

Natural Resources Conservation Service

Arizona Basin Outlook Report February 15, 2022



Issued by

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Released by

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Basin Outlook Reports And Federal – State – Private Cooperative Snow Surveys

How forecasts are made

Most of the annual streamflow in Arizona originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated Snow Telemetry (SNOTEL) sites, along with precipitation and streamflow values, are used in statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service (NRCS) the National Weather Service, and the Salt River Project.

Forecasts of any kind are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertainty of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known. This is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or are concerned about having an adequate water supply, they may want to base their decisions on the 90% or 70% exceedance probability forecasts. On the other hand, if users anticipate receiving too much water, or are concerned about the threat of flooding, they may want to base their decisions on the 30% or 10% exceedance probability forecasts. Regardless of the forecast value users choose, they should be prepared to deal with either more or less water.



For more water supply and resource management information, contact:

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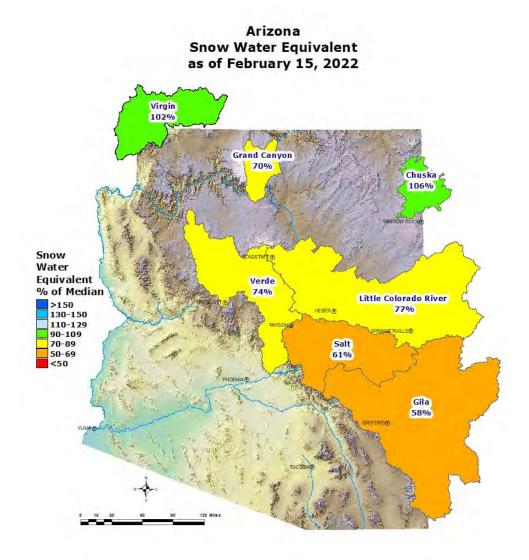
ARIZONA Basin Outlook Report as of February 15, 2022

SUMMARY

As of February 15, snowpack levels are well below median to below median throughout the major basins of the state. Precipitation for the first half of February was well below median in the major river basins. The Salt and Verde River reservoir system stands at 71 percent of capacity, while San Carlos Reservoir is at 4 percent of capacity. The mid-month forecast calls for well below median runoff in all basins for the spring runoff period.

SNOWPACK

Snow water equivalent levels in the state's major river basins are well below median to below median, ranging from 58 percent of median in the Gila River Basin, to 77 percent of median in the Little Colorado River Basin.

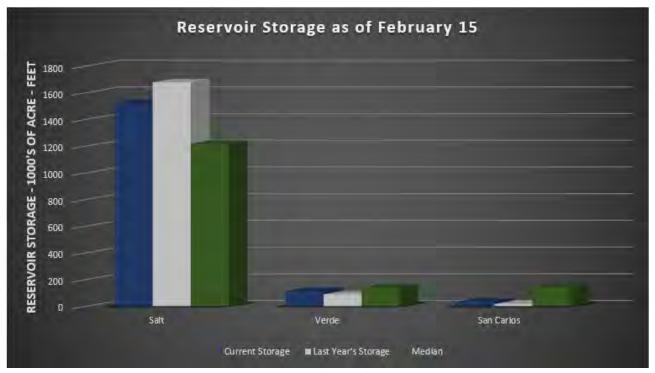


PRECIPITATION

Mountain data from NRCS SNOTEL sites and NWS Cooperator gages show that precipitation for the first half of February was well below median in the major river basins. Cumulative precipitation since October 1 is well below median to below median throughout the basins. Please refer to the precipitation graphs found in this report for more information on precipitation levels in the basins.

RESERVOIR STORAGE

As of February 15, the Salt and Verde River reservoir system stands at 71 percent of capacity. San Carlos Reservoir is currently at 4 percent of capacity.



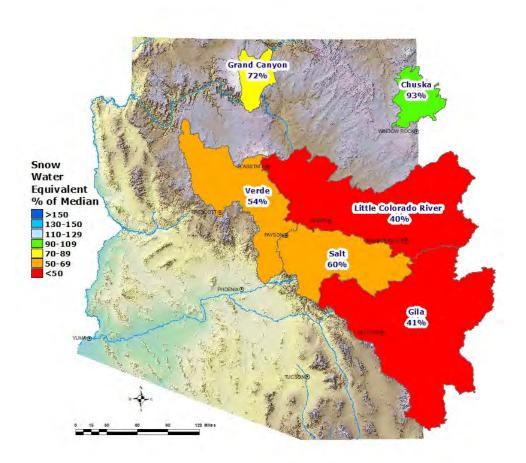
Key storage volumes displayed in thousands of acre-feet (x1000):

Reservoir	Current <u>Storage</u>	Last Year <u>Storage</u>	30-Year <u>Median</u>	Storage <u>Capacity</u>
Salt River System	1523.9	1677.9	1217.0	2025.8
Verde River System	114.3	89.7	139.7	287.4
San Carlos Reservoir	34.0	17.5	140.2	875.0
Lyman Lake	4.8	7.5	8.0	30.0
Lake Havasu	551.7	554.8	564.2	619.0
Lake Mohave	1667.5	1680.3	1671.0	1810.0
Lake Mead	8978.0	10614.0	15384.0	26159.0
Lake Powell	6177.0	9416.0	13256	24322.0

STREAMFLOW

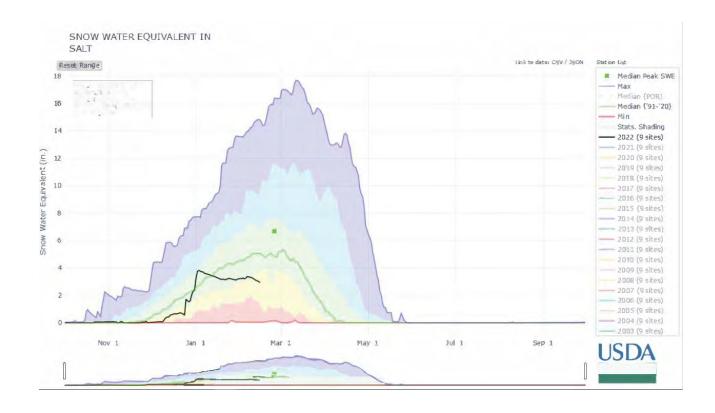
As of February 15, the forecast calls for well below median streamflow for the spring runoff period, ranging from 40 percent of median in the Little Colorado River above Lyman Lake to 60 percent of median in the Salt River near Roosevelt. Please refer to the basin forecast tables found in this report for more information regarding water supply forecasts.

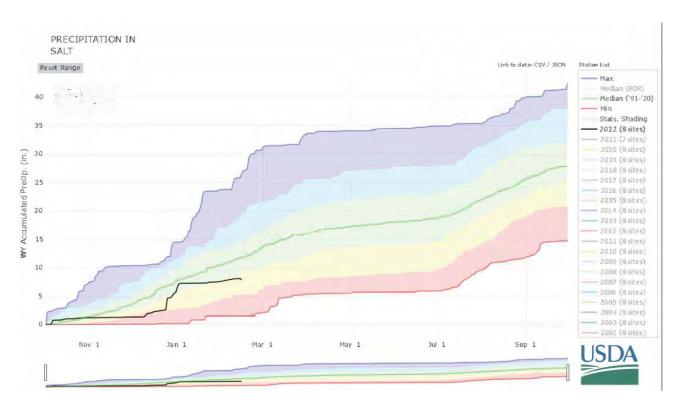
Arizona Spring Streamflow Forecasts as of February 15, 2022



SALT RIVER BASIN as of February 15, 2022

Well below median streamflow levels are forecast for the basin. In the Salt River, near Roosevelt, the forecast calls for 60% of median streamflow through May, while at Tonto Creek, the forecast calls for 42% of median streamflow through May. Snow survey measurements show the Salt snowpack to be at 61% of median.





Salt Streamflow Forecasts - February 16, 2022 Forecast Exceedance Probabilities for Risk Assessment

Salt	Ĺ		Chance that actual volume will exceed forecast						
	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF) 6.4 25 36	
Tonto Ck ab Gun Ck nr Roosevelt ³									
	FEB			3.6	56%			6.4	
	F15-MAY	1.99	6	10.5	42%	16.9	30	25	
Salt R nr Roosevelt ³									
	FEB			22	61%			36	
	MAR-MAY	44	79	110	61%	149	220	179	
	F15-MAY	52	88	120	60%	159	230	200	

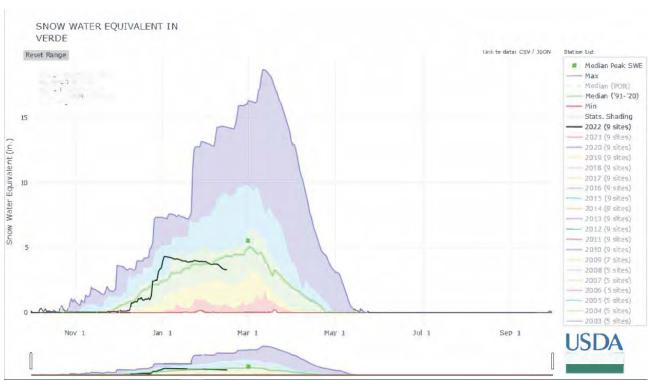
^{1) 90%} and 10% exceedance probabilities are actually 95% and 5%

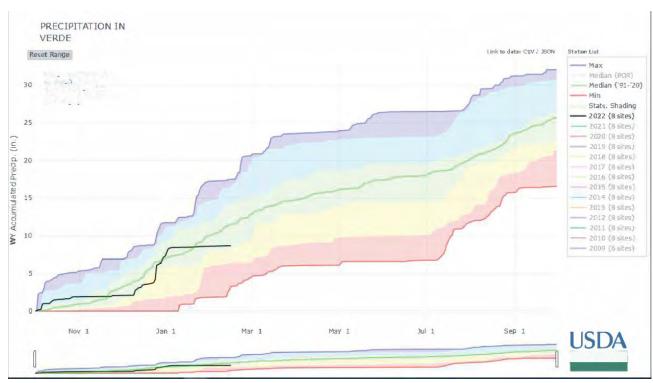
²⁾ Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

Reservoir Storage Middle of January, 2022	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)
Salt River Reservoir System		1677.9	1217.0	2025.8
Basin-wide Total		1677.9	1217.0	2025.8
# of reservoirs	0	1	1	1
Watershed Snowpack Analysis February 16, 2022	# of Sites	% Median	Last Year % Median	
Salt	10	61%	35%	

VERDE RIVER BASIN as of February 15, 2022

Well below median streamflow levels are forecast for the basin. In the Verde River above Horseshoe Dam, the forecast calls for 54% of median streamflow through May. Snow survey measurements show the Verde snowpack to be at 74% of median.





Verde

Streamflow Forecasts - February 16, 2022 Forecast Exceedance Probabilities for Risk Assessment

	Ĺ		Chance th	nat actual vo	lume will exceed	d forecast		
Verde	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Verde R bl Tangle Ck ab Horseshoe Dam								
	FEB			16	59%			27
	F15-MAY	13.4	32	52	54%	79	132	96

^{1) 90%} and 10% exceedance probabilities are actually 95% and 5% $\,$

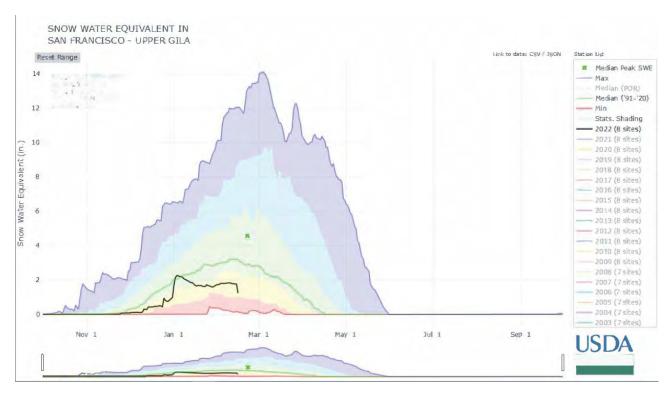
²⁾ Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

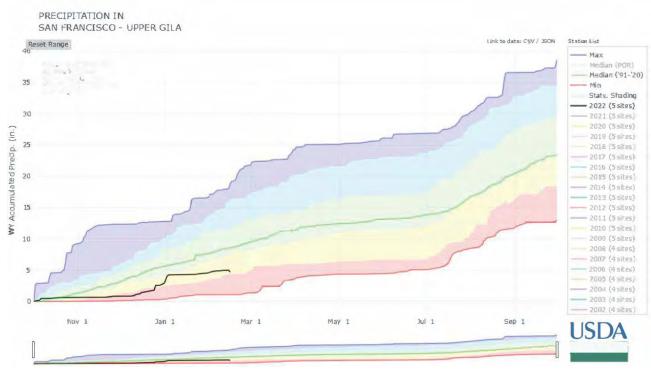
Reservoir Storage Middle of January, 2022	Current (KAF)		Last Year (KAF)	Median (KAF)	Capacity (KAF)
Verde River Reservoir System			89.7	139.7	287.4
Basin-wide Total			89.7	139.7	287.4
# of reservoirs		0	1	1	1

Watershed Snowpack Analysis February 16, 2022	# of Sites	% Median	Last Year % Median
Verde	15	74%	106%

SAN FRANCISCO-UPPER GILA RIVER BASIN as of February 15, 2022

Well below median streamflow levels are forecast for the basin. In the San Francisco River, at Clifton, the forecast calls for 58% of median streamflow levels through May. In the Gila River, near Solomon, the forecast calls for 41% of median streamflow levels through May. At San Carlos Reservoir, inflow to the lake is forecast at 42% of median through May. Snow survey measurements show the snowpack for this basin to be at 58% of median.





San Francisco - Upper Gila Streamflow Forecasts - February 16, 2022

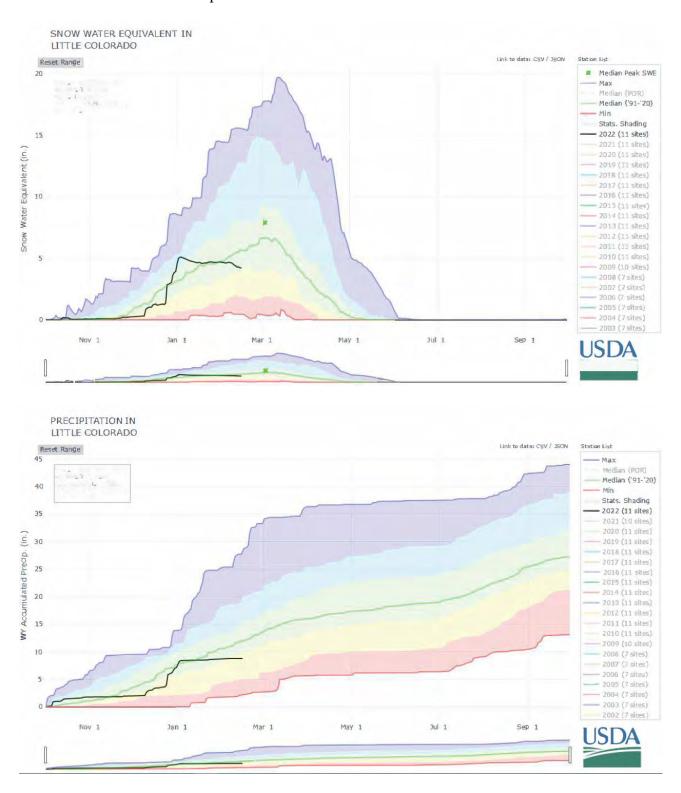
		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast					nt		
San Francisco - Upper Gila	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF) 34 45 38 12.6 21 73	
Gila R at Gila ³								_	
	F15-MAY	4.4	8.4	12.1	36%	16.8	26	34	
San Carlos Reservoir Inflow ³									
	F15-MAY	0	5.2	19	42%	41	90	45	
Gila R bl Blue Ck nr Virden ³									
	F15-MAY	0.86	6.1	12.5	33%	21	38	38	
San Francisco R at Glenwood ³									
	F15-MAY	1.57	4	6.5	52%	10	17.1	12.6	
Gila R nr Solomon ³									
	FEB			7	33%			21	
	F15-MAY	3.3	16.1	30	41%	49	84	73	
San Francisco R at Clifton ³									
	F15-MAY	3.5	11	18.5	58%	28	45	32	

^{1) 90%} and 10% exceedance probabilities are actually 95% and 5% 2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

Reservoir Storage Middle of January, 2022	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)
San Carlos Reservoir	33.5	17.6	140.2	875.0
Basin-wide Total	33.5	17.6	140.2	875.0
# of reservoirs	1	1	1	1
Watershed Snowpack Analysis February 16, 2022	# of Sites	% Median	Last Year % Median	
San Francisco - Upper Gila	8	58%	46%	

LITTLE COLORADO RIVER BASIN as of February 15, 2022

Well below median streamflow levels are forecast for the basin. In the Little Colorado River, above Lyman Lake, the forecast calls for 40% of median streamflow through June. At Blue Ridge (C.C. Cragin) Reservoir, inflow to the lake is forecast at 36% of median through May. Snow survey measurements show the snowpack for this basin to be at 77% of median.



Little Colorado

Streamflow Forecasts - February 16, 2022

Forecast Exceedance Probabilities for Risk Assessment

	<u> </u>		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast					
Little Colorado	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF) 5.5 11.3
Rio Nutria nr Ramah ³								
Little Colorado R ab Lyman Lake ³	FEB-JUN	0.73	1.48	2.2	40%	3.1	4.9	5.5
Blue Ridge Reservoir Inflow ²	FEB-MAY	0.7	2.3	4.1	36%	6.7	12.3	
Zuni R ab Black Rock Reservoir	1 LD W/(1	0.1	2.0		0070	0.7	12.0	11.0
Lake Mary Reservoir Inflow	FEB-MAY	0.76	1.49	2.2	67%	3.1	4.8	3.3

^{1) 90%} and 10% exceedance probabilities are actually 95% and 5% $\,$

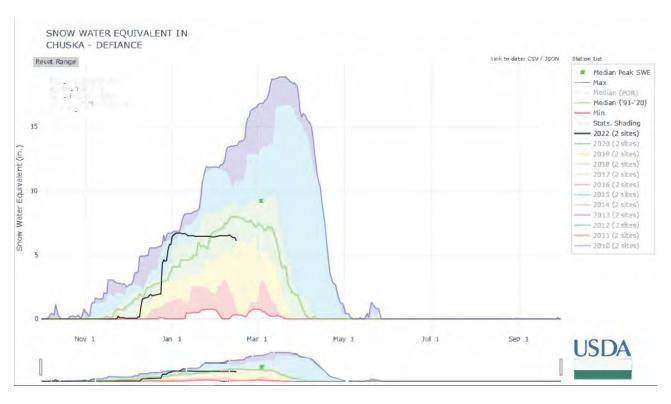
²⁾ Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

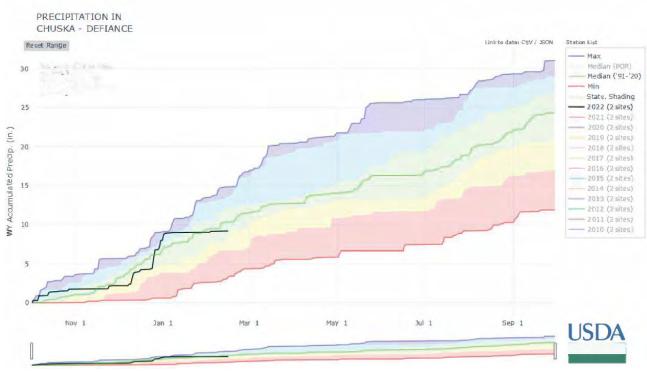
Reservoir Storage Middle of January, 2022	Current (KAF)	Last Year (KAF)	Median (KAF)	Capacity (KAF)
Lyman Reservoir	4.8	7.5	8.0	30.0
Cragin Dam Reservoir	6.3	3.0	8.9	0.0
Show Low Lake			3.1	5.1
Basin-wide Total	11.1	10.5	20.0	35.1
# of reservoirs	2	2	3	3

Watershed Snowpack Analysis February 16, 2022	# of Sites	% Median	Last Year % Median
Little Colorado	17	77%	76%

CHUSKA MOUNTAINS as of February 15, 2022

Median streamflow levels are forecast for Wheatfields Creek, Captain Tom Wash, and Bowl Canyon Creek. Snow survey measurements conducted by staff of the Navajo Nation Water Management Branch show the Chuska snowpack to be at 106% of median.





Chuska - Defiance Streamflow Forecasts - February 16, 2022 Forecast Exceedance Probabilities for Risk Assessment

Chuska - Defiance	<u> </u>		Chance the	nat actual vo	lume will exceed	d forecast			
	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)	
Bowl Canyon Ck ab Asaayi Lake ³									
	MAR-MAY	0.2	0.49	0.76	93%	1.09	1.67	0.82	
Captain Tom Wash nr Two Gray Hills ³									
	MAR-MAY	0.01	0.21	0.6	97%	1.32	3.2	0.62	
Wheatfields Ck nr Wheatfields									
	MAR-MAY	0.11	0.45	0.8	96%	1.26	2.1	0.83	

^{1) 90%} and 10% exceedance probabilities are actually 95% and 5%

²⁾ Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

Watershed Snowpack Analysis February 16, 2022	# of Sites	% Median	Last Year % Median
Chuska - Defiance	9	106%	51%

Basinwide Summary: February 16, 2022 (Medians based on 1991-2020 reference period)

Snowpack Summary for February 16, 2022

(Medians based on 1991-2020 fe	ierence pen	ouj						
San Francisco - Upper Gila	Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Beaver Head	SNOTEL	7990	2	2.2	1.8	122%	0.6	33%
Coronado Trail	SNOTEL	8400	1	0.2	2.0	10%	0.7	35%
Coronado Trail	SC	8350	1	0.4	1.2			
Frisco Divide	SNOTEL	8000	3	1.5	2.0	75%	0.6	30%
Hannagan Meadows	SNOTEL	9020	8	6.1	8.1	75%	2.2	27%
Lookout Mountain	SNOTEL	8500		0.1	1.2		0.6	50%
Nutrioso	SC	8500	2	0.6	0.6	100%	0.0	33,3
Nutrioso	SNOTEL	8500	0	0.0	0.0	10070	0.9	
Signal Peak	SNOTEL	8360	0	0.1	2.6	4%	0.9	35%
Silver Creek Divide	SNOTEL	9000	12	4.1	6.9	59%	4.9	71%
State Line	SC	8000	12	7.1	1.5	3370	7.5	7 1 70
Basin Index	30	8000			1.5	58%		46%
# of sites						8		8
Salt	Network	Elevation			Median	%		Last Year
	INCIMOIN	(ft)	(in)	(in)	(in)	Median	SWE (in)	% Median
Baldy	SNOTEL	9125	16	4.5	6.0	75%	0.8	13%
Beaver Head	SNOTEL	7990	2	2.2	1.8	122%	0.6	33%
Buck Spring	SC	7400	0	0.0	0.9	0%	0.0	0%
Coronado Trail	SNOTEL	8400	1	0.2	2.0	10%	0.7	35%
Coronado Trail	SC	8350	1	0.4	1.2	33%		
Fort Apache	SC	9160	22	5.6	7.1	79%	2.3	32%
Hannagan Meadows	SNOTEL	9020	8	6.1	8.1	75%	2.2	27%
Hawley Lake	SNOTEL	8300	28	8.0			6.4	
Heber	SNOTEL	7640	5	1.7	3.9	44%		
Maverick Fork	SNOTEL	9200	18	5.4	7.0	77%	1.7	24%
Promontory	SNOTEL	7930	11	4.8	9.0	53%	6.7	74%
Wildcat	SNOTEL	7850	3	1.0	2.8	36%	0.6	21%
Workman Creek	SNOTEL	6900	0	0.0	4.0	0%	1.6	40%
Basin Index					_	61%		35%
# of sites						10		10
		Flavotion	Danth	CVVE	Madian	0/	Loot Voor	Loot Voor
Little Colorado	Network	Elevation (ft)	(in)	(in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Baker Butte	SNOTEL	7300	1	0.2	3.2		4.6	144%
Baker Butte No. 2	SC	7700	12	3.9	7.4		6.9	93%
Baker Butte Smt	SNOTEL	7700	16	5.3	9.1	58%	8.7	96%
Baldy	SNOTEL	9125	16	4.5	6.0	75%	8.0	13%
Boon	SC	8140						
Buck Spring	SC	7400	0	0.0	0.9	0%	0.0	0%
Cheese Springs	SC	8700	16	3.9	4.5	87%	2.1	47%
Dan Valley	SC	7640						
Fort Apache	SC	9160	22	5.6	7.1	79%	2.3	32%
Fort Valley	SNOTEL	7350	1	0.3	0.0		1.1	
Fort Valley	SC	7350	1	0.5	1.2	42%	1.5	125%
Heber	SNOTEL	7640	5	1.7	3.9	44%		
Lake Mary	SC	6930	5	2.0	1.7	118%	2.0	118%
Maverick Fork	SNOTEL	9200	18	5.4	7.0	77%	1.7	24%
Mcgaffey	SC	8120						
Mormon Mountain	SNOTEL	7500	6	2.7	3.9	69%	4.6	118%

Manage on Managetain Organity #0	00	0.470	0.4	0.4	7.0	4000/	0.0	000/
Mormon Mountain Summit #2 Mormon Mtn Summit	SC SNOTEL	8470	24	8.4 6.5	7.0 7.2	120% 90%	6.2 5.4	89% 75%
Nutrioso	SC	8500 8500	20 2	0.6	0.6	100%	5.4	75%
Nutrioso	SNOTEL	8500 8500	0	0.0	0.0	100 /6	0.9	
Promontory	SNOTEL	7930	11	4.8	9.0	53%	6.7	74%
Snow Bowl #2	SC	11200		7.0	11.6	3370	8.6	74%
Snowslide Canyon	SNOTEL	9730	32	13.4	12.4	108%	11.0	89%
Basin Index	ONOTEL	3730	02	10.4	12.7	77%	11.0	76%
# of sites						17		17
6. 6.166								
		Elevation	Depth	SWE	Median	%	Last Year	Last Year
Verde	Network	(ft)	(in)	(in)	(in)	Median		% Median
Baker Butte	SNOTEL	7300	1	0.2	3.2	6%	4.6	144%
Baker Butte No. 2	SC	7700	12	3.9	7.4	53%	6.9	93%
Baker Butte Smt	SNOTEL	7700	16	5.3	9.1	58%	8.7	96%
Bar M	SNOTEL	6393	0	0.0			2.3	
Chalender	SNOTEL	7100	3	2.4	2.6	92%	2.6	100%
Chalender	SC	7100	0	0.0	1.0	0%	1.3	130%
Fort Valley	SNOTEL	7350	1	0.3	0.0		1.1	
Fort Valley	SC	7350	1	0.5	1.2	42%	1.5	125%
Fry	SNOTEL	7200	12	4.9	5.8	84%	5.6	97%
Happy Jack	SC	7630	5	1.4	2.7	52%	3.3	122%
Happy Jack	SNOTEL	7630	14	5.4	5.2	104%	5.6	108%
Mormon Mountain	SNOTEL	7500	6	2.7	3.9	69%	4.6	118%
Mormon Mountain Summit #2	SC	8470	24	8.4	7.0	120%	6.2	89%
Mormon Mtn Summit	SNOTEL	8500	20	6.5	7.2	90%	5.4	75%
Newman Park	SC	6750	1	0.8	1.3	62%	3.1	238%
Snow Bowl #2	SC	11200			11.6		8.6	74%
White Horse Lake	SNOTEL	7180	2	1.4	2.2	64%	3.0	136%
Williams Ski Run	SC	7720			6.7			
Basin Index						74%		106%
# of sites						15		15
Chuska - Defiance	Network	Elevation	•		Median	%	Last Year	
		(ft)	(in)	(in)	(in)	Median	SWE (in)	% Median
Beaver Spring	SC	9220	22	7.4	6.7	110%	4.0	60%
Beaver Spring	SNOTEL	9200	17	6.1	8.2	74%	5.5	67%
Bowl Canyon	SC	8980	26	7.8	7.6	103%	3.2	42%
Fluted Rock	SC	7800	11	3.2	3.2	100%	1.8	56%
Hidden Valley	SC	8480	22	7.2	5.5	131%	2.2	40%
Missionary Spring	SC	7940	11	3.6	3.3	109%	1.4	42%
Navajo Whiskey Ck	SNOTEL	9050	18	5.6	7.7	73%	0.0	000/
Tsaile Canyon #1	SC	8160	19	6.2	5.7	109%	2.2	39%
Tsaile Canyon #3	SC SC	8920	23	7.2	7.8	92% 136%	3.8	49%
Whiskey Creek Basin Index	30	9050	28	10.2	7.5	106%	4.2	56% 51%
# of sites						9		9
# 01 31163						9		J
		Elevation	Danth	SIVE	Median	0/_	Last Voor	Last Voor
Grand Canyon	Network	Elevation	-		Median	% Median	Last Year	Last Year % Median
		(ft)	Depth (in)	SWE (in)	(in)		SWE (in)	% Median
Bright Angel	SC	(ft) 8400	(in)	(in)	(in) 5.7	Median	SWE (in) 3.0	% Median 53%
Bright Angel Grand Canyon		(ft)	-		(in)	Median 70%	SWE (in)	% Median 53% 0%
Bright Angel	SC	(ft) 8400	(in)	(in)	(in) 5.7	Median	SWE (in) 3.0	% Median 53%

Virgin		Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Gardner Peak		SNOTEL	8322	22	8.0	9.7	82%	5.6	58%
Gutz Peak		SNOTEL	6763	27	10.7	7.3	147%	4.7	64%
Harris Flat		SNOTEL	7792	20	7.8	5.4	144%	3.3	61%
Kolob		SNOTEL	9263	38	13.1	14.2	92%	10.2	72%
Little Grassy		SNOTEL	6065	6	2.6	1.6	163%	0.9	56%
Long Flat		SNOTEL	7982	14	6.3	6.2	102%	3.8	61%
Long Valley Jct		SNOTEL	7465	13	5.4	4.0	135%	2.6	65%
Midway Valley		SNOTEL	9827	40	11.3	15.2	74%	10.7	70%
Webster Flat		SNOTEL	9203	23	9.0	9.1	99%	7.4	81%
	Basin Index						102%		68%
	# of sites						9		9

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Streamflow Forecast Summary: February 16, 2022 (Medians based on 1991-2020 reference period)

		F			pabilities for Rislume will exceed		nt	
San Francisco - Upper Gila	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Gila R at Gila ³								
	F15-MAY	4.4	8.4	12.1	36%	16.8	26	34
San Carlos Reservoir Inflo	ow ³							
	F15-MAY	0	5.2	19	42%	41	90	45
Gila R bl Blue Ck nr Virde	n ³							
	F15-MAY	0.86	6.1	12.5	33%	21	38	38
San Francisco R at Glenw	vood ³							
	F15-MAY	1.57	4	6.5	52%	10	17.1	12.6
Gila R nr Solomon ³								
	FEB			7	33%			21
	F15-MAY	3.3	16.1	30	41%	49	84	73
San Francisco R at Cliftor	1 ³							
	F15-MAY	3.5	11	18.5	58%	28	45	32

^{1) 90%} and 10% exceedance probabilities are actually 95% and 5%

²⁾ Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

		F	Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast								
Salt	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)			
Tonto Ck ab Gun Ck nr	Roosevelt ³										
	FEB			3.6	56%			6.4			
	F15-MAY	1.99	6	10.5	42%	16.9	30	25			
Salt R nr Roosevelt ³											
	FEB			22	61%			36			
	MAR-MAY	44	79	110	61%	149	220	179			
	F15-MAY	52	88	120	60%	159	230	200			

^{1) 90%} and 10% exceedance probabilities are actually 95% and 5%

²⁾ Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

	Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast									
Little Colorado	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)		
Rio Nutria nr Ramah ³										
Little Colorado R ab Lyn	nan Lake ³									
	FEB-JUN	0.73	1.48	2.2	40%	3.1	4.9	5.5		
Blue Ridge Reservoir In	flow ²									
•	FEB-MAY	0.7	2.3	4.1	36%	6.7	12.3	11.3		
Zuni R ab Black Rock R	eservoir									
Lake Mary Reservoir Inf	low									
	FEB-MAY	0.76	1.49	2.2	67%	3.1	4.8	3.3		

^{1) 90%} and 10% exceedance probabilities are actually 95% and 5%

²⁾ Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

	Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast							
Verde	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Verde R bl Tangle Ck	ab Horseshoe Da	m						
	FEB			16	59%			27
	F15-MAY	13.4	32	52	54%	79	132	96

- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
- 2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast									
Chuska - Defiance	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)	
Bowl Canyon Ck ab Asa	ayi Lake ³								
	MAR-MAY	0.2	0.49	0.76	93%	1.09	1.67	0.82	
Captain Tom Wash nr Tv	vo Gray Hills ³								
	MAR-MAY	0.01	0.21	0.6	97%	1.32	3.2	0.62	
Wheatfields Ck nr Wheat	tfields								
·	MAR-MAY	0.11	0.45	8.0	96%	1.26	2.1	0.83	

- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
- 2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

	< Assessmer I forecast	nt						
Grand Canyon	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)
Lake Powell Inflow ³								
	APR-JUL	2330	3480	4400	72%	5420	7120	6130

- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
- 2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

	Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast								
Virgin	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Median	30% (KAF)	10% (KAF)	30yr Median (KAF)	

Santa Clara R nr Pine Valley³

Virgin R at Virgin

Virgin R nr Hurricane

Virgin R at Littlefield

- 1) 90% and 10% exceedance probabilities are actually 95% and 5%
- 2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions