A one day conference for state legislators, local government officials, water managers, regulators, irrigation and water utility end users, and their scientific, engineering and legal advisors

COLORADO AQUIFER MANAGEMENT

Conjunctive use of groundwater and surface water

This event is a follow-up conference to the two-day program that was held in Denver in November 2012 which discussed river accretions due to artificial recharge and stream depletions due to well pumping.

Tuesday
December 3, 2013
8:30 – 4:45

Holiday Inn
Denver East – Stapleton,
3333 East Quebec Street,
Denver, CO 80207

Conference Organizer: American Ground Water Trust

Background to the Conference

The December 3 program will focus on the need to ensure that Colorado's water management strategies are based on sound hydrologic principles. Because water policy can't be considered in isolation from state priorities over economic, planning and social issues, the program will involve panel discussion sessions with participation from Colorado State Representatives and Senators.

The American Ground Water Trust's November 2012 two-day water conference in Denver examined the issue of well pumping and water rights in the state's alluvial river/ aquifer systems. Presentations were made by twenty nine invited experts representing hydrologic science, agriculture, water management, legal and regulatory perspectives.

The consensus opinion from the 170 attendees at the November event was that there should be a follow-up Conference with focus on ways to maximize beneficial use of water by conjunctively using groundwater and surface water with "real-time" hydrologic input.

The AGWT believes that decision-makers need to be aware of the science and leading-edge technologies as a basis for water management and water policy decisions. Science-based policy requires that the science be based on verifiable data that provide a clear understanding of how groundwater and surface water are connected. Irrigation applications and groundwater pumping have hydrologic effects that are superimposed on natural flow and natural recharge. Water management policy to optimize beneficial use requires that the combined effects of artificial recharge and well pumping be understood. The December 3 conference will present information about alluvial stream/ aquifer systems and the ways in which models of their hydrology are used for management decisions that protect water rights while optimizing beneficial use. All the major rivers in eastern Colorado have hydrologic connection with alluvial aquifers and are impacted by irrigation and groundwater pumping.

7:30 – 8:30 REGISTRATION

8:30 – 9:00
- Andrew Stone, Executive Director, American Ground Water Trust, Concord, NH
  Conjunctive use defined - recap of the November 2012 Conference – outline of issues still on the table

9:00 – 9:35
- Dr. Reagan Waskom, Director, Colorado Water Institute, Colorado State University, Fort Collins, CO
  Preliminary findings of HB 1278 study for the South Platte River Basin

9:35 – 10:10
- Dr. Reed Maxwell, Director, Integrated Groundwater Modeling Center, Colorado School of Mines, Golden, CO
  Groundwater models that can be used as tools for real-time water management decisions

(No presentation available for CD)

10:10 - 10:45
- Steven Sims, Attorney, Brownstein Hyatt Farber Schreck, Albuquerque, NM
  History of how groundwater legislation and water court decisions have determined Colorado's past and current groundwater management policy controlling well pumping

10:45 – 11:05 BREAK

11:05 – 11:40
- Kevin Rein, Deputy State Engineer and
  Brent Schantz, River Operations and Compact Coordinator, Division of Water Resources, Denver, CO
  Ground Water Response to Flooding and Administration of the Resulting Increased Flows in the River

11:40 – 12:15
- Sean T. Cronin, Executive Director, St. Vrain and Left Hand Water Conservancy District, Longmont, CO
  Flooding: Assessment of impacts to irrigation infrastructure and the agricultural economy

12:15 – 1:30 LUNCH Lunch-time speaker (To be announced)

1:30 – 2:05
- John Stulp, Special Policy Advisor to the Governor on Water and Chairman of the Inter Basin Compact Committee,
  The role of groundwater in the State Water Plan

2:05 – 2:10
- Heather Bergman, Peak Facilitation Group, Broomfield, CO
  Introduction to Panel Session Procedure and the Wrap-up process

(See Program Summary)

2:10 – 3:00

Discussion Panel # 1 – Mostly Agricultural Issues

[Kick-off question……Are there water administration changes that could be made to further maximize the beneficial use of groundwater and surface water while preventing injury to vested water rights?]

- **Don Shawcroft**, President, Colorado Farm Bureau, Centennial, CO [Moderator Panel 1]
- **Randy Fischer**, State Rep., District 53 (Fort Collins, CO)
  (Chair, Agriculture, Natural Resources; Capital Development; Transportation Committees
- **Don Coram**, State Rep., District 58 (Montrose, CO)
  (Agriculture, Natural Resources; Transportation & Energy Committees)
- **Scott Renfroe**, State Senator, District 13 (Greeley, CO)
  (Minority Caucus Chair: Appropriations; Education Committees)
- **Lori Saine**, State Representative, District 63, Denver, CO (Weld County)
  (Agriculture, Natural Resources)
- **Dr. Fred Marinelli**, Water Resource Engineer, Interralogic, Inc., Fort Collins, CO
- **Robert Longenbaugh**, Consultant Water Engineer, Fort Collins, CO

3:00 – 3:20 BREAK

3:20 – 4:10

Discussion Panel # 2 – Mostly Urban and Suburban Issues

[Kick-off question…… How can the alluvial aquifers be used to reduce water shortages for municipal and metropolitan water users?]

- **Jeris Danielson**, General Manager, Purgatoire River Water Conservancy District, Trinidad, CO [Moderator Panel 2]
- **Dave Young**, State Rep., District 50 (Greeley, CO)
  (Appropriations; Education; Health, Insurance & Environment Committees)
- **Kathleen** (**KC**) **Becker**, State Rep., District 13, (Boulder, Clear Creek, Gilpin, Grand and Jackson counties)
- **Steve Lebsock**, State Rep., District 34, (Thornton, CO)
  (Agriculture, Natural Resources; Local Government Committees)
- **Courtney Hemenway**, President, Hemenway Groundwater Engineering, Parker, CO
- **Mark Palumbo**, Principal, HRS Water Consultants, Inc., Lakewood, CO
- **Wayland Anderson**, Water Engineer, South Adams County Water and Sanitation District, Commerce City, CO

4:10 – 4:40

Where do we go from here and how do we get there? – Open Discussion

- Heather Bergman, Peak Facilitation Group, Broomfield, CO

4:40 – 4:45 WRAP-UP and ADJOURN

Questions and Issues

The points listed below are examples of Q & A that we expect to be addressed in the presentations and panel sessions.

- ➔ Are we over augmenting? Does this cause injury to well owners?
- ➔ Is irrigation water conservation beneficial? Does it impact groundwater return flows?
- ➔ How might emergency ditch diversions and groundwater recharge help reduce river flood peaks?
- ➔ How can we manage groundwater levels to maximize the use of alluvial aquifer storage?
- ➔ Is there more potential for municipalities to use alluvial groundwater storage to meet shortages?
- ➔ What are the economic impacts on farm productivity from well pumping curtailment?
- ➔ Are there decreased local tax revenues resulting from lower assessed values of farms?
- ➔ Why are new irrigation wells being permitted while existing wells are curtailed?
- ➔ What needs to be done to allow existing irrigation wells to pump within their own priority?
- ➔ Are high groundwater levels causing waste of water by phreatophite consumptive use?
- ➔ Will more effective groundwater management reduce the need for additional west-slope water diversions?

AMERICAN GROUND WATER TRUST (Non-profit 501(c)(3) education organization)
Ground Water Information, Awareness & Education Since 1986…… This is what we do:

~ Promote efficient and effective ground water management
~ Showcase ground water science and technology solutions
~ Increase citizen, community and decision-maker awareness
~ Facilitate stakeholder participation in water resource decisions
~ Communicate the environmental and economic value of ground water

Groundwater Management Programs

Since 1999, the American Ground Water Trust has convened 38 conference programs that have featured aquifer management. The AGWT"s mission-focus on resource sustainability and effective groundwater management is the rationale for our promotion of information exchange programs on ground water management issues and our showcasing of aquifer storage technologies.

There is a strong ongoing need to **educate the public,** and **capture the imagination of decision-makers** about the economic and environmental benefits of creative use of sub-surface water resources. Ongoing drought conditions, predictions of the hydrologic implications of changing weather patterns and political uncertainty regarding regional water transfers more than justify increased attention to the benefits of using groundwater resources as an essential component for optimizing water resources.