

PERFORMANCE REPORT

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FEDERAL AID IN SPORT FISH RESTORATION ACT

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FEDERAL AID PROJECT F-221-M-2

INLAND FISHERIES DIVISION MONITORING AND MANAGEMENT PROGRAM

2016 Fisheries Management Survey Report

Mountain Creek Lake (Dallas County)

Prepared by:

Cynthia Fox, Assistant District Supervisor;
Thomas Hungerford, Assistant District Supervisor;
and
Raphael Brock, District Supervisor
Inland Fisheries Division
Dallas/Fort Worth District
Fort Worth, Texas



Carter Smith
Executive Director

Craig Bonds
Director, Inland Fisheries

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SURVEY AND MANAGEMENT SUMMARY

Fish populations in Mountain Creek Reservoir were surveyed in 2016 using electrofishing and trap netting and in 2017 using gill netting. Historical data are presented with the 2016-2017 data for comparison. This report summarizes the results of the surveys and contains a management plan for the reservoir based on those findings.

- **Reservoir Description:** Mountain Creek Reservoir is a 2,493-acre impoundment constructed by Dallas Power and Light in 1937 on Mountain Creek Reservoir (a tributary of the Trinity River) in Dallas County 4 miles southeast of Grand Prairie, Texas. It was built as a cooling reservoir for a power plant and is now controlled by Excelon Energy Company. The average depth is 8.5 ft., and a maximum depth of approximately 26.0 ft. Angler and boat access is inadequate. There is no ADA compliant facility on the reservoir. As of 2016, habitat was primarily rip-rap and native emergent vegetation.
- **Management History:** Important sport fish include White Bass, Largemouth Bass, White Crappie, and Channel Catfish. All species have been managed through statewide harvest regulations. In April 1996, the Texas Department of State Health Services (TDSHS) declared a ban at Mountain Creek Reservoir for the possession and consumption of all fish species due to their contamination with polychlorinated biphenyls (PCB's). In 2010, TDSHS changed the fish consumption ban to a fish consumption advisory which advised anglers not to consume any fish. In 2017, TDSHS updated the advisory again, and advised non-consumption of Common Carp, Freshwater Drum, or Smallmouth Buffalo and limited consumption of Channel and Flathead Catfish, Largemouth Bass, and White Bass, while White Crappie are no longer included in the consumption advisory and are considered safe for consumption. Despite the changes for consumption advisories for some species, all sport fish will continue to be managed under statewide regulations.
- **Fish Community**
 - **Prey species:** Catch rates of prey species were lower in 2016 than in 2008 and 2012. Windy weather conditions reduced the effectiveness of electrofishing likely reducing catch rates. Gizzard and Threadfin Shad were present in the reservoir. Bluegill catch rates declined since previous surveys and included fewer individuals over six inches in length.
 - **Catfishes:** Catch rates of Channel Catfish decreased slightly compared to previous sample, but the population maintained good size structure. Flathead Catfish were present but none were captured this past survey year.
 - **White Bass:** Catch rates of White Bass have declined since 2009, with few individuals of harvestable size.
 - **Largemouth Bass:** Largemouth Bass catch rates were similar to the previous sample, but few individuals were of legal size. Largemouth Bass body condition was still good in all size classes.
 - **White Crappie:** White Crappie catch increased since the previous survey, and fish were all in good condition.

Management Strategies: Sport fishes will continue to be managed with statewide regulations. Monitoring surveys will be conducted during 2020-2021 and vegetation surveys will be conducted annually.

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INTRODUCTION

This document is a summary of fisheries data collected from Mountain Creek Reservoir in 2016-2017. The purpose of the document is to provide fisheries information and make management recommendations to protect and improve the sport fishery. While information on other species of fishes was collected, this report deals primarily with major sport fishes and important prey species. Historical data are presented with the 2016-2017 data for comparison.

Reservoir Description

Mountain Creek Reservoir is a 2,493-acre impoundment constructed by Dallas Power and Light in 1937 on Mountain Creek Reservoir (a tributary of the Trinity River). It was built primarily as a cooling reservoir for a power plant and is now controlled by Excelon Energy Company. Mountain Creek Reservoir is located in Dallas County four miles southeast of Grand Prairie, Texas. At conservation elevation (457-ft above mean-sea-level [MSL]), the reservoir contains 22,840 acre-feet of water. It has an average depth of 8.5 ft and a maximum depth of approximately 26.0 ft. The reservoir is located in the Blackland Prairies ecological region and the watershed is primarily industrial and residential. The land on the northwest side of the reservoir is owned by the City of Dallas which purchased the property from the U.S. Navy. Other descriptive characteristics for Mountain Creek Reservoir can be found in Table 1.

Angler Access

Mountain Creek Reservoir has one public boat ramp. This ramp is narrow and shallow even at water levels near conservation pool. Extension of the ramp may not be feasible because of dredging that must take place to deepen water near ramp. There is not an ADA compliant facility on the reservoir. Shoreline access is limited to the public boat ramp area. Additional boat ramp characteristics are in Table 2.

Management History

Previous management strategies and actions: Management strategies and actions from the previous survey report (Brock and Hungerford 2013) included:

1. Boat access to the reservoir is limited by the poor condition of the only public boat ramp.
Action: The City of Dallas has been contacted and information regarding the boat ramp program was sent to decisions makers. However, no progress was made because of budget issues.
2. Anglers continued to harvest fish from Mountain Creek Reservoir, despite the consumption advisory. No signs were posted informing anglers of advisory.
Action: TDSHS provided signs containing information about the fish consumption advisory. TPWD posted the signs near the boat ramp and access areas, but the signs have been damaged or removed.
3. Aquatic invasive species threat to all water bodies in Texas.
Action: Exelon was contacted and approved the posting of signage regarding aquatic invasive species threats and how to prevent their spread to non-infested waters. Signs were posted, but have been damaged or removed.

Harvest regulation history: Sport fish populations in Mountain Creek Reservoir have always been managed with statewide regulations (Table 3). In April 1996, the Texas Department of State Health Services (TDSHS) declared Mountain Creek Reservoir a prohibited area for the possession and consumption of all fish species due to their contamination with polychlorinated biphenyls (PCB's). In October 2010, TDSHS changed the fish consumption ban to a fish consumption advisory which advises anglers not to consume any fish. In January 2017, TDSHS updated the advisory again (Appendix A), advising anglers not to consume Common Carp, Freshwater Drum, or Smallmouth Buffalo, but allowing

limited consumption of Channel and Flathead Catfish, Largemouth Bass, and White Bass (TDSHS 2017; for further information see <http://tpwd.texas.gov/regulations/outdoor-annual/fishing/general-rules-regulations/fish-consumption-bans-and-advisories>). White Crappie are no longer included in the consumption advisory and are considered safe for human consumption.

Stocking history: Mountain Creek Reservoir has not been stocked since the fish possession ban was implemented in 1996. The complete stocking history is in Table 4.

Vegetation/habitat history: Mountain Creek Reservoir aquatic vegetation is currently composed of emergent plant species. Another habitat type is rip-rap which is abundant on the upper end of the reservoir. The exotic invasive water hyacinth, was discovered in the reservoir in the summer of 2012. As of 2016, water hyacinth abundance did increase since 2012, but it does not currently inhibit access. Herbicides were applied to the hyacinth in fall 2016 to prevent further abundance increases.

Water transfer: Mountain Creek Reservoir is primarily used as cooling reservoir for a natural gas electrical generating plant, and to a lesser extent, flood control. No inter-basin transfers are known to exist.

METHODS

Surveys were conducted to achieve survey and sampling objectives in accordance with the objective-based sampling (OBS) plan for Mountain Creek Reservoir (TPWD, Inland Fisheries Division, unpublished manual revised 2015). 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 – Black basses, Sunfishes, Gizzard Shad, and Threadfin Shad were collected by electrofishing (1 hour at 12, 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 (5 net nights at 5 stations). CPUE for trap netting was recorded as the number of fish caught per net night (fish/nn).

Gill netting – Channel Catfish and White Bass were collected by gill netting (5 net nights at 5 stations). CPUE 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 2016 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 statistics.

Habitat – A vegetation survey was planned for 2016. However, shortly after beginning the survey, we realized that exotic invasive water hyacinth abundance was significantly higher than had ever occurred in the reservoir, so the focus of the survey shifted towards documentation and treatment of water hyacinth. We traveled along the entire shoreline (where possible) and marked locations of water hyacinth. Coverage (acres) of water hyacinth was estimated using GIS.

Water level – Source for water level data (Figure 1) was the United States Geological Survey (USGS 2017).

RESULTS AND DISCUSSION

Habitat: As of summer 2016 and since being discovered in 2012, water hyacinth coverage had significantly increased to approximately 120 acres (Figure 2). The majority of water hyacinth occurred in the shallow, upper reaches of the reservoir where there is little boat traffic. However, to prevent spreading and further abundance increases, a contractor was hired to treat the water hyacinth with 2,4-D and Diquat herbicides in the fall of 2016. We will continue to monitor water hyacinth abundance in Mountain Creek Reservoir during the next four years and will work with the aquatic habitat enhancement team for further treatment as needed.

Prey species: The electrofishing catch rate of Threadfin Shad was 77.0/hr, which was lower than the previous two surveys (Appendix D). The Gizzard Shad electrofishing catch rate of 148.0/hr was lower than those observed during surveys in 2008 and 2012 (Figure 3). Index of vulnerability for Gizzard Shad decreased since 2008, but 73% of Gizzard Shad captured in 2016 were still available to existing predators. The electrofishing catch rate of Bluegill significantly decreased from 320.0/hr in 2008 to 294.0/hr in 2012 and to 58.0/hr (Figure 4) in 2016. Catch rate of quality-sized fish (>6 inches) decreased from 144.0/hr in 2012 to 11.0/hr in 2016. The Longear Sunfish catch rate observed in 2016 (63.0/hr) was the lowest it has been since 2004 (Appendix D). Windy weather conditions prevented electrofishing near shore and likely lowered electrofishing catch rates of prey species.

Catfishes: Gill netting catch rate of Channel Catfish was 6.0/nn in 2017, a slight decrease from 2013 (Figure 5). Proportional Size Distribution was similar to the previous survey. Mean relative weights of Channel Catfish ranged from 83 to 110, and fish ≥ 16 inches were mostly of optimal condition. Flathead Catfish are present in Mountain Creek, but none were captured this past survey year.

White bass: Gill netting catch rates of White Bass in Mountain Creek Reservoir declined from 24.2/nn in 2009 to 5.8/nn in 2017 (Figure 6). However, excluding 2009, White Bass catch rates have historically been low (Appendix D), averaging 4.1/nn. Size structure of the 2017 survey was dominated by smaller fish as indicated by the PSD value of 14. Mean relative weights of White Bass remained stable near 90.

Largemouth bass: Electrofishing catch rate of Largemouth Bass continued to decline (Figure 7) since 1997 (Appendix D). The size structure of the population has also continued to decrease as indicated by the PSD value dropping from 56 in 2008 down to 49 in 2012 and 40 in 2016. Catch per unit effort of stock-sized Largemouth Bass at Mountain Creek Reservoir decreased from 71.0/hr in 2008 to 57.0/hr in 2012 to 42.0/hr in 2017. The low Largemouth Bass CPUE of 47.0/hr with an RSE of 33 did not meet our objective set prior to sampling; yet, additional electrofishing was not conducted due to the minimal management requirements of this reservoir resulting from limited fishing pressure. Further, windy weather conditions prevented electrofishing near shore and likely contributed to lower electrofishing catch rates of Largemouth Bass. Mean relative weights were good for all sizes of fish. Genetic analysis of Largemouth Bass collected from Mountain Creek Reservoir showed that Florida Largemouth Bass alleles made up 31.0% of the samples in 2016 (Table 6).

White Crappie: Trap netting catch rate of White Crappie was 28.4/nn in 2016, which was higher than the previous survey (Figure 8). The size structure of the population did not change from the previous sample as indicated by a PSD value of 60 in both 2012 and 2016; however, CPUE of stock-size White Crappie increased from 9.6/nn in 2012 to 25.0/nn in 2016 and 10-inch fish increased from 4.8/nn in 2012 to 12.6/nn in 2016. This increase in CPUE without a change in PSD suggests that relative abundance of White Crappie increased. Mean relative weights were ≥ 100 for all fish from 8 to 12 inches, then declined slightly for larger fish.

Fisheries management plan for Mountain Creek Reservoir, Texas

Prepared – July 2017

ISSUE 1: 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. Water hyacinth (*Eichhornia crassipes*) was first observed on Mountain Creek Reservoir in 2012. Its abundance significantly increased over the last 4 years posing a risk to the ecology of Mountain Creek Reservoir.

MANAGEMENT STRATEGIES

1. Herbicides were applied twice in 2016. Annual observations of water hyacinth abundance should be conducted to determine if further treatments are necessary.
2. Cooperate with the controlling authority (Excelon Energy) to maintain treatment activity as needed.
3. Cooperate with the controlling authority to post appropriate signage at access points around the reservoir.
4. Contact and educate controlling authority about invasive species, provide them with posters, literature, signs, etc. so they can, in turn, educate the public utilizing the reservoir.

ISSUE 2: Mountain Creek Reservoir had a fish possession and consumption advisory for many years. The fish possession and consumption advisory has been changed to allow limited consumption of several species and removed all restrictions on White Crappie consumption. Consumption advisory signs were posted, but have been vandalized or removed, so updated signs are needed. The reduced restriction may lead to increased angling activity and harvest of fish from Mountain Creek Reservoir.

MANAGEMENT STRATEGY

1. Cooperate with the controlling authority (Excelon Energy) to place appropriate signage in the boat ramp area where the majority of shoreline angling occurs.

ISSUE 3: Boat access to the reservoir continues to be limited by the poor condition of the only public boat ramp.

MANAGEMENT STRATEGY

1. Continue working to improve boat access on the reservoir by contacting the City of Dallas Parks and Recreation Department and the controlling authority (Excelon Energy) and encouraging them to apply for TPWD boat ramp improvement grants.

Objective-Based Sampling Plan and Schedule 2017-2021

Sport fish, forage fish, and other important fishes

Sport fishes in Mountain Creek Reservoir include Largemouth Bass, Channel Catfish, White Bass and White Crappie. Known important forage species include Bluegill, Longear Sunfish, Gizzard and Threadfin Shad.

Low-density fisheries

Flathead Catfish: Flathead Catfish are present in Mountain Creek Reservoir, but they are rarely captured in gill nets. Data on CPUE and size structure data will be recorded from all Flathead Catfish collected by gill nets targeting Channel Catfish and White Bass.

Survey objectives, fisheries metrics, and sampling objectives

Reservoir Background: Although Mountain Creek Reservoir contains quality populations of Largemouth Bass, Channel Catfish, White Bass, and White Crappie, it receives low fishing effort attributed to poor access and fish tissue contamination. However, it is a large reservoir, located in the heart of a major metropolitan area, which is underutilized and could provide quality angling opportunities. No creel survey has ever been conducted on this reservoir, thus no creel information is available to set efficient sampling objectives.

Largemouth Bass: Trend data on CPUE, size structure, and body condition have been collected periodically from this reservoir. To continue trend data analysis, an electrofishing survey consisting of 12 randomly selected 5-min electrofishing sites will be sampled in fall of 2020 to determine CPUE and size structure and body condition of the species. Based on past catch rates, this should provide adequate information to monitor major changes in population.

White Bass: Trend data on White Bass CPUE, size structure, and body condition have been collected periodically from this reservoir. To continue trend data analysis, a gillnet survey consisting of 5 gillnets will be conducted in spring of 2021 to determine CPUE and size structure and body condition of the species. Based on past catch rates, this should provide adequate information to monitor major changes in population.

White Crappie: White crappie are in high abundance and quality in this reservoir. Five single-cod trap nets will be set in fall of 2020. This should provide sufficient information for monitoring of large-scale changes of population.

Channel Catfish: Trend data on CPUE, size structure, and body condition have been collected periodically from this reservoir. To continue trend data analysis, a gillnet survey consisting of 5 gillnets will be conducted in spring of 2021 to determine CPUE and size structure of the species. Based on past catch rates, this should provide adequate information to monitor major changes in population.

Bluegill, Longear Sunfish, Threadfin Shad, and Gizzard Shad: Bluegill, Longear Sunfish, Threadfin, and Gizzard Shad are the primary forage in Mountain Creek Reservoir. Like Largemouth Bass, trend data on CPUE and size structure have been collected with fall nighttime electrofishing. Sampling in 2020, as with Largemouth Bass above, will allow for monitoring of large-scale changes in Bluegill, Longear Sunfish, Threadfin and Gizzard Shad relative abundance and size structure.

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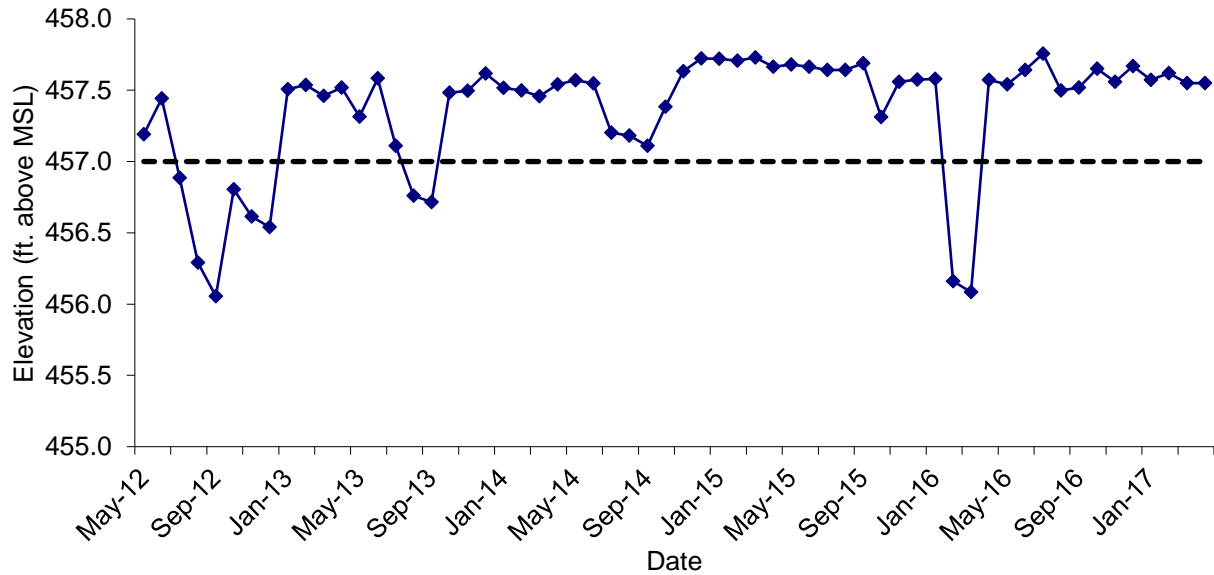


Figure 1. Mean monthly water level elevations in feet above mean sea level (MSL) recorded for Mountain Creek Reservoir, Texas from May 2012-April 2017. Dashed line indicates conservation pool (457 feet above MSL). Data were obtained from the USGS.

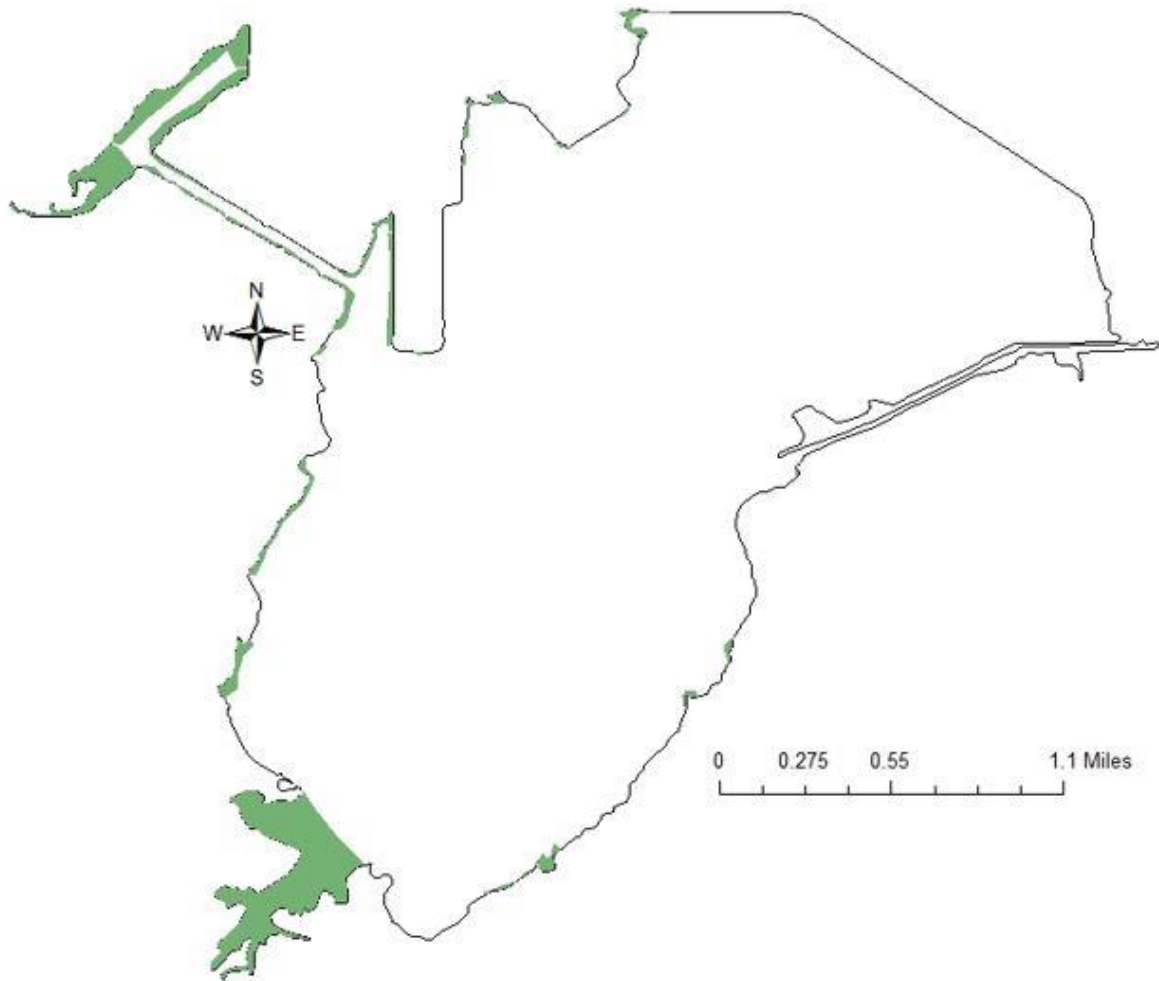


Figure 2. Location of exotic invasive water hyacinth (shaded area) in Mountain Creek Reservoir, Texas fall 2016. We estimated total coverage to be approximately 120 acres using GIS.

Table 1. Characteristics of Mountain Creek Reservoir, Texas.

Characteristic	Description
Year Constructed	1937
Controlling authority	Excelon Energy
County	Dallas
Reservoir type	Tributary
River Basin	Trinity
Conductivity	400 μ S/cm

Table 2. Boat ramp characteristics for Mountain Creek Reservoir, Texas, 2016 - 2017.

Boat Ramp	Latitude Longitude (dd)	Public	Trailer Parking Capacity (N)	Elevation at end of boat ramp (ft.)	Condition
Mountain Valley Park	32.715560; -96.952830	Y	8	NA	Poor ramp and parking

Table 3. Harvest regulations for Mountain Creek Reservoir, Texas. Several species are advised as catch-and-release by Texas Department of Safety and Health Services' update of the fish consumption advisory. See Appendix A for consumption advisories by species.

Species	Bag Limit	Length Limit (in)
Channel Catfish	25	12-minimum
Flathead Catfish	5	18-minimum
White Bass	25	10-minimum
Largemouth Bass	5	14-minimum
White Crappie	25	10-minimum

Table. 4. Stocking History of Mountain Creek Lake (Dallas County), Texas. Life stages are fry (FRY), fingerlings (FGL), and unknown (UNK). Life stages for each species are defined as having a mean length that falls within the given length range. For each year and life stage the species mean total length (Mean TL; in) is given. For years where there were multiple stocking events for a particular species and life stage the mean TL is an average for all stocking events combined.

Species	Year	Number	Life Stage	Mean TL (in)
Florida Largemouth Bass	1980	136,630	FGL	2.0
	1990	45,726	FGL	1.5
	1990	89,550	FRY	1.0
	1994	136,389	FGL	1.3
	Total	408,295		
Palmetto Bass (Striped X White Bass hybrid)	1978	10,656	UNK	UNK
Red Drum	1981	235,000	UNK	UNK
Florida Largemouth Bass	1980	136,630	FGL	2.0

Table 5. Objective-based sampling plan components for Mountain Creek Reservoir, Texas 2016 – 2017.

Gear/target species	Survey objective	Metrics	Sampling objective
<i>Electrofishing</i>			
Largemouth Bass	Abundance	CPUE – Stock	RSE – Stock ≤ 25
	Size structure	PSD, length frequency	N ≥ 50 Stock
	Condition	W_r	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
<i>Trap netting</i>			
Crappie	Size structure	PSD, length frequency	N = 50
<i>Gill netting</i>			
Channel Catfish ^b	Abundance	CPUE – Stock	RSE – Stock ≤ 25
	Size structure	PSD	N ≥ 50 stock
White Bass	Abundance	CPUE – Stock	N ≥ 50
	Size structure	PSD, length frequency	N ≥ 50 Stock

^a No additional effort will be expended to achieve objectives 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.

^b No additional effort will be expended to achieve an RSE ≤ 25 for CPUE of Channel Catfish if not reached from designated White Bass sampling effort.

Gizzard Shad

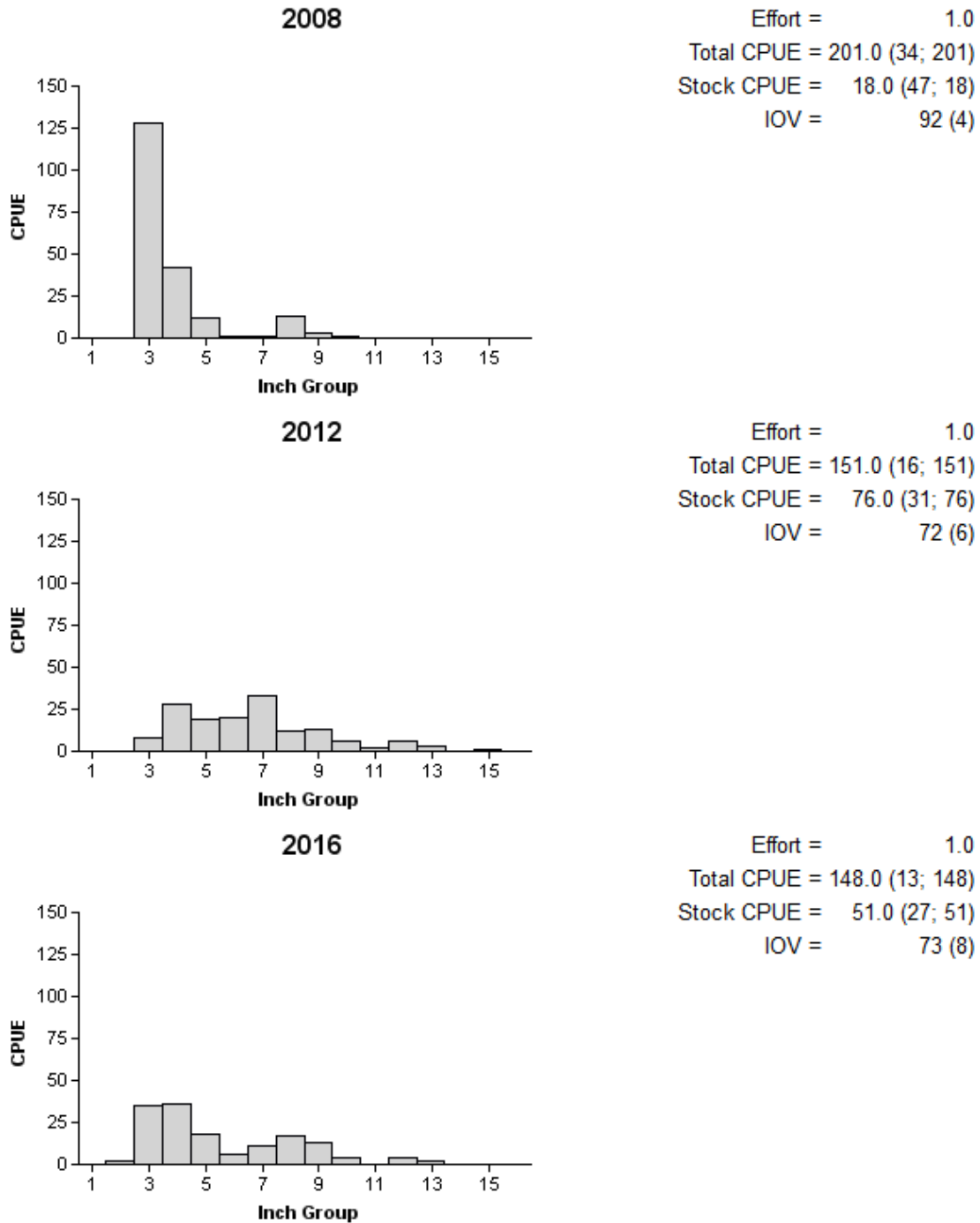


Figure 3. Number of Gizzard Shad caught per hour (CPUE; bars) and population indices (RSE and N for CPUE and SE for IOV are in parentheses) for fall electrofishing surveys, Mountain Creek Reservoir, Texas, 2008, 2012, and 2016.

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Bluegill

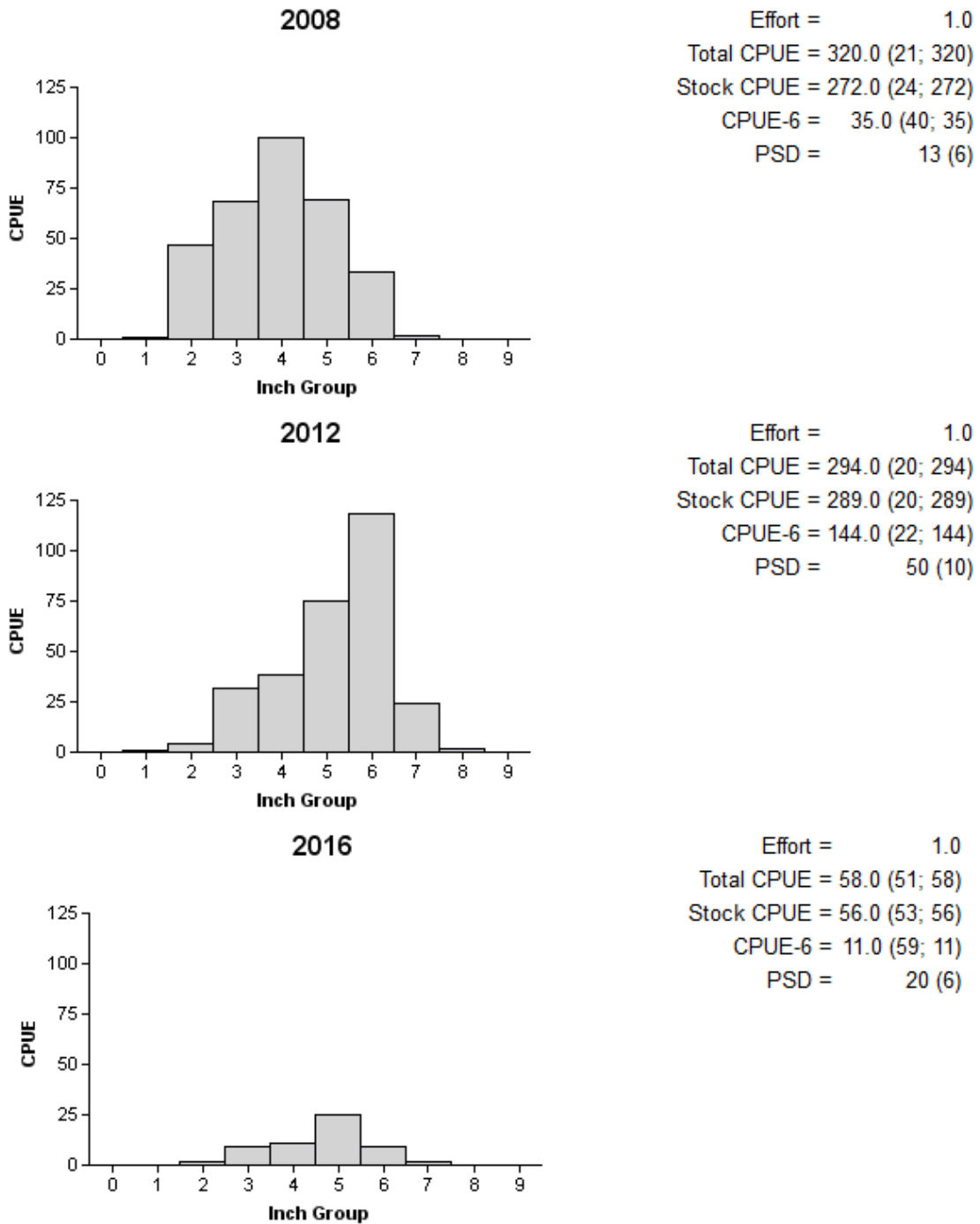


Figure 4. Number of Bluegill caught per hour (CPUE; bars) and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for fall electrofishing surveys, Mountain Creek Reservoir, Texas, 2008, 2012, and 2016.

Channel Catfish

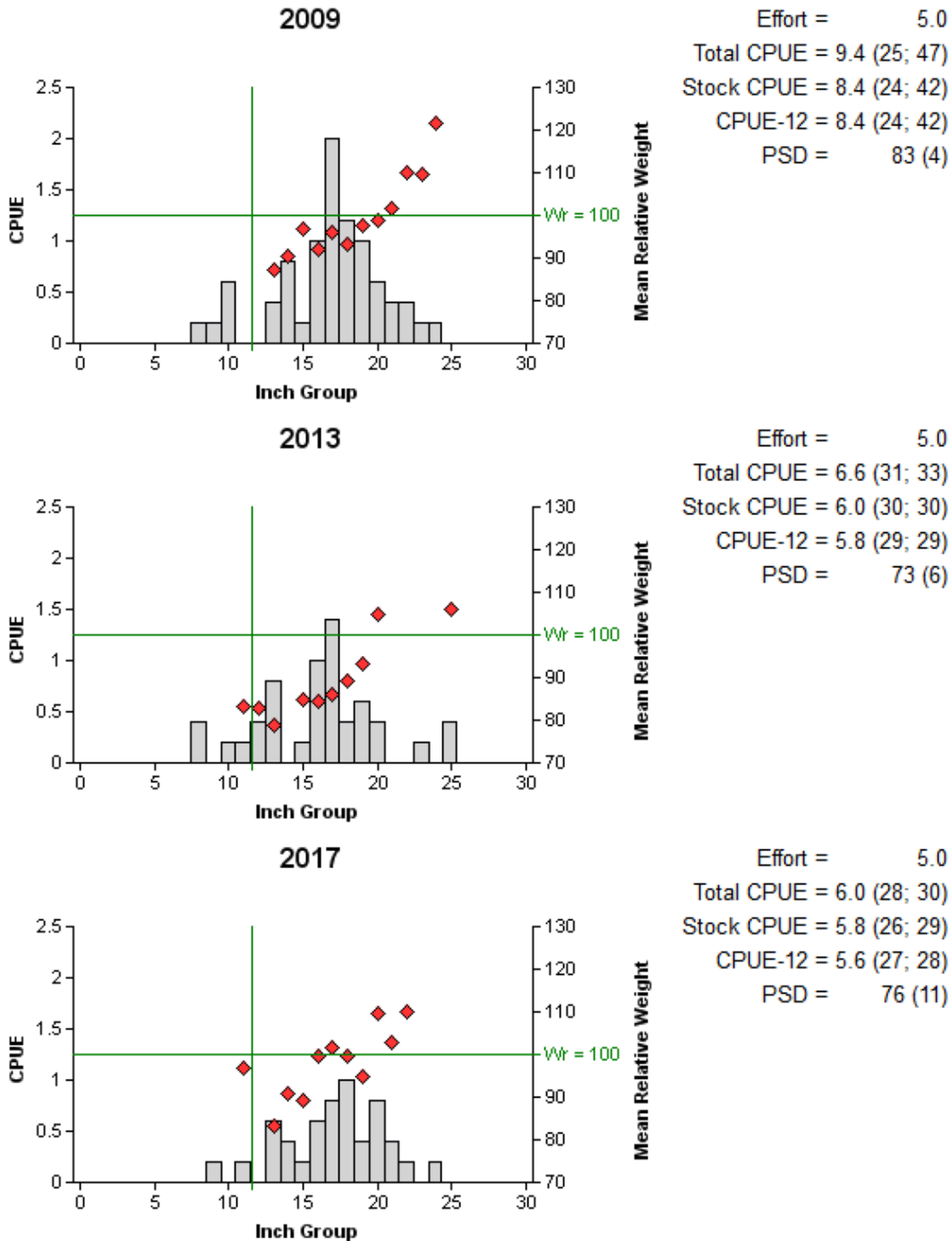


Figure 5. Number of Channel Catfish caught per net night (CPUE; bars), mean relative weight (diamonds), and population indices (RSE and N for CPUE and SE for size structure are in parentheses) for spring gill net surveys, Mountain Creek Reservoir, Texas, 2009, 2013, and 2017. Vertical line represents length limit at time of sampling. Horizontal line represents optimal relative weight value of 100.

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White Bass

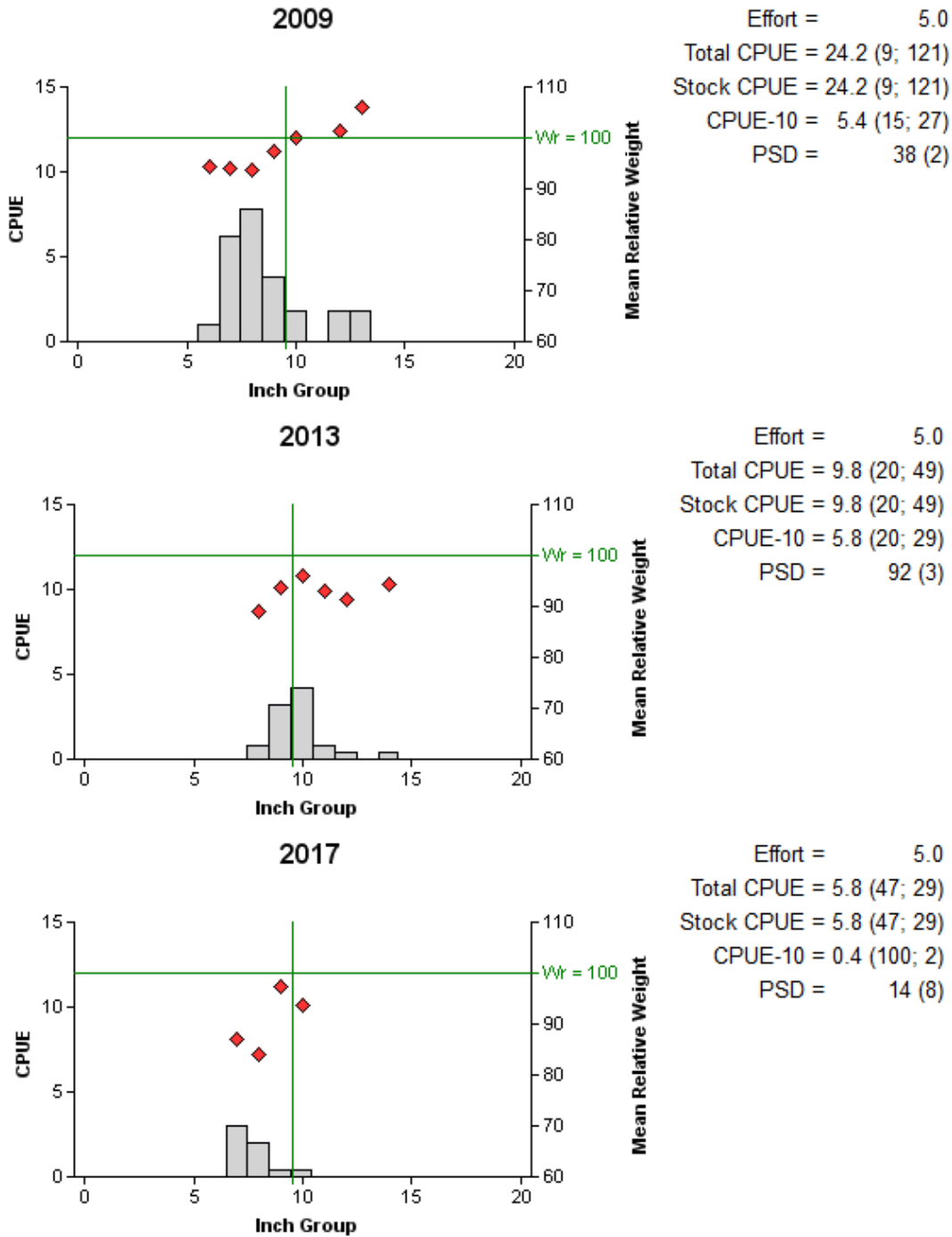


Figure 6. Number of White Bass caught per net night (CPUE; bars), mean relative weight (diamonds), and population indices (RSE and N are in parentheses) for spring gill net surveys, Mountain Creek Reservoir, Texas, 2009, 2013, and 2017. Vertical line represents length limit at time of sampling. Horizontal line represents optimal relative weight value of 100.

Largemouth Bass

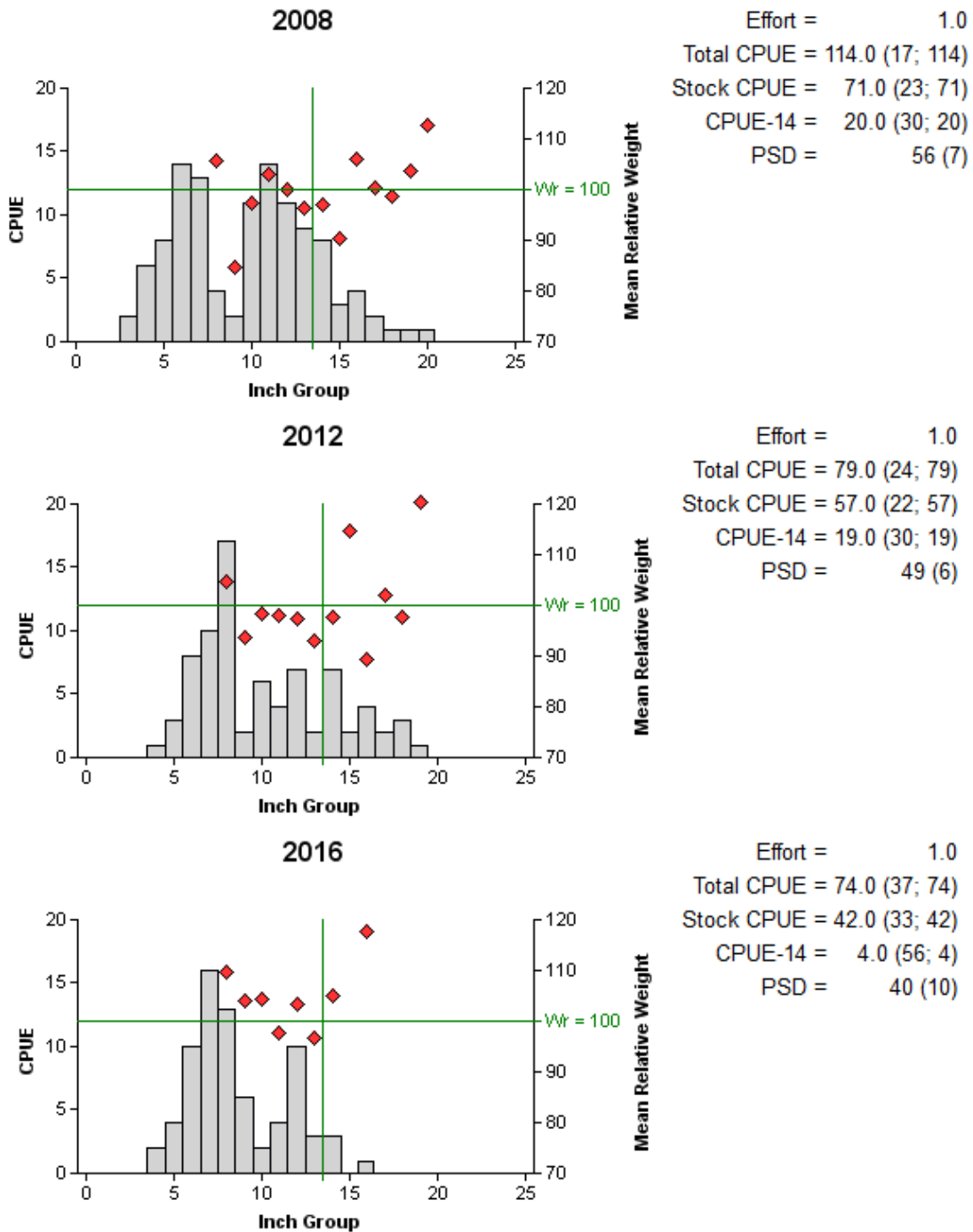


Figure 7. Number of Largemouth Bass caught per hour (CPUE; bars), mean relative weight (diamonds), and population indices (RSE and N are in parentheses) for fall electrofishing surveys, Mountain Creek Reservoir, Texas, 2008, 2012, and 2016. Vertical line represents length limit at time of sampling. Horizontal line represents optimal relative weight value of 100.

Table 6. Results of genetic analysis of Largemouth Bass collected by fall electrofishing, Mountain Creek Reservoir, Texas 2016. FLMB = Florida Largemouth Bass, NLMB = Northern Largemouth Bass, Intergrade = hybrid between a FLMB and a NLMB. Genetic composition was determined with micro-satellite DNA analysis.

Year	Sample Size	Number of Fish			% FLMB alleles	% FLMB
		FLMB	Intergrade	NLMB		
2016	19	0	19	0	31	0

White Crappie

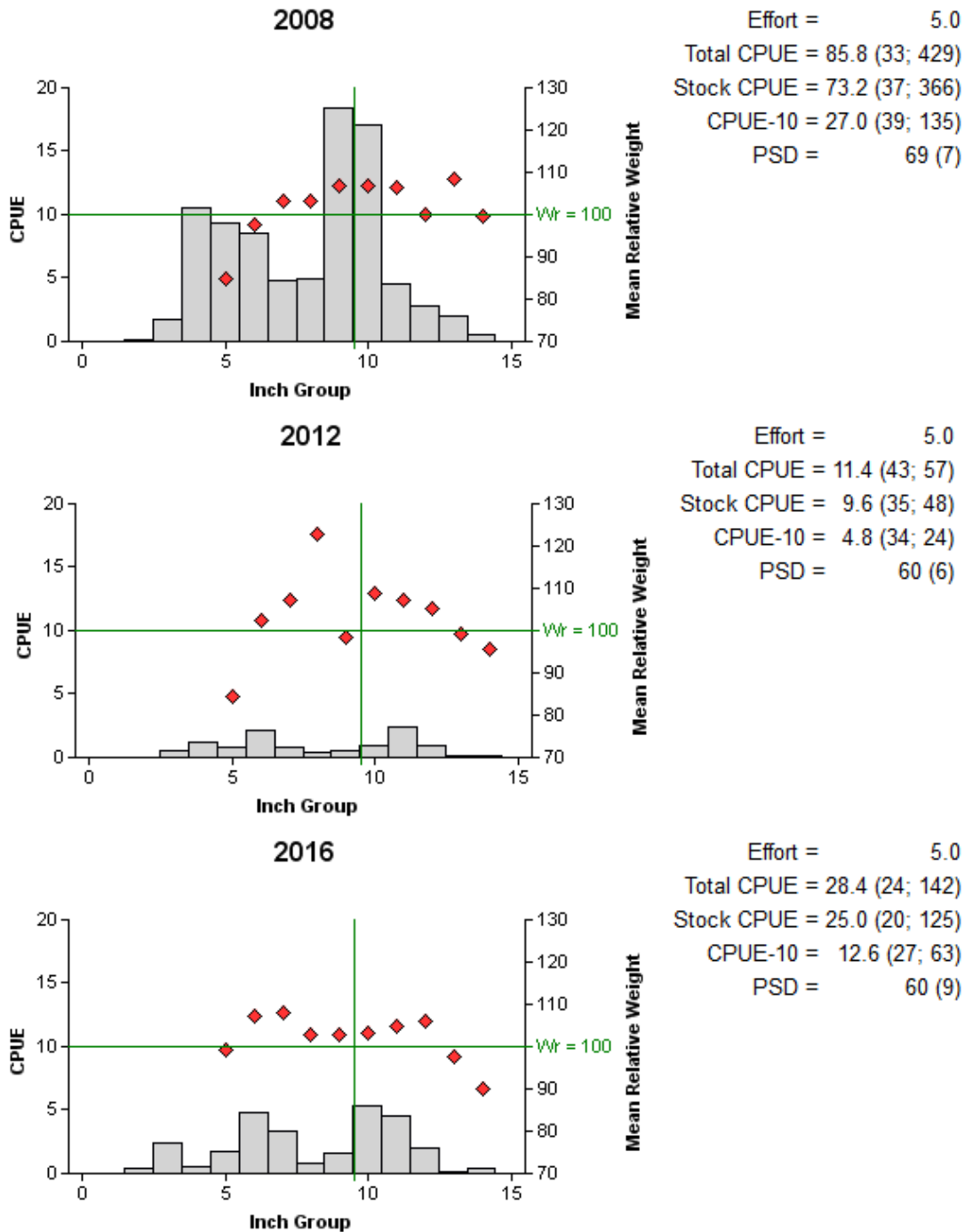


Figure 8. Number of White Crappie caught per net night (CPUE; bars), mean relative weight (diamonds), and population indices (RSE and N are in parentheses) for fall trap net surveys, Mountain Creek Reservoir, Texas, 2008, 2012, and 2016. Vertical line represents length limit at time of sampling. Horizontal line represents optimal relative weight value of 100.

Table 7. Proposed sampling schedule for Mountain Creek 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. Standard survey = S, additional survey = A.

Survey year	Electrofishing	Trap net	Gill net	Structural Habitat	Vegetation	Access	Creel survey	Report
2017-2018					A			
2018-2019					A			
2019-2020					A			
2020-2021	S	S	S		S	S		S

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APPENDIX A

Texas Department of State Health Services (TDSHS) updated (January 2017) consumption advisories due to unsafe levels of dioxins and polychlorinated biphenyls (PCBs) for fish in Mountain Creek Reservoir (Dallas County), Texas. Information obtained from TDSHS (May 2017)

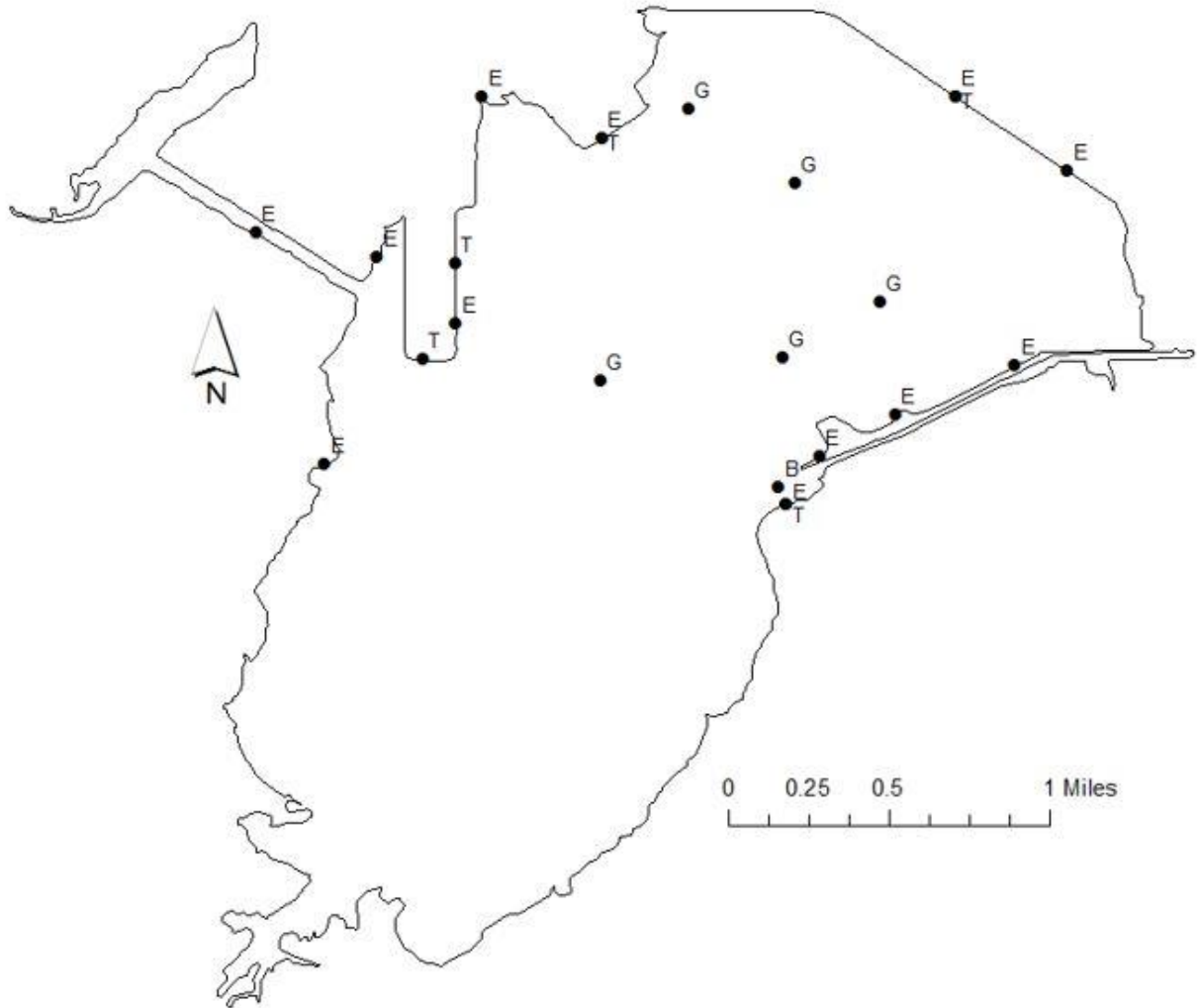
Species Affected	Women of Childbearing Age and Children <12	Women Past Childbearing Age and Adult Men
Channel Catfish	DO NOT EAT	1 meal/month
Common Carp	DO NOT EAT	DO NOT EAT
Flathead Catfish	1 meal/month	2 meal/month
Freshwater Drum	DO NOT EAT	DO NOT EAT
Largemouth Bass	1 meal/month	3 meal/month
Smallmouth Buffalo	DO NOT EAT	DO NOT EAT
White Bass	DO NOT EAT	1 meal/month
White Crappie	No Advisory/Safe Consumption	No Advisory/Safe Consumption

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APPENDIX B

Number (N) and catch rate (CPUE) and relative standard error (RSE) of all species collected from all gear types from Mountain Creek Reservoir, Texas, 2016-2017. Effort for each sampling gear is given in parentheses.

Species	Gill Netting (5 net nights)			Trap Netting (5 net nights)			Electrofishing (1 hour)		
	N	CPUE	RSE	N	CPUE	RSE	N	CPUE	RSE
Spotted Gar	2	0.4	61						
Gizzard Shad	103	20.6	8				148	148.0	13
Threadfin Shad							77	77.0	26
Common Carp	2	0.4	100						
River Carpsucker	1	0.2	100						
Smallmouth Buffalo	19	3.8	26						
Channel Catfish	30	6.0	28						
White Bass	29	5.8	47						
Bluegill	1	0.2	100				58	58.0	51
Longear Sunfish	2	0.4	100				63	63.0	48
Largemouth Bass							74	74.0	37
White Crappie	11	2.2	49	142	28.4	24			
Freshwater Drum	6	1.2	41						

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APPENDIX C



Location of sampling sites, Mountain Creek Reservoir, Texas, 2016-2017. Trap net, gill net, and electrofishing stations are indicated by T, G, and E, respectively. Boat ramps are indicated with a B. Water level at time of electrofishing, trap netting, and gill netting was about one foot above conservation pool.

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APPENDIX D

Historical catch rates of targeted species by gear type for Mountain Creek Reservoir, Texas, for specified years.

Gear	Species	Year						
		1990	1991	1994	1997	2000	2001	2004
Gill Netting (fish/net night)	Blue Catfish	0.2						
	Channel Catfish	2.8		8.6	8.8		4.0	
	White Bass	2.2		5.6	1.6		0.4	
Electrofishing (fish/hour)	Gizzard Shad	168.0		124.0	201.0	228.0		150.0
	Threadfin Shad	116.6		39.3	76.0	20.0		10.0
	Bluegill	320.0		88.6	152.0	28.0		77.0
	Longear Sunfish	251.3		137.3	67.0	32.0		111.0
	Largemouth Bass	135.3		297.3	145.0	131.0		122.0
Trap Netting (fish/net night)	White Crappie		7.0	78.0	13.0	68.2		

Historical catch rates (continued).

Gear	Species	Year							Historical Average
		2005	2008	2009	2012	2013	2016	2017	
Gill Netting (fish/net night)	Blue Catfish								0.2
	Channel Catfish	2.2		9.4		6.6		6.0	6.1
	White Bass	3.6		24.2		9.8		5.8	6.7
Electrofishing (fish/hour)	Gizzard Shad		201.0		151.0		148.0		171.4
	Threadfin Shad		127.0		210.0		77.0		84.5
	Bluegill		320.0		294.0		58.0		167.2
	Longear Sunfish		153.0		149.0		63.0		120.5
	Redear Sunfish		1.0						1.0
	Largemouth Bass		114.0		79.0		74.0		137.2
Trap Netting (fish/net night)	White Crappie		85.8		11.4		28.4		41.7