Placid Reservoir

2024 Fisheries Management Survey Report

PERFORMANCE REPORT

As Required by

FEDERAL AID IN SPORT FISH RESTORATION ACT

TEXAS

FEDERAL AID PROJECT F-221-M-5

INLAND FISHERIES DIVISION MONITORING AND MANAGEMENT PROGRAM

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Survey and Management Summary

Fish populations in Placid Reservoir were not sampled during the current sampling period due to extreme low water levels. On October 14, 2021, the spillgates on Placid Reservoir were opened to release storm water from the reservoir and a mechanical failure of the gates resulted in the reservoir being dewatered and returning to the historic river channel. Repairing the existing dam structure was deemed infeasible and the decision to replace it with a new structure was determined. Construction of the new structure is currently underway with completion anticipated by the end of 2025. A management plan for the reservoir has been prepared and will be initiated when construction of the new dam structure is complete, and the reservoir fills to conservation pool elevation.

Reservoir Description: Placid Reservoir is a 214-acre impoundment located on the Guadalupe River in Guadalupe County, one-half mile southwest of Seguin, Texas. This small impoundment, constructed in 1928, is fed by the Guadalupe River watershed and used for water supply, hydroelectric generation, and recreation. Following a dewatering event in 2021, water level has been restricted to the historic river channel. When at conservation pool, habitat features consisted of boat docks, piers, bulkhead, riprap, and several species of native aquatic vegetation including spatterdock, water willow, and cattail.

Management History: Important sport fish include Largemouth Bass, White Crappie, and catfish. Florida Largemouth Bass were introduced in the mid-1990s, mid-2000s, and most recently in 2017. The management plan from the 2020 survey report included highlighting the fishery through social media and press releases, stocking Florida Largemouth Bass when conditions are ideal, and continuing to monitor for invasive species. Historically, nuisance aquatic vegetation has caused access and recreational problems, however intensive herbicide treatments and intermittent scouring due to flooding appears to have mitigated vegetation issues. No vegetation management actions have been necessary over recent years.

Fish Community

- Due to reservoir conditions, fish community data were not presented. Historical fisheries data are available in Placid Reservoir Fisheries Management Survey Report (McDonald and Binion 2021).

Management Strategies: Mainly work on rebuilding the reservoir sport fishery by surveying post-impoundment inventories and restoring habitat and fish communities in collaboration with the Guadalupe-Blanco River Authority (GBRA).

Introduction

This document is a summary of conditions at Placid Reservoir from 2021-2025. The purpose of this document is to provide fisheries information and make management recommendations to protect and improve the sport fishery. Fish population sampling was not conducted post-June 2021, due to current reservoir conditions. Historical data for Placid Reservoir can be referenced from McDonald and Binion (2021).

Reservoir Description

Placid Reservoir has historically been a 214-acre impoundment located on the Guadalupe River in Guadalupe County, one-half mile southwest of Seguin, Texas, and is operated by the Guadlupe-Blanco River Authority (GBRA). It is part of the Guadalupe River Chain Lakes that includes Dunlap, McQueeny, and Meadow reservoirs, and formerly H-4 and Wood reservoirs. Placid Reservoir was impounded in 1928 for hydroelectric generation, water supply, and recreation. In October of 2021, the spillgates on Placid Reservoir were opened to release storm water from the reservoir and a mechanical failure of the gates resulted in the reservoir being dewatered and returning to the historic river channel. Repairing the existing dam structure was deemed infeasible and the decision to replace it with a new structure was determined. Construction of the new structure is currently underway with completion anticipated by the end of 2025. Prior to dewatering, most of the shoreline was privately owned. Clay, sand, and silt were the dominate substrate types in the middle and lower portions of the reservoir. Habitat included boat docks, piers, bulkheads, riprap, native aquatic vegetation, submerged timber, and overhanging terrestrial vegetation. Historically non-native vegetation, including water hyacinth, water lettuce, and hydrilla caused access problems until aggressive chemical and limited biological controls (N=36 Grass Carp) were implemented. Intermittent flooding situations have an evident impact on vegetation establishment. Control efforts have not been necessary since the mid-1990s. Zebra mussels, a non-native and often detrimental invasive species, were detected within the reservoir and the waterbody was classified as infested in March of 2021. As previously mentioned, water level has been restricted to the historic river channel since 2021. Other descriptive characteristics for Placid Reservoir can be found in Table 1.

Angler Access

Placid Reservoir has one public boat ramp and several private boat ramps. The public boat ramp is located at the I-10 underpass just outside of the City of Seguin. TxDOT is currently leading a boat ramp replacement project, and a preliminary engineering report is currently underway. Construction of the new boat ramp is expected to begin in 2026, remaining near the 1-10 underpass. Additional characteristics for the original ramp are in Table 2. Public shoreline access is very limited.

Management History

Previous management strategies and actions: Management strategies and actions from the previous survey report (McDonald and Binion 2021) included:

1. Write and distribute press releases highlighting the angling opportunities available in the reservoir.

   Action: Due to the spillgate failure, water levels receded to the historical river channel, thus limiting access and fishing opportunities.

2. Promote the ShareLunker program and request FLMB fingerlings when habitat conditions and water levels permit to maintain high-level Florida Bass genetic influence and maximize trophy bass potential.

   Action: Due to spillgate failure, fishing pressure on Placid Reservoir was almost non-existent and conditions were not ideal for FLMB stocking.

3. Cooperate with the controlling authority to post appropriate signage at access point and spread awareness of aquatic invasive species present in the reservoir.

Action: Zebra Mussel signage was placed at the boat ramp. Due to spillgate failure, angler effort and access was significantly limited, therefore further outreach was deemed unnecessary.

Harvest regulation history: Sport fish in Placid Reservoir have been managed with statewide harvest regulations (Table 3).

Stocking history: Placid Reservoir has been stocked with numerous species including Channel Catfish, Florida Largemouth Bass, White Crappie, and Triploid Grass Carp. The most recent stocking (Florida Largemouth Bass) occurred in 2017. The complete stocking history is in Table 4.

Vegetation/habitat management history: Historically, non-native vegetation such as water hyacinth, water lettuce, and hydrilla has caused boater and angler access problems. In 1996, chemical and biological (Triploid Grass Carp) controls were implemented. Non-native invasive vegetation has not negatively impacted boat or angler access over recent years.

Water transfer: No interbasin transfers are known to exist.

Methods

Due to reservoir conditions and lack of boat access, no fisheries surveys were conducted over the current survey period.

Results and Discussion

Due to reservoir conditions and lack of boat access, no fisheries surveys were conducted over the current survey period. Results collected in historical surveys can be accessed in McDonald and Binion (2021).

Fisheries Management Plan for Placid Reservoir, Texas

Prepared – July 2025

ISSUE 1: On October 14, 2021, the spillgates on Placid Reservoir were lowered to pass flows of more than 15,000 cfs downstream. During early morning operations, spillgate #2 was partially lowered and became unresponsive. The gate then progressively dropped to near the fully lowered position and remained unresponsive. With the gate lowered, the water in Placid Reservoir receded to the historic channel. The engineer's evaluation report noted significant and permanent deflection, or warping, in the upstream leaf of the spillgate causing the upstream and downstream gate leaves to make contact and bind during operation. The compromised spillgate presented significant operational and safety concerns and several additional risks, including the gate becoming permanently stuck partway through operation and preventing it from fully lowering to pass flows downstream. Engineers deemed the dam was not repairable and would require replacement. Construction of the replacement dam is currently underway and should be completed by the end of 2025.

MANAGEMENT STRATEGY

1. Following the completion of the new dam structure, conduct exploratory objective-based sampling to evaluate the status of important sport fish and forage species populations.

2. Once the reservoir refills to full pool, request to stock various species to reestablish recreationally important sport fish and prey populations including Lone Star Bass, Channel Catfish, and Bluegill. Write and distribute press releases to inform the public on status of management initiatives and condition of sport fish populations.

ISSUE 2: Texas Department of Transportation (TxDOT) has sought funding to replace the current Placid boat ramp. General site amenities (i.e., signage) and shoreline angling access are limited at the IH-10 public access location. Additionally, flow conditions can create difficult and oftentimes unsafe boat launching and loading.

MANAGEMENT STRATEGY

1. Assist TxDOT and other entities input on boat ramp design.

2. Work with TxDOT and other local partners to post appropriate safety and conservation signage at this public access point.

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 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 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. Placid Reservoir was listed as infested with Zebra Mussels in March of 2021.

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 interbasin water transfers to facilitate potential invasive species responses.

Objective-Based Sampling Plan and Schedule (2025–2029)

Note: Upon completion of dam construction project (projected: end of 2025), Placid Reservoir will undergo a rebuilding phase with the primary objective to reestablish important sport fish and prey populations. Therefore, sampling described below will be exploratory in nature to document presence/absence of all fishes in the reservoir and to evaluate the success of stocking programs. Pending the results of initial surveys, objectives may return to standard sampling objectives within this duration.

Sport fish, forage fish, and other important fishes

Sport fish in Placid Reservoir include Blue, Channel, and Flathead Catfish, Largemouth Bass, and White Crappie. Important forage species include Gizzard Shad and Bluegill Sunfish.

Survey objectives, fisheries metrics, and sampling objectives

Catfishes: Exploratory spring gill net survey will be conducted in 2026 and 2029 to identify presence/absence of Blue Catfish, Flathead Catfish, and Channel Catfish. Surveys will consist of 5 gill nets set at randomly selected stations. Additional population level data (relative abundance, size composition, relative weight) will be collected for specimens sampled.

Largemouth Bass: Exploratory fall electrofishing surveys will be conducted in 2026 and 2028 to identify presence/absence and to aid in evaluating stocking needs. Surveys will consist of 12 randomly selected electrofishing sites. Additional population level data (relative abundance, size composition, relative weight) will be collected for specimens sampled.

Crappie: Exploratory fall trap net surveys will be conducted in 2026 and 2028 to identify presence/absence of crappies. Surveys will consist of 10 biologist selected trap net sites. Additional population level data (relative abundance, size composition, relative weight) will be collected for specimens sampled.

Gizzard and Threadfin Shad and Bluegill: Sampling with electrofishing per Largemouth Bass will be sufficient to identify presence/absence of forage fishes. Additional population level data (relative abundance, size composition) will be recorded on specimens collected in the fall of 2026 and 2028.

Habitat: The reservoir will be circumnavigated in 2026 and 2028 to survey aquatic vegetation.

Literature Cited

McDonald, M., and G. Binion. 2021. Placid Reservoir, 2020 fisheries management survey report. Texas Parks and Wildlife Department, Federal Aid Report F-221-M-4, Austin.

Tables and Figures

Table 1. Characteristics of Placid Reservoir, Texas, as of October 2021 (prior to dewatering).

Characteristic	Description
Year constructed	1928
Controlling authority	Guadalupe-Blanco River Authority
County	Guadalupe
Reservoir type	Mainstem: Guadalupe River
Shoreline Development Index	5.27
Conductivity	395 – 414 µS/cm

Table 2. Boat ramp characteristics for Placid Reservoir, Texas, March 2021 (last report at full pool). Reservoir elevation at time of survey was 497 feet above mean sea level.

Boat ramp	Latitude Longitude (dd)	Public	Parking capacity (N)	Elevation at end of boat ramp (ft)	Condition
IH-10 underpass	29.566847 -98.023132	Y	12+	UNK	Currently out of water; unusable.

Table 3. Harvest regulations for Placid Reservoir, Texas.

Species	Bag limit	Length limit
Catfish: Channel and Blue Catfish, their hybrids and subspecies	25 (only 10 ≥ 20 inches)	None
Catfish, Flathead	5	18-inch minimum
Bass, White	25	10-inch minimum
Bass, Largemouth	5	14-inch minimum
Bass: Spotted and Guadalupe	5[a]	None
Crappie: White and Black crappie, their hybrids and subspecies	25 (in any combination)	10-inch minimum

[a] Daily bag for Largemouth Bass, Spotted Bass, and Guadalupe Bass = 5 fish in any combination.

Table 4. Stocking history of Placid Reservoir, Texas. FRY = fry; FGL = fingerling; ADL = adults

Year	Number	Size
	Channel Catfish	
1973	5,700	FRY
1995	6,261	FGL
1997	5,990	FGL
2005	20,806	FGL
Species Total	38,757	
	Florida Largemouth Bass	
1993	1,461	FGL
1994	40,272	FGL
1994	141	ADL
2003	20,136	FGL
2003	119,487	FRY
2005	20,396	FGL
2017	308,083	FRY
Species Total	509,976	
	White Crappie	
1994	24,808	FGL
Species Total	24,808	
	Triploid Grass Carp	
1995	*25	ADL
1996	*11	ADL
Species Total	36	

*Radio tagged Triploid Grass Carp were stocked as part of a study to monitor escapement in the Guadalupe River Reservoirs.

Table 5. Survey of structural habitat types, Placid Reservoir, Texas, 2008. Shoreline habitat type units are in miles.

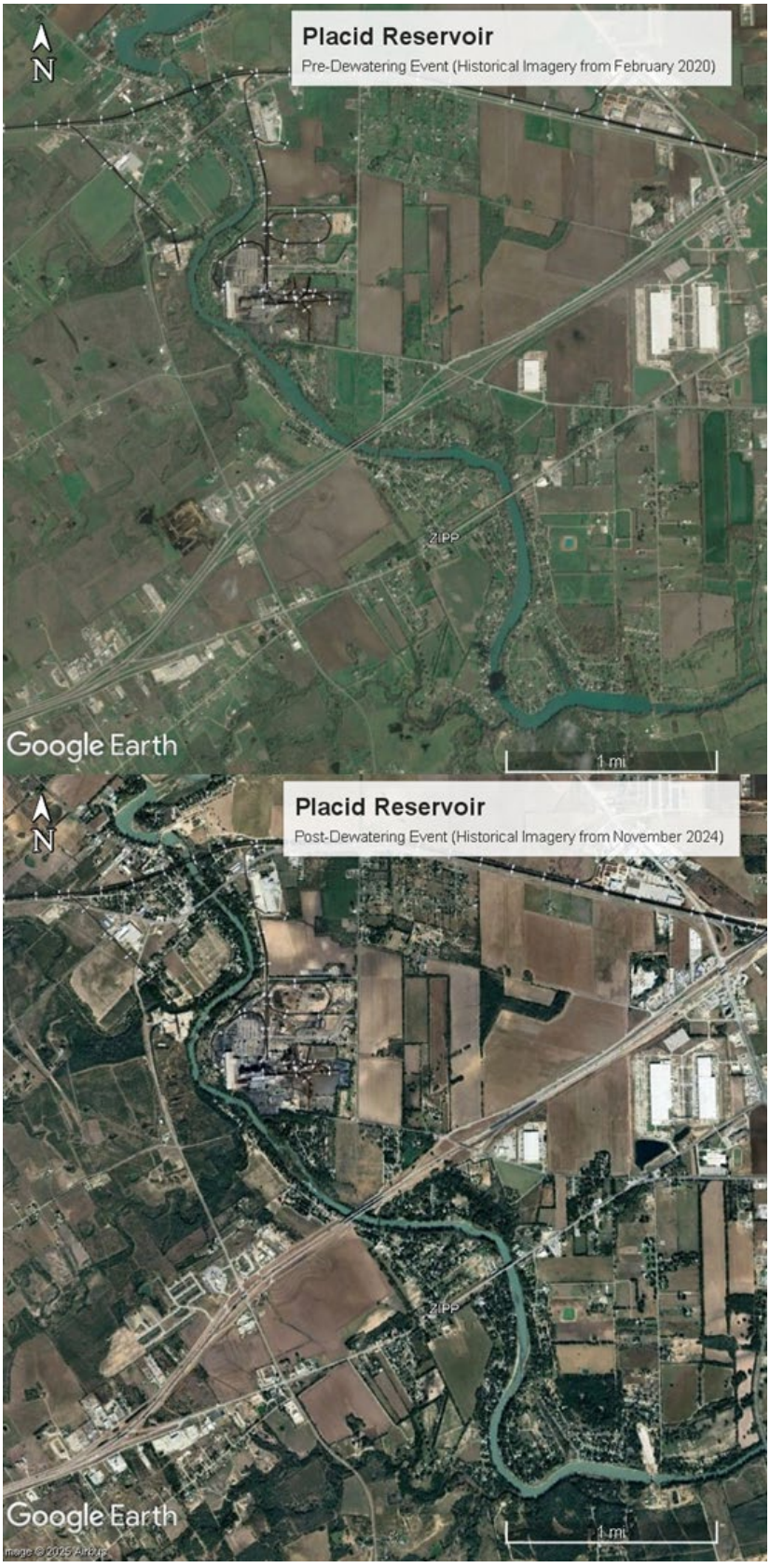
Habitat type	Estimate	% of total
Bulkhead	7.8 miles	30.5
Bulkhead with boat docks	8.5 miles	33.2
Natural	9.2 miles	35.9
Rocky	0.1 miles	0.4

Proposed Sampling Schedule

Table 6. Proposed sampling schedule for Placid Reservoir, Texas pending the completion of the dam in 2025. Survey period is June through May. Gill netting surveys are conducted in the spring, while electrofishing and trap netting surveys are conducted in the fall.

	Survey year			
	2025-2026	2026-2027	2027-2028	2028-2029
Angler Access		X		
Structural Habitat		X		
Vegetation		X		X
Electrofishing – Fall		X		X
Trap netting		X		X
Gill netting	X			X
Report				X

APPENDIX A – Pre- and post-reservoir dewatering images



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