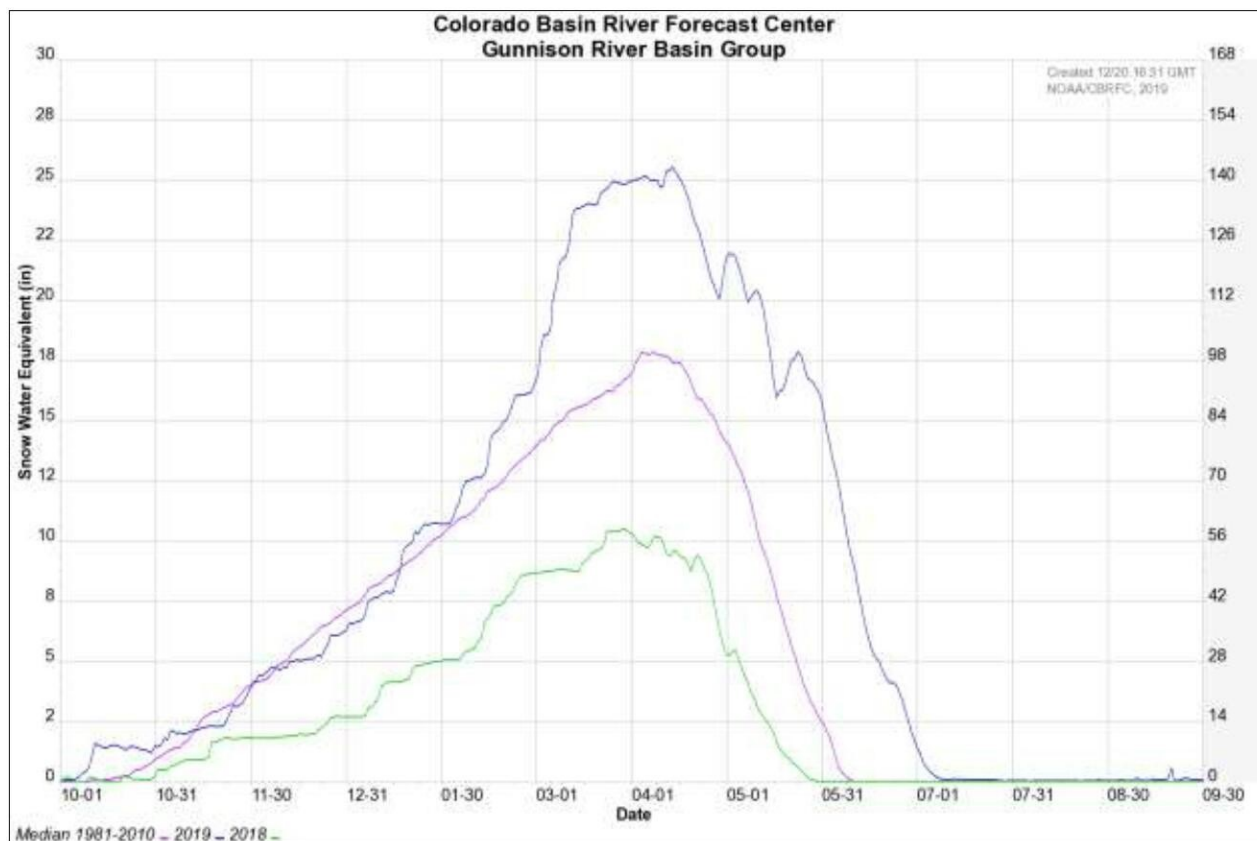


Water Supply

The contrast in water supply between 2018 and 2019 could not have been more dramatic, as can be seen by the chart below. 2018 was one of the worst water supply years on record. And 2019 was one of the top water supply years on record in the Gunnison River Basin. The 2019 Water Year peaked at approximately 143 percent of average for the season by mid-April, with most of the big snow events occurring in February and March. According to the Colorado Basin River Forecast Center, the precipitation totals in March ranked among the highest on record. Runoff conditions were similar to other recent big runoff years, such as 2008 and 2011, in that the weather was mild in the spring and there was an average or below average level of dust on snow events during the winter and spring. As a result, the runoff continued for much later than average and extended natural flow in stream systems for much longer than normal. Reservoir levels going into the 2019 water year (November 1, 2018) were extremely low. Blue Mesa Reservoir, Ridgway Reservoir and the Grand Mesa Reservoirs were at record or near record lows for carry over storage amounts. However, water storage rebounded in all of the drainage basins to 100 percent by the end of the spring runoff.

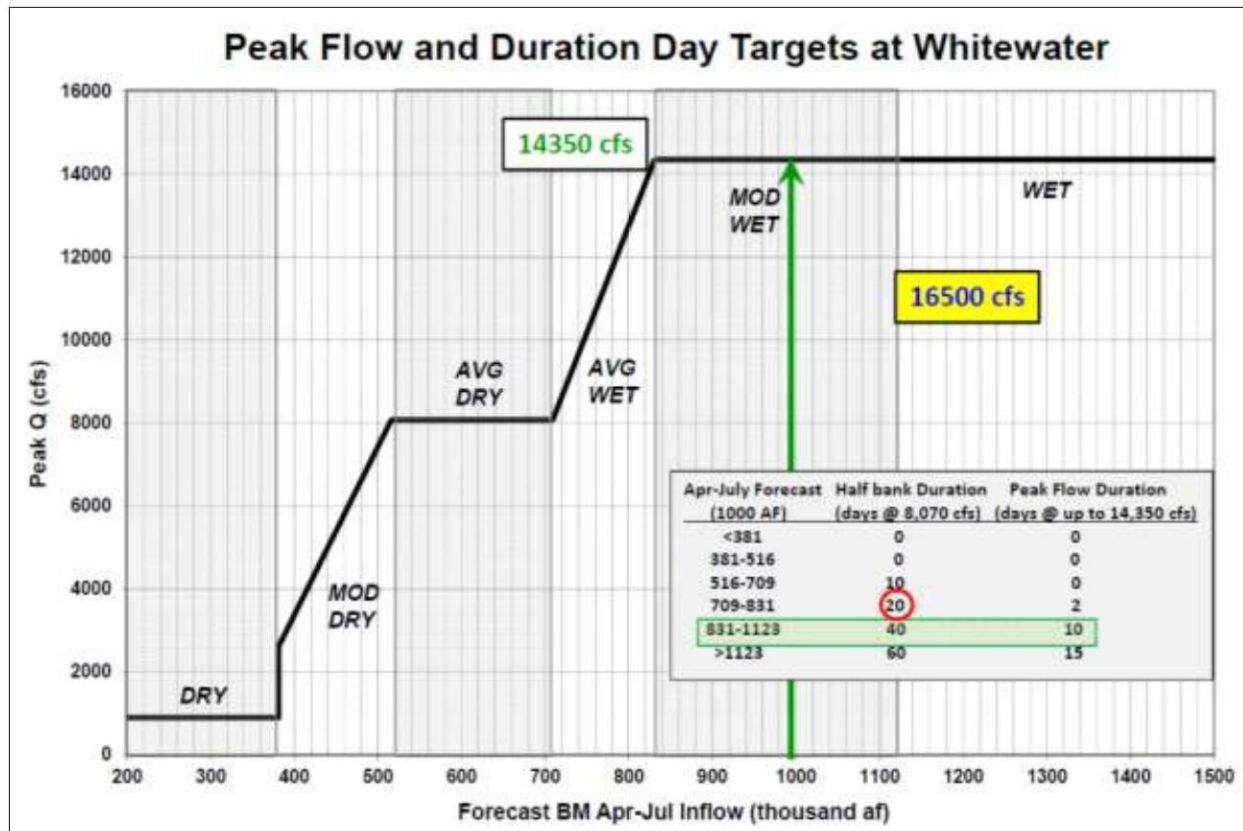


Similar to 2008, the Gunnison Basin received very little precipitation in July, August, and September. The expected monsoon season never materialized. Full reservoirs at the beginning of the irrigation season and dry summer conditions resulted in very good hay crops and haying conditions throughout the basin.

Surface Water Administration

The April-through-July forecasted inflow to the Aspinall Unit (Blue Mesa, Morrow Point, and Crystal Reservoirs) as of May 1st was 970,000 acre-feet, or about 144 percent of the 30-year

median seasonal peak, categorizing the season as a “moderately wet” year for storage management purposes under the Record of Decision for the operation of the Aspinall Unit. However, due to the late April and May precipitation, the actual April through July runoff volume into Blue Mesa Reservoir finally measured at 1,089,000 acre-feet. Based on the Colorado Basin River Forecast Center’s May 1st forecasted inflows into Blue Mesa Reservoir, the target peak flow in the critical stream reach of the lower Gunnison River for 2019 was 14,350 cfs as measured at the Whitewater stream gage, shown in the chart below. The peak flow was sustained for six days and was accomplished primarily by normal releases from Crystal Reservoir, combined with significant tributary runoff from the Uncompahgre River and its side tributaries. The North Fork River peaked two weeks earlier and was not a big factor in the peak measured the Whitewater stream gage of just over 16,500 cfs on June 9th.



Again, each year, the Bureau of Reclamation attempts to meet the peak flow target on the critical habitat stretch of the lower Gunnison River as measured at the river gage near the little town of Whitewater at the lower end of that critical stream reach. In addition, there is a duration component involved with the annual release schedule from the Aspinall Unit as shown in the inset table on the chart above. For 2019 releases, drought rules were in effect, which are designed in aid in the recovery of storage following a drought year.

As explained above, the delayed runoff conditions coupled with higher than average precipitation during April through June for much of the basin, and certainly in the upper Gunnison River Basin, resulted in much more inflow into Blue Mesa Reservoir than could have been forecasted by the snowmelt runoff alone.

Taylor Park Reservoir began its water storage season on November 1, 2018 with an “owed to” exchange account of just over 26,000 acre-feet that must be first moved back down into Blue Mesa Reservoir prior to filling the first fill account for the Uncompahgre Valley Water Users Association (UVWUA). The runoff was so big that the 106,230 AF first fill account was filled by June 14, 2019 and the second fill account was filled by September 5th. Another amazing phenomenon was that the natural flow in the Gunnison River into Blue Mesa Reservoir was sufficient enough to satisfy the Gunnison Tunnel demand until the end of August, which is also probably some sort of record.

In Water District 40, the North Fork Gunnison River basin, carryover storage was practically non-existent. However, the runoff conditions from the Grand Mesa were at historic high levels. For example, the Grand Mesa runoff typically subsides by early to mid-June and storage water is then released to help meet with demand by water users in the area. This irrigation season, natural flow in the streams on Division 4 side of the Grand Mesa was sufficient to meet water demands by irrigators clear into the second week of July, which is a very rare occurrence, and all of the reservoirs filled and spilled in 2019. Reservoir storage is critical to for apple, peach, and cherry orchards in this area, as well as grape vineyards and hay fields. In summary, the irrigation season below the Grand Mesa enjoyed excellent water supply conditions even though the summer was hot and dry with very little rainfall until October.

Paonia Reservoir dominates river operations on the North Fork River during the irrigation season and the storage water accounts are owned by the Fire Mountain Canal Company and the Leroux Creek Water Users Association. In addition, the Ragged Mountain Water User Association, whose water users are located above Paonia Reservoir, tributary to Muddy Creek, leases approximately 2,000 acre-feet of storage by exchange. The Fire Mountain Canal relies on natural flow during the spring until the runoff season ends; then it relies on storage out of Paonia Reservoir. The Paonia Ditch initiated the call on the North Fork River on August 14, which calls out the Fire Mountain Canal. This action is typical of a normal water administration year, however, it usually occurs about a month earlier.

In water District 60, the San Miguel River held up surprisingly well due to the above average snowpack conditions in the San Juan Mountains despite the fact that there was no seasonal monsoon event. As a result, there was no call on the mainstem of the San Miguel River (namely by the Highline Canal) in 2019.

Groundwater Administration

The Well Permitting Program in Division 4 continues to provide timely issuance of exempt well permits. There were 396 well permits issued within Division 4 during the 2019 water year which was remarkably consistent with the 402 permits issued in 2018. The trend is also consistent with the active development and growth in the local economy and real estate market. 349 of the total 396 permits were exempt well permits issued by either Josh Kasper (now the Division 4 hydrographer) or Greg Powers, the present Division 4 well commissioner. The remaining 47 non-exempt permits were issued by the Divisions 456 Team staff in Denver in 2010. Our plan is to continue issuing exempt well permits out of this office.

Water District 40 is the largest district and much development relies on individual wells for water supply. 85 wells permits were issued in Water District in 2019. Similarly, development and growth in unincorporated areas of Water Districts 59 and 60 rely on individual wells for water supply. Water District 59 saw the most exempt water well permits issued at 95. This is consistent with 2018. Due to the availability of a treated potable water supply throughout the

Uncompahgre Valley, comparatively fewer domestic use wells are drilled in Water Districts 41 and 68.

All exempt well permits were issued out of the Montrose office. Our office has spent a considerable amount of time identifying and correcting information in the well permit database. The Well Commissioner has also undertaken several GIS projects involving this database that is proving very useful in getting parcel information from the counties in a useable form and moving toward replacing the hand drawing process on the paper maps. The permit application and approval process has been improved and streamlined by the development of online or web based tools for the Well Commissioners. The process improvements has resulted in much shorter turnaround times for the applicants in getting their permits approved and issued.

Hydrographic Activities

Division 4 has thirty-three Satellite Monitoring Stations (SMS) with forty-two associated gages, an increase of three additional SMS gages this season. Eleven of these gaging stations are record gages that are published annually. The data from these stations may all be found on the *Colorado's Surface Water Conditions* web site. We cooperate with the US Bureau of Reclamation at four sites and publish two of these. With the retirement of the previous lead Hydrographer Tony Arnett (transferred two years ago from Division 1), Josh Kasper has assumed hydrographic support for this Division. With the assistance of several Water Commissioners, Josh maintains the eleven published gages, twenty-five administrative gages and keeps satellite monitoring equipment maintained. In 2019, a total of 117 measurements were made by Josh Kasper, Jason Ullmann (Assistant Division Engineer), Brian Boughton (Lead Hydro in Division 7) and the water commissioners that also assisted. 156 gage visits were recorded.

Division 4 has experimented with replacing Stage Discharge Recorders with Radar Water Level Sensors at several stations with excellent results. The radar units are more expensive than the SDRs but they require less maintenance and there are fewer electronic components associated with the system, which translates to less maintenance.

Personnel

Thankfully, there were no retirements in 2019. However, Division 4 was still managing with the retirement and subsequent replacement of our one full time hydrographer, Jerry Thrush. Division 4 has 28 permanent positions, so it stands to reason that at any given time there is most likely some sort of personnel action or change in the works. Josh Kasper was our Well Commissioner and he transitioned to filling the hydrographer vacancy. Of course this started the chain reaction that can often happen internally as people take opportunities that may open up only occasionally. Greg Powers, deputy water commissioner in District 40 was able to fill the vacant well commissioner position, of course leaving his deputy water commissioner position vacant. And so the story continues, although we anticipate that all vacancies will be filled by the beginning of the next irrigation season.

Community Involvement

Past experience has revealed the extreme importance of having respectful and trusting relationships with the variety of water use organizations and members of the community. Without such trust and respect, this office would have limited effectiveness. Division 4 appears to be somewhat unique, wherein the major water user groups work together with the government organizations for the betterment of the basin. It is a pleasure to be a part of that cooperation and to hold and maintain a position of trust in the water community.

The Division 4 staff was greatly involved in 2019 with our water users and we see such interaction as an increasingly important part of our responsibility as water stewards. To this end, we frequently attended meetings of the Gunnison Basin Roundtable, Colorado River Water Conservation District, Upper Gunnison River Water Conservancy District, Tri-County Water Conservancy District, North-Fork Water Conservancy District, Uncompahgre Valley Water Users Association and its Board of Directors, Farmers Water Development, Surface Creek Ditch and Reservoir Company, Granby Ditch and Reservoir Company, Big Ditch Company and Park Reservoir Company and other water interest groups.

The Division Engineer consistently attended meetings of the Colorado Water Conservation Board, Southwest Water Conservation District in Durango, US Forest Service, Bureau of Land Management, and the US Bureau of Reclamation. Not only is valuable input offered, there is an opportunity to be informed of many other basin issues potentially affecting this office.

Our public involvement included participation on the regularly scheduled Gunnison Basin Roundtable meetings held in Montrose, both for the Statewide Water Supply initiative, or SWSI, and the Interbasin Compact Committee. We have worked closely with both the Executive Director's Office of DNR as well as the Colorado Water Conservation Board in providing a local perspective of basin water issues. We helped identify existing water supplies and pointed out areas where future growth might be faced with water shortages. One of the most effective annual public meetings that has really helped to heighten the awareness of all things water related is the Colorado River Water Conservation District's annual "State of the Rivers" meeting which is held in most of the major watersheds each spring. The Division Engineer's participation includes a discussion on water supply and runoff conditions.

Finally, many Division 4 Water Commissioners attend local water user meetings in their communities, a practice strongly encouraged by this office. As they are the local water experts in the area, they can provide local knowledge and valuable input.

2019
Division 4 Water Court Activities

Applications for Decrees	154
Consultations with Referee	152
Decrees Issued by Water Court	136
Dismissals	8
Complaints	0

	<u>Structures</u>	<u>Cases</u>
New Conditional Water Rights Filed	32	18
New Absolute Water Rights Filed	26	20
New Diligence on Conditional Rights Filed	206	61
New Change of Water Rights Filed	15	10
New Conditional to Absolute Apps Filed	104	47
New Augmentation Plans Filed	11	11
Cancellations of Conditional Rights	14	4
Underground Water Rights Adjudicated	58	24
Surface Water Rights Adjudicated	209	91
Water Storage Rights Adjudicated	103	48
Plans for Augmentation Adjudicated	10	10
Change of Water Rights / Use Adjudicated	13	11
In-stream Flow Rights Adjudicated	3	3

Division 4 Water Resources

