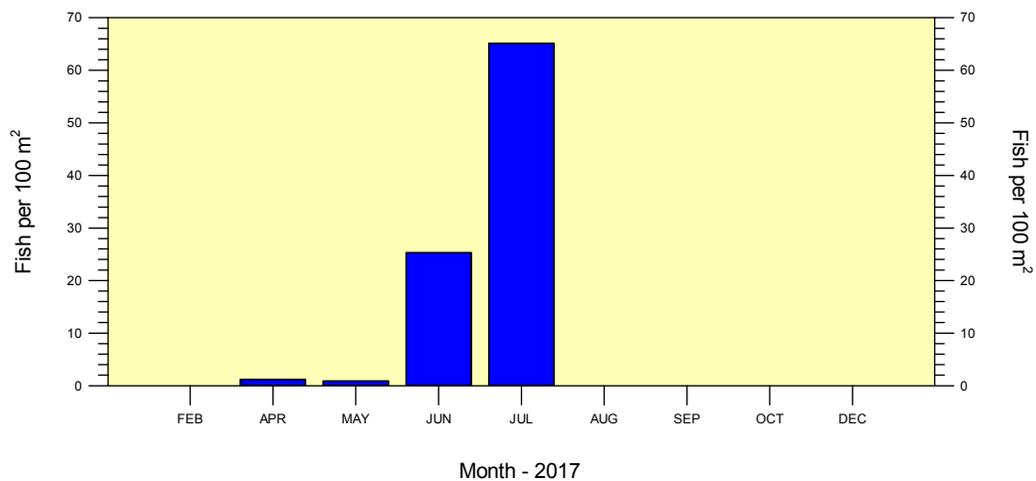
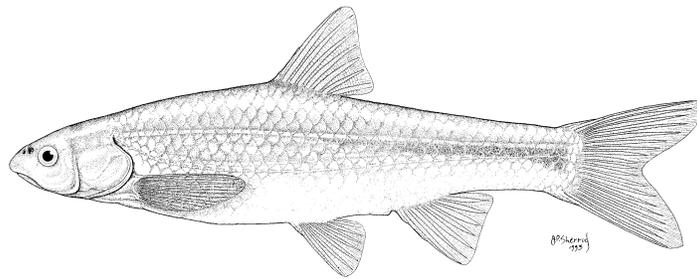


**RIO GRANDE SILVERY MINNOW POPULATION MONITORING RESULTS FROM
JULY 2017**

**A MIDDLE RIO GRANDE ENDANGERED SPECIES
COLLABORATIVE PROGRAM FUNDED RESEARCH PROJECT**



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30 August 2017

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Contract R17PC00028:

Requisition 0040306655

U.S. Bureau of Reclamation
Albuquerque Area Office
555 Broadway NE, Suite 100
Albuquerque, NM 87102-2352

submitted to:

U.S. Bureau of Reclamation
Albuquerque Area Office
555 Broadway NE, Suite 100
Albuquerque, NM 87102-2352

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SUMMARY OF JULY 2017 POPULATION MONITORING

The July population monitoring efforts were conducted at 20 sites throughout the Middle Rio Grande. Five sites were located in the Angostura Reach, six sites in the Isleta Reach, and nine sites in the San Acacia Reach. A list of collection localities is appended (Table A). Adult and juvenile fish were obtained by rapidly drawing a 3.1 m x 1.8 m small mesh (3/16th inch) seine through discrete mesohabitats. Larval fish were also collected with a 1.0 m x 1.0 m fine mesh (1/16th inch) seine in all seasons except winter. 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, however, only present after annual spring spawning occurs (ca. April–June). Figures illustrating fish densities (i.e., fish per 100 m²) were prepared for the ten focal species to facilitate comparisons across reaches.

During July, sampling covered 10,624.3 m² (surface area) of water and yielded 10,876 fish. Cumulative fish density during July was 102.37 individuals/100 m² sampled. The three most common species were Rio Grande Silvery Minnow (n = 6,920), Red Shiner (n = 2,388), and Western Mosquitofish (n = 650). The 20 sampling sites yielded a total of 18 fish species. Rio Grande Silvery Minnow was present in 247 of the 344 seine hauls that yielded fish. We collected Rio Grande Silvery Minnow at 20 of the 20 sampling sites, and its overall density was 65.13 (n = 6,920) individuals/100 m² sampled. Densities of unmarked and marked individuals were 65.13 (n = 6,920) and 0.00 (n = 0) individuals/100 m² sampled, respectively. Densities of age-0, age-1, and age-2+ individuals were 63.61 (n = 6,758), 1.47 (n = 156), and 0.06 (n = 6) individuals/100 m² sampled, respectively.

Rio Grande Silvery Minnow that were stocked during autumn 2016 (ca. 66,000; Thomas P. Archdeacon, New Mexico Fish and Wildlife Conservation Office, pers. comm.) were present at low densities during the spring of 2017. Overwinter mortality of Rio Grande Silvery Minnow apparently resulted in substantial losses of individuals (both unmarked and marked). However, the abundance of Rio Grande Silvery Minnow in July 2017 was substantially higher than it was in July 2016. Ensuring reasonable summer flows will be crucial for the successful survival of Rio Grande Silvery Minnow during 2017.

JULY 2017 POPULATION MONITORING BY RIVER REACH

Angostura Reach

Mean daily discharge in the Angostura Reach (Rio Grande at Albuquerque, NM; USGS Gage 8330000) averaged 838.0 and ranged from 461 to 2,040 cfs from 16 June to 15 July. Water temperatures ranged from 23 to 29.6 °C during the Angostura Reach sampling efforts (ca. 0830–1530 h). Secchi disk measurements of water clarity ranged from 24 to 45 cm.

Sampling for fishes in the Angostura Reach during July yielded 1,262 individuals with a cumulative fish density of 49.1 individuals/100 m² sampled. The overall sampling effort in the Angostura Reach covered 2,570.0 m² (surface area) of water. Densities of all fish species combined ranged from 23.3 to 119.0 individuals per 100 m² at the five sampling sites. In July, there were 11 fish species collected in the Angostura Reach. Rio Grande Silvery Minnow was the most abundant taxon (n = 815), followed by Red Shiner (n = 167), and White Sucker (n = 80). Densities of Rio Grande Silvery Minnow ranged from 0.2 to 109.9 individuals per 100 m². Rio Grande Silvery Minnow (n = 815) was present in 39 of the 79 seine hauls that yielded fish during July.

Isleta Reach

In the Isleta Reach, mean daily discharge (Rio Grande at Isleta Lakes near Isleta, NM; USGS Gage 08354900) averaged 652.0 and ranged from 467 to 975 cfs from 16 June to 15 July. Water temperatures ranged from 23.4 to 32.8 °C throughout the sampling localities during the day (ca. 0930–1600 h). Secchi disk measurements ranged from 15 to 25 cm during sampling.

Isleta Reach population monitoring efforts produced 2,999 individuals in July with a cumulative fish density of 94.6 individuals/100 m² sampled. The total sampling effort in the Isleta Reach during July covered 3,168.9 m² (surface area) of water. Fish densities (all species combined) at the six sites ranged from 27.4 to 203.4 individuals per 100 m² sampled. There were 14 fish species collected in the Isleta Reach during July. Rio Grande Silvery Minnow was the most abundant taxon (n = 2,099), followed by Western Mosquitofish (n = 280), and Red Shiner (n = 262). Densities of Rio Grande Silvery Minnow ranged from 14.8 to 150.9 individuals per 100 m². Rio Grande Silvery Minnow (n = 2,099) was present in 82 of the 103 seine hauls that yielded fish during July.

San Acacia Reach

Mean daily discharge at San Acacia (Rio Grande Floodway at San Acacia, NM; USGS Gage 08354900) from 16 June to 15 July was similar (average = 333.2; range = 82–848 cfs) to San Marcial (Rio Grande Floodway at San Marcial, NM; USGS Gage 08358400) during the same period (average = 437.5; range = 24–1,890 cfs). Water temperatures in July for the San Acacia Reach ranged from 23.7 to 34.4 °C (ca. 0930–1600 h). Water clarity was generally lower in this reach (Secchi disk range = 11–38 cm) compared to the two upstream reaches.

Population monitoring efforts in the San Acacia Reach during July yielded 6,615 individuals with a cumulative fish density of 135.4 individuals per 100 m² sampled. Sampling in the San Acacia Reach covered an area of 4,885.4 m² of water. Fish densities (all species combined) ranged from 20.3 to 342.5 individuals per 100 m² at the nine sites sampled in the San Acacia Reach. In July, there were 16 fish species collected in the San Acacia Reach. Rio Grande Silvery Minnow was the most abundant taxon (n = 4,006), followed by Red Shiner (n = 1,959), and Western Mosquitofish (n = 313). Densities of Rio Grande Silvery Minnow ranged from 1.3 to 297.4 individuals per 100 m². Rio Grande Silvery Minnow (n = 4,006) was present in 126 of the 162 seine hauls that yielded fish during July.

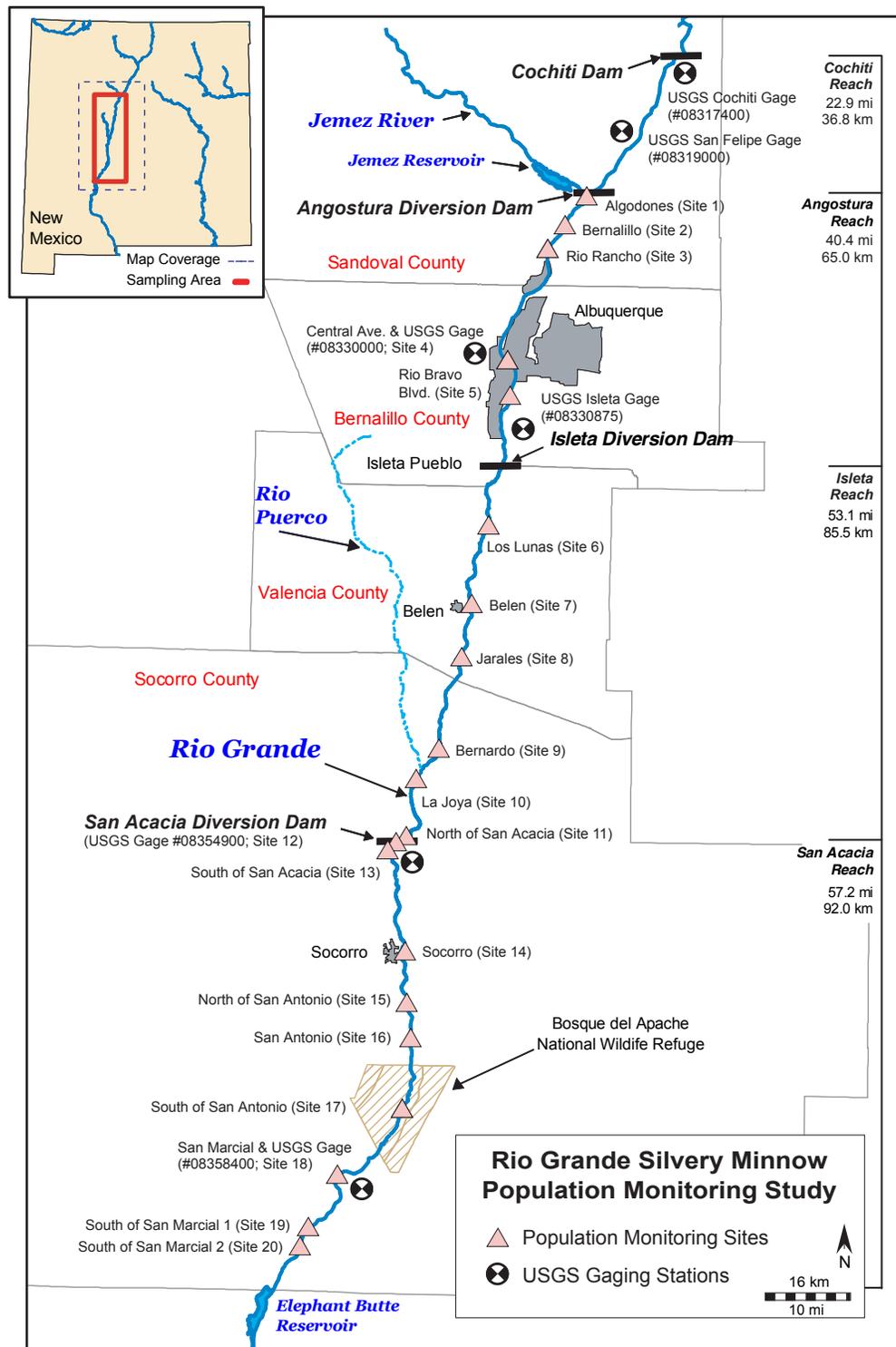


Figure 1. Map of the study area and sampling sites (numbered) for the Rio Grande Silvery Minnow population monitoring study. Sampling site descriptions are located in Appendix A.

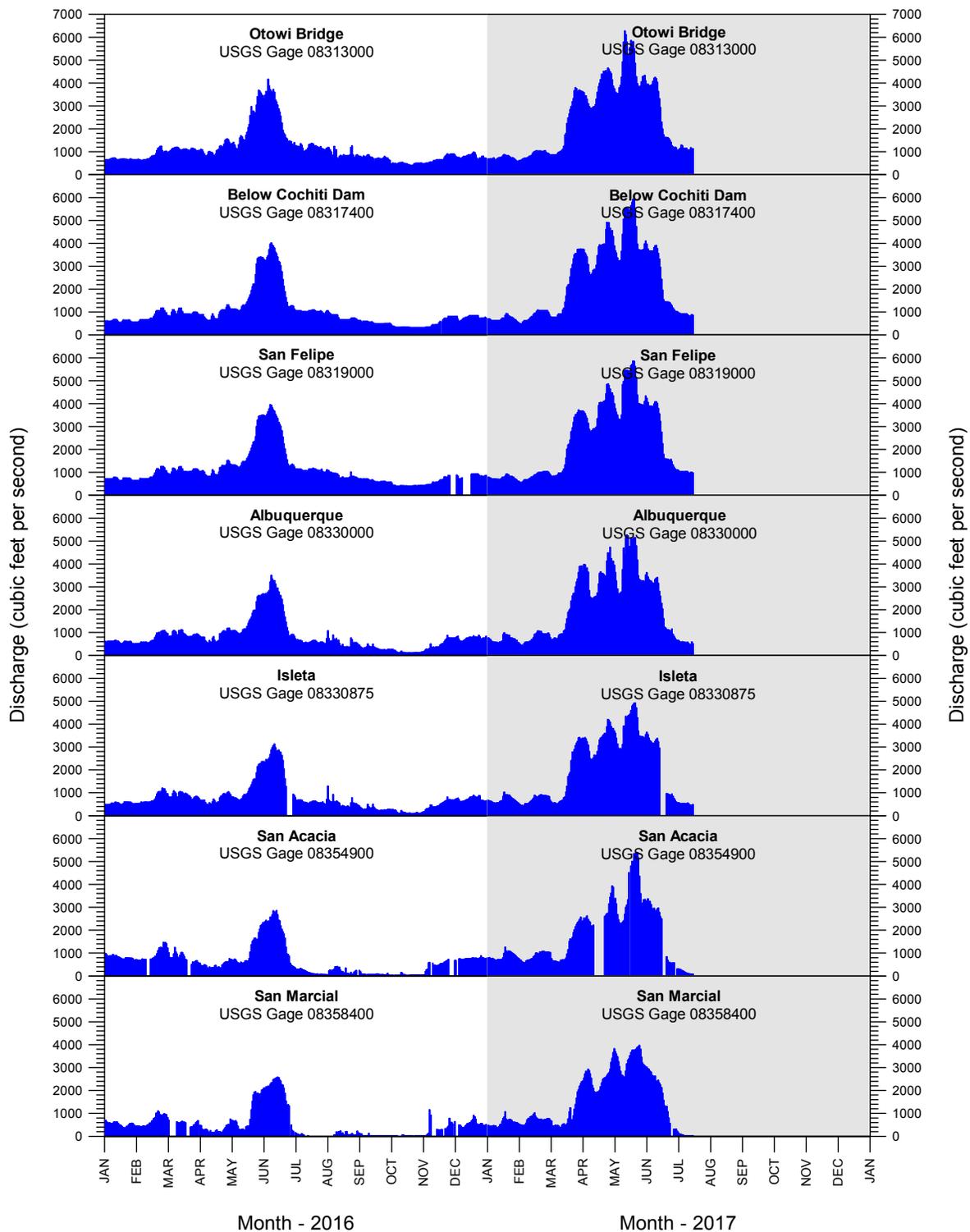


Figure 2. Rio Grande discharge from 1 January 2016 to 15 July 2017 at U.S. Geological Survey (USGS) gaging stations. Discharge data are provisional and subject to change.

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

Scientific Name	Common Name	Species Code
Order Clupeiformes		
Family Clupeidae		
	herrings	
<i>Dorosoma cepedianum</i>	Gizzard Shad	(DORCEP)
<i>Dorosoma petenense</i>	Threadfin Shad	(DORPET)
Order Cypriniformes		
Family Cyprinidae		
	carps and minnows	
<i>Campostoma anomalum</i>	Central Stoneroller	(CAMANO)
<i>Carassius auratus</i>	Goldfish	(CARAUR)
<i>Cyprinella lutrensis</i>	Red Shiner ¹	(CYPLUT)
<i>Cyprinus carpio</i>	Common Carp ¹	(CYPCAR)
<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)
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)
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)
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)

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

Scientific Name	Common Name	Species Code
Order Perciformes		
Family Moronidae		
	temperate basses	
<i>Morone chrysops</i>	White Bass	(MORCHR)
<i>Morone saxatilis</i>	Striped Bass	(MORSAX)
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>	Largemouth Bass	(MICSAL)
<i>Pomoxis annularis</i>	White Crappie	(POMANN)
<i>Pomoxis nigromaculatus</i>	Black Crappie	(POMNIG)
Family Percidae		
	perches	
<i>Perca flavescens</i>	Yellow Perch	(PERFLA)
<i>Percina macrolepida</i>	Bigscale Logperch	(PERMAC)
<i>Sander vitreus</i>	Walleye	(SANVIT)

¹ = Focal taxa were the most abundant species from recent Middle Rio Grande collections.

Table 2. Summary of the July 2017 Rio Grande Silvery Minnow population monitoring results (species list is based on fish collected since 1993).

Family	Common Name	Residence Status ¹	Total Number of Individuals	Percent (%) of Total	Frequency of Occurrence ²	% Frequency of Occurrence ²
Clupeidae	Gizzard Shad	N	2	0.02	1	5
Clupeidae	Threadfin Shad	I	-	-	-	-
Cyprinidae	Central Stoneroller	I	-	-	-	-
Cyprinidae	Goldfish	I	-	-	-	-
Cyprinidae	Red Shiner	N	2,388	21.96	20	100
Cyprinidae	Common Carp	I	188	1.73	19	95
Cyprinidae	Rio Grande Chub	N	-	-	-	-
Cyprinidae	Rio Grande Silvery Minnow	N	6,920	63.63	20	100
Cyprinidae	Golden Shiner	I	-	-	-	-
Cyprinidae	Fathead Minnow	N	18	0.17	9	45
Cyprinidae	Bullhead Minnow	I	1	0.01	1	5
Cyprinidae	Flathead Chub	N	185	1.70	18	90
Cyprinidae	Longnose Dace	N	72	0.66	4	20
Catostomidae	River Carpsucker	N	111	1.02	12	60
Catostomidae	White Sucker	I	108	0.99	13	65
Catostomidae	Smallmouth Buffalo	N	20	0.18	3	15
Ictaluridae	Black Bullhead	I	9	0.08	3	15
Ictaluridae	Yellow Bullhead	I	23	0.21	5	25
Ictaluridae	Blue Catfish	N	27	0.25	4	20
Ictaluridae	Channel Catfish	I	130	1.20	8	40
Ictaluridae	Flathead Catfish	N	-	-	-	-
Salmonidae	Rainbow Trout	I	-	-	-	-
Salmonidae	Brown Trout	I	-	-	-	-
Poeciliidae	Western Mosquitofish	I	650	5.98	20	100
Moronidae	White Bass	I	-	-	-	-
Moronidae	Striped Bass	I	-	-	-	-
Centrarchidae	Green Sunfish	I	-	-	-	-
Centrarchidae	Bluegill	N	-	-	-	-
Centrarchidae	Longear Sunfish	I	-	-	-	-
Centrarchidae	Smallmouth Bass	I	-	-	-	-
Centrarchidae	Largemouth Bass	I	16	0.15	7	35
Centrarchidae	White Crappie	I	8	0.07	3	15
Centrarchidae	Black Crappie	I	-	-	-	-
Percidae	Yellow Perch	I	-	-	-	-
Percidae	Bigscale Logperch	I	-	-	-	-
Percidae	Walleye	I	-	-	-	-
Monthly Total			10,876	100.00		

¹ = N (native); I (introduced)

² = Frequency and % frequency of occurrence were based on 20 site samples.

Table 3. Summary of the Rio Grande Silvery Minnow population monitoring results by month. Sampling was not conducted in February of 2017.

Family	Common Name	Feb	Apr	May	Jun	Jul	Aug	Sep	Oct	Dec	Total
Clupeidae	Gizzard Shad	-	-	2	2	2	-	-	-	-	6
Clupeidae	Threadfin Shad	-	-	-	4	-	-	-	-	-	4
Cyprinidae	Central Stoneroller	-	-	-	-	-	-	-	-	-	0
Cyprinidae	Goldfish	-	-	-	-	-	-	-	-	-	0
Cyprinidae	Red Shiner	-	159	602	1,264	2,388	-	-	-	-	4,413
Cyprinidae	Common Carp	-	12	149	408	188	-	-	-	-	757
Cyprinidae	Rio Grande Chub	-	-	-	-	-	-	-	-	-	0
Cyprinidae	Rio Grande Silvery Minnow	-	111	119	2,327	6,920	-	-	-	-	9,477
Cyprinidae	Golden Shiner	-	-	-	-	-	-	-	-	-	0
Cyprinidae	Fathead Minnow	-	4	6	63	18	-	-	-	-	91
Cyprinidae	Bullhead Minnow	-	-	-	-	1	-	-	-	-	1
Cyprinidae	Flathead Chub	-	84	215	426	185	-	-	-	-	910
Cyprinidae	Longnose Dace	-	28	41	93	72	-	-	-	-	234
Catostomidae	River Carpsucker	-	2	5	9	111	-	-	-	-	127
Catostomidae	White Sucker	-	9	78	139	108	-	-	-	-	334
Catostomidae	Smallmouth Buffalo	-	-	4	-	20	-	-	-	-	24
Ictaluridae	Black Bullhead	-	-	-	-	9	-	-	-	-	9
Ictaluridae	Yellow Bullhead	-	-	-	1	23	-	-	-	-	24
Ictaluridae	Blue Catfish	-	-	2	25	27	-	-	-	-	54
Ictaluridae	Channel Catfish	-	86	61	38	130	-	-	-	-	315
Ictaluridae	Flathead Catfish	-	-	1	-	-	-	-	-	-	1
Salmonidae	Rainbow Trout	-	-	-	-	-	-	-	-	-	0
Salmonidae	Brown Trout	-	-	-	-	-	-	-	-	-	0
Poeciliidae	Western Mosquitofish	-	4	43	123	650	-	-	-	-	820
Moronidae	White Bass	-	-	1	1	-	-	-	-	-	2
Moronidae	Striped Bass	-	-	-	-	-	-	-	-	-	0
Centrarchidae	Green Sunfish	-	-	1	-	-	-	-	-	-	1
Centrarchidae	Bluegill	-	-	-	-	-	-	-	-	-	0
Centrarchidae	Longear Sunfish	-	-	-	-	-	-	-	-	-	0
Centrarchidae	Smallmouth Bass	-	-	-	-	-	-	-	-	-	0
Centrarchidae	Largemouth Bass	-	1	1	-	16	-	-	-	-	18
Centrarchidae	White Crappie	-	-	-	1	8	-	-	-	-	9
Centrarchidae	Black Crappie	-	-	-	-	-	-	-	-	-	0
Percidae	Yellow Perch	-	-	-	-	-	-	-	-	-	0
Percidae	Bigscale Logperch	-	-	-	-	-	-	-	-	-	0
Percidae	Walleye	-	-	-	-	-	-	-	-	-	0
Monthly Totals		-	500	1,331	4,924	10,876	-	-	-	-	17,631

Table 4. Summary of the abundance of Rio Grande Silvery Minnow, by reach, site, and month, during 2017. Marked individuals at sites are shown in parentheses. Sampling was not conducted in February of 2017. Sampling at the additional sites (e.g., 21–30) took place in May of 2017.

Reach	Site	Locality	Feb	Apr	May	Jun	Jul	Aug	Sep	Oct	Dec	Total
Angostura	1	Angostura Dam	-	-	-	-	1(0)	-	-	-	-	1
Angostura	2	Bernalillo	-	8(0)	-	9(0)	82(0)	-	-	-	-	99
Angostura	3	Rio Rancho	-	-	1(0)	12(0)	58(0)	-	-	-	-	71
Angostura	21	Site 21	-	-	3(0)	-	-	-	-	-	-	3
Angostura	22	Site 22	-	-	-	-	-	-	-	-	-	0
Angostura	23	Site 23	-	-	1(0)	-	-	-	-	-	-	1
Angostura	24	Site 24	-	-	10(0)	-	-	-	-	-	-	10
Angostura	4	Central Ave.	-	9(0)	28(0)	201(0)	533(0)	-	-	-	-	771
Angostura	5	Rio Bravo Blvd.	-	18(0)	14(0)	17(0)	141(0)	-	-	-	-	190
Angostura	25	Site 25	-	-	11(0)	-	-	-	-	-	-	11
<i>Angostura Totals</i>			-	35	68	239	815	-	-	-	-	1,157
Isleta	26	Site 26	-	-	7(0)	-	-	-	-	-	-	7
Isleta	6	Los Lunas	-	-	-	796(0)	76(0)	-	-	-	-	872
Isleta	27	Site 27	-	-	2(0)	-	-	-	-	-	-	2
Isleta	7	Belen	-	-	2(0)	555(0)	231(0)	-	-	-	-	788
Isleta	8	Jarales	-	2(0)	2(0)	177(0)	389(0)	-	-	-	-	570
Isleta	28	Site 28	-	-	1(0)	-	-	-	-	-	-	1
Isleta	9	Bernardo	-	-	-	11(0)	326(0)	-	-	-	-	337
Isleta	10	La Joya	-	-	1(0)	15(0)	293(0)	-	-	-	-	309
Isleta	29	Site 29	-	-	1(0)	-	-	-	-	-	-	1
Isleta	11	North of San Acacia	-	-	-	8(0)	784(0)	-	-	-	-	792
<i>Isleta Totals</i>			-	2	16	1,562	2,099	-	-	-	-	3,679
San Acacia	12	San Acacia Dam	-	15(0)	2(0)	3(0)	1566(0)	-	-	-	-	1,586
San Acacia	13	South of San Acacia	-	37(0)	12(0)	75(0)	899(0)	-	-	-	-	1,023
San Acacia	30	Site 30	-	-	16(0)	-	-	-	-	-	-	16
San Acacia	14	Socorro	-	1(0)	-	16(0)	251(0)	-	-	-	-	268
San Acacia	15	North of San Antonio	-	18(0)	2(0)	7(0)	588(0)	-	-	-	-	615
San Acacia	16	San Antonio	-	-	1(0)	17(0)	562(0)	-	-	-	-	580
San Acacia	17	South of San Antonio	-	-	1(0)	214(0)	84(0)	-	-	-	-	299
San Acacia	18	San Marcial	-	2(0)	-	48(0)	21(0)	-	-	-	-	71
San Acacia	19	South of San Marcial 1	-	1(1)	-	146(0)	8(0)	-	-	-	-	155
San Acacia	20	South of San Marcial 2	-	-	1(1)	-	27(0)	-	-	-	-	28
<i>San Acacia Totals</i>			-	74	35	526	4,006	-	-	-	-	4,641
Monthly Totals			-	111	119	2,327	6,920	-	-	-	-	9,477

Table 5. Summary of the abundance of Rio Grande Silvery Minnow, by reach, site and mesohabitat, during July 2017. Blank cells indicate mesohabitats that were unavailable for sampling at certain sites.

Reach	Site	Locality	BW	PO	RU	SHPO	SHRU	Total
Angostura	1	Angostura Dam		-	1	-	-	1
Angostura	2	Bernalillo	19	2		49	12	82
Angostura	3	Rio Rancho		2	13	25	18	58
Angostura	4	Central Ave.	31	1	18	35	448	533
Angostura	5	Rio Bravo Blvd.	20	31	20	24	46	141
<i>Angostura Totals</i>			70	36	52	133	524	815
Isleta	6	Los Lunas	-	11	4	20	41	76
Isleta	7	Belen		-	12	173	46	231
Isleta	8	Jarales	9	66	1	296	17	389
Isleta	9	Bernardo	270	3	1	37	15	326
Isleta	10	La Joya		6	19	55	213	293
Isleta	11	North of San Acacia	32	20	253	189	290	784
<i>Isleta Totals</i>			311	106	290	770	622	2,099
San Acacia	12	San Acacia Dam		25	496	480	565	1,566
San Acacia	13	South of San Acacia		22	153	144	580	899
San Acacia	14	Socorro	6	36	25	88	96	251
San Acacia	15	North of San Antonio	45	41	69	58	375	588
San Acacia	16	San Antonio	12	288	90	60	112	562
San Acacia	17	South of San Antonio	2	5	9	13	55	84
San Acacia	18	San Marcial	1	-	3	3	14	21
San Acacia	19	South of San Marcial 1		-	1	2	5	8
San Acacia	20	South of San Marcial 2		6	3	6	12	27
<i>San Acacia Totals</i>			66	423	849	854	1,814	4,006
Monthly Totals			447	565	1,191	1,757	2,960	6,920

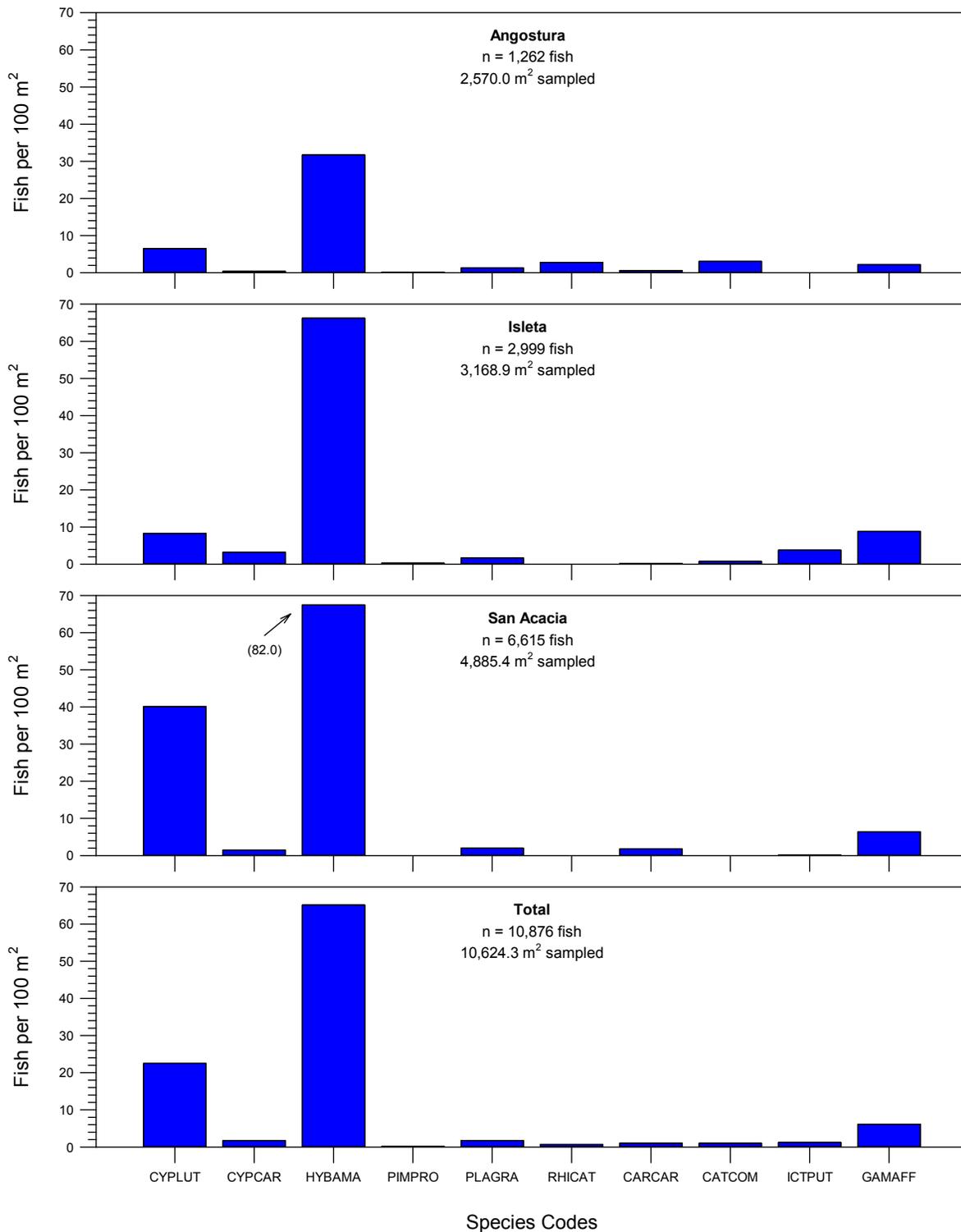


Figure 3. Fish densities during July 2017 for each focal species (see Table 1 for species codes), by sampling reach, in the Middle Rio Grande. Note: all marked and unmarked individuals are included.

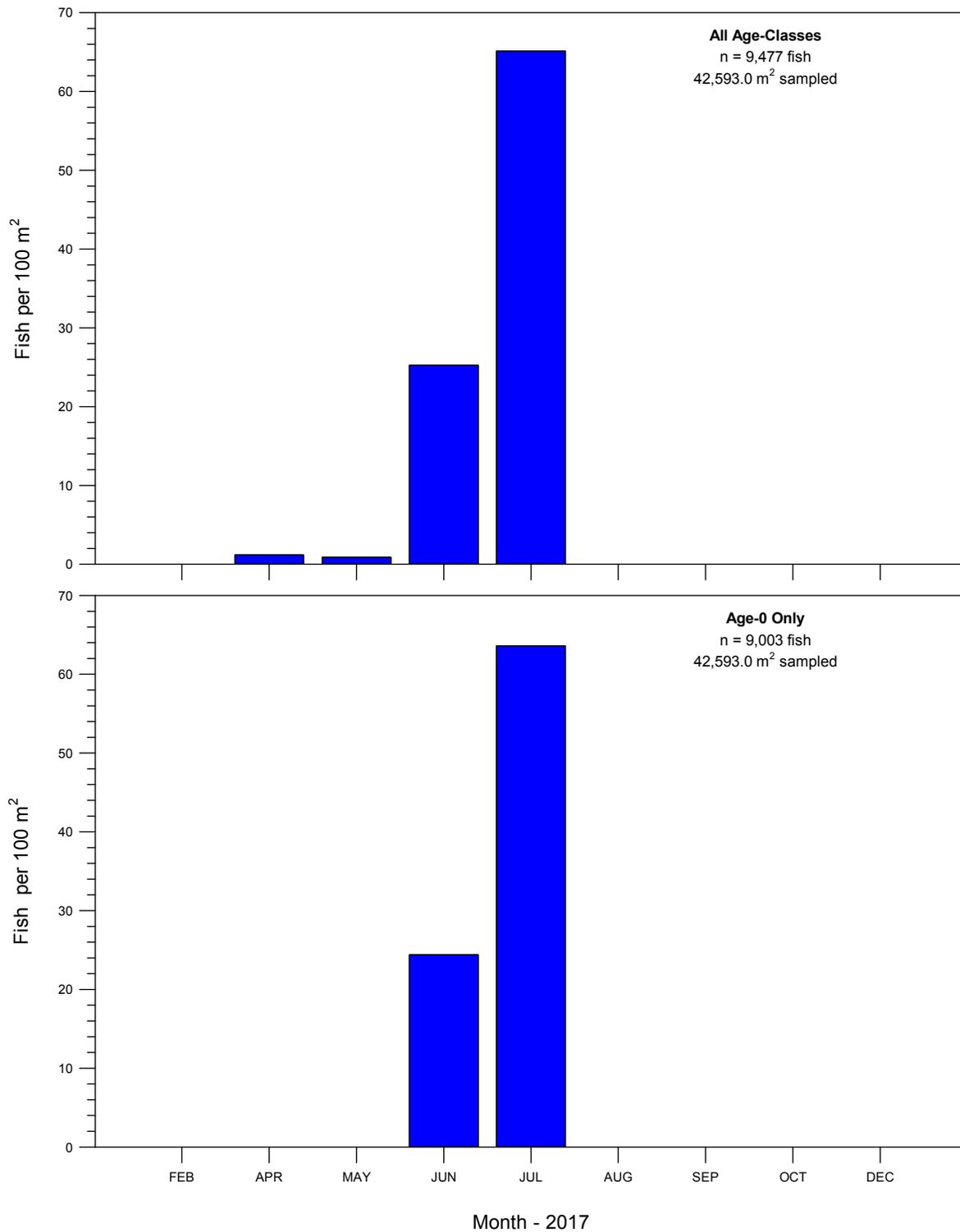


Figure 4. Rio Grande Silvery Minnow densities (all age-classes and age-0 only) during 2017, by sampling month, in the Middle Rio Grande. Note: all marked and unmarked individuals are included. Sampling was not conducted in February of 2017.

APPENDIX A (Sampling Sites)

Middle Rio Grande Fish Sampling Sites

Table A - 1. Sampling reaches and sites for population monitoring of Rio Grande Silvery Minnow in the Middle Rio Grande, NM.

Reach and Site	Locality
Angostura Reach	
1	New Mexico, Sandoval County, Rio Grande, downstream of Angostura Diversion Dam, Algodones. River Mile: 209.7; UTM Easting: 363811; UTM Northing: 3916006; Zone: 13S; Datum: NAD27
2	New Mexico, Sandoval County, Rio Grande, upstream of US Highway 550 bridge crossing, Bernalillo. River Mile: 203.8; UTM Easting: 358543; UTM Northing: 3909722; Zone: 13S; Datum: NAD27
3	New Mexico, Sandoval County, Rio Grande, ca. 4.0 miles downstream of US Highway 550 bridge crossing, at Rio Rancho Wastewater Treatment Plant, Rio Rancho. River Mile: 200.0; UTM Easting: 354772; UTM Northing: 3905355; Zone: 13S; Datum: NAD27
4	New Mexico, Bernalillo County, Rio Grande, upstream of Central Avenue (US Highway 66) bridge crossing, Albuquerque. River Mile: 183.4; UTM Easting: 346840; UTM Northing: 3884094; Zone: 13S; Datum: NAD27
5	New Mexico, Bernalillo County, Rio Grande, upstream of Rio Bravo Boulevard bridge crossing, Albuquerque. River Mile: 178.3; UTM Easting: 347554; UTM Northing: 3877163; Zone: 13S; Datum: NAD27
Isleta Reach	
6	New Mexico, Valencia County, Rio Grande, ca. 0.3 miles upstream of Los Lunas (NM State Highway 49) bridge crossing, Los Lunas. River Mile: 161.4; UTM Easting: 342898; UTM Northing: 3852531; Zone: 13S; Datum: NAD27
7	New Mexico, Valencia County, Rio Grande, ca. 1.0 miles upstream of NM State Highway 309/6 bridge crossing, Belen. River Mile: 151.5; UTM Easting: 339972; UTM Northing: 3837061; Zone: 13S; Datum: NAD27
8	New Mexico, Valencia County, Rio Grande, ca. 2.2 miles upstream of NM State Highway 346 bridge crossing, Jarales. River Mile: 143.2; UTM Easting: 338136; UTM Northing: 3827329; Zone: 13S; Datum: NAD27
9	New Mexico, Socorro County, Rio Grande, upstream of US Highway 60 bridge crossing, Bernardo. River Mile: 130.6; UTM Easting: 334604; UTM Northing: 3809726; Zone: 13S; Datum: NAD27
10	New Mexico, Socorro County, Rio Grande, ca. 3.5 miles downstream of US Highway 60 bridge crossing, La Joya. River Mile: 127.0; UTM Easting: 331094; UTM Northing: 3805229; Zone: 13S; Datum: NAD27
11	New Mexico, Socorro County, Rio Grande, ca. 0.6 miles upstream of San Acacia Diversion Dam, San Acacia. River Mile: 116.8; UTM Easting: 327902; UTM Northing: 3792603; Zone: 13S; Datum: NAD27

Table A - 1. Sampling reaches and sites for population monitoring of Rio Grande Silvery Minnow in the Middle Rio Grande, NM (continued).

Reach and Site	Locality
San Acacia Reach	
12	New Mexico, Socorro County, Rio Grande, downstream of San Acacia Diversion Dam, San Acacia. River Mile: 116.2; UTM Easting: 326162; UTM Northing: 3791977; Zone: 13S; Datum: NAD27
13	New Mexico, Socorro County, Rio Grande, ca. 1.5 miles downstream of San Acacia Diversion Dam, San Acacia. River Mile: 114.6; UTM Easting: 325263; UTM Northing: 3790442; Zone: 13S; Datum: NAD27
14	New Mexico, Socorro County, Rio Grande, ca. 0.5 miles upstream of the Low Flow Conveyance Channel bridge, east and upstream of Socorro Wastewater Treatment Plant, Socorro. River Mile: 99.5; UTM Easting: 327097; UTM Northing: 3771043; Zone: 13S; Datum: NAD27
15	New Mexico, Socorro County, Rio Grande, ca. 4.0 miles upstream of US Highway 380 bridge crossing, San Antonio. River Mile: 91.7; UTM Easting: 328140; UTM Northing: 3761283; Zone: 13S; Datum: NAD27
16	New Mexico, Socorro County, Rio Grande, upstream of US Highway 380 bridge crossing, San Antonio. River Mile: 87.1; UTM Easting: 328914; UTM Northing: 3754471; Zone: 13S; Datum: NAD27
17	New Mexico, Socorro County, Rio Grande, directly east of Bosque del Apache National Wildlife Refuge headquarters, San Antonio. River Mile: 79.1; UTM Easting: 327055; UTM Northing: 3740839; Zone: 13S; Datum: NAD27
18	New Mexico, Socorro County, Rio Grande, downstream of the San Marcial railroad crossing, San Marcial. River Mile: 68.6; UTM Easting: 315284; UTM Northing: 3728347; Zone: 13S; Datum: NAD27
19	New Mexico, Socorro County, Rio Grande, at its former confluence with the Low Flow Conveyance Channel and 16 miles downstream of the southern end of the Bosque del Apache National Wildlife Refuge, San Marcial. River Mile: 60.5; UTM Easting: 309487; UTM Northing: 3718178; Zone: 13S; Datum: NAD27
20	New Mexico, Socorro County, Rio Grande, ca. 10.0 miles downstream of the San Marcial Railroad Bridge crossing, San Marcial. River Mile: 58.8; UTM Easting: 307846; UTM Northing: 3716150; Zone: 13S; Datum: NAD27

APPENDIX B (Site-Specific Ichthyofaunal Composition)

Site-specific ichthyofaunal composition during the July 2017
Rio Grande Silvery Minnow population monitoring study

Monthly and annual reports, along with raw data, are available at:
<http://mrgescp.dbstephens.com>

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

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: SANDOVAL Co., RIO GRANDE Drainage
Rio Grande, directly below Angostura Diversion Dam, Algodones.

RKD17-108

Site Number: 1 River Mile: 209.7
UTM Easting: 363811 UTM Northing: 3916006 Zone: 13
R.K. Dudley, A,L Barkalow, M.J. Chavez

06 July 2017
Quad: San Felipe Pueblo
Effort: 507.9 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	59
76	<i>Hybognathus amarus*</i>	1
76	<i>Pimephales promelas</i>	3
76	<i>Platygobio gracilis</i>	8
76	<i>Rhinichthys cataractae</i>	17
76	<i>Rhinichthys osculus</i>	28
81	<i>Carpoides carpio</i>	2
81	<i>Catostomus commersonii</i>	14
212	<i>Gambusia affinis</i>	13
294	<i>Micropterus salmoides</i>	2

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

age-0
age-1 1
age-2+

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: SANDOVAL Co., RIO GRANDE Drainage
Rio Grande, at US HWY 550 (formerly NM State HWY 44) bridge crossing, Bernalillo.

RKD17-109

Site Number: 2 River Mile: 203.8 06 July 2017
UTM Easting: 358543 UTM Northing: 3909722 Zone: 13 Quad: Bernalillo
R.K. Dudley, A,L Barkalow, M.J. Chavez Effort: 507.5 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	57
76	<i>Cyprinus carpio</i>	4
76	<i>Hybognathus amarus*</i>	82
76	<i>Platygobio gracilis</i>	18
76	<i>Rhinichthys cataractae</i>	23
81	<i>Catostomus commersonii</i>	35
212	<i>Gambusia affinis</i>	19

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

age-0	37
age-1	45
age-2+	

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: SANDOVAL Co., RIO GRANDE Drainage
Rio Grande, ca. 4.0 miles downstream of US HWY 550 (formerly NM State HWY 44) bridge
crossing, at Rio Rancho Wastewater Treatment Plant, Rio Rancho.

RKD17-110

Site Number: 3 River Mile: 200.0 06 July 2017

UTM Easting: 354772 UTM Northing: 3905355 Zone: 13 Quad: Bernalillo

R.K. Dudley, A,L Barkalow, M.J. Chavez

Effort: 556.8 sq. m

FAMILY		N
76	<i>Cyprinella lutrensis</i>	28
76	<i>Cyprinus carpio</i>	1
76	<i>Hybognathus amarus*</i>	58
76	<i>Pimephales promelas</i>	1
76	<i>Platygobio gracilis</i>	3
76	<i>Rhinichthys cataractae</i>	3
81	<i>Catostomus commersonii</i>	18
212	<i>Gambusia affinis</i>	18

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

age-0 58
age-1
age-2+

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: BERNALILLO Co., RIO GRANDE Drainage
Rio Grande, at Central Avenue bridge crossing (US HWY 66), Albuquerque.

RKD17-107

Site Number: 4 River Mile: 183.4 05 July 2017
UTM Easting: 346840 UTM Northing: 3884094 Zone: 13 Quad: Albuquerque West
R.K. Dudley, M.A. Farrington, J.L. Kennedy, A. C. Wedemeyer Effort: 485.1 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	11
76	<i>Cyprinus carpio</i>	2
76	<i>Hybognathus amarus*</i>	533
76	<i>Platygobio gracilis</i>	5
76	<i>Rhinichthys cataractae</i>	1
81	<i>Carpiodes carpio</i>	14
81	<i>Catostomus commersonii</i>	5
93	<i>Ictalurus punctatus</i>	1
212	<i>Gambusia affinis</i>	5

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

age-0 533
age-1
age-2+

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: BERNALILLO Co., RIO GRANDE Drainage **RKD17-106**
Rio Grande, at Rio Bravo Blvd. Bridge crossing (NM State HWY 500) crossing, Albuquerque.

Site Number: 5 River Mile: 178.3 05 July 2017
UTM Easting: 347554 UTM Northing: 3877163 Zone: 13 Quad: Albuquerque West
R.K. Dudley, M.A. Farrington, J.L. Kennedy, A. C. Wedemeyer Effort: 512.8 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	12
76	<i>Cyprinus carpio</i>	4
76	<i>Hybognathus amarus*</i>	141
76	<i>Pimephales promelas</i>	1
81	<i>Catostomus commersonii</i>	8
212	<i>Gambusia affinis</i>	2
294	<i>Micropterus salmoides</i>	2

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

age-0	110
age-1	30
age-2+	1

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: VALENCIA Co., RIO GRANDE Drainage
Rio Grande, at Los Lunas Bridge crossing (NM State HWY 49), Los Lunas.

RKD17-105

Site Number: 6 River Mile: 161.4 06 July 2017
UTM Easting: 342898 UTM Northing: 3852531 Zone: 13 Quad: Los Lunas
W.H. Brandenburg, S.L. Clark Barkalow, J.L. Kennedy, A.C. Wedemeyer Effort: 514.3 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	51
76	<i>Cyprinus carpio</i>	2
76	<i>Hybognathus amarus*</i>	76
76	<i>Pimephales promelas</i>	1
76	<i>Platygobio gracilis</i>	1
81	<i>Carpiodes carpio</i>	2
81	<i>Catostomus commersonii</i>	3
212	<i>Gambusia affinis</i>	4
294	<i>Pomoxis annularis</i>	1

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

age-0	75
age-1	1
age-2+	

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: VALENCIA Co., RIO GRANDE Drainage
Rio Grande, ca. 1.0 miles upstream of NM State HWY 309/6 bridge crossing, Belen.

RKD17-104

Site Number: 7 River Mile: 151.5
UTM Easting: 339972 UTM Northing: 3837061 Zone: 13 Quad: Tome
W.H. Brandenburg, S.L. Clark Barkalow, J.L. Kennedy, A.C. Wedemeyer

06 July 2017

Effort: 542.0 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	52
76	<i>Cyprinus carpio</i>	13
76	<i>Hybognathus amarus*</i>	231
76	<i>Platygobio gracilis</i>	4
81	<i>Carpoides carpio</i>	5
81	<i>Catostomus commersonii</i>	3
212	<i>Gambusia affinis</i>	12

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

age-0 231
age-1
age-2+

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: VALENCIA Co., RIO GRANDE Drainage
Rio Grande, ca. 2.2 miles upstream of NM State HWY 346 bridge crossing, Jarales.

RKD17-103

Site Number: 8 River Mile: 143.2
UTM Easting: 338136 UTM Northing: 3827329 Zone: 13 Quad: Veguita
W.H. Brandenburg, S.L. Clark Barkalow, J.L. Kennedy, A.C. Wedemeyer

06 July 2017

Effort: 516.9 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	92
76	<i>Cyprinus carpio</i>	14
76	<i>Hybognathus amarus*</i>	389
76	<i>Pimephales promelas</i>	1
76	<i>Platygobio gracilis</i>	1
81	<i>Carpoides carpio</i>	1
81	<i>Catostomus commersonii</i>	7
93	<i>Ameiurus melas</i>	2
93	<i>Ictalurus punctatus</i>	2
212	<i>Gambusia affinis</i>	80

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

age-0	381
age-1	7
age-2+	1

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: SOCORRO Co., RIO GRANDE Drainage
Rio Grande, at US HWY 60 bridge crossing, Bernardo.

RKD17-102

Site Number: 9 River Mile: 130.6
UTM Easting: 334604 UTM Northing: 3809726 Zone: 13 Quad: Abeytas
W.H. Brandenburg, S.L. Clark Barkalow, J.L. Kennedy, A.C. Wedemeyer

06 July 2017

Effort: 532.0 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	27
76	<i>Cyprinus carpio</i>	11
76	<i>Hybognathus amarus*</i>	326
76	<i>Pimephales promelas</i>	5
76	<i>Platygobio gracilis</i>	18
81	<i>Catostomus commersonii</i>	1
93	<i>Ameiurus melas</i>	5
212	<i>Gambusia affinis</i>	99
294	<i>Micropterus salmoides</i>	2

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

age-0 326
age-1
age-2+

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: SOCORRO Co., RIO GRANDE Drainage
Rio Grande, ca. 3.5 miles downstream of the US HWY 60 bridge crossing, Bernardo.

RKD17-101

Site Number: 10 River Mile: 127.0
UTM Easting: 331094 UTM Northing: 3805229 Zone: 13 Quad: Abeytas
R.K. Dudley, A.L. Barkalow, M.J. Chavez

06 July 2017

Effort: 544.1 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	19
76	<i>Cyprinus carpio</i>	9
76	<i>Hybognathus amarus*</i>	293
76	<i>Pimephales promelas</i>	1
76	<i>Pimephales vigilax</i>	1
76	<i>Platygobio gracilis</i>	8
81	<i>Catostomus commersonii</i>	7
212	<i>Gambusia affinis</i>	58
294	<i>Micropterus salmoides</i>	2

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

age-0 293
age-1
age-2+

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: SOCORRO Co., RIO GRANDE Drainage
Rio Grande, ca. 0.6 miles upstream of San Acacia Diversion Dam, San Acacia

RKD17-100

Site Number: 11 River Mile: 116.8
UTM Easting: 327902 UTM Northing: 3792603 Zone: 13 Quad: La Joya
W.H. Brandenburg, A.L. Barkalow, S.L. Clark Barkalow, M.J. Chavez

05 July 2017

Effort: 519.6 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	21
76	<i>Cyprinus carpio</i>	55
76	<i>Hybognathus amarus*</i>	784
76	<i>Pimephales promelas</i>	2
76	<i>Platygobio gracilis</i>	22
81	<i>Catostomus commersonii</i>	4
93	<i>Ameiurus natalis</i>	17
93	<i>Ictalurus punctatus</i>	119
212	<i>Gambusia affinis</i>	27
294	<i>Micropterus salmoides</i>	6

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

age-0 784
age-1
age-2+

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: SOCORRO Co., RIO GRANDE Drainage
Rio Grande, directly below San Acacia Diversion Dam, San Acacia.

RKD17-099

Site Number: 12 River Mile: 116.2
UTM Easting: 326162 UTM Northing: 3791977 Zone: 13
W.H. Brandenburg, A.L. Barkalow, S.L. Clark Barkalow, M.J. Chavez

05 July 2017
Quad: San Acacia
Effort: 526.7 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	126
76	<i>Cyprinus carpio</i>	10
76	<i>Hybognathus amarus*</i>	1566
76	<i>Platygobio gracilis</i>	20
81	<i>Carpionodes carpio</i>	1
93	<i>Ictalurus furcatus</i>	22
93	<i>Ictalurus punctatus</i>	1
212	<i>Gambusia affinis</i>	7

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

age-0	1497
age-1	66
age-2+	3

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: SOCORRO Co., RIO GRANDE Drainage
Rio Grande, ca. 1.5 miles downstream of San Acacia Diversion Dam, San Acacia.

RKD17-098

Site Number: 13 River Mile: 114.6
UTM Easting: 325263 UTM Northing: 3790442 Zone: 13 Quad: Lemitar
W.H. Brandenburg, A.L. Barkalow, S.L. Clark Barkalow, M.J. Chavez

05 July 2017

Effort: 491.7 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	32
76	<i>Cyprinus carpio</i>	3
76	<i>Hybognathus amarus*</i>	899
76	<i>Platygobio gracilis</i>	30
81	<i>Carpoides carpio</i>	1
93	<i>Ameiurus natalis</i>	1
93	<i>Ictalurus punctatus</i>	2
212	<i>Gambusia affinis</i>	58

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

age-0	897
age-1	2
age-2+	

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: SOCORRO Co., RIO GRANDE Drainage

RKD17-097

Rio Grande, east of Socorro, 0.5 miles upstream of Socorro Low Flow Conveyance Channel
bridge and east just upstream of Socorro Wastewater Treatment Plant, Socorro.

Site Number: 14

River Mile: 99.5

05 July 2017

UTM Easting: 327097

UTM Northing: 3771043

Zone: 13

Quad: Loma de las Canas

W.H. Brandenburg, A.L. Barkalow, S.L. Clark Barkalow, M.J. Chavez

Effort: 550.1 sq. m

FAMILY		N
76	<i>Cyprinella lutrensis</i>	2
76	<i>Cyprinus carpio</i>	1
76	<i>Hybognathus amarus*</i>	251
76	<i>Platygobio gracilis</i>	1
81	<i>Carpionodes carpio</i>	13
93	<i>Ameiurus melas</i>	2
93	<i>Ameiurus natalis</i>	1
93	<i>Ictalurus furcatus</i>	1
212	<i>Gambusia affinis</i>	24

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

age-0 251

age-1

age-2+

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: SOCORRO Co., RIO GRANDE Drainage
Rio Grande, ca. 4.0 miles upstream of U.S. 380 bridge crossing.

RKD17-096

Site Number: 15 River Mile: 91.7
UTM Easting: 328140 UTM Northing: 3761283 Zone: 13
W.H. Brandenburg, A.L. Barkalow, S.L. Clark Barkalow, M.J. Chavez

05 July 2017
Quad: San Antonio
Effort: 529.6 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	22
76	<i>Cyprinus carpio</i>	3
76	<i>Hybognathus amarus*</i>	588
76	<i>Platygobio gracilis</i>	4
81	<i>Carpoides carpio</i>	54
81	<i>Catostomus commersonii</i>	1
93	<i>Ameiurus natalis</i>	1
93	<i>Ictalurus punctatus</i>	1
212	<i>Gambusia affinis</i>	31
294	<i>Micropterus salmoides</i>	1

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

age-0	587
age-1	1
age-2+	

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: SOCORRO Co., RIO GRANDE Drainage
Rio Grande, at US HWY 380 bridge crossing, San Antonio.

RKD17-095

Site Number: 16 River Mile: 87.1
UTM Easting: 328914 UTM Northing: 3754471 Zone: 13
R.K. Dudley, M.A. Farrington, J.L. Kennedy, A. C. Wedemeyer

05 July 2017
Quad: San Antonio
Effort: 530.1 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	81
76	<i>Cyprinus carpio</i>	1
76	<i>Hybognathus amarus*</i>	562
76	<i>Platygobio gracilis</i>	5
81	<i>Carpoides carpio</i>	6
81	<i>Ictiobus bubalus</i>	2
93	<i>Ameiurus natalis</i>	3
93	<i>Ictalurus punctatus</i>	1
212	<i>Gambusia affinis</i>	4

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

age-0 562
age-1
age-2+

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: SOCORRO Co., RIO GRANDE Drainage
Rio Grande, directly east of Bosque del Apache National Wildlife Refuge Headquarters.

RKD17-094

Site Number: 17 River Mile: 79.1 05 July 2017
UTM Easting: 327055 UTM Northing: 3740839 Zone: 13 Quad: San Antonio SE
R.K. Dudley, M.A. Farrington, J.L. Kennedy, A. C. Wedemeyer Effort: 509.3 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	1590
76	<i>Cyprinus carpio</i>	10
76	<i>Hybognathus amarus*</i>	84
76	<i>Pimephales promelas</i>	3
76	<i>Platygobio gracilis</i>	33
81	<i>Carpoides carpio</i>	1
81	<i>Catostomus commersonii</i>	2
81	<i>Ictiobus bubalus</i>	16
93	<i>Ictalurus furcatus</i>	2
212	<i>Gambusia affinis</i>	3

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

age-0	82
age-1	2
age-2+	

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: SOCORRO Co., RIO GRANDE Drainage
Rio Grande, at San Marcial Railroad Bridge, San Marcial.

RKD17-093

Site Number: 18 River Mile: 68.6 18 July 2017
UTM Easting: 315284 UTM Northing: 3728347 Zone: 13 Quad: San Marcial
J.L. Kennedy, S.L. Clark Barkalow, M.J. Chavez Effort: 547.6 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	47
76	<i>Cyprinus carpio</i>	12
76	<i>Hybognathus amarus*</i>	21
76	<i>Platygobio gracilis</i>	2
81	<i>Carpoides carpio</i>	11
212	<i>Gambusia affinis</i>	18

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

age-0	20
age-1	1
age-2+	

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: SOCORRO Co., RIO GRANDE Drainage
Rio Grande, ca. 8 miles downstream of the San Marcial railroad bridge crossing

RKD17-092

Site Number: 19 River Mile: 60.5 18 July 2017
UTM Easting: 309487 UTM Northing: 3718178 Zone: 13 Quad: Paraje Well
J.L. Kennedy, S.L. Clark Barkalow, M.J. Chavez Effort: 598.4 sq. m

<u>FAMILY</u>		<u>N</u>
69	<i>Dorosoma cepedianum</i>	2
76	<i>Cyprinella lutrensis</i>	19
76	<i>Cyprinus carpio</i>	2
76	<i>Hybognathus amarus*</i>	8
76	<i>Platygobio gracilis</i>	2
93	<i>Ictalurus furcatus</i>	2
212	<i>Gambusia affinis</i>	88
294	<i>Micropterus salmoides</i>	1
294	<i>Pomoxis annularis</i>	6

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

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

**Rio Grande Silvery Minnow Population Monitoring
July 2017**

NEW MEXICO: SOCORRO Co., RIO GRANDE Drainage
Rio Grande, ca. 10 mi downstream of the San Marcial railroad bridge crossing

RKD17-091

Site Number: 20 River Mile: 58.8 18 July 2017
UTM Easting: 307846 UTM Northing: 3716150 Zone: 13 Quad: Paraje Well
J.L. Kennedy, S.L. Clark Barkalow, M.J. Chavez Effort: 602.0 sq. m

<u>FAMILY</u>		<u>N</u>
76	<i>Cyprinella lutrensis</i>	46
76	<i>Cyprinus carpio</i>	35
76	<i>Hybognathus amarus*</i>	28
81	<i>Ictiobus bubalus</i>	2
93	<i>Ictalurus punctatus</i>	3
212	<i>Gambusia affinis</i>	80
294	<i>Pomoxis annularis</i>	2

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

age-0 28
age-1
age-2+