COLORADO DIVISION OF WATER RESOURCES
DEPARTMENT OF NATURAL RESOURCES

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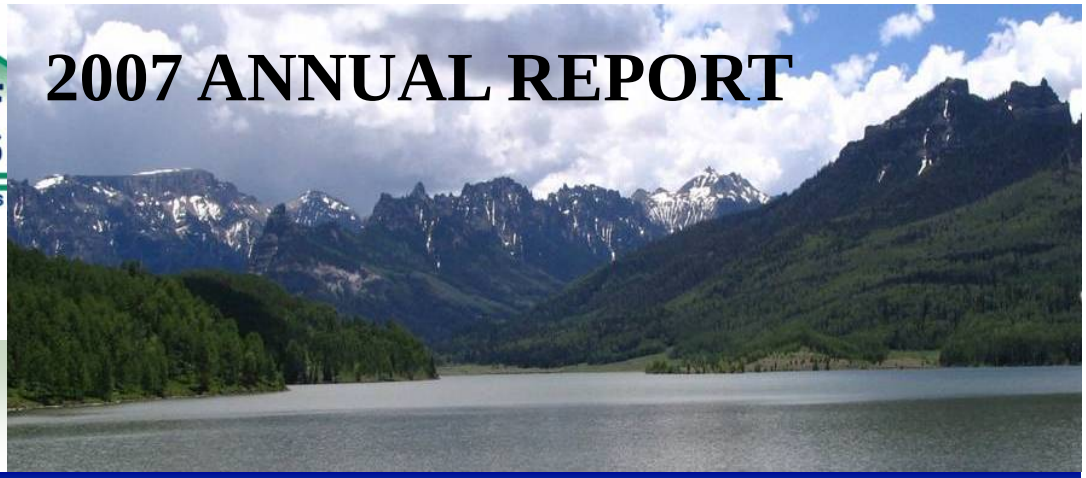
2007 ANNUAL REPORT



Message from Dick Wolfe, Director/State Engineer

It is an honor and a privilege to serve as your next State Engineer. I want to thank Hal Simpson for his many years of dedicated service to the State of Colorado. I am proud to succeed him as State Engineer and the Director of the Colorado Division of Water Resources. As you can see from this report, Hal has led a very active and diverse Division that continues to make outstanding achievements regarding many complex and challenging issues.

As I look forward, I continue to see many challenges ahead. But I recognize that with a clear vision of our future, we can turn these challenges into opportunities. We do not want to act too quickly, but in appropriate steps with clear progression. In doing so, I will be meeting with many people in the upcoming months seeking ideas on how we can best serve the needs of our water users in the coming years. We have some excellent opportunities for change to become even more effective in achieving our mission and objectives. These changes will be aligned with the values we have established for our agency.

I committed to the Governor that I will create new relationships where they did not exist and mend ones that are broken. We may fail at times to achieve our goals and commitments, but I am determined that these experiences will only make us stronger. We live in a fast-changing and complex world and our jobs reflect this. I welcome the challenge to explore solutions to the many complex situations we encounter daily. We are committed to open and direct communication. I promise I will do my best to develop the trust you deserve by listening to your concerns and desires. I expect you to hold me to this promise. I have also asked our dedicated and exceptional staff to do the same. If we ever fail to meet your expectations, please let me know. I look forward to an exciting period ahead of us. We have much to discover and solve. — *Dick Wolfe*

Editor's note: Governor Bill Ritter appointed Dick Wolfe as Colorado's twenty-second State Engineer on November 26, 2007. Dick Wolfe replaced Hal Simpson, who retired in May 2007. Prior to this appointment, Wolfe served as Assistant State Engineer with the Division of Water Resources since 2005. He led the South Platte Task Force in examining water issues in the northeast Colorado basin and made recommendations on possible solutions to the challenges facing the state's water users. Mr. Wolfe authored several articles in various publications, including *"Water Administration: State Engineer's Office"* in the Colorado Water Law Bench Book.

Mr. Wolfe is a native of Colorado and was raised on a farm in Weld County. He also served on the Fort Lupton City Council and was the mayor of Fort Lupton from 1995 to 1997. He has been with the Division since 1993.

Office of the State Engineer
Colorado Division of Water Resources

Executive Director, Department of Natural Resources
Harris D. Sherman

Governor
Bill Ritter, Jr.

COLORADO DEPARTMENT OF NATURAL RESOURCES

Director / State Engineer
Dick Wolfe (appointed November 2007)

Deputy State Engineer
Kenneth W. Knox
Interstate Compacts, Litigation, Information Technology, Public Records, Modeling and Decision Support Systems

Deputy State Engineer
Jack G. Byers
Engineering, Designated Basins, Technology, Budget and Investigations

Assistant State Engineer
Vacant
Water Supply, Water Well Permitting

Public Information Officer
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James R. Hall, Division 1
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Arkansas

Michael J. Sullivan, Division 3
Rio Grande

Wayne I. Schieldt, Division 4
Gunnison

Alan C. Martellaro, Division 5
Colorado

Erin C. Light, Division 6
Yampa / White

Scott D. Brinton (Acting DE), Division 7
Bruce Whitehead (resigned 10/31/07)
San Juan / Dolores

South Platte River Basin—Division 1

For the first time in several years, water conditions in 2007 returned to more of an historical average. With this, the amount of conflict was reduced within the basin. Water commissioners did an excellent job in assuring that water rights were administered in priority seven days a week, every week, all year round. Well issues remain a primary focus of administration. In this regard, staff continued to field-inspect decreed and/or permitted wells that were not in an augmentation plan or substitute water supply plan (SWSP) to determine if these wells exist. Staff issued orders for wells that were not in a plan.

The Division continued to have a successful hydrography and dam safety program. The staff in Division 1 also continue to provide support to planning efforts associated with Basin Roundtables, the South Platte Decision Support System and the Endangered Species Act.

The cold conditions in December and January also created periods of free river on the South Platte due to the limited ability of reservoirs to fill. The ability to store water improved in February as weather conditions warmed during the month. Nevertheless, some users still were unable to take their full decreed amounts due to ice conditions. Flow the latter part of February significantly increased due to the melting of low elevation snow.

Reservoir and municipal users continued to place the main demand on supplies in March and April. With the wet weather, the flow at the Kersey gage, the key gage for measuring overall flow conditions, exceeded the average in February, March, and April for the first time since 2001. This above-average flow allowed the major irrigation reservoirs on the South Platte River to fill despite the fact that many of these reservoirs were either near or totally empty going into the water year in November 2006. As shown in the picture, 2007 even had some limited flooding along the South Platte between Denver and Greeley for a short period of time.

Isolated flooding in Water District 2 in April

Wet conditions continued in the South Platte basin through the month of May which allowed for continued free river conditions for the river throughout the month. The seven weeks of free river in April, May and June on the South Platte exceeded the total number of days of free river that existed between May 2002 and April 2007. With the wet conditions, reservoir levels along the whole South Platte River and on most tributaries continued in very good shape. In addition, the water levels in both Cherry Creek and Chatfield Reservoirs were into the flood pool during most of May.

Arkansas River Basin—Division 2

Following the extraordinary winter of 2006-07 which deposited frequent and significant snow accumulations across the southern plains and which prompted unrealized spring flooding concerns, the Arkansas valley enjoyed a remarkably temperate spring and early summer (with the notable exception of the tornado that devastated the town of Holly in late March). As a result, the runoff was sustained and prolonged, quite similar to the historical average. This afforded some of the junior irrigation water rights a better supply and allowed senior rights to conserve their stored water for use later in the season and to carryover water in storage through the winter as a hedge against future uncertainty in the spring of 2008. The amount of compact water stored during the period of winter storage from November 2006 to May 2007 in John Martin Reservoir was 53,705 acre-feet.

The water commissioners are becoming more proactive in administration of augmentation plans and their efforts are yielding positive results in accomplishing the Division's goal of including diversions, depletions and replacements in diversion records for all augmentation plans. Augmentation coordinators are assisting water commissioners in this effort by providing reports and accounting received from decreed plan and substitute plan users. The number of augmentation plans continues to increase and now totals 462 decreed plans and 80 substitute water supply plans. Every water district picks up additional decrees each year while the number of water commissioners remains constant. Successful administration of augmentation plans and all other decrees will, in the future, require a team effort from all available resources in Division 2.

Monthly usage reports were received for 1,523 meters representing 1,610 wells. The majority of the wells (1,451, 90 percent) now use Totalizing Flow Meters (TFM). The changes in Measurement Test Policies and Amended Measurement Rules have encouraged the use of the TFMs rather than Power Consumption Coefficients. Fifty-five wells changed from the PCC Method to the use of TFMs during 2007 leaving only ten percent of the wells with the PCC method of measurement (159 wells).

Regarding the Arkansas River Compact, the lawsuit filed by Kansas in 1985 is approaching a conclusion. Special Master Littleworth found that Colorado's efforts to regulate post-compact well pumping have been successful in preventing a net depletion to usable stateline flows during the first ten-year compliance period and he will issue his fifth and final report in January 2008.

Rio Grande Basin—Division 3

The year 2007 was inconsistent any way you look at it. During October 2006, the basin saw significant precipitation, which made for efficient river operations later in the year. The snowpack was not auspicious, with a peak of 75 percent of normal by May. This limited snowpack indicated that the total runoff would be low for the year.

By May, the projected annual index was only 490,000 acre-feet on the Rio Grande. With this low forecast and significant return flows, the compact curtailments were kept low or off into June. However, it appeared that the forecast index was too low and a curtailment was instituted in June and increased to a maximum of 33 percent as river flows did not drop off. The river finally turned-over in July after indexing approximately 200,000 acre-feet more than the May forecast. The year ended with 710,000 acre-feet indexed on the Rio Grande.

Stream administration was challenging due to the 75 percent snowpack and the incredible yield in the basin. Early low forecasts for basin yields led to initially low compact delivery requirements and curtailment percentages. The continuing production through June resulted in high curtailments late in the season. The above average year and the smooth runout on the Rio Grande lead to high diversions into ditches. The net result was a 240,000 acre-feet gain in the unconfined aquifer study area. The rise in total volume for the Conejos also meant that high curtailments were required late in the season to make up for the higher obligation. Other streams in the basin (not compact related) also produced substantial water for irrigation.

The well metering program went into effect in 2007. Meters were required to be installed on all non-exempt wells by March. With an estimated 6,000 wells in the basin, this was a huge task. Initially, staff were kept in the office to deal with the huge volume of paperwork involved in the metering program. The program allowed for variances (one meter to many wells under certain circumstances), required owners file meter installation forms or inactivation forms, all of which required a considerable amount of data from the owners. The staff helped review the forms, reviewed variance requests, inspected installations, and began inventorying all the wells in the division.

By the end of 2007, the staff had processed the following: Verification of Totalizing Flow Meter (1,650), Totalizing Flow Meter Installation (3,700), Well Owner Information (3,000), Water Use Data (3,200), Inactivation (1,400), and Variance Request (800). The staff have also been scanning and linking all these forms into the imaging system. To date, over 14,000 forms have been scanned.

Gunnison River Basin—Division 4

The 2007 water year was a unique and interesting year. It started out with very wet surface and ground water conditions from the extremely wet summer/fall of 2006. However, the winter snowfall did not accumulate very well and, by April 1, basinwide was only 73 percent of average. Because of the abundant rains again in the summer and fall, the levels in the reservoirs for the entire basin were very high going into the winter season. This is shown in the high carryover storage level in Blue Mesa Reservoir despite running strong flows in the Black Canyon all summer.

Even though the snowpack was low, the spring runoff turned out to be far more than expected, coming close to normal. Blue Mesa Reservoir was only forecasted to fill to four feet from full, but releases had to be increased in June to avoid spilling. Evidently, the forecasting methods do not give enough consideration to the soil moisture conditions and how it can increase the amount of runoff water the snowpack will produce. This was noticed in the past during drought conditions when the snowpack only seems to evaporate or run into the ground and runoff is far less than predicted.

Division 4 received very timely rains in 2007. After record heat in June and the first half of July, the summer monsoonal rains came early. Several times during the summer, when the flows started to drop, various parts of the basin would receive a good rainstorm and the flows would be brought back up and demand decreased.

The activities over the quantification of the Black Canyon National Park water right continued in 2007. The year 2007 started with the decision by all parties that they would not appeal Judge Brimmer's decision to agree with all four points raised by the environmental coalition plaintiffs. The National Park Service then started work on all the 132 stipulations that were signed, registering them with the court. However, trouble started when staff were reviewing the language in the stipulations and discovered that it contained selective call language that they couldn't accept. During the next seven months, the state deliberated with all of the other parties to remove the selective call language from past or future stipulations. Finally, the issues were worked out by the end of July. The parties hired a professional mediator to mediate several meetings from September through December. Due to the confidentiality agreement signed prior to the negotiations, the issues cannot be discussed in this report and the parties are anticipating a settlement.

With regard to personnel, the Assistant Division Engineer position became vacant in July 2007. After a competitive selection process, Bob Hurford was chosen as the new Assistant Division Engineer, starting on August 13. Bob was the Public Works Director for the City of Montrose and possessed extensive managerial skills which will prove helpful in this new position.

Colorado River Basin—Division 5

The 2007 irrigation season began with brief periods of heavy snow accumulations with lengthy periods of inactivity. On January 1, measurements showed the basin was 102 percent of average overall. With reservoir storage at 101 percent of normal, runoff was forecasted to range from 100 to 107 percent of average for all sub-basins except Muddy Creek, which had a runoff forecast of 83 percent due to low reservoir storage in Wolford Mountain Reservoir.

Releases during 2007 for the endangered fish in the 15-Mile Reach were near normal, though less than deliveries for 2006. The endangered fish include the Colorado Pike Minnow, Humpback Chub, Bonytail Chub and Razorback Sucker. The 15-Mile Reach is on the main stem and extends from Palisade below the diversion dam for the Grand Valley Canal to the confluence with the Gunnison.

On June 20, 2007 one of two penstocks at the Shoshone Power Plant ruptured,

inundating the facility with water and tons of rock and debris. As a result, a call from the power plant would not be exercised for the remainder of the irrigation year and well into the next. This extended to the storage season and allowed diversions that normally would be curtailed or replaced to remain in priority—further improving basinwide storage. Without a call at Shoshone, concerns immediately focused on impact to irrigation, the rafting industry in the Kremmling and Glenwood Springs areas, and other recreation. Additionally, low flows in the Colorado River raised concerns of water quality for the towns of Silt, Rifle, and Clifton, as well as the Orchard and Vineyards in the Grand Valley.

Colorado's slowing economy could be seen during the year in regard to the total number of permit applications received and the total number of permits issued by the Division of Water Resources. Division 5 noted a decrease of 17.6 percent from the number of well permits issued in 2006. However, staff kept busy in the areas of ground water and well permitting along with general research regarding water well ownership for real estate transactions and general well permitting issues.

Division 5 came to an agreement with the USBR regarding operation and upgrades of seven gages on the Colorado-Big Thompson system. In water year 2008, the Division will install high data-rate DCP/satellite transmitters at gages on the Colorado River below Granby Reservoir, the Colorado River near Granby, and Willow Creek below Willow Creek Reservoir.

Yampa/White River Basins—Division 6

In water year 2007, the snowpack or snow-water equivalent (SWE) was initially above average, but quickly changed by the end of December. The October SWE values were well above average but, by December, they had dropped to well below average and remained below average for the remainder of the season. Warm weather in April and May resulted in early snowmelt runoff, and thus low SWE by the end of May.

With regard to precipitation, the water year was relatively dry even though it started and ended well. May and June experienced slightly below average temperatures with significantly below average precipitation. The rest of the summer had significantly above normal precipitation. Based on the precipitation recorded at the NRCS Snotel sites, October precipitation was 166 percent of average for all three basins combined (North Platte, White and Yampa Rivers). However, by December the cumulative precipitation was 94 percent, with December alone being 65 percent of average.

The construction of the enlargement of Elkhead Creek Reservoir near Craig was completed and the reservoir was filled in April. This enlarged reservoir provides an additional 12,000 acre-feet of storage to the lower reaches of the Yampa River drainage. Five thousand acre-feet of this enlargement is designated for in-river fish habitat and enhancement uses and use in furtherance of the Upper Colorado River Basin Fishes Recovery Program in the critical habitat reach of the Yampa River for four endangered fish species. As a result of low flows on the Yampa River through the critical habitat reach, water was released from the reservoir for in-river fish habitat and enhancement uses, and uses for the Recovery Program. Releases were made from the reservoir from August 1 through 9 at a rate of 40 cfs and then resumed on August 13 at the rate of 46 cfs. Varying releases were made until mid-September when rain events increased flows in the Yampa River and the flows no longer needed to be supplemented. Approximately 5,000 acre-feet were released and protected through the critical habitat reach by regulating all diversions.

Maybell Canal diversion from the Yampa River within the critical habitat reach.

San Juan/Dolores River Basin—Division 7

The 2007 water year started out with a big wet bang. Rain started across the basin on October 4 and it rained on ten of the next thirteen days. Durango received a total of 4.29 inches in those thirteen days. The Animas River at Durango peaked at 7,080 cubic feet per second (cfs) on October 7. The La Plata River at Hesperus peaked at 704 cfs on that same day, well above its average flow of 18 cfs. Due to a wetter than normal fall in 2006, major reservoirs in the Division were able to maintain higher than average storage levels throughout the water year. Reservoirs across the Division took advantage of the lack of an irrigation call and stored a major portion of the precipitation received during this time period. As usually happens, the big wet bang changed into the long dry bust. It was not until March 22 that Durango matched the precipitation received in those thirteen days. The year that started out with such a wet promise ended up a merely average year.

On January 1, the snowpack was 77 percent of normal. This continued the unenviable trend of the ninth below average snowpack on January 1 in the last ten years. While this looked to be a bleak snowpack, it was a 321 percent increase over the January 1, 2006 snowpack. The snowpack continued to maintain below normal values for the remainder of the water year.

A significant amount of construction progress was made on the Animas-La Plata Project in 2007. The total project, including the Navajo Gallup Pipeline, was approximately 52 percent complete by September 30, 2007. Ridges Basin Dam, which will store water in Lake Nighthorse, was 'topped out' in November. The completed height of the dam is 275 feet. The total cost of the project is estimated to be over $500 million, and the annual funding by Congress continues to be a concern.

Progress has been slow in obtaining a 404 permit to move forward with the design and construction of Long Hollow Reservoir on a tributary to the La Plata River. A Memorandum of Understanding between the Colorado Division of Wildlife, Division of Water Resources (CDWR), and the La Plata Water Conservancy District (LPWCD) intended to protect the Roundtail Chub population below the confluence of Long Hollow and the La Plata River was signed by the parties in mid-May. A Memorandum of Agreement between the LPWCD and the CDWR was also signed in May. It was hoped that with the signing of these two documents that the 404 permit process would move forward quickly, but that has not been the case. The capacity of the proposed reservoir is 5,400 acre-feet, with the first 300 acre-feet being dedicated to a compact pool to assist with deliveries during periods of "split river" administration. The remaining pool in the reservoir will be used for irrigation purposes in Colorado ditches by exchange.

Dam Safety Activities

As of January 1, 2007 the new Rules and Regulations for Dam Safety and Dam Construction went into effect. The new Rules and Regulations contain guidance on performing hydrologic studies using the Extreme Precipitation Analysis Tool (EPAT). As of the end of 2007, the EPAT software was further refined by HDR Engineering Inc., the developer of the software. The completion of the Extreme Precipitation Analysis Tool (EPAT) under the oversight of the Denver DWR office resulted in the resumption of the spillway review process for dams at higher elevations, which had been placed in abeyance a number of years ago. The EPAT provides a means to model extreme storms under site-specific conditions for the analysis of the high mountain dams.

Significant new construction projects completed include the new 100-foot high roller-compacted concrete Geesee Dam in Jefferson County, and Dry Creek Dam in Larimer County. The latter structure will impound 9,000 acre-feet of water.

Empire Dam slope erosion

Significant wind events in the spring of 2007 resulted in severe upstream slope erosion of Empire Dam, requiring Division 1 dam safety personnel to respond to the emergency and assist with repairs to the slope.

During water year 2006-07, the Branch approved five plans for new dams and 37 plans for alteration, modification, or enlargement of existing dams. The Branch also approved hydrology studies for four dams to determine the inflow design flood for spillway design. The estimated cost of construction for the submitted plans was over $60 million.

The Division's dam safety engineers conducted 541 dam safety inspections and 265 construction inspections, a total of 806 inspections. In addition, staff performed 97 follow-up inspections. At the conclusion of this reporting period, 171 dams were restricted from full storage due to inadequate spillways and various structural deficiencies such as significant leakage, cracking and sliding of embankments. Staff restricted a total of 115,214 acre-feet of storage in the following 171 structures: 18 High Hazard, 32 Significant Hazard, 114 Low Hazard, and 7 No Public Hazard dams.

Rio Grande Compact

The administration of the Rio Grande Compact was rather challenging in 2007. With the low forecast, curtailment was suspended until it was determined that the forecast was significantly lower than the basin was actually producing. After that, relatively high curtailments were imposed to catch-up with the obligation under the Rio Grande Compact. After the irrigation season was over, the Rio Grande and Conejos systems continued to have return flows below the upper index gages which contributed to an eventual credit situation for the state. The San Antonio and Los Pinos Rivers contributed particularly to the over-delivery as these upper index gages, which are not counted against Colorado during the winter months, flowed all winter long.

Colorado started the year with an accrued credit of 15,500 acre-feet as of January 2007 and ended the year with a total accrued credit of 6,800 acre-feet. Diversions on the Rio Grande and Conejos started on April 4 and ended on October 31.

The release of water from Rio Grande Project Storage totaled 637,800 acre-feet. This is approximately 81 percent of a normal release for the project. Usable Project Storage at the beginning of 2007 was below 400,000 acre-feet. It rose above 400,000 acre-feet on January 31, and then fell back below 400,000 acre-feet on July 3 where it remained for the remainder of the year.

Over the last six years, Usable Project Storage has been fluctuating above and below 400,000 acre-feet. Consequently, Article VII of the compact has been invoked and lifted several times. Article VII prevents the upstream states from increasing storage in any post-compact reservoir without relinquishment. The major Colorado reservoir affected is Platoro Reservoir. Colorado continues to take the position that the Conejos can re-regulate pre-compact direct flow rights in Platoro as long as they are released in the same season.

Republican River Basin Activities

The Republican River Water Conservation District is the local body within Colorado working with the state to assure compliance with the compact. The District has been able to retire approximately 30,000 irrigated acres through the Federal EQIP and CREP programs in the basin. However, despite this effort, due in large part to the on-going drought, Colorado has been overusing its compact entitlement by an average of about 10,600 acre-feet per year in the first five-year compliance period (2003-07). Because of this problem, three steps were initiated to bring Colorado into compact compliance. The steps initiated are:

1. Funds were appropriated by the Legislature to change the existing part-time Deputy Water Commissioner position in the basin into a full-time combination Deputy Water Commissioner/Hydrographer position effective July 1, 2007. This position was filled in November 2007 and is expected to greatly assist Colorado in its compact compliance efforts.

2. Colorado began the process of promulgating well measurement rules applicable to all large capacity wells in the basin in August 2007. It is expected these rules will be adopted and be enforced in irrigation year 2009.

3. Also in August, Colorado began the process of promulgating Compact Compliance Rules applicable to all water rights, surface and ground water, in the basin. These rules are quite severe in that they could require the curtailment of all surface and ground water rights within three miles of any point of live flow on the North and South Forks of the Republican River, the Arikaree River, and any of their tributaries if Colorado's Compact obligations are not met. It is hoped that the provisions of these rules will only have to be implemented as a last resort when all other attempts at Compact compliance have failed.

The Republican River Water Conservation District formulated a plan to dry-up approximately 9,500 acres currently irrigated by Ogallala Aquifer ground water located in the sand hill area north of the North Fork of the Republican River, and pipe this water approximately thirteen miles to a point on the North Fork located just above the Colorado-Nebraska border to bring Colorado into Compact compliance. This pipeline could provide as much as 15,000 acre-feet per year and is projected to allow up to 25 years of compact compliance. The District has aggressively pursued this project and, as of press time, has secured the approximately $72 million in funding needed for this project. The projected completion date for this pipeline is September 2009.

North Fork of the Republican River Designation Effort

As reported for the last several years, the Pioneer Irrigation District, Colorado Board, and some owners of the Laird Ditch, have filed a petition for hearing and appeal of a decision of the State Engineer to the Colorado Ground Water Commission. The petition, if successful, would essentially de-designate all ground water within fifteen miles of a point of live flow that is hydraulically connected to the surface flows in the North Fork of the Republican River. A three-week hearing before the Colorado Ground Water Commission's Hearing Officer is scheduled for June 2008.

South Platte Task Force

The governor issued an executive order on June 8, 2007 forming the South Platte Task Force in response to concerns expressed by users whose wells had been ordered not to pump the last several years in response to Colorado Supreme Court decisions, growth and dry conditions.

The Task Force was charged with clearly articulating the problems faced by water users in the South Platte River Basin and recommending potential solutions. Specifically, the Task Force considered whether there were any changes to current water law or policy that would provide relief to junior ground water users without injuring senior water right holders. The Task Force deliberated over issues and recommendations.

While the Task Force realized early on that global solutions to the issues were not feasible because of the shortfall in water supply, the Task force ended up recommending approval of several items.

Some recommendations included support of new water storage as an essential component of resolving water shortfalls; continued support of the South Platte Decision Support System (SPDSS) to provide necessary background information for decision makers; legislation that would provide more flexibility for the use of excess augmentation credits; request of the Colorado Supreme Court to undertake a study to identify possible ways to achieve efficiencies, while still protecting quality outcomes; support of the entities pursuing a Federal CREP or EQIP program to set aside land from irrigation; legislation which would exempt replacement requirements for well pumping that occurred prior to 1974 since the rules on the South Platte did not go into effect until that time; encourage federal funding of the reallocation space study for Chatfield Reservoir; expansion of the Water Banking concept to include sources other than stored water; and continued support of the Senate Bill 07-122 study looking at alternatives to dry up.

While it may be difficult to approve any legislation associated with these recommendations, it is likely that support for SPDSS will continue, and it is also probable that there will be a review of the Water Court system.

Hydrography and Satellite Monitoring Activities

Hydrographers and water commissioners across the state made nearly 3,600 measurements in 2007 in streams, rivers, canals and ditches. These measurements calibrate stage-discharge relationships at stream gaging stations, support of real-time water administration decision-making in canals and ditches, and support of historical streamflow record development.

The Information Technologhy Branch developed and released several new tools that support the collection, processing, and display of streamflow data. Primary among these is the new Sur-face Water Conditions website: *http://www.dwr.state.co.us/SurfaceWater/default.aspx*. The new website is available to the public and offers a number of new features and methods to obtain real-time streamflow data and hydrographs, includes links to both historical published streamflow record data and provisional administrative streamflow data, and links to streamflow data collected by other agencies, such as the U.S. Geological Survey. For internal use by the Hydrographic Branch staff, the web site includes a tool called webHMS, which allows staff to update station data (e.g., shifts, measurements, ratings, stage-shift relationships, and station descriptions).

Several new gaging stations were added to the satellite monitoring system in 2007. Typically, gages are added as the result of the identification of a critical water administration need. Existing gaging stations, not previously on the SMS, are also candidates for adding satellite equipment where water administration needs have increased. Gage cooperators pay the capital costs associated with these new or upgraded stations and annual maintenance agreements.

Fall River near Idaho Springs — A new installation funded by the CWCB tracks minimum stream flows.

The Hydrographic Branch continues to refurbish and maintain existing stream gaging network sites. With $55,000 from the Colorado Water Conservation Board (CWCB) and a portion of DWR's General Fund appropriations, staff carried out several refurbishment projects.

A total of 30 DWR-owned data collection platforms were upgraded in 2007. Upgrades result in satellite transmissions once every hour at 300 bps (compared to the older equipment that transmitted once every 4 hours at 100 bps). Currently, nearly 77 percent (339 out of 440) of the DWR data collection platforms have been upgraded to high data rate.

Flood hardening of gaging stations may involve moving gages to higher ground, installing redundant gage height sensors, stabilizing and protecting banks, rating extensions, improving high flow measurement capability, or some other means of fortifying gage stations to enhance data collection and processing during flood events. It continues to be one of the Division's top priorities. The CWCB provided $50,000 this year to continue flood-hardening projects.

Additional Accomplishments and Statistics

The Division of Water Resources reviewed and acted upon **250 general substitute water supply plans** (SWSPs) (including emergencies) and **72 SWSPs related to gravel pits**. This includes **thirteen Rule 14** replacement plans approved in Division 2 pursuant to the Arkansas Use Rules. The majority of these substitute supply plans used river water as the source of substituted water.

Although subdivision water supply plans must be reviewed in 21 days to meet statutory time restrictions, Denver staff often act on them in substantially less than 21 days. During 2007, the State Engineer's Office received and acted on a total of **326 subdivision referrals**. This function requires continuous information sharing and communication with all Colorado counties.

The Designated Basins staff (the personnel who act as staff for the Colorado Ground Water Commission) issued **423 final** permits, **546 small capacity** well permits, **370 large capacity** permits and **Determination of Water Rights, 104 change application approvals, 13 replacement plans**, and was involved in **38 enforcement actions.** The staff continued evaluation of Final Permits in the Kiowa-Bijou, Southern High Plains, and Upper Big Sandy Basins. The staff participated in a nine-day hearing in January before the Hearing Officer that involved a petition to create a new Box Elder Creek Designated Basin, and the hearing in May before the Commission that appealed a decision of the Hearing Officer.

The topping out ceremony for the High Ridges Basin Dam for the Animas-La Plata Project.

The ground water evaluation staff received and acted upon **6,464 new well permit applications**. Of this total, 782 were applications for replacement wells. The majority of the wells were to be used for domestic purposes. In addition, the staff processed 567 notices to drill monitoring holes, 4265 well construction test reports, and 3,002 pump installation reports.

The Division of Water Resources is a **referral agency** for other state and federal agencies including the Colorado Division of Reclamation, Mining and Safety, the Army Corps of Engineers, and the Colorado Department of Public Health and Environment and miscellaneous federal agencies regarding environmental assessments and environmental impact statements. Staff acted on **161 referrals** from these agencies.

The Denver Basin and Geotechnical Services branches performed final technical review and comment for a Citizen's Guide to the Denver Basin Aquifers published in 2007 by the Colorado Foundation for Water Education.

The **DWR Well Inspectors** conducted more than 2,300 inspections during 2007. As in previous years, nearly half of the inspections were conducted in Division 3 which is fitting as the legislation that established funding and authority for the inspection program stemmed in the San Luis Valley.

The **Board of Examiners** licensed a total of 271 contractors in 2007, including nine new contractors. License renewal for 2007 marks the third year that each contractor is required to obtain a minimum of eight hours of continuing education (CE) for license renewal.

In 2007, the South Platte Decision Support System (SPDSS) completed approximately 80 percent of the Phase 4 activities and began to scope Phase 5 of the 6 phase project.

Chief Justice Mullarkey appointed a committee, led by Justice Hobbs, to look for reforms in Colorado's water courts. Specifically, the **Water Court Committee** is charged with reviewing the water court process; identifying possible ways through rule and/or statutory change to achieve efficiencies in water court cases while still protecting quality outcomes; and ensuring the highest level of competence in water court participants. The committee cannot alter or impair existing water use rights of any public agency or private person. The committee included Justice Bender, a sitting and a retired water court judge, a water court referee, the State Engineer, the Division Engineer for Division 2, representatives of the Attorney General's Office and the State Court Administrator's Office, Colorado Water Conservation Board, the Executive Director's Office, water users, water attorneys, and water consultants.