Yampa River Basin Water Forum 2004

CHALLENGES TO OUR WATER FUTURE

Thursday, June 3rd, 2004 (4:00 pm – 8:00 pm) Hayden High School, Hayden, CO

Sponsored by: **The Nature Conservancy Community Agriculture Alliance**
Colorado River Water Conservation District Yampa River Basin Partnership

Welcome by Marsha Daughenbaugh, Executive Director,
Community Agriculture Alliance http://www.communityagalliance.org
Dinner provided by Charlie Epp, C's Catering

Use of Water in the Yampa Valley

Dan Birch, Colorado River Water Conservation District http://www.crwcd.org

Excerpts from presentation delivered by Dan Birch:

The Colorado River Water Conservation District (CRWCD) was created in 1937 and is comprised of all or parts of 15 western Colorado counties. The CRWCD covers the Colorado, Yampa, White, and Gunnison River Basins for a total of 25% of the total area of Colorado. CRWCD is funded by mill levy and a water activity enterprise.

The statutory directive of the Colorado River Water Conservation District confers two basic, but sometimes inconsistent, purposes:

Statewide - To conserve Colorado River water for beneficial consumptive use and to safeguard, for all of Colorado, the waters of the Colorado River basin to which the state has been allocated by interstate compact.

Regional - To ensure adequate water supplies for present and future uses within the district for the growth and development of the entire district and the welfare of the district's inhabitants.

Geography, climate and population make these two roles a careful balancing act. Economic activity and population projections impact amount of water used.
Eastern slope has 89% of population and western slope has 11% of population. Conversely, the western slope has 87% of water and the eastern slope has 13%.Trans-mountain diversion becomes necessary, as most of the people live where the least amount of water is located.

Water use is driven by activity in the agriculture, industrial and municipal sectors. Current depletions are approximately 110,000 acre-feet per year. Future depletions are expected to increase in 50 years by approximately 50,000 acre-feet per year.

Current storage projects under development are Elkhead Reservoir expansion and the Stagecoach Reservoir expansion.

Use of Water in the Yampa Valley *(continued)*

Colorado River Upper Basin Allocation of water:
15 million acre-feet (MAF) is the assumed average flow less
7.50 MAF to Lower Basin
.75 MAF to Mexico
.60 MAF due to reservoir evaporation
6.15 MAF to Upper Basin

The Colorado River and tributaries account for 9.097 MAF per year in water. Of that 9.097 MAF is 4.491 MAF from the Colorado River and 1.623 MAF from the Yampa River.

Colorado's Share of the Colorado River is 51.75% of 3.1 MAF / year

Trans-mountain Diversions	600,000 AF/year (Acre-Feet)
Reservoir evaporation	300,000 AF/year
West Slope use	1,600,000 AF/year
TOTAL	2,500,000 AF/year

Lower Basin Water Allocation Status:
California currently uses 5.2 – 5.4 MAF with an allocation of 4.4 MAF.
Arizona currently uses 2.6 MAF with an allocation of 2.8 MAF.
Nevada currently uses 0.3 MAF with an allocation of 0.3 MAF.

Colorado River Water Conservation District reference material on line: http://www.crwcd.org

Water Rights, Delivery Systems, Water Sales, Water Leases

Margaret O'Donnell, Attorney at Law

Notes prepared by Audrey Danner from presentation delivered by Margaret O'Donnell.
Definitions prepared and provided by Colorado Foundation for Water Education.

Constitution provides right to divert and appropriate water. Individuals do not 'own' the water. Right to use from the State of Colorado is obtained by water decree from State of Colorado in priority use system. Water law protects water user with water rights. Priority system implemented in times of water scarcity and is rarely used in Yampa Valley.

Definitions from: Citizens Guide to Colorado Water Law *http://www.cfwe.org*

What is a 'water right'? 'A property right to the use of a portion of the public's surface or tributary groundwater resource obtained under applicable legal procedures.'

Trans-Basin Diversion: Moving water from a 'native' source – non native water returns to a different source. (Controlled by definition of 'beneficial use'.)

Diversion: water used with some return flow to the river system.

Depletion: complete use.

Call on the river: 'Demand for administration of water rights. A 'call' results in shut down orders against undecreed water uses and decreed junior water rights as necessary to fill the beneficial use need of the decreed senior calling right.'

Water Rights, Delivery Systems, Water Sales, Water Leases *(continued)*

Water Appropriation: 'Placement of a specified portion of the waters of the state to a beneficial use pursuant to the procedures prescribed by law. Only previously unappropriated surface or tributary water can be appropriated.'

Comment: A few tributaries are over-appropriated; basic stem of Yampa River is not over appropriated overall. When water is scare and over appropriations occur, then senior water rights take priority. Then an augmentation plan would be developed among senior and junior water rights. Stored water is not considered in the appropriation and is eventually a part of the augmentation plan.

Augmentation: 'Replacing the quantity of water depleted from the stream system caused by an out of priority diversion.'

Native Supply: Undepleted, unregulated available surface water

Total demands/diversions: Total amount of water removed from the stream, some water may return to the stream if it is not consumptively used.

Lease: water rights are termed as 'property' and can be leased to others; determined by 'priority'. (Can change use of water right and if changes, held to historic usage numbers) Well permit is not a water right, unless a water decree giving priority. Water wells are administered by State.

In stream flow refers to the right to keep water in the river.

Return flows: 'Water that returns to water system after applied to beneficial use.' (for example: irrigation)

Beneficial use: 'Beneficial use is the basis, measure and limit of a water right.'

Consumptive Use: 'The amount of water used up by application of that water to beneficial use.'

Appropriation: 'Placement of a specified portion of the waters of the state to a beneficial use pursuant to the procedures prescribed by law. Speculation is prohibited. The appropriator must have a plan to divert, store, or otherwise capture, possess, and control the water for beneficial use.'

Water management, Land management and Crop management: Prepare your Farm or Ranch before Drought Strikes

Lori Jazwick, USDA - Routt Natural Resources Conservation Service (NRCS)
lori.jazwick@co.usda.gov phone: 970-879-3225

Notes prepared by Audrey Danner from presentation delivered by Lori Jazwick.

The NRCS offers property assessment as a service to landowners. Drought information is available on line.

http://water.usgs.gov
http://waterdata.usgs.gov/co./nwis/

Water management, Land management and Crop management:
Prepare your Farm or Ranch before Drought Strikes *(continued)*

US Seasonal Drought Outlook
http://www.cpc.ncep.noaa/gov/products/expert_assessment/season_drought.gif

U.S. Drought Monitor
http://drought.unl.edu/dm

Streamflow Forecasts
United States Dept. of Agriculture - USDA, Natural Resources Conservation Service
http://www.wcc.nrcs.usda.gov

Statewide Water Supply Initiative (SWSI) ***Yampa White River Basin drainage***
Darryl Steele, SWSI Board Member

Notes prepared by Audrey Danner from presentation delivered by Darryl Steele.

http://www.cwcb.state.co.us and click on Statewide Water Supply Initiative

The Colorado Water Conservation Board developed Statewide Water Supply Initiative (SWSI) to help Colorado maintain an adequate water supply for citizens and the environment. SWSI is not intended to take the place of local water planning initiatives. Rather, it is a 'forum' to develop a common understanding of existing water supplies and future water supply needs and demands throughout Colorado through the year 2045. Colorado Water Conservation Board, through the SWSI and future efforts, will help support and /or identify solutions to water supply needs.

Examples of potential solutions include: conservation, rehabilitation of existing water supply facilities, enlargement and or more efficient use of water supply facilities as well as new water supply projects. By taking a basin and statewide perspective, SWSI will identify issues and water supply needs and projects that may require coordination by more than planning entity or may be beyond the capabilities of a single entity. (Comment: Steele cautioned Yampa River Basin residents to understand that state owns the water and each basin of origin is developing at a pace not matching others. This could create conflicts, as we grow.)

Objectives drafted by Yampa / White River Round Table Group:

- To substantially meet industrial and municipal demands
- To substantially meet agricultural demands based on agricultural property growth and uses in future
- Optimize existing and future water storage
- Enhance recreational opportunities
- Provide for environmental demands such as the Endangered Fish Recovery Program
- Promote cost effectiveness
- Protect cultural value
- Provide operational flexibility

Small Reservoir Study conducted by Colorado River Water Conservation District has been consulted for storage possibilities available, condition and age of current projects and opportunities.

Water Management and Endangered Fish Recovery: Restoration efforts in the Upper Colorado River

Dan Luecke, Upper Colorado River - Endangered Fish Recovery Program

Notes prepared by Audrey Danner from presentation delivered by Dan Luecke.

Web site of recovery program: http://www.r6.fws.gov/coloradoriver/

Established in 1988, the Recovery Program is a voluntary, cooperative partnership involving state and federal agencies, environmental groups and water and power user organizations in Colorado, Utah and Wyoming. Its purpose is to recover four fish species listed as endangered under the Endangered Species Act of 1973 (ESA), as amended, while water development proceeds in accordance with federal and state laws and interstate compacts.

Native fish are key to understanding our aquatic habitat, which is important as only about 5% of the land mass in Colorado is aquatic habitat. The endangered fish species are: Bony Tail, Humpback Chub, Razorback Sucker, and Colorado Pikeminnow, native fish which are specifically adapted to and previously dominated the Colorado River system.

The Colorado Recovery Program is 're-establishing a balance in ecosystem structure and function to meet the needs of plants, animals and human communities.'

The Colorado Recovery Program negotiated a Memorandum of Understanding in 1987, which was signed by Governors of three states and Department of Interior, to continue use of river and the water while creating programs to protect the endangered fish – making a reasonable and prudent effort toward sufficient progress.

Many perspectives with different goals are working to address the conservation of these endangered fish. Non-native fish including the Northern Pike and Smallmouth Bass have become significant predators of native fishes in Yampa River.

The Colorado Compact: How it relates to the Yampa River

Eric Kuhn, Colorado River Water Conservation District http://www.crwcd.org

Excerpts from presentation delivered by Eric Kuhn.

'Approximately 65% of the Colorado River's water begins in Colorado.'

The Compact divides the Colorado River, including all tributaries, into an Upper and Lower Basin with the boundary between the two basins is Lee's Ferry, AZ. Lower division states are Nevada, California and Arizona. Upper division states are Wyoming, Colorado, New Mexico and Utah. Arizona, Utah and New Mexico have lands within both basins.

The purpose of the Compact was to define the boundaries with the intent of addressing river water issues, boundary disputes and to have the ability to build bridges across rivers.

Hydrologic components of the Colorado River Compact 1922 are in Article III.
III.(a) 'There is hereby apportioned…in perpetuity to the Upper Basin and to the Lower Basin…the exclusive beneficial consumptive use of 7,500,000 af per annum.'

The Colorado Compact: How it relates to the Yampa River (continued)

III.(b) 'In addition to…paragraph (a) the Lower Basin is hereby given the right to increase its beneficial consumptive use…by one million af per annum.'
III.(c) Provides that water for Mexico 'shall be supplied first from the waters over and above…paragraphs (a) and (b); and if such surplus shall prove insufficient…the burden …shall be equally borne by the Upper Basin and the Lower Basin and the Upper Division states shall deliver at Lee Ferry water to supply (its obligation)…in addition to that provided in (d).
III.(d) 'The states of the Upper Division will not cause the flow…at Lee's Ferry to be depleted below an aggregate of 75,000,000 af for any ten consecutive years…'

Other major components of 'Law of the River' include the Boulder Canyon Project Act of 1928, Upper Colorado River Basin Compact of 1948, 1963 Arizona V. California Supreme Court Decision and the 1986 paper written by late John Carlson 'Contrary View of the Law of the Colorado River'. 1922 Compact has a few major unresolved issues. Some of these issues have been reviewed by a Special Master of the Supreme Court. The 1922 Compact was signed by 7 states and Congress and impacts Colorado water supply and, therefore, our future.

This is important because it impacts Colorado's available water supply and thus, our future. Depending on the hydrologic Compact assumptions concerning the available supply: a) Colorado has either a lot of water to develop – upwards of another million acre-feet or b) Colorado may already be at or above full development of its Colorado River supplies. The Secretary of the Interior publishes the Colorado River System Consumptive Uses and Losses Report every five years. Thirty years of data are available. (latest data 1996 – 2000)

Based on the Consumptive Uses and Losses Reports and including reservoir evaporation Colorado is consuming in the range of 2.5 to 2.8 MAF per annum. Likewise, the Upper Basin States are using in the range of 4.5 to 5.0 MAF per annum.

The Colorado River Compact and the Upper Colorado River Compact affect the entire Western Slope, and entitles Colorado to beneficially consume 51.75% of the total water available in the Upper Colorado River Basin. Presently, consumptive use in the Yampa and White basins total approximately 190,000 acre feet.' Depending upon assumptions, Colorado may already be using all of our available water.

Comments and discussion questions from Colorado River Water Conservation District:

- Resolution of the Compact issues will take years and considerable resources. How long did it take the Basin States and Feds to develop surplus criteria? As of today, there are no shortage criteria, system wide accounting, or any consensus at all on the actual uses within the basin.

- Water users in Colorado are planning to invest hundreds of millions of dollars in new Colorado River infrastructure. Unless Colorado and the Upper Basin states take bold action to resolve the compact disputes, can we be certain there will be a sufficient water supply to justify this investment?

- Within Colorado, do we need to address how sub-basins will allocate any remaining water?

- We need to continue to upgrade our technical information, consumptive uses, stream flows and modeling capabilities. The State of Colorado is clearly a leader in this area.

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Thank you for participating in the Yampa River Basin 2004 Water Forum.

Community Agriculture Alliance The Nature Conservancy
Colorado River Water Conservation District Yampa River Basin Partnership