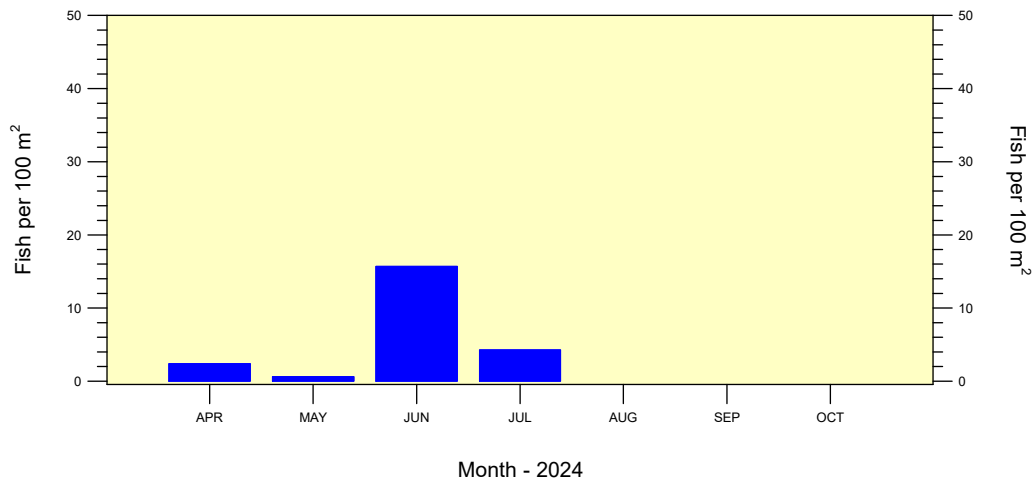
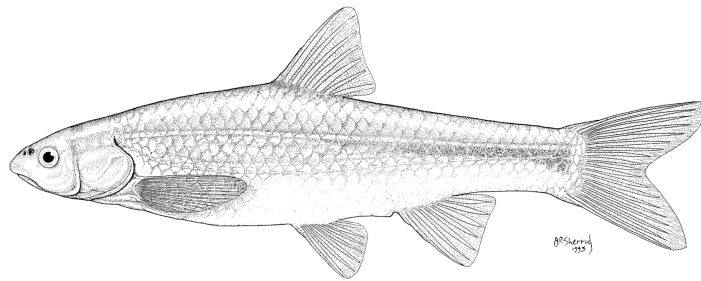


RIO GRANDE SILVERY MINNOW POPULATION MONITORING DURING JULY 2024

**A U.S. BUREAU OF RECLAMATION FUNDED
RESEARCH PROGRAM**



19 August 2024

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Contract 140R4019P0048:

Requisition 0040613161
U.S. Bureau of Reclamation
Albuquerque Area Office
555 Broadway NE, Suite 100
Albuquerque, NM 87102

Submitted to:

U.S. Bureau of Reclamation
Albuquerque Area Office
555 Broadway NE, Suite 100
Albuquerque, NM 87102

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19 August 2024

SUMMARY OF JULY 2024 POPULATION MONITORING

The July 2024 population monitoring efforts were conducted at the 20 standard sites. Five sites were in the Angostura Reach, six sites were in the Isleta Reach, and nine sites were in the San Acacia Reach. For the 2024 monthly trends, data were based on all sites (i.e., standard, additional, and replacement sites) to maintain consistency across all monthly reports. A list of all collection localities is appended (Appendix A). Adult and juvenile fish were obtained by rapidly drawing a 3.0 m x 1.8 m small-mesh (ca. 5 mm) seine through discrete mesohabitats. Larval fish were collected with a 1.2 m x 1.2 m fine-mesh (ca. 1 mm) seine. All fishes were identified to species and enumerated. We used length-age relationships to assign ages (i.e., age-0, age-1, and age-2+) to all Rio Grande Silvery Minnow collected. Age-0 individuals are only present, however, after seasonal spawning events that typically first occur during spring runoff. Figures illustrating fish densities (i.e., fish per 100 m²) were prepared for the ten focal species to facilitate comparisons across reaches.

All Sites (n = 20)

During July, sampling covered 9,226.7 m² (surface area) of water and yielded 2,159 fish. There were no dry sampling sites. Cumulative fish density during July was 23.40 individuals per 100 m² sampled. The three most common species were Red Shiner (n = 854), Rio Grande Silvery Minnow (n = 395), and Channel Catfish (n = 302). The sampling sites yielded a total of 19 fish species.

Rio Grande Silvery Minnow was present in 107 of the 303 seine hauls that yielded fish and at 19 of the 20 sampling sites. Densities of unmarked and marked individuals were 4.28 (n = 395) and 0.00 (n = 0) individuals per 100 m² sampled, respectively. Densities of age-0, age-1, and age-2+ individuals were 3.49 (n = 322), 0.77 (n = 71), and 0.02 (n = 2) individuals per 100 m² sampled, respectively. Based on all July surveys since 1993, the overall density of Rio Grande Silvery Minnow averaged 24.60 (range = 0.26–140.98) individuals per 100 m² sampled. During July 2024, its overall density was 4.28 (n = 395) individuals per 100 m² sampled.

Angostura Reach

From 16 June to 15 July, provisional U.S. Geological Survey (USGS) mean daily discharge in the Angostura Reach (Albuquerque: USGS Gage-08330000) averaged 590 ft³/s and ranged from 214 to 1,870 ft³/s. Water temperatures ranged from 23.2 to 25.4 °C during the Angostura Reach sampling efforts (ca. 0830–1500 h). Secchi disk measurements of water clarity ranged from 2 to 8 cm.

Sampling for fishes in the Angostura Reach during July yielded 414 individuals with a cumulative fish density of 17.1 individuals per 100 m² sampled. The overall sampling effort in the Angostura Reach covered 2,416.3 m² (surface area) of water. Densities of all fish species combined ranged from 6.4 to 27.8 individuals per 100 m² at the different sampling sites. In July, there were 14 fish species collected in the Angostura Reach. Red Shiner was the most abundant taxon (n = 158), followed by Flathead Chub (n = 64), and Longnose Dace (n = 59). We collected Rio Grande Silvery Minnow (n = 25) in 17 of the 74 seine hauls that yielded fish, and its overall density was 1.03 (range = 0.00–2.20) individuals per 100 m².

Isleta Reach

Provisional mean daily discharge in the Isleta Reach (Bosque Farms: USGS Gage-08331160), from 16 June to 15 July, averaged 376 ft³/s and ranged from 140 to 1,840 ft³/s. During the Isleta Reach sampling efforts (ca. 0900–1530 h), water temperatures ranged from 25.5 to 29.0 °C. Secchi disk measurements ranged from 0 to 9 cm during sampling.

Isleta Reach population monitoring efforts produced 447 individuals in July with a cumulative fish density of 19.5 individuals per 100 m² sampled. The total sampling effort in the Isleta Reach during July covered 2,297.5 m² (surface area) of water. Fish densities (all species combined) at the sampling sites ranged from 2.5 to 40.6 individuals per 100 m² sampled. There were 10 fish species collected in the Isleta Reach during July. Channel Catfish was the most abundant taxon (n = 170), followed by Red Shiner (n = 138), and Western Mosquitofish (n = 77). We collected Rio Grande Silvery Minnow (n = 44) in 28 of the 79 seine hauls that yielded fish, and its overall density was 1.92 (range = 0.28–4.91) individuals per 100 m².

San Acacia Reach

From 16 June to 15 July, provisional mean daily discharge at San Acacia (USGS Gage-08354900) was generally higher (average = 295; range = 88–1,110 ft³/s) than at San Marcial (USGS Gage-08358400) during the same period (average = 170; range = 0–806 ft³/s). Water temperatures in July for the San Acacia Reach ranged from 25.4 to 31.0 °C (ca. 0930–1600 h). Secchi disk measurements ranged from 1 to 11 cm during sampling.

Population monitoring efforts in the San Acacia Reach during July yielded 1,298 individuals with a cumulative fish density of 28.8 individuals per 100 m² sampled. Sampling in the San Acacia Reach covered an area of 4,512.9 m² of water. Fish densities (all species combined) ranged from 8.4 to 71.8 individuals per 100 m² at sites sampled in the San Acacia Reach. In July, there were 15 fish species collected in the San Acacia Reach. Red Shiner was the most abundant taxon (n = 558), followed by Rio Grande Silvery Minnow (n = 326), and Western Mosquitofish (n = 178). We collected Rio Grande Silvery Minnow (n = 326) in 62 of the 150 seine hauls that yielded fish, and its overall density was 7.22 (range = 0.19–34.63) individuals per 100 m².

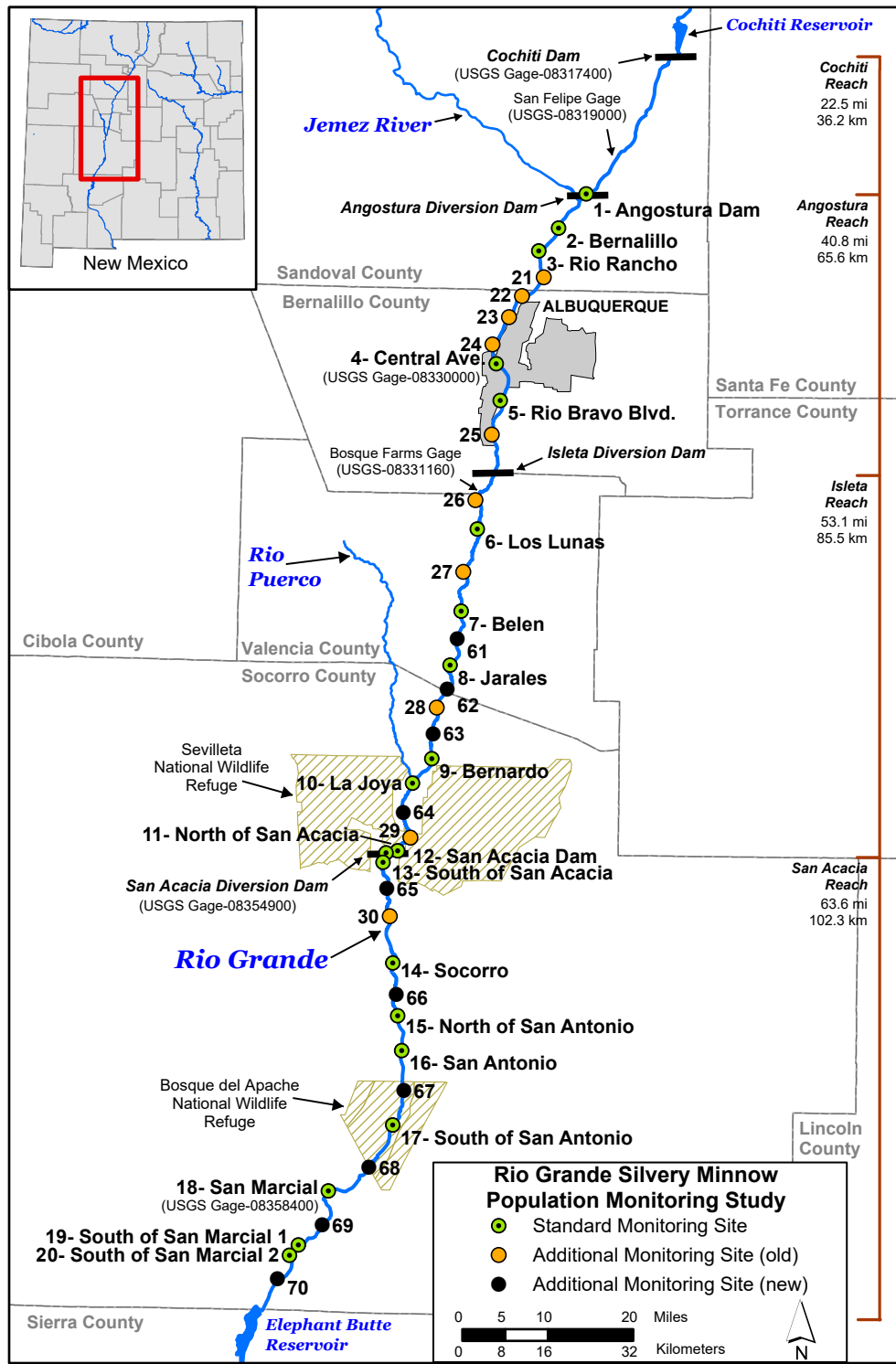


Figure 1. Map of the study area, standard sites, and additional sites (old and new) for the Rio Grande Silvery Minnow population monitoring study. Sampling site descriptions are provided in Appendix A.

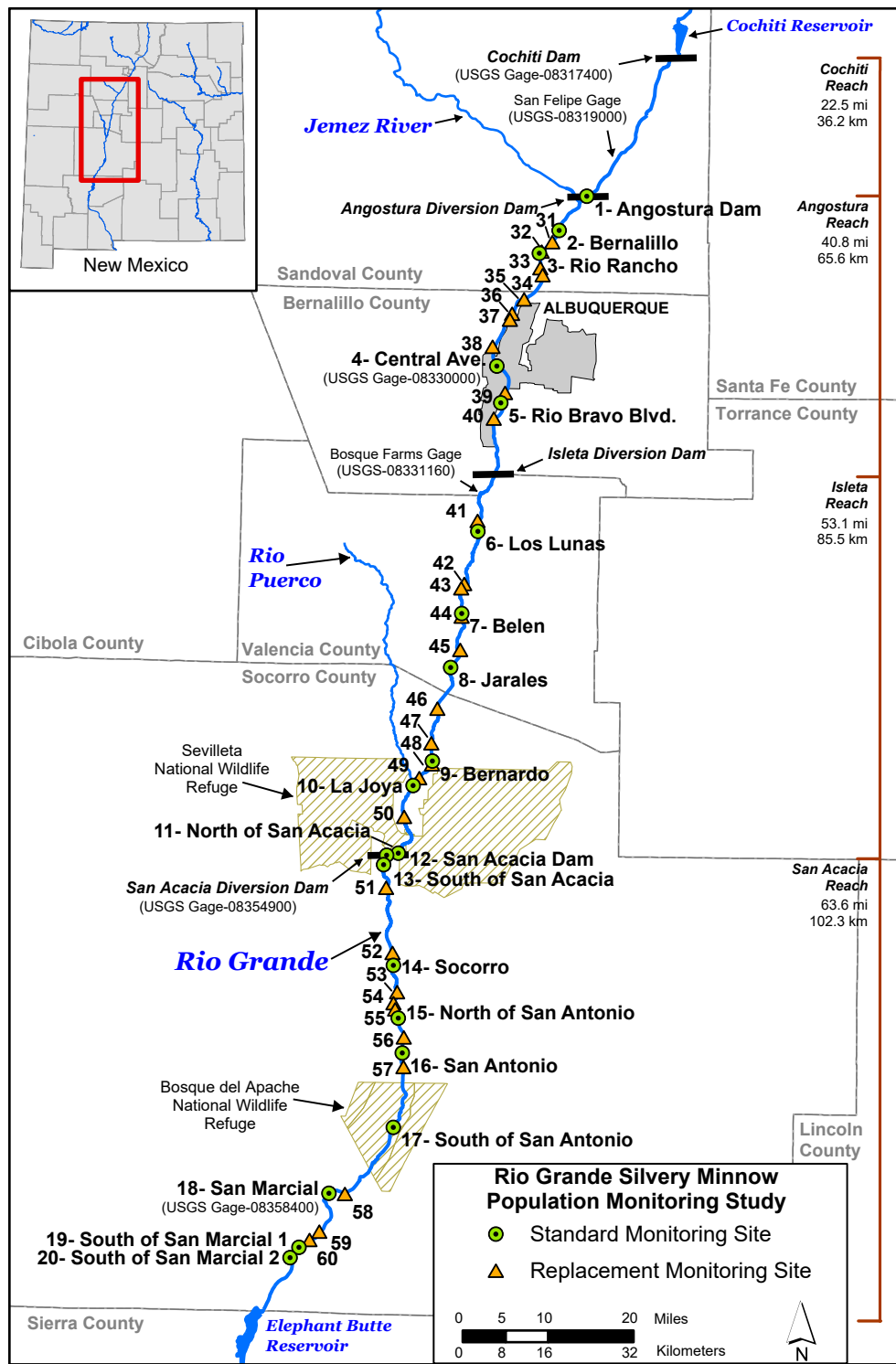


Figure 2. Map of the study area, standard sites, and replacement sites for the Rio Grande Silvery Minnow population monitoring study. Sampling site descriptions are provided in Appendix A.

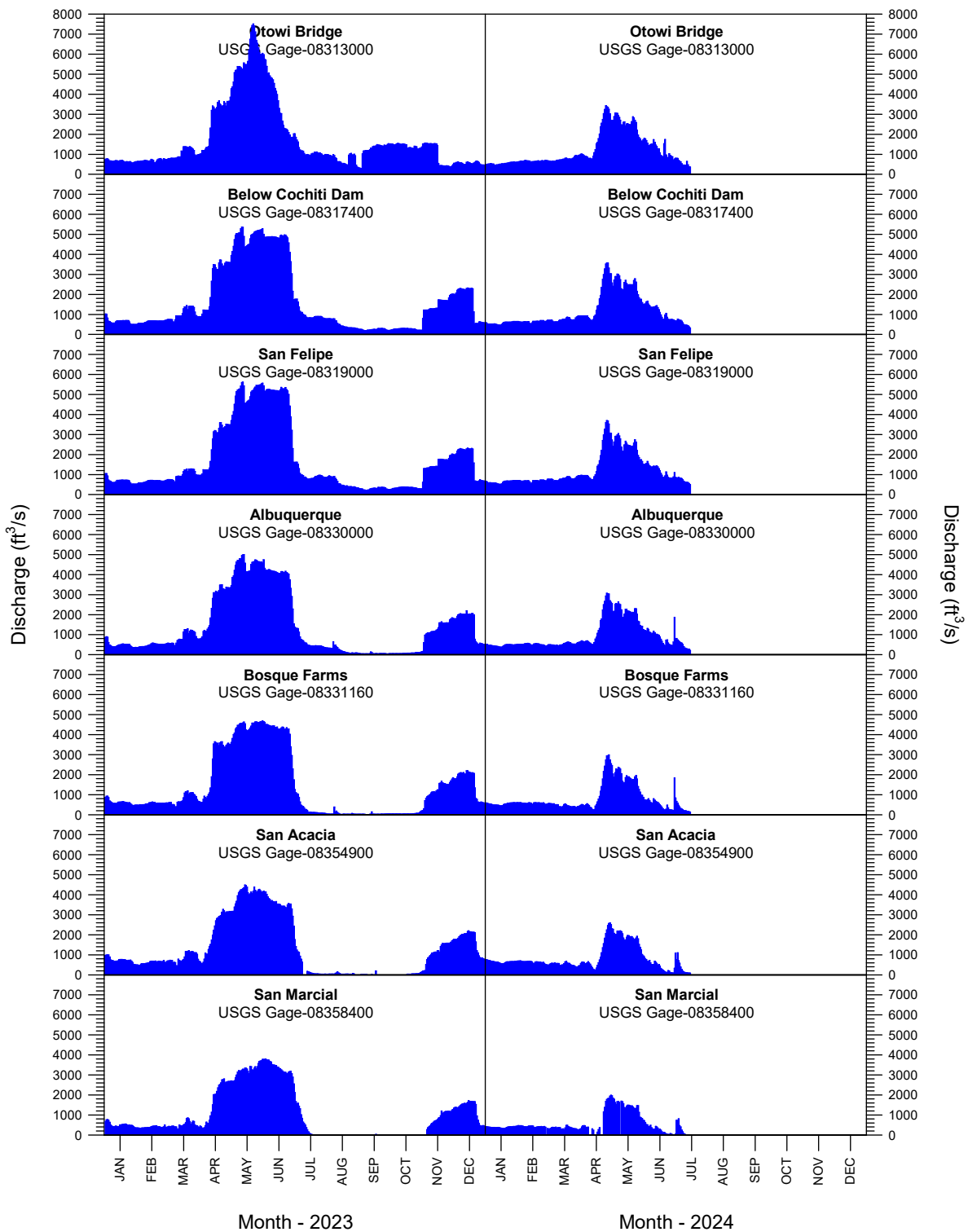


Figure 3. Rio Grande mean-daily discharge, by USGS gaging station, from 1 January 2023 to 15 July 2024. All discharge data are provisional and subject to change.

Table 1. Scientific names, common names, and species codes of fishes collected in the Middle Rio Grande since 1993.

Scientific Name	Common Name	Species Code
Order Clupeiformes		
Family Dorosomatidae		
	thread herrings	
<i>Dorosoma cepedianum</i>	Gizzard Shad	(DORCEP)
<i>Dorosoma petenense</i>	Threadfin Shad	(DORPET)
Order Cypriniformes		
Family Catostomidae		
	suckers	
<i>Carpodes carpio</i>	River Carpsucker ¹	(CARCAR)
<i>Catostomus commersonii</i>	White Sucker ¹	(CATCOM)
<i>Ictiobus bubalus</i>	Smallmouth Buffalo	(ICTBUB)
Family Cyprinidae		
	carps	
<i>Carassius auratus</i>	Goldfish	(CARAUR)
<i>Cyprinus carpio</i>	Common Carp ¹	(CYPCAR)
Family Leuciscidae		
	minnows	
<i>Campostoma anomalum</i>	Central Stoneroller	(CAMANO)
<i>Cyprinella lutrensis</i>	Red Shiner ¹	(CYPLUT)
<i>Gila pandora</i>	Rio Grande Chub	(GILPAN)
<i>Hybognathus amarus</i>	Rio Grande Silvery Minnow ¹	(HYBAMA)
<i>Notemigonus crysoleucas</i>	Golden Shiner	(NOTCRY)
<i>Pimephales promelas</i>	Fathead Minnow ¹	(PIMPRO)
<i>Pimephales vigilax</i>	Bullhead Minnow	(PIMVIG)
<i>Platygobio gracilis</i>	Flathead Chub ¹	(PLAGRA)
<i>Rhinichthys cataractae</i>	Longnose Dace ¹	(RHICAT)
Order Siluriformes		
Family Ictaluridae		
	North American catfishes	
<i>Ameiurus melas</i>	Black Bullhead	(AMEMEL)
<i>Ameiurus natalis</i>	Yellow Bullhead	(AMENAT)
<i>Ictalurus furcatus</i>	Blue Catfish	(ICTFUR)
<i>Ictalurus punctatus</i>	Channel Catfish ¹	(ICTPUN)
<i>Pylodictis olivaris</i>	Flathead Catfish	(PYLOLI)
Family Loricariidae		
	suckermouth armored catfishes	
<i>Pterygoplichthys disjunctivus</i>	Vermiculated Sailfin Catfish	(PTEDIS)

Table 1. Scientific names, common names, and species codes of fishes collected in the Middle Rio Grande since 1993 (continued).

Scientific Name	Common Name	Species Code
Order Esociformes		
Family Esocidae		piques and mudminnows
<i>Esox lucius</i>	Northern Pike	(ESOLUC)
Order Salmoniformes		
Family Salmonidae		trouts and salmons
<i>Oncorhynchus mykiss</i>	Rainbow Trout	(ONCMYK)
<i>Salmo trutta</i>	Brown Trout	(SALTRU)
Order Cyprinodontiformes		
Family Poeciliidae		livebearers
<i>Gambusia affinis</i>	Western Mosquitofish ¹	(GAMAFF)
Order Centrarchiformes		
Family Centrarchidae		sunfishes
<i>Lepomis cyanellus</i>	Green Sunfish	(LEPCYA)
<i>Lepomis macrochirus</i>	Bluegill	(LEPMAC)
<i>Lepomis megalotis</i>	Longear Sunfish	(LEPMEG)
<i>Micropterus dolomieu</i>	Smallmouth Bass	(MICDOL)
<i>Micropterus salmoides</i>	Florida Bass	(MICSAL)
<i>Pomoxis annularis</i>	White Crappie	(POMANN)
<i>Pomoxis nigromaculatus</i>	Black Crappie	(POMNIG)
Order Perciformes		
Family Moronidae		temperate basses
<i>Morone chrysops</i>	White Bass	(MORCHR)
<i>Morone saxatilis</i>	Striped Bass	(MORSAX)
Family Percidae		perches and darters
<i>Perca flavescens</i>	Yellow Perch	(PERFLA)
<i>Percina macrolepida</i>	Bigscale Logperch	(PERMAC)
<i>Sander vitreus</i>	Walleye	(SANVIT)
Family Sciaenidae		drums and croakers
<i>Aplodinotus grunniens</i>	Freshwater Drum	(APLGRU)

¹ = Focal taxa were typically the 10 most abundant species collected during October.

Table 2. Rio Grande Silvery Minnow abundance, by reach, site, and mesohabitat, during July 2024. Marked and unmarked individuals were included. Blank cells indicate site-specific mesohabitats that were unavailable for sampling.

Reach	Site	Locality	BW	PO	RU	SHPO	SHRU	Total
Angostura	1	Angostura Dam		0	0	4	0	4
Angostura	2	Bernalillo	0		0	4	1	5
Angostura	3	Rio Rancho			0	0	0	0
Angostura	4	Central Ave.	1	0	1	0	2	4
Angostura	5	Rio Bravo Blvd.	2		0	0	10	12
<i>Angostura Totals</i>			3	0	1	8	13	25
Isleta	6	Los Lunas			0	0	3	3
Isleta	7	Belen			1	0	7	8
Isleta	8	Jarales				1	5	6
Isleta	9	Bernardo		1		0	0	1
Isleta	10	La Joya			0	7	0	7
Isleta	11	North of San Acacia			2	17		19
<i>Isleta Totals</i>			0	1	3	25	15	44
San Acacia	12	San Acacia Dam	1	0	0	11	7	19
San Acacia	13	South of San Acacia	0	1	0	9	0	10
San Acacia	14	Socorro		1	0	6	5	12
San Acacia	15	North of San Antonio	28	49	1	29	56	163
San Acacia	16	San Antonio		6	0	0	5	11
San Acacia	17	South of San Antonio	0	0	0	1	7	8
San Acacia	18	San Marcial	0	0	0	1	0	1
San Acacia	19	South of San Marcial 1	3	0	1	58	34	96
San Acacia	20	South of San Marcial 2			0	1	5	6
<i>San Acacia Totals</i>			32	57	2	116	119	326
Monthly Totals			35	58	6	149	147	395

Table 3. Rio Grande Silvery Minnow abundance, by reach, site, and month, during 2024. Marked individuals are shown in parentheses, as a subset of the site-specific total. Blank cells indicate months when a site was not visited or will not be visited.

Reach	Site	Locality	Apr	May	Jun	Jul	Aug	Sep	Oct	Total
Angostura	1	Angostura Dam	0	0	0	4(0)	0	0	0	4
Angostura	2	Bernalillo	15(0)	1(0)	0	5(0)	0	0	0	21
Angostura	3	Rio Rancho	15(0)	1(0)	0	0	0	0	0	16
Angostura	21	Site 21	8(0)						0	8
Angostura	22	Site 22	12(0)						0	12
Angostura	23	Site 23	2(0)						0	2
Angostura	24	Site 24	19(0)						0	19
Angostura	4	Central Ave.	0	1(0)	3(0)	4(0)	0	0	0	8
Angostura	5	Rio Bravo Blvd.	1(0)	2(0)	3(0)	12(0)	0	0	0	18
Angostura	25	Site 25	0						0	0
<i>Angostura Totals</i>			72	5	6	25	0	0	0	108
Isleta	26	Site 26	52(0)						0	52
Isleta	6	Los Lunas	14(0)	13(0)	0	3(0)	0	0	0	30
Isleta	27	Site 27	8(0)						0	8
Isleta	7	Belen	0	2(0)	224(0)	8(0)	0	0	0	234
Isleta	61	Site 61	9(0)						0	9
Isleta	8	Jarales	5(0)	5(0)	9(0)	6(0)	0	0	0	25
Isleta	62	Site 62	1(0)						0	1
Isleta	28	Site 28	3(0)						0	3
Isleta	63	Site 63	6(0)						0	6
Isleta	9	Bernardo	14(0)	3(0)	6(0)	1(0)	0	0	0	24
Isleta	10	La Joya	3(0)	0	23(0)	7(0)	0	0	0	33
Isleta	64	Site 64	0						0	0
Isleta	29	Site 29	4(0)						0	4
Isleta	11	North of San Acacia	0	1(0)	9(0)	19(0)	0	0	0	29
<i>Isleta Totals</i>			119	24	271	44	0	0	0	458
San Acacia	12	San Acacia Dam	9(0)	1(0)	29(1)	19(0)	0	0	0	58
San Acacia	13	South of San Acacia	11(0)	1(0)	8(0)	10(0)	0	0	0	30
San Acacia	65	Site 65	24(0)						0	24
San Acacia	30	Site 30	35(0)						0	35
San Acacia	14	Socorro	21(0)	0	211(0)	12(0)	0	0	0	244
San Acacia	66	Site 66	28(0)						0	28
San Acacia	15	North of San Antonio	73(0)	1(0)	44(0)	163(0)	0	0	0	281
San Acacia	16	San Antonio	5(0)	3(0)	3(0)	11(0)	0	0	0	22
San Acacia	67	Site 67	15(1)						0	15
San Acacia	17	South of San Antonio	7(0)	4(0)	29(1)	8(0)	0	0	0	48
San Acacia	68	Site 68	3(0)						0	3
San Acacia	18	San Marcial	16(0)	2(0)	387(0)	1(0)	0	0	0	406
San Acacia	69	Site 69	4(0)						0	4
San Acacia	19	South of San Marcial 1	22(2)	5(0)	531(0)	96(0)	0	0	0	654
San Acacia	20	South of San Marcial 2	3(0)	1(0)	2(0)	6(0)	0	0	0	12
San Acacia	70	Site 70	8(1)						0	8
<i>San Acacia Totals</i>			284	18	1,244	326	0	0	0	1,872
Monthly Totals			475	47	1,521	395	0	0	0	2,438

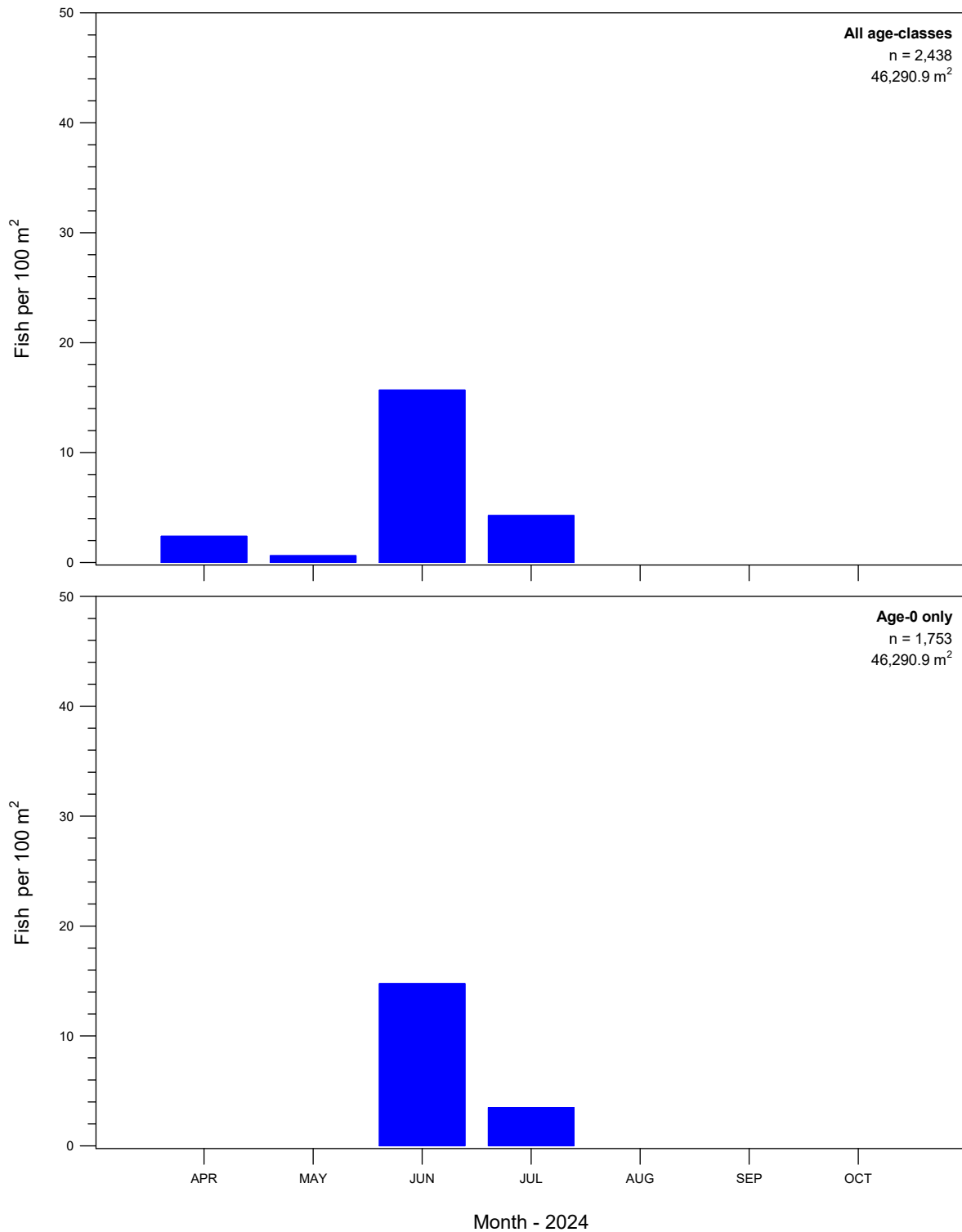


Figure 4. Rio Grande Silvery Minnow densities based on all sites, by age-class and month, during 2024. Marked and unmarked individuals were included.

Table 4. Ichthyofaunal summary based on all sites, by species, during July 2024. Marked and unmarked Rio Grande Silvery Minnow were included. Dashes (-) indicate species that were absent during sampling.

Family	Common Name	Residence Status ¹	Total Number of Individuals	Percent (%) of Total	Frequency of Occurrence ²	% Frequency of Occurrence ²
Dorosomatidae	Gizzard Shad	N	4	0.19	2	10.00
Dorosomatidae	Threadfin Shad	I	-	-	-	-
Catostomidae	River Carpsucker	N	61	2.83	8	40.00
Catostomidae	White Sucker	I	11	0.51	4	20.00
Catostomidae	Smallmouth Buffalo	N	-	-	-	-
Cyprinidae	Goldfish	I	-	-	-	-
Cyprinidae	Common Carp	I	24	1.11	13	65.00
Leuciscidae	Central Stoneroller	I	-	-	-	-
Leuciscidae	Red Shiner	N	854	39.56	20	100.00
Leuciscidae	Rio Grande Chub	N	-	-	-	-
Leuciscidae	Rio Grande Silvery Minnow	N	395	18.30	19	95.00
Leuciscidae	Golden Shiner	I	-	-	-	-
Leuciscidae	Fathead Minnow	N	7	0.32	5	25.00
Leuciscidae	Bullhead Minnow	I	1	0.05	1	5.00
Leuciscidae	Flathead Chub	N	94	4.35	10	50.00
Leuciscidae	Longnose Dace	N	59	2.73	4	20.00
Ictaluridae	Black Bullhead	I	-	-	-	-
Ictaluridae	Yellow Bullhead	I	3	0.14	3	15.00
Ictaluridae	Blue Catfish	N	1	0.05	1	5.00
Ictaluridae	Channel Catfish	I	302	13.99	18	90.00
Ictaluridae	Flathead Catfish	N	-	-	-	-
Loricariidae	Vermiculated Sailfin Catfish	I	-	-	-	-
Esocidae	Northern Pike	I	-	-	-	-
Salmonidae	Rainbow Trout	I	-	-	-	-
Salmonidae	Brown Trout	I	-	-	-	-
Poeciliidae	Western Mosquitofish	I	299	13.85	20	100.00
Centrarchidae	Green Sunfish	I	1	0.05	1	5.00
Centrarchidae	Bluegill	N	1	0.05	1	5.00
Centrarchidae	Longear Sunfish	I	-	-	-	-
Centrarchidae	Smallmouth Bass	I	-	-	-	-
Centrarchidae	Florida Bass	I	-	-	-	-
Centrarchidae	White Crappie	I	40	1.85	9	45.00
Centrarchidae	Black Crappie	I	-	-	-	-
Moronidae	White Bass	I	1	0.05	1	5.00
Moronidae	Striped Bass	I	-	-	-	-
Percidae	Yellow Perch	I	-	-	-	-
Percidae	Bigscale Logperch	I	1	0.05	1	5.00
Percidae	Walleye	I	-	-	-	-
Sciaenidae	Freshwater Drum	N	-	-	-	-
Monthly Total			2,159	100.00		

¹ = Native (N) or introduced (I) species

² = Based on all sites

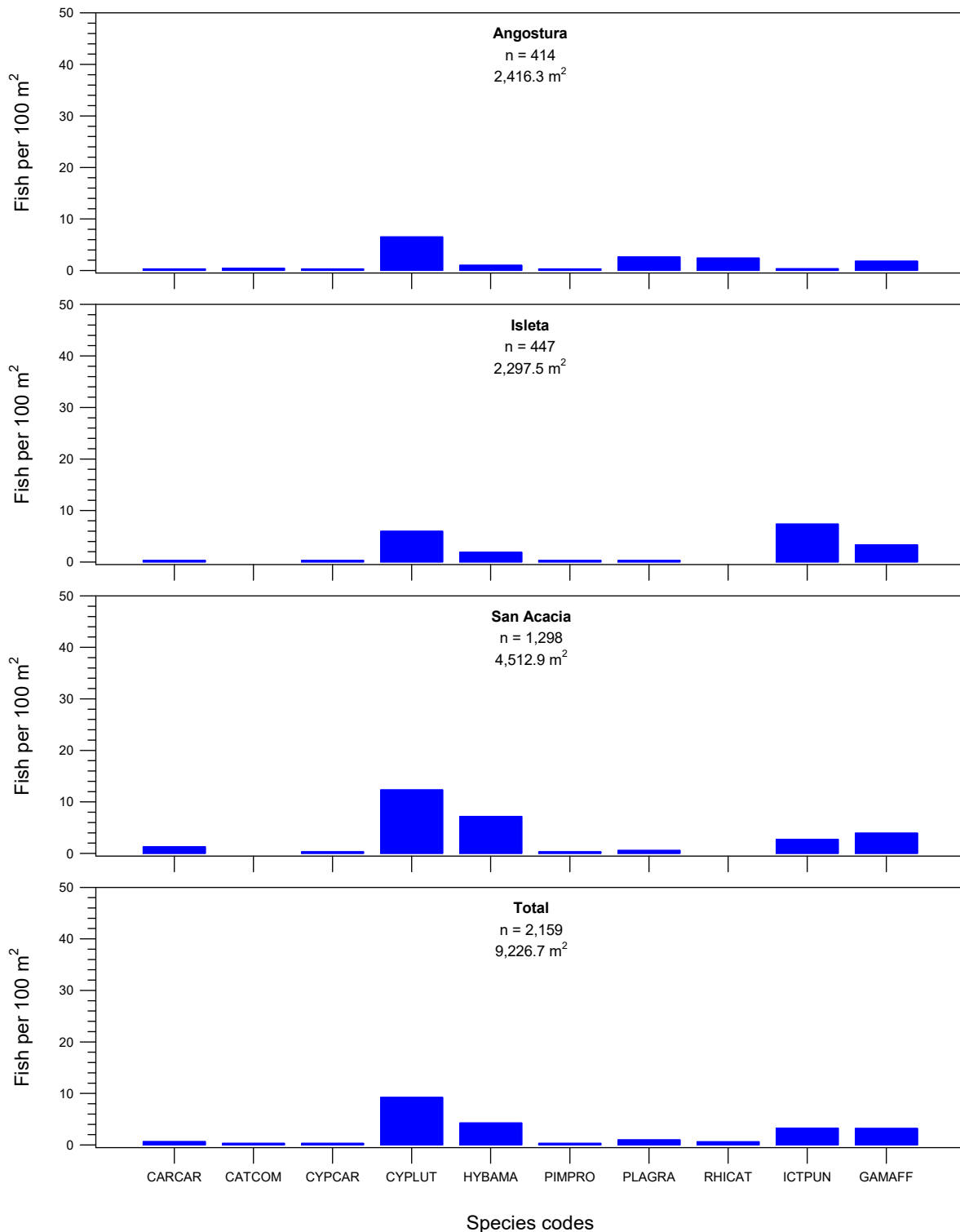


Figure 5. Fish densities based on all sites, by reach and focal taxa, during July 2024. Marked and unmarked Rio Grande Silvery Minnow were included.

APPENDIX A (Sampling Sites)

Middle Rio Grande Fish Sampling Sites

Table A1. Sampling reaches and standard sites for population monitoring of Rio Grande Silvery Minnow in the Middle Rio Grande.

Reach and Site	Locality
Angostura Reach	
1	New Mexico, Sandoval County, Rio Grande, just downstream of Angostura Diversion Dam, Algodones. River Mile: 209.9; UTM Easting: 363665; UTM Northing: 3916331; Zone: 13; Datum: NAD83
2	New Mexico, Sandoval County, Rio Grande, at US HWY 550 bridge crossing, Bernalillo. River Mile: 203.9; UTM Easting: 358457; UTM Northing: 3909887; Zone: 13; Datum: NAD83
3	New Mexico, Sandoval County, Rio Grande, ca. 4.0 mi downstream of US HWY 550 bridge crossing, Rio Rancho. River Mile: 199.9; UTM Easting: 354728; UTM Northing: 3905587; Zone: 13; Datum: NAD83
4	New Mexico, Bernalillo County, Rio Grande, at Central Ave. bridge crossing (US HWY 66), Albuquerque. River Mile: 183.4; UTM Easting: 346719; UTM Northing: 3884331; Zone: 13; Datum: NAD83
5	New Mexico, Bernalillo County, Rio Grande, at Rio Bravo Blvd. bridge crossing (NM State HWY 500), Albuquerque. River Mile: 178.4; UTM Easting: 347468; UTM Northing: 3877400; Zone: 13; Datum: NAD83
Isleta Reach	
6	New Mexico, Valencia County, Rio Grande, just upstream of NM State HWY 6 bridge crossing, Los Lunas. River Mile: 161.7; UTM Easting: 343149; UTM Northing: 3853187; Zone: 13; Datum: NAD83
7	New Mexico, Valencia County, Rio Grande, ca. 1.0 mi upstream of NM State HWY 309 bridge crossing, Belen. River Mile: 150.8; UTM Easting: 340105; UTM Northing: 3837722; Zone: 13; Datum: NAD83
8	New Mexico, Valencia County, Rio Grande, ca. 2.2 mi upstream of NM State HWY 346 bridge crossing, Jarales. River Mile: 143.2; UTM Easting: 338020; UTM Northing: 3827545; Zone: 13; Datum: NAD83
9	New Mexico, Socorro County, Rio Grande, at US HWY 60 bridge crossing, Bernardo. River Mile: 130.6; UTM Easting: 334578; UTM Northing: 3809921; Zone: 13; Datum: NAD83
10	New Mexico, Socorro County, Rio Grande, ca. 3.7 mi downstream of US HWY 60 bridge crossing, Bernardo. River Mile: 126.8; UTM Easting: 330946; UTM Northing: 3805307; Zone: 13; Datum: NAD83
11	New Mexico, Socorro County, Rio Grande, ca. 1.2 mi upstream of San Acacia Diversion Dam, San Acacia. River Mile: 117.3; UTM Easting: 328152; UTM Northing: 3792564; Zone: 13; Datum: NAD83

Table A1. Sampling reaches and standard sites for population monitoring of Rio Grande Silvery Minnow in the Middle Rio Grande (continued).

Reach and Site	Locality
San Acacia Reach	
12	New Mexico, Socorro County, Rio Grande, just downstream of San Acacia Diversion Dam, San Acacia. River Mile: 115.6; UTM Easting: 325960; UTM Northing: 3792182; Zone: 13; Datum: NAD83
13	New Mexico, Socorro County, Rio Grande, ca. 1.5 mi downstream of San Acacia Diversion Dam, San Acacia. River Mile: 114.1; UTM Easting: 325390; UTM Northing: 3790397; Zone: 13; Datum: NAD83
14	New Mexico, Socorro County, Rio Grande, ca. 0.5 mi upstream of Socorro Low Flow Conveyance Channel bridge crossing, Socorro. River Mile: 99.6; UTM Easting: 327231; UTM Northing: 3771432; Zone: 13; Datum: NAD83
15	New Mexico, Socorro County, Rio Grande, ca. 4.5 mi upstream of US HWY 380 bridge crossing, San Antonio. River Mile: 92.0; UTM Easting: 328151; UTM Northing: 3761487; Zone: 13; Datum: NAD83
16	New Mexico, Socorro County, Rio Grande, at US HWY 380 bridge crossing, San Antonio. River Mile: 87.8; UTM Easting: 328907; UTM Northing: 3754926; Zone: 13; Datum: NAD83
17	New Mexico, Socorro County, Rio Grande, east of Bosque del Apache NWR headquarters, San Antonio. River Mile: 79.0; UTM Easting: 327219; UTM Northing: 3740906; Zone: 13; Datum: NAD83
18	New Mexico, Socorro County, Rio Grande, at San Marcial Railroad bridge crossing, San Marcial. River Mile: 68.3; UTM Easting: 315091; UTM Northing: 3728487; Zone: 13; Datum: NAD83
19	New Mexico, Socorro County, Rio Grande, ca. 8.0 mi downstream of San Marcial Railroad bridge crossing, San Marcial. River Mile: 60.1; UTM Easting: 309441; UTM Northing: 3718309; Zone: 13; Datum: NAD83
20	New Mexico, Socorro County, Rio Grande, ca. 10.0 mi downstream of San Marcial Railroad bridge crossing, San Marcial. River Mile: 58.5; UTM Easting: 307767; UTM Northing: 3716360; Zone: 13; Datum: NAD83

Table A2. Sampling reaches and additional sites (old) for population monitoring of Rio Grande Silvery Minnow in the Middle Rio Grande.

Reach and Site	Locality
Angostura Reach	
21	New Mexico, Sandoval County, Rio Grande, ca. 4.4 miles upstream of Alameda Blvd. (NM State Hwy. 528) bridge crossing, Corrales. River Mile: 196.6; UTM Easting: 355531; UTM Northing: 3900626; Zone: 13; Datum: NAD83
22	New Mexico, Sandoval County, Rio Grande, ca. 1.1 miles upstream of Alameda Blvd. (NM State Hwy. 528) bridge crossing, Corrales. River Mile: 193.1; UTM Easting: 351562; UTM Northing: 3897190; Zone: 13; Datum: NAD83
23	New Mexico, Bernalillo County, Rio Grande, ca. 1.0 miles downstream of Paseo del Norte Blvd. (NM State Hwy. 423) bridge crossing Albuquerque. River Mile: 190.0; UTM Easting: 349214; UTM Northing: 3893063; Zone: 13; Datum: NAD83
24	New Mexico, Bernalillo County, Rio Grande, ca. 1.1 miles upstream of I-40 bridge crossing, Albuquerque. River Mile: 186.1; UTM Easting: 346011; UTM Northing: 3887973; Zone: 13; Datum: NAD83
25	New Mexico, Bernalillo County, Rio Grande, ca. 1.5 miles upstream of I-25 bridge crossing, Isleta. River Mile: 174.0; UTM Easting: 345900; UTM Northing: 3870990; Zone: 13; Datum: NAD83
Isleta Reach	
26	New Mexico, Valencia County, Rio Grande, ca. 4.1 miles upstream of NM State Hwy. 6 bridge crossing, Los Lunas. River Mile: 165.2; UTM Easting: 342799; UTM Northing: 3858637; Zone: 13; Datum: NAD83
27	New Mexico, Valencia County, Rio Grande, ca. 6.2 miles upstream of NM State Hwy. 309 bridge crossing, Belen. River Mile: 156.0; UTM Easting: 340647; UTM Northing: 3845146; Zone: 13; Datum: NAD83
28	New Mexico, Socorro County, Rio Grande, ca. 6.3 miles upstream of US Hwy. 60 bridge crossing, Bernardo. River Mile: 137.1; UTM Easting: 335554; UTM Northing: 3819543; Zone: 13; Datum: NAD83
29	New Mexico, Socorro County, Rio Grande, ca. 1.5 miles upstream of confluence with the Rio Salado, San Acacia. River Mile: 120.1; UTM Easting: 330498; UTM Northing: 3795053; Zone: 13; Datum: NAD83
San Acacia Reach	
30	New Mexico, Socorro County, Rio Grande, ca. 2.6 miles upstream of Pueblitos Rd. bridge crossing, Escondida. River Mile: 107.1; UTM Easting: 326303; UTM Northing: 3781123; Zone: 13; Datum: NAD83

Table A3. Sampling reaches and additional sites (new) for population monitoring of Rio Grande Silvery Minnow in the Middle Rio Grande.

Reach and Site	Locality
Isleta Reach	
61	New Mexico, Valencia County, Rio Grande, ca. 6.2 mi upstream of NM State HWY 346 bridge crossing, Jarales. River Mile: 147.0; UTM Easting: 339379; UTM Northing: 3832429; Zone: 13; Datum: NAD83
62	New Mexico, Valencia County, Rio Grande, ca. 0.7 mi downstream of NM State HWY 346 bridge crossing, Jarales. River Mile: 140.0; UTM Easting: 337520; UTM Northing: 3822964; Zone: 13; Datum: NAD83
63	New Mexico, Socorro County, Rio Grande, ca. 3.1 mi upstream of US HWY 60 bridge crossing, Bernardo. River Mile: 133.7; UTM Easting: 334853; UTM Northing: 3814593; Zone: 13; Datum: NAD83
64	New Mexico, Socorro County, Rio Grande, ca. 4.7 mi upstream of the Rio Salado confluence, San Acacia. River Mile: 123.2; UTM Easting: 329215; UTM Northing: 3799784; Zone: 13; Datum: NAD83
San Acacia Reach	
65	New Mexico, Socorro County, Rio Grande, ca. 5.4 mi downstream of San Acacia Diversion Dam, San Acacia. River Mile: 110.3; UTM Easting: 326105; UTM Northing: 3785502; Zone: 13; Datum: NAD83
66	New Mexico, Socorro County, Rio Grande, ca. 3.8 mi downstream of Socorro Low Flow Conveyance Channel bridge crossing, Socorro. River Mile: 95.1; UTM Easting: 327905; UTM Northing: 3765463; Zone: 13; Datum: NAD83
67	New Mexico, Socorro County, Rio Grande, ca. 4.3 mi downstream of San Antonio bridge crossing, San Antonio. River Mile: 83.3; UTM Easting: 329319; UTM Northing: 3747431; Zone: 13; Datum: NAD83
68	New Mexico, Socorro County, Rio Grande, ca. 5.3 mi upstream of San Marcial Railroad bridge crossing, San Marcial. River Mile: 73.7; UTM Easting: 322751; UTM Northing: 3732864; Zone: 13; Datum: NAD83
69	New Mexico, Socorro County, Rio Grande, ca. 4.4 mi downstream of San Marcial Railroad bridge crossing, San Marcial. River Mile: 63.9; UTM Easting: 313940; UTM Northing: 3722027; Zone: 13; Datum: NAD83
70	New Mexico, Socorro County, Rio Grande, ca. 12.9 mi downstream of San Marcial Railroad bridge crossing, San Marcial. River Mile: 55.5; UTM Easting: 305502; UTM Northing: 3711951; Zone: 13; Datum: NAD83

Table A4. Sampling reaches and active replacement sites for population monitoring of Rio Grande Silvery Minnow in the Middle Rio Grande.

Reach and Site	Locality
San Acacia Reach	
51	New Mexico, Socorro County, Rio Grande, ca. 5.0 mi downstream of San Acacia Diversion Dam, San Acacia. River Mile: 110.8; UTM Easting: 325855; UTM Northing: 3786216; Zone: 13; Datum: NAD83
52	New Mexico, Socorro County, Rio Grande, ca. 2.2 mi. downstream of Pueblitos Rd. bridge crossing, Escondida. River Mile: 101.7; UTM Easting: 327091; UTM Northing: 3773950; Zone: 13; Datum: NAD83
53	New Mexico, Socorro County, Rio Grande, ca. 3.1 mi downstream of the Socorro Low Flow Conveyance Channel bridge crossing, Socorro. River Mile: 96.0; UTM Easting: 327928; UTM Northing: 3766570; Zone: 13; Datum: NAD83
54	New Mexico, Socorro County, Rio Grande, ca. 4.7 mi. downstream of Socorro LFCC bridge crossing, Socorro. River Mile: 94.2; UTM Easting: 327288; UTM Northing: 3764453; Zone: 13; Datum: NAD83
56	New Mexico, Socorro County, Rio Grande, ca. 2.1 miles upstream of San Antonio bridge crossing, San Antonio. River Mile: 89.3; UTM Easting: 329188; UTM Northing: 3758027; Zone: 13; Datum: NAD83
58	New Mexico, Socorro County, Rio Grande, ca. 1.8 mi. upstream of San Marcial Railroad bridge crossing, San Marcial. River Mile: 70.1; UTM Easting: 318083; UTM Northing: 3728535; Zone: 13; Datum: NAD83
59	New Mexico, Socorro County, Rio Grande, ca. 5.1 mi. downstream of San Marcial Railroad bridge crossing, San Marcial. River Mile: 63.3; UTM Easting: 313269; UTM Northing: 3721434; Zone: 13; Datum: NAD83
60	New Mexico, Socorro County, Rio Grande, ca. 6.4 mi. downstream of San Marcial Railroad bridge crossing, San Marcial. River Mile: 61.8; UTM Easting: 311422; UTM Northing: 3719873; Zone: 13; Datum: NAD83

APPENDIX B (Site-Specific Population Monitoring Data)

Site-specific data, collected in July 2024, as part of the
Rio Grande Silvery Minnow Population Monitoring Program
(Any blanks in this database output indicate null data)

** Data are provisional and should be verified by direct inspection of field data **

**Rio Grande Silvery Minnow Population Monitoring
 July 2024**

NEW MEXICO: SANDOVAL County, RIO GRANDE Drainage
 Rio Grande, just downstream of Angostura Diversion Dam, Algodones.
 Site Number: 1 River Mile: 209.9
 UTM Easting: 363665 UTM Northing: 3916331 Zone: 13
 Collector(s): Dudley, R.K.; Urioste, A.D.; Dunn, E.A.

RKD24-098

02 July 2024
 USGS Quad: San Felipe Pueblo
 Effort: 452.3 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
2	<i>Catostomus commersonii</i>	3
4	<i>Cyprinella lutrensis</i>	2
4	<i>Hybognathus amarus*</i>	4
4	<i>Platygobio gracilis</i>	6
4	<i>Rhinichthys cataractae</i>	54
5	<i>Ictalurus punctatus</i>	1
9	<i>Gambusia affinis</i>	4
10	<i>Lepomis cyanellus</i>	1
10	<i>Pomoxis annularis</i>	15

***Hybognathus amarus (age-classes):**

age-0	
age-1	3
age-2+	1

NEW MEXICO: SANDOVAL County, RIO GRANDE Drainage
 Rio Grande, at US HWY 550 bridge crossing, Bernalillo.
 Site Number: 2 River Mile: 203.9
 UTM Easting: 358457 UTM Northing: 3909887 Zone: 13
 Collector(s): Dudley, R.K.; Urioste, A.D.; Dunn, E.A.

RKD24-099

02 July 2024
 USGS Quad: Bernalillo
 Effort: 406.8 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
2	<i>Catostomus commersonii</i>	3
4	<i>Cyprinella lutrensis</i>	54
4	<i>Hybognathus amarus*</i>	5
4	<i>Pimephales promelas</i>	3
4	<i>Platygobio gracilis</i>	23
4	<i>Rhinichthys cataractae</i>	2
5	<i>Ameiurus natalis</i>	1
5	<i>Ictalurus punctatus</i>	1
9	<i>Gambusia affinis</i>	21

***Hybognathus amarus (age-classes):**

age-0	
age-1	5
age-2+	

Rio Grande Silvery Minnow Population Monitoring July 2024

NEW MEXICO: SANDOVAL County, RIO GRANDE Drainage
Rio Grande, ca. 4.0 mi downstream of US HWY 550 bridge crossing, Rio Rancho.
Site Number: 3 River Mile: 199.9
UTM Easting: 354728 UTM Northing: 3905587 Zone: 13
Collector(s): Dudley, R.K.; Urioste, A.D.; Dunn, E.A.

RKD24-100

02 July 2024
USGS Quad: Bernalillo
Effort: 512.2 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
2	<i>Catostomus commersonii</i>	2
3	<i>Cyprinus carpio</i>	4
4	<i>Cyprinella lutrensis</i>	17
4	<i>Platygobio gracilis</i>	6
4	<i>Rhinichthys cataractae</i>	2
9	<i>Gambusia affinis</i>	2

NEW MEXICO: BERNALILLO County, RIO GRANDE Drainage
Rio Grande, at Central Ave. bridge crossing (US HWY 66), Albuquerque.
Site Number: 4 River Mile: 183.4
UTM Easting: 346719 UTM Northing: 3884331 Zone: 13
Collector(s): Dudley, R.K.; Urioste, A.D.; Dunn, E.A.

RKD24-097

02 July 2024
USGS Quad: Albuquerque West
Effort: 499.5 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
2	<i>Catostomus commersonii</i>	3
4	<i>Cyprinella lutrensis</i>	51
4	<i>Hybognathus amarus*</i>	4
4	<i>Pimephales promelas</i>	1
4	<i>Platygobio gracilis</i>	4
5	<i>Ictalurus punctatus</i>	3
9	<i>Gambusia affinis</i>	14
10	<i>Lepomis macrochirus</i>	1
10	<i>Pomoxis annularis</i>	6

***Hybognathus amarus (age-classes):**

age-0	1
age-1	3
age-2+	

**Rio Grande Silvery Minnow Population Monitoring
 July 2024**

NEW MEXICO: BERNALILLO County, RIO GRANDE Drainage
 Rio Grande, at Rio Bravo Blvd. bridge crossing (NM State HWY 500), Albuquerque.
 Site Number: 5 River Mile: 178.4
 UTM Easting: 347468 UTM Northing: 3877400 Zone: 13
 Collector(s): Dudley, R.K.; Urioste, A.D.; Dunn, E.A.

RKD24-096
 02 July 2024
 USGS Quad: Albuquerque West
 Effort: 545.6 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
2	<i>Carpiodes carpio</i>	1
3	<i>Cyprinus carpio</i>	2
4	<i>Cyprinella lutrensis</i>	34
4	<i>Hybognathus amarus*</i>	12
4	<i>Platygobio gracilis</i>	25
4	<i>Rhinichthys cataractae</i>	1
5	<i>Ictalurus punctatus</i>	4
9	<i>Gambusia affinis</i>	3
10	<i>Pomoxis annularis</i>	9

***Hybognathus amarus (age-classes):**
 age-0 10
 age-1 2
 age-2+

NEW MEXICO: VALENCIA County, RIO GRANDE Drainage
 Rio Grande, just upstream of NM State HWY 6 bridge crossing, Los Lunas.
 Site Number: 6 River Mile: 161.7
 UTM Easting: 343149 UTM Northing: 3853187 Zone: 13
 Collector(s): Dudley, R.K.; Urioste, A.D.; Dunn, E.A.

RKD24-095
 01 July 2024
 USGS Quad: Los Lunas
 Effort: 264.7 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
3	<i>Cyprinus carpio</i>	1
4	<i>Cyprinella lutrensis</i>	44
4	<i>Hybognathus amarus*</i>	3
5	<i>Ameiurus natalis</i>	1
5	<i>Ictalurus punctatus</i>	15
9	<i>Gambusia affinis</i>	7
10	<i>Pomoxis annularis</i>	1

***Hybognathus amarus (age-classes):**
 age-0
 age-1 3
 age-2+

Rio Grande Silvery Minnow Population Monitoring July 2024

NEW MEXICO: VALENCIA County, RIO GRANDE Drainage
Rio Grande, ca. 1.0 mi upstream of NM State HWY 309 bridge crossing, Belen.
Site Number: 7 River Mile: 150.8
UTM Easting: 340105 UTM Northing: 3837722 Zone: 13
Collector(s): Dudley, R.K.; Urioste, A.D.; Dunn, E.A.

RKD24-094
01 July 2024
USGS Quad: Tome
Effort: 519.8 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
3	<i>Cyprinus carpio</i>	2
4	<i>Cyprinella lutrensis</i>	49
4	<i>Hybognathus amarus*</i>	8
4	<i>Pimephales promelas</i>	1
4	<i>Platygobio gracilis</i>	1
5	<i>Ictalurus punctatus</i>	10
9	<i>Gambusia affinis</i>	41

***Hybognathus amarus (age-classes):**

age-0	1
age-1	6
age-2+	1

NEW MEXICO: VALENCIA County, RIO GRANDE Drainage
Rio Grande, ca. 2.2 mi upstream of NM State HWY 346 bridge crossing, Jarales.
Site Number: 8 River Mile: 143.2
UTM Easting: 338020 UTM Northing: 3827545 Zone: 13
Collector(s): Dudley, R.K.; Urioste, A.D.; Dunn, E.A.

RKD24-093
01 July 2024
USGS Quad: Veguita
Effort: 303.7 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
4	<i>Cyprinella lutrensis</i>	20
4	<i>Hybognathus amarus*</i>	6
5	<i>Ictalurus punctatus</i>	26
9	<i>Gambusia affinis</i>	2

***Hybognathus amarus (age-classes):**

age-0	2
age-1	4
age-2+	

**Rio Grande Silvery Minnow Population Monitoring
 July 2024**

NEW MEXICO: SOCORRO County, RIO GRANDE Drainage
 Rio Grande, at US HWY 60 bridge crossing, Bernardo.
 Site Number: 9 River Mile: 130.6
 UTM Easting: 334578 UTM Northing: 3809921 Zone: 13
 Collector(s): Dudley, R.K.; Urioste, A.D.; Dunn, E.A.

RKD24-092
 01 July 2024
 USGS Quad: Abeytas
 Effort: 356.8 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
2	<i>Carpiodes carpio</i>	1
3	<i>Cyprinus carpio</i>	1
4	<i>Cyprinella lutrensis</i>	4
4	<i>Hybognathus amarus*</i>	1
5	<i>Ictalurus punctatus</i>	1
9	<i>Gambusia affinis</i>	1

***Hybognathus amarus (age-classes):**

age-0	
age-1	1
age-2+	

NEW MEXICO: SOCORRO County, RIO GRANDE Drainage
 Rio Grande, ca. 3.7 mi downstream of US HWY 60 bridge crossing, Bernardo.
 Site Number: 10 River Mile: 126.8
 UTM Easting: 330946 UTM Northing: 3805307 Zone: 13
 Collector(s): Dudley, R.K.; Urioste, A.D.; Dunn, E.A.

RKD24-091
 01 July 2024
 USGS Quad: Abeytas
 Effort: 465.6 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
3	<i>Cyprinus carpio</i>	1
4	<i>Cyprinella lutrensis</i>	16
4	<i>Hybognathus amarus*</i>	7
4	<i>Platygobio gracilis</i>	2
5	<i>Ictalurus punctatus</i>	15
9	<i>Gambusia affinis</i>	1
10	<i>Pomoxis annularis</i>	1

***Hybognathus amarus (age-classes):**

age-0	7
age-1	
age-2+	

**Rio Grande Silvery Minnow Population Monitoring
 June 2024**

NEW MEXICO: SOCORRO County, RIO GRANDE Drainage
 Rio Grande, ca. 1.2 mi upstream of San Acacia Diversion Dam, San Acacia.
 Site Number: 11 River Mile: 117.3
 UTM Easting: 328152 UTM Northing: 3792564 Zone: 13
 Collector(s): Dudley, R.K.; Farrington, M.A.; Accardo, C.M.; Dunn, E.A.

RKD24-090

28 June 2024
 USGS Quad: La Joya
 Effort: 387.1 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
4	<i>Cyprinella lutrensis</i>	5
4	<i>Hybognathus amarus*</i>	19
4	<i>Pimephales promelas</i>	1
5	<i>Ictalurus punctatus</i>	103
9	<i>Gambusia affinis</i>	25
10	<i>Pomoxis annularis</i>	4

***Hybognathus amarus (age-classes):**

age-0	19
age-1	
age-2+	

NEW MEXICO: SOCORRO County, RIO GRANDE Drainage
 Rio Grande, just downstream of San Acacia Diversion Dam, San Acacia.
 Site Number: 12 River Mile: 115.6
 UTM Easting: 325960 UTM Northing: 3792183 Zone: 13
 Collector(s): Dudley, R.K.; Farrington, M.A.; Accardo, C.M.; Dunn, E.A.

RKD24-089

28 June 2024
 USGS Quad: San Acacia
 Effort: 504.0 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
1	<i>Dorosoma cepedianum</i>	3
2	<i>Carpionodes carpio</i>	1
3	<i>Cyprinus carpio</i>	4
4	<i>Cyprinella lutrensis</i>	198
4	<i>Hybognathus amarus*</i>	19
4	<i>Platygobio gracilis</i>	19
5	<i>Ameiurus natalis</i>	1
5	<i>Ictalurus punctatus</i>	13
9	<i>Gambusia affinis</i>	17
10	<i>Pomoxis annularis</i>	1

***Hybognathus amarus (age-classes):**

age-0	9
age-1	10
age-2+	

**Rio Grande Silvery Minnow Population Monitoring
 June 2024**

NEW MEXICO: SOCORRO County, RIO GRANDE Drainage
 Rio Grande, ca. 1.5 mi downstream of San Acacia Diversion Dam, San Acacia.
 Site Number: 13 River Mile: 114.1
 UTM Easting: 325390 UTM Northing: 3790397 Zone: 13
 Collector(s): Dudley, R.K.; Farrington, M.A.; Accardo, C.M.; Dunn, E.A.

RKD24-088
 28 June 2024
 USGS Quad: Lemitar
 Effort: 438.9 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
3	<i>Cyprinus carpio</i>	1
4	<i>Cyprinella lutrensis</i>	100
4	<i>Hybognathus amarus*</i>	10
5	<i>Ictalurus punctatus</i>	34
9	<i>Gambusia affinis</i>	6
10	<i>Pomoxis annularis</i>	1
11	<i>Morone chrysops</i>	1

***Hybognathus amarus (age-classes):**

age-0	2
age-1	8
age-2+	

NEW MEXICO: SOCORRO County, RIO GRANDE Drainage
 Rio Grande, ca. 0.5 mi upstream of Socorro Low Flow Conveyance Channel bridge crossing, Socorro.
 Site Number: 14 River Mile: 99.6
 UTM Easting: 327231 UTM Northing: 3771432 Zone: 13
 Collector(s): Dudley, R.K.; Farrington, M.A.; Accardo, C.M.; Dunn, E.A.

RKD24-087
 28 June 2024
 USGS Quad: Loma de las Canas
 Effort: 500.8 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
3	<i>Cyprinus carpio</i>	2
4	<i>Cyprinella lutrensis</i>	47
4	<i>Hybognathus amarus*</i>	12
4	<i>Platygobio gracilis</i>	1
5	<i>Ictalurus punctatus</i>	24
9	<i>Gambusia affinis</i>	4

***Hybognathus amarus (age-classes):**

age-0	7
age-1	5
age-2+	

**Rio Grande Silvery Minnow Population Monitoring
 June 2024**

NEW MEXICO: SOCORRO County, RIO GRANDE Drainage
 Rio Grande, ca. 4.5 mi upstream of US HWY 380 bridge crossing, San Antonio.
 Site Number: 15 River Mile: 92.0
 UTM Easting: 328151 UTM Northing: 3761487 Zone: 13
 Collector(s): Dudley, R.K.; Farrington, M.A.; Accardo, C.M.; Dunn, E.A.

RKD24-086
 28 June 2024
 USGS Quad: San Antonio
 Effort: 470.8 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
2	<i>Carpiodes carpio</i>	27
3	<i>Cyprinus carpio</i>	2
4	<i>Cyprinella lutrensis</i>	79
4	<i>Hybognathus amarus*</i>	163
4	<i>Pimephales promelas</i>	1
4	<i>Platygobio gracilis</i>	7
5	<i>Ictalurus punctatus</i>	10
9	<i>Gambusia affinis</i>	49

***Hybognathus amarus (age-classes):**
 age-0 159
 age-1 4
 age-2+

NEW MEXICO: SOCORRO County, RIO GRANDE Drainage
 Rio Grande, at US HWY 380 bridge crossing, San Antonio.
 Site Number: 16 River Mile: 87.8
 UTM Easting: 328907 UTM Northing: 3754926 Zone: 13
 Collector(s): Dudley, R.K.; Farrington, M.A.; Accardo, C.M.; Dunn, E.A.

RKD24-085
 27 June 2024
 USGS Quad: San Antonio
 Effort: 519.1 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
2	<i>Carpiodes carpio</i>	13
3	<i>Cyprinus carpio</i>	1
4	<i>Cyprinella lutrensis</i>	15
4	<i>Hybognathus amarus*</i>	11
5	<i>Ictalurus punctatus</i>	8
9	<i>Gambusia affinis</i>	50

***Hybognathus amarus (age-classes):**
 age-0 8
 age-1 3
 age-2+

**Rio Grande Silvery Minnow Population Monitoring
 June 2024**

NEW MEXICO: SOCORRO County, RIO GRANDE Drainage
 Rio Grande, east of Bosque del Apache NWR headquarters, San Antonio.
 Site Number: 17 River Mile: 79.0
 UTM Easting: 327219 UTM Northing: 3740906 Zone: 13
 Collector(s): Dudley, R.K.; Farrington, M.A.; Accardo, C.M.; Dunn, E.A.

RKD24-084

27 June 2024
 USGS Quad: San Antonio SE
 Effort: 524.2 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
2	<i>Carpiodes carpio</i>	3
3	<i>Cyprinus carpio</i>	2
4	<i>Cyprinella lutrensis</i>	25
4	<i>Hybognathus amarus*</i>	8
9	<i>Gambusia affinis</i>	13

***Hybognathus amarus (age-classes):**

age-0	1
age-1	7
age-2+	

NEW MEXICO: SOCORRO County, RIO GRANDE Drainage
 Rio Grande, at San Marcial Railroad bridge crossing, San Marcial.
 Site Number: 18 River Mile: 68.3
 UTM Easting: 315091 UTM Northing: 3728487 Zone: 13
 Collector(s): Dudley, R.K.; Farrington, M.A.; Accardo, C.M.; Dunn, E.A.

RKD24-083

27 June 2024
 USGS Quad: San Marcial
 Effort: 513.9 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
2	<i>Carpiodes carpio</i>	6
4	<i>Cyprinella lutrensis</i>	19
4	<i>Hybognathus amarus*</i>	1
5	<i>Ictalurus punctatus</i>	25
9	<i>Gambusia affinis</i>	8

***Hybognathus amarus (age-classes):**

age-0	1
age-1	
age-2+	

**Rio Grande Silvery Minnow Population Monitoring
 June 2024**

NEW MEXICO: SOCORRO County, RIO GRANDE Drainage **RKD24-082**
 Rio Grande, ca. 8.0 mi downstream of San Marcial Railroad bridge crossing, San Marcial.
 Site Number: 19 River Mile: 60.1 27 June 2024
 UTM Easting: 309441 UTM Northing: 3718309 Zone: 13 USGS Quad: Paraje Well
 Collector(s): Dudley, R.K.; Farrington, M.A.; Accardo, C.M.; Dunn, E.A. Effort: 497.0 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
2	<i>Carpiodes carpio</i>	9
4	<i>Cyprinella lutrensis</i>	57
4	<i>Hybognathus amarus*</i>	96
4	<i>Pimephales vigilax</i>	1
5	<i>Ictalurus furcatus</i>	1
5	<i>Ictalurus punctatus</i>	1
9	<i>Gambusia affinis</i>	19
10	<i>Pomoxis annularis</i>	2
12	<i>Percina macrolepida</i>	1

***Hybognathus amarus (age-classes):**

age-0	89
age-1	7
age-2+	

NEW MEXICO: SOCORRO County, RIO GRANDE Drainage **RKD24-081**
 Rio Grande, ca. 10.0 mi downstream of San Marcial Railroad bridge crossing, San Marcial.
 Site Number: 20 River Mile: 58.5 27 June 2024
 UTM Easting: 307767 UTM Northing: 3716360 Zone: 13 USGS Quad: Paraje Well
 Collector(s): Dudley, R.K.; Farrington, M.A.; Accardo, C.M.; Dunn, E.A. Effort: 544.5 sq. m

<u>Family</u>	<u>Species</u>	<u>Total</u>
1	<i>Dorosoma cepedianum</i>	1
3	<i>Cyprinus carpio</i>	1
4	<i>Cyprinella lutrensis</i>	18
4	<i>Hybognathus amarus*</i>	6
5	<i>Ictalurus punctatus</i>	8
9	<i>Gambusia affinis</i>	12

***Hybognathus amarus (age-classes):**

age-0	6
age-1	
age-2	