2022 RiverEyes Monitoring Report

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EXECUTIVE SUMMARY

GeoSystems Analysis Inc. was contracted by the U.S. Bureau of Reclamation (Reclamation) to conduct daily river monitoring and reporting during 2022 as part of a cooperative interagency effort to document the extent and duration of channel drying in the Middle Rio Grande (MRG). In this report, the MRG refers to the Rio Grande from Cochiti Dam to Elephant Butte Reservoir. The monitoring effort (referred to as "RiverEyes") assists with meeting requirements under Reasonable and Prudent Measure 4, and Terms and Conditions 3.2, 9.1, and 9.2 of the December 2016 *Final Biological and Conference Opinion for Bureau of Reclamation, Bureau of Indian Affairs (BIA), and Non-federal Water Management and Maintenance Activities on the Middle Rio Grande, New Mexico* (2016 BO). When flows fell below key thresholds known to increase flow intermittency risk, field observations were relayed to an interagency water management team and, particularly when flow intermittency occurred, reported to the U.S. Fish and Wildlife Service (USFWS) to support endangered Rio Grande silvery minnow (*Hybognathus amarus*) rescue and relocation activities.

The U.S. Geological Survey (USGS) maintains a network of streamflow monitoring stations throughout the MRG that publish real-time, provisional streamflow to the internet (e.g., https://waterdata.usgs.gov/nm/nwis/current/?type=flow). Per the contractual agreement with Reclamation, field reconnaissance within specific high-risk segments of the MRG was conducted when streamflow was below 300 cubic feet per second (cfs) at USGS 08354900 Rio Grande Floodway at San Acacia, New Mexico (NM); below 80 cfs at USGS 08331160 Rio Grande Near Bosque Farms, NM; or below 100 cfs at USGS 08330000 Rio Grande at Albuquerque, NM. During 2022, the daily average streamflow fell below the 300 cfs threshold at the San Acacia gauge in March and April. On May 25, as runoff declined, streamflow fell below 300 and looked likely to decrease further. Periodic spot checks began the next day. The monitoring team conducted regular, near-daily field reconnaissance in this Reach from May 31 through October 7. The daily average flow at the Bosque Farms gauge fell below the 80 cfs threshold for the first time on June 14 and crews started regular, near daily monitoring in the Isleta Reach that day. Monitoring officially ended in the Isleta Reach on October 3. Average daily flow at the Albuquerque gauge fell below the 100 cfs threshold periodically from July 19 through September 23 and crews monitored the Angostura Reach through this timeframe, especially when reported discharge fell below ~75 cfs. To augment flow recession in the San Acacia Reach, from June 2 to June 7 the Middle Rio Grande Conservancy District (MRGCD) pumped 230 acre-feet into the Rio Grande at the Socorro Hub (the former Neil Cupp pump site), near river mile (RM) 90 with an average flow rate of 20 cfs (Marken 2022).

Channel drying began in the Angostura Reach on July 22 and the Reach reconnected on July 26. Drying was first observed in the Isleta Reach on June 16, and the last day was September 26. In the San Acacia Reach, the first day of drying was June 5, while the last day was September 24. Table 1 summarizes relevant dates and the maximum single day dried extent within each reach. The largest single day drying event was on July 26 in both the San Acacia (35.6 RMs; the "Reachwide" rows in Table 1) and Angostura (10.7 RMs) reaches, while the maximum extent dried on a single day in the Isleta Reach occurred on July 25 (14.0 RMs). Riverwide, the

maximum extent dried on a single day happened on July 26 (rounds to a total of 60.0 RMs dried; 35.6 RMs in the San Acacia Reach, plus 13.6 RMs in the Isleta Reach, and 10.7 RMs in the Angostura Reach). There were several periods of channel drying in the San Acacia and Isleta reaches, totaling 42 and 31 days respectively. In the Angostura Reach, channel drying lasted five days in a single period. At least a portion of the MRG experienced channel drying for 49 total days. Drying affected two distinct segments of the San Acacia Reach, two segments of the Isleta Reach, and one segment of the Angostura Reach.

Table 1. River segments affected by drying in each reach with important dates and maximum dried extent.

Reach	**Segment**	**First Day Drying Occurred**	**Last Day Drying Occurred**	**Max One-Day Extent (RM)**	**Date the Maximum One-Day Extent Occurred**
San Acacia	Socorro (RM 98.7) to below Fort Craig (RM 62.8)	6/5/2022	9/24/2022	34.5	7/26/2022
	Above Low Flow Conveyance Channel Outlet (RM 54.5 to RM 55.6)	7/26/2022	7/27/2022	1.1	7/26/2022
	Reachwide	***6/5/2022***	***9/24/2022***	***35.6***	***7/26/2022***
Isleta	Near Peralta Wasteway (RM 151.3 to RM 163.6)	6/16/2022	9/26/2022	12.3	7/27/2022
	Downstream of Sabinal Drain Near Abeytas Heading (RM 132.2 to 137.1)	7/25/2022	7/27/2022	1.7	7/25/2022
	Reachwide	***6/16/2022***	***9/26/2022***	***14.0***	***7/25/2022***
Angostura	Near Montaño Bridge to Southside Water Reclamation Plant Outfall (RM 177.7 to RM 188.5)	7/22/2022	7/26/2022	10.7	7/26/2022
TOTAL	**Riverwide**	**6/5/2022**	**9/26/2022**	**60.0**	**7/26/2022**

INTRODUCTION

For this report, "channel drying," "drying," and "flow intermittency" all refer to an episode when continuous surface water flow becomes interrupted, creating occasionally short segments of exposed riverbed. "Rewetting" refers to an event where surface water flow reenters a location affected by channel drying, reducing the dried length, but surface flow may not necessarily reconnect the entire affected area. "Reconnection" refers to an event where a segment of river channel affected by channel drying entirely rewets and there is continuous surface flow throughout the entire extent.

Channel drying has been actively monitored since 1996. The monitoring effort became more formal in 2002 when SS Papadopulos and Associates, Inc., systematically mapped the extent of flow intermittency under contract with New Mexico Interstate Stream Commission. Monitoring and reporting flow intermittency was required beginning in 2003 (USFWS 2003).
The RiverEyes project has numerous important monitoring responsibilities which include reporting the extent of channel drying and remnant pool formation and providing information that may help prevent unexpected drying and slow the rate of drying. This is intended to alleviate negative effects to riverine habitat of the federally listed endangered Rio Grande silvery minnow (*Hybognathus amarus*, silvery minnow; USFWS 2016). Timely and accurate reporting is essential to provide USFWS silvery minnow relocation crews with key information to assist with their field planning and site prioritization and to provide water managers with observations to inform their management decisions.

While RiverEyes encompasses potential monitoring that may occur anywhere between Cochiti Dam and Elephant Butte Reservoir, channel drying episodes have historically concentrated in two MRG reaches – the Isleta and San Acacia. Due to low flow conditions through Albuquerque, GeoSystems also regularly monitored further upstream into segments within the city of Albuquerque that lie within the Angostura Reach during 2022.

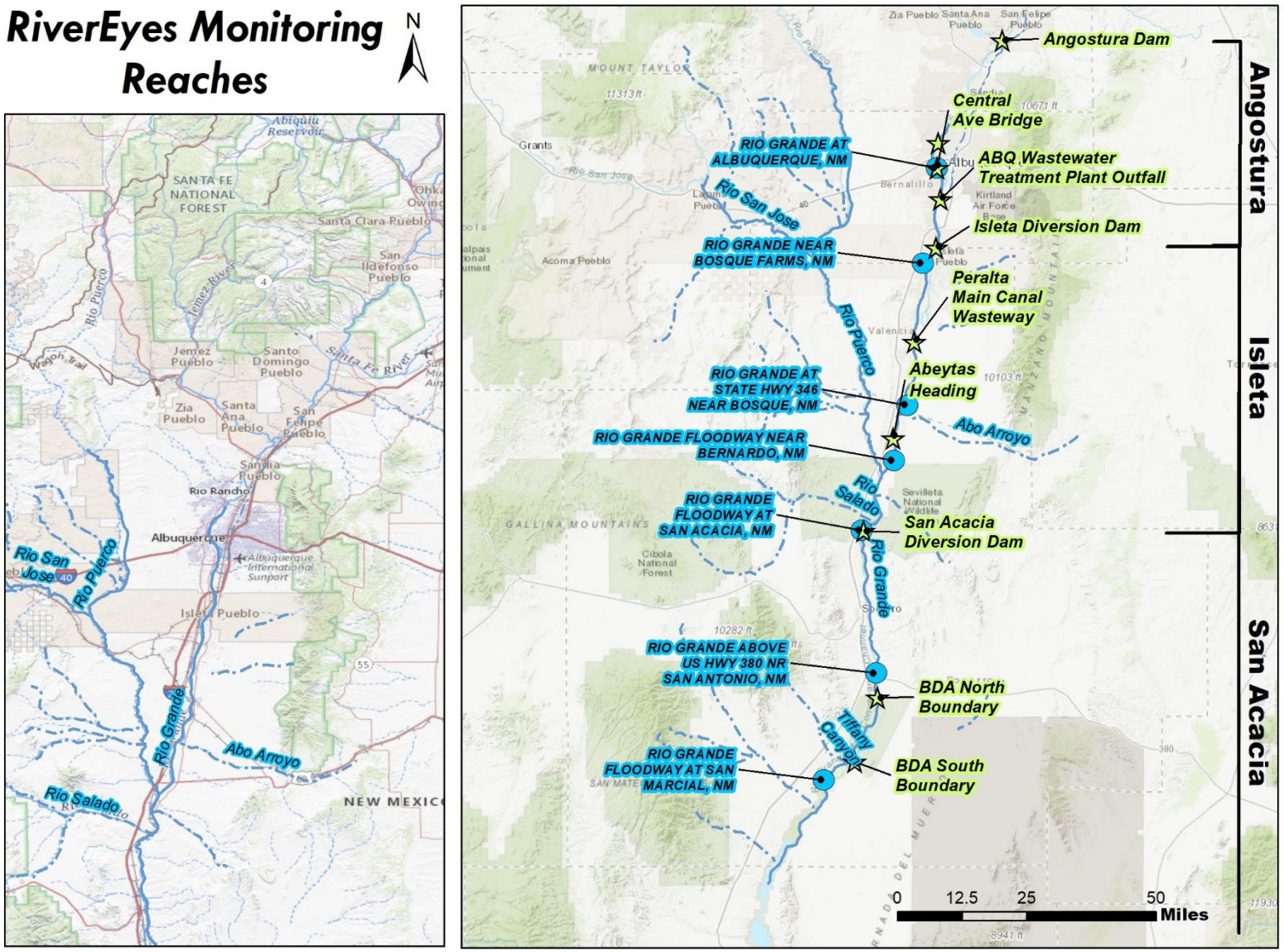

Figure 1. Map showing the locations of Angostura, Isleta, and San Acacia reaches plus other landmarks mentioned in this report.

Table 2. Total number of river miles affected by drying at some point during the year in the Isleta and San Acacia reaches (adapted and expanded from USFWS 2016). Note that the total RMs affected by drying within a year does not always numerically coincide with the longest single day dried extent.

	Angostura		**Isleta**		**San Acacia**		**Combined**	
	40.5 Miles		53.0 Miles		58.5 Miles		111.5 Miles*	
Year	Miles	Percent	Miles	Percent	Miles	Percent	Miles	Percent
2001	0.0	0.0	0.0	0.0	7.0	12.0	7.0	6.3
2002	0.0	0.0	18.2	34.3	25.0	42.7	43.2	38.7
2003	0.0	0.0	30.0	56.6	40.0	68.4	70.0	62.8
2004	0.0	0.0	31.0	58.5	37.0	63.2	68.0	61.0
2005	0.0	0.0	4.0	7.5	24.5	41.9	28.5	25.6
2006	0.0	0.0	9.5	17.9	16.5	28.2	26.0	23.3
2007	0.0	0.0	9.5	17.9	20.5	35.0	30.0	26.9
2008	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2009	0.0	0.0	0.0	0.0	20.0	34.2	20.0	17.9
2010	0.0	0.0	8.5	16.0	19.7	33.7	28.2	25.3
2011	0.0	0.0	12.9	24.3	27.1	46.3	40.0	35.9
2012	0.0	0.0	19.2	36.2	31.8	54.4	51.0	45.7
2013	0.0	0.0	9.7	18.3	26.8	45.8	36.5	32.7
2014	0.0	0.0	3.3	6.2	23.1	39.5	16.4	23.7
2015	0.0	0.0	6.4	12.1	13.2	22.6	19.6	17.6
2016	0.0	0.0	10.0	18.9	20.0	34.2	30.0	26.9
2017	0.0	0.0	2.4	4.5	21.3	36.4	23.7	21.3
2018	0.0	0.0	7.8	14.7	37.9	64.8	45.7	41.0
2019	0.0	0.0	0.0	0.0	17.4	27.7	17.4	15.6
2020	0.0	0.0	13.0	24.5	39.7	67.8	52.7	47.3
2021	0.0	0.0	14.0	26.4	32.1	54.7	46.1	41.2
2022	10.7	26.4	14.3	26.9	36.1	61.7	61.1	40..0
MEAN	**0.5**	**1.2**	**10.2**	**19.2**	**24.4**	**41.6**	**34.6**	**29.0**

*111.5 Miles for each year prior to 2022; 152 Miles thereafter

METHODS

Field Reconnaissance and Mapping

Per the contract with Reclamation, annual field activities begin when directed by Reclamation, and generally soon after streamflow falls below these thresholds at the following gauges:

- 300 cfs at Rio Grande Floodway at San Acacia, NM (USGS 08354900)
- 80 cfs at Rio Grande Near Bosque Farms, NM (USGS 08331160)
- 100 cfs at Rio Grande at Albuquerque, NM (USGS 08330000)

Daily field reconnaissance typically started at daybreak and crews initially focused on determining dried extent. Periodic afternoon site visits were also conducted when specific segments appeared to be nearing separation or when gauges or field observations indicated that flow might fall to a level that could trigger drying. As soon as drying was detected, field personnel located and documented the upstream and downstream extent of each affected channel segment. The extent of drying was reported to the nearest 0.01 RM via a Global Positioning System (GPS) enabled field application on a smartphone or tablet. Additional observations related to pool distribution and discharge measurements were also collected. Most days, reconnaissance targeted specific Rio Grande segments known to be most vulnerable to drying. Based on previous years' RiverEyes data, daily reconnaissance primarily targeted the following locations, though additional areas were checked on a regular (typically weekly) basis.

Angostura Reach Segments

1. Just upstream of the City of Albuquerque Southside Water Reclamation Plant (SWRP) outfall to near Alameda Bridge: approximately RM 178 to RM 192

Isleta Reach Segments

1. Near Peralta Wasteway: approximately RM 151 to RM 160
2. Downstream of Sabinal Drain near Abeytas Heading: approximately RM 132 to RM 136

San Acacia Reach Segments

1. Otero Street in Socorro to below Fort Craig: approximately RM 63 to RM 99
2. Additional segments below Fort Craig near RM 60 and RM 55 that dried during 2018 and 2020; these locations were spot checked regularly but only the location near RM 55 (just upstream of the LFCC terminus) became intermittent during the 2022 monitoring season.

Where access was permitted, the entirety of each reach was checked at least once during the monitoring season to verify that no atypical drying occurred. Crews mapped access and spot-checked beyond historic hotspots more regularly during 2022 because drying was predicted to be more expansive this year. During portions of June and July, areas within the Sevilleta National Wildlife Refuge, between Highways 346 (Bosque, NM) and 60 (Bernardo, NM), within the upstream segments of the San Acacia Reach, and into the Elephant Butte Delta were spot checked nearly weekly.

Dried extent, pools, flow measurements, and general field observations were logged within a custom-designed field application. All observations were spatially correlated to a latitude and longitude plus the nearest 0.01 RM using the 2012 Reclamation centerline. Customized, GPS-enabled smart phone applications also:

- Provided field personnel an intuitive and automated means to plot their location to the nearest 0.01 RM in real-time
- Validated the RM location with underlying latitude and longitude coordinates during post-processing

- Streamlined collection of drying, remnant pool, flow measurement, and other field observations and encouraged consistent observations across personnel and over time
- Improved field data collection and data management efficiency
- Automated multi-user data compilation, backup, and secure storage on the cloud
- Facilitated the transfer of large files (e.g., photos) to an intentionally targeted pool of staff
- Shared observations between individual field crews and office staff, even in real-time
- Streamlined daily report development
- Batched export data into widely used formats such as .xls, .pdf, .shp, and .kml
- Geo-tagged all field photos and videos
- Ensured crew observations could immediately be conveyed by GeoSystems project and data managers to agency staff

When field conditions allowed, crews accessed the riverbed with ATVs, since this has historically been the most efficient method of travel to locate the dried extent quickly and confidently. Reconnaissance was performed on foot when mud, debris, deep holes, or other circumstances blocked access. Unmanned aerial vehicles (UAVs or "drones") were also frequently used to validate observations and monitor flow conditions in difficult to access areas. The specific UAV models used on this project were DJI Mini 2, DJI Mini 3, DJI Phantom 4 Pro V2, DJI Mavic Air, and DJI Mavic 2 Pro. Typically, when a dried extent was detected using a drone, the geo-tagged photo was imported into Avenza Maps to enable real time placement of the photo to the nearest 0.01 RM. Numerous flight planning applications including DJI Fly, DJI GO4, Pix4D capture, and Drone Deploy were used to navigate the drone and acquire photos.

Figure 2. Sample RiverEyes field maps from the 2022 monitoring season. When accessed via the Avenza Maps app, current field location is clearly marked with a large blue dot and the interface allows for panning and zooming.

Discharge Measurements

One key aspect of RiverEyes monitoring involves rapid and accurate measurements of flow. Depending on the measurement objective and timing, the field crew quantified streamflow (in cfs) using one of three methods with differing accuracy:

1) Metered discharge measurements, measured with a SONTEK FlowTracker 2 flow meter or similar. This method was used as requested by Reclamation or when MRGCD or USGS-reported gauge discharge appeared to be grossly inconsistent with field observations.
2) Ball and tape discharge measurements, per EPA 1997. With this method, field crews used a measuring tape, depth rod, small floating ball (e.g., golf ball), and stopwatch to rapidly measure the width of wetted flow, average depth, and velocity of a floating object to quantify discharge, though with less accuracy (but much quicker) than using a flow meter.
3) Trained visual estimates, recorded as a visual estimate of discharge after field personnel were well calibrated following repeated discharge measurements with either a flow meter or the ball and tape method. With this method, the custom field app required an observer to enter their minimum and maximum flow estimate, thus the value was reported as an average and the range indicates the observer's confidence.

Daily Reports

Email and text summaries were regularly circulated between the RiverEyes team, Reclamation, and USFWS when low flow conditions warranted. The RiverEyes team also reported current

conditions during water operations conference calls. Daily email summary reports (submitted electronically with this report) focused on:

- the extent of drying as number of RMs and distance to major landmarks
- the RM change of drying or rewetting since the previous report
- location accessibility
- current river conditions
- visual flow estimates in "hot spots" or other locations that might be useful for predicting flow trends or intermittency risk
- observations of disconnected lateral pools
- representative field photos
- summarizing reported flows at USGS gauges over the past 24 hours
- 24-hour precipitation in the Rio Grande watershed (per Reclamation's ET Toolbox; Reclamation 2020), because it may affect channel drying

Trail Cameras

Cellular enabled Cuddeback trail cameras were used to remotely monitor flows at San Acacia Diversion Dam (SADD) and the Rio Salado. Cameras automatically recorded photos at 30-minute intervals during daylight hours and emailed the photos to accounts accessible by field crews.

Safety

GeoSystems authored a project-specific Health and Safety Plan (see Appendix B). Field personnel certified that they reviewed the document and complied with it. GeoSystems' COVID-19 Safety Manual was also provided to field staff. All staff who operated ATVs received formal safety instruction and were accompanied by other staff until they could confidently and safely operate the ATV and practice all safety protocols. Motor vehicle and ATV inspections were conducted at the start of each day. Field personnel communicated between themselves regularly and checked in via phone call or text message after daily monitoring responsibilities were finished. All safety guidelines were followed, no injuries occurred on the project, and none of the field staff contracted COVID-19 during fieldwork.

Drones were only flown by FAA Part 107 Certified pilots holding appropriate liability insurance, and within authorized areas. FAA pre-flight authorizations were obtained prior to flying within restricted airspace (e.g., the Rio Grande corridor in Albuquerque's South Valley).

RESULTS

Dried Extent

Channel drying occurred in the San Acacia, Isleta, and Angostura reaches during the 2022 monitoring season. Drying began in the San Acacia Reach on June 5 and the Reach reconnected on September 24. The Isleta Reach initially dried on June 16 and the last day of drying in the Reach was September 26. The Angostura Reach initially dried on July 22 and reconnected on July 26. Based on provisional USGS data, mean daily discharge at the San Acacia gauge was 72 cfs when drying began in the San Acacia Reach. Mean daily discharge at the Bosque Farms

gauge was 59.3 cfs on the first day with drying in the Isleta Reach. Mean daily discharge reported by the USGS Albuquerque gauge was 11.5 cfs when channel drying began in the Angostura Reach and the mean daily discharge at Rio Grande Near Alameda, NM (USGS 08329928) on that day was 56.1 cfs. The total number of days with flow intermittency in the San Acacia, Isleta, and Angostura reaches was 42, 31, and 5, respectively (Table 3, Table 4, and Table 5). A description of each of the segments affected by drying is shown in the list below. Longitudinal limits of drying (to the nearest 0.5 RM) and mean daily discharge reported at the various USGS gauges in the Isleta and San Acacia reaches is included as Appendix A, while more precise (reported to the nearest 0.01) RM dried extent is shown for each day in Appendix E. The RM location of landmarks frequently mentioned in this report and daily summary reports is included as Appendix D. Drone photos of many of the commonly referred-to landmarks are shown in Appendix C.

Angostura Reach Segment

1) Above the SWRP: A total of 10.7 unique RMs were affected from RM 177.7 (drying began at this point on July 22) to RM 188.5 (drying extended this far upstream on July 26). This segment was dry for 5 days over the course of one drying event.

Isleta Reach Segments

1) Near Peralta Wasteway: A total of 12.34 unique RMs were affected from RM 151.26 (drying first extended to this point on July 26) to RM 163.6 (intermittency extended upstream to this point on July 27). Occasionally, this section divided into two dry sub-segments via irrigation return flow out of the Los Chavez Wasteway; however, rewetting from Los Chavez never extended more than about a half mile. This segment was dry for 31 days in five drying events (i.e., it dried and then reconnected five times).
2) Downstream of Sabinal Drain near Abeytas Heading: A total of 1.96 unique RMs were affected from RM 132.47 (drying first extended downstream to this point on July 25) to RM 134.43 (drying extended upstream to this point on July 27). The segment only experienced one drying event spanning a total of three days.

San Acacia Reach Segments

1) Socorro to below Fort Craig: A total of 34.99 RMs were affected from RM 63.7 (drying first extended downstream to this point on June 18) to RM 98.69 (drying extended upstream to this point on July 26). This segment was dry for 42 days in five drying events.
2) Above Low Flow Conveyance Channel Outlet: A total of 1.1 RMs dried from RM 54.49 (drying extended downstream to this point on July 26) to RM 55.59 (drying extended upstream to this point on July 26). This segment was dry for two days in one drying event.

In the Angostura Reach, channel drying affected the Rio Grande through Albuquerque for 5 days and maximum dry length was 10.74 RMs on July 26. In the Isleta Reach, the longest drying event was 15 consecutive days (Peralta Wasteway segment, July 17 to July 31). The maximum

dry length in the Isleta Reach occurred on July 25 (13.95 RMs), spread across two segments. The longest consecutive drying event in the San Acacia Reach lasted 17 days (June 5 to June 21). Drying reached its maximum length in the San Acacia Reach on July 26 when the total dry length was 35.61 RMs spanning two affected areas. As shown in Table 1, the river-wide maximum single-day dried extent occurred on July 26 (60.0 RMs). On that day, drying affected 5 segments of the MRG (one in the Angostura Reach, two in the Isleta Reach, two in the San Acacia Reach). To slow river recession from June 2 to June 5, MRGCD pumped a total of 230 acre-feet to the Rio Grande from the LFCC with an average flow rate of 20 cfs through the Socorro Hub facility near RM 90.2 (Marken 2022).

Table 3. Summary of RiverEyes channel drying observations in the San Acacia Reach during 2022. Mean length only considers days when drying occurred.

San Acacia Reach			
Month	**Total Number of Intermittent Days**	**Maximum Length (RMs)**	**Mean Length (RMs)**
June	17	34.3	28.2
July	14	35.6	20.3
August	0	0.0	0.0
September	11	20.7	15.0
	42	**35.6**	**22.1**

Table 4. Summary of RiverEyes channel drying observations in the Isleta Reach during 2022. Mean length only considers days when drying occurred.

Isleta Reach			
Month	**Total Number of Intermittent Days**	**Maximum Length (RMs)**	**Mean Length (RMs)**
June	4	3.3	2.4
July	15	14.0	10.1
August	0	0.0	0.0
September	12	5.4	3.6
	31	**14.0**	**6.6**

Table 5. Summary of RiverEyes channel drying observations in the Angostura Reach during 2022. Mean length only considers days when drying occurred.

Angostura Reach			
Month	**Total Number of Intermittent Days**	**Maximum Length (RMs)**	**Mean Length (RMs)**
July	5	10.7	4.9
	5	**10.7**	**4.9**

When channel drying expanded into new segments, remnant pools often formed in the thalweg, scour holes, and/or other depressional features. After a more prolonged period (typically after a few days to a week), remnant pools dried, creating an entirely dry riverbed. The presence, size, and location of remnant pools were sometimes (though inconsistently) recorded and often communicated to the managing agencies via daily emails; however, RM locations where remnant pools entirely dried were not systematically differentiated from segments where remnant pools persisted during fieldwork.

Raw data (provided electronically with this report in various formats) include crew observations related to the distribution and size of remnant pools as well as visual estimates of flow in various locations. Note that these data are not intended to represent a complete log of remnant pools during the season.

DISCUSSION

The Rio Grande watershed had below average snowpack during the winter 2021-2022 (Reclamation 2022) and, through June, much of the Rio Grande watershed was under severe, extreme, or exceptional drought conditions (National Drought Mitigation Center 2022). Drying occurred within the City of Albuquerque for the first time in about 40 years and the channel dried in the San Acacia and Isleta reaches by early to mid-June, when spring snowmelt runoff has peaked in the past. RiverEyes crews prepared to monitor channel drying throughout Albuquerque into Corrales and Sandia Pueblo, as well as atypical segments of the Isleta and San Acacia reaches. Crews ran reconnaissance and mapped additional access points in segments of the Isleta and San Acacia reaches that have maintained connected flow over the past two decades. Because of above-average monsoonal rainfall, flows in these sections remained continuous.

June rainfall, as measured at Albuquerque Airport, was 1.81 inches above the mean over the past two decades (Table 6). Flows reconnected throughout the MRG during the June storms and then separated again by mid-July. While July rainfall was below average, intense rainfall during late July produced storm pulses throughout the MRG which reconnected flows throughout the entire system, reconnecting the Angostura Reach. Due to above-average rainfall, flows remained continuous through August, which is atypical for years like 2022 with below average snowpack and limited storage in upstream reservoirs. The San Acacia and Isleta reaches redried in September but reconnected by late September and remained continuous through October.

Table 6. Monthly precipitation (in.) at the Albuquerque Airport during 2022 compared to the monthly average for the period between 2000 and 2022 (NOAA, 2022).

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct
2022	0.03	0.27	0.55	T	T	2.38	1.01	2.48	0.23	1.58
Mean	0.32	0.43	0.39	0.52	0.33	0.57	1.7	1.08	1.08	0.89
Diff	-0.29	-0.16	0.16	-0.52	-0.33	1.81	-0.69	1.4	-0.85	0.69

REFERENCES

Marken, A. 2022. Personal communication, Middle Rio Grande Conservancy District Water Operations Division Manager.

McKenna, C. 2018. 2018 RiverEyes Monitoring Report. Report developed by GeoSystems Analysis under sub-contract with AJAC Enterprises. Parties contracted by U.S. Bureau of Reclamation Albuquerque Area Office, Albuquerque, New Mexico. 14 pages.

National Drought Mitigation Center. 2022. Drought Monitor for New Mexico accessed online at: https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?NM

U.S. Bureau of Reclamation (Reclamation). 2022. 2022 Annual Operating Plan. Albuquerque Area Office, Albuquerque, New Mexico. Reviewed as a PowerPoint presentation.

Smith, J.R. 1999. Summary of Rio Grande Investigations for FY1997. Draft. U.S. Fish and Wildlife Service Report Submitted to the U.S. Bureau of Reclamation, Albuquerque, New Mexico.

SS Papadopulos and Associates, Inc. (SSPA). 2004. ESRI geodatabase containing RiverEyes project observations between 2002 and 2004.

SWCA Environmental Consultants (SWCA). 2015. RiverEyes Observations in the Middle Rio Grande for the 2015 Irrigation Season.

U.S. Environmental Protection Agency (EPA). 1997. Volunteer Stream Monitoring: A Methods Manual. EPA document EPA 841-B-97-003.

U.S. Fish and Wildlife Service (USFWS). 1994. Endangered and threatened wildlife and plants; Final rule to list the Rio Grande Silvery Minnow as an endangered species. Federal Register 59:36,988–37,001.

USA Today. 2022. The Rio Grande went dry in Albuquerque for first time in 40 years. A key fish habitat went with it. Published August 3, 2022. Accessible online: https://www.usatoday.com/story/news/nation/2022/08/03/rio-grande-river-dry-albuquerque-new-mexico/10224672002/

USFWS. 2003. Biological and conference opinions on the effects of actions associated with the Programmatic Biological Assessment of Bureau of Reclamation's Water and River Maintenance Operations, Army Corps of Engineers Flood Control Operation, and Related Non-Federal Actions on the Middle Rio Grande, New Mexico. Consultation No. 2-22-03-F-0129. New Mexico Ecological Services Field Office, Albuquerque, New Mexico.

USFWS. 2016. Final Biological and Conference Opinion for Bureau of Reclamation, Bureau of Indian Affairs, and Non-Federal Water Management and Maintenance Activities on the Middle Rio Grande. Consultation Number 02ENNM00-2013-F-0033. New Mexico Ecological Services Field Office, Albuquerque, New Mexico.

Appendix A. Longitudinal Limits of Drying and Mean Daily Discharge as Reported by USGS for Various Gages in the Angostura, Isleta, and San Acacia Reaches (discharge data Provisional)

June

Landmark	RM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Angostura Diversion 210.10	210.0																														
	209.5																														
	209.0																														
Jemez River Confluence 208.6	208.5																														
	208.0																														
	207.5																														
	207.0																														
	206.5																														
	206.0																														
	205.5																														
	205.0																														
	204.5																														
Hwy 550 Bridge 203.8	204.0																														
	203.5																														
	203.0																														
	202.5																														
	202.0																														
	201.5																														
	201.0																														
	200.5																														
Rio Rancho North Beach 199.9	200.0																														
	199.5																														
	199.0																														
Harvey Jones Canal 198.3	198.5																														
Romero Road 198.0	198.0																														
	197.5																														
	197.0																														
	196.5																														
	196.0																														
Sandia Lakes Wasteway 195.7	195.5																														
	195.0																														
North Diversion Channel 194.2	194.5																														
S Boundary Sandia Pueblo 193.9	194.0																														
	193.5																														
	193.0																														
Cabezon Channel 192.7	192.5																														
USGSS @ Alameda Bridge (CFS)		389[P]	411[P]	417[P]	401[P]	387[P]	397[P]	389[P]	377[P]	383[P]	390[P]	394[P]	394[P]	430[P]	385[P]	402[P]	391[P]	268[P]	238[P]	316[P]	234[P]	189[P]	268[P]	205[P]	168[P]	177[P]	256[P]	886[P]	904[P]	571[P]	580[P]
Alameda Bridge 192.1	192.0																														
ABQ Drinking Water Diversion 191.8	191.5																														
Calabacillas Arroyo 191.2	191.0																														
Paseo del Norte Bridge 190.9	190.5																														
USGSS @ Paseo del Norte (CFS)		364[P]	359[P]	354[P]	328[P]	302[P]	303[P]	292[P]	274[P]	265[P]	258[P]	249[P]	245[P]	244[P]	225[P]	208[P]	210[P]	219[P]	206[P]	297[P]	229[P]	195[P]	302[P]	237[P]	196[P]	214[P]	336[P]	742[P]	771[P]	492[P]	487[P]
Corrales Main Canal Wasteway 188.9	190.0																														
	189.5																														
	189.0																														
	188.5																														
Montaño Bridge 187.9	188.0																														
	187.5																														
San Antonio Arroyo 187.0	187.0																														
	186.5																														
Campbell Rd Entrance 186.2	186.0																														
	185.5																														
Interstate 40 Crossing 185.0	185.0																														
	184.5																														
Central Wasteway 184.1	184.0																														
Central Ave Bridge 183.4	183.5																														
USGSS @ Albuquerque (CFS)		306[P]	304[P]	292[P]	251[P]	237[P]	250[P]	247[P]	231[P]	226[P]	232[P]	226[P]	223[P]	214[P]	210[P]	181[P]	175[P]	201[P]	223[P]	271[P]	205[P]	171[P]	313[P]	212[P]	182[P]	164[P]	305[P]	712[P]	866[P]	430[P]	403[P]
Tingley Beach 183.0	183.0																														
	182.5																														
	182.0																														
Cesar Chavez Bridge 181.6	181.5																														
	181.0																														
	180.5																														
	180.0																														
	179.5																														
	179.0																														
Río Bravo Bridge 178.4	178.5																														
	178.0																														
ABQ WWTP Outfall 177.7	177.5																														
South Diversion Channel 177.1	177.0																														
SW Valley Channel 176.4	176.5																														
	176.0																														
	175.5																														
	175.0																														
Brown Burn 174.7	174.5																														
Valle de Oro 174.1	174.0																														
	173.5																														
	173.0																														
Interstate 25 Crossing 172.6	172.5																														
USGSS @ Isleta Lakes (CFS)		306[P]	304[P]	292[P]	251[P]	237[P]	250[P]	247[P]	231[P]	226[P]	232[P]	226[P]	223[P]	214[P]	210[P]	181[P]	175[P]	201[P]	223[P]	271[P]	205[P]	171[P]	313[P]	212[P]	182[P]	164[P]	305[P]	712[P]	866[P]	430[P]	403[P]
Isleta Pueblo N Boundary 172.4	172.0																														
	171.5																														
	171.0																														
	170.5																														
	170.0																														
	169.5																														

June

Landmark	RM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Isleta Diversion 169.4	169.0																														
	168.5																														
	168.0																														
	167.5																														
	167.0																														
Alejandro Drain 166.6	166.5																														
	166.0																														
	165.5																														
240 Wasteway 165.2	165.0																														
Cottonwood Rd 164.5	164.5																														
USGSS @ Bosque Farms (CFS)		203[P]	203[P]	202[P]	191[P]	177[P]	173[P]	160[P]	151[P]	139[P e]	108[P e]	95.7[P]	94.2[P]	85.1[P]	69.2[P]	61.3[P]	59.3[P]	59.8[P]	99.8[P]	196[P]	235[P]	131[P]	205[P]	294[P]	181[P]	172[P]	262[P]	624[P]	969[P]	553[P]	414[P]
	164.0																														
	163.5																														
	163.0																														
	162.5																														
	162.0																														
	161.5																														
Los Lunas (HWY 6) 161.4	161.0																														
	160.5																														
	160.0																														
	159.5																														
	159.0																														
	158.5																														
El Cerro Tome / Los Lunas Airport	158.0																														
	157.5																														
Los Lunas River Widening	157.0																														
Los Chavez Wasteway 156.7	156.5																														
	156.0																														
	155.5																														
	155.0																														
	154.5																														
	154.0																														
	153.5																														
	153.0																														
Peralta Wasteway 152.5	152.5																														
	152.0																														
	151.5																														
	151.0																														
	150.5																														
LP1DR (Allsups) 149.6	150.0																														
Belen Br (NM 6 Hwy 309) 149.5	149.5																														
	149.0																														
	148.5																														
	148.0																														
AT&SF RR 147.7	147.5																														
New Belen Wasteway 147.2	147.0																														
	146.5																														
	146.0																														
	145.5																														
	145.0																														
LP2DR 144.6	144.5																														
	144.0																														
Aerial Gas Line 143.7	143.5																														
	143.0																														
Feeder 3 Wasteway 142.7	142.5																														
	142.0																														
	141.5																														
	141.0																														
Jarales Rd Br 140.8	140.5																														
USGSS @ HWY 346 (CFS)		121[P]	111[P]	108[P]	98.5[P]	87.0[P]	78.2[P]	73.7[P]	65.7[P]	64.1[P]	57.5[P]	45.9[P]	37.5[P]	32.7[P]	28.3[P]	22.8[P]	17.5[P]	17.2[P]	16.5[P]	26.4[P]	91.0[P]	105[P]	126[P]	203[P]	193[P]	169[P]	157[P]	271[P]	693[P]	773[P]	376[P]
Storrie Wasteway 140.1	140.0																														
	139.5																														
Abo Arroyo 139.3	139.0																														
	138.5																														
	138.0																														
Sabinal Drain Outfall 137.9	137.5																														
	137.0																														
	136.5																														
	136.0																														
	135.5																														
	135.0																														
	134.5																														
	134.0																														
	133.5																														
Abeytas Heading 134.4	133.0																														
	132.5																														
	132.0																														
	131.5																														
	131.0																														
Bernardo (U.S. 60 Br) 130.6	130.5																														
USGSS @ Bernardo (CFS)		115[P]	95.1[P]	93.6[P]	88.2[P]	78.4[P]	69.2[P]	65.7[P]	59.3[P]	57.1[P]	55.1[P]	42.3[P]	30.4[P]	22.3[P]	17.7[P]	11.7[P]	7.44[P]	4.18[P]	5.77[P]	5.07[P]	41.8[P]	108[P]	104[P]	159[P]	219[P]	166[P]	167[P]	229[P]	601[P]	800[P]	430[P]
	130.0																														
	129.5																														
	129.0																														
	128.5																														
	128.0																														
	127.5																														
Lower San Juan Drain 127.2	127.0																														
Rio Puerco 126.6	126.5																														
	126.0																														
	125.5																														
	125.0																														
	124.5																														
La Joya 124	124.0																														
	123.5																														
	123.0																														
	122.5																														
Lower San Juan Drain 2 122.1	122.0																														
Sevilleta North Boundary 121.7	121.5																														
	121.0																														
	120.5																														
	120.0																														
	119.5																														
	119.0																														
Rio Salado 118.9	118.5																														
	118.0																														
	117.5																														
	117.0																														
	116.5																														

June

Landmark	RM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
San Acacia Diversion Dam 116.2	116.0																														
USGS @ San Acacia (CFS)		168[P]	142[P]	128[P e]	106[P e]	72.0[P e]	56.6[P e]	57.1[P]	46.1[P]	33.6[P]	31.0[P]	31.2[P]	31.5[P]	30.9[P]	31.7[P]	31.3[P]	29.6[P]	28.9[P]	36.6[P]	114[P]	189[P]	78.5[P]	361[P]	1,380[P]	697[P]	377[P]	1,110[P]	1,080[P]	695[P]	843[P]	18.8[A]
	115.5																														
	115.0																														
One Mile Stop 114.8	114.5																														
	114.0																														
	113.5																														
	113.0																														
	112.5																														
	112.0																														
	111.5																														
	111.0																														
	110.5																														
	110.0																														
	109.5																														
	109.0																														
	108.5																														
	108.0																														
	107.5																														
	107.0																														
Lemitar Diversion 106.7	106.5																														
	106.0																														
	105.5																														
	105.0																														
9 Mile Outfall 104.5	104.5																														
USGS @ Escondida (CFS)		136[P]	122[P e]	105[P]	86.4[P]	69.2[P]	58.1[P e]	56.4[P e]	52.9[P e]	42.2[P e]	35.1[P]	30.6[P]	30.0[P]	26.8[P]	24.5[P]	23.3[P]	21.5[P]	17.6[P]	19.1[P]	67.9[P]	104[P]	48.3[P]	142[P]	1,460[P]	518[P]	233[P]	567[P]	891[P]	547[P]	654[P]	728[P]
Escondida Br 104.1	104.0																														
	103.5																														
	103.0																														
N. Socorro Div. Channel 102.5	102.5																														
	102.0																														
	101.5																														
Escondida Drain Outfall 101.0	101.0																														
	100.5																														
	100.0																														
	99.5																														
Otero Street 99.0	99.0																														
	98.5																														
	98.0																														
	97.5																														
	97.0																														
	96.5																														
	96.0																														
	95.5																														
	95.0																														
	94.5																														
Brown Arroyo 94.0	94.0																														
	93.5																														
	93.0																														
	92.5																														
	92.0																														
	91.5																														
	91.0																														
	90.5																														
Neil Cupp 90.2	90.0																														
	89.5																														
	89.0																														
	88.5																														
	88.0																														
	87.5																														
USGS @ Highway 380 (CFS)		108[P]	100[P]	80.8[P]	63.5[P]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	50.5[P]	70.1[P]	677[P e]	607[P e]	394[P e]	916[P e]	756[P e]	626[P]	702[P]	771[P]
San Antonio (U.S. 380) 87.1	87.0																														
	86.5																														
	86.0																														
	85.5																														
	85.0																														
	84.5																														
BDA North Boundary 84.1	84.0																														
	83.5																														
	83.0																														
	82.5																														
	82.0																														
	81.5																														
Realignment Channel Inlet 81.4	81.0																														
	80.5																														
	80.0																														
	79.5																														
Realignment Channel Outlet 79.4	79.0																														
BDA HQ 78.7	78.5																														
	78.0																														
Former Mid BDA Pump Site 77.6	77.5																														
	77.0																														
	76.5																														
	76.0																														
	75.5																														
	75.0																														
	74.5																														
	74.0																														
South BDA Boundary Pumps 73.8	73.5																														
	73.0																														
	72.5																														
	72.0																														
	71.5																														
	71.0																														
	70.5																														
	70.0																														
	69.5																														
	69.0																														
San Marcial RR Bridge 68.6	68.5																														
USGS @ San Marcial (CFS)		24.2[P e]	13.7[P]	9.37[P]	1.69[P]	0.07[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	15.7[P]	21.0[P]	457[P]	381[P]	265[P]	333[P]	441[P]	440[P]	376[P]	503[P]
	68.0																														
	67.5																														
	67.0																														
	66.5																														
	66.0																														
	65.5																														
	65.0																														
Ft Craig 64.5	64.5																														
	64.0																														
	63.5																														
	63.0																														
	62.5																														
	62.0																														
	61.5																														
	61.0																														
	60.5																														
S Curve 60	60.0																														
	59.5																														
White Gate 59.2	59.0																														
	58.5																														
	58.0																														
	57.5																														
	57.0																														
	56.5																														
	56.0																														
	55.5																														
	55.0																														
	54.5																														
	54.0																														
	53.5																														

July

Landmark	RM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Angostura Diversion 210.10	210.0																															
	209.5																															
	209.0																															
Jemez River Confluence 208.6	208.5																															
	208.0																															
	207.5																															
	207.0																															
	206.5																															
	206.0																															
	205.5																															
	205.0																															
	204.5																															
Hwy 550 Bridge 203.8	204.0																															
	203.5																															
	203.0																															
	202.5																															
	202.0																															
	201.5																															
	201.0																															
	200.5																															
Rio Rancho North Beach 199.9	200.0																															
	199.5																															
	199.0																															
Harvey Jones Canal 198.3	198.5																															
Romero Road 198.0	198.0																															
	197.5																															
	197.0																															
	196.5																															
	196.0																															
Sandia Lakes Wasteway 195.7	195.5																															
	195.0																															
North Diversion Channel 194.2	194.5																															
S Boundary Sandia Pueblo 193.9	194.0																															
	193.5																															
	193.0																															
Cabezon Channel 192.7	192.5																															
USGSS @ Alameda Bridge (CFS)		533[P]	541[P]	684[P]	584[P]	564[P]	521[P]	470[P]	451[P]	351[P]	316[P]	288[P]	205[P]	189[P]	200[P]	192[P]	191[P]	156[P]	127[P]	99.1[P]	67.8[P]	56.0[P]	53.9[P]	46.2[P]	42.9[P]	33.2[P]	176[P]	222[P]	285[P]	482[P]	798[P]	876[P]
Alameda Bridge 192.1	192.0																															
ABQ Drinking Water Diversion 191.8	191.5																															
Calabacillas Arroyo 191.2	191.0																															
Paseo del Norte Bridge 190.9	190.5																															
USGSS @ Paseo del Norte (CFS)		463[P]	486[P]	627[P]	580[P]	576[P]	545[P]	513[P]	505[P]	388[P]	347[P]	316[P]	219[P]	190[P]	212[P]	213[P]	222[P]	199[P]	175[P]	135[P]	97.8[P]	62.3[P]	56.1[P]	33.6[P]	34.7[P]	18.6[P]	161[P]	195[P]	237[P]	441[P]	727[P]	843[P]
Corrales Main Canal Wasteway 188.9	190.0																															
	189.5																															
	189.0																															
	188.5																															
Montaño Bridge 187.9	188.0																															
	187.5																															
San Antonio Arroyo 187.0	187.0																															
	186.5																															
Campbell Rd Entrance 186.2	186.0																															
	185.5																															
Interstate 40 Crossing 185.0	185.0																															
	184.5																															
Central Wasteway 184.1	184.0																															
Central Ave Bridge 183.4	183.5																															
USGSS @ Albuquerque (CFS)		377[P]	377[P]	554[P]	525[P]	514[P]	469[P]	445[P]	430[P]	339[P]	278[P]	248[P]	197[P]	141[P]	147[P]	151[P]	160[P]	139[P]	120[P]	95.1[P]	54.8[P]	24.7[P]	11.5[P]	---	---	---	---	87.3[P]	86.8[P]	174[P]	535[P]	619[P]
Tingley Beach 183.0	183.0																															
	182.5																															
	182.0																															
Cesar Chavez Bridge 181.6	181.5																															
	181.0																															
	180.5																															
	180.0																															
	179.5																															
	179.0																															
Río Bravo Bridge 178.4	178.5																															
	178.0																															
ABQ WWTP Outfall 177.7	177.5																															
South Diversion Channel 177.1	177.0																															
SW Valley Channel 176.4	176.5																															
	176.0																															
	175.5																															
	175.0																															
Brown Burn 174.7	174.5																															
Valle de Oro 174.1	174.0																															
	173.5																															
	173.0																															
Interstate 25 Crossing 172.6	172.5																															
USGSS @ Isleta Lakes (CFS)		377[P]	377[P]	554[P]	525[P]	514[P]	469[P]	445[P]	430[P]	339[P]	278[P]	248[P]	197[P]	141[P]	147[P]	151[P]	160[P]	139[P]	120[P]	95.1[P]	54.8[P]	24.7[P]	11.5[P]	---	---	---	---	87.3[P]	86.8[P]	174[P]	535[P]	619[P]
Isleta Pueblo N Boundary 172.4	172.0																															
	171.5																															
	171.0																															
	170.5																															
	170.0																															
	169.5																															

July

Landmark	RM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Isleta Diversion 169.4	169.0																															
	168.5																															
	168.0																															
	167.5																															
	167.0																															
Alejandro Drain 166.6	166.5																															
	166.0																															
	165.5																															
240 Wasteway 165.2	165.0																															
Cottonwood Rd 164.5	164.5																															
USGSS @ Bosque Farms (CFS)		362[P]	353[P]	386[P]	469[P]	363[P]	325[P]	267[P]	230[P]	204[P]	127[P]	207[P]	228[P]	89.0[P]	45.4[P]	33.4[P]	25.5[P]	19.0[P]	14.5[P e]	12.2[P e]	11.5[P e]	11.6[P e]	10.3[P e]	9.61[P e]	9.57[P e]	9.50[P e]	9.39[P]	9.29[P]	8.66[P]	11.1[P]	62.9[P]	255[P]
	164.0																															
	163.5																															
	163.0																															
	162.5																															
	162.0																															
	161.5																															
Los Lunas (HWY 6) 161.4	161.0																															
	160.5																															
	160.0																															
	159.5																															
	159.0																															
	158.5																															
El Cerro Tome / Los Lunas Airport	158.0																															
	157.5																															
Los Lunas River Widening	157.0																															
Los Chavez Wasteway 156.7	156.5																															
	156.0																															
	155.5																															
	155.0																															
	154.5																															
	154.0																															
	153.5																															
	153.0																															
Peralta Wasteway 152.5	152.5																															
	152.0																															
	151.5																															
	151.0																															
	150.5																															
LP1DR (Allsups) 149.6	150.0																															
Belen Br (NM 6 Hwy 309) 149.5	149.5																															
	149.0																															
	148.5																															
	148.0																															
AT&SF RR 147.7	147.5																															
New Belen Wasteway 147.2	147.0																															
	146.5																															
	146.0																															
	145.5																															
	145.0																															
LP2DR 144.6	144.5																															
	144.0																															
Aerial Gas Line 143.7	143.5																															
	143.0																															
Feeder 3 Wasteway 142.7	142.5																															
	142.0																															
	141.5																															
	141.0																															
Jarales Rd Br 140.8	140.5																															
USGSS @ HWY 346 (CFS)		302[P]	285[P]	272[P]	363[P]	339[P]	286[P e]	242[P]	192[P e]	160[P]	140[P]	89.7[P]	156[P]	130[P]	58.2[P]	38.9[P]	29.3[P]	24.5[P]	20.8[P]	17.5[P]	16.3[P]	14.6[P]	13.9[P]	12.2[P]	11.0[P]	10.2[P]	9.97[P]	9.12[P]	10.2[P]	13.0[P]	12.2[P]	13.7[P]
Storrie Wasteway 140.1	140.0																															
	139.5																															
Abo Arroyo 139.3	139.0																															
	138.5																															
	138.0																															
Sabinal Drain Outfall 137.9	137.5																															
	137.0																															
	136.5																															
	136.0																															
	135.5																															
	135.0																															
	134.5																															
	134.0																															
	133.5																															
Abeytas Heading 134.4	133.0																															
	132.5																															
	132.0																															
	131.5																															
	131.0																															
Bernardo (U.S. 60 Br) 130.6	130.5																															
USGSS @ Bernardo (CFS)		309[P]	276[P]	264[P]	313[P]	388[P]	289[P]	259[P]	195[P]	161[P]	145[P]	98.6[P]	112[P]	163[P]	69.0[P]	38.1[P]	23.5[P]	17.8[P]	13.7[P]	10.3[P]	6.28[P]	5.15[P]	3.89[P]	3.87[P]	4.12[P]	4.04[P]	4.74[P]	4.65[P]	7.11[P]	10.9[P]	9.06[P]	41.3[P]
	130.0																															
	129.5																															
	129.0																															
	128.5																															
	128.0																															
	127.5																															
Lower San Juan Drain 127.2	127.0																															
Rio Puerco 126.6	126.5																															
	126.0																															
	125.5																															
	125.0																															
	124.5																															
La Joya 124	124.0																															
	123.5																															
	123.0																															
	122.5																															
Lower San Juan Drain 2 122.1	122.0																															
Sevilleta North Boundary 121.7	121.5																															
	121.0																															
	120.5																															
	120.0																															
	119.5																															
	119.0																															
Rio Salado 118.9	118.5																															
	118.0																															
	117.5																															
	117.0																															
	116.5																															

July

Landmark	RM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
San Acacia Diversion Dam 116.2	116.0																															
USGS @ San Acacia (CFS)		1,140[P]	591[P]	580[P]	797[P]	988[P]	---	---	299[P]	218[P]	179[P]	107[P]	37.3[P]	110[P]	61.5[P]	54.0[P]	131[P]	35.2[P]	25.9[P]	24.9[P]	20.8[P]	20.8[P]	19.6[P]	16.9[P]	14.1[P]	11.8[P]	91.4[P]	11.3[P]	94.5[P]	196[P]	457[P]	511[P]
	115.5																															
	115.0																															
One Mile Stop 114.8	114.5																															
	114.0																															
	113.5																															
	113.0																															
	112.5																															
	112.0																															
	111.5																															
	111.0																															
	110.5																															
	110.0																															
	109.5																															
	109.0																															
	108.5																															
	108.0																															
	107.5																															
	107.0																															
Lemitar Diversion 106.7	106.5																															
	106.0																															
	105.5																															
	105.0																															
9 Mile Outfall 104.5	104.5																															
USGS @ Escondida (CFS)		1,080[P]	723[P]	398[P]	473[P]	596[P]	459[P]	405[P]	287[P]	198[P]	173[P]	128[P e]	35.7[P e]	67.2[P e]	81.3[P e]	40.5[P e]	75.0[P e]	55.0[P e]	28.7[P e]	27.4[P e]	20.5[P e]	19.4[P e]	17.4[P e]	16.5[P e]	13.0[P e]	9.83[P e]	51.0[P e]	75.8[P]	53.1[P]	131[P]	329[P]	349[P]
Escondida Br 104.1	104.0																															
	103.5																															
	103.0																															
N. Socorro Div. Channel 102.5	102.5																															
	102.0																															
	101.5																															
Escondida Drain Outfall 101.0	101.0																															
	100.5																															
	100.0																															
	99.5																															
Otero Street 99.0	99.0																															
	98.5																															
	98.0																															
	97.5																															
	97.0																															
	96.5																															
	96.0																															
	95.5																															
	95.0																															
	94.5																															
Brown Arroyo 94.0	94.0																															
	93.5																															
	93.0																															
	92.5																															
	92.0																															
	91.5																															
	91.0																															
	90.5																															
Neil Cupp 90.2	90.0																															
	89.5																															
	89.0																															
	88.5																															
	88.0																															
	87.5																															
USGS @ Highway 380 (CFS)		875[P]	809[P]	332[P]	743[P]	672[P]	494[P]	378[P]	271[P]	210[P]	150[P]	97.3[P]	56.9[P]	---	---	---	---	59.3[P]	13.7[P]	11.5[P]	7.01[P]	---	---	---	---	---	---	---	27.4[P]	177[P]	369[P]	439[P]
San Antonio (U.S. 380) 87.1	87.0																															
	86.5																															
	86.0																															
	85.5																															
	85.0																															
	84.5																															
BDA North Boundary 84.1	84.0																															
	83.5																															
	83.0																															
	82.5																															
	82.0																															
	81.5																															
Realignment Channel Inlet 81.4	81.0																															
	80.5																															
	80.0																															
	79.5																															
Realignment Channel Outlet 79.4	79.0																															
BDA HQ 78.7	78.5																															
	78.0																															
Former Mid BDA Pump Site 77.6	77.5																															
	77.0																															
	76.5																															
	76.0																															
	75.5																															
	75.0																															
	74.5																															
	74.0																															
South BDA Boundary Pumps 73.8	73.5																															
	73.0																															
	72.5																															
	72.0																															
	71.5																															
	71.0																															
	70.5																															
	70.0																															
	69.5																															
	69.0																															
San Marcial RR Bridge 68.6	68.5																															
USGS @ San Marcial (CFS)		568[P]	645[P]	314[P]	474[P]	445[P]	281[P]	---	262[P]	171[P]	137[P]	---	53.0[P]	15.2[P]	0.49[P]	14.6[P e]	69.7[P e]	24.2[P e]	11.2[P e]	3.79[P e]	0.24[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	30.5[P]	156[P]	307[P]	527[P]
	68.0																															
	67.5																															
	67.0																															
	66.5																															
	66.0																															
	65.5																															
	65.0																															
Ft Craig 64.5	64.5																															
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	62.0																															
	61.5																															
	61.0																															
	60.5																															
S Curve 60	60.0																															
	59.5																															
White Gate 59.2	59.0																															
	58.5																															
	58.0																															
	57.5																															
	57.0																															
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	54.5																															
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	53.5																															

August

Landmark	RM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Angostura Diversion 210.10	210.0																															
	209.5																															
	209.0																															
Jemez River Confluence 208.6	208.5																															
	208.0																															
	207.5																															
	207.0																															
	206.5																															
	206.0																															
	205.5																															
	205.0																															
	204.5																															
Hwy 550 Bridge 203.8	204.0																															
	203.5																															
	203.0																															
	202.5																															
	202.0																															
	201.5																															
	201.0																															
	200.5																															
Rio Rancho North Beach 199.9	200.0																															
	199.5																															
	199.0																															
Harvey Jones Canal 198.3	198.5																															
Romero Road 198.0	198.0																															
	197.5																															
	197.0																															
	196.5																															
	196.0																															
Sandia Lakes Wasteway 195.7	195.5																															
	195.0																															
North Diversion Channel 194.2	194.5																															
S Boundary Sandia Pueblo 193.9	194.0																															
	193.5																															
	193.0																															
Cabezon Channel 192.7	192.5																															
USGSS @ Alameda Bridge (CFS)		894[P]	1,040[P]	1,200[P]	1,260[P]	1,360[P]	1,080[P]	1,540[P]	1,080[P]	1,170[P]	1,210[P]	1,110[P]	1,050[P]	927[P]	770[P]	662[P]	529[P]	412[P]	425[P]	522[P]	623[P]	636[P]	1,030[P]	1,060[P]	1,020[P]	1,020[P]	879[P]	717[P]	699[P]	675[P]	671[P]	649[P]
Alameda Bridge 192.1	192.0																															
ABQ Drinking Water Diversion 191.8	191.5																															
Calabacillas Arroyo 191.2	191.0																															
Paseo del Norte Bridge 190.9	190.5																															
USGSS @ Paseo del Norte (CFS)		946[P]	1,110[P]	1,350[P]	1,460[P]	1,490[P]	1,260[P]	1,580[P]	1,260[P]	1,270[P]	1,270[P]	1,210[P]	1,200[P]	1,080[P]	895[P]	775[P]	630[P]	467[P]	459[P]	566[P]	700[P]	719[P]	1,090[P]	1,130[P]	1,090[P]	1,110[P]	973[P]	820[P]	793[P]	778[P]	765[P]	741[P]
Corrales Main Canal Wasteway 188.9	190.0																															
	189.5																															
	189.0																															
	188.5																															
Montaño Bridge 187.9	188.0																															
	187.5																															
San Antonio Arroyo 187.0	187.0																															
	186.5																															
Campbell Rd Entrance 186.2	186.0																															
	185.5																															
Interstate 40 Crossing 185.0	185.0																															
	184.5																															
Central Wasteway 184.1	184.0																															
Central Ave Bridge 183.4	183.5																															
USGSS @ Albuquerque (CFS)		731[P]	834[P]	1,070[P]	1,190[P]	1,310[P]	1,040[P]	1,330[P]	1,020[P]	969[P]	1,080[P]	948[P]	899[P]	801[P]	637[P]	515[P]	399[P]	258[P]	233[P]	298[P]	462[P]	521[P]	883[P]	1,150[P]	1,070[P]	1,180[P]	1,010[P]	854[P]	772[P]	748[P]	733[P]	721[P]
Tingley Beach 183.0	183.0																															
	182.5																															
	182.0																															
Cesar Chavez Bridge 181.6	181.5																															
	181.0																															
	180.5																															
	180.0																															
	179.5																															
	179.0																															
Río Bravo Bridge 178.4	178.5																															
	178.0																															
ABQ WWTP Outfall 177.7	177.5																															
South Diversion Channel 177.1	177.0																															
SW Valley Channel 176.4	176.5																															
	176.0																															
	175.5																															
	175.0																															
Brown Burn 174.7	174.5																															
Valle de Oro 174.1	174.0																															
	173.5																															
	173.0																															
Interstate 25 Crossing 172.6	172.5																															
USGSS @ Isleta Lakes (CFS)		731[P]	834[P]	1,070[P]	1,190[P]	1,310[P]	1,040[P]	1,330[P]	1,020[P]	969[P]	1,080[P]	948[P]	899[P]	801[P]	637[P]	515[P]	399[P]	258[P]	233[P]	298[P]	462[P]	521[P]	883[P]	1,150[P]	1,070[P]	1,180[P]	1,010[P]	854[P]	772[P]	748[P]	733[P]	721[P]
Isleta Pueblo N Boundary 172.4	172.0																															
	171.5																															
	171.0																															
	170.5																															
	170.0																															
	169.5																															

August

Landmark	RM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Isleta Diversion 169.4	169.0																															
	168.5																															
	168.0																															
	167.5																															
	167.0																															
Alejandro Drain 166.6	166.5																															
	166.0																															
	165.5																															
240 Wasteway 165.2	165.0																															
Cottonwood Rd 164.5	164.5																															
USGSS @ Bosque Farms (CFS)		324[P]	481[P]	786[P]	1,130[P]	1,250[P]	1,140[P]	1,030[P]	1,050[P]	735[P]	917[P]	696[P]	655[P]	635[P]	530[P e]	445[P e]	351[P e]	228[P]	119[P]	148[P]	282[P]	355[P]	488[P]	776[P]	769[P]	800[P]	740[P]	659[P]	529[P]	478[P]	411[P]	417[P]
	164.0																															
	163.5																															
	163.0																															
	162.5																															
	162.0																															
	161.5																															
Los Lunas (HWY 6) 161.4	161.0																															
	160.5																															
	160.0																															
	159.5																															
	159.0																															
	158.5																															
El Cerro Tome / Los Lunas Airport	158.0																															
	157.5																															
Los Lunas River Widening	157.0																															
Los Chavez Wasteway 156.7	156.5																															
	156.0																															
	155.5																															
	155.0																															
	154.5																															
	154.0																															
	153.5																															
	153.0																															
Peralta Wasteway 152.5	152.5																															
	152.0																															
	151.5																															
	151.0																															
	150.5																															
LP1DR (Allsups) 149.6	150.0																															
Belen Br (NM 6 Hwy 309) 149.5	149.5																															
	149.0																															
	148.5																															
	148.0																															
AT&SF RR 147.7	147.5																															
New Belen Wasteway 147.2	147.0																															
	146.5																															
	146.0																															
	145.5																															
	145.0																															
LP2DR 144.6	144.5																															
	144.0																															
Aerial Gas Line 143.7	143.5																															
	143.0																															
Feeder 3 Wasteway 142.7	142.5																															
	142.0																															
	141.5																															
	141.0																															
Jarales Rd Br 140.8	140.5																															
USGSS @ HWY 346 (CFS)		111[P]	186[P]	297[P]	548[P]	762[P]	930[P]	761[P]	1,040[P]	776[P]	806[P]	863[P]	701[P]	669[P]	611[P]	466[P]	384[P]	286[P]	183[P]	155[P]	247[P]	420[P]	446[P]	706[P]	935[P]	873[P]	958[P]	834[P]	679[P]	564[P]	494[P]	442[P]
Storrie Wasteway 140.1	140.0																															
	139.5																															
Abo Arroyo 139.3	139.0																															
	138.5																															
	138.0																															
Sabinal Drain Outfall 137.9	137.5																															
	137.0																															
	136.5																															
	136.0																															
	135.5																															
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	134.0																															
	133.5																															
Abeytas Heading 134.4	133.0																															
	132.5																															
	132.0																															
	131.5																															
	131.0																															
Bernardo (U.S. 60 Br) 130.6	130.5																															
USGSS @ Bernardo (CFS)		67.7[P]	157[P]	250[P]	446[P]	686[P]	823[P]	786[P]	878[P]	762[P]	684[P]	828[P]	650[P]	609[P]	572[P]	452[P]	367[P]	304[P]	199[P]	116[P]	208[P]	331[P]	410[P]	---	794[P]	799[P]	861[P]	778[P]	656[P]	512[P e]	476[P e]	420[P e]
	130.0																															
	129.5																															
	129.0																															
	128.5																															
	128.0																															
	127.5																															
Lower San Juan Drain 127.2	127.0																															
Rio Puerco 126.6	126.5																															
	126.0																															
	125.5																															
	125.0																															
	124.5																															
La Joya 124	124.0																															
	123.5																															
	123.0																															
	122.5																															
Lower San Juan Drain 2 122.1	122.0																															
Sevilleta North Boundary 121.7	121.5																															
	121.0																															
	120.5																															
	120.0																															
	119.5																															
	119.0																															
Rio Salado 118.9	118.5																															
	118.0																															
	117.5																															
	117.0																															
	116.5																															

August

Landmark	RM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
San Acacia Diversion Dam 116.2	116.0																															
USGS @ San Acacia (CFS)		282[P]	297[P]	427[P]	575[P]	506[P]	790[P]	965[P]	1,210[P]	---	847[P]	1,070[P]	781[P]	746[P]	778[P]	781[P]	555[P]	430[P]	320[P]	349[P]	834[P]	641[P]	572[P]	882[P]	1,140[P]	---	---	1,290[P]	1,040[P]	1,120[P]	975[P]	750[P]
	115.5																															
	115.0																															
One Mile Stop 114.8	114.5																															
	114.0																															
	113.5																															
	113.0																															
	112.5																															
	112.0																															
	111.5																															
	111.0																															
	110.5																															
	110.0																															
	109.5																															
	109.0																															
	108.5																															
	108.0																															
	107.5																															
	107.0																															
Lemitar Diversion 106.7	106.5																															
	106.0																															
	105.5																															
	105.0																															
9 Mile Outfall 104.5	104.5																															
USGS @ Escondida (CFS)		211[P]	238[P]	316[P]	396[P]	414[P]	534[P]	624[P]	791[P]	814[P]	774[P]	1,030[P]	694[P]	784[P]	857[P]	925[P]	624[P]	474[P]	342[P]	280[P]	611[P]	570[P]	519[P]	590[P]	855[P]	1,000[P]	970[P]	1,050[P]	894[P]	870[P]	817[P]	618[P]
Escondida Br 104.1	104.0																															
	103.5																															
	103.0																															
N. Socorro Div. Channel 102.5	102.5																															
	102.0																															
	101.5																															
Escondida Drain Outfall 101.0	101.0																															
	100.5																															
	100.0																															
	99.5																															
Otero Street 99.0	99.0																															
	98.5																															
	98.0																															
	97.5																															
	97.0																															
	96.5																															
	96.0																															
	95.5																															
	95.0																															
	94.5																															
Brown Arroyo 94.0	94.0																															
	93.5																															
	93.0																															
	92.5																															
	92.0																															
	91.5																															
	91.0																															
	90.5																															
Neil Cupp 90.2	90.0																															
	89.5																															
	89.0																															
	88.5																															
	88.0																															
	87.5																															
USGS @ Highway 380 (CFS)		253[P]	267[P]	278[P]	494[P]	491[P]	612[P]	819[P]	899[P]	834[P]	651[P]	922[P]	696[P]	609[P]	605[P]	696[P]	490[P]	351[P]	241[P]	164[P]	576[P]	519[P]	400[P]	393[P]	638[P]	740[P]	739[P]	778[P]	732[P e]	653[P e]	644[P e]	488[P]
San Antonio (U.S. 380) 87.1	87.0																															
	86.5																															
	86.0																															
	85.5																															
	85.0																															
	84.5																															
BDA North Boundary 84.1	84.0																															
	83.5																															
	83.0																															
	82.5																															
	82.0																															
	81.5																															
Realignment Channel Inlet 81.4	81.0																															
	80.5																															
	80.0																															
	79.5																															
Realignment Channel Outlet 79.4	79.0																															
BDA HQ 78.7	78.5																															
	78.0																															
Former Mid BDA Pump Site 77.6	77.5																															
	77.0																															
	76.5																															
	76.0																															
	75.5																															
	75.0																															
	74.5																															
	74.0																															
South BDA Boundary Pumps 73.8	73.5																															
	73.0																															
	72.5																															
	72.0																															
	71.5																															
	71.0																															
	70.5																															
	70.0																															
	69.5																															
	69.0																															
San Marcial RR Bridge 68.6	68.5																															
USGS @ San Marcial (CFS)		351[P]	363[P]	344[P]	458[P e]	585[P e]	717[P e]	954[P]	954[P]	806[P e]	695[P]	905[P e]	665[P e]	603[P e]	678[P]	793[P e]	674[P e]	567[P e]	406[P e]	284[P]	457[P]	410[P]	348[P]	380[P]	504[P]	541[P]	752[P]	764[P]	774[P e]	573[P e]	571[P e]	512[P e]
	68.0																															
	67.5																															
	67.0																															
	66.5																															
	66.0																															
	65.5																															
	65.0																															
Ft Craig 64.5	64.5																															
	64.0																															
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	63.0																															
	62.5																															
	62.0																															
	61.5																															
	61.0																															
	60.5																															
S Curve 60	60.0																															
	59.5																															
White Gate 59.2	59.0																															
	58.5																															
	58.0																															
	57.5																															
	57.0																															
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	54.5																															
	54.0																															
	53.5																															

September

Landmark	RM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Angostura Diversion 210.10	210.0																														
	209.5																														
	209.0																														
Jemez River Confluence 208.6	208.5																														
	208.0																														
	207.5																														
	207.0																														
	206.5																														
	206.0																														
	205.5																														
	205.0																														
	204.5																														
Hwy 550 Bridge 203.8	204.0																														
	203.5																														
	203.0																														
	202.5																														
	202.0																														
	201.5																														
	201.0																														
	200.5																														
Rio Rancho North Beach 199.9	200.0																														
	199.5																														
	199.0																														
Harvey Jones Canal 198.3	198.5																														
Romero Road 198.0	198.0																														
	197.5																														
	197.0																														
	196.5																														
	196.0																														
Sandia Lakes Wasteway 195.7	195.5																														
	195.0																														
North Diversion Channel 194.2	194.5																														
S Boundary Sandia Pueblo 193.9	194.0																														
	193.5																														
	193.0																														
Cabezon Channel 192.7	192.5																														
USGSS @ Alameda Bridge (CFS)		702[P]	582[P]	490[P]	432[P]	415[P]	392[P]	311[P]	283[P]	280[P]	285[P]	301[P]	308[P]	275[P]	311[P]	285[P]	283[P]	267[P]	258[P]	236[P]	210[P]	197[P]	200[P]	219[P]	294[P]	300[P]	458[P]	561[P]	479[P]	450[P]	367[P]
Alameda Bridge 192.1	192.0																														
ABQ Drinking Water Diversion 191.8	191.5																														
Calabacillas Arroyo 191.2	191.0																														
Paseo del Norte Bridge 190.9	190.5																														
USGSS @ Paseo del Norte (CFS)		783[P]	655[P]	513[P]	453[P]	437[P]	406[P]	291[P]	245[P]	234[P]	246[P]	261[P]	275[P]	245[P]	295[P]	271[P]	265[P]	233[P]	219[P]	186[P]	151[P]	134[P]	135[P]	159[P]	256[P]	265[P]	416[P]	530[P]	482[P]	444[P]	327[P]
Corrales Main Canal Wasteway 188.9	190.0																														
	189.5																														
	189.0																														
	188.5																														
Montaño Bridge 187.9	188.0																														
	187.5																														
San Antonio Arroyo 187.0	187.0																														
	186.5																														
Campbell Rd Entrance 186.2	186.0																														
	185.5																														
Interstate 40 Crossing 185.0	185.0																														
	184.5																														
Central Wasteway 184.1	184.0																														
Central Ave Bridge 183.4	183.5																														
USGSS @ Albuquerque (CFS)		771[P]	616[P]	500[P]	396[P]	348[P]	329[P]	230[P]	156[P]	127[P]	131[P]	156[P]	154[P]	192[P]	185[P]	192[P]	171[P]	141[P]	131[P]	115[P]	84.6[P]	63.2[P]	62.1[P]	78.5[P]	142[P]	183[P]	311[P]	417[P]	519[P]	399[P]	302[P]
Tingley Beach 183.0	183.0																														
	182.5																														
	182.0																														
Cesar Chavez Bridge 181.6	181.5																														
	181.0																														
	180.5																														
	180.0																														
	179.5																														
	179.0																														
Río Bravo Bridge 178.4	178.5																														
	178.0																														
ABQ WWTP Outfall 177.7	177.5																														
South Diversion Channel 177.1	177.0																														
SW Valley Channel 176.4	176.5																														
	176.0																														
	175.5																														
	175.0																														
Brown Burn 174.7	174.5																														
Valle de Oro 174.1	174.0																														
	173.5																														
	173.0																														
Interstate 25 Crossing 172.6	172.5																														
USGSS @ Isleta Lakes (CFS)		771[P]	616[P]	500[P]	396[P]	348[P]	329[P]	230[P]	156[P]	127[P]	131[P]	156[P]	154[P]	192[P]	185[P]	192[P]	171[P]	141[P]	131[P]	115[P]	84.6[P]	63.2[P]	62.1[P]	78.5[P]	142[P]	183[P]	311[P]	417[P]	519[P]	399[P]	302[P]
Isleta Pueblo N Boundary 172.4	172.0																														
	171.5																														
	171.0																														
	170.5																														
	170.0																														
	169.5																														

September

Landmark	RM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Isleta Diversion 169.4	169.0																														
	168.5																														
	168.0																														
	167.5																														
	167.0																														
Alejandro Drain 166.6	166.5																														
	166.0																														
	165.5																														
240 Wasteway 165.2	165.0																														
Cottonwood Rd 164.5	164.5																														
USGSS @ Bosque Farms (CFS)		369[P]	392[P]	265[P]	201[P]	124[P]	125[P]	106[P]	94.0[P]	83.4[P]	68.1[P]	55.1[P e]	51.1[P e]	66.1[P e]	60.5[P e]	78.0[P]	55.5[P e]	53.8[P e]	52.6[P e]	39.0[P e]	33.7[P]	34.4[P]	35.3[P]	39.5[P]	48.1[P]	94.4[P]	104[P]	188[P]	266[P]	253[P]	270[P e]
	164.0																														
	163.5																														
	163.0																														
	162.5																														
	162.0																														
	161.5																														
Los Lunas (HWY 6) 161.4	161.0																														
	160.5																														
	160.0																														
	159.5																														
	159.0																														
	158.5																														
El Cerro Tome / Los Lunas Airport	158.0																														
	157.5																														
Los Lunas River Widening	157.0																														
Los Chavez Wasteway 156.7	156.5																														
	156.0																														
	155.5																														
	155.0																														
	154.5																														
	154.0																														
	153.5																														
	153.0																														
Peralta Wasteway 152.5	152.5																														
	152.0																														
	151.5																														
	151.0																														
	150.5																														
LP1DR (Allsups) 149.6	150.0																														
Belen Br (NM 6 Hwy 309) 149.5	149.5																														
	149.0																														
	148.5																														
	148.0																														
AT&SF RR 147.7	147.5																														
New Belen Wasteway 147.2	147.0																														
	146.5																														
	146.0																														
	145.5																														
	145.0																														
LP2DR 144.6	144.5																														
	144.0																														
Aerial Gas Line 143.7	143.5																														
	143.0																														
Feeder 3 Wasteway 142.7	142.5																														
	142.0																														
	141.5																														
	141.0																														
Jarales Rd Br 140.8	140.5																														
USGSS @ HWY 346 (CFS)		420[P]	431[P]	334[P]	263[P]	184[P]	125[P]	104[P]	80.6[P]	62.5[P]	51.4[P]	41.7[P]	34.3[P]	31.1[P]	33.0[P]	56.3[P]	47.5[P]	33.0[P]	33.0[P]	32.9[P]	29.1[P]	26.3[P]	26.6[P]	26.3[P]	58.7[P]	30.1[P]	25.6[P]	51.6[P]	119[P]	176[P]	190[P]
Storrie Wasteway 140.1	140.0																														
	139.5																														
Abo Arroyo 139.3	139.0																														
	138.5																														
	138.0																														
Sabinal Drain Outfall 137.9	137.5																														
	137.0																														
	136.5																														
	136.0																														
	135.5																														
	135.0																														
	134.5																														
	134.0																														
	133.5																														
Abeytas Heading 134.4	133.0																														
	132.5																														
	132.0																														
	131.5																														
	131.0																														
Bernardo (U.S. 60 Br) 130.6	130.5																														
USGSS @ Bernardo (CFS)		417[P e]	428[P e]	356[P e]	264[P e]	195[P e]	116[P e]	99.3[P e]	87.3[P e]	70.3[P e]	56.4[P e]	45.0[P e]	37.1[P e]	38.0[P e]	33.5[P e]	57.4[P e]	49.6[P e]	47.5[P e]	41.6[P e]	36.8[P e]	34.7[P e]	25.9[P e]	19.4[P e]	12.9[P]	49.2[P]	22.2[P]	15.9[P]	18.3[P]	83.2[P]	153[P]	167[P]
	130.0																														
	129.5																														
	129.0																														
	128.5																														
	128.0																														
	127.5																														
Lower San Juan Drain 127.2	127.0																														
Rio Puerco 126.6	126.5																														
	126.0																														
	125.5																														
	125.0																														
	124.5																														
La Joya 124	124.0																														
	123.5																														
	123.0																														
	122.5																														
Lower San Juan Drain 2 122.1	122.0																														
Sevilleta North Boundary 121.7	121.5																														
	121.0																														
	120.5																														
	120.0																														
	119.5																														
	119.0																														
Rio Salado 118.9	118.5																														
	118.0																														
	117.5																														
	117.0																														
	116.5																														

September

Landmark	RM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
San Acacia Diversion Dam 116.2	116.0																														
USGS @ San Acacia (CFS)		651[P]	597[P]	653[P]	368[P]	255[P]	162[P]	138[P]	117[P]	89.6[P]	58.5[P]	37.8[P]	137[P]	16.4[P]	15.5[P]	15.9[P]	19.3[P]	48.3[P]	15.6[P]	17.6[P]	17.6[P]	39.1[P]	14.0[P]	104[P]	421[P]	208[P]	344[P]	---	1,140[P]	199[P]	175[P]
	115.5																														
	115.0																														
One Mile Stop 114.8	114.5																														
	114.0																														
	113.5																														
	113.0																														
	112.5																														
	112.0																														
	111.5																														
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	110.0																														
	109.5																														
	109.0																														
	108.5																														
	108.0																														
	107.5																														
	107.0																														
Lemitar Diversion 106.7	106.5																														
	106.0																														
	105.5																														
	105.0																														
9 Mile Outfall 104.5	104.5																														
USGS @ Escondida (CFS)		560[P]	470[P]	512[P]	369[P]	246[P]	180[P]	151[P]	132[P]	110[P]	83.6[P]	59.3[P]	105[P]	44.7[P]	29.2[P]	25.4[P]	23.9[P]	42.6[P]	25.2[P]	21.0[P]	21.1[P]	35.1[P]	18.8[P]	28.5[P]	305[P]	205[P]	273[P]	575[P]	809[P]	230[P]	184[P]
Escondida Br 104.1	104.0																														
	103.5																														
	103.0																														
N. Socorro Div. Channel 102.5	102.5																														
	102.0																														
	101.5																														
Escondida Drain Outfall 101.0	101.0																														
	100.5																														
	100.0																														
	99.5																														
Otero Street 99.0	99.0																														
	98.5																														
	98.0																														
	97.5																														
	97.0																														
	96.5																														
	96.0																														
	95.5																														
	95.0																														
	94.5																														
Brown Arroyo 94.0	94.0																														
	93.5																														
	93.0																														
	92.5																														
	92.0																														
	91.5																														
	91.0																														
	90.5																														
Neil Cupp 90.2	90.0																														
	89.5																														
	89.0																														
	88.5																														
	88.0																														
	87.5																														
USGS @ Highway 380 (CFS)		406[P]	341[P e]	268[P e]	362[P e]	210[P e]	122[P e]	71.1[P]	61.1[P]	47.9[P]	28.1[P]	7.86[P e]	4.67[P e]	49.9[P]	11.5[P]	9.82[P e]	3.14[P e]	0.46[P e]	13.6[P e]	4.15[P e]	1.18[P e]	4.65[P e]	14.0[P e]	6.57[P e]	238[P]	148[P]	218[P]	550[P]	802[P]	243[P e]	153[P e]
San Antonio (U.S. 380) 87.1	87.0																														
	86.5																														
	86.0																														
	85.5																														
	85.0																														
	84.5																														
BDA North Boundary 84.1	84.0																														
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Realignment Channel Inlet 81.4	81.0																														
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Realignment Channel Outlet 79.4	79.0																														
BDA HQ 78.7	78.5																														
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Former Mid BDA Pump Site 77.6	77.5																														
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South BDA Boundary Pumps 73.8	73.5																														
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San Marcial RR Bridge 68.6	68.5																														
USGS @ San Marcial (CFS)		373[P e]	323[P e]	278[P]	355[P]	236[P]	153[P]	85.1[P]	47.0[P]	37.3[P]	24.8[P]	9.12[P]	1.04[P]	0.65[P]	21.3[P]	9.01[P]	2.10[P]	0.17[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	0.00[P]	153[P]	179[P]	195[P]	353[P e]	714[P e]	284[P e]	162[P e]
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Angostura Diversion 210.10	210.0																															
	209.5																															
	209.0																															
Jemez River Confluence 208.6	208.5																															
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Hwy 550 Bridge 203.8	204.0																															
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Rio Rancho North Beach 199.9	200.0																															
	199.5																															
	199.0																															
Harvey Jones Canal 198.3	198.5																															
Romero Road 198.0	198.0																															
	197.5																															
	197.0																															
	196.5																															
	196.0																															
Sandia Lakes Wasteway 195.7	195.5																															
	195.0																															
North Diversion Channel 194.2	194.5																															
S Boundary Sandia Pueblo 193.9	194.0																															
	193.5																															
	193.0																															
Cabezon Channel 192.7	192.5																															
USGSS @ Alameda Bridge (CFS)		302[P]	241[P]	175[P]	318[P]	327[P]	340[P]	483[P]	529[P]	527[P]	559[P]	518[P]	526[P]	539[P]	542[P]	460[P]	555[P]	590[P]	558[P]	451[P]	433[P]	432[P]	433[P]	441[P]	436[P]	429[P]	432[P]	436[P]	472[P]	491[P]	491[P]	527[P]
Alameda Bridge 192.1	192.0																															
ABQ Drinking Water Diversion 191.8	191.5																															
Calabacillas Arroyo 191.2	191.0																															
Paseo del Norte Bridge 190.9	190.5																															
USGSS @ Paseo del Norte (CFS)		269[P]	278[P]	246[P]	389[P]	402[P]	451[P]	623[P]	682[P]	662[P]	676[P]	606[P]	589[P]	563[P]	563[P]	481[P]	585[P]	639[P]	578[P]	441[P]	410[P]	391[P]	387[P]	391[P]	379[P]	365[P]	365[P]	358[P]	384[P]	398[P]	416[P]	436[P]
Corrales Main Canal Wasteway 188.9	190.0																															
	189.5																															
	189.0																															
	188.5																															
Montaño Bridge 187.9	188.0																															
	187.5																															
San Antonio Arroyo 187.0	187.0																															
	186.5																															
Campbell Rd Entrance 186.2	186.0																															
	185.5																															
Interstate 40 Crossing 185.0	185.0																															
	184.5																															
Central Wasteway 184.1	184.0																															
Central Ave Bridge 183.4	183.5																															
USGSS @ Albuquerque (CFS)		200[P]	191[P]	181[P]	344[P]	352[P]	457[P]	545[P]	691[P]	647[P]	647[P]	571[P]	571[P]	577[P]	565[P]	485[P]	574[P]	634[P]	547[P]	438[P]	386[P]	367[P]	357[P]	356[P]	353[P]	353[P]	355[P]	352[P]	388[P]	414[P]	422[P]	426[P]
Tingley Beach 183.0	183.0																															
	182.5																															
	182.0																															
Cesar Chavez Bridge 181.6	181.5																															
	181.0																															
	180.5																															
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	179.5																															
	179.0																															
Río Bravo Bridge 178.4	178.5																															
	178.0																															
ABQ WWTP Outfall 177.7	177.5																															
South Diversion Channel 177.1	177.0																															
SW Valley Channel 176.4	176.5																															
	176.0																															
	175.5																															
	175.0																															
Brown Burn 174.7	174.5																															
Valle de Oro 174.1	174.0																															
	173.5																															
	173.0																															
Interstate 25 Crossing 172.6	172.5																															
USGSS @ Isleta Lakes (CFS)		200[P]	191[P]	181[P]	344[P]	352[P]	457[P]	545[P]	691[P]	647[P]	647[P]	571[P]	571[P]	577[P]	565[P]	485[P]	574[P]	634[P]	547[P]	438[P]	386[P]	367[P]	357[P]	356[P]	353[P]	353[P]	355[P]	352[P]	388[P]	414[P]	422[P]	426[P]
Isleta Pueblo N Boundary 172.4	172.0																															
	171.5																															
	171.0																															
	170.5																															
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Isleta Diversion 169.4	169.0																															
	168.5																															
	168.0																															
	167.5																															
	167.0																															
Alejandro Drain 166.6	166.5																															
	166.0																															
	165.5																															
240 Wasteway 165.2	165.0																															
Cottonwood Rd 164.5	164.5																															
USGSS @ Bosque Farms (CFS)		192[P e]	174[P e]	162[P e]	200[P e]	243[P]	477[P]	449[P]	584[P]	582[P]	558[P]	560[P]	529[P]	540[P]	524[P]	487[P]	536[P]	625[P]	580[P]	502[P]	369[P]	338[P]	322[P]	317[P]	344[P]	329[P]	326[P]	331[P]	316[P]	328[P]	343[P]	327[P]
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	162.5																															
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Los Lunas (HWY 6) 161.4	161.0																															
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	160.0																															
	159.5																															
	159.0																															
	158.5																															
El Cerro Tome / Los Lunas Airport	158.0																															
	157.5																															
Los Lunas River Widening	157.0																															
Los Chavez Wasteway 156.7	156.5																															
	156.0																															
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	154.5																															
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Peralta Wasteway 152.5	152.5																															
	152.0																															
	151.5																															
	151.0																															
	150.5																															
LP1DR (Allsups) 149.6	150.0																															
Belen Br (NM 6 Hwy 309) 149.5	149.5																															
	149.0																															
	148.5																															
	148.0																															
AT&SF RR 147.7	147.5																															
New Belen Wasteway 147.2	147.0																															
	146.5																															
	146.0																															
	145.5																															
	145.0																															
LP2DR 144.6	144.5																															
	144.0																															
Aerial Gas Line 143.7	143.5																															
	143.0																															
Feeder 3 Wasteway 142.7	142.5																															
	142.0																															
	141.5																															
	141.0																															
Jarales Rd Br 140.8	140.5																															
USGSS @ HWY 346 (CFS)		149[P]	92.6[P]	105[P]	71.3[P]	181[P]	367[P]	503[P]	543[P]	701[P]	707[P]	652[P]	548[P]	549[P]	515[P]	488[P]	455[P]	585[P]	675[P]	554[P]	447[P]	372[P]	339[P]	323[P]	318[P]	318[P]	304[P]	296[P]	287[P]	298[P]	322[P]	365[P]
Storrie Wasteway 140.1	140.0																															
	139.5																															
Abo Arroyo 139.3	139.0																															
	138.5																															
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Sabinal Drain Outfall 137.9	137.5																															
	137.0																															
	136.5																															
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Abeytas Heading 134.4	133.0																															
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	132.0																															
	131.5																															
	131.0																															
Bernardo (U.S. 60 Br) 130.6	130.5																															
USGSS @ Bernardo (CFS)		164[P]	98.1[P]	97.9[P]	102[P]	141[P]	334[P]	466[P]	465[P]	623[P]	643[P]	595[P]	518[P]	494[P]	482[P]	451[P]	459[P]	565[P]	655[P]	577[P]	486[P]	374[P]	341[P]	327[P]	314[P]	326[P]	319[P]	304[P]	288[P]	270[P]	308[P]	340[P]
	130.0																															
	129.5																															
	129.0																															
	128.5																															
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Lower San Juan Drain 127.2	127.0																															
Rio Puerco 126.6	126.5																															
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La Joya 124	124.0																															
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Lower San Juan Drain 2 122.1	122.0																															
Sevilleta North Boundary 121.7	121.5																															
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Rio Salado 118.9	118.5																															
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October

Landmark	RM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
San Acacia Diversion Dam 116.2	116.0																															
USGS @ San Acacia (CFS)		160[P]	149[P]	134[P]	---	162[P]	513[P]	486[P]	594[P]	844[P]	698[P]	814[P]	860[P]	867[P]	855[P e]	803[P e]	784[P e]	824[P e]	923[P e]	897[P e]	801[P e]	696[P e]	552[P]	492[P e]	425[P e]	401[P e]	414[P]	422[P]	415[P e]	464[P]	480[P e]	470[P e]
	115.5																															
	115.0																															
One Mile Stop 114.8	114.5																															
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Lemitar Diversion 106.7	106.5																															
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	105.0																															
9 Mile Outfall 104.5	104.5																															
USGS @ Escondida (CFS)		165[P]	162[P]	150[P]	185[P]	151[P]	328[P]	438[P]	692[P]	669[P]	663[P]	748[P]	666[P]	628[P]	615[P]	577[P]	561[P]	582[P]	710[P]	716[P]	606[P]	526[P]	462[P]	429[P]	400[P]	386[P]	378[P]	368[P e]	344[P e]	357[P]	398[P]	433[P]
Escondida Br 104.1	104.0																															
	103.5																															
	103.0																															
N. Socorro Div. Channel 102.5	102.5																															
	102.0																															
	101.5																															
Escondida Drain Outfall 101.0	101.0																															
	100.5																															
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Otero Street 99.0	99.0																															
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Brown Arroyo 94.0	94.0																															
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Neil Cupp 90.2	90.0																															
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USGS @ Highway 380 (CFS)		118[P]	109[P]	91.4[P]	138[P]	175[P]	329[P]	700[P]	750[P]	864[P]	764[P]	770[P]	652[P]	685[P]	687[P]	604[P]	568[P]	587[P]	713[P]	733[P]	602[P]	542[P]	464[P]	414[P]	399[P]	376[P]	371[P]	372[P]	345[P]	342[P]	371[P]	410[P]
San Antonio (U.S. 380) 87.1	87.0																															
	86.5																															
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BDA North Boundary 84.1	84.0																															
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Realignment Channel Inlet 81.4	81.0																															
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Realignment Channel Outlet 79.4	79.0																															
BDA HQ 78.7	78.5																															
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Former Mid BDA Pump Site 77.6	77.5																															
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South BDA Boundary Pumps 73.8	73.5																															
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San Marcial RR Bridge 68.6	68.5																															
USGS @ San Marcial (CFS)		135[P e]	112[P e]	81.4[P e]	125[P e]	188[P e]	212[P e]	378[P]	718[P e]	822[P e]	416[P]	374[P]	352[P]	307[P]	355[P]	349[P]	349[P]	351[P]	417[P]	494[P]	435[P]	377[P]	310[P]	271[P]	263[P]	248[P]	242[P]	230[P]	221[P]	202[P]	208[P]	236[P]
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S Curve 60	60.0																															
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White Gate 59.2	59.0																															
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Appendix B. GeoSystems Job Specific Health and Safety Plan

GeoSystems Analysis, Inc.

PROJECT-SPECIFIC FIELD HEALTH AND SAFETY PLAN SIGNATURE PAGE

Project Information			
Project and Field Site Name	River Eyes Project		
Location	The project is located throughout the Rio Grande Corridor in Bernalillo, Valencia, and Socorro Counties, New Mexico		
Anticipated Start Date	4/15/2022	**Duration of Work**	To be determined, no later than 10/31

Name	**Email**	**Signature**	**Date**
Prepared by: I verify that I personally prepared this Field Health and Safety Plan, based on my review of the project and the associated hazards and health and safety requirements.			
Chad McKenna	chad@gsanalysis.com		**4/15/2022**

FIELD PERSONNEL ACKNOWLEDGEMENT SIGNATURE PAGE

I acknowledge that the safety concerns addressed in this Field Health and Safety Plan (HASP) have been communicated to me and that my questions regarding project safety have been answered to my satisfaction prior to the beginning of field work. I understand that failure to comply with the requirements outlined in this Field HASP may result in disciplinary action up to and including termination of employment.

Name	**Signature**	**Date**

SITE AND LOGISTICS INFORMATION

Project, Site, Communication, and Transportation/Travel	
Scope of Work and Activities Description	Conducting, regular, often daily, early morning field reconnaissance of Rio Grande flow conditions throughout the Middle Rio Grande (MRG) Valley in New Mexico. Fieldwork is conducted on foot and with all-terrain vehicles (ATVs) in sometimes remote portions of the state.
Site Information	Reconnaissance visits occur throughout the MRG, depending on flow conditions. Sites are potentially found on property owned and managed by federal and state agencies, Native American lands, private lands, and various municipalities. Only sites where access permission is authorized with a written permit should be entered. Land ownership is visible on electronic project maps within the Avenza Maps app. Most of the monitoring occurs within the Rio Grande's mainstem active channel where conditions are often muddy, contain varying volumes of flowing water, and adjacent floodplains commonly contain thick vegetation.
Communication Procedures	Check ins must occur daily. A GeoSystems group text thread will be used for regular communication amongst crew members. In addition, either the Project Manager (Chad McKenna), the Project Supervisor (Tyler Mobraten), or another pre-designated person will be always available via cell phone when staff are in the field. All crew members should notify the group thread after they have safely returned home or to the office. If staff feel unsafe for any reason, they should take steps to improve their immediate situation and then contact the Project Manager to discuss the situation and improve protocols to ensure sufficient safety measures are in place. If an incident occurs, reporting requirements are discussed on Page 6 of this HASP (Injury Reporting Requirements)
General Topics	Before entering the field, check upstream USGS stream flow monitoring gages. This is especially important during monsoon season. Under no conditions should staff enter the active channel during a flash flood or if they believe a flash flood is imminent. If field and/or gage conditions suggest there is a high risk of flash flooding, check upstream channel conditions from bridges or other readily accessible access points prior to entering the channel. Properly dispose of trash and remove litter as a courtesy. Stay hydrated. Wear appropriate clothing as weather conditions can change quickly. Ensure all required PPE and a first aid kit is accessible at all times. No fieldwork shall occur before sunrise, but vehicular travel to the site is permitted prior to daybreak. Be prepared to extinguish small fires, particularly if they are ignited by the ATV or our vehicle. Contact information, lock combinations, access permits, this HASP, and other information is contained within the River Eyes binder kept within each truck.
Field Transportation	4WD vehicle(s) with chocks, fire extinguisher, recovery boards, shovels, first aid kit, and other supplies to aid in self rescue/getting unstuck. Avoid having loose objects in vehicles. ATV's with winch, straps, helmet, and fire extinguisher. ATVs should not be driven on paved roads; they are only intended (and insured) to be used off road. Personnel can only operate ATVs after they are trained and certified. Helmets must be worn at all times when operating or riding on ATVs. GeoSystems vehicle inspection forms should be completed regularly. Additionally, inspect the ATV for mechanical or other physical damages prior to using each day. Any required service or maintenance should immediately be reported on the GeoSystems group text thread. The Project Supervisor will be maintaining ATVs on a regular maintenance schedule. A more detailed cleanup and inspection of equipment will be conducted at least once every two weeks to ensure the equipment is in safe and operable condition.

Project, Site, Communication, and Transportation/Travel	
Travel to Site	Crew will be mobilizing from Albuquerque, Socorro, and portions of Valencia County. Two 4WD vehicles will be dedicated to the River Eyes project along with two ATVs. Access behind locked gates will often be required. Gate keys will be stored inside vehicles. Also, lock combinations are available in the River Eyes binder within each vehicle.
Nearby Facilities	Emergency services are available in Albuquerque, Los Lunas, Belen, and Socorro. Use the field phone to locate the nearest medical office, if needed. Gas, food, water, etc. are available in multiple locations. Mechanics and tire shops are also available in Albuquerque, Los Lunas, Belen, and Socorro.
Cell Phone Coverage	Cellular signal is good overall, with occasional intermittency. Certain cell phone providers have more optimal coverage, for example, Verizon has coverage south of Bosque del Apache where other providers such as AT&T and Sprint do not. Typically a field cell phone will be provided to the crew in each reach.
Insurance	If an incident occurs that requires an insurance claim is filed, immediately contact GeoSystems Office Manager Bere Torres at (520) 465-4474 and the Project Manager (Chad McKenna). GeoSystems carries workman's compensation coverage, professional liability, automobile insurance that meets or exceeds industry standards and contract requirements. Insurance cards are also available within each vehicle.

JOB HAZARD ANALYSIS

Job Hazard Analysis – Consult with Project Manager and Safety Coordinator regarding appropriate training and documentation requirements based on hazards identified.	
COVID-19 Exposure Hazards	Per GeoSystems COVID-19 prevention measures, the following is implemented until safety restrictions are lifted by the Governor and the Reclamation Contracting Officer concurs: • Please inform the Project Manager of your vaccination status • If working in groups, face masks must be always worn • Social distance (6+ ft) should be maintained whenever possible • No more than 2 people may share a 4-door vehicle, with the passenger seated in the back seat on the righthand side • Frequent handwashing and disinfecting of shared touchpoints • Regular COVID testing for staff that will be sharing vehicles
Physical Demands	Manage fatigue, take breaks as needed. Sometimes prolonged ATV use. Hiking in slippery, uneven terrain sometimes through dense vegetation. Occasionally dramatic temperature swings from early morning to midday. High heat is possible. Procedures for mitigating hazards associated with terrain and weather are specified below.
Mental Demands	Early mornings and occasional long workdays may be mentally draining, reducing the ability for the field crew to maintain focus. The project involves rigorous field activities in remote locations, which requires focus and the ability to assess risk quickly and accurately. Sufficient staff are available to re-delegate monitoring days. Please contact the Project Manager if you are experiencing exhaustion, not able to focus, or have other concerns.

Job Hazard Analysis – Consult with Project Manager and Safety Coordinator regarding appropriate training and documentation requirements based on hazards identified.	
Work Tools	The standard work tools will be ATVs, measuring tapes, flow meter, floating ball, GPS enabled tablet or smartphone, electronic field maps, four-wheel drive vehicles, straps, loading ramps, and helmets. Proper strapping and securing of ATVs should always be employed in truck beds or trailers as instructed during the training day.
Expected Weather	High midday heat is possible, along with cold early morning conditions. For this project, the safe environment will be the field vehicle. A second hazard associated with the weather is flash flooding. This hazard will be mitigated by parking the vehicle on high ground above drainages. The active channel will not be entered, either in the ATV or on foot when there is flash flood risk. As stated above, always check gages and upstream river conditions prior to entering the channel. Do not enter the channel if intense precipitation is falling in the area and there is a high density of undammed arroyos in the reach.
Expected Terrain	Floodplain vegetation is dense. Expected hazards of this type of terrain consist primarily of steep slopes, loose rocks and other slip/trip hazards, especially along banks and levees, and overhanging branches. The slip/trip hazards will be mitigated by wearing appropriate footwear (ankle supporting boots with rough-terrain tread). Where appropriate., crew members may choose to employ a walking stick for assistance on steep slopes. The hazard of overhanging branches mainly involves small cuts and scrapes, but could be dangerous to the eyes.
Drinking Water Availability	☐ Plumbed water available ☐ Water cooler with ice ☒ Bottled water (please bring your own water in a refillable container to avoid creating plastic bottle waste) ☐ Natural source and treatment methods require specific discussion with Safety Coordinator (e.g., filtration, boiling, chemical disinfection)
Access to Shade/Shelter	☐ Building structures ☒ Trees ☐ Temporary Canopy/Tarp ☒ Vehicle with A/C
High Heat Procedures	☒ Direct supervision ☐ Buddy system ☒ Reliable cell or radio contact ☒ Other: Prior to fieldwork each day, check weather conditions and verify that appropriate clothing and plenty of water is available.
Security Hazards	Securely lock all vehicles and ensure that no valuables are in clear sight within the vehicle. On occasion, bonfire parties and open drug or alcohol use has been observed by River Eyes field staff. Avoid interactions with people engaging in illicit activities and report illegal actions to local authorities, as appropriate. In addition, if abandoned firearms, stolen vehicles, etc. are observed, please report to local authorities immediately. Any incidents reported to local authorities should also be reported to the Project Manager.

Job Hazard Analysis – Consult with Project Manager and Safety Coordinator regarding appropriate training and documentation requirements based on hazards identified.	
Deep Water	On rare occasions, deep water may be entered unexpectedly while travelling within the active channel either on foot or on ATV. If you fall into deep water, remain calm and swim facing downstream diagonally towards the shore. If the current is too strong, float on your back with your feet pointed downstream until you get to a calmer area where you can swim. Do not attempt to stand in deep, flowing water if you cannot see the ground surface, to avoid foot entrapment. If you do not know how to swim please notify the Project Manager prior to beginning work on this project.
Quicksand	At all costs, avoid entering quicksand areas with the ATVs or on foot. If you encounter quicksand or impassible muddy areas, notify the GeoSystems text message thread immediately. If you are stuck in quicksand with the ATV, use the winch to extract the ATV. A sand spike is also provided. If extraction isn't possible, call the Project Manager to arrange for backup.
Other Environmental Hazards	In the event of an active lightning storm, crew will return to the vehicle for safety and wait until the storm has cleared. We recommend waiting until the time between seeing lightning and hearing thunder is at least 30 seconds apart and the time interval between lightning and thunder is increasing. Vehicle will be parked in a high location, to avoid flash flood conditions. No drainages will be crossed in the event of a thunderstorm or if running water is present. Project team will monitor NWS weather alert systems and USGS flows, and ensure the field crew is aware of regional and local alerts by alerting the crew via cell phone. Slip/trip on steep slopes and loose rocks, muddy conditions, quicksand. Dress appropriately. No opened toed shoes are allowed. Quick dry, long sleeved shirts, and quick dry pants are recommended, along with a hat. Aggressive, venomous, or otherwise hazardous insects, snakes, and other wildlife may be present. Watch hand and foot placement. Crew will be equipped with snake gaiters. Avoid entering deep pools, quicksand, and excessively muddy areas whenever possible with the ATV. A winch is mounted to each ATV and safe operation will be covered in detail during the ATV operating training class. Field vehicles are also equipped with 4WD recovery tracks.
UAV (drone) Hazards	Unmanned Aerial Vehicles (UAV, or "drone") will only be operated by appropriately licensed personnel and in locations where Federal Aviation Administration (FAA) airspace authorizes UAV operation. If special FAA permissions are required due to airspace designations in certain areas, UAVs will only be operated after FAA permission is gained. Similarly, certain jurisdictions including Department of the Interior (DOI) property and private lands also require either pre-authorization from appropriate authorities prior to UAV operation or UAVs are not permitted at all. Do not fly a UAV within any location without Project Manager approval. Note: It is the responsibility of the pilot in command (PIC) to check airspace and Temporary Flight Restrictions prior to each flight.

Job Hazard Analysis – Consult with Project Manager and Safety Coordinator regarding appropriate training and documentation requirements based on hazards identified.	
Heavy Equipment Hazards	On occasion, heavy equipment is present on levee roads, within the mainstem channel, or along drains and ditches. Only approach heavy equipment on foot if you have proper PPE (hard hat and safety vest). If passing with a motor vehicle, ensure that the heavy equipment operator is aware of your presence, and initiate eye contact with the operator if possible. Follow their guidance and if they want you to pass, pass with caution.
Chemical Hazards	No chemicals will be used or encountered.
Excavation Hazards	No excavations will be conducted
Other Hazards	The hazards involved in this project are related to terrain and weather, and are described in detail (along with mitigation measures) above.
No-go Criteria	Flash flooding, weather conditions, or other security considerations may warrant "no-go" criteria. Please consult with the Project Manager or other designated personnel, if in question. Do not under any circumstances enter an area that feels unsafe or engage in any activity that unnecessarily threatens your wellbeing.
Injury Reporting Requirements	In the event of a serious injury, immediately dial 911 and if possible, notify the GeoSystems group thread and call the Project Manager or other designated safety officer. Maintain scene safety. Trained contractor personnel should render first aid to any incident victims as needed. Reclamation will also be notified about any injuries requiring medical care. If an incident requires immediate notification to government agencies, the area must be secured and nothing disturbed or removed after evacuation of the injured employee until approval from all Government Agencies, and GeoSystems representatives is received. OSHA must be notified within 8 hours of any such incident, as appropriate given the jurisdiction of the working location. In addition to serious injury or fatality, any medical incidents that create lost time or restricted duty should be reported to GeoSystems, Reclamation, and OSHA (if applicable). First aids and near misses should also be reported to GeoSystems in addition to anything that is required to be reported to OSHA.

FIRST AID AND OTHER TRAINING REQUIREMENTS

Health/First Aid and Training Information	
First Aid Training & Supplies	First aid training and type: previous Wilderness First Aid courses and certifications through NOLS (National Outdoor Leadership School) is encouraged. Location and description of group medical/first aid kit: Each truck and ATV will have a first aid kit. At least one backpack first aid kit will be with the crew at all times.

Health/First Aid and Training Information	
ATV Training	Training: ATVs can only be operated by individuals who have successfully completed the project ATV operation course and certification.
UAV Operation Certification	Unmanned Aerial Vehicles (UAV) or "drones" may only be operated by Federal Aviation Administration Licensed Part 107 pilots.

PERSONAL PROTECTIVE AND SAFETY EQUIPMENT REQUIREMENTS

Personal Protective Equipment (PPE) and Other Safety Equipment		
PPE (include notes as appropriate)	**Required**	**Recommended/ Optional**
Fluorescent safety vest	☒	☐
Hiking boots	☒	☐
Drinking water		
ATV helmet	☒	☐
Hard hat	☐	☒
Safety glasses	☒	☐
Gloves	☒	☐
Pants (no shorts)	☒	☐
Long-sleeved shirt	☐	☒
Sun hat	☒	☐
Insect repellant	☒	☐
Handkerchief for neck protection	☐	☒
Sunscreen	☒	☐
Personal floatation device (Reclamation approved)	☐	☒
Snake gaiters	☒	☒
Whistle	☒	☐
Fire extinguisher in the ATV	☒	☐
Vehicle first aid kit	☒	☐
Field first aid kit	☒	☐
Walking stick	☐	☒
Bear spray	☒	☐
Cell phone (protected in waterproof case)	☒	☐
Phone charger	☒	☐
Safety Supplies	Face masks for the duration of the COVID-19 pandemic safety restrictions.	
Vehicle Safety Requirements	Provide any special requirements for vehicles on the project: ☒ Fire extinguisher ☒ Spare tire ☒ Vehicle recovery device ☒ Other: First aid kit, tire repair kit, air compressor, straps, ATV ramps	

Appendix C. Representative Drone Photos of Key Landmarks through Albuquerque

Albuquerque Wastewater Treatment Plant (RM 177.7)

Central Avenue Bridge (RM 183.4)

Central Wasteway (RM 184.1)

Interstate-40 Crossing (RM 185.0)

Montaño Bridge (RM 187.9)

Paseo del Norte Bridge (RM 190.9)

Alameda Bridge (RM 192.1)

Appendix D. RiverEyes Landmark River Miles

Reach	Site	River Mile
Angostura	Angostura Dam	210.1
Angostura	Jemez River Confluence	208.57
Angostura	HWY 550 Bridge	203.81
Angostura	Rio Ranch North Beach	199.9
Angostura	Harvey Jones Canal	198.28
Angostura	Romero Road	197.97
Angostura	Sandia Lakes Wasteway	195.67
Angostura	Dixon Road	195.54
Angostura	North Diversion Channel	194.18
Angostura	South Boundary Sandia Pueblo	193.91
Angostura	Andrews Lane	193.87
Angostura	Cabezon Channel	192.66
Angostura	Upper Corrales Riverside Drain Outlet	192.14
Angostura	Alameda Bridge	192.07
Angostura	ABQ Drinking Water Diversion	191.76
Angostura	Calabacillas Arroyo	191.24
Angostura	Paseo del Norte Bridge	190.9
Angostura	Corrales Main Canal Wasteway	188.9
Angostura	Montano Bridge	187.87
Angostura	San Antonio Arroyo	187.02
Angostura	Cambell Rd Entrance	186.17
Angostura	Interstate 40 Crossing	184.97
Angostura	Central Wasteway	184.1
Angostura	Central Ave Bridge	183.4
Angostura	Tingley Beach	182.98
Angostura	Cesar Chavez Bridge	181.59
Angostura	Rio Bravo Bridge	178.41
Angostura	ABQ Wastewater Treatment Plant Outfall	177.71
Angostura	South Diversion Channel	177.12
Angostura	SW Valley Channel	176.39
Angostura	Brown Burn	174.73
Angostura	Valle de Oro	174.12
Angostura	Interstate 25 Crossing	172.59
Angostura	Isleta Pueblo North Boundary	172.4
Isleta	Isleta Diversion Dam	169.38
Isleta	Alejandro Drain	166.59
Isleta	Isleta Pueblo South Boundary	166.14
Isleta	240 Wasteway	165.18
Isleta	Los Lunas Highway 6	161.39
Isleta	Los Chavez Wasteway	156.68
Isleta	Peralta Main Canal Wasteway	152.45
Isleta	Lower Peralta Riverside Drain #1	149.59
Isleta	Belen Br (NM 6 Hwy 309)	149.51
Isleta	Belen Railroad Bridge	147.73
Isleta	New Belen Wasteway	147.16

Reach	Site	River Mile
Isleta	Lower Peralta Riverside Drain #2	144.6
Isleta	Aerial Gas Line	143.74
Isleta	Feeder 3 Wasteway	142.72
Isleta	Jarales Rd Br	140.83
Isleta	Storrie Wasteway	140.07
Isleta	Abo Arroyo	139.26
Isleta	Sabinal Drain Outfall	137.86
Isleta	Abeytas Heading	134.39
Isleta	Bernardo (U.S. 60 Bridge)	130.62
Isleta	San Francisco Riverside Drain	127.23
Isleta	Rio Puerco	126.63
Isleta	Lower San Juan Riverside Drain	126.45
Isleta	Lower San Juan Riverside Drain 2	122.06
Isleta	Sevilleta North Boundary	121.64
Isleta	Rio Salado	118.88
San Acacia	San Acacia Diversion Dam	116.17
San Acacia	Lemitar Diversion	106.65
San Acacia	9-Mile Outfall	104.44
San Acacia	Escondida Br	104.12
San Acacia	N. Socorro Div. Channel	102.48
San Acacia	Escondida Drain Outfall	100.9
San Acacia	Socorro Wastewater Treatment Plant Outfall (Otero St)	99.04
San Acacia	Brown Arroyo Wasteway	94
San Acacia	Neil Cupp Pumping Station	90.2
San Acacia	San Antonio (U.S. 380)	87.13
San Acacia	Socorro Drain	84.25
San Acacia	BDA North Boundary	84.1
San Acacia	North End of Pilot Channel	81.44
San Acacia	South End of Pilot Channel	79.4
San Acacia	Md BDA Pumps (Old Site)	77.55
San Acacia	South Boundary Pumping Station	73.75
San Acacia	San Marcial RR Bridge	68.57
San Acacia	San Marcial Gauge	68.26
San Acacia	Fort Craig Pumping Station	64.5
San Acacia	S Curve	60
San Acacia	White Gate	59.21
San Acacia	Power Line	57.5

Appendix E. Summary Table Showing the Daily Discontinuous Length (in RMs) by Affected Segment

Summary of the total length (RMs) affected by drying for each day by segment, reach, and riverwide								
Date	Socorro to Below Fort Craig Segment	Above LFCC Outlet Segment	San Acacia Reach Total	Peralta Wasteway Segment	Abeytas Heading Segment	Isleta Reach Total	Angostura Reach	Riverwide Total
6/1/2022	0	0	**0**	0	0	**0**	**0**	**0**
6/2/2022	0	0	**0**	0	0	**0**	**0**	**0**
6/3/2022	0	0	**0**	0	0	**0**	**0**	**0**
6/4/2022	0	0	**0**	0	0	**0**	**0**	**0**
6/5/2022	17.14	0	**17.14**	0	0	**0**	**0**	**17.14**
6/6/2022	20.93	0	**20.93**	0	0	**0**	**0**	**20.93**
6/7/2022	23.59	0	**23.59**	0	0	**0**	**0**	**23.59**
6/8/2022	27.38	0	**27.38**	0	0	**0**	**0**	**27.38**
6/9/2022	28.26	0	**28.26**	0	0	**0**	**0**	**28.26**
6/10/2022	30.59	0	**30.59**	0	0	**0**	**0**	**30.59**
6/11/2022	31.6	0	**31.6**	0	0	**0**	**0**	**31.6**
6/12/2022	31.95	0	**31.95**	0	0	**0**	**0**	**31.95**
6/13/2022	32	0	**32**	0	0	**0**	**0**	**32**
6/14/2022	32.9	0	**32.9**	0	0	**0**	**0**	**32.9**
6/15/2022	33.22	0	**33.22**	0	0	**0**	**0**	**33.22**
6/16/2022	33.51	0	**33.51**	2.42	0	**2.42**	**0**	**35.93**
6/17/2022	33.92	0	**33.92**	3.28	0	**3.28**	**0**	**37.2**
6/18/2022	34.31	0	**34.31**	2.81	0	**2.81**	**0**	**37.12**
6/19/2022	33.61	0	**33.61**	1.15	0	**1.15**	**0**	**34.76**
6/20/2022	24.44	0	**24.44**	0	0	**0**	**0**	**24.44**
6/21/2022	10.37	0	**10.37**	0	0	**0**	**0**	**10.37**
6/22/2022	0	0	**0**	0	0	**0**	**0**	**0**
6/23/2022	0	0	**0**	0	0	**0**	**0**	**0**
6/24/2022	0	0	**0**	0	0	**0**	**0**	**0**
6/25/2022	0	0	**0**	0	0	**0**	**0**	**0**
6/26/2022	0	0	**0**	0	0	**0**	**0**	**0**
6/27/2022	0	0	**0**	0	0	**0**	**0**	**0**
6/28/2022	0	0	**0**	0	0	**0**	**0**	**0**
6/29/2022	0	0	**0**	0	0	**0**	**0**	**0**
6/30/2022	0	0	**0**	0	0	**0**	**0**	**0**

Date	Socorro to Below Fort Craig Segment	Above LFCC Outlet Segment	San Acacia Reach Total	Peralta Wasteway Segment	Abeytas Heading Segment	Isleta Reach Total	Angostura Reach	Riverwide Total
7/1/2022	0	0	**0**	0	0	**0**	**0**	**0**
7/2/2022	0	0	**0**	0	0	**0**	**0**	**0**
7/3/2022	0	0	**0**	0	0	**0**	**0**	**0**
7/4/2022	0	0	**0**	0	0	**0**	**0**	**0**
7/5/2022	0	0	**0**	0	0	**0**	**0**	**0**
7/6/2022	0	0	**0**	0	0	**0**	**0**	**0**
7/7/2022	0	0	**0**	0	0	**0**	**0**	**0**
7/8/2022	0	0	**0**	0	0	**0**	**0**	**0**
7/9/2022	0	0	**0**	0	0	**0**	**0**	**0**
7/10/2022	0	0	**0**	0	0	**0**	**0**	**0**
7/11/2022	0	0	**0**	0	0	**0**	**0**	**0**
7/12/2022	0	0	**0**	0	0	**0**	**0**	**0**
7/13/2022	0	0	**0**	0	0	**0**	**0**	**0**
7/14/2022	18.9	0	**18.9**	0	0	**0**	**0**	**18.9**
7/15/2022	9.56	0	**9.56**	0	0	**0**	**0**	**9.56**
7/16/2022	25.08	0	**25.08**	0	0	**0**	**0**	**25.08**
7/17/2022	14.75	0	**14.75**	3.33	0	**3.33**	**0**	**18.08**
7/18/2022	0	0	**0**	7.22	0	**7.22**	**0**	**7.22**
7/19/2022	2.32	0	**2.32**	9.59	0	**9.59**	**0**	**11.91**
7/20/2022	9.81	0	**9.81**	10.52	0	**10.52**	**0**	**20.33**
7/21/2022	18.21	0	**18.21**	10.94	0	**10.94**	**0**	**29.15**
7/22/2022	27.14	0	**27.14**	10.06	0	**10.06**	**0.55**	**37.75**
7/23/2022	29.01	0	**29.01**	10.5	0	**10.5**	**2.04**	**41.55**
7/24/2022	28.73	0	**28.73**	12.08	0	**12.08**	**5.12**	**45.93**
7/25/2022	32.75	0	**32.75**	12.23	1.72	**13.95**	**5.9**	**52.6**
7/26/2022	34.51	1.1	**35.61**	12.24	1.38	**13.62**	**10.74**	**59.97**
7/27/2022	26.43	0.83	**27.26**	12.31	1.5	**13.81**	**0**	**41.07**
7/28/2022	4.83	0	**4.83**	12.3	0	**12.3**	**0**	**17.13**
7/29/2022	0	0	**0**	11.18	0	**11.18**	**0**	**11.18**
7/30/2022	0	0	**0**	9.7	0	**9.7**	**0**	**9.7**
7/31/2022	0	0	**0**	2.47	0	**2.47**	**0**	**2.47**

Date	Socorro to Below Fort Craig Segment	Above LFCC Outlet Segment	San Acacia Reach Total	Peralta Wasteway Segment	Abeytas Heading Segment	Isleta Reach Total	Angostura Reach	Riverwide Total
8/1/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/2/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/3/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/4/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/5/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/6/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/7/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/8/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/9/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/10/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/11/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/12/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/13/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/14/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/15/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/16/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/17/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/18/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/19/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/20/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/21/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/22/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/23/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/24/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/25/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/26/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/27/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/28/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/29/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/30/2022	0	0	**0**	0	0	**0**	**0**	**0**
8/31/2022	0	0	**0**	0	0	**0**	**0**	**0**

Date	Socorro to Below Fort Craig Segment	Above LFCC Outlet Segment	San Acacia Reach Total	Peralta Wasteway Segment	Abeytas Heading Segment	Isleta Reach Total	Angostura Reach	Riverwide Total
9/1/2022	0	0	**0**	0	0	**0**	**0**	**0**
9/2/2022	0	0	**0**	0	0	**0**	**0**	**0**
9/3/2022	0	0	**0**	0	0	**0**	**0**	**0**
9/4/2022	0	0	**0**	0	0	**0**	**0**	**0**
9/5/2022	0	0	**0**	0	0	**0**	**0**	**0**
9/6/2022	0	0	**0**	0	0	**0**	**0**	**0**
9/7/2022	0	0	**0**	0	0	**0**	**0**	**0**
9/8/2022	0	0	**0**	0	0	**0**	**0**	**0**
9/9/2022	0	0	**0**	0	0	**0**	**0**	**0**
9/10/2022	0	0	**0**	0	0	**0**	**0**	**0**
9/11/2022	0	0	**0**	0	0	**0**	**0**	**0**
9/12/2022	12.23	0	**12.23**	1.77	0	**1.77**	**0**	**14**
9/13/2022	15.51	0	**15.51**	2.14	0	**2.14**	**0**	**17.65**
9/14/2022	0	0	**0**	0	0	**0**	**0**	**0**
9/15/2022	0	0	**0**	1.74	0	**1.74**	**0**	**1.74**
9/16/2022	12.63	0	**12.63**	0	0	**0**	**0**	**12.63**
9/17/2022	20.73	0	**20.73**	0	0	**0**	**0**	**20.73**
9/18/2022	20.43	0	**20.43**	3.52	0	**3.52**	**0**	**23.95**
9/19/2022	13.83	0	**13.83**	3.79	0	**3.79**	**0**	**17.62**
9/20/2022	15.19	0	**15.19**	4.39	0	**4.39**	**0**	**19.58**
9/21/2022	15.31	0	**15.31**	5.08	0	**5.08**	**0**	**20.39**
9/22/2022	14.89	0	**14.89**	5.39	0	**5.39**	**0**	**20.28**
9/23/2022	12.67	0	**12.67**	5.11	0	**5.11**	**0**	**17.78**
9/24/2022	11.74	0	**11.74**	4.56	0	**4.56**	**0**	**16.3**
9/25/2022	0	0	**0**	4.74	0	**4.74**	**0**	**4.74**
9/26/2022	0	0	**0**	0.48	0	**0.48**	**0**	**0.48**
9/27/2022	0	0	**0**	0	0	**0**	**0**	**0**
9/28/2022	0	0	**0**	0	0	**0**	**0**	**0**
9/29/2022	0	0	**0**	0	0	**0**	**0**	**0**
9/30/2022	0	0	**0**	0	0	**0**	**0**	**0**