

PERFORMANCE REPORT

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FEDERAL AID PROJECT F-221-M-4

INLAND FISHERIES DIVISION MONITORING AND MANAGEMENT PROGRAM

2013 Fisheries Management Survey Report

McClellan Reservoir

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SURVEY AND MANAGEMENT SUMMARY

Fish Populations in McClellan Reservoir were not surveyed in fall 2013 and spring 2014 due to drought conditions.

- **Reservoir Description:** McClellan Reservoir is a 405-acre reservoir located 64 miles east of Amarillo, Texas, on McClellan Creek in the Red River Basin. It is owned and operated by the United States Forest Service as part of the Black Kettle National Grassland and is used for recreational purposes. No water level data is recorded for the reservoir, but it has a history of extreme water level fluctuations. The maximum estimated water depth for the reservoir is 25 feet. Extensive excavation was done within the basin in 2001 and 2002 to allow for better water retention. Since the drought began in about 2000, the reservoir has filled to capacity twice and been completely dry 5 times, the latest in summer 2013. The reservoir currently (May 12, 2014) has a maximum depth of about 3 feet. Boat access consisted of two public boat ramps. The shoreline is 100% accessible to bank anglers. There are no handicap-specific facilities. Primary habitat was mud bank and cobble.
- **Management History:** Important sport fish have included White Crappie and catfish. The US Forest Service did extensive excavation within the basin in 2001 and 2002 with the goal of improved water retention. Harvest of sportfishes is managed with statewide regulations. Channel Catfish and Largemouth Bass were stocked when water conditions permitted. Saugeye were stocked to help reduce an overabundant crappie population.
- **Fish Community:**
 - **Prey Species:** No data collected due to drought.
 - **Catfishes:** No data collected due to drought.
 - **Largemouth Bass:** No data collected due to drought.
 - **White Crappie:** No data collected due to drought.
 - **Saugeye:** No data collected due to drought.
- **Management strategies:** Based on current information, and due to extreme water level fluctuations, sportfishes should continue to be managed with existing statewide regulations. The focus will be on providing a catfish fishery in the next few years, if water levels and drought conditions allow for continued survival. Blue and Channel Catfish, Largemouth Bass and Bluegill will be requested and stocked as available and as water levels permit. Black Bullhead have become overabundant in the reservoir in the past. Blue Catfish and Flathead Catfish adults will be collected and stocked to help manage the Black Bullhead problem if it recurs.

INTRODUCTION

This document is a summary of conditions at McClellan Reservoir in 2013-2014. The purpose of the document is to provide fisheries information and make management recommendations to protect and improve the sport fishery. No fisheries data was collected in 2013-2014 due to extreme drought conditions.

Reservoir Description

McClellan Reservoir is a 405-acre impoundment constructed in 1938 on McClellan Creek. It is located in Gray County approximately 64 miles east of Amarillo and is owned and operated by the US Forest Service, Black Kettle National Grassland. Primary water use is recreation. No water level data is recorded for the reservoir, but it has a history of extreme water level fluctuations. The maximum estimated water depth for the reservoir is 25 feet. Extensive excavation was done within the basin in 2001 and 2002 to allow for better water retention. Since the drought began in about 2000, the reservoir has filled to capacity twice and been completely dry 5 times, the latest in summer 2013. The reservoir currently (May 12, 2014) has a maximum depth of about 3 feet. Habitat in 2005 consisted of mud shoreline and small areas of cobble. Native aquatic plants present were *Potamogeton* species. Boat access consisted of two public boat ramps. The shoreline is 100% accessible to bank anglers. There are no handicap-specific facilities. Other descriptive characteristics for McClellan Reservoir are in Table 1.

Angler Access

McClellan Reservoir has two public boat ramps and no private boat ramps. The two public boat ramps, were unavailable to anglers in 2013-14 due to low water levels. Extension of the ramps is not feasible due to slope issues. Additional boat ramp characteristics are in Table 2. The entire shoreline area is accessible to anglers.

Management History

Previous management strategies and actions: Management strategies and actions from the previous survey report (Munger and Clayton 2010) included:

Issue 1. The current drought of record has caused the reservoir to experience extreme low water levels and it has gone dry five times in the past 10 years. The management strategy was to stock Channel Catfish, Largemouth Bass, and Bluegill at standard rates when water levels permitted.

Action: The reservoir was stocked with Bluegill, Channel Catfish, Blue Catfish, Largemouth Bass, and Saugeye in 2010 and 2011.

Issue 2. The reservoir has a history of overpopulation of White Crappie and Black Bullhead. The management strategies were to monitor these populations and stock Saugeye if the White Crappie population became overabundant and stock Flathead Catfish if the Black Bullhead population became overabundant.

Action: Repeated drying has controlled the problem species. Saugeye were stocked in 2010 and 2011 as a preventative measure but did not survive the low water level.

Harvest regulation history: Sport fishes in McClellan Reservoir have always been managed with statewide harvest regulations (Table 3).

Stocking history: The earliest recorded stocking for McClellan Reservoir is 1965. Experimental stockings of Palmetto Bass were conducted between 1979 and 1992. Smallmouth Bass were stocked in 1984 and Paradise Bass (hybrid Yellow Bass X Striped Bass) were stocked in 1977. Saugeye were stocked since 1999 to control the White Crappie population. Stocking has been conducted to re-establish sport fish communities following drought periods. The recent stocking history is in Table 4.

Vegetation/habitat management history: McClellan Reservoir has no vegetation or habitat management history.

Water transfer: No interbasin transfers are known to exist.

METHODS

No fisheries surveys were conducted in 2013 and 2014 due to extreme drought conditions.

RESULTS AND DISCUSSION

Habitat: A habitat survey was last conducted in 1998 (Munger 1999). At that time, littoral zone habitat consisted primarily of silt, rocks, submerged terrestrial vegetation, and Eurasian watermilfoil.

Prey species: No data was collected due to drought conditions.

Blue Catfish: No data was collected due to drought conditions.

Channel Catfish: No data was collected due to drought conditions.

Largemouth Bass: No data was collected due to drought conditions.

White Crappie: No data was collected due to drought conditions.

Saugeye: No data was collected due to drought conditions.

Fisheries management plan for McClellan Reservoir, Texas

Prepared – July 2014.

ISSUE 1: The current drought of record has caused the reservoir to go completely dry five times since 2000. Recent drought conditions are illustrated in Appendix A. The Climate Prediction Center predicts that the Pacific Decadal Oscillation will persist resulting in below-average precipitation in the Texas Panhandle for another 20 to 30 years. The current drought in the Texas Panhandle is forecast to persist at least through the end of the year with average to below average rainfall. Based on information from the National Oceanic and Atmospheric Climate Data web site (NOAA 2014) the reservoir watershed would need 4-8 inches of rainfall within a three-month period to end the current drought conditions.

MANAGEMENT STRATEGY

1. Stocking will be recommended when the reservoir water levels have risen to at least ½ full and the watershed area of the reservoir has at least three consecutive months classified as better than abnormally dry as determined by the United States Drought Monitor (2014).

ISSUE 2: Boating access at the two public access sites (North Ramp and South Ramp) was not possible due to low water level in 2013. Neither boat ramp can be extended because the lake bottom levels out at the end of the ramp with no access to deeper water.

MANAGEMENT STRATEGY

1. Since neither ramp can be extended, the basin has already been deepened, and the entire shoreline is accessible to bank anglers, there are no strategies for improving this situation.

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. Educate the public about invasive species through the use of media and the internet.
3. Make a speaking point about invasive species when presenting to constituent and user groups.
4. 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 includes a full survey in 2017/2018 (Table 5).

LITERATURE CITED

Munger, C. 1999. Statewide freshwater fisheries monitoring and management program survey report for McClellan Reservoir, 1998. Texas Parks and Wildlife Department, Federal Aid In Sport Fish Restoration, Grant F-30-R, Performance Report, Austin.

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National Oceanic and Atmospheric Administration (NOAA). 2014. National climate data: Web interface. Available: <http://www.ncdc.noaa.gov/temp-and-precip/drought/recovery.php?type=end&duration=3&curr-submitted=Submit#curr> (April 2014).

United States Drought Monitor. 2014. Web interface. Available: <http://droughtmonitor.unl.edu/Home/StateDroughtMonitor.aspx?TX> (April 2014).

Table 1. Characteristics of McClellan Reservoir, Texas.

Characteristic	Description
Year constructed	1938
Controlling authority	US Forest Service
County	Gray
Reservoir type	Tributary
Shoreline Development Index	2.05
Conductivity	230 μ mhos/cm

Table 2. Boat ramp characteristics for McClellan Reservoir, Texas, August, 2013. Reservoir elevation at time of survey was approximately 2905 feet above mean sea level.

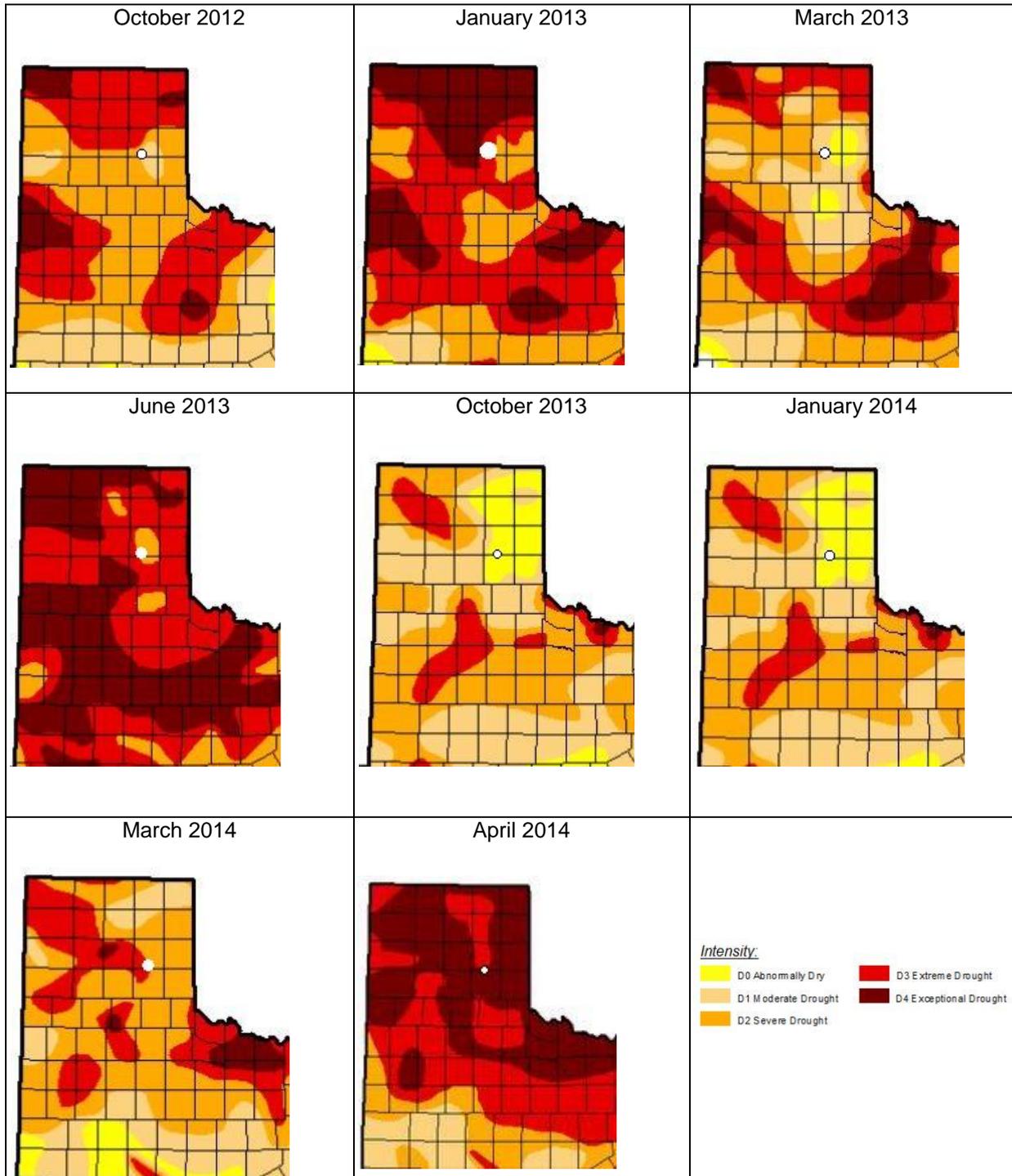
Boat ramp	Latitude Longitude (dd)	Public	Parking capacity (N)	Elevation at end of boat ramp (ft)	Condition
North Ramp	35.21352 -100.87255	Y	10	2930	Out of water. Extension is not feasible
South Ramp	35.2094 -100.86563	Y	10	2940	Out of water. Extension is not feasible

Table 3. Harvest regulations for McClellan Reservoir, Texas.

Species	Bag Limit	Length Limit
Catfish: Channel and Blue, their hybrids and subspecies	25 (in any combination)	12-inch minimum
Bass, Largemouth	5	14-inch minimum
Crappie: White and Black, their hybrids and subspecies	25 (in any combination)	10-inch minimum
Saugeye	3	18-inch minimum

APPENDIX A

Recent maps of drought conditions in District 1A obtained from the United States Drought Monitor web site (<http://droughtmonitor.unl.edu/Home/StateDroughtMonitor.aspx?TX>). The white circle indicates the approximate location of McClellan Reservoir.



APPENDIX B

GoogleEarth satellite images of the boat ramps on McClellan Reservoir, Texas, imagery date 5/1/2012, accessed 3/5/14.

North Ramp



South Ramp

