

Colorado

# Stream Lines

QUARTERLY NEWSLETTER OF THE OFFICE OF THE STATE ENGINEER  
COLORADO DIVISION OF WATER RESOURCES

VOLUME 1, NUMBER 4  
DECEMBER 1988

## FROM THE STATE ENGINEER

As the first year of publishing **STREAM LINES** draws to a close, I would like to express my appreciation to our readers who have been so gracious with constructive suggestions, for the positive comments on our efforts to communicate with the water user community, and for your support. We will try to implement as many of your ideas as we can and continue with timely, informative articles of interest.

Since the intent of **STREAM LINES** is to provide an opportunity for communication, I would like to briefly discuss State Engineer activities in several areas.

### LEGISLATION

Two proposals will be presented to the legislature for consideration in 1989. One is to secure full General Fund support for the satellite-linked water resources monitoring network because of the broad range of benefits the system provides to all water users. The other initiative will be to place the White River Basin (Water District 43) under the jurisdiction of the Water Court for Division VI in Steamboat Springs. At present, the administration of water rights in the White River is done by the Division Engineer for Division VI, but the adjudication of water rights is handled by the Water Court for Division V in Glenwood Springs. This system is extremely cumbersome and expensive, and the proposed change would reduce the heavy case load in the Division V Water Court.

### GROUND WATER COMMISSION

The Colorado Ground Water Commission, which is responsible for the management of well over 60

percent of the groundwater in Eastern Colorado, elected **George Bush** of Keenesburg as its chairman and **James Hume** of Walsh as its vice-chairman at its last quarterly meeting held November 18, 1988, in Denver. In addition, the Governor recently appointed **Charles Clapper** of Strasburg and re-appointed **Barbara Green** of Frisco to four-year terms on the Commission.

The Willows Water District, in cooperation with the Denver Water Board, the Parker Water and Sanitation District, and the State Engineer's Office, recently began actual recharge of the Arapahoe Aquifer at a depth of 1500 feet. This is the first attempt to recharge the aquifers of the Denver Basin, and Dr. Khanh Le and the Willows District are to be congratulated on taking such a positive step to replace a non-renewable resource. This project was recommended by the Ground Water Commission as one of Colorado's recharge demonstration sites to be considered for ....

.....Continued on page 2.....



funding by the U.S. Bureau of Reclamation under the High Plains States Groundwater Recharge Demonstration Program. The recharge demonstration program is part of the oversight effort assigned to the Commission as lead agency by the Governor.

#### NEW DIVISION ENGINEER

It is my pleasure to announce that **Edward W. Blank** has been appointed Division Engineer for Water Division 6 in Steamboat Springs effective January 1, 1989, filling the position recently left vacant by the transfer of Steve Witte to Division 2. Ed began working for the Division as a hydrographer in 1975, and has worked in Divisions 1, 2, 4 and 7. For the past ten years Ed has been the Assistant Division Engineer for Division 1 in Greeley. I hope you will join me in congratulating Ed and welcoming him to Division 6.

#### GEOHERMAL RULES AND REGULATIONS

The State Engineer's Office will be promulgating rules and regulations for permitting the construction of geothermal wells and the production of geothermal fluids. These rules will apply to any structure extracting energy from the earth from closed-loop, earth coupled systems to high pressure steam for the generation of electricity pursuant to Article 37-90.5, C.R.S. It is anticipated that hearings on the proposed rules and regulations will be held in late spring or early summer of 1989.

Input from interested persons or committees is sought to develop the draft rules. Anyone wishing to be included on a mailing list or wanting to participate in the rulemaking process should notify this office. Please contact Marsha Smith c/o Division of Water Resources, 1313 Sherman Street, Suite 818, Denver, CO 80203 (303) 866-3581.

#### ALL IN THE FAMILY

1988 marks a milestone in water administration in Water Division I in that two family names which have been involved in administering water rights since the turn of the century will no longer be part of the Division. **Robert Samples**, water commissioner for District 1, and **Ralph Van Gorden**, water commissioner for District 9, will retire this year with 22 and 30 years of service, respectively.

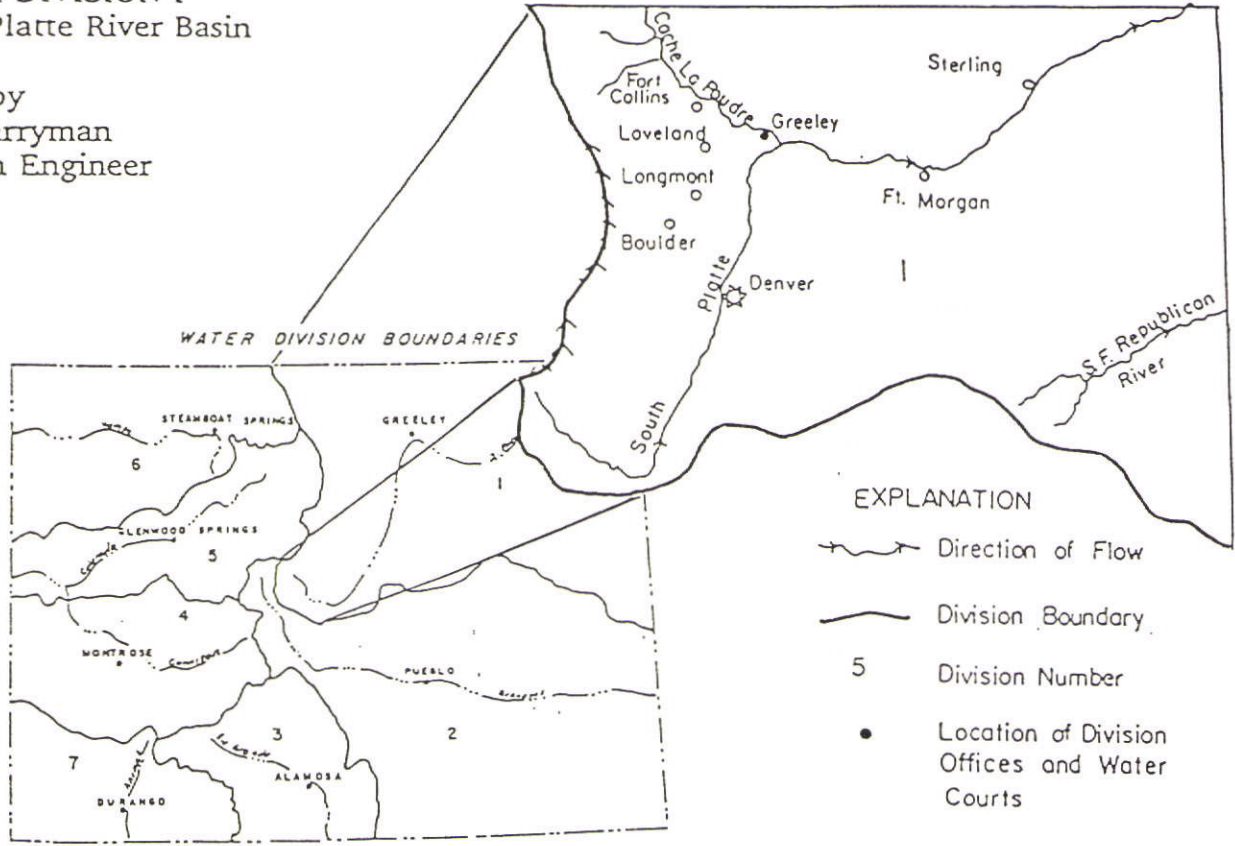
Bob's grandfather started as a water commissioner for District 1 in 1900, followed by Bob's uncle and then Bob. Ralph's grandfather was a water commissioner 102 years ago and was succeeded by Ralph's uncle and then Ralph. Our hats go off to these two gentlemen and their families for their extraordinary length of service and dedication to the citizens of Colorado.

It was with a great deal of sorrow that we bid farewell to one of our own. Dale Anderson, water commissioner for District 7, passed away November 14, 1988, after a long illness. Responsible for administering water rights in the Clear Creek drainage, Dale's optimistic attitude, sense of fairness and superb recordkeeping were widely known and we will miss him very much. In 1987 Dale was honored as DWR's Water Commissioner of the Year.

## AN OVERVIEW OF WATER DIVISIONS IN THE STATE OF COLORADO

### WATER DIVISION I South Platte River Basin

by  
Alan Berryman  
Division Engineer



This is the second in a series of nine articles explaining the geographical division and administration of water in Colorado.

Water Division I covers an area of some 28,068 square miles, or approximately the northeast quarter of the state. The South Platte is the largest river in the Division. It has its beginning at the Continental Divide, flows through South Park, down mountain canyons to Denver, then northeasterly across the plains to the northeast corner of the state and into Nebraska.

Some of the major tributaries that supplement the flow of the South Platte River along the Front Range include Bear, Clear, Boulder, Cherry, Plum and St. Vrain creeks, and the Big Thompson and Cache La Poudre rivers. Many smaller and intermittent streams also supplement the flow of the South Platte from the south and east. Other major river basins in the Division include the Republican and Laramie rivers.



Transmountain water is imported into the South Platte River Basin from the Colorado River Basin through the Roberts and Moffat tunnels, the Colorado-Big Thompson and Windy Gap projects and the Grand River Ditch. Water is imported from the Laramie River Basin and North Park into the Cache La Poudre River and from the Arkansas River through the Homestake Tunnel. Total transmountain diversions for 1987 were 370,000 acre-feet.

These sources provide water for a population of approximately 2 million people and for the irrigation of approximately 1.5 million acres.

There are approximately 10,000 surface water rights, 20,000 ground water rights and 350 plans for augmentation administered within Division I. River flows during the warm summer months decline to a point where river calls with priority dates of 1870 and 1880 are common along the South Platte, and calls on the tributary drainages can have priority dates as early as the 1860s. Water rights in Division I are administered by 15 full-time and nine part-time water commissioners.

Two interstate compacts and one U.S. Supreme Court decree are also administered within Division I. The South Platte River Compact between Colorado and Nebraska; the Republican River Compact involving Colorado, Nebraska and Kansas; and the Laramie River Decree between Colorado and Wyoming.

In 1987 there were 692 applications for water rights filed with the Water Court for Division I and 341 decrees issued by Judge Robert A. Behrman. Ray Liesman is the Referee and Mary Crespin the Water Clerk.

The Division Engineer, **Alan Berryman**, and his staff are located in Greeley at 800 8th Avenue in Room 209 of the ARIX Building. Office staff consists of six engineers, two water commissioners, one technician and two secretaries.

\*\*\*\*\*

Some statistics for 1987 include:

Irrigated land	1.5 million acres
Total direct flow irrigation diversions	1.7 million acre-feet
Total diversions to storage	1.3 million acre-feet
Municipal and other direct flow diversions	0.7 million acre-feet
Transmountain diversions	370,00 acre-feet
Gaging stations located in Division I	90
Published gaging stations	56
Annual streamflow at South Platte	405,800 acre-feet
Denver	442,200 acre-feet
Kersey	973,300 acre-feet
Julesburg	650,000 acre-feet

Division II, the Arkansas Drainage, will be featured in the March issue of **STREAM LINES**



## PUBLICATIONS

Two new publications concerning Dam Safety will be available after January 1, 1989. The first is the Division's publication of the **Rules and Regulations for Dam Safety and Dam Construction**. The rules were adopted on September 30, 1988 and are now effective. Copies can be obtained from our Records Section for \$3.00.

The second publication was written by **James Norfleet** of our Montrose office and is entitled "**Determination of the 100-year Flood for Sizing Spillways for Low-Hazard Dams**". Copies of this report are available for \$3.50 from our Records Section.

\*\*\*\*\*

### CORRECTION TO:

#### ELEVATION--A BIAS IN SCS BLANEY-CRIDDEL ET ESTIMATES

In our June 1988 **STREAM LINES**, this article discussed a correction factor for lawn grass consumptive use. It has come to our attention that there was an error in the **BASE ELEVATION** as stated (4129 feet), this elevation should have been **4429 feet**. The same article gave correction factors for alfalfa. The methodology for alfalfa as described **should not be used!!** At this time, we are currently revising the values to be used and will provide the results of the study in a later edition. For more information contact Richard Stenzel at (303) 866-3581.

### DIVISION VII OUTSTANDING WATER MANAGER

**John Ey** of the Florida Water Conservancy District was named the outstanding water manager in Southwest Colorado for 1988. The District operates the Florida Project and Lemon Reservoir providing water to 19,000 acres through the reservoir and canal system. John was faced with a very low water supply forecast and a dry spring with calls for irrigation water early in the season.

Through his foresight in the fall of 1987 in carrying over storage, cooperation with water users, encouraging limited water applications, and balancing runoff patterns to prevent flooding while meeting downstream senior demands, he was able to assure the filling of Lemon Reservoir and to deliver an ample supply during the irrigation season.

This award will be presented annually to a water user or group who makes an outstanding and exceptional effort to manage their water supply for maximum utilization of the resource.

### 1988 WATER COMMISSIONERS OF THE YEAR

As part of the State Engineer's Employee Recognition Program, each year the seven Division Engineers select one of their water commissioners to be recognized as **Water Commissioner of the Year** for their division. The recipients of this year's awards were announced at the Annual Fall Water Commissioner Meetings held in each division. Receiving recognition were:

- Division I George Varra, District 6
- Division II Robert Ermel District 10
- Division III Paul R. Clark District 22
- Division IV John S. Garber District 28
- Division V Robert Carlson District 72
- Division VI Truman Manes Districts 57 & 58
- Division VII Hal M. Pierce Districts 31 & 46

Congratulations to each of you and a special thanks for your outstanding efforts in serving the citizen of Colorado.

In January the State Engineer will select among the seven individual recipients and name one as **Water Commissioner of the Year** for the entire Division of Water Resources.



RECORDS SECTION IMPROVEMENTS  
by  
Will Burt

Several changes have been made in the Records Section recently which should improve our service to the public as well as our own staff.

1. The files of permits and completed wells were merged for simpler access. In the process, many permits which were out of place were found and re-filed correctly.
  2. All denials and expired permits have now been entered into the computerized application/permit file, and all expired permits have been microfilmed.
  3. Approximately the first of January, we expect to have the "Well File" of data on completed wells merged with the existing application/permit file. This will allow more efficient computer inquiry from several workstations in DWR, including one located in Records.
  4. Some re-arranging of furniture has been done in an attempt to provide more work space for our customers.
  5. We will soon receive a new microfilm reader/printer that uses plain bond paper. We now expect to produce better quality copies while reducing the cost of our supplies.
  6. A position previously filled by a data entry operator will soon be transferred to Records. We expect this new person to provide additional service to the public, and to allow us to produce more records onto microfilm with increased completeness and quality.
- 

WaterTalk  
FOR  
STREAMFLOW DATA INQUIRY

by  
Will Burt

Hardware and software has recently been added to the DWR VAX computer to allow telephone access to streamflow data. WaterTalk was developed to allow data collected via the Satellite Monitoring System to be accessed without the need for a computer terminal.

Using a touch tone phone, a person can call the WaterTalk phone number and receive computer synthesized voice readouts of the current streamflow and other data readings available on the system. Stations are selected by keying simple station number codes that have been assigned to each station.

If you wish to use WaterTalk, please contact John Kaliszewski in the Denver office. Eventually we may ask for a small annual subscription charge for WaterTalk access, but for now, it's free!

---

CHEMIGATION MAILING

by  
Will Burt

Dennis Petersen is working on a special project for the Department of Agriculture to produce a set of mailing labels. The labels will be used to mail information concerning chemigation requirements to owners of irrigation wells. In order to target the mailing list as precisely as possible, Dennis is performing several processing steps on the well file data before the labels are printed.





## CALENDAR UPDATE

### JANUARY

January 11-13 93rd Quarterly Meeting of the Western States Water Council, Las Vegas, Nevada

### FEBRUARY

February 7 Board of Examiners of Water Well Construction and Pump Installation Contractors, Room 821, 1313 Sherman Street, Denver, Colorado 8:30 a.m.

February 10 Colorado Ground Water Commission, Room 220, 1313 Sherman Street, Denver, Colorado 9:00 a.m.

February 27-28 Colorado Water Engineering and Management Conference, Colorado State University, Fort Collins, Colorado

### MARCH

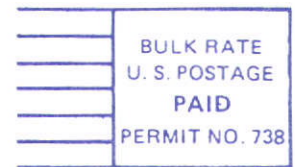
March 30 50th (66th) Annual Meeting of the Rio Grande Compact Commission, Holiday Inn, Alamosa, Colorado

## OFFICE OF THE STATE ENGINEER

Colorado Division of Water Resources  
1313 Sherman St. Room 818  
Denver, Colorado 80203

Phone (303) 866-3581

Jeris A. Danielson, State Engineer  
George D. VanSlyke, Editor



STREAMLINES is published by the Colorado Division of Water Resources on a quarterly basis in March, June, September and December. Subscriptions are available for \$10.00 per year to cover the cost of printing and mailing.