

WATER STRATEGIST

ANALYSIS OF WATER MARKETING, FINANCE, LEGISLATION AND LITIGATION

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TRANSACTIONS

Each month, WS reports on purchases, leases, and exchanges of water in western states' water markets.

Arizona

Acquirer: Private entities
Supplier: Private entities
Water: Purchase of 57.7 AF of Type II non-irrigation groundwater rights in the Tucson AMA
Purpose: M&I, domestic
Terms: \$2,000/AF to \$3,000/AF
Status: Complete

A total of 57.7 AF of Type II non-irrigation groundwater rights in the Tucson AMA changed hands between private parties in a four transactions during the first quarter of 2006. Type II groundwater rights can be used for municipal, industrial and domestic purposes. The going rate for Type II rights in the Tucson AMA generally ranges from \$2,000/AF to \$3,000/AF. In addition to the purchase price, the acquirer must pay fees to the Arizona Department of Water Resources, including a statewide water quality assurance fee of \$2.12/AF and a groundwater withdrawal fee that varies by AMA. For the Tucson AMA, the groundwater withdrawal fee is \$3/AF—which includes \$2.50/AF for the Arizona Water Banking Authority and \$0.50/AF for augmentation and conservation.

California

Acquirers: Various recycled water customers
Supplier: Eastern Municipal Water District
Water: 1-year leases totaling 20,643 AF of secondary and tertiary treated water
Purpose: Agricultural and landscape irrigation, construction and wildlife habitat
Terms: Ranged \$30/AF to \$344.50/AF, depending upon level of treatment and use
Status: Complete

During 2005, Eastern Municipal Water District (EMWD) leased to various water users a total of 20,643 AF of secondary and tertiary treated water, which represents 42% of the volume available for lease. Of the total volume leased, 7,362 AF was secondary treated water, while 13,281 AF was tertiary treated water. The district's secondary water can be either disinfected or disinfected and filtered, while all of its tertiary treated water is disinfected and filtered.

Agricultural water users, who acquire effluent to irrigate both food crops and fodder crops, paid \$30/AF for disinfected secondary water, \$42/AF for tertiary treated water in the winter months and \$71.50/AF for tertiary treated water other months. Landscapers, who use tertiary water to irrigate golf courses, parks, school grounds, median strips and other streetscapes, paid the municipal rate of \$205.75/AF, while those using effluent for construction purposes paid \$344.50/AF. The California Department of Fish and Game leased disinfected secondary water for habitat management at the agricultural rate of \$30/AF, while Rancho California Water District, who receives tertiary treated water under a wholesale contract, paid \$163/AF. An advisory committee composed of parties from both municipal and agricultural sectors established the variance between prices several years ago based upon level of treatment and use. The prices that were initially set by the committee are escalated annually by CPI for agriculture and CPI plus 4.7% for all other uses.

Acquirers: Residential property owners in the Del Monte Forest
Supplier: Pebble Beach Company
Water: Sales of 4 AF of potable water entitlements granted by the Monterey Peninsula Water Management District
Purpose: Future residential development
Terms: \$250,000/AF
Status: Complete

Pebble Beach Company sold 4 AF of potable water entitlements to residential property owners in the Del Monte Forest. The Monterey Peninsula Water Management District (MPWMD), the local water regulatory agency, granted 365 AF of potable water entitlements to Pebble Beach Company in exchange for an agreement to guarantee the financing of a \$33.9 million water reclamation plant to be constructed by the Pebble Beach Community Services District and the Carmel Area Wastewater District. The volume provided through the entitlements came from the 800 AF of potable water saved by the reclamation plant. The balance of that volume will remain unused to benefit the local environment and minimize potential water use restrictions in the local area. The saved water would have been drawn from the three sources regulated by MPWMD: the Carmel River (surface water), the Carmel Valley (groundwater) and the Seaside Coastal Area (groundwater).

Pebble Beach Company offered a total of 150 AF of potable water entitlements, of which 105 AF sold last year (see *WS November 2005*) bringing the total volume sold to 109 AF. The 41 AF balance remains available, with the price still set at \$250,000/AF.

The water will be delivered to the property owners by California American Water Company through its current system.

The proceeds from the water sales will be used to finance the expansion and improvement of the reclamation plant, which is expected to save an additional 300 to 400 AF. One component of the project, Forest Lake Reservoir, which has a cost of \$12.5 million, is nearly complete and is more than 80% full with recycled water that will be used during the 2006 irrigation season.

Colorado

Six entities acquired Colorado–Big Thompson (CBT) units in 7 transactions in March (see table). On April 14, 2006, the Northern Colorado Water Conservancy District Board of Directors declared a quota of 80%—so each unit yields 0.8 AF. The new quota represents an increase of 20% over the initial quota set in November and is the highest quota in five years. The board last declared an 80% quota in April 2001 and raised it to 90% in July 2001. In 2003, the board declared a quota of 40%, which it subsequently increased to 50%. The board wanted to help irrigators deal with low soil moisture conditions and set the current quota based upon demand. In recent years the board had to set the quota based upon water availability because supplies were so low. Current supply information for the CBT project shows above average storage levels for the first time since 2000. Storage in Lake Granby is at 53% of capacity—more than double the level it was at this time last year—and snowpack in the Upper Colorado River Basin is 101% of average, with inflows to the project forecast at 99% of average.

Transactions involved 189 units, of which 46 units were dedicated in exchange for service and 143 units sold at an average price of \$10,224/unit. An additional 24 units changed hands between private parties in 3 transactions, with price and use information remaining undisclosed.

Colorado-Big Thompson Units Transactions Report

Reflects March activity

Acquirer	Supplier	Purpose	Prior Use	Units	Terms
Central Weld Co. WD	Developer	Municipal	Irrigation	2	Transfer for taps
City of Evans	Irrigator	Municipal	Irrigation	10	\$10,300/unit
Town of Firestone	Developer	Municipal	NA	1	Transfer for taps
Irrigator	Irrigator	Irrigation	Irrigation	8	\$10,500/unit
Morgan Co. Quality WD	Irrigator	Municipal	Irrigation	125	\$10,200/unit
Town of Windsor	Developer	Municipal	Irrigation	2	Transfer for taps
Town of Windsor	Developer	Municipal	Irrigation	41	Transfer for taps

Acquirers: 10 recycled water customers

Supplier: Denver Water

Water: Water service providing 3,825 AF of recycled water

Purpose: Various uses including landscape irrigation and power plant cooling

Terms: \$143/AF to \$270/AF

Status: Complete

Denver Water provided about 3,825 AF (1.246 MG) of recycled water to 10 recycled water customers during 2005. Current recycled water rates range from \$143/AF to \$270/AF. The City and the County of Denver pay the lowest price, which is based on a rate of \$0.44/1000 gallons, while other users

who are within the city limits pay \$225/AF (\$0.69/1000 gallons). Other users who are outside of the city limits pay the highest price—\$270/AF (\$0.83/1000 gallons).

Most customers use the recycled water for irrigation of golf courses, landscapes, parks and school grounds, while Xcel Energy uses recycled water in its cooling towers at a local power plant, and the Denver Zoo uses recycled water for both irrigation of the zoo grounds and for animal use.

To Denver Water the recycled water project is a significant source of supply that will delay its need to seek additional imported water. The project will be completed in five phases. In 2004, the utility completed Phase 1, which provides a capacity of 7,983 AF/year. Phase 2, which is scheduled for completion in spring 2007, will include additional storage, an additional pipeline, a pump station, connections to existing recycled water pipelines and service to additional areas. Once all five phases of the project are completed, it will provide about 17,600 AF/year.

Acquirer: City of Loveland
Suppliers: Various developers
Water: Permanent acquisitions of 281.74 AF of water rights in various ditch companies
Purpose: M&I
Terms: Transferred in exchange for development credits
Status: Complete

The City of Loveland acquired a total of 281.74 AF of water rights in various ditch companies from developers during 2005. The total volume is based upon the reasonable estimated yield for the ditch company at the time the water was transferred to the city. Developers transfer water rights to Loveland's water bank program to meet city requirements for new development. When the water is transferred the city issues development credits. Alternatively, Loveland allows payment of a Cash-in-Lieu (CIL) of credits fee—currently \$13,817/AF—to meet water requirements. The current CIL fee was reduced from \$14,947.68/AF on January 1, 2006. The credit and the CIL fees are subject to change at any time. Any annual assessments charged after the rights are transferred to the city are paid by the city.

A total of 7 transfers were completed during 2005, with developers providing shares in four ditch companies. The table below shows the amount acquired by ditch company:

Ditch	Amount	Yield +	Acre-feet	Annual Assessment
Big Thompson D&M	0.0223 shares	189.11 AF/share	4.22 AF	\$1,000/share
Chubbuck	58.332 shares	2.97 AF/share	173.24 AF	None
Louden	6 shares	11.05 AF/share	66.30 AF	\$75/share
South Side	9 shares	4.22 AF/share	37.98 AF	\$165/share

+ Reasonable estimated yield at the time of acceptance

Loveland also received a transfer of 20 CBT units from a developer (see *WS July/August 2005*).

Nevada

<i>Acquirers:</i>	<i>Southern Nevada Water Authority and Moapa Valley Water District</i>
<i>Supplier:</i>	<i>Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-day Saints</i>
<i>Water:</i>	<i>20-year lease of 2,001 AF/year of spring water for use in the Moapa Valley</i>
<i>Purpose:</i>	<i>M&I, Irrigation</i>
<i>Terms:</i>	<i>\$130/AF (adjusted annually for inflation)</i>
<i>Status:</i>	<i>Pending State Engineer approval of a change of beneficial use and Interior Department approval to convey the water through Lake Mead</i>

The Southern Nevada Water Authority (SNWA) and Moapa Valley Water District (MVWD) entered into an agreement with the Corporation of the Presiding Bishop of the Church of Jesus Christ of Latter-day Saints to lease spring water from a source that provides inflow to the Muddy River for use in the Moapa Valley. A concurrent agreement outlines terms for cooperative use and cost-sharing between SNWA and MVWD.

The 20-year lease with the church provides 2,001 AF/year at a price of \$130/AF, which will be adjusted annually for inflation. SNWA and MVWD will split the leased volume so that each is entitled to use half. The parties may renew the lease for two additional 10-year terms. SNWA will pay for the lease each year, and MVWD will reimburse them for any water used over 500.25 AF. An initial payment to the church of \$20,000 that will apply to the first year's lease is required as earnest money. The church will assess a surcharge of \$100/AF (adjusted annually for inflation) on any water used outside of MVWD's service area. In the event that a surcharge is assessed, SNWA and MVWD will split the obligation with each paying half.

Currently the water is approved for irrigation use. The acquirers intend to use it for municipal and industrial use in the Moapa Valley area, but first must obtain approval of change of beneficial use from the State Engineer. If they do not receive the approval by December 31, 2006, SNWA and MVWD may terminate the agreement, but will forfeit the earnest money payment.

As an additional consideration for the lease, MVWD will provide a 1½ inch potable water connection at the church's recreational facility and about 300 feet of pipe necessary to connect the tap to the mainline.

The agreement does not bind the parties regarding the means of conveyance. The State Engineer has approved points of diversion for the water, but SNWA and MVWD are permitted to apply for a change in the point of diversion. SNWA desires to convey the water through the natural waterway and take it into its system at Lake Mead. This type of conveyance would have to be allowed by the seven Colorado River Basin states under an operating agreement for the river, which is currently undergoing federal environmental review and will require approval by the Department of the Interior (see *WS February 2006* for background on the operating agreement). Last summer, SNWA purchased water rights on the Virgin River that it desires to convey in the same manner (see *WS July/August 2005*). An alternate means of conveyance would require the SNWA to build infrastructure to divert the water at a designated point of diversion and transport it by pipeline.

Acquirer: Washoe County
Supplier: Fish Springs Ranch, LLC
Water: Dedication of 8,000 AF from the Honey Lake Project
Purpose: To hold in trust for future municipal use
Terms: Dedication
Status: Pending Record of Decision from BLM, construction of project infrastructure including pipeline

Washoe County and Fish Springs Ranch, LLC (FSR) entered into an agreement, under which Washoe County will hold in trust 8,000 AF from FSR's Honey Lake Project for future municipal use. Fish Springs Ranch is owned by Vidler Water Company, a division of Pico Holdings.

As one of the conditions required to receive approval for development projects in Washoe County, developers must dedicate water rights to the county. The county will hold the water in trust to apply toward the development requirement for FSR or its assignees, parties that would purchase the water bank credits controlled by FSR. Once the water is delivered, the county may use any excess water, i.e. water that has not yet been applied toward a development requirement, for general temporary purposes, such as groundwater recharge or conjunctive use management. Currently, water prices in the area are ranging from about \$25,000/AF to \$35,000/AF.

The Honey Lake Project, which will require construction of wells, well houses and related infrastructure and a 28-mile pipeline across federal lands, would import water from the Honey Lake Basin to the North Valleys. The Bureau of Land Management has issued the Final Environmental Impact Statement (FEIS) under the National Environmental Protection Act (NEPA), but has not yet issued a Record of Decision (ROD), which is pending tribal and U.S. Fish and Wildlife Service consultations, but is expected "soon." The Washoe County Commission approved the project in December. Deliveries are contingent on completion of the project. (For additional background on the project, see *WS January 2006*).

Oregon

Acquirer: Stanfield Irrigation District
Supplier: Bureau of Reclamation
Water: One-year lease for up to 3,178.53 AF from McKay Reservoir
Purpose: Irrigation
Terms: \$8/AF, plus a \$750 contract administration fee
Status: Complete

In 2005, Stanfield Irrigation District entered into a contract with the Bureau of Reclamation for a temporary lease up to 3,178.53 AF of Umatilla Project water from McKay Reservoir. The district paid \$25,427.04 (about \$8/AF) for the water service, plus a \$750 contract administration fee. The district used the water during the irrigation season, which runs from March 1 to November 1, to irrigate up to 3,178.53 acres of land outside of the federally recognized district boundaries.

Texas

<i>Acquirer:</i>	<i>Various water users</i>
<i>Supplier:</i>	<i>Various water users</i>
<i>Water:</i>	<i>Sales totaling 5,572.41 AF and leases totaling 8,632.358 AF of Edwards Aquifer pumping rights</i>
<i>Purpose:</i>	<i>Municipal, Industrial and Irrigation</i>
<i>Terms:</i>	<i>\$2,000/AF for purchases; \$75/AF to \$80/AF for leases</i>
<i>Status:</i>	<i>Complete</i>

During 2005, Edwards Aquifer Authority (EAA) approved sales and leases of Edwards Aquifer pumping rights. A total of 5,572.41 AF were sold in 79 transactions—compared to sales of 10,438.893 AF in 89 transactions in 2004. Of the total volume sold, 1,151.360 AF in 29 transactions went to municipal use, 321.5 AF in 12 contracts went to industrial use and 4,099.55 AF in 38 contracts went to irrigation. Leases totaled 8,632.358 AF in 76 transactions—compared to leases of 11,718.204 AF in 60 transactions in 2004. The total volume leased was distributed with 2,604.1 AF in 23 transactions for municipal use, 3,589.378 AF in 29 transactions for industrial use and 2,438.88 AF in 24 transactions for irrigation. For sales, the going rate for Edwards Aquifer pumping rights is \$2,000/AF, with smaller blocks of less than 10 AF often selling at higher prices ranging from \$2,600/AF to \$3,000/AF. Lease prices have remained fairly stable over time and still generally range from \$75/AF to \$80/AF, with the difference driven primarily by the term of the lease.

The acquirers will take delivery of the water by pumping it from their own wells and will pay a pumping fee to EAA. Agricultural water users will pay a pumping fee of \$2/AF, which is the legislative cap set for agricultural water under an amendment to the Edwards Authority Act. Non-agricultural water users will pay \$37/AF. Some of the parties involved in transfers of Edwards Aquifer pumping rights include Bexar County Water Control and Improvement District #10, Bexar Metropolitan Water District, East Medina County Special Utility District, San Antonio Water System, San Antonio River Authority as administrator for the Regional Water Resources Development Group, several municipalities, school districts and numerous private parties.

A total of 155 transactions were completed in 2005, which is comparable to the 149 transactions completed in 2004, but was low compared to previous years. The volume transferred in 2005, 14,204.768 AF, was substantially below the volumes transferred in 2004 and previous years. The low level of activity is attributed to planning on the part of the water users. Most water users anticipated their needs and entered into multi-year agreements in previous years.

The 2006 transfer market may be affected as EAA moves toward implementing its “two-tier” pumping rights plan, which designates “senior” and “junior” rights to the water. The authority recently released proposed implementation rules and notification of the related reductions. EAA adopted the two-tier plan to bring pumping below the 450,000 AF legislative cap. The plan has faced opposition, most recently by State Representative Harvey Hilderbran, who has requested an Attorney General’s opinion on its validity. (For background on the two-tier plan, see *WS June 2004* and *November 2003*).

<i>Acquirers:</i>	<i>11 entities, including 1 irrigator, 2 irrigation districts, 6 mining interests, Zapata County Water Works and North Alamo WSC</i>
<i>Suppliers:</i>	<i>9 entities, including 1 irrigator, 7 irrigation districts and 1 mining interest</i>
<i>Water:</i>	<i>1-year leases of a total of 2,452.805 AF of Lower Rio Grande surface water rights</i>
<i>Purpose:</i>	<i>Irrigation, Municipal, Mining</i>
<i>Terms:</i>	<i>Irrigation (up to \$7.20/AF); Municipal (not disclosed); Mining (\$100/AF to \$225/AF)</i>
<i>Status:</i>	<i>Complete</i>

A total of 11 entities, including 1 irrigator, 2 irrigation districts, 6 mining interests, Zapata County Water Works and North Alamo WSC, signed 13 contracts for 1-year leases of Lower Rio Grande surface water during the first quarter of 2006. Leasing activity was considerably higher than the first quarter of 2005, which had 4 contracts totaling 1,020.399 AF, but still remains below the activity level in the first quarter of 2004, which had 20 contracts totaling 4,117.825 AF. Rain during the spring of 2004 boosted supplies so that the Texas Commission on Environmental Quality (TCEQ) was able to provide full allocations of water for most of the accounts. The increase in supplies was sustained by Mexico's repayment of its water debt in the Rio Grande Basin in 2005.

Irrigators leased 1,100 AF at prices up to \$7.20/AF, while municipal water users were the most active, leasing 1,309.075 AF. Lease prices for municipal water typically range up to \$50/AF. While mining interests leased the lowest volume, 43.73 AF at prices ranging from \$100/AF to \$225/AF, it was an unusually large amount of activity for that purpose.

The largest supplier was HCID No. 1, which provided 1,000 AF to Santa Cruz ID No. 15, the largest acquirer, in a single transaction. The most active supplier was HCID No. 2, with 3 contracts totaling 24 AF. North Alamo WSC and a mining interest tie as the quarter's most active acquirers, with two transactions each.

WATER MARKET INDICATORS

Unlike stock or commodity exchanges or bond markets, water markets are still in their infancy. Water assets are not traded westwide; no indicator can measure overall activity in water markets. The economic value of water depends upon the reliability of the underlying water right, quantity, quality, uses and the location and availability of competing sources of supply. *WS Indicators*, therefore, provide only a partial picture of emerging water market trends. As markets evolve, so will *WS Indicators*.

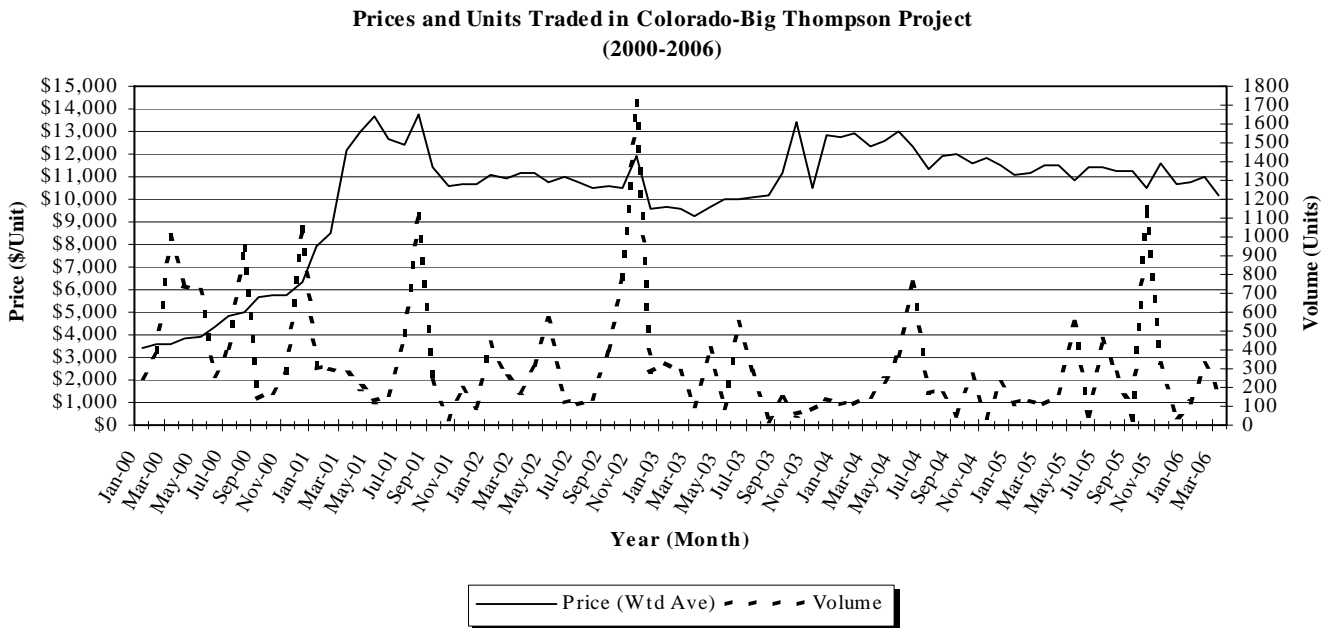
WS Indicators, which are selected because the water rights or leases represented are widely traded, include permanent acquisitions of Colorado–Big Thompson units in Colorado, Truckee River Surface Water Rights in Nevada, and Middle Rio Grande water rights by the City of Albuquerque, New Mexico, leases of Lower Rio Grande surface water in Texas, and the CAWCD lease rates for Central Arizona Project allocations in Arizona. *WS Indicators* are reported quarterly, though some individual indicators are omitted from some of the quarterly reports because their related transactions are reported to *WS* less frequently. Each quarterly *WS Indicators* report includes CBT Units, which have related transactions reported monthly, and Lower Rio Grande Surface Water Leases, which have related transactions reported quarterly. Truckee River Surface Water Rights and Albuquerque’s Middle Rio Grande Water Rights Purchases appear twice each year, at the same frequency as their related transactions are reported. Central Arizona Project Allocation Leases appear annually, because the Central Arizona Water Conservancy District sets the rates annually. Related CAP lease transactions are reported as they occur.

Colorado–Big Thompson Units

In the market created by the Colorado–Big Thompson Project, the most organized water market in the West, water rights are traded widely and competitively. Northern Colorado Water Conservancy District (NCWCD) manages the project, with its board of directors approving transfers of CBT units and setting quotas to determine the yield of each unit. For 2003 and 2004, the board set the quota based upon availability of water. Normally, the board bases its quota decision on need, leading to a historical average yield of 0.7 AF/unit in years of normal hydrology and 0.5 AF/unit in years of heavy runoff. The board set the 2005 irrigation season quota, which applies from March to October, at 0.7 AF/unit and the winter quota, which is in effect from November to April, at 0.6 AF/unit. The board began setting a winter quota in 2001 to allow municipal and domestic water suppliers to use CBT Project water during the winter without incurring a negative balance when the regular quota is set in April. The CBT Project has a total of 310,000 units.

Irrigators and municipal water suppliers have a straightforward process through which they may buy and sell CBT units (see “Trading Federal Project Water,” *WS October 1990*). *WS* reports an average of eight transactions each month.

In general, prices during the first quarter continued to stay at the low levels reached last year, ranging from \$10,224/unit to \$11,500/unit—compared to a range of \$10,500/unit to \$10,689/unit in the fourth



quarter and a range of \$10,037/unit to \$11,170/unit throughout 2005. The highest price paid in the first quarter was in January, when there was only one paid transaction. Additional units were dedicated to municipal water suppliers in exchange for service.

The volume traded during the first quarter shows promise for a rebound of activity, with a total of 627 units transferring—compared to 360 units in the first quarter of 2005 and 373 units in the first quarter of 2004. The volume traded in the first quarter was much lower than the fourth quarter of 2005, but was more stable, with the monthly trading volume ranging from 119 units to 319 units. The fourth quarter of 2005 saw volume vacillate from 53 units to 1,156 units per month.

Activity continues to rebound and stabilize after the 2002 drought. As residential and commercial development continues on the Front Range, expect the CBT market to pick up and strengthen.

Lower Rio Grande Surface Water Leases

In South Texas, demand for Lower Rio Grande water rights created a market for those rights. Leases of Lower Rio Grande water can be completed through a clear-cut process. The implicit rates for water vary among the different types of users. Though, recently, agricultural water rates have met municipal rates, agricultural users usually pay lower rates per acre-foot because they have lower consumptive use of water.

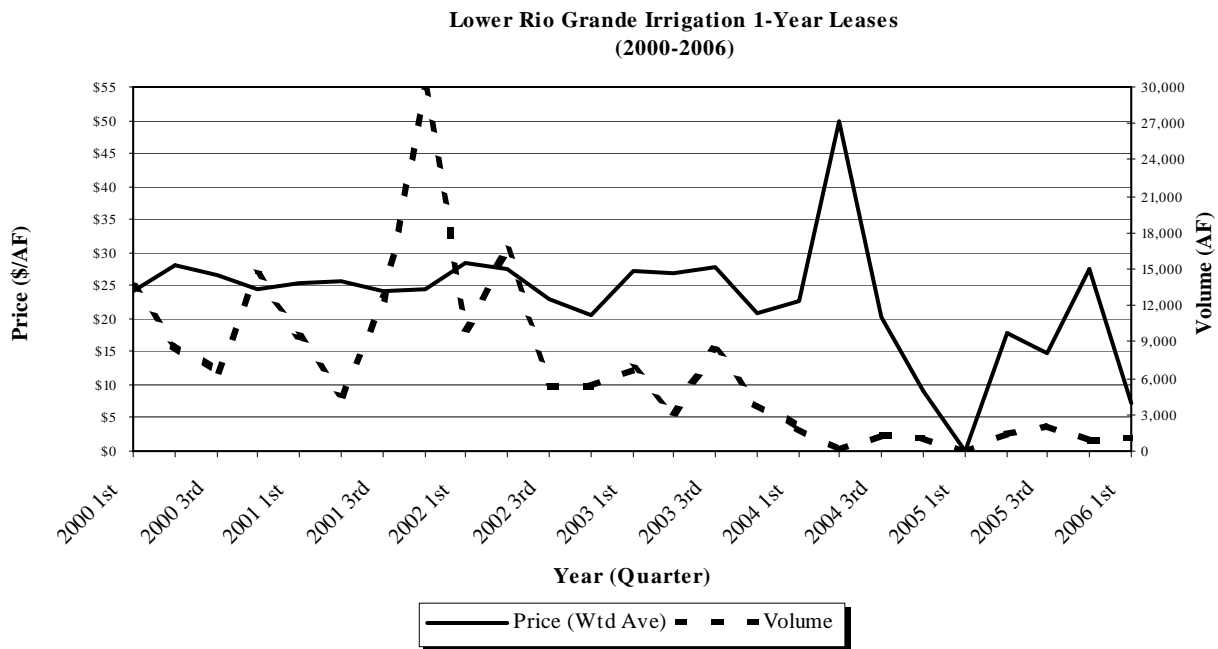
The first quarter once again saw a low level of activity, with 1,100 AF transferring in only two leases for irrigation. There were no leases for irrigation in the first quarter of 2005, while the first quarter of 2004 saw a drop in volume to 2,014 AF, the lowest point in six years at that time. The first quarter volume is comparable to the volume leased in each quarter for the last year and half, excluding the jump in activity in the third quarter of 2005.

Prices in the first quarter plummeted to a new all time low of \$7.20/AF. The previous low was \$9/AF in the fourth quarter of 2004. While the prices paid in most of 2005 generally were low compared to previous years, the first quarter price was less than half of the lowest price paid in 2005—\$14.87/AF in the third quarter—and nearly 25% of the highest price paid in the 2005—\$27.45/AF in the fourth quarter.

The first quarter had only two contracts for irrigation water, compared to 10 contracts in the fourth quarter, 18 contracts in the third quarter, 12 contracts in the second quarter, and no contracts in the first quarter.

In 2004, heavy rainfall in the second and third quarters provided sufficient water supplies to most irrigators, so their leasing activity was minimal.

Under an agreement reached between the United States and Mexico early last year, Mexico made deliveries to pay off its water debt in the in the Rio Grande Basin by September 30, 2005. Supplies are shored up from Mexico’s repayment of its water debt, but leasing activity and prices may increase if dry weather conditions resume.



MONTHLY WATER INTELLIGENCE

Federal Actions

National Integrated Drought Information System Act of 2006 Introduced in Congress

Representatives Ralph Hall (R-TX) and Mark Udall (D-CO) have introduced a bill to create a comprehensive drought information and warning system. The National Integrated Drought Information System Act of 2006 (NIDIS), introduced this month, would build an integrated system that enables local, state and national leaders to be more proactive in their approach to droughts. The bill designates the National Oceanic and Atmospheric Administration (NOAA) as the lead agency to create the system. NIDIS directs NOAA to build a national drought monitoring and forecasting system; create a drought early warning system that communicates drought forecasts, drought conditions and drought impacts to decisionmakers at the federal, regional, state, tribal and local levels; and provide an interactive drought information delivery system. The bill also allocates \$94 million over the next six years to fund the creation of the system.

“In my home state of Texas, the wheat crops have been decimated by drought conditions, producing the worst ratings in 20 years. My own home district in northeast Texas is experiencing the most severe damage statewide from the drought. In Missouri, farm ponds have been drying up in record numbers, and in Oklahoma, the wheat crop rated 58% poor to very poor. Droughts cause between \$6 billion and \$8 billion a year in direct estimated losses to the U.S. economy, and they have devastating impacts on our society,” Rep. Hall said. “While we cannot stop nature, we can do a better job predicting, monitoring and mitigating this problem.”

The bill has been referred to the House Committee on Science.

In another action related to the need to address the drought, Senate field hearings were held in Albuquerque, N.M. to look into the severe drought and associated water crisis facing New Mexico and the Southwest this year. The committee is conducting field hearings to assess ongoing drought conditions as well as legislative and technological initiatives that might alleviate escalating water shortages. “The seriousness of the ongoing drought cannot be overstated,” Senate Energy Committee Chairman Pete V. Domenici states. “These dry days are just about the worst in a century and the ramifications of the drought are affecting everyone. We have selected witnesses who can give real-life assessments of what the drought is doing to our state, and to look at what resources might be applied to help the situation. There is a pressing need now, not only in New Mexico, but in a majority of the Western states to address this problem.”

State Actions

Colorado Water Charter Goes to the Legislature

A historic charter that could end Colorado's water wars has been introduced in the Colorado General Assembly. The charter, created and approved by the Inter Basin Compact Committee (IBCC), considers the water needs of users across the state – including fishing and recreation in the mountains, booming urban communities along the Front Range and farming on the plains. Participants in the IBCC agreed to explore flexible, market-based approaches to water supply including interruptible water contracts, water banking, in-state water leasing and groundwater recharge. The charter, if passed, will not supersede any existing Colorado water law, nor does the charter repeal or amend any existing water rights adjudication.

The charter has 10 foundational guiding principles: all Colorado water users must share in solving water resource problems; the State of Colorado should provide assistance, when requested, for local water supply planning and assist in the implementation of consensus-based water resource solutions that respect local authorities, private property and water rights; while planning to meet future needs, water suppliers and utilities should give preference to development of economically viable local water sources and demand management; additional water storage should be pursued through the improvement and rehabilitation of existing structures and the development of new structures; the right of water rights owners to market their water rights must be protected; appropriate recognition should be given to preservation of flows necessary to support recreation, hydroelectric and environmental needs concurrent with development of water for beneficial consumptive use; adverse economic, environmental and social impacts of future water projects and water transfers should be minimized; future water supply solutions must benefit both the area of origin and the area of use; water conservation measures that do not injure other water rights should be aggressively pursued; and finally, there must be an ongoing, concerted effort to educate all Coloradans on the importance of water, and the need to conserve, manage and plan for the needs of this and future generations.

Legislation sponsored by State Senator Jim Isgar (D–Hesperus) created the IBCC in 2005. Since creation, the IBCC and water roundtables in the state's seven river basins and two sub-basins have met with the purpose of determining how water should be utilized in their districts. The Committee approved The Colorado Water for the 21st Century Charter in April, and has submitted the charter to the legislature for ratification.

Isgar feels the charter is a major step in resolving the differences over water in Colorado. The process outlined in the charter is designed to help alleviate the state's chronic water shortages that were exacerbated by the rejection of a plan in 2003 that would have authorized \$2 billion in bonds for water storage if approved by voters. The charter provides a road map for water planners while taking into consideration the needs of users across the state. Language in the charter not only calls for consideration of economic impacts of water transfers, but a recent amendment includes recreation and socioeconomic impacts. The charter specifies "future water solutions must benefit the area of origin and the area of use." With the current Colorado law favoring the thirsty Front Range at the expense of water users in the Western Slope, this may mean

big changes. Using the charter, the committee will consider and approve plans negotiated by the roundtables. However, there are many skeptics of the problem-solving capabilities of the charter.

It has been argued that the charter dodges the major issues that initially divided those in the area of water origin and those in the area of use. Skeptics of the charter note that it contains “guiding principals” which are not enforceable and can be easily ignored. There is also a question of legality. Senator Jim Dyer (R-Littleton) feels that the roundtables are unconstitutional and will be challenged in court. He states, “The constitution says basins can’t claim water that can be put to beneficial use. They can’t claim something they don’t own.” While the roundtables will potentially force negotiations over the water wars, their effectiveness may ultimately be decided in the Supreme Court of Colorado.

The charter has been assigned to the House Agriculture, Livestock and Natural Resources Committee. Full text of the charter is published on the Colorado Department of Natural Resources home page at <http://www.dnr.state.co.us/>.

New Mexico Issues Draft Taos Pueblo Water Rights Settlement

Nearly forty years of struggle among the Taos Pueblo, the State of New Mexico, the Taos Valley Acequia Association, the Town of Taos and several other water providers and users in the Taos Valley has likely ended with the negotiation of the Taos (aka, “Abeyta”) Pueblo Draft Water Rights Settlement Agreement (DSA).

The New Mexico Office of the State Engineer (OSE) had originally filed suit in the matter in 1968. The original dispute, along with the *Aamodt* case, pitted Native American Pueblos against non-Indian water users and concerned the pueblo’s adjudicated water rights.

March 31, 2006, OSE announced that DSA was reached after negotiations that began in 1989.

The 101 page agreement will also need federal approval and state and federal legislation to help enable some of its provisions. It will also need to be formally approved by the seventy-one other signatories. Senator Pete Dominici (R-New Mexico) has expressed concerns to the Bush Administration that settlements like *Aamodt* and Taos Pueblo be adequately and immediately funded in upcoming appropriations so as to protect the Pueblos.

In a release from the State of New Mexico, OSE State Engineer John D’Antonio said, “This proposed settlement is in the best interest of water right owners in the Taos area and on the Rio Grande throughout New Mexico. It will resolve the water claims of the Taos Pueblo and bring certainty to thousands of water right claimants in the Taos area, while still protecting the main stem of the Rio Grande.”

Pueblo officials hailed the agreement as not just a fair resolution of difficult water issues, but a change in how pueblos are treated by New Mexico governments and water users.

“The long and hard work of the Pueblo and its neighbors on this agreement has led to a foundation upon which we can all build a relationship for the future,” said Nelson Cordova, Taos Pueblo Water Rights Coordinator, in the release. He added that the DSA provides for “a relationship that is built on mutual trust, respect and cooperation, something that has been missing historically.”

The DSA gives the Pueblo the right to market its water rights within or without the Taos Valley. The

pueblo can market under the following restrictions:

- That the use of the water is consistent with federal law;
- That the pueblo does not permanently sell or “alienate” any of its rights;
- That no term for rights goes beyond ninety-nine years, including renewals;
- And that any agreement for rights beyond seven years must be approved by the Secretary of the Interior.

While the pueblo gained authority they wanted, some of the non-Indian users were also pleased with the DSA.

The Mayor of Taos, Bobby F. Duran, said in the release that the DSA “quantifies and protects Taos Pueblo’s waters. It further provides for the security for waters of the Town of Taos and other non-Indian water users.”

Also a party to the DSA, the Mutual Domestic Water Consumers Associations, representing community and government water systems to non-Indian water users in the rural Taos area, said it too is pleased with the agreement.

“At long last it resolves our uncertainties over our water rights and provides us with the resources to supply domestic water to over 5,000 residents in our valley.”

A series of public meetings were also held in mid-April to discuss the DSA.

NV: Washoe County Urges State Engineer to Act Cautiously on Aqua Trac’s Water Appropriation Applications

The Washoe County Board of County Commissioners held a meeting on March 28th to review a proposed water importation project and recommend a course of action to the State Engineer. Under state law the affected counties must hold such a meeting and recommend action to the State Engineer whenever an application is filed to appropriate water in one county and use it in another county. The State Engineer is not bound by the county’s recommendations.

A staff report submitted to the board suggests that the commissioners recommend that the State Engineer deny the applications to appropriate water for the project. The commissioners recommended that the State Engineer act cautiously when deciding the applications and advised the State Engineer’s Office to complete additional studies to update the projected sustainable yields for the affected hydrographic areas.

Aqua Trac, a private development firm, has proposed a water importation project and filed for applications to appropriate water in three hydrographic basins in Pershing, Churchill and Washoe Counties. The water would be used in Washoe, Storey, Lyon and Churchill Counties. The Washoe County Comprehensive Plan, Public Services and Facilities Element prohibits long term groundwater mining.

In all, Aqua Trac filed 87 appropriation applications between April 4, 2005 and October 18, 2005, requesting 101,800 AF. According to USGS reports, which were completed in the 1970s, the total estimated yield for the three hydrographic basins is 8,300 AF. Of the total volume, Aqua Trac requested 30,800 AF in 16 applications in the Kumiva Valley hydrographic basin, where a USGS report shows an estimated yield of 500 AF, and preliminary data from the State Engineer’s Office show no existing or pending appro-

priations. Thirty six applications for 38,000 AF were filed in the Granite Springs Valley hydrographic basin, where a USGS report shows an estimated yield of 4,500 AF, and preliminary data from the State Engineer's Office indicate that the basin is over-appropriated with 5,400 AF of existing and pending appropriations. In the Winnemucca Lake Valley hydrographic basin, Aqua Trac filed 35 applications for 33,000 AF. USGS reports an estimated yield of 3,300 AF, and the State Engineer's Office shows that the basin is fully appropriated with existing and pending appropriations accounting for the full 3,300 AF.

Because the proposal exceeds the perennial yield, Washoe County filed protests against all of the permits in Winnemucca Lake Valley, which would divert water from Washoe and Pershing Counties. Aqua Trac has filed applications in other hydrographic areas, such as Cold Springs Valley, East and West Lemmon Valleys, Warm Springs Valley, Dry Valley and Newcomb Lake Valley, which the county has also protested because USGS and county data show that the areas are fully appropriated.

WY: State Court Decision Clouds Jurisdiction Over Water

A March 2006 Wyoming state district court decision concerning whether two creeks were waterways under Wyoming law has put into question decades of the state's water law and regulation.

In *Williams Production RMT Company v. William P. Maycock II*, decided March 16, 2006 by Wyoming 8th Judicial District Judge Keith G. Kautz, the Court held that Barber Creek and South Prong Barber Creek on Maycock's ranch were not "watercourses" under Wyoming law.

Williams has plans to develop coal bed methane (CBM) gas under its mineral rights patent on Maycock's land. In order to get at the CBM gas, Williams would first have to drain water in cracks and fissures that currently trap the gas. Williams planned to pump out the water and have it drain through the two creeks, which it argued were watercourses under Wyoming law.

If considered "watercourses" under state law, Williams believed they would not have to seek condemnation of Maycock's land in order to drain the CBM water as the water would be "owned" by the State of Wyoming. They argued this water could "naturally" flow down the creeks.

Maycock argued that the two creeks did not meet the legal definition of a watercourse. While water is a precious resource in water-starved Wyoming, Maycock and other ranchers do not want CBM water flowing across their lands because the areas are used as pasture and meadows for cattle. Also, they are concerned about the quality of the CBM water, the minerals it carries, and the impact that has on their vegetation. CBM producers assumed the practice was legal.

The decision came as a surprise to the Wyoming State Engineer. The Wyoming State Constitution provides that all natural waters within the boundaries of the state are property of the state. The assumption prior to the March 16th decision was that the state regulated all naturally occurring water in the state, including the water that Williams proposed to pump across Maycock's land. The decision calls that assumption into question.

"While the State Engineer's Office is still reviewing Judge Kautz's March 16, 2006 decision, we are concerned about the potential ramification that some water may not be under state jurisdiction," said State Engineer Patrick Tyrrell. "This creates consistency questions regarding the practices of this office."

Judge Kautz analyzed whether the two creeks on Maycock's land were legally watercourses under *State v. Hiber*, a 1935 Wyoming Supreme Court decision. Under *Hiber*, the factors to consider as to whether a watercourse is actually a legal water course are:

- Does the stream flow in a particular direction;
- Does it have well-defined banks and channels;
- The watercourse need not flow continuously;
- Water accumulates in large quantities from rain and snow;
- At regular season the water flows and carves out a distinct channel;
- Is there more than mere surface drainage;
- Is there indication of frequent running water action;
- Beneficial use of the water is only one factor; and
- None of these factors predominates.

Judge Kautz held that "Although they (the two creeks) largely have banks and beds, and sometime flow accumulated water, the flow of water is rare. . . . Although some portions of Barber Creek, viewed in isolation, may give the impression of frequent flowing water, the entire drainage, viewed as a whole, does not."

As of press time, Williams had not decided whether to appeal the decision to the Wyoming Supreme Court.

Indian Water Resources

Muckleshoot Indian Tribe Agreement with Seattle

In 2003 the Muckleshoot Indian Tribe challenged permits that allowed the City of Seattle to operate its water supply and hydroelectric facilities on the Cedar River without legal responsibility to the federal Endangered Species Act. The City was awarded the permits based on its Cedar River Conservation Plan, but the Muckleshoot argued the water diversions for municipal use from the river would impact salmon and other natural resources.

The Tribe filed a lawsuit against the National Marine Fisheries Service and the permit issued to the city. After 26 months of talks the city and the Tribe have filed a settlement agreement with the District Court. The agreement consists of three basic parts: in-stream flows; funding for fish & wildlife; and tribal access to the watershed for purposes of hunting and fishing.

The city has agreed to guarantee in-stream flows to support healthy fish populations in perpetuity through water limits. The perpetual limits will be a maximum water diversion of 124 million gallons per day (mgd), calculated as an annual average and beginning in 2051, with the average of city annual diversions for any ten-year period shall not exceed 114 mgd. This annual diversion will be raised in increments and will not exceed 105 mgd prior to 2021 and from 2021 to 2030 will not exceed 110 mgd. In 2031 there will be a rolling 10-year average not to exceed 100 mgd.

The city has also agreed to transfer the portion of its water right claims exceeding 124 mgd to the State Water Trust for the purpose of providing instream flows. This transfer will be in a manner that is

acceptable to the Tribe and will also be a permanent agreement. Seattle will continue its conservation efforts with respect to direct retail customers and ensure that wholesale customers implement similar conservation efforts.

Other agreements within the settlement include the enhancement of the sockeye hatchery on the Cedar River, the transfer of 1,300 acres in the Green River watershed to the Tribe, a cooperative plan for wildlife in the watershed, and protocol for watershed access. Overall the settlement seeks to protect the native fish, establish greater certainty for the region's water supply and to support the exercise of tribal rights.

Norton Signs Southern Arizona Indian Water Rights Settlement Agreement

As one of her last major actions before leaving office, Secretary of the Interior Gale Norton signed the Southern Arizona Water Rights Settlement Agreement resolving the water claims of the Tohono O'odham Nation. The agreement was authorized under the Arizona Water Settlements Act, which was signed by President Bush in December 2004. It addresses Central Arizona Project (CAP) repayment and water allocation issues and claims and disputes between tribes and other water uses that arose from a negotiated settlement between the federal government and the Central Arizona Water Conservation District

An initial step toward addressing the tribe's claims, which center on groundwater pumping, was taken in 1982 with the passage of the Southern Arizona Water Rights Settlement Act. Among the issues addressed by the Arizona Water Settlements Act of 2004, were matters that prevented full implementation of the 1982 settlement act. The recently signed agreement was the final step required before the act could be fully implemented.

Under the agreement, which settles the tribe's existing water right claims, the tribe waives all future water rights claims. In return, the San Xavier and Shuk Toak Districts of the Tohono O'odham Nation will receive a firm supply of 37,000 AF/year of CAP water, an additional 28,200 AF/year from any source and a \$15 million trust fund for water resource development.

The costs associated with delivering the CAP water to the tribe will be covered by a cooperative fund. Contributions by the federal government, State of Arizona and other settlement parties provided the fund's initial capitalization of \$10.5 million. Congress has authorized the federal government to appropriate an additional \$16 million if needed.

Norton commended the parties for their work in developing the agreement.

"A comprehensive approach is the right way to resolve longstanding disputes regarding the use of the Central Arizona Project and this portion of Arizona's allocation from the Colorado River," Norton said. "These parties have worked together to solve problems cooperatively rather than through decades of litigation. I salute their accomplishment."

She also applauded U.S. Senator Jon Kyl (R-AZ) for his work in steering the 2004 settlement act through congress. (For background on the Arizona Water Settlements Act of 2004, see *WS December 2004* and *October 2004*).

Corporate Actions

RWE Planning American Water IPO

A German-based utility conglomerate's plans to spin off its American water operation has spurred interest on Wall Street and concerns on some American main streets.

In November 2005, RWE AG, German's third largest utility, announced its intention to divest itself of its water operations in Great Britain (RWE Thames River) and in North American (American Water). American Water is one of the largest private suppliers of water in the United States, serving 18 million people in 29 states and in Canada. (See *WS November 2005* for background on the announcement).

In March 2006, the RWE executive board decided to pursue an initial public offering (IPO) for shares of American Water. RWE had previously purchased American Water Works, Inc. in 2001 for \$7.5 billion. (See *WS September 2001* for background RWE's purchase of American Water).

The company, which is German's largest producer of electricity, said it plans to concentrate on "the converging European electricity and gas markets," according to a November 4, 2005 press release. "The limited synergies between the North American and UK water businesses and the European energy business were also a major factor in this decision," it noted at the time.

According to its March 24, 2006 release, RWE says the IPO will result in a publicly traded company that is focused on water and wastewater in the U.S. and "dedicated to maintaining a high level of service and quality."

However, the IPO and divestiture has been met with concerns by some American mayors whose communities are served by American Water. Some have expressed interest in having RWE sell their facilities to the municipalities they currently serve. However, RWE has not been receptive to the idea, saying it does not want to sell off American Water "piecemeal."

Prior to its yearly annual shareholder's meeting in April at its Essen, Germany headquarters, city officials from Monterey Peninsula Water Management District in Monterey, California; Santa Clara, California; Urbana, Illinois and four other Illinois communities and Lexington, Kentucky presented a petition calling for interested municipalities to be able to negotiate the purchase the portions of the of the utility serving their communities prior to RWE proceeding with the IPO.

There is also pending legislation sponsored by California State Senator Abel Maldonado (R-Monterey) that would give public agencies the right of first refusal in the purchase of the Cal Am portion of the American Water system in California. One appraisal commissioned by a group campaigning for the public purchase of Cal Am calculates a small rate hike spread over thirty years would be cheaper for users than the continuing increases that Cal Am has proposed.

As of press time, there was no information on what action RWE took on the petition.

Prior to its November 2005 announcement noting its proposed divestiture of American Water, RWE AG was trading for •55 (euros)/share on the German stock exchange. The selling price has risen steadily since the divestiture announcement, with a one year high of 74.8 on February 22, 2006. Since then, the stock has traded in the low 70s, with a April 13, 2006 close of 71.97. The company is over one hundred years old. It had operating revenues of •42.95 (euros) billion in 2005, earning a six per cent net profit margin.

RWE says they hope the IPO and divestiture of its American and UK water systems is completed by 2007.