

Colorado

# Stream Lines

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

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## FROM THE STATE ENGINEER

After a rather lengthy hiatus, I am delighted that the Office of the State Engineer is able to resume publication of its newsletter. We hope in coming issues to be able to communicate to the water user community information that is instructive, interesting and timely. Our plans are to address issues of a technical nature, legislative needs and activities, State Engineer's policies and procedures, and items of general interest. Our goal is to provide a way of enhancing the agency's visibility in the water user community and to explain the importance and variety of issues the office deals with on a daily basis.

We would welcome ideas and comments from our readers on possible topics for subsequent issues, as well as suggestions on how to improve the newsletter.

## NATIONAL AWARD FOR SATELLITE-LINKED MONITORING SYSTEM

The Council of State Governments (CSG) selected the Colorado Satellite-Linked Water Resources Monitoring System operated by the Division of Water Resources as one of the top eight innovative state programs in the nation for 1986/1987. The Colorado program was one of over 500 entries from all 50 states.

State Senator Harold McCormick accepted the award on behalf of the State during a national awards ceremony on December 9 in Boston. Senator McCormick was the sponsor of the legislation which authorized the purchase and installation of the system in 1983 and 1984. Representative Lewis Entz co-sponsored the legislation.

Previously, the National Society of Professional Engineers named the system as one of the top ten engineering achievements for 1985.

## CHERRY CREEK STUDY

The Water Supply Branch is currently completing a study of the water rights and water resources of the Cherry Creek Basin southeast of Denver. The study of the 416 square-mile basin was initiated by the State Engineer due to recent requests by downstream water users for the administration of water rights upstream of Cherry Creek Reservoir.

The study includes analyses of water rights and river calls: municipal and irrigation consumptive use and return flows both from tributary and non-tributary sources; operation of Cherry Creek Reservoir; and the impact of wells on stream flow. The study will be used to determine if strict water rights administration and modification of the operation of Cherry Creek Reservoir will result in additional water reaching the South Platte to meet the demands of senior water rights. A draft report is nearing completion with the final report due by late spring.

## **DAM SAFETY REGULATIONS**

The State Engineer is in the process of finalizing new rules and regulations for dam safety. The rules will be presented at public hearings scheduled for April 13th to 15th of this year to be held at 201 E. Colfax in Denver. At least 20 days prior to the hearings, notice will be published in the Colorado Register. The Basis and Purpose of the rules will be available to the public at least 5 days prior to the hearing date. The State Engineer intends to hold public meetings both on the Western Slope and in the Denver area to solicit comments prior to the formal hearings. Time and location for these meetings will be announced.

The rules are to cover the following:

1. Requirements for construction, enlargement, alteration, modification, repair and removal of jurisdictional dams or reservoirs
2. Construction quality control
3. Acceptance of construction, enlargement, alteration, modification or repair of jurisdictional dams
4. Non jurisdictional dams
5. Notification of the intent to construct
6. Safety requirements
7. Breaching
8. General Maintenance, ordinary repairs and emergency action which does not require prior approval by the State Engineer
9. Safe storage level
10. Owner's responsibilities
11. Inspections by owner's engineer
12. Fees
13. Exempt structures
14. Restriction of recreational facilities within the reservoir

## **GROUND WATER OBSERVATION WELL NETWORK**

During the 1987 legislative session, Senate Bill 200 was passed which directed the State Engineer to Establish a state-wide ground water observation well network to provide data on water level trends. During the first year of operation, the Division will establish a network for the Northern High Plains, the Denver Basin, the alluvium of the South Platte and the Lost Creek Designated Basin. In future years the network will be expanded into the Front Range, Western Slope, San Luis Valley and the Arkansas drainage. Each year the Division will publish data collected throughout the network as a series of reports for individual areas. These reports will aid local residents, Management Districts and Professionals in planning for the future. This network will be funded directly from fees collected by the Division from well permits.

Measurements of wells in the Northern High Plains is presently under way. By March first, approximately 650 wells will have been measured in cooperation with local Ground Water Management Districts. Measurement of about 100 Denver Basin bedrock wells will be completed by May. Data from these programs should be available in published form by mid-year.

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## **DIVISION V TABULATION**

The 1984 abandonment proceedings are drawing to a close with the last of the individual protest cases being concluded prior to the new year. All changes will be reflected in the 1988 published tabulation. There were 937 water rights tabulation line items on the abandonment list with 433 court cases in protest.

## FROM THE EDITOR

This is the first issue of the Division's new information bulletin *STREAM LINES*. The purpose of this publication is to allow the Division to inform the public and the professional community of items of interest in water administration in a timely manner. *Colorado STREAM LINES* will be published quarterly. The first issue is being sent to you with our compliments, however, all our publications are now on a cash funded basis. Subscriptions will be \$10.00 per year which is to cover the cost of printing and mailing. To subscribe, please fill out and return the order form in this issue along with your check made payable to the Colorado Division of Water Resources. The next issue will be sent out about the first week in June.

## PUBLICATIONS

A new printing of the Water Division/District Map is now available. This edition includes the boundaries of the Designated Ground Water Basins and Management Districts over-printed in an additional color. The maps are at a scale of 1:1,000,000, (21" x 27") and are printed in four color. The price is \$6.00 and may be purchased through the Records Section.

Copies of a stream depletion model utilizing the Glover method and adapted to IBM compatible PC's are available for \$15.00. This publication includes the program, documentation, sample out-put and a program disk.

A new printing of the Dam Safety Manual will be available approximately the end of March.

Brochures listing the available publications of the Division are available free of charge from Records.

## PUBLIC ACCESS TO SATELLITE-LINKED MONITORING SYSTEM

Access to the satellite-linked water resources monitoring system operated by this office is now available to the public on a user fee basis. The fee is variable depending on the number of stations of interest and the frequency of access.

The system monitors over 250 gaging stations throughout the state collecting flow data at 15 minute intervals which are transmitted at four hour intervals. More frequent transmissions are made if the hydrologic conditions change. All transmissions are relayed through the Geostationary Operational Environmental Satellite (GOES) to a receiver and data processor at a ground station located in the State Engineer's Office in Denver. A sophisticated software package provides for a series of report and graphic data output. System access can be obtained utilizing a terminal, modem and phone communications link. Up to 32 users can access the central data base simultaneously.

Another option for system access will be a voice-synthesized data relay unit operating in tandem with the central computer. This "talking" computer will allow the user to retrieve up-to-date flow information by phone without having to utilize a computer terminal. Specific information retrieval commands can be entered using the keypad of a touch-tone phone. This option is scheduled for operation by mid-year.

An eight-inch well casing isn't very large, only the size of the circle drawn on this page. Even so, last October 18-month old Jessica McClure of Midland Texas fell into an abandoned well this size. This near fatal tragedy is a reminder that abandoned wells are a hazard if not properly plugged and sealed as required by Colorado Rules and Regulations.

Please contact this office for information concerning the proper abandonment of wells.

## **Water Rights Data on Disk**

Water Rights data out of the Water Data Bank is now available on floppy disk or magnetic tape, as well as on printed reports. This is a new service that many water data users are finding useful, and more convenient and cost-efficient than performing an on-line extraction of the data base at CSU.

The entry, reporting, and correction of the Water Rights data base has been distributed into each of the Division offices, with the result that the data is rapidly becoming much more accurate and timely than when it was maintained at CSU. Once a year, in the spring, each Division office will transmit their current set of Water Rights data files into the Denver office. These files will then become available for public distribution throughout the following year.

With the success of this method of operating and an increase in demand for limited disk space at CSU, the Water Rights data base has been removed from the CSU Water Data Bank system.

Our users may still request any of the "standard" reports, or opt to receive the data on floppy disks or magnetic tape, in either data file or dBASE III file format. When transferred on computer readable media, there is no particular order to the records, but all data base fields are transferred, so that it is quite easy to manipulate the data by sorting, selecting, and reporting using any of the popular data base software now available.

*COLORADO STREAM LINES* was the winning entry in a Division-wide contest to name the newsletter. The name was submitted by John Bilisoly of the Ground Water Section of the Denver office.

## **OFFICE OF THE STATE ENGINEER**

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