COLORADO
Division of Water Resources
Department of Natural Resources

Division 7 Annual Report

Water Year 2022
(November 1, 2021 - October 31, 2022)

by
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1 Water Supply

Snowpack in the San Juan and Dolores River Basins during the winter of 2021-2022 (Water Year 2022) was slightly below average. Coming off a dry 2021, where summer monsoonal rains only provided a minimal amount of relief, there was concern that 2022 would again be a difficult year due to reservoirs that started at very low levels. Furthermore, runoff on most rivers peaked in early May due to warm and dry days, which also heightened the concerns of a short water supply. Division 7 entered the irrigation season in a state of drought.

However, during the summer and fall, precipitation regularly provided a critical source of water to irrigators and reservoir operators. Significant rainfall arrived in June; June typically is one of the driest months of the year. Most reservoirs were able to add water into storage in June, after beginning the releases as early as March (Long Hollow).

The rainfall continued sporadically throughout the irrigation season and most reservoirs were able to carry stored water over into the 2023 water year.

2022 was a year that came in like a lamb and went out like a lion. The importance of monsoonal rains were evidenced. It could be argued that monsoonal rains are more important than an excellent snowpack across much of Division 7. Heading into 2023, many reservoirs look to fill completely if there is an average snowpack.

Figure 1: Monsoon rains returned in 2022

2 Surface Water Issues

2022 was a year different than the recent years because although it was anticipated that only the most senior water rights would remain it priority, the rainfall allowed many of the junior water rights to regularly divert water.

There were 164 administrative called placed on 11 different stream systems in Division 7. From the total, two of the calls were on Cherry Creek, one of the calls was on Chicken Creek, one of the calls was on Coal Creek, one of the calls was on Devil Creek, two of the calls were on Dry Creek, 13 of the calls were on the Florida River, 3 of the calls were on Fourmile Creek, 69 of the calls were on the La Plata River, 22 of the calls were on the Pine River, 34 of the calls were on the Mancos River, and 16 of the calls were on McElmo Creek.

McPhee Reservoir, with a capacity of 382,000 +/- AF, contained 161,000 AF at the start of the water year. The prior year, McPhee carried over 170,620 AF. McPhee did not release water through the fall and winter as may be typical in other years. McPhee was able to store water through May 30, 2022, when it contained a maximum volume of the year, 257,780 AF. At the end of water 2022, McPhee contained 183,956 AF. The amount of diverted water from the Dolores River basin into the McElmo Creek Basin totaled, 147,416 AF, which is well below the 200,000 AF that has been regularly diverted.

Vallecito Reservoir, with a capacity of 126,000 +/- AF, did not fill again this year, however it did store water during the monsoonal rain events, which allowed for a productive irrigation season. The reservoir provided flood protection to downstream properties. The peak flowrate was only 682 cfs. Minimal water was bypassed in the winter, spring, and early summer. A total of 161,109 AF was measured at the gage below Vallecito, which is less than in 2021, and much less than a normal year of approximately 200,000 AF. The reservoir contained 29,835 AF at the start of the water year. Vallecito Reservoir only partially filled to a volume of 96,190 AF on May 20, 2022 and later dropped to a low of 45,767 AF on October 2, 2022. Ending the 2022 water year and heading into the 2023 water year, Vallecito contained 56,420 AF.

Lemon Reservoir, with a capacity of 40,000 +/- AF, contained 13,255 AF to start the 2022 water year. In order to conserve water, Lemon Reservoir limited winter releases to only 5.0 cfs, which is below the average of 10 cfs. Lemon Reservoir stored water all winter and spring. On May 20, 2022, Lemon contained 29,041 AF, the maximum volume for the year. The reservoir elevation began to drop after May 20 in order to provide water to irrigators. The maximum release from Lemon Reservoir was 238 cfs. On September 14, reservoir releases dropped to 32 cfs, marking the end of the irrigation season. At the end of water year 2022, Lemon Reservoir was at 16,208 AF. A total of 42,294 AF was measured at the gage below Lemon Reservoir, which is more than 2021's total of 34,340 AF.

Long Hollow Reservoir, with a capacity of 5,300 AF, contained 0 AF at the start of water year 2022. Long Hollow Reservoir filled to a volume of 796 AF on March 17, 2022 and dropped to a low of 0 AF on October 18, 2022, where it ended the water year.

The San Juan-Chama Project, which diverts water from Colorado into New Mexico, diverted 65,835 AF during the year, which is more than the 56,280 AF that was diverted in 2021. However, the diversion in 2022 was only 73% of average since diversion started in 1971.

3 Ground Water Issues

There were 313 well permits issued in Division 7 water year 2021. Of these 228 residential well permits, 45 general purpose well permits, one geoexchange system loop, two gravel pits, 20 monitoring holes (notice of intents), 16 monitoring/observation wells, and one rooftop precipitation collection system was permitted.

There are currently over 3,900 coal bed methane (CBM) wells in Division 7, 90% of which lie within the Southern Ute Indian Reservation boundary. The Colorado Supreme Court upheld the question of the State's authority to administer non-tributary groundwater within the Ute Reservation. Stayed applications pending a Supreme Court decision resumed, and consultation with the Attorney General continued in 2021 to address these wells and associated applications for water rights and plans for augmentation.

4 Compact Issues

4.1 La Plata River Compact

The 2022 water year was another year of below average snow pack and spring runoff. Peak snow pack in the La Plata Mountains was 20.8 inches (88%) on March 30, 2022. The peak flow at Hesperus was 150 cfs, occurring on May 7. Due to this low snowpack coupled with poor monsoonal rains the previous year, the La Plata Basin entered the water year and spring runoff in a state of drought. Coupled with already dry soils, high spring winds exacerbated these drought conditions and likely further depleted the below average snow pack.

New Mexico placed a call on March 16 for half the flow as measured at the La Plata River at Hesperus gage, up to a maximum of 100 cfs. When the New Mexico call came on, the lower stretch of river, from the Vosburgh Ditch to the La Plata – Cherry Creek confluence, was dry and had been so since the previous summer. The call was set to a #5 priority in order to satisfy compact requirements. It took approximately 10 days for the dry stretch of river to become productive.

From July 14 to July 28, the drastic measure of curtailing all Colorado users occurred. Colorado water users argued a futile call should be made. On July 26, a rain event occurred and by July 29, the priority in Colorado was up to a #29. Monsoon rains kept the river live for the remainder of the year, assuaging senior Colorado water users and bringing some understanding to the complexities involved in making a futile call.

Releases from the compact pool in Long Hollow aided in meeting Colorado's compact obligation. However, because monsoon rains kept the river live, the entire compact pool was not needed this water year.

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4.2 Animas - La Plata Compact

4.2.1 A-LP Release and Diversions

398 AF of water was delivered from Ridges Basin Reservoir to Johnson Reservoir (Lake Durango).

There was no water released into Basin Creek for delivery downstream.

Water was pumped from the Animas River into Lake Nighthorse to replace diversions and evaporative losses. Localized runoff from Basin Creek provided minimal storage, due to the dry conditions.

In 2020, no water was pumped from the Animas River into Lake Nighthorse to replace diversions and evaporative losses from Ridges Basin Reservoir, therefore the pumping in 2021 was increased to replace two years of diversions and evaporative losses. In 2021, 8245 AF was pumped from the Animas River into Lake Nighthorse. Localized runoff from Basin Creek provided minimal storage, due to the dry conditions.

4.2.2 La Plata West Water Authority

La Plata West Water Authority continues its work to construct infrastructure in the western part of La Plata County in order to deliver domestic water. A portion of water used to supply the system is from water delivered from Lake Nighthorse to Johnson Lake.

5 Problems Solved

5.1 Long Hollow Reservoir Exchange and La Plata River Administration

Long Hollow Reservoir provided valuable water to irrigators on the La Plata River. Those irrigators upstream of Long Hollow diverted water out of priority in exchange for releases from Long Hollow Reservoir. Those irrigators downstream of Long Hollow were able to receive water directly from releases out of Long Hollow.

In total, 12 ditches received 766 acre-ft of exchange water. This includes 303 acre-ft of water stored from monsoonal rain events (June 19, July 31, September 1 and September 22). Bypassing the high inflows from these high intensity rain events would have resulted in severely over-delivering water to New Mexico; inflows were therefore allowed to be stored in the reservoir.

As in years past, mechanical issues presented challenges in the operation and administration of Long Hollow Reservoir. In early August, the small valve stopped working and all releases were made from the large valve, which has no working flow meter or gage. To assure necessary releases, midnight target capacities are determined based on exchange release and evaporation. While this approach works over a period of days to assure that required releases are on track, it can present challenges to daily call setting when there is not a high degree of confidence in the release rate. Additionally, a hydraulic leak associated with the gate was detected in mid-July and by July 26 the gate was malfunctioning and releases not possible; the hydraulics were repaired July 29th by a diver and bypassing inflows resumed along with releasing water stored out-of-priority. The reservoir needed to be drained to do a more thorough inspection of the gate and hydraulics. By late September, there was still 143 acre-ft of compact water and 48 acre-ft of exchange water in the reservoir. With the goal of draining the reservoir by October 15, releases were made at a rate of approximately 3.75 cfs from the compact pool. Since the river was not futile, the goal was to over deliver to New Mexico by this amount, less transit loss, and once the hydraulics inspected and fully repaired, under deliver to New Mexico and allow the reservoir to recover the released water. On November 1 the reservoir began storing inflows, and by December 1 had stored 172 acre-ft.

Figure 2: Long Hollow Reservoir filling after flash flood from monsoon rain

6 Community Involvement

Water year 2021-2022 was another year that was affected by the Corona Virus Disease 2019 (COVID-19), however staff has adapted to the challenges that come with this disease. Employees are working both in the office and at home, meetings are held both in person and virtually.

Division 7 was however still able to attend virtually meetings with the Southwestern Water Conservation District; Animas-La Plata Operation Maintenance, and Replacement Association; Animas-La Plata Water Conservancy District; Dolores Water Conservancy District; San Juan Water Conservancy District; Montezuma Valley Irrigation Company; Pagosa Area Water and Sanitation District; and other water user group meeting they were invited to attend.

The Division also made efforts to keep the public at large informed of water issues by participating in interviews for articles in the local newspapers and television stations. The Division worked closely with local, city and county governments on water issues.

7 Highlights

7.1 2020 Abandonment

Division 7 staff assisted in the 2020 abandonment process. As required by statute, the Division Engineer's abandonment list was published and notices were mailed to all water right holders on the abandonment list.

A total of 1,497 water rights were initially identified as being subject to abandonment. Of the total, 621 were identified as "post-compact" and subject to abandonment. Follow a review by Water Commissioners and DWR Staff, a total of 182 water rights were added to the Division Engineer's abandonment list. DWR staff worked with those water users who contacted the Division Office to request that their water right be removed from the abandonment list. A total of 134 water rights will be included on the final abandonment list that will be included in the abandonment court case in 2022.

7.2 Important Court Cases

There were no court cases that went to trial this year in Division 7.

7.2.1 15CW3017 – Town of Bayfield

The town of Bayfield filed a change of use of senior irrigation water rights. The town proposed to change the use to municipal use. A ruling of the referee was entered in this case. Pine River Irrigation District then filed a protest to the ruling of the referee, objecting to the use of Vallecito Reservoir as a source of augmentation. A three-day trial has been set in 2024.

7.2.2 15CW3023 – Florida Water Conservancy District (FWCD)

FWCD filed a diligence application for a junior storage water right in Lemon Reservoir. As part of the negations in case 14CW3013 and 14CW3049, this case has not made progress for many years. As part of the settlement agreements with ERMD, the court granted diligence on this water right in 2021.

7.2.3 18CW3052 – Montezuma Valley Irrigation Company (Change of Use)

Montezuma Valley Irrigation Company filed an application for change of water right and for confirmation of relocated points of diversion. The Applicant seeks a change of their 87.3 cfs conditional water right from a direct flow right on the Dolores River to a storage right that may be stored in either McPhee Reservoir and/or Narraguinnep Reservoir, for subsequent irrigation. As part of the change of this conditional water right, the Applicant submitted an analysis of the "contemplated draft" that this water right would have on the Dolores River. The Applicant requests to store a maximum of 22,755 AF in any calendar year, with maximum monthly volumetric diversion limits. As an alternative claim, the applicant seeks judicial confirmation that relocation of the points of diversion to the Great Cut Dike and the Dolores Tunnel Inlet is consistent with C.R.S. § 37-86-111 because the decreed points of diversion were inundated by McPhee Reservoir.

The State Engineer and Division Engineer filed a Statement of opposition, requesting that the proposed change be held to strict proof of the contemplated draft to ensure the change does not result in expansion of the original water right. The State and Division Engineer ask to consider whether this water right has been abandoned as it has not been used for over 100 years. Additionally, the State and Division Engineer ask that the Applicant be held to show they can and will beneficially use the changed conditional water for the decreed purposes.

7.2.4 19CW3005 – Montezuma Valley Irrigation Company (Diligence)

Montezuma Valley Irrigation Company filed an application for finding of reasonable diligence for the Main No. 1 Canal and the Main No. 2 Canal. The Applicant owns 87.3 cfs of an irrigation water right on the Dolores River with an appropriation date of November 25, 1885.

The State and Division Engineer filed a Statement of Opposition, indicating that the Applicant needs to demonstrate the water right has not become speculative over time. This water right is the same water right in Case No. 18CW3052, in which the State and Division Engineer have filed a Statement of Opposition.

7.2.5 17CW3036 – Pine River Irrigation District Basin Wide Augmentation Plan

Pine River Irrigation District filed for a basin wide augmentation plan. Division staff continues to work through the Attorney General to conclude this case.

7.2.6 07CW37 – Pine River Irrigation District 2nd Fill of Vallecito Reservoir

Pine River Irrigation District (PRID) filed for a second fill of Vallecito Reservoir. Division staff has worked with PRID to include terms and conditions that will address the claim for flood control.

7.2.7 21CW3002 – United States of America

The United States Bureau of Reclamation (BOR) filed a change of point of diversion and place of use for the Earl Hart Ditch. The BOR desires to use the senior water at the Simons Wetlands. DWR filed a statement of opposition and continues to work through Attorney General to conclude this case. The Earl Hart Ditch is also listed for abandonment in the 2020 abandonment process.

7.2.8 22CW3016, 22CW3027 and 22CW3030 – Canyon Springs Ranch Association of Owners

The Canyon Springs Ranch Association of Owners has filed multiple court cases regarding their water right, which states it may be used for 10 acres of irrigation and the means of diversion is gravity flow.

In case 22CW3016, the plaintiff claims for relief include: violation of due process, a declatory judgment that the plaintiff can use water on the land anywhere within the subdivision, a declatory judgment that any call must be substantiated by a measuring device, permanent injunctive relief allowing the plaintiff to use the water anywhere within the subdivision, and permanent injunctive relief allowing the use of a pump.

In case 22CW3027, the plaintiff filed an application for determination of water rights, confirming that the applicant may use the water anywhere within the subdivision.

In case 22CW3030, the plaintiff claims for relief include: violation of due process, a declatory judgment that any call by an owner of a water right must be substantiated by a measuring device, a permanent injuctive from honoring a call where the owner does not have a measuring device, and declatory judgement that shutting down a pump.

The division engineer is working closely with the Attorney General's office to address these cases.

7.3 Hydrography

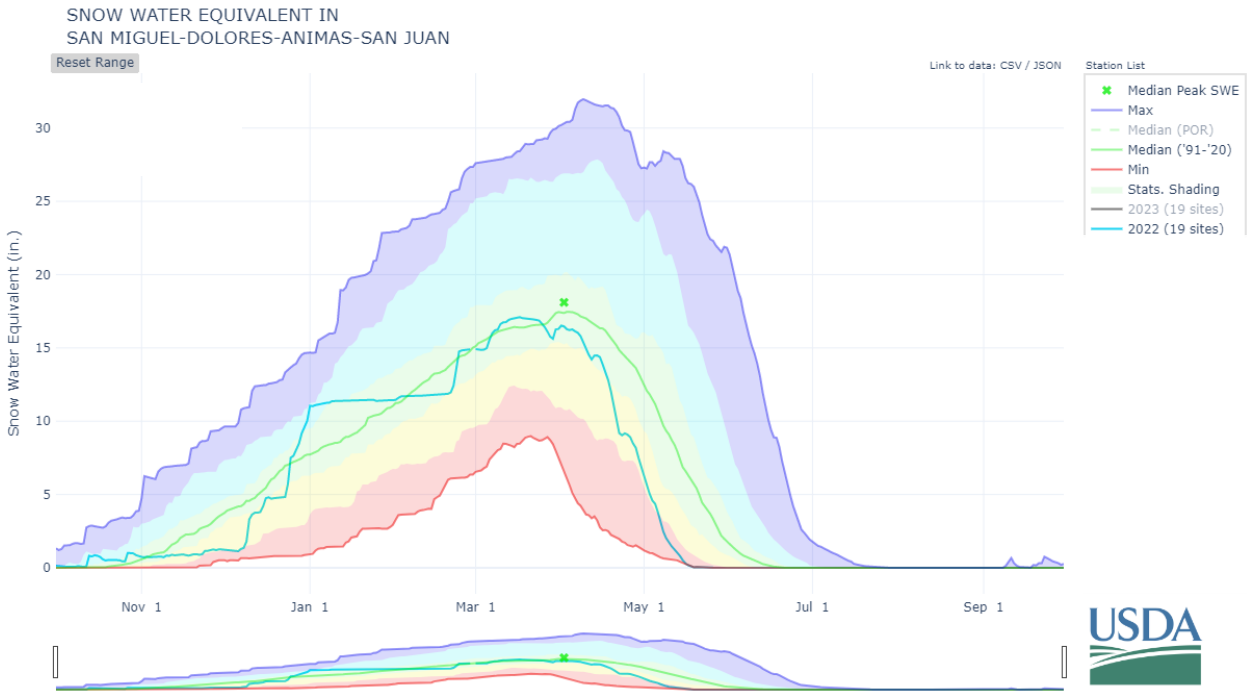
7.3.1 Groundhog Reservoir

Division 7 Hydrographers and Water Commissioners worked with Montezuma Valley Irrigation Company (MVIC) to repair the outlet structure and install new gaging equipment on Groundhog Reservoir. While MVIC was constructing a new hydraulically controlled outlet structure and concrete grade beam, DWR staff installed a pressure transducer and a bubbler to record the elevation of the water.

Figure 3: New outlet structure and control house at Groundhog Reservoir

Figure 4: Guard gate leading into outlet structure. Grating above.

8 Appendix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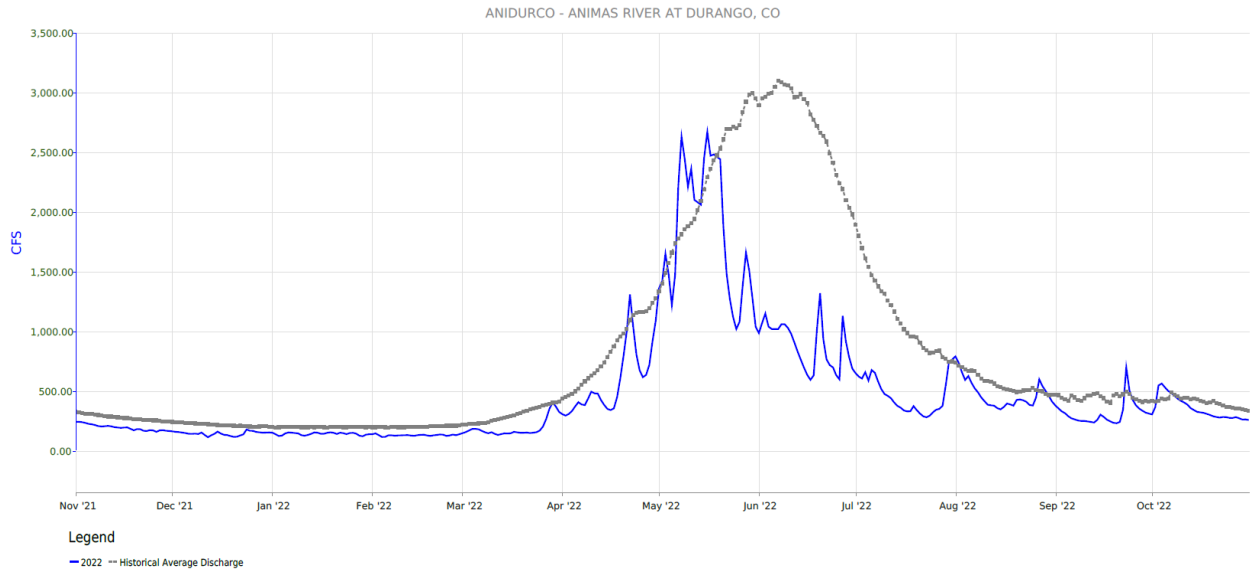
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Legend
2022
Historical Average Discharge

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Basinwide Summary: June 1, 2022
(Medians based On 1991-2020 reference period)

Snowpack Summary For June 1, 2022

San Miguel-Dolores-Animas-San Juan	Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Groundhog	SC	8940						
Lemon Reservoir	SC	8700						
Telluride	SC	8800						
Trout Lake #2	SC	9780						
Upper San Juan	SC	10200						
Beartown	SNOTEL	11600	0	0.0	0.1	0%	0.2	200%
Black Mesa	SNOTEL	11580	10	6.2			9.6	
Cascade	SNOTEL	8880	0	0.0	0.0		0.6	
Cascade #2	SNOTEL	8920	0	0.0	0.0		0.0	
Columbine Pass	SNOTEL	9400	0	0.0	0.0		0.0	
Columbus Basin	SNOTEL	10785	0	0.0	0.5	0%	0.0	0%
El Diente Peak	SNOTEL	10000	0	0.0	0.0		0.0	
Lizard Head Pass	SNOTEL	10200	0	0.0	0.0		0.0	
Lone Cone	SNOTEL	9600	0	0.0	0.0		0.0	
Mancos	SNOTEL	10000	0	0.0	0.0		0.0	
Mineral Creek	SNOTEL	10040	0	0.0	0.0		0.0	
Molas Lake	SNOTEL	10500	0	0.0	0.0		0.0	
Red Mountain Pass	SNOTEL	11200	0	0.0	7.1	0%	7.9	111%
Scotch Creek	SNOTEL	9100	0	0.0	0.0		0.0	
Sharkstooth	SNOTEL	10720	0	0.0	0.0		0.0	
Spud Mountain	SNOTEL	10660	0	0.0	0.0		0.0	
Stump Lakes	SNOTEL	11200	0	0.0	3.1	0%	0.0	0%
Upper San Juan	SNOTEL	10200	0	0.0	0.0		0.0	
Vallecito	SNOTEL	10880	0	0.0	0.0		0.0	
Weminuche Creek	SNOTEL	10740	0	0.0	0.0		0.0	
Wolf Creek Summit	SNOTEL	11000	0	0.0	20.3	0%	5.5	27%
Basin Index						**0%**		**46%**
# of sites						20		20

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Basinwide Summary: June 1, 2022
(Medians based On 1991-2020 reference period)

Reservoir Storage Summary For the End of May 2022

San Miguel-Dolores-Animas-San Juan	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Median % Capacity	Current % Median	Last Year % Median
Mcphee Reservoir	257.3	189.0	359.2	381.0	68%	50%	94%	72%	53%
Groundhog Reservoir	10.8	7.1	20.2	26.3	41%	27%	77%	53%	35%
Lemon Reservoir	26.3	18.6	33.7	40.0	66%	46%	84%	78%	55%
Navajo Reservoir	953.6	1104.9	1485.0	1696.0	56%	65%	88%	64%	74%
Jackson Gulch Reservoir	9.5	4.1	10.0	10.0	95%	41%	100%	95%	41%
Trout Lake Reservoir	3.1	2.2	2.3	3.2	97%	70%	72%	135%	98%
Vallecito Reservoir	92.1	76.6	111.0	126.0	73%	61%	88%	83%	69%
Basin Index					**59%**	**61%**	**89%**	**67%**	**69%**
# of reservoirs					7	7	7	7	7