

Santa Fe River Commission
Thursday, May 10, 2018 (Round House Room), 6 pm to 8 pm
City Offices at the Market Station Building at the Railyard
500 Market Street, Suite 200, Santa Fe, NM
505-955-6840

- 1. ROLL CALL
- 2. APPROVAL OF AGENDA
- 3. APPROVAL OF MINUTES FROM MARCH 8, 2018
- 4. COMMUNICATION FROM OTHER AGENCIES / COMMITTEES
 - a. SF Watershed Report (Andy Otto)
- 5. INFORMATION/DISCUSSION/ACTION:
 - a. Information Item: Update Santa Fe River Target Flows / Hydrograph (M. McDonald)
 - Information Item: Guidance regarding optional water management practices regarding establishment of plantings associated with the Santa Fe Greenway Project (Andrew Erdmann, Alan Hook)
 - c. Action Item: River Commission Organization Review & 2018 Goals (Zoe Issacson)
- 6. MATTERS FROM COMMISSIONERS
- 7. MATTERS FROM STAFF
- 8. CITIZENS' COMMUNICATION FROM THE FLOOR
- 9. SUB-COMMITTEE BREAKOUT SESSION
- 10. ADJOURN

Next Scheduled River Commission Meeting is June 14, 2018
Captions & Packet Material are due by 10 am on June 6, 2018
Persons with disabilities in need of accommodations,

Contact the City Clerk's office at
(505) 955-6521 five (5) working days prior to the meeting date.

SUMMARY OF ACTION SANTA FE RIVER COMMISSION CITY OFFICES AT MARKET STATION BUILDING AT THE RAILYARD

500 MARKET STREET, SUITE 200 THURSDAY, MAY 10, 2018, 6:00 PM

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INFORMATION/DISCUSSION/ACTION		
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MATTERS FROM COMMISSIONERS	INFORMATION/DISCUSSION	9-10
MATTERS FROM STAFF	NONE	10

CITIZENS' COMMUNICATION FROM THE FLOOR	NONE	10
SUBCOMMITTEE BREAKOUT SESSION	NONE	10
ADJOURN	ADJOURNED	10

SANTA FE RIVER COMMISSION CITY OFFICES AT MARKET STATION BUILDING AT THE RAILYARD 500 MARKET STREET, SUITE 200 THURSDAY, MAY 10, 2018, 6:00 PM

1. CALL TO ORDER

The meeting of the Santa Fe River Commission was called to order at 6:00 pm by Commissioner Zoe Isaacson, Chair, on Thursday, May 10, 2018, at the City Offices at Market Station, 500 Market Street, Suite 200, Santa Fe, New Mexico.

2. ROLL CALL

MEMBERS PRESENT

Zoe Isaacson, Chair Phil Bove Jerry Jacobi Dale Doremus County Commissioner Anna Hansen F. M. Patomi Emile Sawyer

MEMBERS ABSENT

Luke Pierpointe, Excused John R. Buchser, Vice Chair, Excused

OTHERS PRESENT

Melissa McDonald, City of Santa Fe Alan Hook, City of Santa Fe Andrew Erdmann, City of Santa Fe Andy Otto, Santa Fe Watershed Association Elizabeth Martin for Frances Lucero, Stenographer

3. APPROVAL OF AGENDA

MOTION A motion was made by County Commissioner Hansen, seconded by Commissioner Doremus, to approve the agenda as presented.

VOTE The motion passed unanimously by voice vote.

4. APPROVAL OF MINUTES APRIL 12, 2018

MOTION A motion was made by County Commissioner Hansen, seconded by

Commissioner Doremus, to approve the minutes as presented.

VOTE The motion passed unanimously by voice vote.

5. COMMUNICATION FROM OTHER AGENCIES/COMMITTEES

A. SANTA FE WATERSHED REPORT

Mr. Otto, handed out the Watershed monthly report which is incorporated herewith into these minutes as Exhibit "1". Mr. Otto reviewed the report.

Mr. Otto said on Monday the Canyon Road Neighborhood Association is doing brush clearing in the Amigo Park area. It will be from 10:00 am to 12:00 noon, on June 16th. It is part of the Clean and Green Great American River Clean Up. They are also doing thinning from St. Frances to DeFouri Bridge. All of you are invited.

6. INFORMATION/DISCUSSION/ACTION

A. INFORMATION ITEM: UPDATE SANTA FE RIVER TARGET FLOWS/HYDROGRAPH

Ms. McDonald said she reported this information to the Public Utilities Committee, the Public Works Committee and City Council. The hydrograph has changed since our last meeting.

Mr. Hook handed out the hydrograph and additional information which is incorporated herewith into these minutes as Exhibit "2".

Mr. Hook reviewed the hydrograph.

Ms. McDonald said as a result of the current water situation, their will be no pluse and the Fishing Derby has been postponed until potentially fall. We are trying to keep the critical flow of 015. We are unable to do any pluses unless we get strong monsoons.

Mr. Hook reviewed the additional information in the packet.

Commissioner Doremus asked has Article 7 kicked in.

Mr. Hook said no, not so far. He does not think we will get there and there will not be a need to exchange water.

Commissioner Jacobi said at our last meeting our discussion was about plantings at Frenchys. What is going to happen now.

Ms. McDonald said that brings us to item B.

B. INFORMATION ITEM: GUIDANCE REGARDING OPTIONAL WATER MANAGEMENT PRACTICES REGARDING ESTABLISHMENT OF PLANTINGS ASSOCIATED WITH THE SANTA FE GREENWAY PROJECT

Mr. Erdmann said he had found 3 options to water the trees. The Osage well was the only viable option. The Public Utilities Committee had a lot of questions about this. They passed it without recommendation. It goes to Public Works on the 29th. The good news is we think the Osage well could make some impact for those trees. He spoke to Scott Kaseman and they are talking about putting in some burms along the side to slow the water down. We are meeting down there on Wednesday with Scott. The orchard area questions were around can we water there. He doesn't think we will be able to do it.

County Commissioner Hansen said the first orchard was near Agua Fria. Numerous people have told her that they are going to go down there with hoses. She has tried to reassure them that we have a water truck that goes there every week.

County Commissioner Hansen asked where is Osage well.

Mr. Erdmann said it is near the parking lot at Frenchys, against the road. The return for the Acequia Madre will be used. That was for the old Acequia Media.

Commissioner Bove asked what is that distance.

Mr. Erdmann said a couple of hundred yards. We are going to look into how to control the water.

Commissioner Bove said cut a bar ditch to control the water.

Mr. Erdmann said he is not sure we can round up 170 feet of hose.

Commissioner Bove suggested that they borrow sections of aluminum pipe.

County Commissioner Hansen Brian suggested that Mr. Erdmann contact Mr.

Gonzales at the horse facility.

Commissioner Patomi suggested that he talk to the Fire Chief.

Commissioner Doremus asked the acequia itself, will it need cleaning out.

Mr. Erdmann said yes, we will get some staff to do that. If we can get a hose through that, then it is a section we don't have to clean.

Mr. Erdmann said he talked to the Environment Department and no permit is necessary from them. We have contacted EPA and are awaiting a response. We made them aware. The State Engineers Office is not concerned about it. It is still municipal use.

Commissioner Sawyer asked how many acre feet do we have at Osage.

Mr. Erdmann said 35 acre feet. We haven't run it in a long time. There is a relief pipe that comes off of the well and it should work. It is 1,700 feet from the well to the trees. He thinks they will get approval.

C. ACTION ITEM: RIVER COMMISSION ORGANIZATION REVIEW AND 2018 GOALS

Chair Isaacson said she wanted to touch on our 2018 goals. We all put in our thoughts, ranked them and refined them and now she would like to take the time to revisit them and prioritize goals. With a new administration it is important to refocus what we want to do as a Commission. On the screen now is the last draft of our goals.

Chair Isaacson said she would like to have an open discussion. Her first thought was that the River Corridor Master Plan needs to be updated. If we take that on we have a lot of things that are applicable. Another thing she wanted to bring up was the Upper Watershed Plan we gave input to. She would like to invite Alan, when he has data, to present on the Seepage Study. With that we can expand some of these recommendations that were given to Council. We could try to focus on the City letting out an RFQ for infrastructure improvements along the historic channel.

Commissioner Patomi said his concern on the watershed as a whole is when you drive around it you see that all the landscaping is being destroyed by growth and building. Growth is killing Santa Fe as a City and County. We should focus on the watershed as a whole. Any land use is a water decision.

Ms. McDonald asked are you recommending expanding our goals and objectives as a Body.

Commissioner Patomi said he thinks the mandate includes the whole watershed.

Ms. McDonald said the watershed is included.

Chair Isaacson said we need to help the City approach the river corridor as a whole with a comprehensive plan. That would be an opportunity to really emphasize that we understand the complex system, but encourage that it be treated comprehensively.

Ms. McDonald said there is a creating authority from the Resolution that created this Body. Under purpose you may want to look at that and make sure your goals and objectives fit the stated purpose. The creating authority was put on the screen and County Commissioner Hansen read it for the group.

Commissioner Patomi said he wants to focus more on the watershed. What happens to the watershed with climate change.

Chair Isaacson said as a Commission we do need to focus. We have a very broad vision of what we can do. If we can refine this list a bit and have more tangible items that we can check off the list and say we have done that would be progress. We need short term goals. We need to have clearly defined objectives and something we can achieve and we need everyone to have a vested interest in getting this done.

Chair Isaacson said there are few things on our goal list that we have worked on and are ready to be achieved and can continue. Talks on the river, events along the river, walks and talks and signage are on the list.

County Commissioner Hansen asked what happened to "scoop to poop."

Ms. McDonald said she has been looking for leadership for that. Who wants to take that on. If this Body is interested Joe Abeyta Media has offered to do a video for us. It requires writing a script. Dog park and trails people are interested. We need a group of people to come together and say they are going to start it. It could be very simple. Catchy, fun reminders. Massaging. We could set up a little task force and we could come up with some ideas. She wants to make sure the group is behind the activity.

County Commissioner Hansen said she thinks that is a public health and safety issue.

Ms. McDonald said we did find dog e-coli in the river. That is one of the major water quality issues with the river.

Commissioner Bove said it is also in the acequias and on the trails as well. We

could do signs about the City Ordinance.

Commissioner Doremus said there is the EPA list of standards. Did we exceed fecal coliform in the river.

Commissioner Sawyer said yes.

Commissioner Doremus asked couldn't we apply for the 319 grant.

Ms. McDonald said she and Alex are looking into that as a possibility. We are going to be doing some of this in our MS4 group as well.

County Commissioner Hansen said if we are going to address this as a water quality issue there are a lot of City committees we could also piggyback with. It is not only a river quality issue, but it is a park issue and watershed issue. She believes if we did it we would need for it to be a blitz all over the City to clean up after your dog.

Ms. McDonald said if the Commission wants to move forward it would be good to get creative with funding. Lay out a plan and you will be able to find the money. Citizen initiated action has been very successful. Maybe we could do op-ed articles or letters to the editor. This might be a good venue for that.

Commissioner Jacobi said we would need to make sure the whole City understands it is a problem.

Chair Isaacson asked what do you guys feel about doing an update for the River Corridor Plan.

Everyone agreed that they wanted to work on that.

Chair Isaacson asked who has the time and energy to work on that.

Chair Isaacson, Mr. Otto and Commissioners Sawyer and Jacobi volunteered.

Ms. McDonald said the update could be a series of white papers that would be a supplement to the Plan. She found an original blueprint set of 3 sheets of the river corridor. All hand drawn. She will bring that next month or send it out.

County Commissioner Hansen said the River Corridor Plan is a priority. It has not been updated since 1995.

Ms. McDonald said we will be able to update maps with more modern technology.

Ms. McDonald said if the group needs anything let her know.

Chair Isaacson said she will send out an email to get the ball rolling. Thank you for committing some time.

Chair Isaacson asked is there anything else that is a priority or that we should take on for the short term.

Commissioner Jacobi said the idea of trying to get water back into the natural channel and where we are now. Are we doing anything to get the surface flow back to the natural channel.

Ms. McDonald said we are doing all we can within the bypass constraint. The main problem is with the bypass constraint in order to meet the acequia and other requirements we can only replace river flows 3 days a week in a row. It makes everyone sad to see the situation. There are efforts. We are all thinking about it.

Commissioner Jacobi said he would just like to see that at some point.

Ms. McDonald said there is seepage going into the ponds now. July will be dryer.

Commissioner Bove said the .15 CPS is not on the surface before the check in. With the lay of the land you cannot measure accurately. It looks like between one third and one half CPS is coming out. For the pond that is a good sign. It has been like that for the last 3 or 4 weeks.

Commissioner Doremus said that is a priority for this group. Get the results of the seepage study as a first step. After we have that information combined with infrastructure from the State Engineer for funding or other collaborations. Maybe we should have a subcommittee at that point.

Ms. McDonald asked are you talking about the Upper Watershed Plan.

Commissioner Doremus said yes. This year planning and funding for next year.

Chair Isaacson said we do need that information. Once Alan presents that to us that would be a great point to form a subcommittee.

Ms. McDonald said we will continue to monitor the seepage throughout the summer then Alan can hone in more.

Mr. Hook said there is a timeline for the Seepage Study. We have the final draft and hope to get it to PUC in July. He will be able to make a presentation in July to this Commission. It will be 2 years of data. We will still be collecting more data this summer.

Commissioner Doremus asked could you bring the results to us before PUC.

Mr. Hook said the Water Division Director wants it to go to PUC first.

Ms. McDonald said you are really looking at August to formulate a subcommittee.

County Commissioner Hansen said Brian Gallegos mentioned helping you with money.

Mr. Hook said he is not helping with money, he is talking about coming up with the money and doing the work themselves. He may go to the Legislature in January to try to get more money for next spring, summer or fall. It is on the radar.

Commissioner Bove said we agreed to allow electronic monitoring when we renewed our agreement with the City.

Mr. Hook said there are 4 parties to the court order. The State Engineer is assigned the responsibility. Our role is having to provide monitoring. It is on their website.

Chair Isaacson said that is a good place to start. Pending the results of the Seepage Study we can form a group on the Upper Watershed Plan.

Chair Isaacson said we have in our goals to promote the Living River Fund. Can you get the quarterly report for us.

Ms. McDonald said yes, she will see if she can get that for next month.

County Commissioner Hansen said she would like Melessia to follow up with the MS4 group and how we could possibly do something about dog feces on the river.

Ms. McDonald said we will talk about that at our next meeting. She would like to see a group do a letter to the editor.

County Commissioner Hansen said if you give the information to Maria, her constituent liaison, she will have her start working on something like that.

Chair Isaacson said she is willing to edit and work with her.

County Commissioner Hansen said she will bring a draft with her to the next Commission meeting if she can get the information from Melessia in time. 500 words. It would be good to come from this group. It will be saying this group cares about the river and the quality of the water

Ms. McDonald said she can pull together some materials and get with Maria and also send the test results we got back.

Ms. McDonald said thank you very much Anna and Zoe. She doesn't think people rally realize this.

Commissioner Bove said the lower flows are dirtier.

Commissioner Doremus said they are all interconnected. Emphasize that.

Ms. McDonald said the tone will be that we are all in this together. It will not be accusatory. We will remind them how important it is.

Chair Isaacson said thank you Anna

7. MATTERS FROM COMMISSIONERS

Commissioner Bove said there was an article this morning about Lake Mead and possible emergency measures. It said an acre foot is enough to supply a typical family in the United States for a year. We ought to think about the fact that this is really wrong. 325,000 gallons.

Ms. McDonald asked do we want to change the way we are doing our agendas. Do we want to have on every agenda the list the goal groups you have set up based on this conversation. Do we want reports monthly on the progress of the working groups identified today. Think about that.

Chair Isaacson said when she first started we were doing updates. She is not opposed to having that on the agenda. It became a decent amount of work to do that every month. Maybe make the reports more concise.

Ms. McDonald said with the Public Information Act we need to have what you are talking about on the agenda.

County Commissioner Hansen said she sent out the Bike To Work Week information. The County has challenged the City to a convoy on May 18th at 4. It will be a fun ride. It is from the County Administrative Building around the Plaza down Alameda to Railyard Park. It will be police escorted. She invited everyone to participate. Everyone is welcome.

Ms. McDonald said she will forward details to everyone. The County is wearing red, the City green.

Commissioner Jacobi said we are an advisory group to the City. He would like to find a way to participate is some of the meetings staff and others have.

Ms. McDonald will ask staff to make regular reports to the River Commission at

each meeting to update them on what is happening and regarding possible activities they may participate in. She will reach out to Andrew and Alan and let them know you are interested.

8. MATTERS FROM STAFF

None.

9. CITIZENS' COMMUNICATION FROM THE FLOOR

None.

10. SUBCOMMITTEE BREAKOUT SESSION

None.

11. ADJOURN

There being no further business before the Commission the meeting adjourned at 8:00 pm.

Zoe Isaacson, Chair

Elizabeth Martin, Stenographer



Adopt Update

MARCH ~ APRIL 2018



How Stormwater Affects Our Watershed

Over time, the Santa Fe Watershed has been altered by humans. As Santa Fe's population grew, so did the amount of hardscaped areas. This increase of roofs, parking lots, and roads disrupted the way water was once absorbed by soils and plants. Now, water runs quickly off of these surfaces, carrying pollutants into the the river and arroyos. The chance of water being reabsorbed into the landscape has diminished. Useful, valuable water passes faster through Santa Fe than can be absorbed. Stormwater can be managed as an asset instead of a waste. Rain gardens or rain barrels help catch this precious asset. Visit our website for more info



RIVER NEWS

Volunteers are back in action in the Santa Fe River this spring. We celebrated Earth Day 2018 in the river and the arroyos. Big thank yous to:

SOUTHWEST CARE, UPCYCLE SANTA FE, ATC, SANTA FE PREP, UNITED CHURCH OF SANTA FE, and SF CENTER FOR SPIRITUAL LIVING.





SPONSOR NEWS

We would like to welcome two new sponsors to our adopt programs:

Coca Cola of Santa Fe adopted a portion of the Arroyo Chamisos, and Rancho Siringo **Neighborhood Association** adopted a part of the Arroyo de los Pinos.

Thank you!

VOLUNTEERS: 262*

BAGS: 249*

HOURS: 490* **ARROYO REACHES: 13***

UPCOMING EVENTS

5.14.18 URGENT! **VOLUNTEERS NEEDED**

Help your watershed stay fire free by helping remove dead and down brush at Armijo Park where the river runs. Call for more information: 820-1696

6.16.18 SANTA FE RIVER SUMMER **CLEAN + GREEN CLEAN UP EVENT** 10:00-12:00

TO CLEAN OR TO GREEN

...the choice is yours **CLEAN** Join our community clean up to keep the river and arroyos healthy. Meet us at our sign-in table under the trees in Alto Park near the bike trail next to the river. Sign in, enjoy some light snacks, and we'll give you trash bags.

OR

GREEN This year volunteers can help improve our river habitat by thinning willows and young elm trees. Meet us at L.Montano Park for tools and refreshments.

Green? Be sure to sign in at our website!

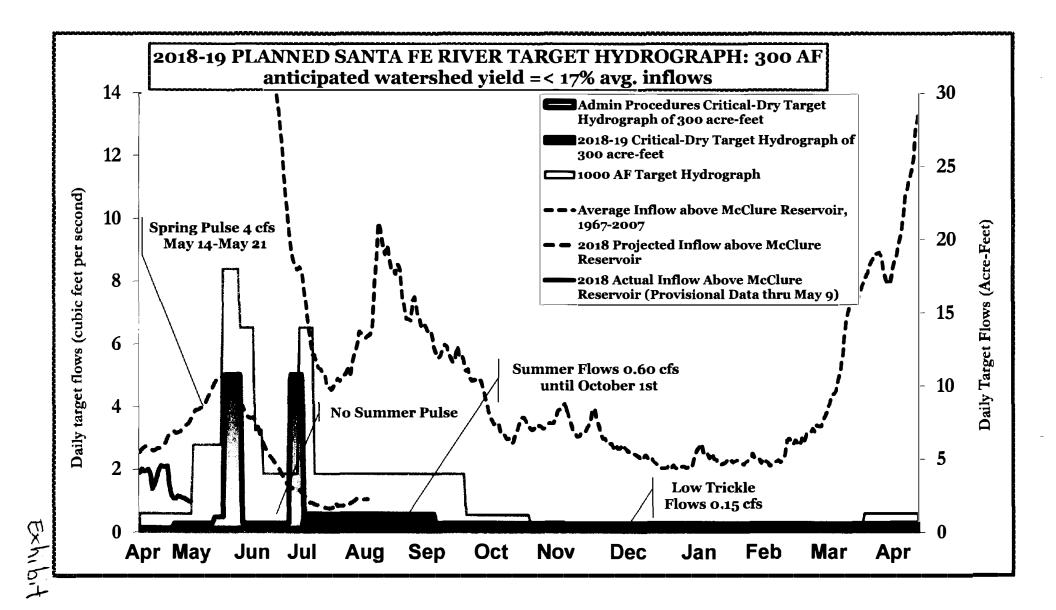
SF River + Arroyo cleanup totals = 2 months

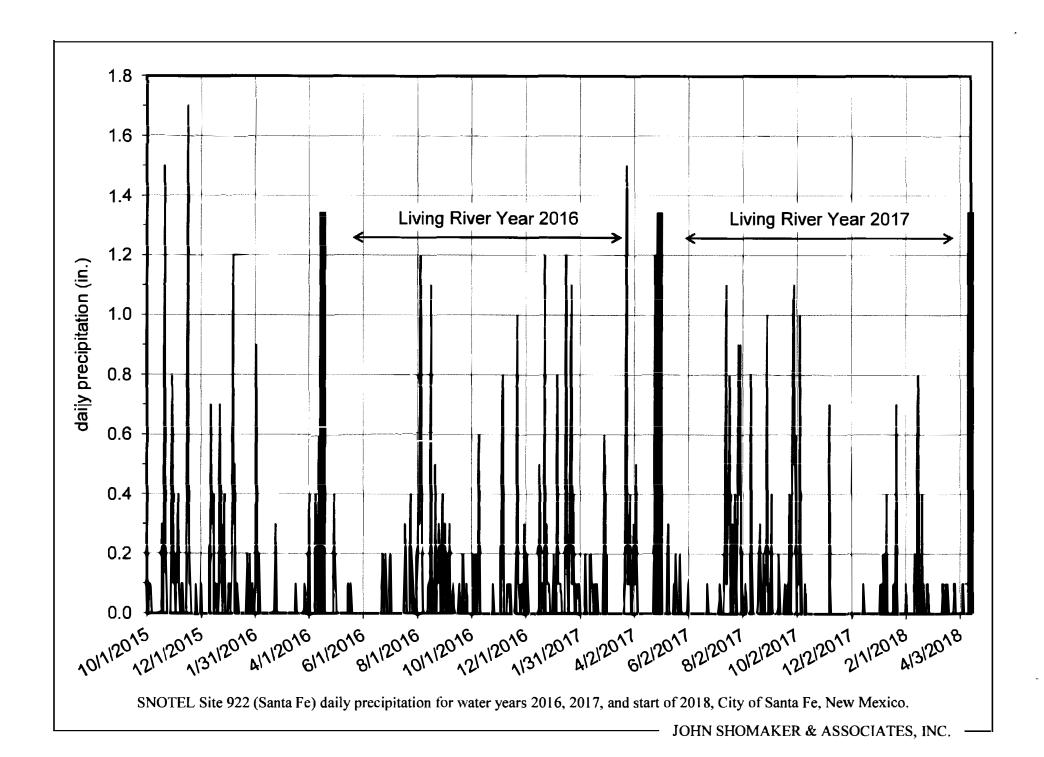
ARROYO NEWS

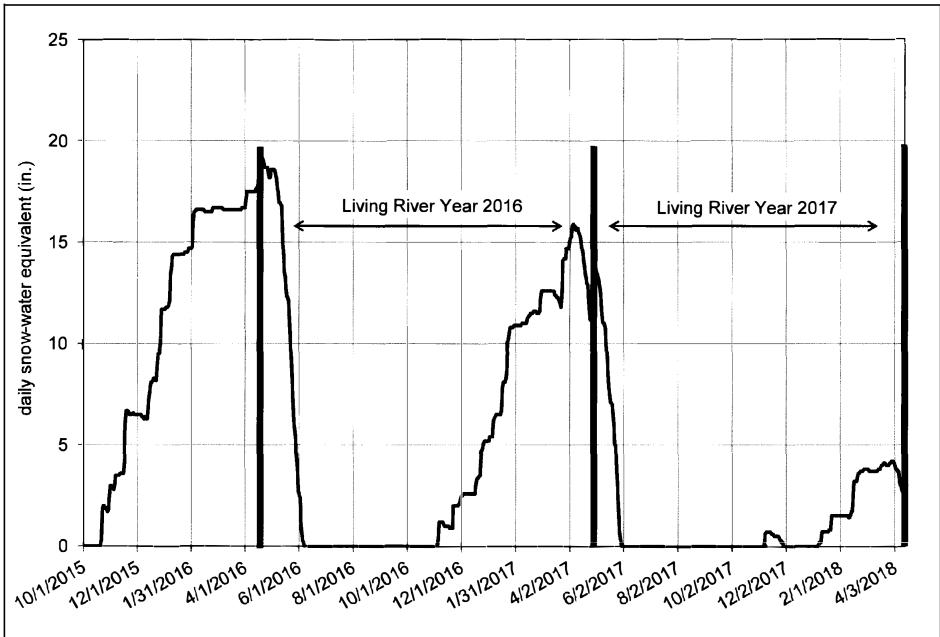
Our neighborhood arroyos have been getting their fair share of attention too. Our trusty volunteers have given these arrovos: Pinos, Mascaras, Chamisos, and Ancha: a good spring cleaning.

Many thanks to: ATC, the Arroyo Ratz at Santa Fe Prep, St. Catherine's Neighborhood Association, and Ten Thousand Waves.

RIVER REACHES: 19*







SNOTEL Site 922 (Santa Fe) snow water equivalent for water years 2016, 2017, and start of 2018, City of Santa Fe, New Mexico.



O Click to hideNews Bulletins

- · Please see news on new formats
- Full News

• Click to hide state-specific text

USGS 08315480 SANTA FE RIVER ABOVE MCCLURE RES, NR SANTA FE, NM

PROVISIONAL DATA SUBJECT TO REVISION

Time-series: Current/Historical Observations ✓

Click to hidestation-specific text

Station operated in cooperation with the City of Santa Fe.

This station managed by the Rio Arriba Field Office.

Available Parameters ☐ All 2 Available Parameters for this site ☑ 00060 Discharge

2 00065 Gage height

2006-10-01 2018-05-10 2007-10-01 2018-05-10

Available Period

Output format

O Graph

○Graph w/ state

OGraph w/o stats

@Graph w/ (up to 3) parms

OTable

OTab-separated

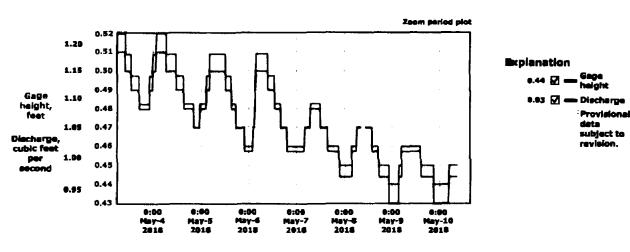
Days (7) Summary of all available data for this site Instantaneous-data availability statement GO

-- Or --Begin date 2018-05-03

2018-05-10

USGS 08315480 SANTA FE RIVER ABOVE MCCLURE RES, NR SANTA FE, NM





20180501FMT_rg_final

USDA NRCS National Water & Climate Center

* - DATA CURRENT AS OF: May 04, 2018 11:15:24 AM

- Based on May 01, 2018 forecast values

Northwestern Rio Grande in Colorado		F.00V	۰ - ۴		30%	70%	สาเก	30 vm
Forecast Point	period	50% (KAF)	% of avg	max (KAF)	(KAF)	(KAF)	(KAF)	30-yr avg
Rio Grande at Thirty Mile Bridge (2)	APR-JUL APR-SEP MAY-JUL MAY-SEP	47 53 38 44	42 41 36 36	62 73 53 64	53 61 44 52	42 46 33 37	35 37 26 28	113 129 106 122
Rio Grande at Wagon Wheel Gap (2)	APR-SEP MAY-SEP	115 87	34 28	154 126	130 102	101 73	83 55	340 315
SF Rio Grande at South Fork (2)	APR-SEP	47	37 26	57 39	51 33	43 25	38 20	127
Rio Grande nr Del Norte (2)	MAY-SEP APR-SEP	29 168	33	220	187	150	127	113 515
Saguache Ck nr Saguache (2)	MAY-SEP APR-SEP	118 11.4	25 36	168 18.9	137 14.2	100 9.0	77 6.2	470 32
Alamosa Ck ab Terrace Reservoir	MAY-SEP APR-SEP	8.7 27	30 40	16.2 36	11.5 31	6.3	3.5 21	29 68
La Jara Ck nr Capulin	MAY-SEP MAR-JUL	17.8 3.1	29 35	26 4.6	3.6	14.9 2.7	11.1 2.3	62 8.9
Platoro Reservoir Inflow (2)	MAY-JUL APR-JUL	1.07 25	19 45	2.5 31	1.56 27	0.66	0.24 19.4	5.6 56
	APR-SEP MAY-JUL	27 18.9	44 36	34 25	30 21	24 16.6	20 13.5	62 53
Conejos R nr Mogote (2)	MAY-SEP APR-SEP	21 78	36 40	28 100	24 87	17.9 71	14.3 61	59 194
San Antonio R at Ortiz	MAY-SEP APR-SEP	54 3.0	31 19	76 3.7	63 3.2	2.8	37 2.7	177 15.6
Los Pinos R nr Ortiz	MAY-SEP APR-SEP	0.26 27	3 37	1.01	0.51 29	0.100	0.000	9.4 73
	MAY-SEP	12.0	20	17.5	14.1	10.1	7.5	61
Northeastern Rio Grande in Colorado								
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Forecast Point	period	50% (KAF)	% of avg	max (KAF)	30% (KAF)	70% (KAF)	min (KAF)	30-yr avg
	APR-SEP	(KAF) 2.9	avg 23	(KAF) 5.9	(KAF) 4.0	(KAF)	(KAF) 1.06	avg 12.8
Forecast Point	APR-SEP MAY-SEP APR-SEP	2.9 2.5 1.91	23 22 12	5.9 5.5 5.5	4.0 3.6 3.1	2.0 1.62 1.08	1.06 0.67 0.54	12.8 11.6 16.3
Forecast Point Ute Ck nr Fort Garland	APR-SEP MAY-SEP APR-SEP MAY-SEP APR-SEP	2.9 2.5 1.91 1.38 3.0	23 22 12 11 24	5.9 5.5 5.5 5.0 4.6	4.0 3.6 3.1 2.6 3.6	2.0 1.62 1.08 0.55 2.5	1.06 0.67 0.54 0.010 1.83	12.8 11.6 16.3 12.7 12.6
Forecast Point Ute Ck nr Fort Garland Sangre de Cristo Ck (2)	APR-SEP MAY-SEP APR-SEP MAY-SEP APR-SEP MAY-SEP APR-SEP	2.9 2.5 1.91 1.38 3.0 2.5 4.5	23 22 12 11 24 22 20	5.9 5.5 5.5 5.0 4.6 4.1 9.7	4.0 3.6 3.1 2.6 3.1 6.4	2.0 1.62 1.08 0.55 2.5 1.97 3.0	1.06 0.67 0.54 0.010 1.83 1.30 1.45	avg 12.8 11.6 16.3 12.7 12.6 11.6
Forecast Point Ute Ck nr Fort Garland Sangre de Cristo Ck (2) Trinchera Ck ab Turners Ranch	APR-SEP MAY-SEP APR-SEP MAY-SEP APR-SEP MAY-SEP	2.9 2.5 1.91 1.38 3.0 2.5 4.5 4.0 2.6	avg 23 22 12 11 24 22 20 19 23	5.9 5.5 5.5 5.0 4.6 4.1 9,7 9.2 4.2	(KAF) 4.0 3.6 3.1 2.6 3.6 3.1 6.4 5.9 3.2	(KAF) 2.0 1.62 1.08 0.55 2.5 1.97 3.0 2.5 2.1	(KAF) 1.06 0.67 0.54 0.010 1.83 1.30 1.45 0.97 1.55	avg 12.8 11.6 16.3 12.7 12.6 11.6 23 21 11.1
Forecast Point Ute Ck nr Fort Garland Sangre de Cristo Ck (2) Trinchera Ck ab Turners Ranch Culebra Ck at San Luis (2)	APR-SEP MAY-SEP APR-SEP APR-SEP MAY-SEP APR-SEP MAY-SEP MAY-SEP MAY-SEP MAY-SEP MAY-SEP MAY-SEP MAY-JUL MAY-JUL	2.9 2.5 1.91 1.38 3.0 2.5 4.0 2.6 1.50	avg 23 22 12 11 24 22 20 19 23 17 22	(KAF) 5.9 5.5 5.0 4.6 4.1 9.7 9.2 4.2 3.1 9.8	(KAF) 4.0 3.6 3.1 2.6 3.1 6.4 5.9 3.2 2.1 7.1	(KAF) 2.0 1.62 1.08 0.55 2.5 1.97 3.0 2.5 2.1 1.01 4.6	(KAF) 1.06 0.67 0.54 0.010 1.83 1.30 1.45 0.97 1.55 0.46 3.5	avg 12.8 11.6 16.3 12.7 12.6 11.6 23 21
Forecast Point Ute Ck nr Fort Garland Sangre de Cristo Ck (2) Trinchera Ck ab Turners Ranch Culebra Ck at San Luis (2) Costilla Reservoir Inflow (2)	APR-SEP MAY-SEP APR-SEP MAY-SEP APR-SEP MAY-SEP APR-SEP MAY-SEP MAY-SEP MAY-JUL	2.9 2.5 1.91 1.38 3.0 2.5 4.0 2.6 1.50	avg 23 22 12 11 24 22 20 19 23 17	(KAF) 5.9 5.5 5.5 5.0 4.6 4.1 9.7 9.2 4.2 3.1	4.0 3.6 3.1 2.6 3.1 6.4 5.9 3.2 2.1	(KAF) 2.0 1.62 1.08 0.55 2.5 1.97 3.0 2.5 2.1 1.01	(KAF) 1.06 0.67 0.54 0.010 1.83 1.30 1.45 0.97 1.55 0.46	avg 12.8 11.6 16.3 12.7 12.6 11.6 23 21 11.1 8.9
Forecast Point Ute Ck nr Fort Garland Sangre de Cristo Ck (2) Trinchera Ck ab Turners Ranch Culebra Ck at San Luis (2) Costilla Reservoir Inflow (2)	APR-SEP MAY-SEP APR-SEP APR-SEP MAY-SEP APR-SEP MAY-SEP MAY-SEP MAY-SEP MAY-SEP MAY-SEP MAY-SEP MAY-JUL MAY-JUL	2.9 2.5 1.91 1.38 3.0 2.5 4.5 4.0 2.6 1.50	avg 23 22 12 11 24 22 20 19 23 17 22 14	(KAF) 5.9 5.5 5.0 4.6 4.1 9.7 9.2 4.2 3.1 9.8	4.0 3.6 3.1 2.6 3.1 6.4 5.9 3.2 2.1 7.1	(KAF) 2.0 1.62 1.08 0.55 2.5 1.97 3.0 2.5 2.1 1.01 4.6 1.58	(KAF) 1.06 0.67 0.54 0.010 1.83 1.30 1.45 0.97 1.55 0.46 3.5	12.8 11.6 16.3 12.7 12.6 11.6 23 21 11.1 8.9 26 19.6
Forecast Point Ute Ck nr Fort Garland Sangre de Cristo Ck (2) Trinchera Ck ab Turners Ranch Culebra Ck at San Luis (2) Costilla Reservoir Inflow (2) Costilla Ck nr Costilla (2)	APR-SEP MAY-SEP APR-SEP APR-SEP MAY-SEP APR-SEP MAY-SEP MAY-SEP MAY-SEP MAY-SEP MAY-SEP MAY-SEP MAY-JUL MAY-JUL	2.9 2.5 1.91 1.38 3.0 2.5 4.0 2.6 1.50	avg 23 22 12 11 24 22 20 19 23 17 22	(KAF) 5.9 5.5 5.0 4.6 4.1 9.7 9.2 4.2 3.1 9.8	(KAF) 4.0 3.6 3.1 2.6 3.1 6.4 5.9 3.2 2.1 7.1	(KAF) 2.0 1.62 1.08 0.55 2.5 1.97 3.0 2.5 2.1 1.01 4.6	(KAF) 1.06 0.67 0.54 0.010 1.83 1.30 1.45 0.97 1.55 0.46 3.5	12.8 11.6 16.3 12.7 12.6 11.6 23 21 11.1 8.9 26
Forecast Point Ute Ck nr Fort Garland Sangre de Cristo Ck (2) Trinchera Ck ab Turners Ranch Culebra Ck at San Luis (2) Costilla Reservoir Inflow (2) Costilla Ck nr Costilla (2) Middle Sangre Mtns in New Mexico	APR-SEP MAY-SEP APR-SEP MAY-SEP APR-SEP MAY-SEP MAY-SEP MAR-JUL MAY-JUL MAR-JUL MAY-JUL	2.9 2.5 1.91 1.38 3.0 2.5 4.5 4.0 2.6 1.50 5.7	avg 23 22 12 11 24 22 20 19 23 17 22 14 % of avg	(KAF) 5.9 5.5 5.0 4.6 4.1 9.7 9.2 4.2 3.1 9.8 6.8	(KAF) 4.0 3.6 3.1 2.6 3.1 6.4 5.9 3.2 2.1 7.1 4.1	(KAF) 2.0 1.62 1.08 0.55 2.5 1.97 3.0 2.5 2.1 1.01 4.6 1.58	(KAF) 1.06 0.67 0.54 0.010 1.83 1.30 1.45 0.97 1.55 0.46 3.5 0.47	avg 12.8 11.6 16.3 12.7 12.6 11.6 23 21 11.1 8.9 26 19.6
Forecast Point Ute Ck nr Fort Garland Sangre de Cristo Ck (2) Trinchera Ck ab Turners Ranch Culebra Ck at San Luis (2) Costilla Reservoir Inflow (2) Costilla Ck nr Costilla (2) Middle Sangre Mtns in New Mexico Forecast Point	APR-SEP MAY-SEP APR-SEP MAY-SEP APR-SEP MAY-SEP MAY-SEP MAY-JUL MAY-JUL MAY-JUL MAY-JUL	2.9 2.5 1.91 1.38 3.0 2.5 4.5 4.0 2.6 1.50 5.7 2.7	avg 23 22 12 11 24 22 20 19 23 17 22 14 % of avg 35 22 20	(KAF) 5.9 5.5 5.0 4.6 4.1 9.7 9.2 4.2 3.1 9.8 6.8	(KAF) 4.0 3.6 3.1 2.6 3.6 3.1 6.4 5.9 3.2 2.1 7.1 4.1 30% (KAF) 14.1 8.3 4.6	(KAF) 2.0 1.62 1.08 0.55 2.5 1.97 3.0 2.5 2.1 1.01 4.6 1.58 70% (KAF) 9.9 4.1 2.8	(KAF) 1.06 0.67 0.54 0.010 1.83 1.30 1.45 0.97 1.55 0.46 3.5 0.47	avg 12.8 11.6 16.3 12.7 12.6 11.6 23 21 11.1 8.9 26 19.6
Forecast Point Ute Ck nr Fort Garland Sangre de Cristo Ck (2) Trinchera Ck ab Turners Ranch Culebra Ck at San Luis (2) Costilla Reservoir Inflow (2) Costilla Ck nr Costilla (2) Middle Sangre Mtns in New Mexico Forecast Point Red R bl Fish Hatchery nr Questa	APR-SEP MAY-SEP APR-SEP MAY-SEP APR-SEP MAY-SEP MAY-SEP MAY-JUL MAY-JUL MAY-JUL MAY-JUL MAY-JUL	(KAF) 2.9 2.5 1.91 1.38 3.0 2.5 4.5 4.0 2.6 1.50 5.7 2.7	avg 23 22 12 11 24 22 20 19 23 17 22 14 % of avg	(KAF) 5.9 5.5 5.0 4.6 4.1 9.7 9.2 4.2 3.1 9.8 6.8	(KAF) 4.0 3.6 3.1 2.6 3.6 3.1 6.4 5.9 3.2 2.1 7.1 4.1	(KAF) 2.0 1.62 1.08 0.55 2.5 1.97 3.0 2.5 2.1 1.01 4.6 1.58	(KAF) 1.06 0.67 0.54 0.010 1.83 1.30 1.45 0.97 1.55 0.46 3.5 0.47	avg 12.8 11.6 16.3 12.7 12.6 11.6 23 21 11.1 8.9 26 19.6
Forecast Point Ute Ck nr Fort Garland Sangre de Cristo Ck (2) Trinchera Ck ab Turners Ranch Culebra Ck at San Luis (2) Costilla Reservoir Inflow (2) Costilla Ck nr Costilla (2) Middle Sangre Mtns in New Mexico Forecast Point Red R bl Fish Hatchery nr Questa Rio Hondo nr Valdez	APR-SEP MAY-SEP APR-SEP MAY-SEP APR-SEP MAY-SEP APR-SEP MAY-SEP MAY-JUL MAY-JUL MAY-JUL MAY-JUL MAY-JUL MAY-JUL MAY-JUL MAY-JUL MAY-JUL	(KAF) 2.9 2.5 1.91 1.38 3.0 2.5 4.0 2.6 1.50 5.7 2.7	avg 23 22 12 11 24 22 20 19 23 17 22 14 % of avg 35 22 20 13	(KAF) 5.9 5.5 5.0 4.6 4.1 9,7 9.2 4.2 3.1 9.8 6.8 max (KAF) 18.2 12.4 6.3 4.7	(KAF) 4.0 3.6 3.1 2.6 3.6 3.1 6.4 5.9 3.2 2.1 7.1 4.1 30% (KAF) 14.1 8.3 4.6 3.0	(KAF) 2.0 1.62 1.08 0.55 2.5 1.97 3.0 2.5 2.1 1.01 4.6 1.58 70% (KAF) 9.9 4.1 2.8 1.23	(KAF) 1.06 0.67 0.54 0.010 1.83 1.30 1.45 0.97 1.55 0.46 3.5 0.47	avg 12.8 11.6 16.3 12.7 12.6 11.6 23 21 11.1 8.9 26 19.6
Forecast Point Ute Ck nr Fort Garland Sangre de Cristo Ck (2) Trinchera Ck ab Turners Ranch Culebra Ck at San Luis (2) Costilla Reservoir Inflow (2) Costilla Ck nr Costilla (2) Middle Sangre Mtns in New Mexico Forecast Point Red R bl Fish Hatchery nr Questa Rio Hondo nr Valdez Rio Lucero nr Arroyo Seco Rio Pueblo de Taos nr Taos	APR-SEP MAY-SEP APR-SEP MAY-SEP APR-SEP MAY-SEP MAY-SEP MAY-SEP MAY-JUL MAY-JUL MAY-JUL MAY-JUL MAY-JUL MAY-JUL MAR-JUL MAY-JUL MAR-JUL MAY-JUL MAY-JUL MAY-JUL MAY-JUL MAY-JUL	2.9 2.5 1.91 1.38 3.0 2.5 4.5 4.5 2.6 1.50 5.7 2.7 50% (KAF) 11.8 6.0 3.6 2.2 1.40 1.96 0.66	avg 23 22 12 11 24 22 20 19 23 17 22 14 % of avg 35 22 20 13 20 16	(KAF) 5.9 5.5 5.0 4.6 4.1 9.7 9.2 4.2 3.8 6.8 (KAF) 18.2 12.4 6.3 4.0 4.2 2.9	(KAF) 4.0 3.6 3.1 2.6 3.6 3.1 6.4 5.9 3.2 2.1 7.1 4.1 30% (KAF) 14.1 8.3 4.6 3.0 3.1 2.3 2.7 1.37	(KAF) 2.0 1.62 1.08 0.55 2.5 2.7 3.0 2.5 2.1 1.01 4.6 1.58 70% (KAF) 9.9 4.1 2.8 1.56 0.73 1.50 0.20	(KAF) 1.06 0.67 0.54 0.010 1.83 1.30 1.45 0.97 1.55 0.46 3.5 0.47 min (KAF) 7.7 1.91 2.0 0.43 0.97 0.140	avg 12.8 11.6 16.3 12.7 12.6 11.6 23 21 11.1 8.9 26 19.6 30-yr avg
Forecast Point Ute Ck nr Fort Garland Sangre de Cristo Ck (2) Trinchera Ck ab Turners Ranch Culebra Ck at San Luis (2) Costilla Reservoir Inflow (2) Costilla Ck nr Costilla (2) Middle Sangre Mtns in New Mexico Forecast Point Red R bl Fish Hatchery nr Questa Rio Hondo nr Valdez Rio Lucero nr Arroyo Seco	APR-SEP MAY-SEP APR-SEP MAY-SEP APR-SEP MAY-SEP APR-SEP MAY-SEP MAY-JUL MAY-JUL MAY-JUL MAY-JUL MAY-JUL MAR-JUL MAY-JUL MAR-JUL MAY-JUL	(KAF) 2.9 2.5 1.91 1.38 3.0 2.5 4.5 4.5 1.50 5.7 2.7 50% (KAF) 	avg 	(KAF) 5.9 5.5 5.0 4.6 4.1 9.7 9.2 4.2 3.1 9.8 6.8 (KAF) 18.2 12.4 6.3 4.0 4.2	(KAF) 4.0 3.6 3.1 2.6 3.1 6.4 5.9 3.2 2.1 7.1 4.1 30% (KAF) 14.1 8.3 4.6 3.1 2.3 2.7	(KAF) 2.0 1.62 1.08 0.55 2.5 2.7 3.0 2.5 2.1 1.01 4.6 1.58 70% (KAF) 9.9 4.1 2.8 1.23 1.56 0.73 1.50	(KAF) 1.06 0.67 0.54 0.010 1.83 1.30 1.45 0.97 1.55 0.46 3.5 0.47 min (KAF) 7.7 1.91 2.0 0.43 0.97 0.140 1.30 0.000	avg 12.8 11.6 16.3 12.7 12.6 11.6 23 21 11.1 8.9 26 19.6 30-yr avg 18.4 15.4 10.9 9.0 17.0

Embudo ck at Dixon	20180501FMT_ MAR-JUL	rg_fina	a1 7	8.0	4.5	2.6	2.6	48
	MAY-JUL	0.61	2	5.4	1.97	0.030	0.000	36
Santa Cruz R at Cundiyo	MAR-JUL MAY-JUL	3.0 1.69	16 13	5.3 4.0	3.8 2.5	2.3 1.02	1.65 0.35	18.3 13.4
Nambe Falls Reservoir Inflow (2)	MAR-JUL MAY-JUL	1.15 0.61	18 12	1.92 1.38	1.42	0.93	0.69 0.150	6.5
Tesuque Ck ab diversions	MAR-JUL MAY-JUL	0.140 0.040	10 4	0.35	0.21	0.110 0.010	0.100	1.34 0.90
Santa Fe R nr Santa Fe (2)	MAR-JUL MAY-JUL	0.34 0.140		0.63 0.43	0.44	0.26 0.060	0.21 0.010	4.3 2.9
El Vado, Jemez		50%	% of	max	30%	70%	min	30-yr
Forecast Point	period	(KAF)	avg	(KAF)	(KAF)	(KAF)	(KAF)	avg
El Vado Reservoir Inflow (2)	MAR-JUL APR-JUL	56 51		67 71	60 59	52 44	47 34	225 205
Jemez R nr Jemez	MAY-JUL MAR-JUL	14.8 6.4 3.0	10 15 15	26 9.3 5.9	19.1 7.4 4.0	11.0 5.5 2.1	6.5 4.5 1.08	153 42 19.4
Jemez R bl Jemez Canyon Dam	MAY-JUL MAR-JUL MAY-JUL	2.4 1.00	7	7.5 6.1	3.9 2.5	1.53 0.170	1.36 0.000	34 17.0
Mainstem Routings		F.00/	۰, ۹		3.09/	709/		20 ··=
Forecast Point	period	50% (KAF)	% of avg	(KAF)	30% (KAF)	70% (KAF)	min (KAF)	30-yr avg
Rio Grande at Otowi Bridge (2)	MAR-JUL MAY-JUL	132 40	18 8	179 87	149	118 26	103 11.1	720 485
Rio Grande at San Marcial (2)	MAR-JUL MAY-JUL	-60 -91	. =	79 48	-4.4 -35	-116 -147	-199 -230	510 335
Pecos		500 /	۰, ۲		2001	700/		20
Forecast Point	period	50% (KAF)	% of avg	max (KAF)	30% (KAF)	70% (KAF)	min (KAF)	30-yr avg
Pecos R nr Pecos	MAR-JUL MAY-JUL	8.3 5.0	15 11	15.6 12.3	10.8	6.2	4.2 0.92	57 45
Pecos R nr Anton Chico	MAR-JUL MAR-JUL MAY-JUL	2.1 2.0	3	10.3	4.7 4.6	0.58 0.48	0.100 0.000	63 45
Gallinas Ck nr Montezuma	MAR-JUL MAY-JUL	0.81 0.41		2.6	1.35	0.49	0.40	9.8 6.0
Pecos R ab Santa Rosa Lk	MAR-JUL MAY-JUL	2.0 1.32	4	9.8 9.1	4.3	0.86 0.160	0.70	56 43
Ruidoso and Mimbres		F 00/	o, c		2624	7004	• ·	20
Forecast Point	period	50% (KAF)	% of avg	max (KAF)	30% (KAF)	70% (KAF)	min (KAF)	30-yr avg
Rio Ruidoso at Hollywood	MAR-JUN MAY-JUN	1.89 0.50		2.9 1.53	2.2	1.63 0.24	1.42 0.030	6.7

Max (10%), 30%, 50%, 70% and Min (90%) chance that actual volume will exceed forecast. Averages are for the 1981-2010 period. All volumes are in thousands of acre-feet.

footnotes:
1) Max and Min are 5% and 95% chance that actual volume will exceed forecast
2) streamflow is adjusted for upstream storage
3) median value used in place of average