

PERFORMANCE REPORT

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FEDERAL AID PROJECT F-221-M-3

INLAND FISHERIES DIVISION MONITORING AND MANAGEMENT PROGRAM

2012 Fisheries Management Survey Report

**Clyde Reservoir**

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## SURVEY AND MANAGEMENT SUMMARY

Fish populations in Clyde Reservoir were not surveyed in 2012 and 2013 due to low water caused by drought conditions. This report presents data on conditions observed during the survey period and contains a management plan for the reservoir.

- **Reservoir Description:** Clyde reservoir is a 374-acre impoundment of Pecan Bayou created in 1970. It is located 15 miles southeast of Abilene and is controlled by the City of Clyde. Primary water uses are municipal water supply and recreation. Shoreline habitat in consisted of dead brush, black willow, button brush, and salt cedar in 2008. Severe drought conditions from 1998-2004 reduced the water level in the reservoir, but the reservoir filled to within four feet of conservation pool in late 2004 and remained stable through 2007. Water level has dropped steadily since 2007 and by early 2013 the water level was estimated at 20 feet below conservation pool with the deepest water estimated at 11 ft. Boat access consists of two public-use ramps, and bank fishing is available in several areas. At the current water level there is no boat access.
- **Management History:** Clyde Reservoir has been a quality Largemouth Bass fishery in past years. The current lake record is 14.8 pounds and was caught 2001. Florida Largemouth Bass were stocked in 2004 and 2005 to help re-establish Clyde Reservoir as a quality Largemouth Bass fishery following severe drought conditions. Channel Catfish were stocked in 2004 to supplement the existing population and replace fish lost during the extended low water period.
- **Fish Community:** No fish communities were surveyed due to extreme drought conditions and low water levels.
- **Management Strategies:** Standard sampling will be conducted in 2016-2017. Additional surveys may be conducted before 2016 if water levels increase enough to allow boat access.

## INTRODUCTION

This document is a summary of the status of Clyde Reservoir in 2012-2013. The purpose of the document is to provide fisheries information and make management recommendations to protect and improve the sport fishery.

### *Reservoir Description*

Clyde Reservoir is a 374-acre impoundment located on Pecan Bayou in the Colorado River Basin approximately 15 miles southeast of Abilene. It was constructed in 1970 as a municipal water supply and is controlled by the City of Clyde, Texas. Watershed land use is primarily agriculture. Water level history is not kept for this reservoir; however, during winter 2000/2001, the reservoir size was estimated at less than 50 surface acres due to a severe ongoing drought. By the end of 2004, water level was within four feet of conservation level and remained stable through 2007. Water level has dropped steadily since 2007 and by early 2013 the water level was estimated at 20 feet below conservation pool with the deepest water estimated at 11 ft. The habitat consisted primarily of clay or sand flats, gravel or rock banks, and submerged terrestrial vegetation in 2008. Clyde Reservoir became a fee-entry fishery in 2008 when a pay-gate was installed at the only entrance. Other characteristics of Clyde Reservoir are listed in Table 1.

### *Angler Access*

Clyde Reservoir has two public boat ramps that are currently out of the water and extension is feasible with one ramp. The reservoir has no private boat ramps. Additional boat ramp characteristics are in Table 2. Approximately 30% of the shoreline is available to public access.

### *Management History*

**Previous management strategies and actions:** Management strategies and actions from the previous survey report (Neely and Dumont 2009) included:

1. Advertise White Crappie fishing to anglers by promoting the 2008 year class when they reach harvestable size.  
**Action:** Drought conditions limited boat angler access and inhibited our ability to survey the crappie population to determine population growth.
2. Continue to monitor the Largemouth Bass population and promote the fishery when they begin to reach trophy size. Analyze the genetics of the Largemouth Bass population with microsatellite DNA samples in 2010. Conduct daytime spring electrofishing survey in 2010 to assess trophy-size Largemouth Bass.  
**Action:** Drought conditions restricted our ability to conduct Largemouth Bass surveys.

**Harvest regulation history:** Sportfishes in Clyde Reservoir have been managed with statewide regulations (Table 3).

**Stocking history:** Clyde Reservoir has not been stocked since 2005 (Florida Largemouth Bass). Channel Catfish and Florida Largemouth Bass were stocked in 2004 and Blue Catfish were stocked in 1997 and 1998. The complete stocking history is in Table 4.

**Vegetation/habitat management history:** Clyde Reservoir has no vegetation/habitat management history.

**Water transfer:** No interbasin transfers are known to exist.

## METHODS

Fisheries surveys were not conducted in 2012-2013 due to extreme low water levels.

### Fisheries management plan for Clyde Reservoir, Texas

Prepared – July 2013.

**ISSUE 1:** The reservoir is currently experiencing record low water levels. It is expected that drought conditions may have a negative impact on the fisheries. Some of the negative impacts of low water levels may be mitigated as low water levels have also reduced angling pressure. What angling pressure is directed at the reservoir is restricted to shoreline areas.

#### MANAGEMENT STRATEGY

1. Conduct standard fisheries surveys as soon as practical following a water level rise that would allow survey boat access.
2. Re-stock predator and prey fishes contingent on water level increase

**ISSUE 2:** New boat ramp is unusable at a low-water level, eliminating boating access. Some room for ramp extension may be possible and ramp construction is easier when the area is dry.

#### MANAGEMENT STRATEGIES

1. Discuss ramp extension and grant information with the City of Clyde.

**ISSUE 3:** Many invasive species threaten aquatic habitats and organisms in Texas and can adversely affect the state ecologically, environmentally, and economically. For example, zebra mussels (*Dreissena polymorpha*) can multiply rapidly and attach themselves to any available hard structure, restricting water flow in pipes, fouling swimming beaches and plugging engine cooling systems. Giant salvinia (*Salvinia molesta*) and other invasive vegetation species can form dense mats, interfering with recreational activities like fishing, boating, skiing and swimming. The financial costs of controlling and/or eradicating these types of invasive species are significant. Additionally, the potential for invasive species to spread to other river drainages and reservoirs via watercraft and other means is a serious threat to all public waters of the state.

#### MANAGEMENT STRATEGIES

1. Cooperate with the controlling authority to post appropriate signage at access points around the reservoir.
2. Contact and educate marina owners about invasive species, and provide them with posters, literature, etc... so that they can in turn educate their customers.
3. Educate the public about invasive species through the use of media and the internet.
4. Make a speaking point about invasive species when presenting to constituent and user groups.
5. Keep track of (i.e., map) existing and future inter-basin water transfers to facilitate potential invasive species responses.

**SAMPLING SCHEDULE JUSTIFICATION:**

The proposed sampling schedule is standard monitoring in 2016-2017 (Table 5). Additional surveys may be added if water levels increase to allow boat access prior to 2016.

LITERATURE CITED

Neely, B., and S. Dumont. 2009. Statewide freshwater fisheries monitoring and management program survey report for Clyde Reservoir, 2008. Texas Parks and Wildlife Department, Federal Aid Report F-30-R, Austin.

Table 1. Characteristics of Clyde Reservoir, Texas.

Characteristic	Description
Year constructed	1970
Controlling authority	City of Clyde, TX
Water uses	Municipal supply; recreation
Impoundment size	374 acres
County	Callahan
Geographical coordinates	32° 28' N; 99° 17' W
Reservoir type	Mainstem
Watershed basin	Pecan Bayou in the Colorado River Basin
Mean depth	10.0 ft
Maximum depth	30.0 ft
Shoreline development index (SDI)	2.3
Watershed size	38 mi <sup>2</sup>
Secchi disc range	1 ft
Conductivity	610 $\mu$ S/cm
Boat access	2 ramps; currently unusable
Bank access	1 area; adequate

Table 2. Boat ramp characteristics for Clyde Reservoir, Texas, August, 2012.

Boat ramp	Latitude Longitude (dd)	Public	Parking capacity (N)	Elevation at end of boat ramp (ft msl)	Condition
Old ramp	32.18.9183 -99.28.3318	Y	15	1865	Out of water. Extension is not feasible
New ramp	32.18.8291 -99.28.3217	Y	15	1872	Out of water. Extension may be feasible

Table 3. Harvest regulations for Clyde Reservoir, Texas.

Species	Bag limit	Length limit
Catfish: Channel and Blue, their hybrids and subspecies	25 (in any combination)	12-inch minimum
Catfish, Flathead	5	18-inch minimum
Bass, Largemouth	5	14-inch minimum
Crappie: White and Black, their hybrids and subspecies	25 (in any combination)	10-inch minimum

Table 4. Stocking history in Clyde Reservoir, Texas from 1976 - 2012. FRY = fry; FGL = fingerling; ADL = adults; blank indicates size at stocking is unknown.

Species	Year	Number	Size
Threadfin Shad	1984	1,000	
	1990	2,343	
	1991	2,812	ADL
	Total	6,155	
Blue Catfish	1980	6,800	
	1997	50,800	FGL
	1998	50,839	FGL
	Total	108,349	
Channel Catfish	1980	12,000	
	1981	28,015	
	1991	12,548	FGL
	2004	21,957	FGL
	Total	74,520	
Largemouth Bass	1976	10,000	
Florida Largemouth Bass	1979	2,500	FGL
	1988	50,784	FGL
	1997	50,428	FGL
	2004	45,277	FGL
	2005	45,398	FGL
	Total	194,387	
Walleye	1979	900,000	

Table 5. Proposed sampling schedule for Clyde Reservoir, Texas. Survey period is June through May. Electrofishing and trap net surveys are conducted in fall and gill net surveys occur in spring. Standard surveys are denoted by S and additional surveys are denoted with A.

Survey year	Electrofishing Fall(Spring)	Trap net	Gill net	Habitat			Creel survey	Report
				Structural	Vegetation	Access		
2013-2014								
2014-2015								
2015-2016								
2016-2017	S	S	S		S	S		S

APPENDIX A

Reservoir photographs were taken from the boat ramp area in spring 2013.

