

Colorado

Stream Lines

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

1313 Sherman St. Room 818, Denver, CO 80203 - (303) 866-3581

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Dam Safety Program Overview by Alan Pearson, Chief of Dam Safety

Colorado's Dam Safety Program is managed by the State Engineer through the Dam Safety Branch. A major reorganization of the Branch has occurred during the past six years in which the State Engineer has been decentralizing the program by moving members of the division to the field division offices to provide faster more efficient service to the dam owner community. Supervision of the inspection program is now completely under the Division Engineers in each of the seven water divisions of the state. The Chief of the Branch, located in Denver, has program wide responsibilities, and also supervises the Design Review and Construction Inspection Unit.

The Dam Safety Engineer's principal responsibilities are to conduct safety inspections of existing dams, review the adequacy of spillways, enforce the requirements for emergency preparedness, assist dam owners in developing Emergency Preparedness Plans (EPP), complete design review and construction inspections of repairs and alterations, and investigate complaints regarding the safety of dams. Training is also provided on the inspection of dams for division personnel, dam owners, interested agencies, engineers and the public.

The Design Review and Construction Inspection Unit's principal duties are to review the plans and specifications for the construction, alteration, modification, repair and enlargement of reservoirs or dams. This involves a comprehensive engineering review of the plans and specifications to assure that a safe design has been developed, and to inspect the construction of the dam. The unit also assists the Department of Health in the technical evaluation of tailing impoundments through a Memorandum of Understanding, provides technical assistance to the division engineer's offices on dam safety, and performs other related dam issue assignments.

The mission of the program is to prevent the loss of life and property damage as a result of the failure of dams within the resources available to the program. While all dams in the state are under the regulation of the Dam Safety Program, emphasis is placed on what are defined as "jurisdictional" dams and reservoirs. These dams are defined as being greater than ten feet high at the spillway, or twenty acres in surface area at the high water line, or 100 acre-feet in capacity at the high water line. Particular focus is placed on inspecting dams being deemed having the greatest potential risk for loss of property or life.

Our mission is to serve the needs of the public and to distribute, conserve, protect, develop and maximize the beneficial use of the state's present and future water supplies.



Gravel Pit Substitute Supply Plan Update

by
Dick Wolfe, P.E.

In late 1993, the Division of Water Resources (DWR) selected three engineering consultants to assist in the review of gravel pit substitute supply plan requests as required by Colorado statutes. The three new consulting engineering firms are Rocky Mountain Consultants from Longmont, HRS Water Consultants from Wheat Ridge and Wright Water Engineers from Denver. Rocky Mountain Consultants will be evaluating plans in Water Division 1, HRS Water Consultants will be evaluating plans in Water Divisions 4, 5, 6, and 7, and Wright Water Engineers will be evaluating plans in Water Divisions 2 and 3.

The DWR held its second open forum meeting on November 8, 1993 with the new engineering consultants and representatives from Colorado Rock Products Association to further discuss issues and concerns regarding gravel pits and long term augmentation needs. Some of the issues discussed included: wintertime depletion replacements; bonding requirements for replacement water, lining or backfilling; dewatering requirements; basin-wide substitute supply plans; nontributary and leased replacement water; and historic consumptive use credit. Copies of the minutes from this meeting will be available by the end of January. The DWR, in coordination with the Attorney General's

During FY 1992-93, the Dam Safety Branch conducted 800 safety inspections of existing dams, 111 inspections of construction, and 118 follow-up inspections. Presently there are approximately 250 restricted dams of the 1,849 jurisdictional dams in the state.

Office, is reviewing the issues raised at the meeting.

One issue raised during the meeting was regarding the DWR's policy on the use of various sources of replacement water in decreed (permanent) augmentation plans to offset evaporative losses from gravel pits. The DWR would be opposed to the use of leased, nontributary, and not-nontributary water as permanent replacement source in a decreed plan for augmentation. Primarily, a nonrenewable source of water cannot be used to offset perpetual evaporative losses without injury to other vested water rights. Secondly, the DWR cannot bind future governments with enforcement of a non-perpetual lease or non-renewable water supply. Only a legally transferrable and renewable water source that is appurtenant to the gravel pit will be allowed as a part of a decreed plan for augmentation. Without a water source tied to a gravel pit site, the DWR would have the difficult and expensive task of finding the entity responsible for augmentation requirements.

Additionally, the DWR is currently updating the general criteria used to evaluate gravel pit substitute supply plans. Several revisions are being made as well as some new additions. It is anticipated that the new guidelines will be available by February. Public comment is always encouraged and greatly appreciated. Interested persons should contact Dick Wolfe or Judy Sappington at the DWR at (303) 866-3581 with comments or for additional information.

New Ground Water Policy Approved

The State Engineer has adopted a new ground water policy with regard to use restrictions for permits issued as the only well on 35 plus acres. The adoption of the policy results from a procedure that has been in place since 1981, that required all permits, approved under the provisions of section 37-92-602(3)(b)(II) as the only well on a tract of 35 acres or more, to be limited to serving one single-family dwelling unless specifically indicated otherwise in the permit applications. This resulted in extra work and expense for the Division, and additional expense for well owners when applications for extended use of the existing wells were required. Therefore, the following policy is now in affect to alleviate this situation.

Effective January 1, 1994:

1. New well permits approved pursuant to section 37-92-602(3)(b)(II)(A) as the only well on a tract of 35 acres or more and for use as described in 37-92-602(1)(b), shall be conditioned to provide for all the uses described in that subsection, including use in up to three (3) single-family dwellings, regardless of whether or not the applicant requested any specific number of dwelling units or all the other uses. Provided that if the only use requested is watering of livestock on a farm or ranch such permit will limit the use to only watering of livestock on a farm or ranch.

2. Requests to amend existing well permits, issued under the provision of section 37-92-602(3)(b)(II)(A) [or 602(3)(b)(II)] as the only well on a tract of 35 acres or more, to allow use for all or any of the uses described in subsection 37-

92-602(1)(b), including use in up to three single-family dwellings, shall be approved provided the documents indicated below are submitted. No fee shall be charged for this service. A request to amend is appropriate any time the condition of approved uses are less than or not specific to the use desired.

a. A letter, signed by the applicant, requesting the permit amendment and addressing the uses desired.

b. If the applicant for the amendment is not the original applicant of record in the Division's files, an application for a change in ownership/address (Form No. GWS-11) and a copy of a deed showing that they are the owner(s) of the 35 plus acres described in the existing well permit.

c. A legal description of the 35 plus acre tract, if that information has not already been provided.

The previous procedure was in response to a belief that if the Division of Water Resources did not limit use on these 35 plus acre tracts of land to only one dwelling, a proliferation of division of land would occur from counties exempting certain division of land. This would result in an increased potential for injury to other water rights in overappropriated systems. However, it has been the Division's experience that our restrictions did not result in a reduction of the number of divisions of land that were occurring and our procedure only forced well owners to apply for permits to extend the use of their existing wells, which would then be approved since the Division could not find sufficient evidence of injury to

For the second year in a row, Water Division 4, in cooperation with other various public and private organizations, is holding the "Childrens Water Festival" in Montrose and Delta, Colorado. The program is presented to 4th and 5th graders at local schools in the area and met with great success last year. The date for the Montrose seminars is April 27, and the festival will be in Delta on the 28th. For more information contact Jerry Thrush at (303) 249-6622.

overcome the presumptions provided in section 37-92-602(3)(b)(II)(A). This only resulted in increased work for the Division and frustration for the well owners.

It is hoped that this new policy will be a win-win situation for all concerned. Copies of the policy are available from the Records Section in the Denver office, 1313 Sherman St., Rm. 818, Denver, CO 80203.



Extreme Precipitation Study

The Division of Water Resources, in conjunction with the Colorado Water Conservation Board, have formed an Extreme Precipitation Committee to identify problems with estimating extreme precipitation in the mountains of Colorado and to propose solutions for the preparation of a study plan that will be submitted to the legislature to benefit the economic welfare and safety of the public in relation to the design and evaluation of dams in the state. The committee is comprised of meteorologists, hydrologist, and engineers from universities, consulting engineering firms, water agencies, and state and federal agencies. The committee is currently meeting approximately every two weeks and is in the process of formulating the study plan.

The reasons for the review of existing standards is that recent studies by the United States Geological Survey (Jarrett-Costa) and the Denver Water Board, reveal a real disparity between the level of flooding predicted by the Hydrometeorological Reports (HMR's),

under which current standards are based. These studies indicate that extreme precipitation is significantly less than predicted by the HMRs. This could result in significant cost savings to dam owners is designing/constructing spillways to handle floods caused by extreme precipitation.

Persons or entities interested in further information regarding the scope of the study or desiring to provide comment to the committee should contact Alan Pearson at (303) 866-3581.

State Engineer Publishes Annual Report

After a 24 year absence, the Division of Water Resources and the State Engineer have published an annual report that outlines activities and accomplishments during fiscal year 1992-1993, and sets forth future goals and projects that will be focused on during the coming years. There are a very limited number of the reports available for sale to the public at a cost of \$5.00 each, and they can be purchased from the Records Section of the Denver office, located at 1313 Sherman St., Room 818, Denver, Colorado. If the publication sells out, copies of the report can be obtained from the Records Section, or at 17 libraries located throughout the state that are the depositories for Colorado State publications of general interest.

**Division of Water Resources is
Recruiting**

By
Jo Ann Thomas

The Colorado Division of Water Resources is the state agency responsible for the regulation of water delivery from the state's natural streams and ground water aquifers. We employ field technicians and other support staff, as well as engineers and geologists.

We are currently recruiting individuals for positions as field technicians in water administration. (These positions were historically known as "Water Commissioners"). All applicants will be considered fairly, regardless of background, race or sex. Multiple jobs are now open around the state, and this recruiting effort also seeks candidates who wish to be considered for future employment in these and similar positions. Jobs may be either seasonal or year-round, and working hours are variable. Applicant testing will be performed in Denver and other locations.

Our field technicians typically work both outdoors and indoors. They travel along the state's streams monitoring streamflows, checking rates of diversion into canals and ditches, regulating these diversions in accordance with lists of water rights priorities, and regulating reservoirs and wells. The field technician also keeps records of water measurements.

Field technicians should enjoy working outdoors, be able to interact easily with

people in sometimes difficult situations, and be able to keep accurate records. Applicants should be skilled in arithmetic, map reading, diagram interpretation, field navigation, and be able to work independently with minimal supervision.

If you are interested in working with us, complete a State of Colorado job application and return it to your nearest Job Service Center. You may obtain an application or further information from your local field division office listed below, or contact Jo Ann Thomas in our Denver office at (303) 866-2128. Jo Ann will be happy to discuss job duties or answer any questions you may have.

List of Division offices:

South Platte River area:
(303) 352-8712

Rio Grande area:
(719) 589-6683

Colorado River mainstem area:
(303) 945-5665

San Juan & Dolores River area:
(303) 247-1845

Arkansas River area:
(719) 542-3368

Gunnison River area:
(303) 249-6622

Yampa River area & North Park
(303) 879-0272

The Hydrography Branch of the State Engineer's Office monitors 300 gaging stations and receives data via satellite from over 220 different locations throughout the state.

In Memory of John Romero

On the 28th of November, our long time friend and colleague John Romero lost his long battle with cancer. John began his career with the Division in 1965 and served the people of the state for 28 years. Throughout those years he conducted and published numerous studies concerning the geology and hydrogeology of the state, and was recognized as the foremost expert on the Denver Basin. He received many awards including the Robert Glover Award from the Colorado Ground Water Association and was named the Professional Employee of the Year by the Division in 1993. Before beginning his career with the state, John was a machinist in the mines in Leadville and spent time in the army. He was also an accomplished artist.

We will all miss the dedication and thoroughness with which he did his work and the guidance he gave us. No one was more dedicated to his job and loved his work more than John. For all of you who knew John well, we will also miss his sense of humor and his friendship.

1994 Legislative News

There are numerous bills before this year's legislature that will be of particular interest to water users throughout the state. Below is a brief synopsis of those bills.

House Bills

HB-1006 This bill deletes language from Colorado law related to interstate diversions of water being credited as a "delivery" of water to another state pursuant to interstate water compact or otherwise and also specifies that the fee charged by the state engineer for the diversion of water to another state be adjusted annually for inflation based on the consumer price index.

HB-1027 In summary, this bill expands the purposes of a conservancy district to include conservation of natural resources, control of water pollution within and affecting the district and participation in development of recreational facilities within the district.

HB-1075 This legislation would preclude any claim by the United States department of agriculture or any other person or agency to acquire water rights or otherwise to control or direct the use of water that is subject to existing water rights of private owners and that remains in or is returned to the stream as a result of salinity control and conservation measures taken by such owners participating in the Colorado River Basin Salinity Control Act.

HB-1139 This proposal would authorize the state board of water well construction and pump installation contractors to promulgate rules that establish continuing education requirements for licensed well construction and pump installation contractors. It would make the completion of continuing education requirements a prerequisite to license renewal and also increase the renewal fee.

Senate Bills

SB-29 This bill authorizes the Colorado Water Conservation Board (CWCB) to make loans from the CWCB construction fund for certain water resources projects.

SB-54 This proposal would prevent "relation back" of the priority of a conditional water right, or the recognition or decree of a claim for a new or changed conditional water right, except where the completion of the appropriation serves the same purpose as that which was to have been served by the original appropriation.

SB-81 This bill would increase the number of acres in a division of land exempt from the definition of a "subdivision" or "subdivided land" from 35 acres to 160 acres and exempts from that definition parcels created by: a single gift or sale to a member of the landowner's immediate family; a single gift or sale of 35 or more acres to any non-family member within a 2-year period; or the sale of land in which the parties enter a covenant that the land will be used exclusively for agricultural purposes.

SB-95 This proposed legislation would require persons seeking to transport water from a natural river basin in Colorado to another location to demonstrate that they have explored all reasonable alternatives to such water transport. It also would divide the state into regions for purposes of defining rivers and creeks and their tributaries are in. The entity seeking to transport the water would have to conduct an analysis as to other alternatives that may be feasible and specifies what shall be considered in those analyses. All applicants for such a transfer would have to prepare an integrated water supply and demand plan and they would also have to hold public hearings regarding the proposed plan.

SB-97 Defines a base amount of water which may be withdrawn through a well constructed outside a designated basin pursuant to permit and specifies that the water which is recharged into an aquifer is not subject to the quantity limitations of a permit or court decree up to the amount recharged. It also places limitations on how recharged water may be withdrawn and grants a party with a right to withdraw ground water through a well constructed outside a designated basin to bank the amount of water that may be withdrawn so that if an allotment is not completely withdrawn in one year the right to that amount of water is not lost and may be withdrawn in subsequent years.

Calendar of Events

- February 8 Board of Examiners of Water Well Construction and pump Installation Contractors meeting to be held in Room 615, 1313 Sherman Street, Denver, CO. Contact Marta Ahrens, at (303)866-3581.
- February 18 Colorado Ground Water Commission to be held in Room 318, 1313 Sherman Street, Denver, CO. Contact Marta Ahrens, at (303)866-3581.
- February 17 & 18 Annual Convention and Training Seminar at the Red Lion Inn in Colorado Springs. Contact Colorado Rural Water Association at (719)545-6748.
- February 17 - 19 Annual Conference of the Colorado Water Well Contractors Association at the Holiday Inn West, 14707 W. Colfax, Golden, Co. The theme "Learn More in 94."
- March 8 - 9 Colorado Water Conservation Board meeting to be held in Denver. For more information contact Sam Atwell, at 866-3441.
- April 12 Board of Examiners of Water Well Construction and Pump Installation Contractors meeting, 8:30 a.m., 1313 Sherman St., Rm 615, Denver, CO. For further information contact Marta Ahrens at (303) 866-3581.
- April 28 Colorado Rural Water Association is presenting a seminar "Mechanized Maintenance and Chlorination at City Hall in Walsenburg, CO. Contact Colorado Rural Water Association at (719) 545-6748.
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