

**ARIZONA GAME AND FISH DEPARTMENT'S
SECTION 10(A)1(A) PERMIT ANNUAL REPORT 2013**

TE-083636-0

Topminnow and Pupfish SHA Statewide

Note: Tasks identified below are from the Department's E5 Segment 22 performance report. Information covers the Department's fiscal year (FY) 2013 (July 1, 2012 to June 30, 2013).

Cumulative total of Cooperators enrolled under the SHA at the end of Fiscal Year 2013: 15.
Cumulative number of populations (topminnow and pupfish) being managed under the SHA during FY 2013: 21

Site:	Landowner:	Species Stocked:
Timbucktwo Pond, Ruby	Private	Gila topminnow
Pemberton Pond, McDowell Mtn Regional Park	Maricopa County Parks & Recreation Department (MCPR)	Gila topminnow & desert pupfish
Nursery Tank, McDowell Mtn Regional Park	MCPR	Desert pupfish
Willow Springs, White Tanks Mtn Regional Park	MCPR	Gila topminnow (failed site)
Spur Cross Solar Oasis	MCPR	Gila topminnow & desert pupfish
Hernbrode Pond, Tucson	Private	Desert pupfish (Rio Sonoyta origin, not QBQ)
Onofryton Pond, Phoenix	Private	Desert pupfish (Rio Sonoyta origin, not QBQ)
Swimming Pool Pond, Robbins Butte Wildlife Area	Arizona Game & Fish Commission	Gila topminnow
Twin Tanks, Robbins Butte Wildlife Area	Arizona Game & Fish Commission	Desert pupfish
Stop Sign Tank, Robbins Butte Wildlife Area	Arizona Game & Fish Commission	Gila topminnow
Cottonwood Tank, Robbins Butte Wildlife Area	Arizona Game & Fish Commission	Desert pupfish
Cienega High School Pond	Vail School District	Gila topminnow
National Audubon Society Appleton-Whittell Research Ranch	Private	Desert pupfish
The Nina Mason Pulliam Rio Salado Audubon Center	Private	Gila topminnow and desert pupfish
Kei Sundt Pond, Safford	Private	Desert pupfish
Keiser Pond, Wickenburg	Private	Desert pupfish
Usery Mountain Regional Park	MCPR	Gila topminnow

Terry Morgan/KT Ranch Pond, Portal	Private	Desert pupfish
San Rafael Cattle Company	Private	Gila topminnow

Management activities that were implemented during FY 2013 include the evaluation, stocking, and/or monitoring of the above sites under the SHA, and the evaluation of additional sites for future enrollment. In FY13, Department staff evaluated one site for enrollment, the White Tank Wildlife Pond in the White Tank Mountains, managed by Maricopa County Parks and Recreation, an existing cooperator. Another pond belonging to Gary Nabhan near Patagonia, AZ was visited and evaluated early in the year (March 01, 2013). A coordination meeting was held with Nabhan and representatives of Native Seed Search, owners of an adjacent property, to explain the workings and advantages of the SHA. The representatives of Native Seed Search (occupants of the adjacent property) indicated they are also interested in enrolling in the SHA program. Initial plans for the enrollment of the properties were discussed, and the pond visited for evaluation.

Funding sources for activities associated with site evaluations, enrollment, and stocking of topminnow and/or pupfish under the SHA include: Arizona Heritage Fund; State Wildlife Grant; Arizona Game and Fish Fund; and CAP Funds Transfer Program.

Topminnow / Pupfish

The Statewide SHA for Topminnow and Pupfish was finalized and signed by the Department and USFWS on March 12, 2008. Only one new SHA site was enrolled during the FY13, but there were a total of 4 stockings that took place on SHA enrolled properties, as well as numerous stockings that SHA enrolled sites provided topminnow or pupfish stocks for (see details below) and stocked under the SHA in FY13.

1. **Timbucktuo Pond**, a privately-owned pond in southern Arizona was first stocked with Redrock Canyon lineage Gila topminnow on September 3, 2008.

Activities FY 2013 – Timbucktuo Pond was monitored on June 25, 2013 and a total of 89 Gila topminnow were sampled using minnow traps, seines and dip nets; there were no mortalities. The pond has become heavily vegetated with submergent weeds, and reports from partners indicate the pond is losing water at an elevated rate, suggesting a bad leak in the lining.

2. **Pemberton Pond** at the McDowell Mountain Regional Park (Maricopa County Parks and Recreation Department [MCPR]) was stocked with Gila topminnow on March 13 and July 9, 2009, and desert pupfish on October 15, 2009.

Activities FY 2013 - No monitoring activities were conducted at this site during FY 2013.

3. **Spur Cross Solar Oasis** at the Spur Cross Natural Conservation Area (MCPR) was

stocked on October 19, 2009 with Gila topminnow and on November 18, 2009 with desert pupfish.

Activities FY 2013 - This site was monitored on May 31, 2013. A total of 209 desert pupfish and 29 longfin dace were sampled. No Gila topminnow were observed during this effort. There were no mortalities.

4. **Hernbrode Pond**, is a privately-owned pond in Tucson that was stocked on April 10, 2009 with desert pupfish (Rio Sonoyta origin, not Quitobaquito; the entire population was removed from the Appleton-Whittell Research Ranch Headquarters Pond).

Activities FY 2013 - No monitoring activities were conducted at this site during FY 2013.

5. **Onofryton Pond**, is a privately-owned pond in Phoenix that was stocked on September 29, 2009, with desert pupfish from another SHA site in Tucson AZ, the Hernbrode Pond. These fish derived from fish that long existed in Finley Tank, a spring-fed tank within the Babocomari River drainage. They were long suspected as hybrids between Quitobaquito and desert pupfishes, but recent genetic studies have identified them as pure Sonoyta pupfish of Rio Sonoyta origin, not hybrids, and not from Quitobaquito Springs. This makes them (fishes in the Hernbrode and Onofryton ponds) the only stocks derived from Rio Sonoyta pupfish existing in the US.

Activities FY 2013 - Onofryton Pond was monitored on May 30, 2013. A total of 144 Sonoyta pupfish were sampled. Large males displayed full breeding colors. There were no mortalities.

6. **Cienega High School Pond** in the town of Vail was stocked with Gila topminnow on November 9, 2009, from Davison Pond in Tucson (after that pond had received new founders from Cienega Creek). Monitoring on April 7, 2010 found topminnow very rare, almost non-existent ($n < 5$). Stocked with longfin dace (*Agosia chrysogaster*, $n = 122$) in the hopes that they may survive at this location.

Activities FY 2013 - No monitoring activities were conducted at this site during FY 2011.

- 7-9. **Robbins Butte Wildlife Area**, owned by the Arizona Game and Fish Commission, was stocked on November 17, 2009: Gila topminnow ($n = 629$) at **Swimming Pool Tank**, and desert pupfish ($n = 128$) at **Twin Tanks**. Desert pupfish salvaged from the Scott L. Libby pupfish population ($n = 174$) on September 9, 2010, were also stocked into Twin Tanks. The Gila topminnow used to stock Swimming Pool Tank came from Dexter National Fish Hatchery and Technology Center (Sharp Spring lineage) via Bubbling Ponds Fish Hatchery. The desert pupfish stocked into Twin Tanks were collected from Boyce Thompson Arboretum, Deer Valley High School, Desert Botanical Gardens, Phoenix Zoo, and Dexter via Bubbling Ponds Fish Hatchery. A second stocking of Gila

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topminnow (n=571) took place on April 27, 2010, at **Stop Sign Tank**. These fish were from Deer Valley High School's refuge population. Between August 5, and September 9, 2010, an additional 1386 pupfish were salvaged from Scott L. Libby Elementary School and stocked into **Cottonwood Tank** at Robbins Butte.

Activities FY 2013 – On October 30, 2012, 27 pupfish were captured from Twin Tanks and 14 pupfish were captured from Cottonwood Tank. These fish (along with 284 additional fish from the Phoenix Zoo) were used to establish a population (KT Pond) in Portal, AZ on 31 October, 2012.

On March 28, 2013 a total of n=495 topminnow were collected from Swimming Pool Tank, transported to Pasture 2 Tank on San Rafael Cattle Company property and stocked, with no mortalities; these fish are of Sharp Spring lineage.

On June 7, 2013, n=312 pupfish were collected from Cottonwood Tank and transported to Las Cienegas National Conservation Area near Elgin, AZ. The numbers were split between two transport tanks and along with n=209 pupfish from the Phoenix Zoo (Desert Trail and Mandarin ponds), were used to establish two new refuge ponds on BLM lands, Antelope Tank (n=257 stocked) and Bald Hill Tank (n=263 stocked); there was one transport mortality.

On May 20, 2013, 233 Gila topminnow were collected from Swimming Pool Tank to be used in the stocking of Buckhorn Spring the following day. A total of n=227 topminnow were stocked at Buckhorn Spring on May 21, with 6 mortalities. The topminnow stocked were of Sharp Spring lineage.

10. After assurances that **Willow Springs** at the White Tanks Mountain Regional Park (MCPR) was a perennial water source, it was enrolled as a SHA site and following stocking, was monitored on October 30, 2009 and found to be dry; all fish had been extirpated.

Activities FY 2013 - No monitoring activities were conducted at this site during FY 2013.

11. **Nursery Tank** at the McDowell Mountain Regional Park (MCPR) was stocked with desert pupfish on June 17, 2010. The fish were collected at Boyce Thompson Arboretum.

Activities FY 2013 - No monitoring activities were conducted at this site during FY 2013.

12. **National Audubon Society Appleton-Whittell Research Ranch** was stocked with 229 desert pupfish from populations at Robbins Butte Wildlife Area on June 4, 2011. The fish originated from SHA ponds Twin and Cottonwood tanks on Robbins Butte Wildlife Area, 115 individuals from each pond.

Activities FY 2013 - No monitoring activities were conducted at this site during FY 2013.

13. **The Nina Mason Pulliam Rio Salado Audubon Center** was stocked with 496 desert pupfish and 544 Gila topminnow on August 31, 2010.

Activities FY 2013 – Monitoring was conducted at the Audubon Center on May 13, 2013. The effort resulted in 150 topminnow sampled, however although present, the number of pupfish captured was not recorded. There were no mortalities.

14. **Kei Sundt Pond** was enrolled under the SHA in 2010 and stocked with 194 desert pupfish on November 9, 2010. Source of the pupfish stocked into the pond was the captive population maintained at The Nature Conservancy's Lower San Pedro River Preserve in Dudleyville, AZ. Four (4) pupfish died during the stocking effort.

Activities FY 2013 – On October 15, 2012, 325 Gila topminnow were stocked into the Kei Sundt Pond; there were three mortalities. The topminnow originated from Bylas Stock at the TNC San Pedro River Preserve in Dudleyville, where they were collected earlier on the 15th. The topminnow were acclimated with three partial water changes over $\frac{3}{4}$ of an hour and stocked. A follow-up monitoring effort was conducted on May 21, 2013. A total of 438 Gila topminnow and 70 desert pupfish were captured during monitoring efforts, with no resulting mortalities.

15. The **Keiser Pond** was enrolled under the SHA for topminnow and pupfish in September of 2011, and pupfish stocked in the pond roughly 1 year later on September 6, 2012. Keiser Pond had previously been stocked with longfin dace (*Agosia chrysogaster*); prior to the pupfish stocking, 67 dace were removed and transported to the Phoenix Zoo. Phoenix Zoo personnel had set minnow traps earlier to capture pupfish in the Mandarin Pond, and following the stocking of the dace, the traps were pulled. A total of n=164 pupfish were captured that afternoon and transported back to Wickenburg, where they were tempered with pond water and released; there were no mortalities.

Activities FY 2013 - No monitoring activities were conducted at this site during FY 2013.

16. **Terry Morgan/KT Ranch Pond** was enrolled in the SHA in December of 2011. The pond was stocked with 325 desert pupfish on October 31, 2012. Forty-one pupfish were collected on October 30th from Twin Tanks and Cottonwood Tank at Robbins Butte Wildlife Area near Buckeye, and the remaining 284 were collected the same day from the Phoenix Zoo Mandarin Pond. The fish were transported and stocked the following day into the KT Ranch Pond near Portal, AZ; there were no mortalities.

Activities FY 2013 – See preceding paragraph; no monitoring activities were conducted at this site during FY 2013.

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17. **Usery Mountain Regional Park** was enrolled in May 2010 and the initial stocking occurred on October 19, 2011 when 92 Gila Topminnow were released. Ten mortalities were reported.

Activities FY 2013 - No monitoring activities were conducted at this site during FY 2013.

18. **Ross Humphreys/San Rafael Cattle Company Ranch** -

Activities FY 2013 - On July 25, 2012 the San Rafael Cattle Company Ranch was enrolled under the SHA. On March 28, 2013 a total of 495 Gila topminnow were stocked into Pasture 2 Tank on San Rafael Cattle Company property. The source of the Sharp Spring topminnow stock released into Pasture 2 Tank was Swimming Pool Tank at AGFD's Robbins Butte Wildlife Area in Buckeye AZ. Participants in the effort included AGFD, USFWS and the landowner; all fish survived transport and were stocked.