



Rural Water Authority

of Douglas County, Colorado

www.rwadc.org

I. The Rural Water Authority was created in 2008 to give a voice to rural water users in Douglas County.

Mission:

- To provide services and education to rural water users
- To work with other agencies/groups on water issues
- To represent the interests of rural water users

Board members:

- 5 Individual Water Provider directors
- 3 Small Water System Provider directors
- 1 County Commissioner director

Membership:

- Owner of a domestic or household well living in the service area of the RWA
- Small Water System Providers who have agreed to join the RWA

II. WATER Supply in Douglas County

The Denver Basin consists of 4 stacking aquifers shaped as an asymmetric bowl approximately one-half mile deep. Borders stretch from Greeley to Colorado Springs and from Golden to the eastern borders of Elbert, Arapahoe and Adams counties.

The basin's assets have limited natural recharge.

From 1997 to 2004, well measurements taken by the Colorado Division of Water Resources showed declining aquifer levels, averaging:

9.0 ft./yr. in the Dawson

13.8 ft./yr. in the Denver

33.4 ft./yr. in the Arapahoe

9.7 ft./yr. in the Laramie/Fox Hills

These effects are magnified at the aquifer margins.²

Lone Tree, Chatfield South Water District, and in some years Highlands Ranch, use renewable water. Douglas County's water supply is approximately 35% from renewable sources and 65% from nonrenewable groundwater. In extremely dry years nearly all water supplies come from nonrenewable sources. Groundwater continues to be the principal water supply of the county.

III. Water Issues in Douglas County

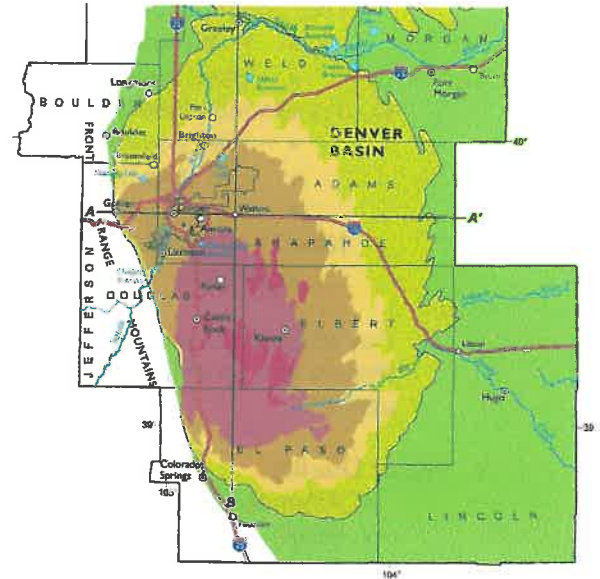
Quality:

- Iron prevalent in the county, especially in the lower Dawson and Denver aquifers
- Hard water is common
- Acidity in aquifers near the El Paso border causes high copper levels in drinking water in homes with copper pipes
- High fluoride levels may be present in the southwest part of the county

Quantity:

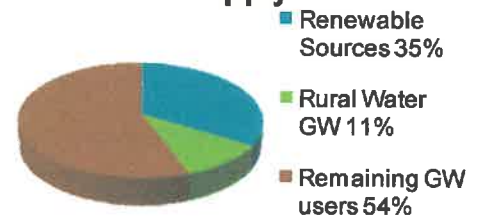
- Decreasing aquifer levels most magnified in the western part of the county at the Basin margins.

Water from fractured granite wells in the foothills may have both quality and quantity issues.



Picture courtesy of Jordan¹

Douglas County Water Supply



IV. Troubleshooting your water

- A. What steps to take if no water comes out of the faucet?
Mechanical - Check filters, replace them if clogged
Electrical - Push reset button(s) located on bottom of control box
Check breaker box and fuses to the pump
Call a professional for assistance
- B. Well information
Well life
- In general, aquifer life is longer than well life
 - Wells with steel casing have a shorter lifetime (40-60 yrs.) than those made of plastic
- Well construction
- Preferred material – PVC, depending on well depth
 - Steel casing required if pressure washing needed to remove mud and debris
- C. System maintenance
- Well and cistern disinfection
 - Old style tanks may need air charging annually
 - New diaphragm style tank – generally no maintenance
- New Technologies - constant pressure, variable speed drives - consult a professional for pros/cons

Pay attention to anything unusual: fast cycling, drop in pressure, on and off cycling for no apparent reason and air in line. Keep the area around wellheads landscape free for easy professional access.

V. Water Quality

- When to test? Initially and then annually
- Why? To check for microorganisms, chemicals, toxins
- Where? Tri County Health Department or commercial labs
- More information: www.cdphe.state.co.us/lr/WhenTest4Page.pdf

VI. Water Management

Conservation

- Outdoor irrigation accounts for 50% of water use
 - Consider xeriscaping and/or drip irrigation
 - Consider going natural
- Use energy efficient and low water consumption appliances
- Check your toilets – try the leaky toilet test
- To prolong the life of your water supply use only what you need

Rainwater Collection Systems

- Only residences on domestic or household wells, without access to municipal water are eligible to obtain a rainwater collection permit. A free permit can be obtained from the Division of Water Resources, State Engineer's Office at: www.water.state.co.us
- Fire departments can access cisterns

Tidbits: Did you know that after agriculture, the energy industry is the second-largest user of water in the US? "If you want to save water, turn off the lights."³

Did you know that to "manufacture water bottles twice as much water is required as the bottles ultimately contain? Moreover, the filtering process uses between 3 and 9 gallons of water for every filtered gallon that ends up on the shelf."³

1. Pictures courtesy of Emmitt Jordan, Citizen's Guide to Denver Basin Groundwater, 2007, Colorado Foundation for Water Education.
2. 2005 Update on the Denver basin Aquifers and Douglas County Water Supply Criteria, Lytle Water Solutions.
3. Unquenchable, Chapters 2 and 3, Robert Glennon, 2009.