	656	3	178	318	331	27,163	2,642,603	37,386	952,579	108,809	8.75
TOTAL	5,618	76	1,631	1,757	2,022	77,753	6,444,246	501,527	2,050,514	291,584	6.01

Definitions:

(1) Count of structures with CIU = A and NUC = blank.
(2) Count of structures with CIU = A and NUC = B.
(3) Count of structures with CIU = A and NUC = {A,C,d} + CIU = I.
(4) Count of structures with CIU = A and NUC = {E,F}.
(5) Count of structures with CIU = U.

from stat summary
less Q water
add non-additive

DIVISION 5 -- 1999
WATER DIVERSION SUMMARIES TO VARIOUS USES (AF)

WD	TRANSMOUNTAIN OUTFLOW	TRANSBASIN OUTFLOW	MUNICIPAL	COMMERCIAL	INDUSTRIAL	RECREATION	FISHERY	DOMESTIC & HOUSEHOLD	STOCK
36	51,456	0	7,506	137	1,278	1,669	697	320	12
37	34,210	0	9,405	1	1,090	0	0	267	1,392
38	65,483	723	7,157	165	274	72	52,619	4,874	2,421
39	0	1,253	2,539	14	209	0	33,950	790	2,391
45	0	229	1,257	6	12	0	1	541	16,925
50	0	0	395	54	0	0	91	21	174
51	220,144	428	1,876	173	2,827	622	3,950	264	1,890
52	0	787	0	1	0	0	362	40	684
53	0	0	2,828	92	0	6	362	295	445
70	0	24	60	0	0	0	0	16	1,359
72	7,050	1,895	16,177	0	0	0	293	274	16,575
TOTAL	378,343	5,339	49,200	643	5,690	2,369	92,325	7,702	44,268

WD	AUGMENTATION	EVAPORATION	GEOTHERMAL	SNOWMAKING	MINUMUM STREAMFLOW	POWER GENERATION	WILDLIFE	RECHARGES	OTHER
36	3,045	11,036	0	1,622	0	408,448	0	0	5,082
37	1,365	2,446	0	206	610	1,448	0	0	7,176
38	29	4,394	80	253	0	98,298	387	0	6,228
39	0	1,244	0	0	0	362	1	0	3,739
45	0	266	0	0	0	47	0	0	189
50	0	2,930	0	0	0	0	0	0	1,695
51	651	23,988	0	181	0	72,772	0	0	171,717
52	0	186	0	0	0	0	600	0	4
53	0	1,022	0	0	0	847,835	447	0	13,825
70	0	49	0	0	0	0	0	0	49
72	1,021	1,954	0	16	0	934,407	134	0	672,842
TOTAL	6,111	49,515	80	2,278	610	2,363,617	1,569	0	882,546

II.D. WATER COURT ACTIVITIES

Calendar Year 1999

Applications Made to Water Court...(99CW...).	325
Div 5 DWR - Colorado River.....	289
Div 6 DWR - White River.....	36
No. of Consultations With Referee.....	367
No. of Complaints.....	1
No. of Withdrawn Cases.....	1
No. of Dismissals.....	14
No. of Denials.....	1
No. of Deletions From 1990 Abandonment List	2
No. of Protests To 1990 Abandonment List.....	1
No. of Structures Abandoned on 1990 Abandonment List	316

No. of Cases Decreed by Water Court 309 (see breakdown below)

TYPE OF DECREE	# Cases (including combinations)	# Structures
Findings of Diligence on Conditional Rights	73	242
Cancellations of Conditional Rights	16	33
Conditional Rights Made Absolute	43	91
Surface Water Rights Adjudicated	76	186
Underground Water Rights Adjudicated	33	86
Water Storage Rights Adjudicated	38	121
Plans for Augmentation Adjudicated	43	237
Changes of Water Right (location) Adjudicated	35	210
Changes of Water Right (use) Adjudicated	10	20
Changes of Water Right (amount) Adjudicated	0	0
Instream Flow Rights Adjudicated	5	N/A
Amend Augmentation Plans	6	18
	Total:	1,158

II.E. **RIVER CALLS**

SUMMARY OF COLORADO RIVER CALLS

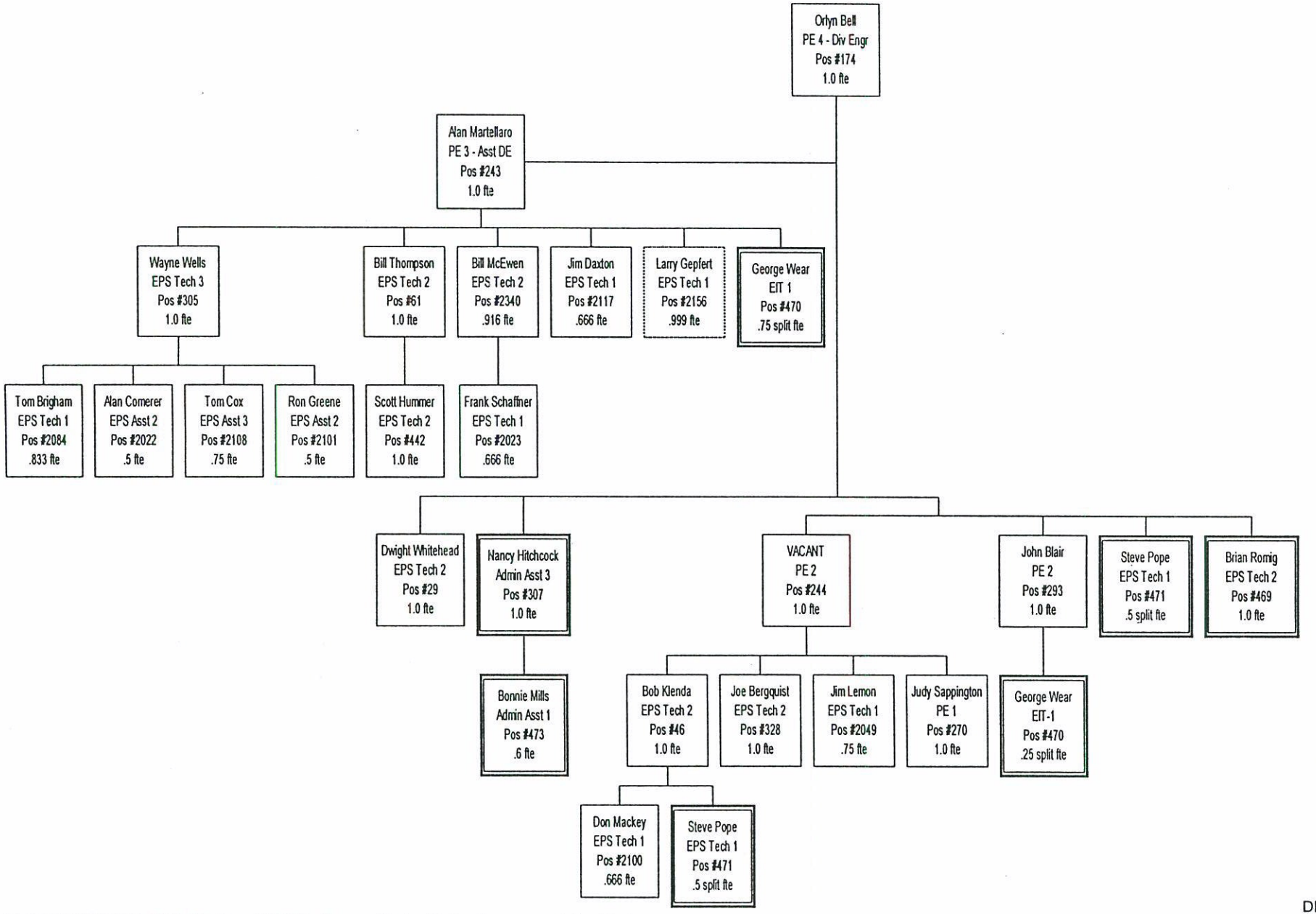
1999 WATER YEAR

COLORADO RIVER MAINSTEM
GOVERNING CALL ABOVE
SHOSHONE POWER PLANT
(DISTRICTS 36, 37, 50, 51, 52, 53)

DATE ON	DATE OFF	CALLING WATER RIGHT	DECREED AMOUNT	ADMINISTRATIVE NUMBER
11/1/98	11/29/98	Shoshone Power Plant	158 cfs	33023.28989
11/30/98	01/04/99	Shoshone Power Plant	1250 cfs	20427.18999
03/22/99	04/11/99	Shoshone Power Plant	158 cfs	33023.28989
04/12/99	04/21/99	Shoshone Power Plant	1250 cfs	20427.18999

COLORADO RIVER MAINSTEM
GOVERNING CALL ABOVE CAMEO DIVERSIONS
AND BELOW SHOSHONE POWER PLANT
(DISTRICTS 38, 39, 45, 70, 72)

NO CALLS



DIV 5

ORGANIZATIONAL CHART - Rev. 2/18/00 - Boxes with double borders are explained below:
Pos #470: George Wear 1.0 FTE - splits between Bell and Blair for supervisors
Pos #471 - Steve Pope - 1.0 FTE - splits between Bell and Klenda for supervisors
Pos #469 new hire 2/1/00
Pos #473 new hire 12/15/99

Until Pos #244 is filled, subordinate positions are supervised by Bell
*Pos #307 requesting upgrade to Prog Asst 1
*Pos #2156 requesting upgrade to EPS Tech 2

III. OFFICE ADMINISTRATION AND WORKLOAD MEASURES -

III.A. PERSONNEL

NAME	WORKING TITLE, POSITION	DISTRICT	FY MONTHS BUDGETED	FY MONTHS WORKED	1999 MILEAGE Total 2/4w	1999 MILEAGE 2 wheel	1999 MILEAGE 4 wheel
OFFICE STAFF							
Orlyn J. Bell	Div. Engr, PE IV		12	12	-	-	-
Alan C. Martellaro	Asst Div Engr, PE III		12	12	1,155	1,155	-
Bob McCabe	Engineer, PE II		12	12	389	-	389
John G. Blair	Dam Safety Engr, PE II		12	12	-	-	-
Judy T. Sappington	Hydrographer, PE I		12	12	-	-	-
Dwight M. Whitehead	Wells Comm, Eng Tech II		12	12	401	401	-
Steve Pope	Wells/Water Comm, Eng Tech I	45	12	12	8,950	4,939	4,011
Don Meyer	IT/Res Insp, Eng Tech II		12	8	-	-	-
George H. Wear	Aug Plnr/Res Insp, Eng Tech II		12	12	274	274	-
Nancy Hitchcock	Admin Asst III		12	12	557.5	557.5	-
Cindy Tucker	Admin Asst I		7.2	6	-	-	-
FULL-TIME EMPLOYEES IN THE FIELD							
Scott Hummer	Water Comm, Eng Tech II	36	12	12	540	-	540
Joe Bergquist	Water Comm, Eng Tech II	38	12	12	2,462	2,254	208
Bob Klenda	Water Comm, Eng Tech II	45	12	12	407	177	230
Bill Thompson	Water Comm, Eng Tech II	50, 51, 36	12	12	11,058	2,762	8,296
L. Wayne Wells	Water Comm, Eng Tech II	72	12	12	-	-	-
PERMANENT PART-TIME EMPLOYEES IN THE FIELD							
Bill McEwen	Water Comm, Eng Tech II	37	11	11	5,144	4,963	181
Larry Gepfert	Water Comm, Eng Tech I	38, 45	12	12	4,979	3,559	1,420
Jim Lemon	Water Comm, Eng Tech I	39	9	9	9,200	9,200	-
Jim Daxton	Water Comm, Eng Tech I	51	8	8	10,751	9,757	994
Frank Schaffner	Water Comm, Eng Tech I	52, 53	8	8	9,451	7,735	1,716
Don Mackey	Water Comm, Eng Tech I	70, 45	8	8	12,123	9,743	2,380
Tom Brigham	Water Comm, Eng Tech I	72	10	10	13,083	1,944	11,139
Alan Comerer	Water Comm, Eng Asst II	72	6	6	5,872	3,486	2,404
Tom Cox	Water Comm, Eng Asst III	72	9	9	6,654	576	6,078
Ron Greene	Water Comm, Eng Asst II	72	6	6	6,900	4,115	2,785
	Total Worker Months:		274.2	269			
	Total FTE:		22.85	22.41			
	Total Reimbursable Miles Driven:				110,350.5	67,597.5	42,771

III.B. ACTIVITY SUMMARY

1998 CALENDAR YEAR

ACTIVITY	TOTALS
Professional and Technical Staff (FTE)	7
Clerical Staff (FTE)	1.6
Water Commissioner FTE (Full/Part Time)	7 / 7.16
Decreed Surface Water Structures	186
Surface Rights Administered (Site Visits) (from time sheets)	14,184
Number of Decreed Wells	86
Consultations With Referee	367
Water Court Appearances (from time sheets)	2
Meetings With Water Users (Public Meetings) (from time sheets)	113
Meetings To Resolve Water Related Disputes	Not on time sheets
Contacts to Give Public Assistance on Water Matters ** (from time sheets)	23,503 Total Contacts (6,617 personal contacts) (16,886 phone/letter/FAX)
Dams Visited (from time sheets)	1,836
Wells Visited (from time sheets)	292
Surface Structures Administered by Phone (from time sheets)	217

** Contacts - Excludes Office Exempt Staff

ADDENDUM

The following two articles are our contributions to the Streamlines publication:

Change - The Way Of Our Future

by Orlyn Bell, Division Engineer

Change is the current driving force in the Colorado River basin water use scramble. Land in many areas is rapidly being converted from traditional agricultural use to those uses associated with growth, recreation and the environment. The latest crop to be rooting and thriving in the soil of Division 5 is condominiums and second/trophy homes. This means a multiplicity of water right owners and rights now exist. Historically, there were large working ranches with single owners of several rights. Add to this the increased need for water to satisfy environmental concerns, and it is easy to see that as these trends continue the need for cooperation is imperative. Sharing education and information among all residents of the area and employees of the Division of Water Resources must occur.

An example regarding growth, in Summit County, the area above Dillon Reservoir is now home to approximately fifteen hundred wells, most of them in-house use only permits. Twenty years ago this same area housed less than 100 wells. Three hundred sixty-five water rights, mostly for irrigation and mining, existed in 1970. Today, there are 1,136 water rights, including 43 minimum streamflow rights with nearly all the mining rights abandoned and the irrigation rights converted to other uses.

With the respect to environmental concerns, the pressure to provide additional water flow for endangered fish has resulted in proposed adjustments in Grand Valley irrigation users' techniques. Eight million dollars in check structures to be installed in one of the irrigation canals can conserve up to thirty thousand-acre feet of water annually. This water may then be available for release out of Green Mountain Reservoir when needed for the fish.

The Blue, Fraser, Eagle, and Roaring Fork River Valleys are transitioning from ranches to small tracts on wells. The next step will be housing densities that displace wells with central water systems. Are the mechanisms we have in place prepared to handle this change? Will they best define and protect the resource, ownership transitions, and water use?

Change is not made without inconvenience but it seems to be the way of our future and we at the Division 5 office plan to continue to keep pace with it. As Isaac Asimov said, "It is change, continuing change, inevitable change, that is the dominant factor in society today. No sensible decision can be made any longer without taking into account not only the world as it is but the world as it will be."

15-Mile Reach Programmatic Biological Opinion

- Orlyn Bell, Division Engineer, Water Division 5

With the enactment of the Environmental Species Act (ESA) and the listing of four endangered fish in the Upper Colorado River Basin, implementation of a recovery program has been pursued. The Secretary of the Interior, Administrator of Western Area Power Administration, and the governors of Colorado, Wyoming, and Utah signed the basic Recovery Program agreement in 1988. The goals of the Recovery Program are simple: provide a programmatic approach to recovering native Colorado River fishes listed as threatened or endangered under the ESA while allowing the Upper Basin states (Colorado, Wyoming, and Utah) to develop their compact entitlements.

While the goals of the Recovery Program are to recover fish while developing compact entitlements, the practical objective of water users is to utilize the program to obtain federal permits. Under Section 7 of the ESA, most federal actions require consultation with the U.S. Fish and Wildlife Service. Almost all new water projects and many existing water projects require federal actions such as 404 permits, BLM and Forest Service permits and rights-of-way, federal loans, etc. Federal projects, e.g., Green Mountain, Ruedi and Aspinall Reservoirs, are especially vulnerable as they are under the continuing jurisdiction or management of a federal agency.

If the program works as designed, the Recovery Program is the "reasonable and prudent alternative" to offset jeopardy and adverse modifications to critical habitat under Section 7 of the ESA.

Since 1988, it's been more or less year-to-year with a few large projects undergoing consultations and many specific efforts (not listed here) for recovery enhancement occurring but lacking any certainty. The completion of the 15-Mile Reach Programmatic Biological Opinion was a significant accomplishment within the Program. The U.S. Fish and Wildlife Service issued the final opinion on December 18, 1999. Basically, it will cover all existing depletions including five USBR projects and up to another 120,000 acre-feet of future depletions within Water Division 5. The conservation measures include a number of very significant actions:

1. The water users will provide 10,825 acre-feet of permanent water for delivery to the 15-Mile Reach. The water users have agreed to split this equally between the East Slope and the West Slope.

2. Ruedi Reservoir will provide another 10,825 acre-feet of interim water (for a 15-year period).

3. Wolford will continue to provide 6,000 acre-feet of capacity as provided for in the Wolford Enlargement Biological Opinion.

4. The U.S. Fish and Wildlife Service, water users, CWCB and environmental community are cooperating on an expanded coordinated facilities study (16,000 to 20,000 acre-feet initially without storage releases).

5. The Green Mountain check case surplus water will be delivered to the 15-Mile Reach pursuant to a contract recently agreed to by the parties (16,000 to 65,000 acre-feet).

6. The Grand Valley Improvement Project will be constructed (28,400 acre-feet conserved plus 9,000 acre-feet at Palisade).

7. Green Mountain "excess" surplus water will be delivered to the 15-Mile Reach.

8. The proposed funding legislation for federal involvement in the above will need to pass Congress.

9. Beneficiaries of the 15-Mile Reach Programmatic Biological Opinion will be required to sign recovery agreements. The intent of the recovery agreement is to commit the Biological Opinion beneficiaries not to "sabotage" efforts to complete the required conservation measures. (There are water right priorities, refills, and water administration issues to resolve.)

Even with the above permitting, "certainty" will not be absolute because of the potential for U.S. Fish and Wildlife Service to "re-open" project approvals if the fishes' status does not improve.