Bachman Reservoir

2022 Fisheries Management Survey Report

PERFORMANCE REPORT

As Required by

FEDERAL AID IN SPORT FISH RESTORATION ACT

TEXAS

FEDERAL AID PROJECT F-221-M-4

INLAND FISHERIES DIVISION MONITORING AND MANAGEMENT PROGRAM

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Contents

| Contents | i |
|---|--|
| Survey and Management Summary | . 1 |
| Introduction | . 2 |
| Reservoir Description | . 2 |
| Angler Access | . 2 |
| Management History | . 2 |
| Methods | .4 |
| Results and Discussion | . 4 |
| Fisheries Management Plan for Bachman Reservoir, Texas | . 6 |
| Objective-Based Sampling Plan and Schedule (2023–2027) | .7 |
| Literature Cited | . 8 |
| Tables and Figures | . 9 |
| Reservoir Characteristics | . 9 |
| Boat Ramp Characteristics | |
| Boat Namp Onaracteristics | . 9 |
| Harvest Regulations | |
| | . 9 |
| Harvest Regulations | . 9 . 9 |
| Harvest Regulations Stocking History | .9 .9 11 |
| Harvest Regulations Stocking History Objective-Based Sampling Plan for 2018-20231 | .9 .9 11 12 |
| Harvest Regulations Stocking History Objective-Based Sampling Plan for 2018-2023 Gizzard Shad | .9 .9 11 12 13 |
| Harvest Regulations Stocking History Objective-Based Sampling Plan for 2018-2023 Gizzard Shad | .9 .9 11 12 13 14 |
| Harvest Regulations Stocking History Objective-Based Sampling Plan for 2018-2023 | .9 .9 11 12 13 14 |
| Harvest Regulations Stocking History Objective-Based Sampling Plan for 2018-2023 Gizzard Shad Bluegill Channel Catfish Largemouth Bass | .9 .9 11 12 13 14 15 16 |
| Harvest Regulations Stocking History Objective-Based Sampling Plan for 2018-2023 Gizzard Shad Bluegill Channel Catfish Largemouth Bass White Crappie | .9 .9 11 12 13 14 15 16 17 |

i

Survey and Management Summary

Bachman Lake and the surrounding area is currently undergoing a major, multi-focal rehabilitation and enhancement project. The project includes hydraulic dredging in the reservoir and dam and spillway repairs. Dredging began in 2022 which led to the City of Dallas prohibiting all boating access to the reservoir. As such, fish populations in Bachman Lake have not been surveyed since the 2018-2019 sampling surveys. This project does not require dewatering of the reservoir; therefore, we do not anticipate loss of the fishery or any major negative impacts to the fish community. This report contains a summary of the progress of the reservoir rehabilitation project, some historical (2018-2019) fishery data, and a management plan for the reservoir based on that information.

Reservoir Description: Bachman Lake is a 132-acre reservoir located on Bachman Branch, a tributary of the Trinity River, constructed in 1903 by the City of Dallas for water supply. The reservoir is currently used for recreation only and is no longer used as a water supply. The watershed is primarily industrial with a major airport, Dallas Love Field, located next to the reservoir. Habitat was composed mainly of shoreline emergent vegetation in the form of water willow and bulkhead in the form of rock gabions. One, single-lane public ramp provides boating access to the reservoir. Prolonged siltation decreased the depth of the upper half of the reservoir making it virtually inaccessible to boaters. A major rehabilitation and enhancement plan was approved for Bachman Lake and the surrounding area in 2021. The rehabilitation portion of the plan included dredging the shallow, upper half of the reservoir and repairing the dam and spillway. Hydraulic dredging of the upper reservoir was completed in 2023. The dam and spillway repair plan has been approved and is currently out for bid. Bachman Lake will be open to boaters during the dam and spillway repair work. The dam and spillway repair work is expected to be completed in 2025. Water level data is not available for Bachman Reservoir, but little fluctuation of water level occurs.

Management History: Important sport fish have historically included Largemouth Bass and White Crappie. All fish species have been managed by statewide regulations.

Fish Community: The fish community of Bachman Lake has not been surveyed since 2018-2019 due to the ongoing major renovation project by the City of Dallas.

- **Prey species:** Shad and Bluegill were abundant prior to the renovation project, with most individuals of both species being available to sport fish as forage.
- **Catfishes:** Channel Catfish were present in low abundance with limited recruitment prior to renovation.
- **Largemouth Bass:** Largemouth Bass were abundant with high numbers of legal-sized fish in excellent condition available to anglers prior to renovation.
- White Crappie: White Crappie were moderately abundant with legal-sized fish in good condition available to anglers prior to renovation.

Management Strategies: Fish surveys will resume on Bachman Lake during Fall 2024, approximately one year before the rehabilitation project is complete. We will maintain contact with City of Dallas Parks and Recreation, Dallas Water Utilities and other stakeholder groups to offer guidance for fisheries habitat enhancement activities that may arise during dam and spillway repair.

Introduction

This document is a summary of fisheries data collected from Bachman Lake from 2018-2023. The purpose of the document is to provide fisheries information and make management recommendations to protect and improve sport fisheries. While information on other fishes was collected, this report deals primarily with major sport fishes and important prey species. Bachman Lake and the surrounding area is undergoing a major, multi-focal rehabilitation and enhancement project. The full project consists of building a recreation center, skate park, and an aquatics center and includes hydraulic dredging in the reservoir and dam and spillway repairs. As such, fish populations in Bachman Lake have not been surveyed since the 2018-2019 sampling surveys. This report contains a summary of the progress of the reservoir rehabilitation project (Appendix B), some historical fishery data, and a management plan for the reservoir based on that information.

Reservoir Description

Bachman Lake is a 132-acre reservoir constructed in 1903 by the City of Dallas on the Bachman Branch tributary of the Trinity River for water supply. The reservoir is currently used for recreation only and is no longer used as a water supply for the City of Dallas. The watershed is primarily industrial with a major airport, Dallas Love Field, next to the reservoir. A park surrounds the reservoir and provides recreational opportunities for the citizens of Dallas. Fish habitat was composed mainly of shoreline emergent vegetation in the form of water willow and bulkhead in the form of rock gabions. The lower half of Bachman Lake was dredged in 2003 to increase depth and to provide better access for boaters, but the upper half of the reservoir remained shallow and was virtually inaccessible to boaters. Siltation has continued since the 2003 dredging and the reservoir needed dredging again. A large, multi-focal group rehabilitation and enhancement plan was approved for Bachman Lake and the surrounding area in 2021. The rehabilitation plan included dredging the upper half of lake and repairing the dam and spillway. Hydraulic dredging began in early 2022 and was completed in early 2023. Hydraulic dredging does not require reservoir dewatering; therefore, we anticipate impacts to the fish community were minimal. The dam and spillway repair plan has been approved and is currently out for bid. The plan includes the use of a cofferdam to allow for dam and spillway repairs, preventing the need to dewater the reservoir. Dam and spillway repair project is estimated to be completed in 2025. Other descriptive characteristics for Bachman Reservoir are in Table 1. Water level data is not available for Bachman Lake, but little fluctuation of water level occurs.

Angler Access

Bachman Lake has one public boat ramp with very limited trailer parking. Although there is a 10.5 HP restriction on outboard motors, boats with larger horsepower motors may launch provided they use only their electric trolling motors. Additional boat ramp characteristics are in Table 2. The parking lot and ramp were closed to the public during dredging, but reopened following the completion of the dredging and will remain open for the remainder of the rehabilitation project. Angler bank access is excellent around the entire reservoir; however, ADA compliant fishing access is limited. Shoreline access for bank angling remained available to anglers during dredging and will remain open for the remainder of the rehabilitation project.

Management History

Previous management strategies and actions: Management strategies and actions from the previous survey report (Brock et al. 2019) included:

1. Conduct a category 2 age and growth survey to assess Largemouth Bass growth.

Action: Age samples were not collected due to uncertainty of the future of the fishery and Bachman Lake.

2. Partner with interest groups to install artificial fish habitat structure into Bachman Lake.

Action: Met with City of Dallas, Dallas Water Utilities, and Friends of Bachman Lake stakeholder group to discuss ways to enhance fish habitat in Bachman Lake. Conversations stalled during dredging. Project and stakeholder group leaders suggested we revisit the addition of habitat following the completion of the rehabilitation project.

3. Cooperate with controlling authorities to post signage, educate the public about invasive species, and track existing and future inter-basin water transfers to facilitate potential invasive species responses.

Action: The DFW District continued to work with Dallas Water Utilities to post signage and to educate the public about invasive species threats through media outlets.

Harvest regulation history: Sport fish populations in Bachman Lake have been managed with statewide regulations throughout the history of the reservoir. Current regulations can be found in Table 3.

Stocking history: Bachman Lake was stocked annually with Channel Catfish from 2004-2017. Florida Largemouth Bass were stocked in 2016 and 2017. The complete stocking history is in Table 4.

Vegetation/habitat management history: Historically, there have been no management activities to increase natural vegetation or structural habitat in Bachman Lake.

Water transfer: Bachman Lake is used for recreation only. No interbasin transfers are known to exist.

Methods

Surveys were conducted to achieve survey and sampling objectives in accordance with the objectivebased sampling (OBS) plan for Bachman Reservoir (Brock et al. 2019)). Primary components of the OBS plan are listed in Table 5. All survey sites were randomly selected, and all surveys were conducted according to the Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2015).

Electrofishing – Largemouth Bass, sunfishes, Gizzard Shad, and Threadfin Shad were collected by electrofishing (30 minutes at 6, 5-min stations). Catch per unit effort (CPUE) for electrofishing was recorded as the number of fish caught per hour (fish/h) of actual electrofishing.

Trap netting – Crappie were collected using trap nets (3 net nights at 3 stations). Catch per unit of effort for trap netting was recorded as the number of fish caught per net night (fish/nn).

Gill netting – Channel Catfish were collected using gill nets (3 net nights at 3 stations). Catch per unit of effort for gill netting was recorded as the number of fish caught per net night (fish/nn).

Genetics – Genetic analysis of Largemouth Bass was conducted according to the Fishery Assessment Procedures (TPWD, Inland Fisheries Division, unpublished manual revised 2015). Micro-satellite DNA analysis was used to determine genetic composition of individual fish from 2005 through 2018 and by electrophoresis for previous years.

Statistics – Sampling statistics (CPUE for various length categories), structural indices [Proportional Size Distribution (PSD), terminology modified by Guy et al. 2007], and condition indices [relative weight (W_r)] were calculated for target fishes according to Anderson and Neumann (1996). Index of Vulnerability (IOV) was calculated for Gizzard Shad (DiCenzo et al. 1996). Standard error (SE) was calculated for structural indices and IOV. Relative standard error (RSE = 100 X SE of the estimate/estimate) was calculated for all CPUE and creel statistics.

Creel survey – A creel survey has never been conducted on Bachman Reservoir. Reasons for not conducting a creel survey include, but are not limited to, the lake size and data collection efficiency.

Habitat - A habitat survey was not conducted for the 2022-2023 sampling season.

Water level – Water level data are not available for Bachman Lake, but little fluctuation of water level occurs.

Results and Discussion

Habitat: The last habitat survey of Bachman Lake was in 2010 (Brock and Hungerford 2011). Fish habitat in Bachman Lake has remained consistent with the primary habitat consisting of shoreline emergent vegetation in the form of water willow and bulkhead in the form of rock gabions (Brock et al. 2011).

Prey species: 2018 electrofishing catch rates of Gizzard Shad were high (1,432.0 fish/h) and all individuals collected were available to predators (Index of Vulnerability (IOV) = 100; Figure 1). Electrofishing catch rates of Bluegill in 2018 were high (170.0 fish/h), but the size structure was balanced (proportional size distribution (PSD) = 30) with plenty of individuals available to predators (Figure 2).

Channel Catfish: The gill net catch rate of Channel Catfish was low (2.7 fish/nn) in 2019. Although Channel Catfish have been consistently stocked since 2004 (Table 4), we did not collect any catfish below 12 inches (Figure 3). This suggests catfish recruitment is extremely limited in Bachman Lake.

Largemouth Bass: Electrofishing catch rates of Largemouth Bass were high in 2018 and body condition was excellent ($W_r \ge 95$) for all size classes (Figure 4). The OBS objectives for this species, abundance (CPUE – Stock; RSE ≤ 25) and size structure (PSD and length frequency; N ≥ 50) were achieved with 56

stock-size LMB collected and an RSE of 23 (Figure 4). The category-2 age and growth survey was not conducted in 2018 due to the uncertainty of the fishery and Bachman Lake.

White Crappie: Trap net catch rates of White Crappie in 2018 were lower than previous surveys, but still high at 75.7 fish/nn (Figure 5). Body condition was good for all size classes ($W_r \ge 85$) and most of the fish were harvestable size (PSD = 94). The OBS objectives for this species, size structure (PSD and length frequency; N = 50) were achieved with over 200 individuals collected (Figure 5).

Fisheries Management Plan for Bachman Reservoir, Texas

Prepared – July 2023

ISSUE 1: Bachman Lake is undergoing major renovations including dredging and dam and spillway repair. Hydraulic dredging began in early 2022 and was completed in April 2023. A total of 154,441 cubic yards of sediments and 3,125 tons of debris (wood, rock, and man-made materials) were removed from the lake during that time. A cofferdam will be used to do the dam and spillway repairs, avoiding the need to lower the water level of Bachman Lake, thereby limiting impacts on the current fish and wildlife communities. However, the removal of submerged sediment mounds, gravel, and sunken debris, may impact the feeding success of all species and future recruitment of sunfish and Largemouth Bass populations.

MANAGEMENT STRATEGY

- 1. Monitor rehabilitation project progress and keep the public informed of current conditions.
- 2. Conduct a habitat survey to assess current habitat conditions and needs following dredging and dam and spillway repairs.
- 3. Continue conversations with the City of Dallas, Dallas Water Utilities, and stakeholder groups about the benefits of habitat enhancement through the addition of rock in the form of rip rap on the dam and rock or reclaimed concrete piles throughout the reservoir.
- 4. Conduct an electrofishing survey in Fall 2024 to assess the Largemouth Bass and prey species populations to assess abundance and recruitment.
- 5. Resume monitoring and 4-year sampling schedule in 2026-2027.
- **ISSUE 2:** 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.

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.

Objective-Based Sampling Plan and Schedule (2023–2027)

Sport fish, forage fish, and other important fishes

Important sport fishes in Bachman Lake include Largemouth Bass and White Crappie. Known important forage species include Gizzard Shad, Bluegill and Longear Sunfish. All planned surveys listed below will be subject to change depending on the status of Bachman Lake over the next four years.

Low-density fisheries

Catfishes: Blue Catfish were stocked once in Bachman Reservoir (~13,000 fingerlings in 2003), yet only one Blue Catfish has ever been collected using standard sampling methods. Channel Catfish were consistently stocked as 9" fingerlings for the better part of two decades (1996-2016) due to an event hosted at Bachman Reservoir by the Turning POINT organization. Despite regular stockings, Channel Catfish didn't show up in surveys until 2007. Catch rates have been variable and size structure is skewed towards a low-density population of larger individuals. The Turning POINT event is no longer held at Bachman Lake, so Channel Catfish stockings at the reservoir have ceased. Given the unknown effects of the ongoing renovation project on Channel Catfish, trend data on catfish CPUE, size structure, and body condition will be collected using 3 gill nets at 3 randomly selected stations (3 net nights) throughout Bachman Lake in spring 2027. Sampling objective will be limited to general monitoring trend data (without precision or sample size requirements).

Survey objectives, fisheries metrics, and sampling objectives

Largemouth Bass: Electrofishing catch rates for Largemouth Bass have been historically high in Bachman Reservoir. Fall nighttime electrofishing will be conducted in 2024 and 2026. Given the unknown effects of the renovation project on Largemouth Bass, a minimum of 6 randomly selected 5-min sites will be sampled to collect trend data on CPUE, size structure, and body condition for Largemouth Bass. Based on past catch rates, this should be adequate to obtain an RSE of CPUE-S \leq 25. If the RSE objective is not met, no additional electrofishing sampling will be conducted.

White crappie: Previous survey data indicated that White Crappie are abundant in Bachman Reservoir; however, it is unknown how the renovation project will affect crappie in Bachman Lake. A trap netting survey consisting of 3 single-cod shoreline net sets will be conducted in Fall 2026. Sampling objective will be limited to general monitoring trend data (without precision or sample size requirements). This level of effort should be sufficient to collect 50 stock size fish for size structure estimation. No additional effort will be expended if 50 stock length fish are not collected in the 3 trap nets.

Bluegill, Longear Sunfish, Threadfin and Gizzard Shad: Bluegill, Longear Sunfish, Threadfin, and Gizzard Shad are the primary forage in Bachman Lake. Like Largemouth Bass, trend data on CPUE and size structure will be collected with fall nighttime electrofishing in 2024 and 2026. Sampling, as with Largemouth Bass above, will allow for monitoring of large-scale changes in Bluegill, Longear Sunfish, and Gizzard Shad relative abundance and size structure. Sampling effort based on achieving sampling objectives for Largemouth Bass should result in sufficient numbers of Bluegill, Longear Sunfish, and Gizzard Shad for size structure estimation (PSD and IOV; 50 fish minimum at 6 stations with 80% confidence).

Literature Cited

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- Neumann, R. M., C. S. Guy, and D. W. Willis. Length, weight and associated indices. Pages 637-676 in A. V. Zale, D. L. Parrish, and T. M. Sutton, editors. Fisheries techniques, 3rd edition. American Fisheries Society, Bethesda, Maryland.

Tables and Figures

Table 1. Characteristics of Bachman Reservoir, Texas.

| Characteristic | Description |
|-----------------------------|-------------------------|
| Year constructed | 1903 |
| Controlling authority | City of Dallas |
| County | Dallas |
| Reservoir type | Tributary Trinity River |
| Shoreline development index | 2.28 |
| Conductivity | 375 μS/cm |

Table 2. Boat ramp characteristics for Bachman Reservoir, Texas, August 2022.

| Boat ramp Boat ramp Bachman Lake 32 505865 | | Public | Parking capacity (N) | Elevation at end of boat ramp (ft) | Condition | | |
|---|-------------------------|--------|----------------------------|--|------------------------------------|--|--|
| Bachman Lake ramp | 32.505865 -96.515695 | Y | 3 | Unknown | Ramp is shallow, but in good shape | | |

Table 3. Harvest regulations for Bachman Reservoir, Texas.

| Species | Bag limit | Length limit |
|---|--|-----------------|
| Catfish: Channel and Blue, their hybrids and subspecies | 25 (in any combination; only 10 ≥ 20 inches) | None |
| Bass, Largemouth | 5 | 14-inch minimum |
| Crappie: White and Black, their hybrids and subspecies | 25 (in any combination) | 10-inch minimum |

| Species | Year | Number Stocked | Size |
|-------------------------|-------|----------------|------|
| Blue Catfish | 2003 | 13,313 | FGL |
| Channel Catfish | 1966 | 6,000 | UNK |
| Channel Catfish | 1969 | 20,000 | UNK |
| Channel Catfish | 1976 | 2,000 | UNK |
| Channel Catfish | 1982 | 180 | UNK |
| Channel Catfish | 1996 | 324 | ADL |
| Channel Catfish | 1997 | 400 | ADL |
| Channel Catfish | 1998 | 500 | FGL |
| Channel Catfish | 1999 | 400 | ADL |
| Channel Catfish | 2000 | 400 | FGL |
| Channel Catfish | 2002 | 900 | ADL |
| Channel Catfish | 2004 | 3,807 | FGL |
| Channel Catfish | 2005 | 662 | FGL |
| Channel Catfish | 2006 | 600 | FGL |
| Channel Catfish | 2007 | 660 | ADL |
| Channel Catfish | 2008 | 660 | FGL |
| Channel Catfish | 2009 | 660 | FGL |
| Channel Catfish | 2010 | 660 | FGL |
| Channel Catfish | 2011 | 695 | FGL |
| Channel Catfish | 2012 | 661 | FGL |
| Channel Catfish | 2013 | 660 | FGL |
| Channel Catfish | 2014 | 550 | FGL |
| Channel Catfish | 2015 | 550 | FGL |
| Channel Catfish | 2016 | 550 | FGL |
| Channel Catfish | 2017 | 550 | FGL |
| | Total | 43,029 | |
| Largemouth Bass | 1967 | 2,500 | UNK |
| Largemouth Bass | 1976 | 3,000 | UNK |
| Largemouth Bass | 1982 | 185 | UNK |
| C C | Total | 5,685 | |
| Florida Largemouth Bass | 1976 | 5,450 | FGL |
| Florida Largemouth Bass | 2016 | 14,965 | FGL |
| Florida Largemouth Bass | 2017 | 19,027 | FGL |
| - | Total | 39,442 | |
| Green x Redear Sunfish | 1976 | 6,000 | UNK |
| Redear Sunfish | 1976 | 6,000 | UNK |

Table 4. Stocking history of Bachman Reservoir, Texas. FGL = fingerling, ADL = adults, UNK = unknown.

| Gear/target species | Survey objective | Metrics | Sampling objective |
|---------------------------|-------------------|-----------------------|--------------------------|
| Electrofishing | | | |
| Largemouth Bass | Abundance | CPUE-Stock | RSE-Stock ≤ 25 |
| | Size structure | PSD, length frequency | N ≥ 50 stock |
| | Condition | Wr | 10 fish/inch group (max) |
| | Genetics | % FLMB | N = 30, any age |
| Bluegill ^a | Abundance | CPUE-Total | RSE ≤ 25 |
| | Size structure | PSD, length frequency | N ≥ 50 |
| Gizzard Shad ^a | Abundance | CPUE-Total | RSE ≤ 25 |
| | Size structure | PSD, length frequency | N ≥ 50 |
| | Prey availability | IOV | N ≥ 50 |
| Trap netting | | | |
| Crappie | Size structure | PSD, length frequency | N = 50 |
| | Condition | Wr | None |
| Gill netting | | | |
| Channel Catfish | Abundance | CPUE | None |
| | Size Structure | Length frequency | None |
| | Condition | Wr | |
| | | | |

Table 5. Objective-based sampling plan components for Bachman Reservoir, Texas 2018–2023.

^a No additional effort will be expended to achieve an RSE ≤ 25 for CPUE of Bluegill and Gizzard Shad if not reached from designated Largemouth Bass sampling effort. Instead, Largemouth Bass body condition can provide information on forage abundance, vulnerability, or both relative to predator density.



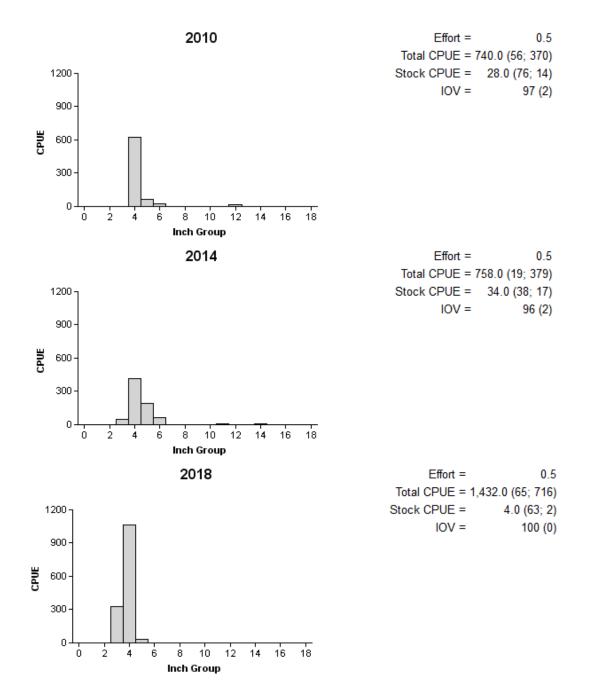


Figure 1. Number of Gizzard Shad caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for IOV are in parentheses) for fall electrofishing surveys, Bachman Reservoir, Texas, 2010, 2014, and 2018.



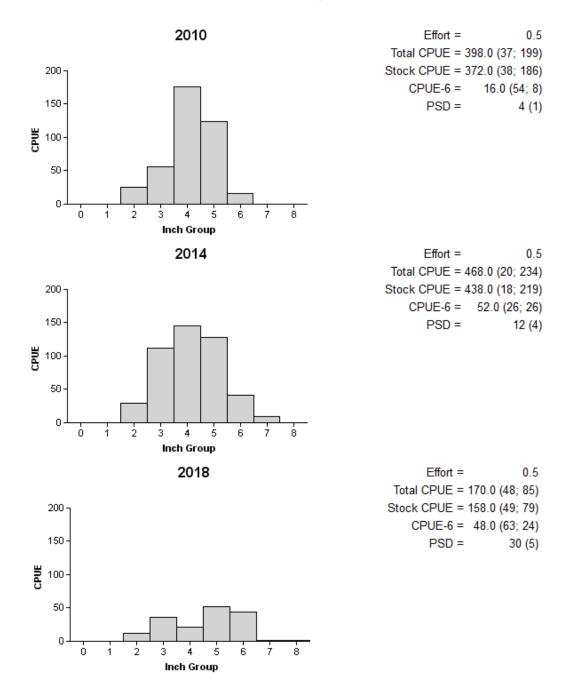


Figure 2. Number of Bluegill caught per hour (CPUE) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Bachman Reservoir, Texas, 2010, 2014, and 2018.



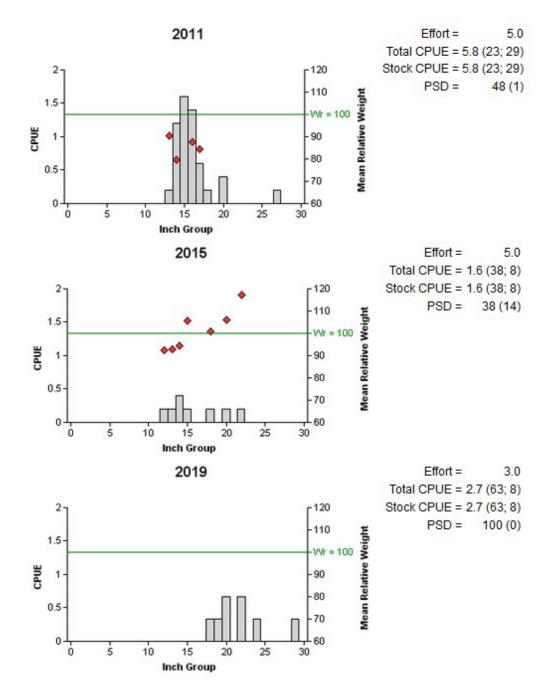


Figure 3. Number of Channel Catfish caught per net night (CPUE), mean relative weight (diamonds) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Bachman Reservoir, Texas, 2011, 2015, and 2019. Vertical line indicates minimum length limit at time of sampling. Statewide catfish regulation changes in 2021 removed the minimum length limit for catfish. Sampling effort was reduced for 2019 due to low and variable catch rates from previous years. Weight data were not collected in 2019 due to equipment failure.

Largemouth Bass

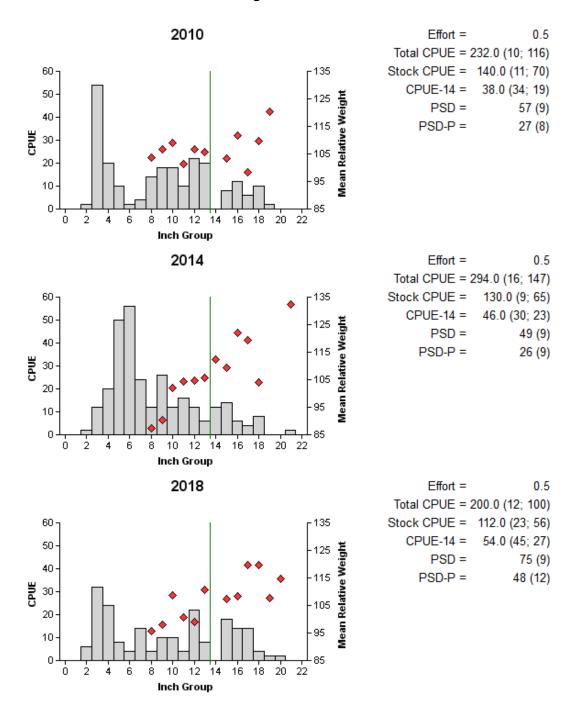


Figure 1. Number of Largemouth Bass caught per hour (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Bachman Reservoir, Texas, 2010, 2014, and 2018. Vertical line indicates minimum length limit.



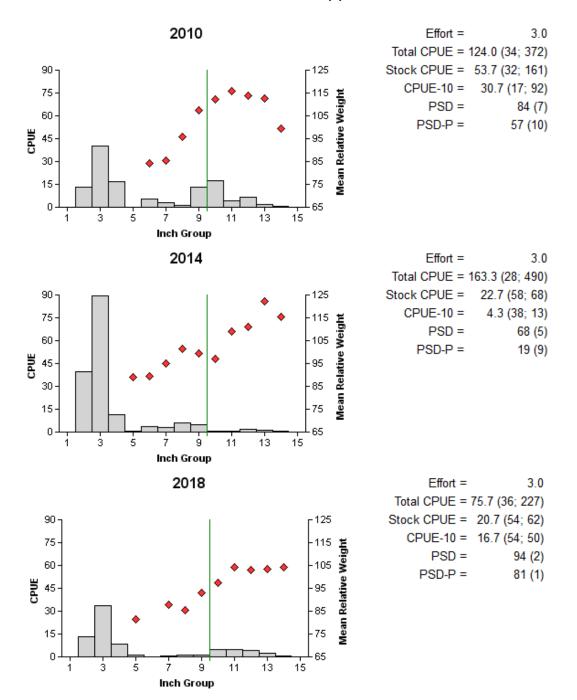


Figure 52. Number of White Crappie caught per net night (CPUE, bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall trap netting surveys, Bachman Reservoir, Texas, 2010, 2014, and 2018. Vertical line indicates minimum length limit.

Proposed Sampling Schedule

Proposed sampling schedule for Bachman Reservoir, Texas. 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. Schedule is dependent upon completion of renovation project.

| | | Surve | y year | |
|-----------------------|-----------|-----------|-----------|-----------|
| | 2023-2024 | 2024-2025 | 2025-2026 | 2026-2027 |
| Angler Access | | | | Х |
| Structural Habitat | | | | Х |
| Vegetation | | | | Х |
| Electrofishing – Fall | | Х | | Х |
| Trap netting | | | | Х |
| Gill netting | | | | Х |
| Report | | | | Х |

APPENDIX A – Historical Catch

Catch rates (CPUE) of all species collected with electrofishing, trap netting and gill netting surveys on Bachman Lake, Dallas, Texas, 2002 to present.

| | | | | | | | Y€ | ear | | | | | |
|---------------------------------|--------------------|-------|-------|-------|-------|-------|------|-------|------|--------|------|-------|------|
| Gear | Species | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2010 | 2011 | 2014 | 2015 | 2018 | 2019 |
| <i>Electrofishing</i> (fish/hr) | Gizzard Shad | 101.3 | 364.0 | 8.0 | 156.0 | 250.0 | | 740.0 | | 758.0 | | 1,432 | |
| | Warmouth | 4.0 | | | | | | | | | | | |
| | Bluegill | 9.3 | 512.0 | 82.0 | 218.0 | 442.0 | | 398.0 | | 468.0 | | 170.0 | |
| | Longear Sunfish | 5.3 | 60.0 | 24.0 | 54.0 | 32.0 | | 202.0 | | 76.0 | | 26.0 | |
| | Largemouth Bass | 192.0 | 94.0 | 170.0 | 368.0 | 182.0 | | 232.0 | | 294.0 | | 200.0 | |
| | White Crappie | | | | | 84.0 | | | | 82.0 | | | |
| Trap netting | | | | | | | | | | | | | |
| (fish/nn) | White Crappie | 38.2 | | | | 54.67 | | 124.0 | | 163.33 | | 75.67 | |

Historical catch rates cont'd.

| | | | | | | | Ye | ear | | | | | |
|-------------------------------|---------------------|------|------|------|------|------|-------|------|------|------|------|------|------|
| Gear | Species | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2010 | 2011 | 2014 | 2015 | 2018 | 2019 |
| <i>Gill netting</i> (fish/nn) | Spotted Gar | | | | | | 2.67 | | 1.0 | | 1.2 | | 0.33 |
| | Gizzard Shad | | | | | | 22.33 | | 32.4 | | 8.2 | | 17.0 |
| | Common Carp | | | | | | 6.0 | | 1.2 | | 2.4 | | 1.33 |
| | River Carpsucker | | | | | | | | 0.2 | | | | |
| | Blue Catfish | | | | | | | | | | 0.2 | | |
| | Channel Catfish | | | | | | 0.67 | | 5.8 | | 1.6 | | 2.67 |
| | White Crappie | | | | | | 1.0 | | 0.4 | | | | 0.33 |

APPENDIX B – Bachman Dam Rehabilitation Plan

Below is the latest update on the Bachman Lake Dam and Spillway Rehabilitation Project. Additional information can be found at https://bachmanlakedam.com/.

Dredging at Bachman Lake was completed in late April 2023, finalizing the first phase of the Bachman Lake Dredging and Dam and Spillway Rehabilitation Project. Dredging has restored the lake to recreational depths and removed the "sediment islands" and debris in the lake. The lake is open to the public and rowers, kayakers, and other users to enjoy the lake without restrictions. The southern parking area next to the Dallas Rowing Club has also reopened. Dallas Water Utilities, in partnership with Dallas Park and Recreation, is leading the project at the lake.

The Dallas City Council approved the dredging construction contract on October 29, 2021 and dredging activities began in early 2022 to remove silt and debris that have entered the lake from Bachman Creek and the surrounding area. The contractor, Renda Environmental, used a barge to pump silt to an off-site location, where the slurry was dewatered to load the sediment onto trucks for offsite disposal. The contractor was able to remove 154,441 cubic yards of sediment and 3,125 tons of debris from the lake, resulting in improved water quality, aquatic habitat and restoration of the lake to recreational levels.

The next phase of improvements will include the rehabilitation of the Bachman dam and spillway to address regulatory flood capacity as well as structural and stability recommendations. These improvements will ensure dam safety and regulatory compliance, minimize flood risk, and allow residents to enjoy the lake for years to come. The rehabilitation improvements will significantly reduce the potential of a breach by replacing the existing service spillway to improve capacity along with moving and widening the auxiliary spillway to pass flood events safely. Additional improvements include hardening the earthen embankment to protect the dam and to comply with TCEQ dam safety guidelines.

The dam and spillway rehabilitation design is complete, and the project has been advertised for construction. The bids for the construction project are expected to be received by the City early this summer, with construction activities anticipated to start this upcoming winter after approval of a construction contract by City Council.



The dredging barge on Bachman Lake (May 2022). Photo posted by City of Dallas at https://bachmanlakedam.com/.



Before and after images of the "sediment island" in Bachman Lake. Photo posted by City of Dallas at https://bachmanlakedam.com/.



A collection of debris removed from Bachman Lake. Photo posted by City of Dallas at https://bachmanlakedam.com/.



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