

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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A Letter from the State Engineer

by
Hal Simpson

With the first issue of *Streamlines* since my appointment as State Engineer, I would like to take this opportunity to introduce myself and discuss some of the issues facing Colorado and this office.

I am a second generation native of Colorado from Severance. I spent about ten years growing up on a dry land wheat farm where we had a small dairy herd. I graduated from Colorado State University with a B.S. in Civil Engineering in 1967 and an M.S. in Civil Engineering in 1969. After graduation, I was an officer in the U.S. Army for almost three years. I began my career with the Office of the State Engineer in December of 1972. I have held a number of interesting and challenging positions with the SEO including Chief of the Water Management Branch, Assistant State Engineer in charge of the Engineering Section, and Deputy State Engineer.

I feel both fortunate and humble to have the opportunity to direct an agency with such a long and important history. We are also fortunate to have a highly qualified and dedicated staff. It is only as a result of this dedication that we have been able to "do more with less."

Colorado is at a very crucial time in its water development history. Unless we address some

very critical issues, Colorado may not be able to use its water resources allocated by interstate compacts in a manner to maximize beneficial use while preventing the dry up of irrigated agriculture, meeting the growing demand for water along the front range, and dealing with environmental requirements imposed by Federal law.

The State of Colorado, through the Department of Natural Resources, the Colorado Water Conservation Board, and this office, can provide leadership that hopefully will address the above concerns. It will take careful negotiation, give and take, and cooperation among all parties to resolve these issues. The State can be a facilitator for these discussions and can provide the facts, funds and a forum to assist decision makers.

One of the key factors facing decision makers is the lack of necessary data and technology to answer various policy questions or evaluate important alternatives. The State can provide both data and decision support systems to assist policy and decision makers. This office, with its various data bases, computer technology capabilities, and staff expertise, is capable and willing to assist in this important effort. We are involved in the feasibility study for a decision support system for the Colorado River Basin being funded by the CWCB through Senate Bill 92-87. We are also developing data bases and confirming irrigated acreage maps for the Colorado River Basin provided by the USBR.

Mission: To serve the needs of the public while conserving, protecting, developing and maximizing the beneficial use of the state's present and future water supplies.



In future *Streamlines*, I hope to provide updates on current issues as well as additional information on the work of the State Engineer's Office. I look forward to working along with my staff in accomplishing our mission, especially in serving the needs of the public.

A LOOK BACK ON MY DWR WORK EXPERIENCE

By Heath Hixson

Youth in Natural Resources* Participant

Rattlesnake skins cover one of the walls in the back room, which the hydrographers sometimes kill at several of the gaging stations across the Division 3 area. Meter notes lying on the desks waiting for me to check and a computer sitting there anxiously awaiting for me to enter some data. These were some of the objects that I saw everyday when I walked into the office.

On the sixth day of June, I started working at the Division of Water Resources Division 3 office in Alamosa. At the Division 3 office I learned a few skills, like measuring the rivers to see how much water is going through that point, taking meter notes, and, of course, painting the gages. This project was probably my only duty I disliked, mostly because of the oil based green paint that would stick to my skin and fingernails like a bug on fly paper. To this day you can still see traces of green on my fingernails.

When I wasn't out in the field I would sometimes type data into the satellite monitoring system. This satellite monitoring system is a very complex program to understand, yet it was so fascinating and easy to use. the system has many different uses. Some of these uses are flood tracking, flood early-warning system, water rights administration, Water Talk, and stream flow data records. The satellite monitoring system's most important use is the

administration of the Rio Grande Compact which is an agreement between Colorado, New Mexico, and Texas. What this compact says is that Colorado has to deliver so many acre-feet of Rio Grande water to New Mexico each year. This compact also includes the deliveries from the Conejos River and the Closed Basin Project.

When I started this job I came in with my own opinions about some of the things going on in the San Luis Valley with the water. Some of my opinions were that if AWDI or Stockman's Water Incorporation take water out of the Valley, then that would destroy the Valley's aquifer. If the Valley's aquifer was destroyed, then we would end up like the Owens Valley in California, and I don't think I would want to live in an almost dried-up valley.

While I was working at DWR's Division 3 office in Alamosa I learned more about how precious the water is. While I still live in a town and shouldn't really care if AWDI or Stockman's Water Incorporation take our water, I still side with the farmers. The reason for that is they need the water so they can irrigate their fields to make a living and so you can eat your potatoes, drink your Coors beer (which buys barley from the Valley), and enjoy your hamburgers and steaks.

Working at Division 3 in Alamosa has been both a rewarding and educational working experience. I would like to thank Steve Romero (Rocky Mountain SER) for getting me the job, Bruce Whitehead and Steve Vandiver for hiring me. Also thanks to YNR and the Division 3 hydros.

*Youth in Natural Resources is an educational program sponsored by the Department of Natural Resources that places high school students in summer jobs throughout the Department. Mr. Hixson attends Alamosa High School and hopes to be a journalism major in college.

1 cubic foot per second
(cfs) is equivalent to 449
gallons per minutes (gpm)

How To Correctly Fill Out A Well Permit Application or "What Did I Do To Deserve This?!"

by
Joseph Grantham
Administrative Officer

Finally! All that's left to do now is get a well permit. You called DWR and received the application form today. Piece of cake - you'll have it completed in no time! Wrong! It's an hour later and you're still trying to figure out the answers!

Filling out a well permit form is no easy task due to the specialized nature of the information that the Division must have in order to process the application. Carefully reading the instructions provided with the application form *prior* to attempting to fill out the form will provide you with some assistance, and will help you avoid having your application returned for additional information.

To assist you further in providing complete/accurate information, below are various hints that will help you avoid making mistakes that can delay our processing of your application.

Filing fees. Filing fees for most new well permit applications, for replacement of existing wells or for Late Recording and Replacing existing unregistered domestic wells are \$60.00. Any change or extension of use of an existing well is also \$60.00 per structure changed. To replace currently permitted or registered domestic or household use only wells not in an augmentation plan, as long as there is no extension of use of the well (uses other than those permitted or change in aquifer or location of more than 200 feet), the fee is \$20.00.

Copies of the application form cannot be accepted, and please type the information or print in black ink.

(1) Applicant. The applicant's name and mailing address must be filled out in full. This is where all correspondence will be sent. Therefore, if you desire your attorney, relator, etc. to receive the permit, denial letter or other correspondence regarding the permit, their name and address should be listed as "in care of."

(2) Location of Proposed Well. To obtain the correct location of the proposed well contact either your well driller, County Clerk, County Assessor or the County Planning Department and obtain the information from the subdivision maps or survey plat for your land. Remember, the proposed location of the well is not your property description.

(3) Water Use and Well Data. A proposed pumping rate must be indicated on the permit. Household, domestic and livestock wells are generally limited to 15 gpm. Approximate average annual appropriation amounts are based on the amounts below:

- Household use only 1/3 to 1 AF
 - Domestic (with lawn) 1 to 2 AF
 - Livestock (cattle) 1 AF/100 head
 - Irrigation variable
 - Others variable
- Remember that one acre-foot is approximately 325,900 gallons.

If your application involves irrigation of crops, the number of acres intended to be irrigated must be indicated on the application. If the application is for home lawn and garden irrigation using a domestic well, then indicate the amount to be irrigated in acres or fraction thereof or square feet. One acre of home garden and lawn irrigation is the maximum allowed for most domestic wells.

Proposed total depth of your proposed well, as well the aquifer into which the well will be drilled, must be indicated. The assistance of a well driller may be needed in completing this portion of the application.

Alan Pearson, Supervisor of DWR's Dam Safety Branch, was elected to serve on the Board of Directors of the Association of State Dam Safety Officials at its 9th annual meeting held in Baltimore in September. ASDSO is a national organization which Colorado helped organize in 1984.

"Owner's well designation" is where you can indicate a name for your well.

Next, indicate how the water will be used. Although generally self-explanatory, the following brief explanations may assist you:

Household Use Only: For use only inside one single family dwelling (no outside use, lawn or garden irrigation or stock watering). Under current legislation, some household use only wells may include the watering of non-commercial domestic animals (household pets).

Domestic: For household use, the irrigation of up to one acre of home gardens and/or lawns, and the watering of domestic animals. Usually for use in no more than three single family dwellings (which exact number should be indicated under item 11 of the permit application).

Livestock: For watering livestock on farms and ranches.

Irrigation: Irrigation of crop land.

Municipal: All uses associated with municipal water districts, towns and cities.

Other: Any other use, including observation and monitoring wells and drinking and sanitary wells.

(4) Driller. Enter the driller's name and address here. It is very importance to make sure you have licensed well and pump contractors. This can be verified through our office or by asking to see their current license. If you have not yet chosen a driller (which is not unusual), indicate "unknown at this time." If you plan to construct the well yourself there are certain applicable restrictions and the rules of the Board of Examiners of Water Well Construction and Pump Installation Contractors must be followed.

(5) Location of Proposed Well. Mark the location of the proposed well on the section map. To do this, place an X at the approximate location in the proper 1/4, 1/4 section on the map. If the application is for an irrigation well also shade in the lands to be irrigated. A township contains 36 sections, each one mile by one mile in size (36 square miles). A section equals 640 acres and is 5,280 feet on each side, a 1/4 section contains 160 acres and is 2,640 feet on each side and a 1/4, 1/4 section contains 40 acres and is 1,320 feet on each side. The information provided here must match the information provided in section (2) of the application.

(6) Well Must be Located Below. This section asks for the well location by distances from sections lines. Again, this information must correspond to the 1/4, 1/4 description in sections 2 and 5 above. This is not the distances from the lot or property lines. If your well is located in a subdivision you should include the subdivision name, filing, lot and block numbers. A filing number is not the recording number. An example is Lot 3, Block 7, Filing No. (Unit) 12.

The state engineer must also have evidence of when a parcel of land was created to evaluate applications for many residential wells. If your parcel is not in a regular platted subdivision, this evidence may be documented by a copy of a dated survey plat, a deed dated prior to June 1, 1972. If after June 1, 1972, obtain documents from the County showing when and how (exemption or subdivision) your property division was approved. This information should be attached to the well permit application when submitted. Please contact your County Planning and/or Assessor Office if you have any questions about the creation of your subdivision or parcel.

Sections 2, 5 and 6 of the permit application are where most mistakes are found that slow up the evaluation process, causing the application to be returned. At a minimum,

An acre-foot of water covers 1 acre of land 1 foot deep and is equal to 325,900 gallons of water. It is generally enough water for a family of 5 for a year.

make sure the information is consistent in each of these sections.

(7) Tract Where Well is to be Located. If the well is to be a domestic or livestock well on a parcel 35 acres or more, state the total number of acres being dedicated to the well and provide a legal description if different than that description listed in section 10. If it is not the only well on the parcel, you will also have to list the other wells on the tract in section 12 of the application.

(8) Proposed Casing Program. A licensed well driller can help you with this information. A minimum of 4-inch nominal diameter casing is required and at least twenty feet of plain, steel casing must be installed from one foot above the ground surface to 19 feet below the surface.

(9) Replacement Wells. Indicate the distance and direction from the old well to the new proposed well location. You must plug and abandon the old well, in accordance with the Board of Examiners' rules and regulations, to receive a replacement well.

(10) Land on Which Water Will Be Used. Describe the individual tract on which water produced by the well will be used, including a complete metes and bounds description. If the well is in a subdivision or development, information provided should include the lot, block, filing number and name of the subdivision. For irrigation wells, the total land to be irrigated by the well should be listed. Generally, for household, domestic and livestock wells, the acreage stated here should agree with the information provided in section 7. If additional space is needed, an attachment to the application with this information should be provided.

(11) Detailed Description. Describe the specific use of the water from the well. That can be the number of houses to be served, the number of horses to be watered, the amount

of landscape irrigation, etc. For household and domestic wells also indicate the type of sewage disposal system (septic, central sewage) to be used.

(12) Other Water Rights. Complete this section if there are other water rights or wells that are located and/or used on the tract of land as described in sections 7 and 10.

Finally, remember to sign your application! Each application must have an original signature. If the applicant is an organization, the signature must be accompanied by the printed or typed name and title of the person signing the application. Also, if the form is signed by someone other than the applicant, the application must be accompanied by a letter signed by the applicant authorizing that person to sign in the applicant's behalf.

Accurately filling out the well permit application can often times be difficult. To make this process easier for you and more efficient for us, DWR has created a Ground Water Information desk to assist you. Should you have any questions with regards to this form that cannot be answered by the provided instructions, call the Division field office in your area or the Ground Water Information desk in Denver at 866-3587. Your licensed well driller or water attorney may also be able to provide assistance.



ANOTHER CUSTOMER SERVICE IMPROVEMENT IN RECORDS

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For several months now, the Records Section of the Division of Water Resources has had a computer in the public work area for customers to use to research and/or print copies of well records from the "Well System" data base. This has proved to be so popular and useful to our many customers that we have purchased four more machines for the public work area. With the new computers, Records customers will be able to access the "Well System" and the "Water Rights" data bases. It is expected that the new computers will be set up within the next two or three weeks for well records and approximately December 1st for the water rights data base. Records also has a new laser printer in the area that will allow several print jobs to be completed in a very short time.

Customers that have had the opportunity to use the computer have expressed their satisfaction with the system and the quality of the prints.

As with all our viewing and copying equipment, use is on a first-come, first-served basis. Our per page fee for copies is still only \$.50.

New Records Section Staff

Two new employees have joined the Records Section staff. Transferring from the Department of Social Services, **Joseph Matthews'** first day was August 30th and **Bonnie Tusinger**, a relatively newcomer to Colorado, started with the Division on October 1st.

Dam Safety Emergency Preparedness Plans

DWR's Dam Safety Branch recently participated in a series of statewide workshops for dam owners/operators and emergency preparedness officials concerning Dam Safety Emergency Preparedness. These workshops were held in conjunction with the Colorado Office of Emergency Management. Updated guidelines, based on national standards, for preparing Emergency Preparedness Plans (EPP) were presented.

EPPs are required for all Class I (loss of human life is expected in the event of a failure of the dam) and Class II (significant property damage expected, but no loss of life in the event of dam failure) dams under the *Rules and Regulations for Dam Safety and Dam Construction* promulgated by the State Engineer in 1988.

Copies of the guidelines can be obtained at no charge from the Denver office or any of the seven Division Engineer field offices.

IN MEMORIAM

JOHN U. CARLSON, ESQ.

1940 - 1992

A fine gentleman and scholar.
A true friend of the Division of Water Resources
and all Colorado water users.

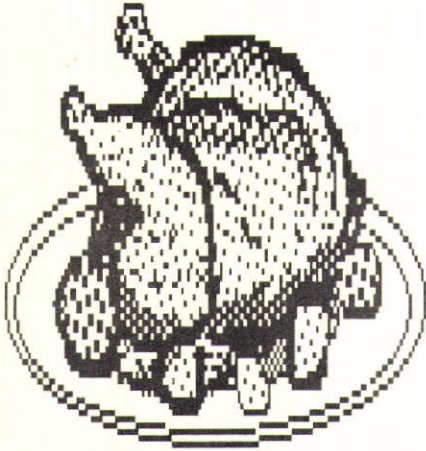
CALENDAR OF EVENTS

- November 20 Colorado Ground Water Commission meeting, 9:00 a.m., Room 318, 1313 Sherman Street, Denver, CO. Contact Marta Ahrens, DWR (303) 866-3581.
- December 1 Board of Examiners of Water Well Construction and Pump Installation Contractors meeting, 8:30 a.m., Room 719, 1313 Sherman Street, Denver, CO. Contact Paula Lacey, DWR (303) 866-3581.
- December 10-11 49th Annual Meeting of the Colorado River Water Users Association, The Mirage, Las Vegas, NV. Contact Linda Thompson, CRWUA '92 Secretary-Treasurer (505) 334-9481.
- January 13-15 109th Quarterly meeting of the Western States Water Council, Las Vegas, NV. Contact Craig Bell, WSWC (801) 561-5300
- January 20-21 Colorado Water Conservation Board meeting, Northglenn Holiday Inn, CO. Contact Maria Martell, CWCB (303) 866-3441.
- January 21-22 Colorado Water Congress 35th Annual Convention, Northglenn Holiday Inn, CO. Contact Dick MacRavey, CWC (303) 837-0812.

- January 28-29 National Water Resources Association January Leadership meeting, Doubletree Inn, Monterey, CA.
Contact NWRA Arlington, VA office at (703) 524-1544.

- February 11-12 12th Annual Convention of the Colorado Rural Water Association, Red Lion Hotel, Colorado Springs, CO
Contact Herman Wooten, CRWA (719) 545-6748.

- February 18-19 Annual meeting of the Colorado Water Well Contractors Association, Holiday Inn Holidome, Fort Collins,
CO. Contact Carol Brooks, CWWCA (303) 759-1756.



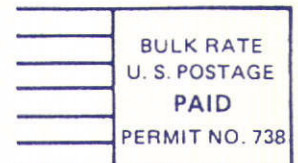
HAPPY THANKSGIVING!

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