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ANNUAL REPORT WATER DIVISION 5 2004 IRRIGATION YEAR

Water Division 5 is the Colorado River mainstem. The Division covers an area of approximately 9,930 square miles and is comprised of all tributaries to the Colorado River in the state of Colorado, excluding the Gunnison River Basin. The average annual precipitation in Water Division 5 varies from less than 9 inches in the Grand Valley to over 50 inches in a few remote areas of the Elk Mountains, Gore Range, and northern Sawatch Range. The average annual natural flow of the Colorado River above Grand Junction is approximately 3.6M AF/YR. The two primary uses of this water for average year conditions are approximately 540,000AF/YR consumed for irrigation on 270,000 acres, and approximately 560,000AF/YR of transmountain diversions to Eastern Colorado. Other major uses in order of consumption include evaporation, municipal and domestic, and stock watering. The greatest diversion of water is for hydroelectric power generation with an average year yield of 2.5M AF/YR.

The 2004 irrigation year continued a 20-year trend with the reduction basin-wide irrigated acres. This trend is the result of continued urbanization of agricultural land. The peak of irrigated acres was in the mid-1970's. The 1980's began slightly off the peak with 360,000 acres irrigated, which declined to 295,000 acres by the end of the 1990's. For 2002 and 2003 dramatic drought related declines occurred with only 250,000 and 254,000 acres irrigated. Below average runoff continued in 2003 and 2004 producing diversions well below average, and irrigated acreage that should increase with an average runoff year. 2004 irrigation year hydroelectric power generation was 1,270,982AF, while transmountain diversions were 486,803AF, and irrigation diversions were 1,703,106AF resulting in irrigation depletions of approximately 480,000AF.

I. 2004 WATER YEAR ACCOMPLISHMENTS AND EVENTS

A. WATER ADMINISTRATION AND RUNOFF CONDITIONS

- **Runoff Conditions**

The very dry ending to the 2003 irrigation season changed abruptly in November to begin the 2004 irrigation season, when impressive storms left well above average precipitation for that month, which was tempered by December's less than average precipitation. On January 1, 2004 the runoff forecast and water supply outlook were more optimistic than had been since 2001. Basin-wide precipitation was 89% of normal and snowpack was 91% of normal. Reservoir storage on January 1, 2004 was 222% of January 1, 2003 and 87% of normal storage.

However, each month following the January 1st forecast produced below average precipitation through May with May at 42% of average. Reservoir storage stayed ahead of the previous year but dropped from 222% to 139% of 2003 year-to-date levels on June 1st. Even though storage was ahead of the previous year, the June 1st runoff forecasts degraded to extremely dire conditions. From lows of 38% and 39% of normal for the Muddy Creek and Willow Creek basins to a high of 60% for the Roaring Fork drainage.

SNOTEL sites recorded season maximum accumulations nearly 4 weeks ahead of schedule. This was followed by the unusually

dry May previously noted, causing all SNOTEL sites to completely melt-out by mid-June, which is about one month early.

Though reservoir storage started the year significantly higher than the previous two years, and the Shoshone Power plant delayed its call, allowing over 37,000AF of additional storage on the tail end of the snowmelt runoff, the only major reservoir in the basin to physically fill was Vega Reservoir. Green Mountain Reservoir did reach a paper fill on June 25, 2004, but on that date was nearly 40,000AF short of a physical fill. Ruedi Reservoir, which generally fills in dry years, was over 9,000AF short at the end of the storage season. Dillon, Granby, Wolford Mountain, Homestake, and Rifle Gap were all considerably below full when they began to be drawn upon. **SEE APPENDIX F FOR HISTORIC AND PROJECTED RESERVOIR LEVELS**

The 2003-04 winter river operations were controlled by the normal Shosone and Green Mountain power operations. As has been customary, Shoshone reduced the winter call to 700cfs to perform maintenance on the two units, one at a time. However, in late March the entire Shoshone Power Plant went off-line until July 19th. On July 17th the Shoshone call was honored 23 days after the flows at the Colorado River near Dotsero dropped below the power plant capacity. The Cameo call was placed briefly in April 2004, and then again on July 12 through October 20, 2004. The Irrigation Year ended with only the Shoshone call in place. **See Appendix A Mainstem River Calls**

The USFWS started the target flows at the Colorado River at Palisade gage at extreme dry year flows of 400cfs, and maintained low target flows for the endangered fish in the 15-Mile Reach throughout the summer. With Ruedi Reservoir not full and the Green Mountain Reservoir HUP within the drawdown band until September 24th the USFWS had little flexibility in delivering water for the endangered fish. Target flows were increased in late September from the summer long target of 400cfs to 810cfs.

The Cameo demand was reduced in late September because of the rains, which conserved storage in Green Mountain Reservoir. Releases at Green Mountain were on pace to completely deplete the West Slope Historic Users Pool by the end of the irrigation season. Largely due to the Grand Valley Management Project and the late summer rains, Green

Mountain's HUP ended the season with nearly 30,000AF on October 31, 2004.

• Shoshone Power Plant No Call During the Storage Season

For the third consecutive year, Xcel Energy reduced its Shoshone Power Plant demands. However, the 2004 reduction was not the result of power interference agreements but major repair to the tunnel and headwork, and also the installation of remote operation equipment. The daily operations of the power plant are now controlled at Cabin Creek near Georgetown, CO. This work continued through the entire storage season and was the reason the reservoir storage conditions exceeded 2002 and 2003.

The power plant went off-line in late March and began testing the second week of July. On July 19th the power plant was back to full production. The beneficiaries of the lack of Shoshone power operations during the critical fill season included (in order of amount benefited) Green Mountain Reservoir, Roberts Tunnel, Wolford Mountain Reservoir, Williams Fork Reservoir, Homestake Reservoir, Moffat Tunnel, Con-Hoosier Tunnel, and Dillon Reservoir. Unlike previous years with the relax call/power interference agreement, Windy Gap was not in a position to benefit. The total conserved flow for 2004 was 36,999AF. The beneficiaries and corresponding amounts are listed in below:

	AF
Con Hoosier 1929:	14
Moffat:	1,228
Green Mtn:	11,122
Williams Fk 1935:	5,939
Roberts:	8,619
Dillon:	527
Con Hoosier 1948:	928
Homestake:	2,284
Wolford:	6,338
Windy Gap:	0
Total:	36,999AF

• Green Mountain Ring Seal Project Delayed Again

Work on the outlet ring seals at Green Mountain Reservoir was once again delayed until next year. The work remains in the second year of what was once a three-year project and is now

going into the fifth year. The plan continues to replace the second ring seal with the first reconditioned ring seal, and would limit releases to one of two outlet tunnels plus flows through the spillway radial gates for the top 42,000AF in the reservoir. The projected inflow, lake levels, and demands for CBT Project replacement and downstream users were judged to leave insufficient head to provide releases needed with the constraints of the ring seal replacement project. For 2004, once again, the lake levels did not reach an elevation to provide any releases through the radial gates, and one outlet tube was deemed insufficient.

- **Coordinated Reservoir Operations (CROS) Called Off**

2004 marked the eighth year of Coordinated Reservoir Operations under the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River. Unfortunately, it was also the seventh consecutive year of below-average precipitation. The objective of the program is to coordinate operations of and releases from various reservoirs to enhance habitat in the ~~15-Mile Reach~~15-Mile-Reach of the Colorado River below the Grand Valley Irrigation Canal for the benefit of endangered fish species. The plan bypasses storable inflow to increase the maximum peak at the Colorado River near Cameo gage. Co-operators limit such bypasses to amounts that would spill after the Cameo gage peaks. The minimum projected flow to trigger operation is 12,900cfs in the ~~15-Mile Reach~~15-Mile-Reach, determined to be the minimum needed to provide habitat maintenance and enhancement, without exceeding 26,600cfs at Cameo.

A committee of several governmental agencies and water user groups oversee the Coordinated Reservoir Operations. Division 5 staff serve on the committee along with representatives of the United States Fish and Wildlife Service (USFWS), National Weather Service (NWS), United States Bureau of Reclamation (USBR), Colorado River Water Conservation District (CRWCD), Denver Water, Grand Valley Water Users Association (GVWUA), City of Colorado Springs, Orchard Mesa Irrigation District (OMID), and Grand Valley Irrigation Company (GVIC). Division 5 staff is charged with the responsibility to determine in consultation with the USFWS when it is appropriate to begin and

end the releases, and to maintain accounting records of the operation.

Discussion of reservoir re-operation for endangered fish habitat enhancement was tabled for the fifth consecutive year. None of the participating reservoirs were projected to spill or release storable inflow, and in May further CROS discussions were cancelled.

- **Substitution and Administration of the Blue River Decrees**

2004 was a substitution year. On July 15, 2004 Green Mountain storage was out-of-priority triggering the substitution calculations and the discussion to set the manner in which Denver Water and Colorado Springs would accomplish the substitution releases. The Green Mountain fill shortage was 29,942AF. Denver's substitution was 26,390AF, and Colorado Spring's substitution debt to Green Mountain was 3,552AF. See [Appendix B](#) for the substitution calculations and the manner the water was repaid.

The consolidated Blue River Decrees settled the relative priorities of the rights of the USBR, Denver Water, and the City of Colorado Springs, and provided for the terms that allowed depletions upstream of Green Mountain Reservoir prior to the filling of Green Mountain Reservoir. Prior to a paper fill, transmountain diversions by Denver and Colorado Springs are limited to the amount of storage each has on hand in the Blue and Williams Fork Rivers and is necessary to fill Green Mountain Reservoir. The Secretary of Interior must notify these water users as to when the start of fill date occurred (between April 1st and May ~~15th~~15th), the amount needed to fill, whether or not Green Mountain will fill, and if there is water available for upstream depletion. A substitution year occurs when Green Mountain does not fill and Denver Water or Colorado Springs opt to use Williams Fork Reservoir, Wolford Mountain Reservoir, or even Homestake Reservoir in lieu of releasing Dillon Reservoir and Upper Blue Reservoir storage owed to Green Mountain Reservoir. In 91CW252 Denver Water added Wolford Mountain Reservoir as a source of substitution with strict terms and conditions. The years 1977, 1981 and 1990 were substitution years pre-dating the decree in 91CW252. Since that time 1994, 2001, 2002, and now 2004 were substitution years.

- **Cameo Operations**

The summation of the water rights diverted by the Government Highline Roller Dam and the Grand Valley Canal is known as the Cameo demand. During the irrigation season the Cameo demand totals 2,260cfs, but is limited to 1,950cfs in 91CW247, the "Orchard Mesa Check Case." While the Shoshone Power Plant was not operating, the Grand Valley interests issued a letter declaring the Check Case inoperative, and considered calling for the full 2,260cfs. However, the concern resulting from persistent drought conditions held off demand for the full 2,260cfs, and the Shoshone Power Plant was put on-line one week after the Cameo call was placed. For the 2004 irrigation season the call at Cameo was briefly issued for the last two days of April 2004. The call remained off through May and June. Then on July 12th the junior Grand Valley Canal right initiated the Cameo Call. Summer precipitation provided no relief, as the Cameo Call remained on through October 25, 2004.

Flows at Cameo are followed closely by the HUP Managing Entities, which include the USBR, GVWUA, OMID, GVIC, DWR, CWCB, and USFWS, as defined in Exhibit D, paragraph 3.d. of the Stipulation and Agreement for 91CW247, the Orchard Mesa Check Case. The meetings generally include the NWS, CRWCD and other major water users in the basin. The kick-off meeting was held on June 29th at the Hotel Colorado in Glenwood Springs. Prior to the HUP kick-off meeting, weekly state-of-the-river meetings modeled around the HUP meeting had been held in preparation for the continuation of the drought to manage the river during the reservoir fill season, including monitoring savings from the Shoshone Power Plant maintenance project. The HUP meetings were held weekly and occasionally biweekly into November. The primary purpose of the meetings is to manage the Historic Users Pool in Green Mountain Reservoir, declare a surplus at Green Mountain, integrate the most efficient use of RIPRAP releases with other reservoir releases, and river administration.

The amount of storage in the Green Mountain Historic Users Pool remained within the drawdown band from the end of the fill season through late September. On September 29th

HUP storage was at the upper limit for the drawdown band; however, a surplus was not declared until the next HUP meeting on October 5th. Through October flows at Cameo remained in the 2,000 to 2,400cfs range, allowing water users to operate without rationing in the Grand Valley. The HUP drawdown band and 2004 HUP operations are in [Appendix C](#).

- **RIPRAP (Recovery Implementation Program)**

The fish ladder at the Government Highline Roller Dam was completed in 2004. In prior years the fish ladder and fish screen at the Grand Valley Canal Dam were completed. The fish screen in the Government Highline Canal should be completed in 2005. This will leave only the fish ladder at the Price-Stubbs Dam to complete the habitat connection from the 15-Mile Reach to the Upper River.

The US Fish and Wildlife Service has three pools in Ruedi Reservoir for the Recovery Program: 10,825AF; 5,000AF four out of five years; and 5,000AF firm contract water. At the beginning of the release season the 5,000AF four out of five water was not guaranteed to be available. On August 4th this water was determined to be available and therefore the full 20,825AF of Ruedi Reservoir storage for the endangered fish flows became available for 2004. The full 10,825 and 5,000AF contract water was released, but only 155AF of the 5,000AF four out of five water released. Total Ruedi releases for endangered fish was 15,980AF.

The pools in Wolford Mountain Reservoir for the recovery program are 6,000AF and 5,412AF, based on the carryover and storage in current year. For 2004 Wolford Mountain, none of the 5,412AF was available and 4,555AF of the 6,000AF was available. No Wolford storage was released in 2004. Without carryover Wolford Mountain would not have any water for the fish in 2005; this concern was the primary purpose for not releasing any of this pool.

The pool in Williams Fork Reservoir for the recovery program is the other half of the 10,825AF water in Wolford Mountain Reservoir, or up to 5,412AF, and is based on system-wide water supply conditions for Denver Water. For 2004 the 5,412AF was only 30% or 3,788AF. Williams Fork released only 2,678AF of this water.

Therefore, a total of 29,168AF was available to the program, but only 18,658AF was released. Additionally, the HUP surplus declaration allowed 119AF of Green Mountain water to be released for power at the Palisade Power Plant and for municipal/recreation contracts. These releases benefit the 15-Mile-Reach, providing total releases of 18,777AF. After assessment of transit losses, the total benefit from reservoir releases to the 15-Mile-Reach was 17,299AF. The table and graph in [Appendix D](#) summarize the contributions made by each reservoir and graphically depict the impact of those releases as shown on the flows at the Palisade stream flow gage.

The Grand Valley Management Project (GVMP) provides additional augmentation of fish flows through operation of automated check dams within the canal and operation spills at the Palisade Pipeline. These operational spills, which without the GVMP would return to the Colorado River below the confluence with the Gunnison River, are upstream of the 15-Mile Reach. The GVMP reduced demands at the roller dam by 50- to 200cfs from mid-April through October. The total volumetric benefit to both the Grand Valley Irrigation Company and the endangered fish for 2004 was 13,262AF.

With the projected water supply extremely low, the target flows at the Colorado River at Palisade were set on July 12th at 400cfs -- well

below the dry year target of 810cfs as set in the Programmatic Biological Opinion. The targets were not raised until September 28th, when they were raised to 650cfs, and then raised again on September 29th to 810cfs. The target fish flows remained at 810cfs into November, when the irrigation season ended. On October 5th a surplus in the Green Mountain Reservoir HUP was declared, allowing releases at Green Mountain when the Colorado River near Cameo flows exceed 1,950cfs.

Palisade-gage vs. Cameo-gage

• **Green Mountain Reservoir Fill Accounting**

Elliot Creek is tributary to the Blue River below Green Mountain Dam. The Bureau of Reclamation has a right to fill Green Mountain with Elliot Creek water through the Elliot Feeder. The Elliot Feeder has not operated for many years but was back in service in 2004.

On June 25, 2004 Green Mountain Reservoir attained a paper fill, when physical capacity was 112,640AF, which is 42,005AF short of a physical fill at 154,645AF. From June 25th through July 15th Green Mountain Reservoir stored an additional 12,114AF under Interim Policy 2004-4 for the administration of Green Mountain Reservoir. See Interim Policy 2004-4 in [Appendix E](#), and discussion of policy and the Green Mountain Fill Committee under Special Projects in this report.

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B. **DAM SAFETY**

The year 2004 was another drought year with below normal runoff and reservoir storage. Only one significant incident occurred. However, due to the drought conditions there is a growing desire by dam owners to rehabilitate and enlarge existing dams, as 10 significant projects were reviewed by the dam safety staff (4 by the Glenwood Springs (GWS) Dam Safety Engineer and 6 by the Grand Junction (GJ) Dam Safety Engineer), and 6 dams had their restrictions lifted or relaxed resulting in a gain of 187 AF of available storage. This can be considered as a significant dam safety highlight

With the reorganization of the Dam Safety Branch last year, the dam safety engineers in Grand Junction and in Division 6 are fully

established to assist with the inspection workload problems. This, along with the relatively quiet runoff, the inspection backlog of low hazard dams and their associated problems was for the most part resolved. This also allowed for the completion of 14 hazard evaluations, 13 hydrology studies, and 5 other technical evaluations.

Another item of significance accomplished by the Dam Safety Engineer in Division 6 along with Division 1 was a dam owner-training seminar for owners in the Steamboat Springs area and Districts 50 and 51.

The total number of inspections performed in Division 5 in 2004 increased to 166 (10 more

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than last year). This was largely a result of the GJ Dam Safety Engineer becoming 100% established. The breakdown of the inspections performed is as follows:

95 Inspections Performed by the Division 5 (GWS) Dam Safety Engineer, John G Blair:

- 26 High Hazard regular
- 12 Significant Hazard regular
- 9 Significant Hazard interim
- 17 Low Hazard regular
- 2 No Public Hazard regular
- 25 Follow-up
- 3 Construction
- 1 Outlet

17 Inspections Performed by the Division 6 Dam Safety Engineer, John R Blair:

- 2 High Hazard regular
- 4 Significant Hazard regular
- 0 Significant Hazard interim
- 10 Low Hazard regular
- 0 No Public Hazard regular
- 1 Follow-up
- 0 Construction

30 Inspections by the Grand Junction (GJ) Dam Safety Engineer, Garrett Jackson:

- 4 High Hazard regular
- 3 Significant Hazard regular
- 2 Significant Hazard Interim
- 6 Low Hazard regular
- 0 No Public Hazard regular
- 9 Follow-up
- 4 Construction
- 2 Outlet

4 Inspections by federal entities and DOW

- 4 High Hazard regular
- 0 Significant Hazard regular
- 0 Low Hazard regular

19 Water Commissioner observations:

- 8 Significant Hazard interim
- 11 Follow-up

A Division 2 Dam Safety Engineer performed 1 High Hazard regular inspection of a Colorado Springs-owned dam in District 36.

• **Dam Safety Incidents and Restrictions Imposed – 1 incident and 2 restrictions**

1. *Alsbury – a high hazard dam in District 45.* Increase in seepage with potential piping from the left abutment and foundation. The

dam was restricted 4.5' below the spillway crest with a loss in storage volume of 100AF. The dam was monitored daily until the restricted level was reached. Geotechnical engineers were hired to design a solution.

2. *Hopkins – a significant hazard dam located in District 45.* No incident occurred except for lack of action by the owner with a continual deterioration of this dam with significant seepage concerns and poor outlet operability. A zero storage restriction was imposed with a loss of storage of 70AF.

• **Rehabilitations and Restrictions Lifted**

1. *Nottingham Dam – a low hazard dam in District 37.* Its upstream slope, spillway and outlet were rehabilitated allowing for the use of 20AF of storage not usable in the recent past.
2. *Y T Ranch Dam - a high hazard dam located in District 72.* The owner lowered the spillway to the restricted level of 6 feet below the dam crest, which allowed for the removal of the restriction.
3. *Battlement #1 – a low hazard dam in District 45* on Battlement Mesa was rehabilitated last year to a non-jurisdictional fish and recreation reservoir. The submittal of completion documents this year allowed for the removal of the restriction and a gain of 14AF of storage.
4. *Battlement #2 – a low hazard dam in District 45* on Battlement Mesa was rehabilitated last year to a non-jurisdictional flood detention and wetlands mitigation structure. The submittal of completion documents this year allowed for the removal of the restriction and a gain of 1.4AF of storage.
5. *Encana GRS Pond – a low hazard dam located in District 45.* This dam was built illegally last year as a jurisdictional-sized dam with no spillway. The owner constructed a spillway that made the dam non-jurisdictional, which allowed for the removal of the restriction and a gain of 9.6AF.
6. *Scholl – a significant hazard dam in District 51.* Several maintenance problems and the implementation of a monitoring program allowed for the relaxation of the restriction from zero storage to a partial seasonal restriction of gage 18 during the spring runoff and then draining the reservoir down to gage 10 after July 1. This adds 147AF of

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available storage during the irrigation season.

7. *Hopkins - a significant hazard dam located in District 38.* The reservoir operator improved the outlet operability. This allows for the control of a restriction at the seepage level. The zero storage restriction was relaxed to 10' below the dam crest and adds 15AF of storage.
8. *Big Creek #3 (aka Atkinson) - A high hazard dam in District 72.* Rehabilitation of the

downstream slope and crest was started last fall before fall snowstorms prevented its completion. It will be completed this year.

• **Enlargements and New Dams:**

The Barton Porter - a Class 3 soon to be Class 1 dam in District 45. Continued work on the enlargement of this dam occurred. The project is not yet completed.

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C. GROUNDWATER AND WELL PERMITTING WELL INSPECTION PROGRAM

▪ **Groundwater and Well Permitting**

Continued growth and strong economic conditions could be seen during the year 2004 which kept the Division 5 staff 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.

During calendar year 2004 a total of 939 permits were approved for Division 5 -- an increase by 4.3 % from 2003. Additionally, Ground Water forms such as Statements of Beneficial Use, Change in Ownership and certain types of permits not reviewed by the Division office were preprocessed and forwarded to Denver for review.

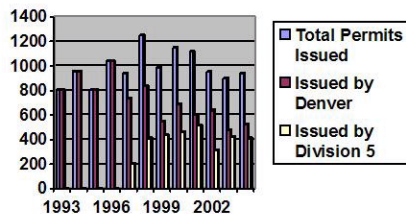
A breakdown of permits processed includes:

Exempt Permits.....	584
Non- Exempt Permits.....	291
Geothermal Permits (excluded from total count)	25
Exempt Replacements	54
Non - Exempt Replacements	10
Late Registrations (included in exempt count) ..	22

With the decentralized well permitting process in place, a total of 411 permits (300 exempt and 111 non-exempt) or 44% were issued at the Division level. Certain types of non-exempt well permit applications, change in ownership applications and well location amendment requests

are still preprocessed and forwarded to the Denver office.

Well Permits for Water Division 5 1993 through 2004:



The major water-well-related bill approved during the 2004 legislative session which affected Water Division 5 was Senate Bill 04-185 (SB04-185). SB04-185 eliminated the requirement for Statement of Beneficial Use (SBU) or Notice of Well Completion (NWC) be submitted to prevent non-exempt wells from expiring, for wells located outside the Designated Ground Water Basins. Instead SB04-185 created a new statutory requirement stating that a non-exempt well permit would expire unless the applicant or the well construction contractor submitted "evidence that the well was constructed and that the pump was installed" before the permit's expiration date.

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D. WELL INSPECTION PROGRAM

The Well Inspection Program was instituted for the protection of the groundwater resources and

public health through enforcement of minimum well construction and pump installation

standards. The program was created under Senate Bill 03-045. The objective of the program is to deal with the following concerns:

- - Enforcement of the existing Colorado Revised Statutes and Rules and Regulations for Well Construction and Pump installation
- - Well construction and pump installation inspection
- - Complaint investigation
- - Education and outreach
- - Monitoring/observation hole/well construction
- - Well and hole plugging and abandonment
- - Board of Examiners\support

In 2004 the inspection program was implemented. Joe Bender was hired as the Chief Well Inspector with 4 Division inspectors based out of Alamosa, Denver, Durango, and Glenwood Springs. Over 1,000 inspections were performed on over 400 different well sites with the most frequent violation being no permit on site. Also the 200 feet from the permitted location rule has been an issue with the contractors. 69 case actions were taken including citing 30 unlicensed contractors.

The best time to inspect construction of the well is when the contractor's rig is on site and the crew is performing their duties but, if that is not possible, we are refining ways to check grout around the surface casing with steel probes and total depth of steel surface casing with metal detectors. In Division 5, Well Inspector Doug Stephenson has asked the water commissioners to contact him when a water well rig is working in their district. This helps in finding rigs operating and inspections can be performed with crews on site.

We have received 7 consumer complaints in the Glenwood Springs office. All have been contractual problems and are beyond the scope of enforcement for the inspection program and are being pursued in civil court.

In 2005, an informal GPS workshop for contractors and associated persons is being presented by DWR in the seven Division areas. Lori Torikai of the Denver office is the presenter with assistance from the well inspectors. Scope of the workshop is to educate the contractors on mapping, new well forms with UTM coordinates, and using GPS units to locate well sites.

E. HYDROGRAPHIC PROGRAM

The following hydrographic duties and projects were completed in Division 5 in WY2004:

- Measuring, recording and publishing the streamflows above Ruedi Reservoir associated with transmountain diversions for the Frying Pan-Arkansas Project. There are 4 chart record and 4 satellite record stations.
- Measuring, recording and publishing the streamflows for the Blue River below Breckenridge station for minimum streamflow compliance; five cooperators pay for operation of this station.
- Measuring, recording and publishing the streamflows for the Roaring Fork River below Maroon Creek station for the Aspen Consolidated District for permit compliance.
- Measuring and recording winter streamflows for the Snake River at the Keystone Ski Area for minimum streamflow compliance; Vail Associates Inc. pays for seasonal operation of this station.
- Measuring and recording the streamflows for Snowmass Creek below the Snowmass Water & San District diversion for the Colorado Water Conservation Board for minimum streamflow compliance.
- Measuring, recording and completing the diversion records for the Government Highline Canal and the Grand Valley Canal, near Palisade.
- Measuring and recording the streamflow records for Bull Creek and Big Creek in District 72 for reservoir release/water administration purposes.
- Recording and completing records for four transdistrict/transbasin diversions into District 45.
- Measuring diversions and/or bypass flows for water commissioners for administration and flume shifts.

- Responding to data requests from Division 5 staff and the general public.
- Operating and maintaining 25 DWR satellite stations used for administrative and hydrographic record purposes.
- Monitoring 43 stations that are operated by other entities in Division 5.
- Maintaining 3 satellite monitoring streamflow stations for the Colorado Water Conservation Board.

The Division 5 Hydrographer, George Wear, made 78 river discharge measurements (including 51 measurements for the Fry-Ark Project) and 22 ditch/canal discharge measurements during the 2004 hydrographic Water Year.

Two gaging stations in Division 5 were upgraded with SatLink DCP's and high data rate GOES radio transmitters in WY2004. Approximately 10 stream gages in Division 5 are now part of the new DWR ALERT system, including 7 high-flow stations and 3 low-flow stations. DCP's for the high-flow alert stations were reprogrammed for the specific thresholds desired, but the value of this system hasn't been confirmed since high flows have not been experienced yet on these streams. For low-flow alert stations, the ALERT system has had to utilize self-timed transmissions and will probably change from gage height parameter data to discharge data to eliminate changing shift revisions. Low alerts were triggered several times this year, typically because snowmaking diversions reduced stream levels below instream flow amounts.

Other Stream Gage Improvements in WY2004 include:

- A new rating was established for Rifle Creek below Rifle Gap Reservoir, based

on rating extension work performed by the USGS in the previous year.

- Water administration satellite monitoring stations were installed on two remote ditches (transdistrict and transbasin) which divert water into District 45.
- A new satellite monitoring station was established on the Southside Canal in District 72 for water administration purposes.
- A permanent NEMA box/mast installation was performed at another remote water administration satellite monitoring station in District 45, in order to facilitate more efficient operation for the brief diversion season at this station.
- A new gaging station on the Government Highline Canal in District 72 was established down the canal from the old station, necessitated by the installation of a fish screen in the canal. Satellite monitoring was installed at the new station and an initial rating was established with measurements taken with the new bank-operated cableway. The USBR funded station construction including the cableway, while DWR funded the satellite monitoring equipment. Both stations were operated throughout the diversion season in order to compare records. At the end of the season, the old station was decommissioned.
- Electric power was installed to the Blue River at Highway 9 Bridge gaging station, and a stock tank heater was placed in the stilling well to prevent well freezing in the future.
- The equipment shelf above the well in the Blue River at Highway 9 Bridge station was rebuilt.
- Decoding of USBR satellite data for 4 Fry-Ark gaging stations was initiated this year. This will improve the records for these stations, which are published by Division 5.

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F. WATER RECORDS AND INFORMATION

The diversion records' deadline was mid-January this year with many districts meeting this aggressive deadline. All districts were signed by late January. With the Shoshone Hydro Power Plant changing to an automated

system from April through July, the Grand Valley call controlled the mainstem flows. This required more record keeping and administration for all the Water Commissioners throughout the basin.

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Some factoids (on the average):
District 70 (only a coyote would love) has the least amount diverted to storage with 55AF.
District 51 (the Division 5 icebox) has the most diverted to storage, to the C-BT Project, with 438,000AF.

The least irrigation is done in *District 70* (suitable for a gas well), with 9,169AF and 2,766 acres irrigated while the most irrigation is done in *District 72* (damned diverse), with over 850,000AF and over 70,000 acres irrigated.

The most municipal record is kept for *District 72* (Grand Junction's 2003 population was 46,779) with 17,041AF and the least municipal record is *District 52* (all the towns are too small to make the census summaries) with 0AF.

The amount of water ran through power plants, 1.27M AF, is shy of what is diverted for irrigation, 1.7M AF.

(All diversions are 2004 data.)

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G. INFORMATION TECHNOLOGIES

PC Status – We are currently seeking to replace 7 water commissioner machines that are outdated or no longer in service (this includes our GIS workstation). We have 3 machines in our Glenwood office and 2 machines in our Grand Junction office that serve as water commissioner machines to do tabulation and other projects as needed. These typically are the older machines. Progress is starting to be made on computer literacy as fewer calls from office and field

staff seem to be coming in. However, we still have a ways to go and our goal is to have everyone with good basic knowledge on their computers and software programs that help them do their jobs. Listed below is Division 5's computer/hardware inventory. Not listed is a commissioner's machine that was destroyed in a fire in January 2005 and the GIS workstation which broke down and was returned to Denver.

Description	PC	HD	Speed	RAM	Monitor	Printer	GPS	Camera	PDA
Alan Martellaro	GX150	9.3	933	256	DELL 15"	Networked			Palm 130
Brian Romig	EVO	18.6	1800	256	7500	Networked	Map76S	none	Dell Axim X5
Dwight Whitehead	DP EN	18.6	1000	256	S720 15"	Networked			
George Wear	NC6000	56	1.7GHz	512	Laptop	Networked			Palm 130
John G Blair	EVO	18.6	1800	512	Coloreal 7500	Networked			Palm 130
John Sikora	GX150	9.3	933	256	DELL 15"	Networked	Map76S		
Judy Sappington	DP EN	18.6	933	256	S720 17"	Networked			
Kasi Rishel	DP EN	18.6	1000	256	S720 17"	Networked			
Kyle Whitaker	EVO	18.6	1800	256	DELL 15"	Networked			Palm 130
Nancy Hitchcock	DP EN	18.6	1000	256	S720 17"	Networked			
Public Machine	GX150	9.29	933	256	DELL 15"	Networked	n/a	n/a	n/a
Steve Trexel	E-4200	12.7	500	256	VIVITRON 17"	Networked			
Alan Comerer	E-4200	12.7	800	256	VIVITRON 17"	V40XI			
Bill Blakeslee	E-4200	17	500	256	VIVITRON 15"	V40XI	12XL	DC3800	
Bill McEwen	EVO	18.6	1800	256	Coloreal 17"	5110	12XL		
Bill Thompson	GX150	9.3	933	256	VIVITRON 15"	V40XI	12XL	DX3700	
Don Mackey	E-4200	12.6	500	384	EV700 17"	V40XI	Map76S	DC3800	Dell Axim X5
Frank Schaffner	DIV 6	DIV 6	DIV6	DIV6	DIV6	DIV6	Map76S		Dell Axim X5
Jim Lemon	E-4200	8	550	256	EV700 17"	V40XI	12XL	DX3600	
Michael Craig	DP EN	9.3	933	256	VX900	Networked	12XL	DC3800	
Ron Greene	E4200	18.9	500	384	VIVITRON 15"	V40XI			
Scott Hummer	EVO	18.6	500	256	Coloreal 17"	V40XI	12XL	DC3800	

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Steve Pope	GP7-550	19.1	550	256	VIVITRON 15"	V40XI			Palm 130
Tom Brigham	GP7-550	18.6	550	256	VIVITRON 17"	V40XI	12XL	DX3600	
Tom Cox	EVO	18.6	1800	256	Coloreal 17"	V40XI			
Grand Junction 1	EVO	18.6	180	256	7500	Networked			
Grand Junction 2	GP7-550	19	550	384	EV700	Networked			
WC1	E-4200	12.7	500	384	VIVITRON 15"	Networked	n/a	n/a	n/a
WC2	EVO	38	2.4GHz	256	Coloreal 17"	Networked	n/a	n/a	n/a
WC3	GX 150	9	933	256	EV910	Networked			
Laptop - Alan Martellaro	LAT D600	18.5	1600	523	Laptop	NONE	n/a	n/a	n/a
Laptop - John Blair	Insp 3800	9.22	600	128	Laptop	NONE			
Laptop - Office	Omni 6100	18.5	1000	256	Laptop	NONE			

- **Hardware/Software** – We replaced our flat bed scanner/printer in the office, however, it is not giving the results we would like. Looking to upgrade this scanner/printer with software features, we will work with the vendor to accomplish this task. We also anticipate replacing our laser printer downstairs as it's running on its last legs and we need to print two-sided pages. We want to improve our mapping analysis with the purchase of *Spatial Analyst*. All of our commissioners have access to a GPS. Our goal is to have all of our structures, or at least most of our structures, marked.

understanding projections (UTM) and datums (NAD83), yet other topics covered tabulation, explained the new per diem rates and how to use our new State-issued travel credit card. We brought in two guest speakers: Div of Wildlife Officer Craig Wescoatt spoke about wildlife encounters: how to avoid them and what do to if encountering wildlife. The other speaker, Rob Hunker of the Colorado Avalanche Information Center, talked about avalanche awareness and what to do in case you are caught in one.

- **Training**- Our in-house training is still going strong. Our topics and training included touring the Fish Ladder near Cameo, Diversion Record and *HydroBase* training as well as properly completing water court case field inspection reports. GIS-related training included using the digitizer, working with the GPS, applying LT Tools, and importing/exporting as well as printing from the software program TOPO!. Other in-depth topics on GIS included

- **Web Page** – The Division 5 website continues to be updated about twice a month and is a very useful tool. Contained within our website are phone numbers for all division employees, river calls, organizational chart, frequently asked questions, news, important meetings and functions, and calendar of events. We've had over 5,000 visits to our web page.

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H. **GIS PROJECTS**

- **A/B Area Mapping**
The A/B boundary was completed in 2004. In October 2004 the boundary was incorporated into all existing projects and contracts. The only thing left to do on the A/B line is to make sure all of our structures are located by GPS standard methods. Also, all of our data is now converted to datum NAD83 from the previous NAD27.

There were many more requests for Division 5 maps this year than in previous years, accounted for by a combination of the new A/B line work along with more displays of maps in the office.

More GIS projects are in the works, including "booklets" for water commissioners

that will contain all their streams with irrigated acres and structures in 3-ring binders. Updating our USGS quads, using GPS to locate all structures, map indexes, and updating field inspection reports are all on the agenda. Also, we are working on a process of Visual Basic tools for various projects to have all of our data in digital format.

The irrigation year 2005 looks to be a promising one for GIS, including possibly acquiring 1 meter DOQQs for our districts. We also plan to do a lot more GIS involving more office staff. We look forward to

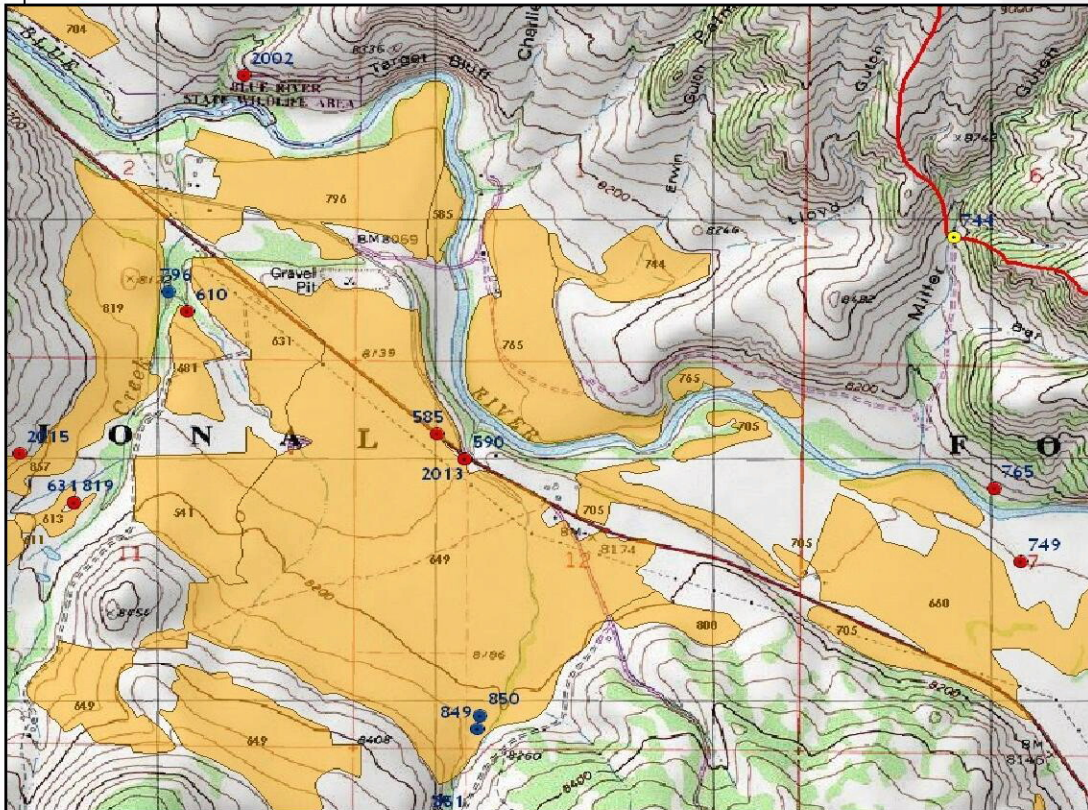
improving our irrigated acres maps with field inspections using GPS.

We completed our digitizing project in April 2004. Of our 15,976 structures in Division 5's GIS database, 4,200 or 26% have been digitized from existing maps; 359 or a little over 2% have been marked using GPS technology; 277 or a little under 2% have been hand/eye plotted from maps; the rest, 11,140 structures or 70% came from *HydroBase* XY locations. Our goal is to have all of these structures located with GPS technology.

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• **A/B**

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This map depicts how we updated the USGS quad maps in 2004. The red circles indicate that the point came from *HydroBase's* XY coordinates, the blue circles mean the point was located by GPS, and the yellow indicates that this location was spotted by eye from a map. Green circles mean that the location was done by the digitizer. The orange polygons represent irrigated acres with the structure number that irrigates them within the field. The solid red line is our new A/B line. These maps are given to commissioners to update as well as to use for field work. Soon, these maps will be available for the public to view in our office or for purchase.

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I. **SUBSTITUTE SUPPLY PLANS**

Division 5 had 13 applications for Substitute Water Supply Plans. Eight plans were approved under § 37-92-308(4).

J. **SPECIAL PROJECTS AND ISSUES**

Of note are the following:

- **Green Mountain Reservoir Fill Committee**

Green Mountain Reservoir (GMR) was constructed by the USBR as part of the Colorado Big Thompson Project as a compensatory reservoir on the West Slope to offset depletions caused by East Slope diversions. Green Mountain Reservoir is located on the Blue River downstream from the City of Denver's Dillon Reservoir/Roberts Tunnel and the City of Colorado Spring's Continental-Hoosier Diversion. Green Mountain Reservoir has a storage right and a power right which is senior to Denver's and Colorado Springs' transmountain diversions on the Blue River. The water rights are extremely important to both the West Slope and the East Slope because of the location of Green Mountain and the impact of these water rights on many water users in the State of Colorado.

The years 2000-2004 produced below average runoff in the Colorado River Basin and included the driest year on record. The drought combined with increased demand from both the East and West Slopes has made each administrative decision and interpretation of State and Federal Court Decrees more critical. The drought years have focused the various opposing parties on the interaction of the Green Mountain storage and power rights. The separate rights have equal priorities and how the USBR "calls" for their water as either storage in the reservoir or to generate power can impact both upstream and downstream water users.

From 2000 through 2002, the fill accounting at GMR was debated each year at the very moment we were attempting to make the decision. To avoid continued disagreement and prior to the mainstem river call in July

2003, Division 5 convened a meeting of 40 to 50 attorneys, engineers, and water managers. The meeting resulted in a one-time agreement to get through that year, that was not binding on the future, with a commitment to work on a permanent resolution of the issue. Division 5 staff began a series of meetings in the Fall of 2003 through the Spring of 2004. At that time, the State Engineer and the Attorney General's Office were brought into the discussion. In a race to resolve the dispute before the end of fill, we held a series of meetings individually with each of the major interests, several times. Denver Water, the Colorado River Water Conservation District and the Grand Valley entities each submitted position papers. The culmination of this effort was a meeting on July 7, 2004 where all the interested parties were brought together to review our proposed policy, which became the SEO Interim Policy 2004-4 of July 8, 2004 "Administration of Green Mountain Reservoir," see [Appendix E](#) for a copy of the policy.

The central issue involves the determination of a reservoir paper fill. Is the Green Mountain Reservoir storage right satisfied with upstream out-of-priority junior storage in Dillon and Upper Blue Reservoirs? Green Mountain Reservoir has a 1935 storage and power right, while upstream is the Continental-Hoosier System with a 1948 right and Dillon Reservoir with a 1946 right. Both upstream junior rights are allowed to store and divert prior to the filling of GMR to the extent that water is on hand for the lesser of replacing diversions or filling GMR. The Blue River Decrees were originally adjudicated in federal court and affirmed in state court, prior to the upstream storage statute, but operate in a similar manner. The issue arises when a call downstream of GMR causes administration of these rights.

The policy guided the administration for 2004 and convened the Green Mountain Reservoir Fill Committee, whose first meeting was on August 30, 2004. At this initial meeting the USBR presented the details of its proposed Active Management Plan for the filling of Green Mountain Reservoir and power production. Under the Active Management Plan the USBR assesses the runoff forecast and determines the amount of that forecast needed for storage and the amount needed for power. As the runoff forecast changes, and storage targets change, the amounts of Blue River runoff allocated to storage and power changes. Any water intercepted by Denver and Colorado Springs that is part of the USBR storage allocation (or any other storage the Cities have on hand) must be available for later release should GMR not fill. However, any water the USBR has allocated to power—at the time of each forecast—intercepted by the Cities may be kept by the Cities. Should GMR not fill, the USBR is at risk and this water does not need to be released. The Blue River Decrees do state that the Secretary of Interior shall offer a plan and that plan can change from time to time. A complete list of issues was developed at this initial meeting.

A second meeting was convened on October 6, 2004 where the USBR's Active Management Plan was reviewed with new details; relevance of historic operations was discussed; and a few positions on the issues argued in front of the whole group.

The third meeting was held on November 8, 2004. At this meeting we focused on what each party expected from continuing with this process, and what is necessary to permanently resolve the issues. A general consensus emerged where permanent resolution would only be reached through moving the federal court to recognize a stipulation in the Blue River Decrees that provides resolution to the fill accounting and any outstanding issues on which the group can reach agreement. Prior to the next meeting of the group, the USBR will circulate a proposal/written explanation. Each party will submit a response to the USBR, and the USBR will attempt to incorporate these responses. This document will then be the starting point for negotiating a stipulation to be offered to the court.

- **Study of Water Rights with Priorities between 1935-1946**

The junior Shoshone power right has a 1940 priority. Dillon Reservoir and Green Mountain Reservoir have 1946 and 1935 priorities, respectively. If Green Mountain continues to fill under a 1935 right after it has paper filled with storage in Dillon Reservoir, this allows Dillon to hide behind Green Mountain's 1935 right, when storage on the Blue River should be curtailed by the junior Shoshone 1940 right. This could occur for a one- to three-week period during June, July and August, subject to runoff conditions. If Dillon Reservoir is hiding behind Green Mountain, other water rights with priorities between 1935 and 1946 may be impacted, or the Green Mountain Reservoir Historic Users Pool (HUP) may make releases for these rights. Therefore, allowing Dillon to hide behind Green Mountain may injure water rights between 1935 and 1946, but also Green Mountain Reservoir itself, for it would be making releases for beneficiaries of the reservoir with these priorities.

To understand the size of the problem Division 5 and the CRCWD jointly analyzed depletions for all water rights within the 1935-1946 priorities above the Shoshone Power Plant. The study used diversion data for the below average runoff conditions of July 2001. From July 3-July 16, 2001, the Shoshone 1940 right was the calling right and Dillon Reservoir was the "swing right" or the most junior right at least partially in priority above the Shoshone Power Plant. Total depletions were found to be 5892AF for these priorities during the July 3-16 period. A subset of this data is for depletions on the Blue River, which total 2,402AF. Because these amounts were considerably larger than State-Mod calculations, the study has been closely reviewed. We believe our figures to be accurate, and hope to investigate the calculations of State-Mod.

- **Transit Losses**

Very little progress with assessment of non-irrigation season transit losses was made in 2004. Though a few water users in the Blue and Eagle River basins continued to dispute the amount of transit loss charges, the existence of transit losses now appear to be accepted by all. Empirical site-specific

studies continue to appear to be the only solution. A source of funding of such studies remains elusive. A few water users maintain it is a legislative mandate that the State Engineer perform such studies before transit losses can be charged; others continue to assert, in the case of augmentation plans, that the plans find no injury though transit losses occur and are included in the plan.

• **SWSI**

The Statewide Water Supply Initiative under the guidance of the Colorado Water Conservation Board was initiated this year. The initiative is a reconnaissance level study with a 30-year planning horizon. The initiative is intended to provide an understanding of supplies and needs, and identify the gap between the supplies and needs, allowing providers and policy makers to make informed decisions. The project includes public meetings and Basin Roundtable Technical Meetings. Division Engineers from each division participated as technical advisors to the Basin Roundtable participants. The first Colorado River Basin Roundtable Technical Meeting was held in Grand Junction on September 24, 2003. Three meetings were held in Glenwood Springs between January and August 2004. A final meeting was held in November 2004 to review the final draft document.

• **GM HUP Limits & the 1977-1984 "Slot Group"**

Due to demands of administering the continuing drought, no progress was made on this project in 2004. As with previous years the CRWCD made 200AF in 2004 available to replace out-of-priority depletions by this group of water users.

and '77-'84 slot

• **SB-278, Water Administration Fee**

Senate Bill SB-278 was passed in the 2003 legislative session to provide cash funding for the Division of Water Resources faced with major budget reductions. Though the effort to implement SB-278 occurred in the spring of

2004, it was included in last year's annual report. The Governor signed HB 04-1402 on April 12, 2004. This bill repealed SB-278, and required refunding of all fees collected to date.

• **Summit County Well Enforcement**

On May 18, 2004, after nearly eight years of legal negotiations, Division 5 staff in cooperation with Summit County Government and the Vidler Water Company held a joint public meeting to introduce the "umbrella" augmentation plans of the two entities to the citizens of Summit County. These "umbrella" augmentation plans would enable well owners to acquire a source of augmentation water to cover uses not allowed under the definition of a household-use-only well. The primary need for such augmentation coverage is for outdoor irrigation and accessory apartments within subdivisions in unincorporated Summit County.

During Summer 2004, Michael O'Loughlin, a second-year law student at the University of Denver, was hired by Division 5 to conduct field inspections of suspected "out of compliance" wells in a number of subdivisions in Summit County. With eight weeks to complete the task Michael created a spreadsheet database containing critical information as to ownership, location, and current use for over 1000 wells in some 20 subdivisions in unincorporated Summit County.

In Spring 2005 Division 5 staff will begin to issue administrative letters to those well owners found to be out of compliance with permitted well conditions. It is expected that such violators will either comply with their permitted use conditions or obtain augmentation coverage from the plans for augmentation now available to them. Failure to comply or obtain augmentation coverage will result in the issuance of cease and desist orders as necessary in order to assure compliance with the priority system.

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K. WATER COURT

• **Litigation**

Litigation continues to dominate the workload of the Division's personnel. A total of 248 new water right applications were filed in Division 5

Water Court during calendar year 2004 – 226 for the Colorado River administered by Div. 5 Water Resources and 22 for the White River administered by Div. 6 Water

Resources. Of the 226 applications, 32 were applications involving new augmentation plans and 4 were to amend existing augmentation plans. The State and Division Engineers formally objected in 3 cases (two of Eagle Park Reservoir, and one of Mesa Creek Farms); entered 8 protests to referee rulings; and intervened via 1 protest to a proposed ruling that was re-referred to the Water Judge. 83 amended applications were also published in the résumé. 2 cases are on appeal in Colorado Supreme Court, 04SA81 *Miller v. Kirchner & Weber* (02CW262), and 04S328 *Nichols et al v. Elk Dance Colorado and Alan Martellaro and Harold Simpson* (combined cases 00CW99 and 00CW302).

The number of water right applications is well below previous year, but the number of amended applications continues to increase over previous years. Though the number of new cases has dropped considerably, the workload has not fallen off. The court is catching up on the backlog of pending cases, and new cases continue to be more complex than the past.

- **Retirement of Water Judge**

Chief District Judge Thomas W Ossola stepped down November 1, 2004, after more than 28 years on the bench. Although he retired from his full-time duties, he now works for the Court in the State's Senior Judge program. In this program, retired judges make themselves available for 60 days a year to fill in for other judges throughout the state who are on vacation or other leave.

Judge Ossola was first appointed to the Garfield County Court bench in 1976. He was appointed to serve as 9th District Court judge in February 1980, where he heard criminal and civil cases. Judge Ossola served as Water Judge for Water Division No. 5 and Chief Judge for the 9th Judicial District since 1991.

- **Other Judicial Appointments**

Peter Craven was appointed as the Chief District Court Judge, and Water Court Judge for Water Division No. 5.

Daniel Petre was appointed to the position of District Court Judge of the 9th Judicial District, leaving the position of Water Referee vacant.

Lain Leoniak filled the Water Referee position. Her story will appear in next year's report.

- **Water Division 5 Bench Bar Meeting**

On March 5, 2004, a meeting hosted by Judge Ossola was held amongst the Water Court, the Division 5 Division Engineer, the State Engineer, and the Water Bar. The following are some of the highlights of that meeting:

1. *The procedure and timing for Water Court cases, including the proper scope of the Division Engineer's participation*

The Water Bar has two complaints in this arena. First, the Division Engineer has continuing access to the Court, in particular to the Referee, through the consultation process. The Water Bar argued that this gives the Division Engineer more than "one bite of the apple" and raised concern of *ex parte* communications. The Judge, Referee, State Engineer, and the Division Engineer all made similar arguments that this was consistent with CRS 37-92-302(4), where the Referee is to "make such investigations as are necessary to determine whether or not the statements in the application and statements of opposition are true and to become fully advised..." The Judge further noted that the 1969 Act put Water Court applications on two tracks. As long as the application was in front of the Referee, the Referee was to investigate and facilitate settlement. Once the application is re-referred it is on a more formal track. The second concern noted by the Water Bar is that the Division Engineer raises legal issues in the Summary of Consultation and has no legal expertise regarding legal issues. The Referee noted that many of the legal issues raised in the consultation are those raised by the Referee, but went further to state that he would be remiss if he did not consult on such issues with the Division Engineer.

2. *Augmentation sources must be decreed with the use augmentation*

This is an old argument that the Water Bar appears to retrace in an attempt to discredit the Division Engineer in front of the Water Judge. The argument is that DWR has reversed its previous 1970's position that augmentation is not a use, but a means to a use. Now, augmentation sources must be decreed with the use augmentation or can't be used in augmentation plans. It is true that

augmentation was previously not considered a use but a means to a use, and now is considered a use. However, if an augmentation source does not have the use augmented decreed to it, and augmentation is consistent with the initially decreed use then that source can be used for augmentation without a change of water right. We have been consistent in this matter, and continue to require a change of use where the type and place of use is new.

3. Post-decree transit losses on augmentation plans

The Water Bar states there are three circumstances at issue. First, the augmentation plan expressly states the amount of transit losses, in which case the Division Engineer is limited to assessing those exact amounts. Second, the plan states transit losses are to be assessed but does not specify exactly when and how much. The Bar argues that in this instance the Court has improperly delegated its authority to the Division Engineer. The third instance is where the decree is silent on transit losses and, because an augmentation plan must have a finding of no injury, the Division Engineer is barred from assessing transit losses. Further, CRS 37-305(8) does not allow the Division Engineer to impose additional (post-decree) terms and conditions on a plan for augmentation. Other arguments against post-decree transit loss determinations include: uncertainty introduced into a certainly decreed plan, vague and arbitrary standards, taking of a property right, necessity to assess losses on instream flows if charging reservoir releases, and finally technical issues involved make assessment problematic.

The response of the State Engineer is that the statutes give us a clear authority to prevent injury in the administration. Regarding uncertainty and the idea that transit losses are a taking, there is always an element of uncertainty with respect to water rights and water supply. Changing transit losses are not exempt from that uncertainty. Senior water rights cannot be expected to fill a hole in the river by the operation of augmented junior rights.

3. Issues that may be raised when a plan for augmentation is amended

The drought has caused many augmentation sources to be proven unreliable, and plans

with those sources to be amended. Green Mountain Reservoir's contract pool is the largest single augmentation source to be found unreliable. The Water Bar presented two examples. The first example is where a supplemental source is added to an existing plan. In this instance the Bar was assured that the previous depletion and injury analysis would not be challenged by DWR. The second example is where the proposed supplemental augmentation source had been decreed for the use augmentation, but had never been used in an augmentation plan.

Our response was that the prior determination is *res judicata*, however changed conditions may require a re-determination. As with the first example, the previous depletion and injury analysis regarding the augmented diversions and use are *res judicata*.

• Water Court Cases or Issues of Note

Eagle Park Reservoir Company, 03CW211

This application was not opposed by the State and Division Engineer, until it became clear the applicant would not adopt the major recommendations of the Summary of Consultation, and applicant filed a motion to re-refer to avoid the Referee's consultation with the Division Engineer. Just prior to this motion to re-refer, a decree in Water Division 1 was entered involving augmentation by exchange for Central City. The Central City case did not recognize the existence of the exchange and found that the plan only needed to augment the downstream senior calling right. Eagle Park Reservoir Company had made it clear they expected the Division 5 Court to recognize the Central City decision and grant a similar decision to Eagle Park, though Eagle Park's application was for an exchange plan. The Central City issue is the primary issue of this case, however there are several other issues that are of statewide concern and very important to DWR.

The applicant claimed a 1997 appropriation date, which will be unimportant if applicant prevails on the Central City issue, and claims that though the exchange is claimed as conditional and admits has not operated, the exchange is an "existing" exchange and entitled to relate back to the 1997 date (or much earlier if the Central City issue prevails). The applicant inserted in a proposed decree

language that the applicant is not responsible for augmenting the CWCB instream flows if the CWCB does not augment stream losses caused by the instream flows. This proposed decree also attempts to place additional measurement criteria on the CWCB, though their rights are not the subject of the application. The proposed decree also inserts an unenforceable selective subordination. Note that this selective subordination is unnecessary if the application does not prevail on the Central City and relation back issues. Finally, the applicant is taking a stand on the insertion of the exact statutorily required CRS 37-92-305(8) language as insisted upon by the State and Division Engineers. This applicant, as many others, wants the language qualified to not allow curtailment when applicant is complying with the plan. That is, though it may be clear that the plan is causing injury to senior rights, the Court has found the plan will not cause injury, and DWR is not entitled to usurp the Court's finding.

This case has proceeded through depositions and motions on determination of law, and a hearing before the Judge. It is on track for trial.

City of Golden v. Hal Simpson, State Engineer, and Alan Martellaro, Division Engineer for Division 5

In late July 2003 Golden was informed their Vidler Tunnel rights would be curtailed on July 31, 2003. Golden immediately responded, claiming that they were entitled to divert 250AF from August through October. This amount included 103.2AF of 361AF of water decreed in W-217, which limited diversions to the months of May-July. Incredibly, Golden interprets this condition to mean that any portion of the 361AF not diverted in May, June and July could be diverted at any time. The remainder of the 250AF involved reallocating on July 30th 146.8AF previously attributed to senior rights in June and July (this senior water could be diverted in August) to Vidler's junior 1959 right. This change in accounting was claimed after the fact and because Green Mountain Reservoir had filled on July 25th. However, the junior rights were never in priority at any time during 2003. Next, Golden advanced the argument that the Division Engineer was applying the "senior first rule." As previously noted, the junior rights were never in priority, therefore, no opportunity existed in 2003 to

apply the senior first rule. Golden then stated that Green Mountain's power right could not call out the Vidler rights, because Golden had a power interference agreement with the USBR. According to Golden, administration of the Green Mountain power call had deprived Golden of yield. This did not occur in 2003 for the Green Mountain power call had not curtailed Golden in 2003. It may have in 2000 but has not since. The United States claimed to have an agreement with the Vidler Tunnel Water Company, but not its successor Golden, and further stated Vidler could not assign the agreement to Golden. Finally, Golden insisted that the Division Engineer failed to administer a stipulation with Denver, where Golden claimed they could divert their 1959 rights any time Denver diverted its 1946 rights, including when Denver diverts out of priority by exchange. Golden failed to provide notice of the existence of the stipulation and intent to divert pursuant to this stipulation until after Golden ceased to divert. Further, Denver Water has a different interpretation of the stipulation that would limit Golden's diversions to only when Denver was in priority and no intervening rights would be injured.

After advancing numerous arguments between July 28th and August 13th, changing the amount of claimed injury on each time, Golden filed a complaint on August 13, 2003, for 5.2AF due to the State's senior first policy. The State's response noted that the plaintiff had no claim of injury, for even the plaintiff admitted to diverting the 5.2AF. Golden then asked the Court to rule on all its other arguments, though issue or controversy was rightly before the Court.

An October 21, 2004 Order by Judge Ossola denied Golden's Motion for Summary Judgment but granted Northern Colorado Water Conservancy District's Cross Motion for Summary Judgment, where Golden is denied to divert under its stipulation against Green Mountain Reservoir. Since this Order was issued, Golden has filed a Motion for Clarification of the Order, and a Motion for Determination on a Question of Law. This case continues on track for trial.

The Summit County and Vidler Water Company Plans for Augmentation 95CW122 and 97CW035, respectively

These are known as the umbrella plans and are the first of their kind in Water Division 5.

These plans arose out of the identification by the Vidler Water Company of 1700 wells in Summit County that were out of compliance. Vidler's basis was that any well with a single-family dwelling household-use-only limitation must be out of compliance with either its permit conditions or its augmentation plan limitations, or both. Obviously, not all the identified wells will be found to be out of compliance, though it is likely a substantial portion are. Division 5 has been active in pursuit of a solution for Summit County long before the State and Division Engineers became parties to the water court applications. We developed the GIS mapping of critical structures and stream reaches throughout the Blue River Basin and worked with both entities to develop limits and administrative strategies for operation of the eventual plans. In August 2003 the Court decreed the Vidler Water Company Umbrella Plan. A decree for the Summit County plan was in June 2004. Since the signature of the Summit County Plan, Division 5 has co-sponsored several public meetings with Summit County and Vidler to bring illegal wells into the plan.

Flattops Land Company and Eagle River Water and Sanitation District, 03CW159

This application changes the use of water historically imported from the Yampa River Basin for irrigation by the Stillwater Ditch in the Egeria Creek drainage near Toponas. Both the return flows from lands irrigated by the water rights and water first used for the new uses are considered in the change. The changed water may be used directly, by direct augmentation, or stored in several local ponds for later use. The issues of concern in Water Division 5 include control, identification, and delivery of this water to the new uses. The issues of concern in Water Division 6 include enlargement of historic use, seepage returns to the Yampa, change in irrigation practice to emphasize use in Division 5, separation of Upper Yampa Water Conservancy District water, and use of storage rights delivered through the Stillwater Ditch. In 95CW133 Upper Yampa decreed a similar change of water rights but limited its water available for augmentation to the return flows of water first used for the previously decreed purposes within the Conservancy District. The Upper Yampa case took six years to be resolved. The Flattops case is more complicated but

does have the Upper Yampa decree as a template.

In October 2003 the applicant and interested parties met on site to tour the area of historic use and the structures involved. Several settlement meetings, and technical meetings with Flattops were held in 2004. Division 6 staff a series of measurements on June 23rd and then again on July 16th of 2004 to rate the accuracy of several measuring devices within the ditch system, and monitor carriage losses. The current offer to Flattops focuses on 10-year rolling averages, requiring the ditch to remain substantially as it is (open unlined ditch), and significant improvements in measurement and accounting to demonstrate dominion and control.

Blue River Consolidated Decrees, Heeney Slide

The small town of Heeney along Green Mountain Reservoir's southwest shore is located on a landslide. The issue is not a new one. Many activities and events contribute to the creep of the landslide including seismic activity, excess draining water or ponding of water from spring runoff and irrigation returns, physical changes in the hillside due to landscaping, and Green Mountain Reservoir water levels.

In 1962 Green Mountain Reservoir was drawn down in order to do maintenance on the dam. Two landslides occurred during this time: one along the northern shore; the other in the Heeney area. The Heeney slide crept a number of feet over a period of three weeks, from December 1962 to January 1963. Some property damage occurred. As a result of the slide, Reclamation geologists and engineers re-evaluated draw down operations for the reservoir. For the last 40 years slide activity has been minimal.

The '62-'63 landslide occurred when reservoir water elevations dropped below a level of 7,847 feet. Referencing information from the '62-'63 slide, Reclamation geologists recommended limiting the reservoir level to an elevation of 7850 in 2002, stranding 20,000 on top of the 7,000AF dead pool. Because the USBR allocated all the stranded water to the 100,000AF West Slope Pool, the Colorado River Water Conservation District filed suit to re-open the Blue River Decrees for consideration of the loss of storage in Green

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Mountain Reservoir. The State of Colorado filed a Motion to Intervene, which was granted on August 5, 2004.

The State of Colorado's first claim requests declaratory relief that the Green Mountain Reservoir operation relating to Heeney slide mitigation is not in accord with the terms of the Blue River Decrees. The first claim further requests that the Court declare that any interim procedures related to the Heeney slide result in a fair and equitable operation of the Colorado-Big Thompson Project.

The State brings its second claim pursuant to the Administrative Procedures Act for violation of the Blue River Decrees. The Blue River Decrees set forth the operating criteria for the Colorado-Big Thompson Project, including Green Mountain Reservoir. The Blue River Decrees do not provide storage of water or operation of Green Mountain Reservoir for the purpose of mitigating the Heeney slide. Therefore, the State claims that the USBR violated the Blue River Decrees by its

implementation and declaration of operating criteria for Green Mountain Reservoir for the Heeney slide.

Federal Judge Nottingham (the Federal Court has continuing jurisdiction over interpretation of the "Blue River Decrees") has issued several orders in the matter, but the litigants are now pursuing mediation. The mediator is expected to review documents (Senate Document 80, the Blue River Decrees, pleadings in this case) and then conduct interviews of each party involved, including the State. Then a draft preliminary situation report will be prepared for all parties to read due late winter-early spring 2005. The parties will then evaluate whether further talks or shuttle mediation will be productive. Total first-phase mediation cost is estimated at \$19,000, and the State's share is 15%. Other cost shares are as follows: 25% to River District and other petitioners, 25% to U.S., 25% to Northern, and 10% to the Cities (Denver and Colorado Springs).

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L. TABULATION

The Division 5 tabulation remains a priority. The backlog has been decreased from 1700 decrees in 2000 to approximately 350 decrees at the end of 2004. Division 5 continues to receive 300-350 new decrees each year that will be incorporated into the tabulation. With the help of water commissioners, the tabulation backlog continues

to decrease and districts in which the backlog has been eliminated are being kept current. Currently 8 of the 11 water districts in Division 5 are current and, at the current rate, the backlog should be eliminated by 2006.

Division 5 Tabulation

Water District	Backlog on 1/1/2004	New Decrees in 2004*	Total Untabulated Decrees	Decrees Tabulated as of 12/31/04	Remaining Untabulated Decrees
36	154	37	191	94	97
37	282	51	333	278	55
38	330	111	441	276	165
39	44	48	92	60	32
45	0	35	35	35	0
50	0	9	9	9	0
51	0	54	54	54	0
52	0	7	7	7	0
53	0	21	21	21	0
70	0	3	3	3	0
72	0	73	73	73	0
Total	810	449	1259	910	349

* Includes Court Orders. Does not include Abandonment List.

M. ABANDONMENT LISTS

▪ **2001 Revised Abandonment List - 01CW337**

There were 158 water rights placed on the Revised Abandonment List that was published in December resume in 2001. Protests to the abandonment list were to be filed by June 30, 2002. There were 40 water rights that were protested during 2002. Field investigations for the protested water rights were field inspected in the Fall of 2002 and Spring 2003. A considerable amount of time was spent negotiating settlements in 2003. The Table in [Appendix G Abandonment 2000](#) summarizes the water rights that were abandoned and the status of the water rights that were protested.

▪ **1984 Abandonment List - 84CW218**

The *Pond No. 2 Ditch* water right in Water District 38 for 0.56cfs was put on the 1980

Abandonment List. On March 28, 1988, District Court Judge Litwiller cancelled this right. On October 18, 2004, Water Judge Ossola ordered a reinstatement of this water. Ownership of the right was at issue and was eventually clarified in 2004.

The Homestake Ditch Nos. 1, 2 and 3 in Water District 37, decreed for 0.6cfs, 0.3cfs, and 0.3cfs, respectively, for irrigation were put on the 1980 Abandonment List. The existence and use of the structures and rights were in question. Negotiations continue in the resolution of this case.

N. PERSONNEL AND BUDGET ISSUES

Division 5 was not fully staffed in 2004 due to vacancies in Districts 38 and 45. Bob Klenda retired in February after 21 years of service. Bob was one of our best Water Commissioners; he received Water Commissioner of the Year in 1987 and 2001. Bob was the lead Water Commissioner in WD 45 and supervised WD 70. Larry Gepfert resigned from the Division of Water Resources in April to become a pilot with the Division of Wildlife, leaving a vacancy in WD 38.

Michael Craig, who had been hired in 2003 as a combination Water Commissioner in WD 45 and Well Commissioner at the Glenwood Springs office, transferred to the WD 38 vacancy. Jim Lemon, part-time WD 39 EPST I Water Commissioner, was promoted to the supervisory EPST II position in WD 45. Steve Trexel transferred from Division 2 to take the EPST II combination WD 45 and Well Commissioner position.

With the promotions and transfers we are still missing a 9-month EPST I position that was vacated by Jim Lemon. This position when filled will have water commissioner duties in Water Districts 39 and 45.

Filling positions has been very difficult due to the backlog in DNR's Human Resources. The delay in filling positions has caused additional demands on the existing staff to perform the duties of the vacant position.

• **Impact of the Budgets on Operations**

Division 5 Operating Budget

Vacancies, vacancy savings, and drought have resulted in Division 5 doing more with less resources. Computer skills, time management, and personnel management training is extremely important in enabling the employees to handle difficult situations.

Overtime Budget

Historically, Division 5 has addressed the shortage of permanent man-months for water commissioners through use of overtime. Division 5 is at least one full-time water commissioner short when fully staffed to address the existing water commissioner duties.

Division 5 is experiencing a transformation from rural to urban areas. This transformation has resulted in approximately 300 to 400 new water rights each year and the duties of the water

commissioner have increased from the traditional irrigation months of May through October to year-round administration. Currently,

Division 5 has four water districts without a full time water commissioner.

O. **2004 PERSONNEL AWARDS**

- **John Sikora, Division of Water Resources Manager of the Year**



John can truly be recognized in any or all of three categories--Professional, Manager, and Leadership, and was deservedly selected DWR's Manager of the Year by Hal Simpson, State Engineer. John is an excellent example of what a manager and supervisor should be. He seeks opportunities to support and guide those in his charge, and does not treat these duties as an afterthought. It is very easy to get too busy with tasks that are visible and have deadlines, and then miss the more important job as a manager and supervisor. That is not how John approaches his job. John also seeks the difficult management tasks, providing positive direction to difficult situations. When John first started as Assistant Division Engineer, he pushed for a monthly staff meeting. These meetings have produced some excellent ideas in addition to focusing staff on the important tasks. The meetings are important in the promotion of a team concept, and to maintain communication between staff and the Division Engineer. This is one example of professional, leadership, and management skills that John has brought to Division 5 from the very first day. John has also kept projects on track for completion. For example, though later repealed, John led the Division 5 effort for SB-278, organizing staff and developing the tools for the project. As a result

of John's management and leadership skills, Division 5 took the lead in this project. John's skills as a supervisor and manager have helped develop Division 5 into a thriving work force. We are truly fortunate and thankful to have John as our Assistant Division Engineer.

- **Michael Craig, Division 5 Water Commissioner of the Year**



Michael is new to the Division of Water Resources, but is not new to water rights or enforcement of laws and regulations. However, starting the first full year as a Water Commissioner in Water District 45 in the extremely contentious year of 2003 would test anyone. Michael accepted this challenge and handled some battle-hardened water users with skill and professionalism. Michael has become our go-to-guy whenever something comes up that requires time-consuming effort, particularly if technical skills are required. When overwhelming and difficult tasks arise, we can

count on Michael to finish the job with quality workmanship. Since the 2004 irrigation season, Michael has shifted to Water District 38, and together with Bill Blakeslee DWR now has two excellent Water Commissioners in the Roaring Fork Valley.

• **Bill Blakeslee, Recipient of The Tarnished Shovel**



The Tarnished Shovel is a special Division 5 award awarded for a variety of reasons and is not given out every year. Generally, it is awarded to someone who has tackled a project no one has mustered the energy to take on. This year the award went out to Bill for several projects but primarily his efforts to improve administration in both Four Mile and Three Mile Creeks. Bill's dedication was obvious. When we shifted his duties to the upper Roaring Fork, he insisted that we not take-away his Four Mile and Three Mile administration until he was comfortable things were running smoothly. Bill worked on ranches in the upper Roaring Fork and Fryingspan Valleys for many years prior to becoming a Water Commissioner. The contact with water users he has made over these years has now become invaluable to DWR.

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II. 2005 WATER YEAR

A. BASE OBJECTIVES

At the beginning of the 2005 runoff season the snow pack is once again below average, but is a considerable improvement over the 2004 projections. As of March 1, 2005 the Colorado River mainstem is a basinwide 91% of normal. The runoff conditions vary from an excellent snowpack on the Grand Mesa with 163% to a low of 78% in the Williams Fork basin. Generally, the Middle Park area and the Flattops have the worst conditions with upper 70's to low 80's. Conditions improve slightly in the Eagle

River to 85%. Below Glenwood Canyon, only the Fryingspan River is forecasted to below 90% of average with 84%.

For 2005 Green Mountain Reservoir is expected to fill on paper. It may not, however, physically fill, thereby triggering another substitution year. Dillon is not expected to legally fill in 2005, but will be physically full. Vega Reservoir will fill; however, none of the other major reservoirs in the basin are projected to fill.

B. SPECIAL PROJECTS AND WORK ITEMS FOR 2005

The everyday operations of Division 5 Water Resources will continue to include:

- Administration of water rights and augmentation plans,

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Collecting and recording diversion data,
Collecting data regarding irrigated acres and other use information,
Tabulation of water rights,
Permitting wells,
~~Preparation of a decennial abandonment list,~~
Performing well inspections,
Inspecting dams and reservoirs,
Reviewing water rights applications and litigating cases to ensure statutory compliance and no injury in changes of water rights,
Informing the public,
Attending Water Conservancy District meetings and other water user meetings,
Contacting water users.

• **Green Mountain Fill Committee**

Resolution of accounting of the senior storage right and the power right at Green Mountain Reservoir continues to be the most significant issue in Water Division 5. The strategy for moving forward continues to rely on collaboration through the Green Mountain Fill Committee meetings and, barring agreement by a reasonable majority, the State and Division Engineers will exercise their administration authority in the fill accounting of Green Mountain and Dillon Reservoirs.

Green Mountain Fill Committee meetings will unlikely resolve the dispute for the 2005 fill season. A draft Interim Policy will be presented by the State Engineer at the April 14, 2005 meeting, and likely will be adopted with input from the committee prior to the expected start of fill declaration in May. Given the runoff forecast for the upper Colorado River, fill accounting will once again be critical to administration of water rights above Dotsero.

▪ **Hydrographic Records Backlog**

Major progress was accomplished in 2004 on the completion of the hydrographic records backlog. All of the backlog records have been worked and now require only checking and review, before publication. Checking and review will be finished by the end of the 2005 water year, resulting in continuous published historic record for all ten gaging stations in Division 5. This progress can be attributed almost entirely to three factors: hiring a temporary part-time employee, retired USGS data section chief Ed Wilson, who did an outstanding job working on the records; Water Commissioners provided significant help on records

over the last four years; and, the Division 5 lead hydrographer George Wear was able to focus more on hydrographic tasks by reducing other duties.

• **Hydrographic Projects**

Several improvements are planned for the Snake River at Keystone station. A "natural" control will be constructed this fall to improve sensitivity at low flows. Beginning in October, the station will be operated during the winter months as a "full-service" station, including publication of the discharge record. This change will facilitate better year-round gaging record for the Snake River, and is being done in conjunction with the USGS reduction in operation of their upper station ("near Montezuma") to summer only.

Satellite monitoring of District 45 transbasin diversions will be improved through high data rate (HDR) equipment upgrades and a station addition. Cooperator and grant funding has been secured to upgrade five existing transbasin diversion satellite monitoring stations to HDR; this work will be completed in 2005 or 2006. This funding will also help with the addition of a new satellite monitoring station at the headgate of the Multa-Trina Ditch, which will measure imported and in-basin water, and with the upgrades and operation of the West Divide Creek near Raven station, which will be taken over by DWR from the USGS in 2006.

Three new satellite monitoring stations are planned for the Leon Lake Tunnel System on Grand Mesa, to be completed in 2005 or 2006. Leon Lake Reservoir and Colby Horse Park Reservoir elevations will be

measured with acububbler pressure sensors and the Leon Lake Tunnel outlet will be measured with a shaft encoder. All three sites will have HDR satellite monitoring installed.

HDR upgrades are planned for several other existing stations in Division 5 for 2005.

• **Augmentation Plans**

Division 5 will:

• Investigate several major augmentation plans located throughout the Division. An established team approach will continue to be used, where augmentation plan coordinator staff and water commissioners will share in the research and administration planning duties.

• Fine-tune the existing system where water commissioners regularly administer small pond releases associated with small augmentation plans.

• CONTINUE TO DEVELOP AUGMENTATION PLAN ACCOUNTING TEMPLATES AND STANDARDIZED WATER USER CORRESPONDENCE NEEDED TO ASSIST IN AUGMENTATION PLAN ADMINISTRATION.

• Continue to utilize administrative-only structure ID's for reservoir pool releases or exchange pools in diversion record keeping.

The CDSS Division 5 Workbook will collect input via E-mail from the four largest water users in Water Division 5. During 2004 the Workbook should become operational. Once operational we will link data from the Workbook to the Division 5 diversion record spreadsheets. After we acquire some experience in this area, we will investigate developing a system to obtain data for all our spreadsheet input that relies on user-supplied data. Such a system has many benefits; the greatest benefits are improved efficiencies and the use of the same data by all.

• **CRDSS Workbook**

The Division 5 Workbook became operational in 2002. No improvements have been made since. The task remains to make this

tool more effective in the administration of the river, more functional for our water users, and to integrate its output seamlessly into our diversion records. Until the Information Technology section completes water rights and diversion record upgrades to *HydroBase*, it is unlikely that the Workbook will receive any attention.

• **Transit Loss Litigation**

The issue continues to be a major point of dispute with a handful of water users. In the litigation of augmentation plans, it has been the position of the State and Division Engineers to not include locked-in amounts for transit losses within a decree. This has created a concern expressed by attorneys that their clients expect certainty in the final decree and that the Court cannot delegate its authority to assess injury to the State and Division Engineers (see Bench Bar Meeting elsewhere in this report). Winter transit losses are a particularly difficult topic. We have reached the point where firm assessment of transit losses will be made as we brace for subsequent litigation.

• **Heeney Slide**

By late spring the success or failure of the first phase of mediation should be known, and the process for the next step will be further mediation or litigation. Taking a page from the Green Mountain Fill Accounting, an Interim Policy for 2005 drawdown relating to the Heeney Slide mitigation has been circulated and will likely be accepted by all parties. This policy is deemed—"Stipulation On Interim Operating Procedure For Green Mountain Reservoir For 2005 Case No. 49-N-2782 (CBS)."

• **Slot Group and the Green Mountain HUP Policy**

Once again, administration of the continuing drought eliminated any non-internal discussion on this matter. As previously reported, a draft policy to be signed by the State Engineer has been proposed. This proposal will define the upper limits of the beneficiaries of the Green Mountain HUP. By defining this upper limit, those that fit in the "slot" perfected between 1977 and 1984 can be determined. The Division of Water Resources had taken the lead in these critical discussions, but discussion of this issue is unproductive in the middle of this

drought. The majority of users represented in previous discussions endorse the policy as drafted. The biggest hurdle to resolution is a few users with larger demands than previously considered, and a few users with large conditional rights that pre-date 1977 that are not inclined to give up status as a beneficiary of Green Mountain Reservoir. Finding replacement for these uses may prevent simple resolution. For now we will continue to use the 200AF set aside in Wolford Mountain annually by the Board of the Colorado River Water Conservation District as adequate to augment this group of water users, as defined by DWR, without curtailment.

- **Reconciliation of Irrigated Acres**

The problem involves two projects. The first is the GPS'ing of irrigated acreage under ditches with numerous change cases where dry-up is used for consumptive use credits in plans for augmentation. Many of the older change cases do not include maps of the dry-up, and we have found some cases where new dry-up claims are overlapping with old claims. Division 5 staff has begun with two ditches along the Colorado River where a substantial amount of the dry-up is tied to the development of gravel pits, or to the construction of I-70 during the 1970's. The second project involves the reconciliation of the irrigated acreage project with acreage claimed in the annual diversion records.

C. PERSONNEL, BUDGET, AND OPERATIONS

- **Personnel**

In 2004 Division 5 exceeded 1,000 decreed plans for augmentation. Administration of plans for augmentation have become very time-consuming and more complex. Real-time and active administration and accounting for these plans for augmentation is extremely important to properly administer all water rights.

There were over 300 new water right applications in 2004 in Division 5 water court. There is increasing level of complexity in water right applications due to transfer of water from rural to urban uses. We have estimated we spend approximately 10 man-hours per application on consultation with the court and applicants and 2 man-hours on tabulating signed decrees. To address the increasing water court application workload, Division 5 requires approximately 3,600 man-hours per year. Assuming 1800 man-hours in a year, Division 5 requires over 2 FTE employees to address the litigation workload. Currently, Alan Martellaro, John Sikora and Kyle Whitaker each devote 0.5 man-years to litigation thus leaving over 0.5 FTE employee necessary to address the litigation workload. Alan normally exceeds the statutory limit on Summaries of Consultation, and John and Kyle are more than 2 months behind in addressing proposed rulings of the referee.

- **Operations**

HydroBase

There are several improvements to *HydroBase* that would significantly reduce our workload producing records. There is still no way to print directly from *HydroBase*. There are several steps to transfer the data to *DBase* and print from *DBase*. This has led to several database file errors as well as our water commissioners cannot print their own records and check the data.

HydroBase should also be programmed to accept river calls and automatically assign diversion records to Green Mountain protection. Our water commissioners spend a significant amount of time entering diversion records with Green Mountain protection. With some simple programming, the water commissioners could simply enter Total Water Through Structure and thus eliminate creating multiple records.

The Division Engineer is responsible for releasing water from Green Mountain Reservoir to protect out-of-priority diversion from Historic Users Pool (HUP) beneficiaries. The HUP beneficiaries group was defined by the USBR in January 1984 as the water rights that were perfected by use prior to October 15, 1977. No one has produced guidance on how the water is to be released from Green Mountain. Past Green Mountain administration has relied on Rule Curves that were developed based on

practice on the River being "on call" in mid-July. Recent droughts have made these Rule Curves obsolete. We need to develop a consumptive use model to estimate the amount of depletions

from HUP beneficiaries to better represent the depletions to downstream senior rights and to better manage the releases from Green Mountain.

D. DAM SAFETY ISSUES FOR THE FUTURE

With the Division 6 Dam Safety Engineer and the Division 5 Grand Junction-stationed Dam Safety Engineer being fully established and the backlog of inspections being resolved, the schedule of routine inspections should be stabilized for 2005 and in the future. However, it appears now that there will be runoff-related dam safety problems in 2005 with the potential for more incidents. This is due to the heavy snowpack in the southern part of the Division in portions of Districts 38, 45, and 72. Presently the snowpack on Grand Mesa is, on the average, 170% of normal for early March and 135% of the average peak snowpack of mid-April. This could present spillway snow blockage problems. Also, smaller reservoirs could fill very quickly after they had been drained so long during the drought conditions of 2004. Dry embankments suddenly asked to store water could result in many seepage-related problems. With the present dam safety vacancy in Division 4, our dam safety engineers in Grand Junction and Glenwood Springs may be needed to respond to incidents in both Divisions 4 and 5 resulting in a significant increase in the workload.

In general, aside from the potential problems in 2005, the future workload will still be very full for the following reasons:

- Except for during drought years, the trend of reservoirs in Division 5 to remain full for longer periods of time continues as less water is used for irrigation and more for recreation. Many of these dams are old and were designed and built for irrigation. As a result, the trend for an increase in dam safety problems will continue to increase the dam safety workload.
- With the drought comes the increased desire to enlarge or rehabilitate existing dams. This will increase the amount of time to review the designs, plans and specifications submitted for these enlargements or rehabilitations. The Dam

Safety Branch statewide is understaffed for design review, which will cause the Grand Junction-based Dam Safety Engineer to be needed for design review in other Divisions. This in turn will leave more design review for the main Division 5 Dam Safety Engineer stationed in Glenwood Springs to do.

- Another dam safety issue that will have an effect on the future workload is the proliferation of non-jurisdictional dams being built in the Division. As more people move into the area, more want to build a small recreational pond. Also with more development there is an increasing need for augmentation plans, which usually require augmentation ponds. Reviewing the "Notice of Intent to Construct," these non-jurisdictional dams will have some impact on the workload but the big concern is the public safety risks and potential incidents that will occur as the population grows. With this in mind, the review of plans and specifications for the construction of significant hazard non-jurisdictional sized dams will be required with the proposed new rules and regulations, which will require additional design review time.
- Even though the Dam Safety Engineers were able to accomplish 14 hazard evaluations in 2004, there is still a large backlog of 32 hazard evaluations that need to be done. As the risk assessment approach becomes more of a reality, accomplishing the hazard evaluations will become a higher priority. It is estimated that it will take over 30 man-weeks to accomplish these. This does not include training time if other personnel are to be used.
- The extreme precipitation study for designing rainfall amounts above 7500ft. elevation is near completion. When the methodology is finally completed, it will mean approximately 50 Class 1 and 2 dams will have to have a hydrology study

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performed. This will take another 40(+) man-weeks to accomplish.

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