

LOUISIANA DEPARTMENT OF WILDLIFE & FISHERIES



**OFFICE OF FISHERIES
INLAND FISHERIES SECTION**

PART VI -B

WATERBODY MANAGEMENT PLAN SERIES

GRAND BAYOU RESERVOIR

**WATERBODY EVALUATION &
RECOMMENDATIONS**

CHRONOLOGY

October 2013 - Prepared by
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WATERBODY EVALUATION

STRATEGY STATEMENT

Recreational

Largemouth bass are managed to provide the opportunity to catch fish of greater than average size. Sunfish, catfish and crappie are managed to provide a sustainable population while providing anglers the opportunity to catch or harvest numbers of fish.

Commercial

Catfish, spotted gar and bowfin are managed to provide sustainable populations.

Species of Special Concern

No species of special concern are known to occur in this reservoir.

EXISTING REGULATIONS

Recreational Fishing Regulations

Largemouth Bass – 14” – 17” protective slot limit for black bass, along with an 8 fish creel limit of which only 4 fish may be over 17”. These regulations went into effect on June 1, 1997. (Title 76, Part VII, Chapter 1, Section 149.)

Recreational fishing regulations for 2013 may be viewed at the link below:

<http://www.wlf.louisiana.gov/fishing/regulations>

Commercial Fishing Regulations

Louisiana’s commercial fishing regulations for 2013 may be viewed at the link below:

<http://www.wlf.louisiana.gov/fishing/regulations>

Commercial Gear Types Allowed

Use of gill nets, trammel nets, fish seines, hoop nets, and wire nets is prohibited on Grand Bayou Reservoir. (Title 76, Part VII, Chapter 1, Section 185.)

TITLE 76
WILDLIFE AND FISHERIES
PART VII. FISH AND OTHER AQUATIC LIFE

Chapter 1. Freshwater Sports and Commercial Fishing

185. Netting Prohibition, John K. Kelly - Grand Bayou Reservoir

The Louisiana Wildlife and Fisheries Commission hereby prohibits the possession and/or use of commercial nets, including, but not limited to, gill nets, trammel nets, flag nets, hoop nets, wire nets and fish seines in John K. Kelly - Grand Bayou Reservoir located in Red River Parish.

AUTHORITY NOTE: Promulgated in accordance with R.S. 56:22(B).

HISTORICAL NOTE: Promulgated by the Department of Wildlife and Fisheries, Wildlife and Fisheries Commission, LR 24:1520 (August 1998).

SPECIES EVALUATION

Recreational Species

Largemouth Bass

Angler harvest and effort-

A creel census survey was initiated in May 1997 to determine angler effort and catch rates. The access point creel survey, which included a count of trailers and bank fishermen, was conducted 2 weekend days and 1 weekday per month through December 1997. In 1998, the creel survey was continued with efforts increasing to 6 days per month during the peak periods of March through October, and 3 days per month from November through February. In 2001, the creel survey followed a schedule similar to that in 1998.

An angler opinion survey was also conducted in conjunction with the creel surveys to determine the popularity of the 14” – 17” slot limit on the lake. During the 1998 and 2001 creel surveys, 82% and 63% of anglers were in favor of the 14” – 17” slot limit on Grand Bayou, respectively (Seales 2001).

The largemouth bass fishery is an important component of Grand Bayou Reservoir. Anglers logged 46,684.88 hours fishing on Grand Bayou Reservoir in 2001 with 26,012.99 hours (55.7%) directed toward largemouth bass. Specific results derived from analysis of largemouth bass angler information data gathered during creel surveys are given in Table 1.

Table 1. Largemouth bass angler information taken from creel surveys conducted at Grand Bayou Reservoir.

1997 (May-December), 1998 and 2001 (January-December) 14”-17” Slot, 8 fish creel limit of which only 4 fish may be over 17”.				
YEAR	NUMBER OF LARGEMOUTH BASS ANGLERS	MEAN NUMBER OF ANGLERS IN PARTY	MEAN TRIP LENGTH (HOURS)	MEAN ONE- WAY DISTANCE TRAVELED (MILES)
1997	5,700	1.7	3.75	32
1998	9,335	1.69	4.26	33
2001	6,294	1.71	3.82	41

Table 2. Annual creel survey results, total estimates for largemouth bass anglers, surveys conducted at Grand Bayou Reservoir.

1997 (May-December), 1998 and 2001 (January-December) 14"-17" Slot, 8 fish creel limit of which only 4 fish may be over 17".			
	YEAR 1997	YEAR 1998	YEAR 2001
NUMBER CAUGHT	26,992	35,667	21,914
NUMBER HARVESTED	6,245 (23% of catch)	14,237 (40% of catch)	3,789 (17% of catch)
NUMBER RELEASED	20,747 (77% of catch)	21,430 (60% of catch)	18,126 (83% of catch)
NUMBER RELEASED BELOW SLOT	10,297	13,496	5,069
NUMBER RELEASED WITHIN SLOT	10,265	7,521	12,177
NUMBER RELEASED ABOVE SLOT	185	413	880
POUNDS HARVESTED	5,502	14,790	5,796
AVERAGE WEIGHT PER LM BASS (POUNDS)	1.04	1.3	1.72

Table 3. Annual Creel Survey Results, Trip and Hourly Estimates for Largemouth Bass Anglers, surveys conducted at Grand Bayou Reservoir.

1997 (May-December), 1998 and 2001 (January-December) 14"-17" Slot, 8 fish creel limit of which only 4 fish may be over 17".			
	YEAR 1997	YEAR 1998	YEAR 2001
LM BASS CAUGHT PER TRIP	4.25	3.97	2.6
LM BASS HARVESTED PER TRIP	0.87	1.25	0.5
LM BASS CAUGHT PER HOUR	1.14	1.01	0.69
LM BASS HARVESTED PER HOUR	0.2	0.3	0.14

Length frequencies for largemouth bass harvested by bass anglers during creel surveys at Grand Bayou Reservoir are shown in Figure 1.

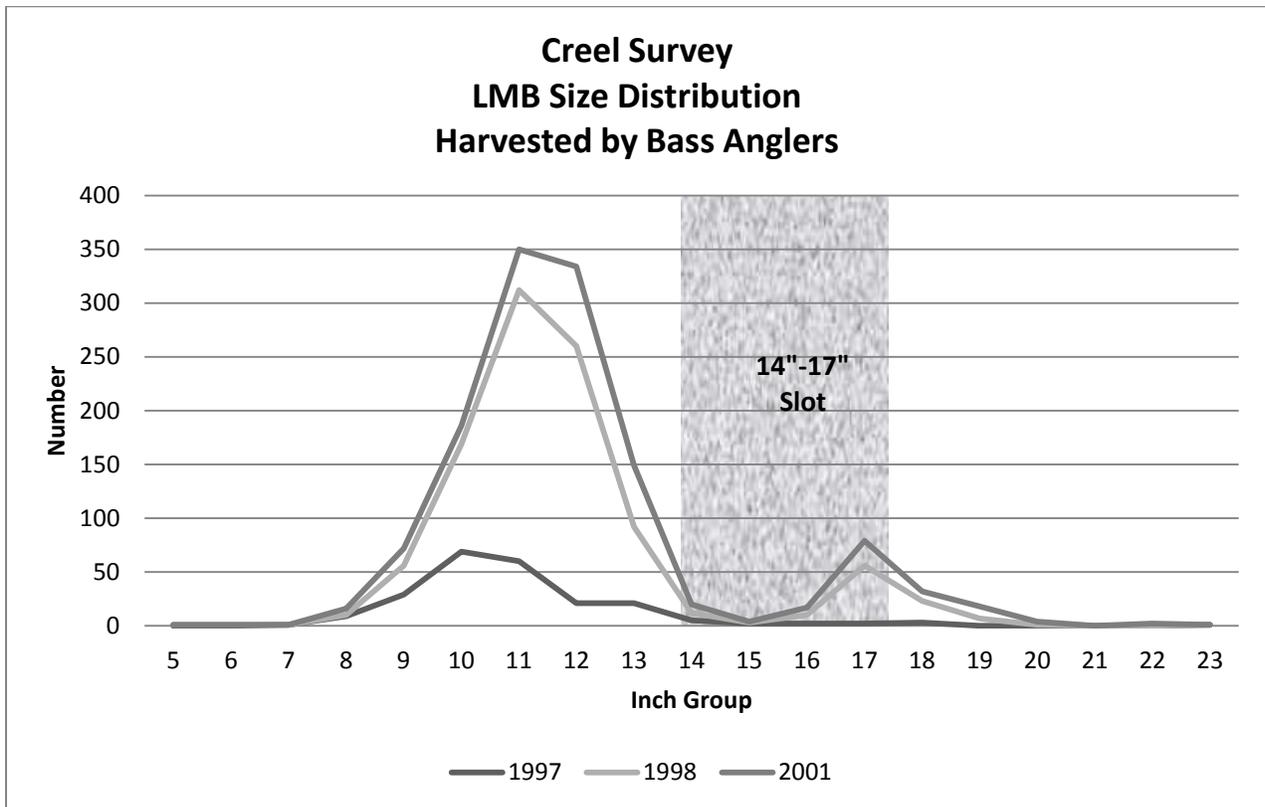


Figure 1. The size distributions (inch groups) of largemouth bass harvested by bass anglers during creel surveys at Grand Bayou Reservoir, LA.

The preceding figure indicates general angler compliance with the 14” – 17” slot limit. For the three creel survey periods, largemouth bass anglers released 71.3% of all bass caught. As expected, most bass harvested are below the 14” minimum of the slot.

Relative abundance and relative weight-

Analysis of electrofishing data from Grand Bayou Reservoir reveals that most values have declined from the levels recorded immediately following impoundment. This reduction is seen as part of the normal aging pattern that all reservoirs exhibit and is not cause for concern at this time. Some electrofishing results have shown an increase in largemouth bass abundance in more recent samples. It is expected that these values will continue to rise and fall within a range that will mimic the pattern seen in other regional reservoirs as they have aged.

The catch-per-unit-of-effort (CPUE) values for selected largemouth bass size groups collected during spring electrofishing sampling are shown in Figure 2.

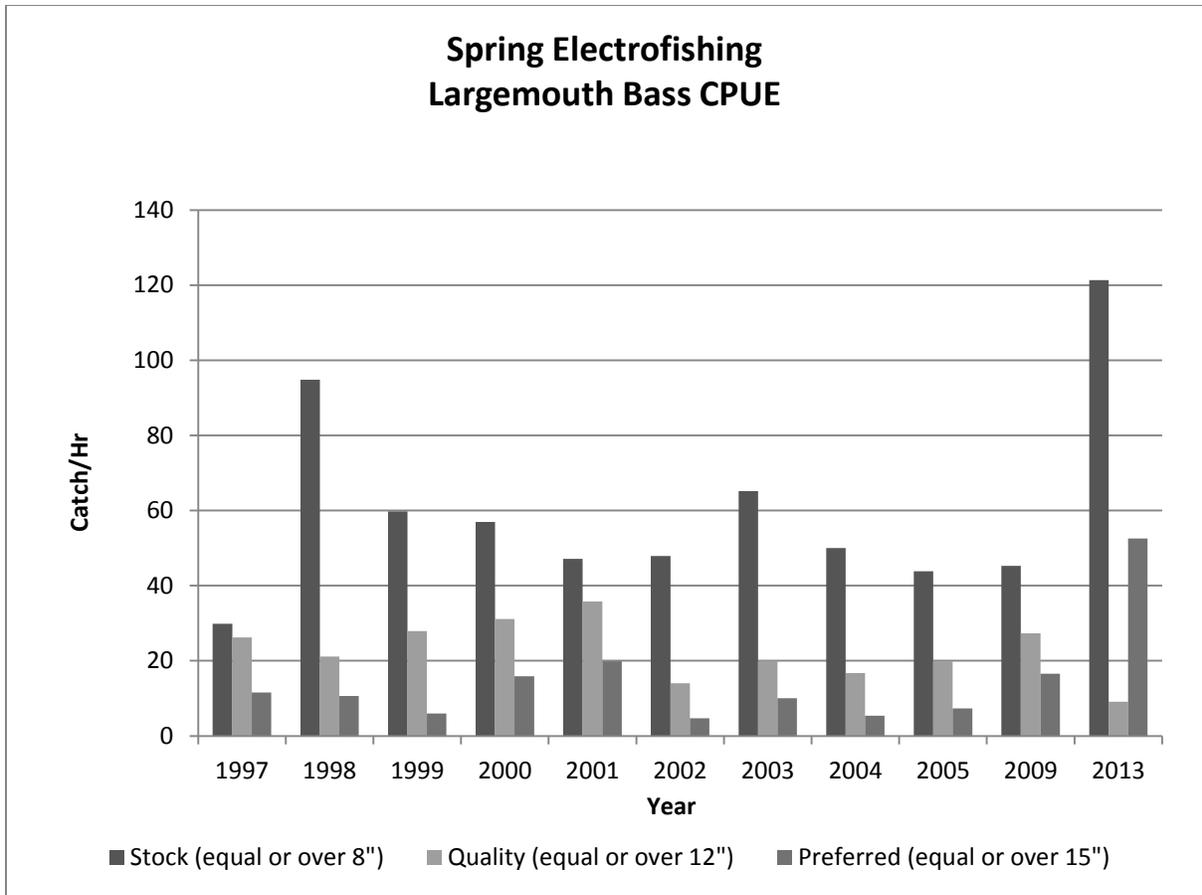


Figure 2. The CPUE (number per hour) for largemouth bass of stock-, quality- and preferred-size fish from spring electrofishing results at Grand Bayou Reservoir, LA years 1997-2005, 2009 & 2013.

Average relative weights (W_r) for different size groups of largemouth bass sampled from Grand Bayou Reservoir by fall electrofishing during the years 1999 – 2005 and 2009 are stock-size – 102.8, quality-size – 99.4, preferred-size – 95.9 and memorable-size – 100.4. Relative weight results for selected largemouth bass are depicted in Figure 3.

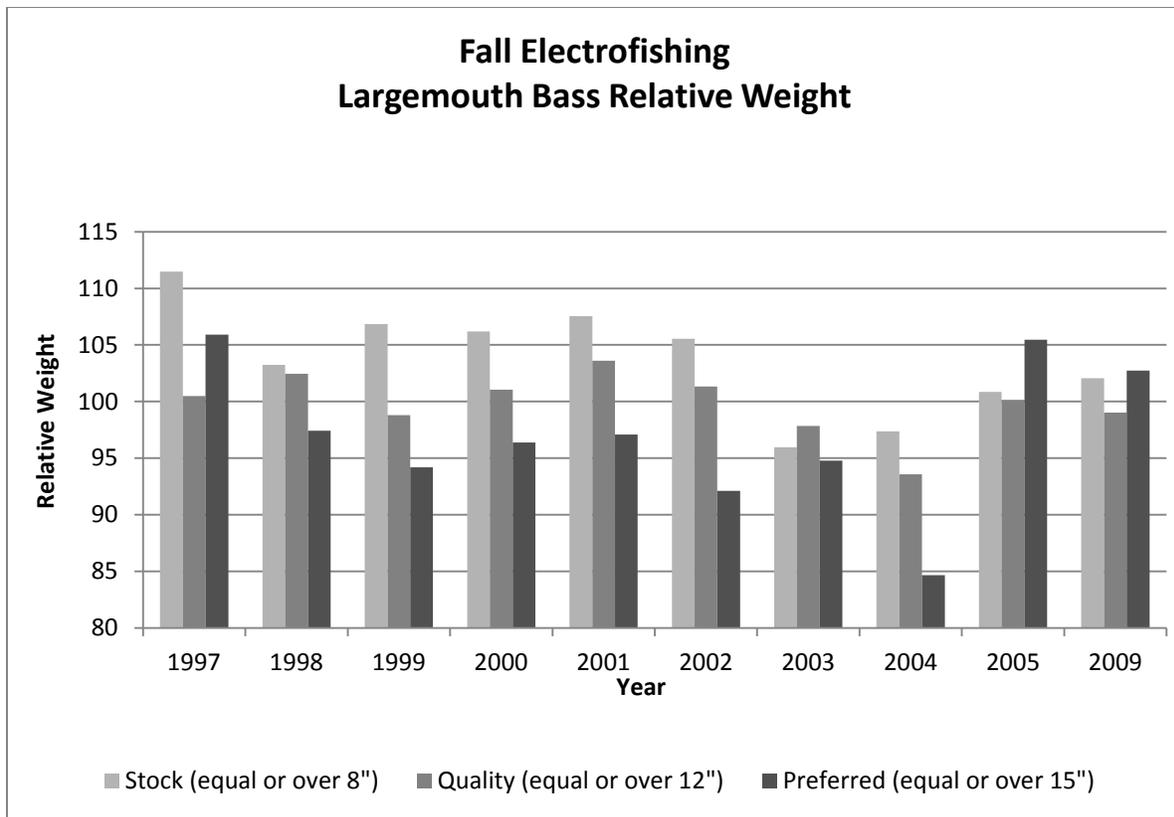


Figure 3. The relative weights of largemouth bass sizes stock-, quality-, preferred- and memorable-size fish sampled at Grand Bayou Reservoir, LA by fall electrofishing during years 1997 – 2005, 2009 and 2013.

In comparing relative weights for largemouth bass collected in 2009 to earlier Wr values for that species, Wr for stock-size fish decreased by 0.3%, Wr for quality-size fish decreased by 0.4%, Wr for preferred-size fish increased by 7.1% when compared to the previous nine year average.

Largemouth Bass Genetics

Grand Bayou has been stocked with Florida strain largemouth bass since 1995. Florida strain largemouth bass are stocked into the reservoir to incorporate a genetic trait associated with larger maximum sized adult fish. Samples taken from electrofishing show that over time, the percentage of bass with Florida influence ($F - F_x$) has ranged from 6 percent (1998-1990) to 60 percent (2003-2004). Sampling has indicated that largemouth bass with the genetic signature defined as pure Florida have ranged from 0 percent (1997-1998 and 2009-2010) to 19 percent (2005-2006). Genetic testing results for largemouth bass are shown in Table 4.

Table 4. Genetic analysis of largemouth bass taken from Grand Bayou Reservoir, LA.

Year	Number	Northern	Florida	Hybrid	Florida Influence
1996	102	86%	3%	11%	14%
1997	49	86%	0%	14%	14%
1998	95	94%	2%	4%	6%
1999	59	80%	8%	12%	20%
2000	74	61%	15%	24%	39%
2001	49	63%	14%	23%	37%
2002	46	70%	11%	19%	30%
2003	52	79%	4%	17%	21%
2004	53	40%	13%	47%	60%
2005	53	49%	19%	32%	51%
2009	45	87%	0%	13%	13%

Sunfish (Bluegill & Redear)

Sunfish anglers comprise a small portion of the total angler group at Grand Bayou Reservoir, but as is typical statewide in Louisiana, are a devoted group. Annual catch information for bluegill sunfish appears in Table 5.

Table 5. Bluegill catch data collected during annual creel surveys at Grand Bayou Reservoir, Red River Parish, Louisiana.. Estimates are from all anglers.

1997 (May-December), 1998 and 2001 (January-December)			
	YEAR 1997	YEAR 1998	YEAR 2001
NUMBER CAUGHT	27,371.90	7,573	3,267
NUMBER HARVESTED	27,371.90 (100% of catch)	7,573 (100% of catch)	3,267 (100% of catch)
POUNDS HARVESTED	20,993	6,690	2,393
AVERAGE WEIGHT PER BLUEGILL (POUNDS)	0.77	0.88	0.73

Crappie

Relative abundance and size structure indices-

Crappies are a significant predatory fish group at Grand Bayou Reservoir and provide recreational opportunity for many anglers. Crappie were sampled with gillnets during four periods between 1997 and 2013. Total catch-per-unit-of-effort (number of fish caught per hour) values for those gillnet samples are given in figure 4.

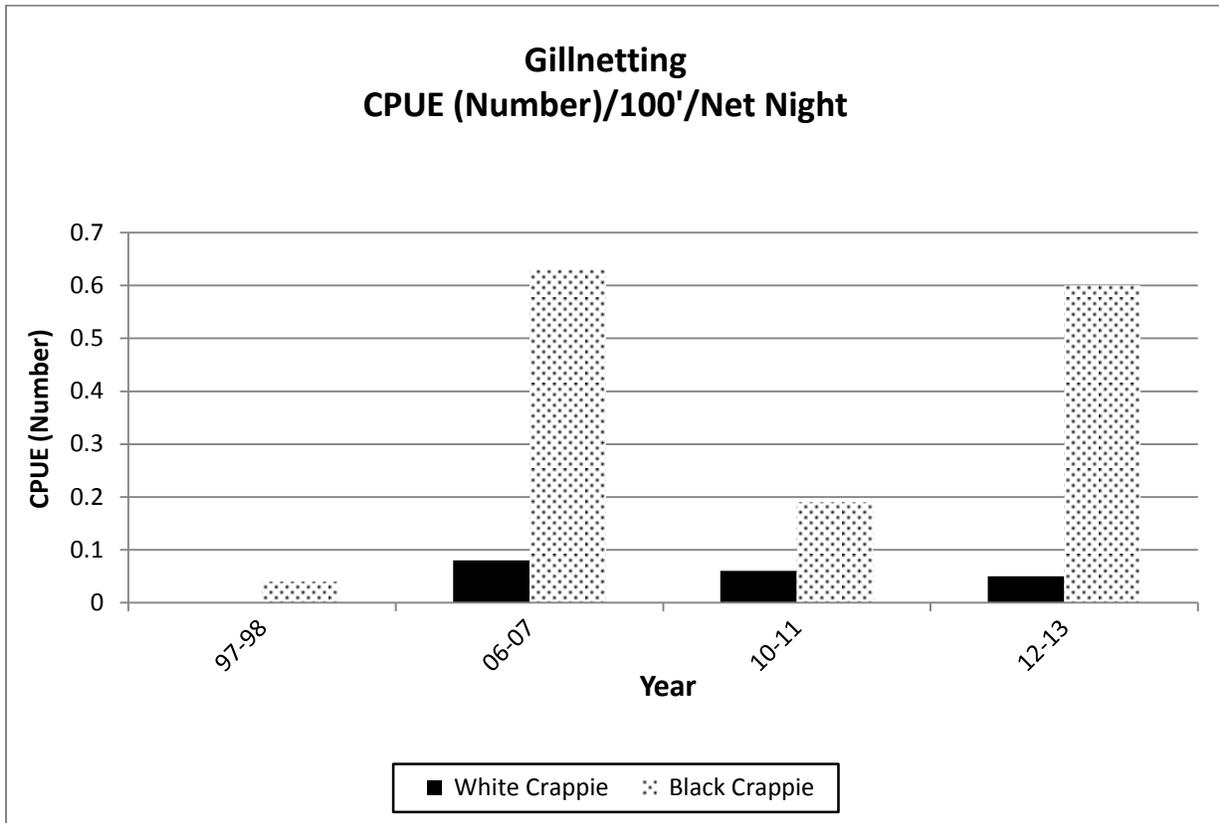


Figure 4. The catch-per-unit-effort (number caught/100'/net night) of white crappies and black crappies captured in gillnets from Grand Bayou Reservoir, LA in 1997- 1998, 2006-2007, 2010-2011 & 2012-2013.

These results indicate the presence of a stable to increasing population of crappie in this reservoir. They also indicate a higher frequency of occurrence for black crappie as opposed to white crappie. Crappies appear to follow the cyclical pattern exhibited by these species in waterbodies statewide.

Crappies were collected with leadnets in 2009 and 2010. The CPUE from these samples are illustrated in Figure 5.

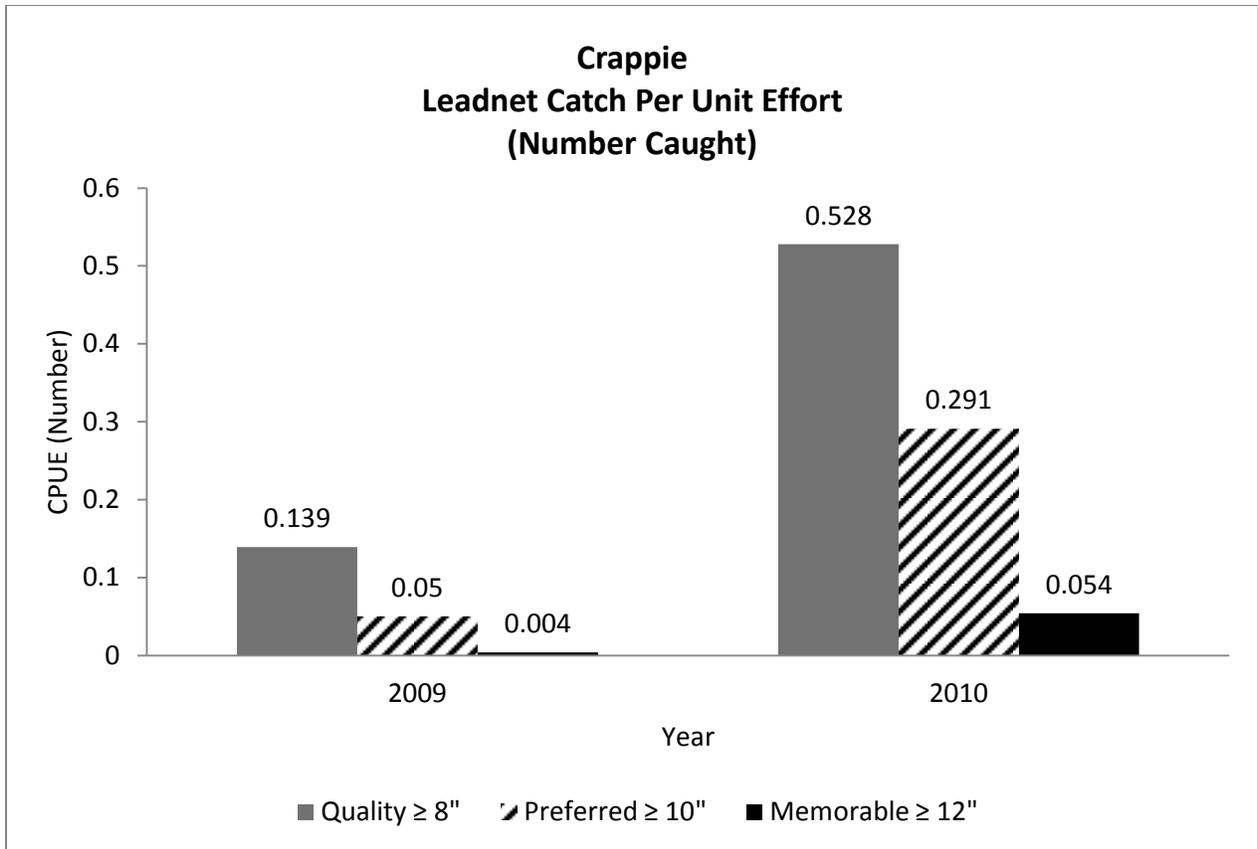


Figure 5. The CPUE for crappie taken from lead net sampling at Grand Bayou Reservoir, LA during years 2009 & 2010.

The CPUE of crappies captured in leadnets also reflect the cyclical nature of this crappie population. Information depicted in Figure 5 provides some insight into the size distribution of the crappie population. This population follows the typical bell curve pattern as frequency decreases with size and age.

Further understanding of the size distribution of this crappie population can be gained by looking at the relative stock density (RSD) values calculated for crappies collected with leadnets. RSD values for the three largest size groups of crappie are given in Figure 6.

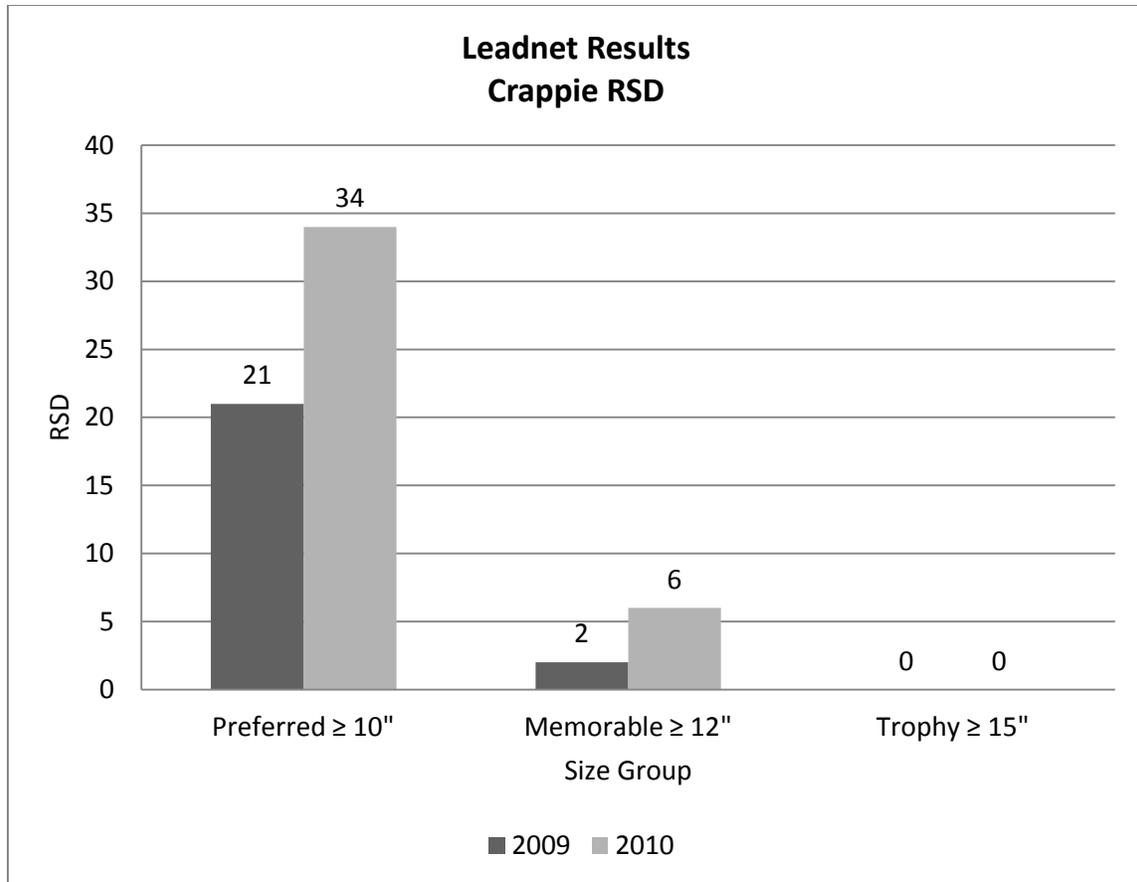


Figure 6. The relative stock density for preferred-, memorable- and trophy-sized crappie collected during lead net sampling at Grand Bayou Reservoir, LA during years 2009 & 2010.

The RSD of crappies suggests a significant portion of the crappie population is in the preferred-size group (TL > 10 in.). Memorable-sized fish are not considered abundant in this waterbody but are present in numbers sufficient to provide reasonable angler opportunity. The RSD of trophy-size crappies were zero, which is typical for this sampling method in most crappie populations. Relative Stock Density for preferred- and memorable-sized crappies was higher in 2010 than 2009. Lead net sampling is scheduled to be conducted in the fall of 2013 and during alternate years thereafter.

Angler harvest and effort-

Crappie anglers were interviewed as part of the aforementioned creel surveys. Size distribution results from those surveys are illustrated in Figure 7.

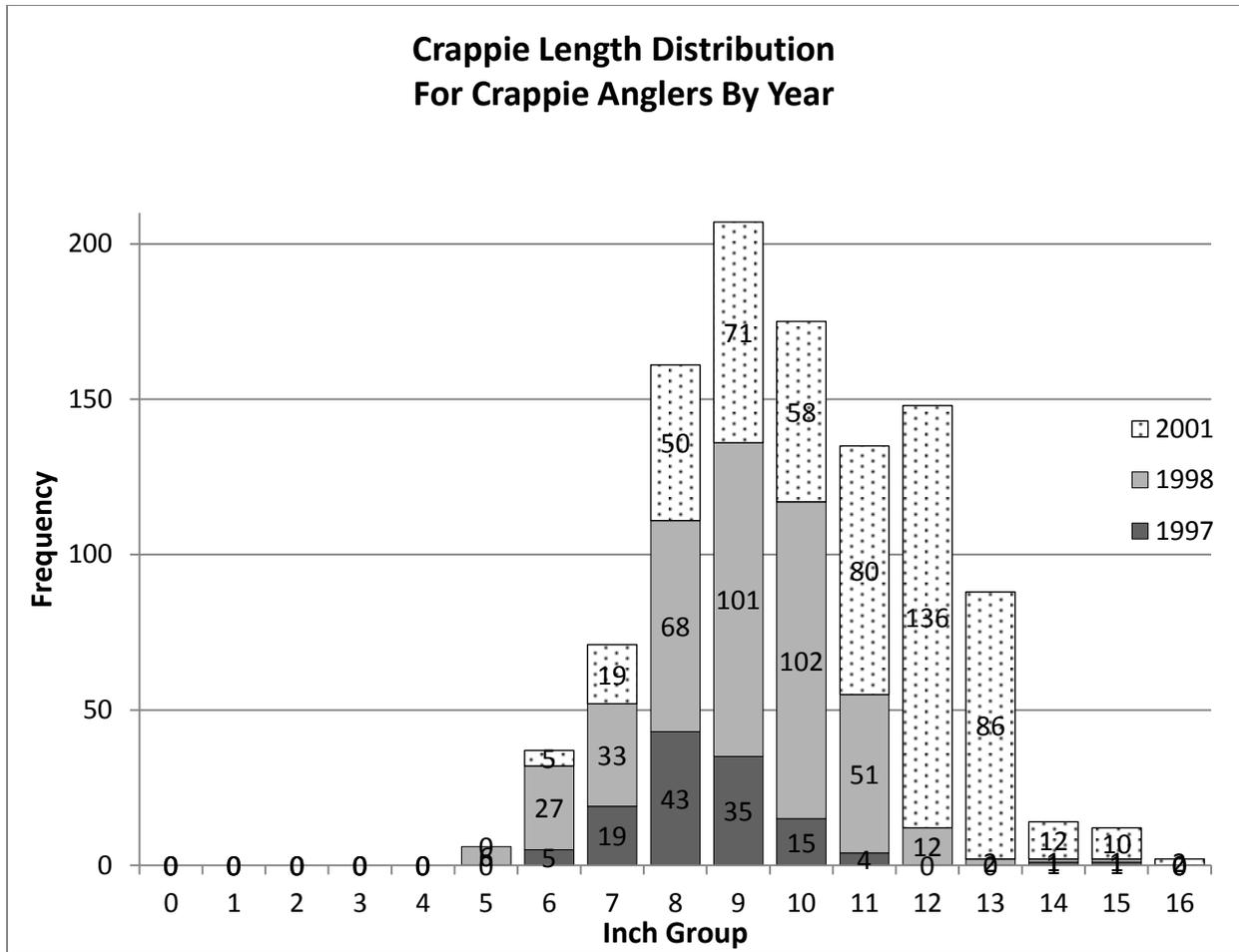


Figure 7. The size distribution (length groups) of crappie caught by crappie anglers and measured during creel surveys at Grand Bayou Reservoir, LA in years 1997, 1998 & 2001.

Most of the crappies caught by anglers were 8 to 10 inches TL. The minimum and maximum measurements were 5 and 15 inches TL.

Table 6. Angler captured crappie length distribution data collected during creel surveys at Grand Bayou Reservoir, LA in 1997, 1998 & 2001.

1997 (May-December), 1998 and 2001 (January-December)				
	1997	1998	2001	1997,1998, 2001 COMBINED
CRAPPIE MEDIAN LENGTH	8 inches	9 inches	11 inches	10 inches
TOTAL NUMBER OF CRAPPIE MEASURED	123	404	529	1,056

Notwithstanding some difference in sampling period during 1997, changes in crappie length distributions can be seen when comparing one year to another. The most common crappies measured in 1997 were 8 inches long while the most common crappies measured in 2001 were 11 inches long. When coupled with an increase in the number of crappies measured during each period, it appears that a strong age class of crappies, likely spawned in 1996 was moving through this population during these surveys.

Catfish

While each of the three major species of catfish channel catfish, *Ictalurus punctatus*, blue catfish, *Ictalurus furcatus*, and flathead catfish *Pylodictis olivaris* are found in this reservoir, abundance of catfish remains relatively low. Catfish are often found in low abundance in new reservoirs due to high levels of hydrogen sulfide gas formed when submerged terrestrial vegetation decays following impoundment. To increase recreational angling opportunity, LDWF has stocked channel catfish into this reservoir since 1996. To date 341,832 channel catfish have been released. Gillnetting results for the three species of catfish are shown in Figures 8 and 9.

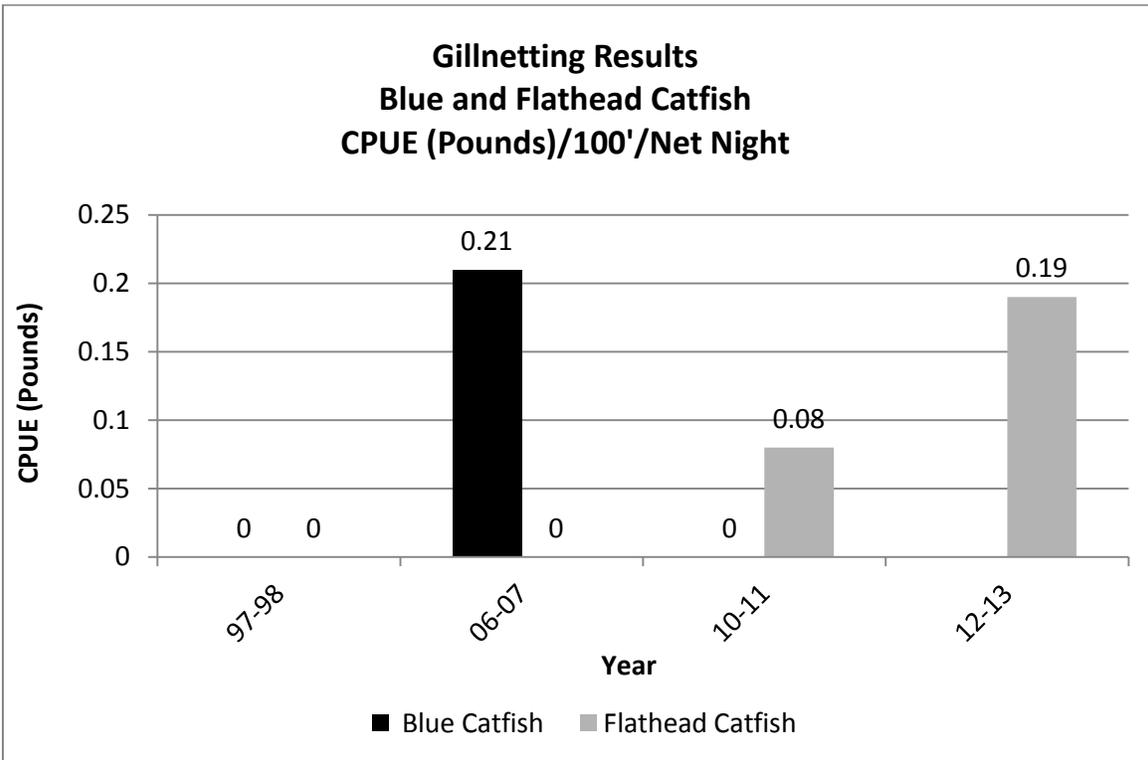


Figure 8. The total CPUE (pounds per net night) of blue catfish and flathead catfish collected in Grand Bayou Reservoir, LA by gillnet sampling 1997-2013.

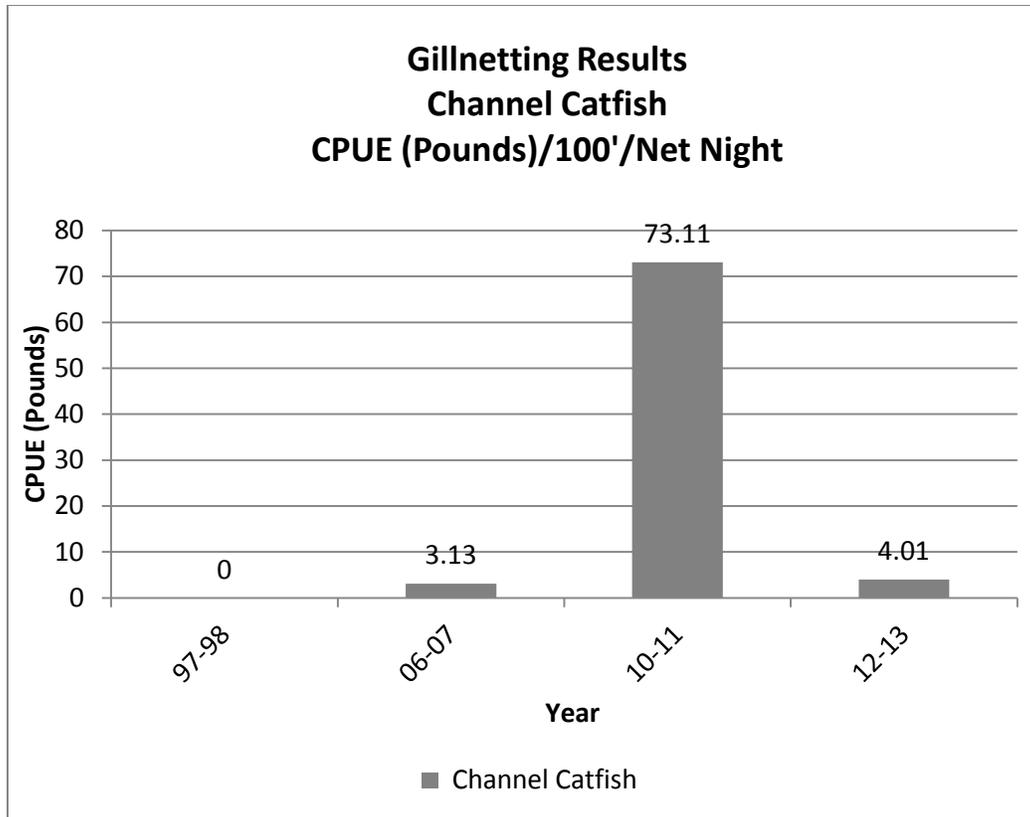


Figure 9. The total CPUE (pounds per net night) of channel catfish collected in Grand Bayou Reservoir, LA by gillnet sampling 1997-2013.

Blue catfish are not found in significant numbers at this reservoir. Flathead catfish are found with slightly increasing frequency and are expected to increase in number and size in the future. Channel catfish are apparently found in proportion to their stocked numbers and frequency in what amounts to a “put, grow and take” fishery.

Forage

Forage fish are those that are available for use as food by predatory fishes. In general, all individuals up to six inches in length are forage fish, particularly when discussing forage for largemouth bass. Figure 10 shows the CPUE of forage fish captured during fall electrofishing from 1997 to 2009.

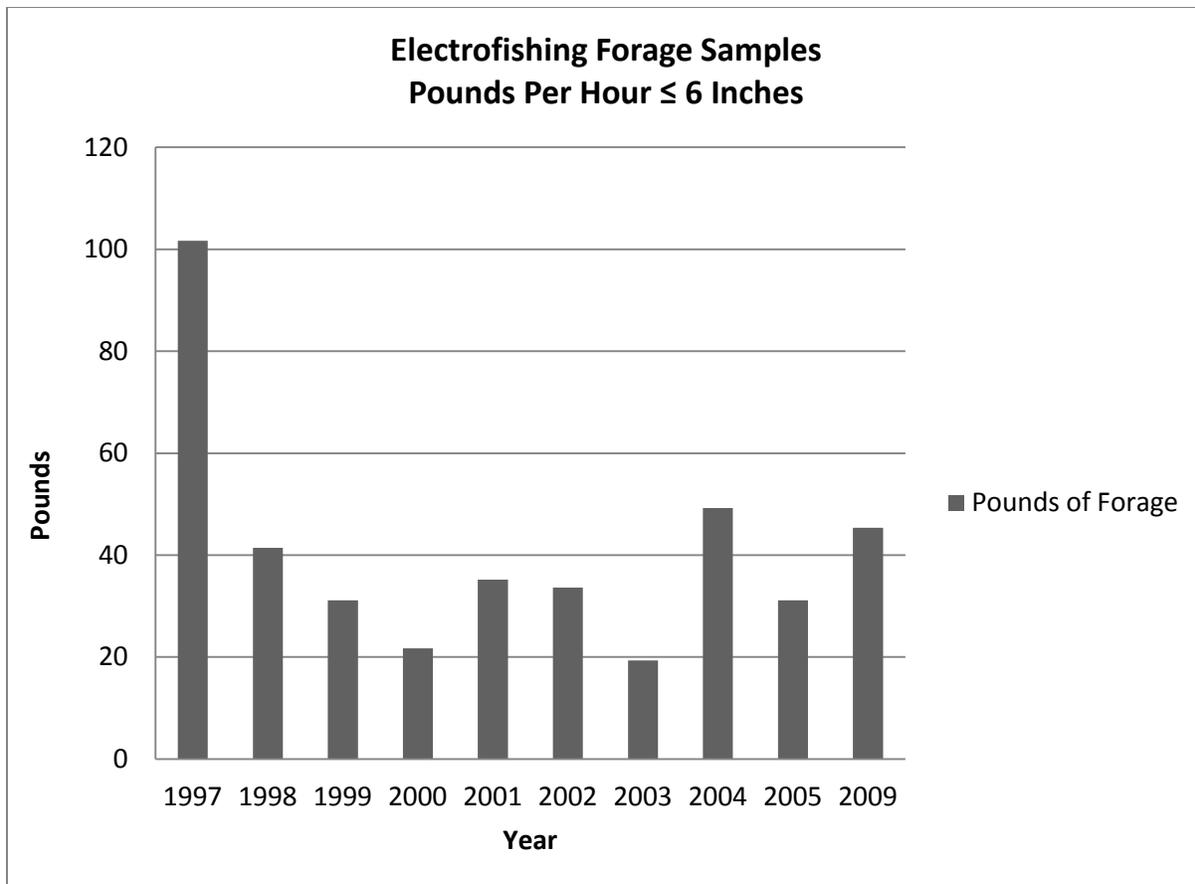


Figure 10. The pounds of forage equal to or less than six inches in total length collected per hour during fall electrofishing at Grand Bayou Reservoir, LA in years 1997 – 2005 and 2009.

While forage has decreased since the initial “boom” period following impoundment, these values have been steady at around 40 pounds per hour in recent years. Primary forage species in this reservoir include bluegill, silversides, threadfin shad, dollar sunfish, redspotted sunfish, warmouth, redear sunfish and gizzard shad.

Commercial Species

Data collected with standardized gillnets is presented in the following graphs. Standardized gillnet sampling involves the use of 100 yards each of 2.5 inch, 3 inch, 3.5 inch and 4 inch monofilament gill nets at each station.

Carp

While common carp (*Cyprinus carpio*) are not subject to species specific management, they are considered commercial species. As such, they are managed to provide a sustainable population. Figure 11 depicts total CPUE of common carp collected in gillnets at Grand Bayou Reservoir.

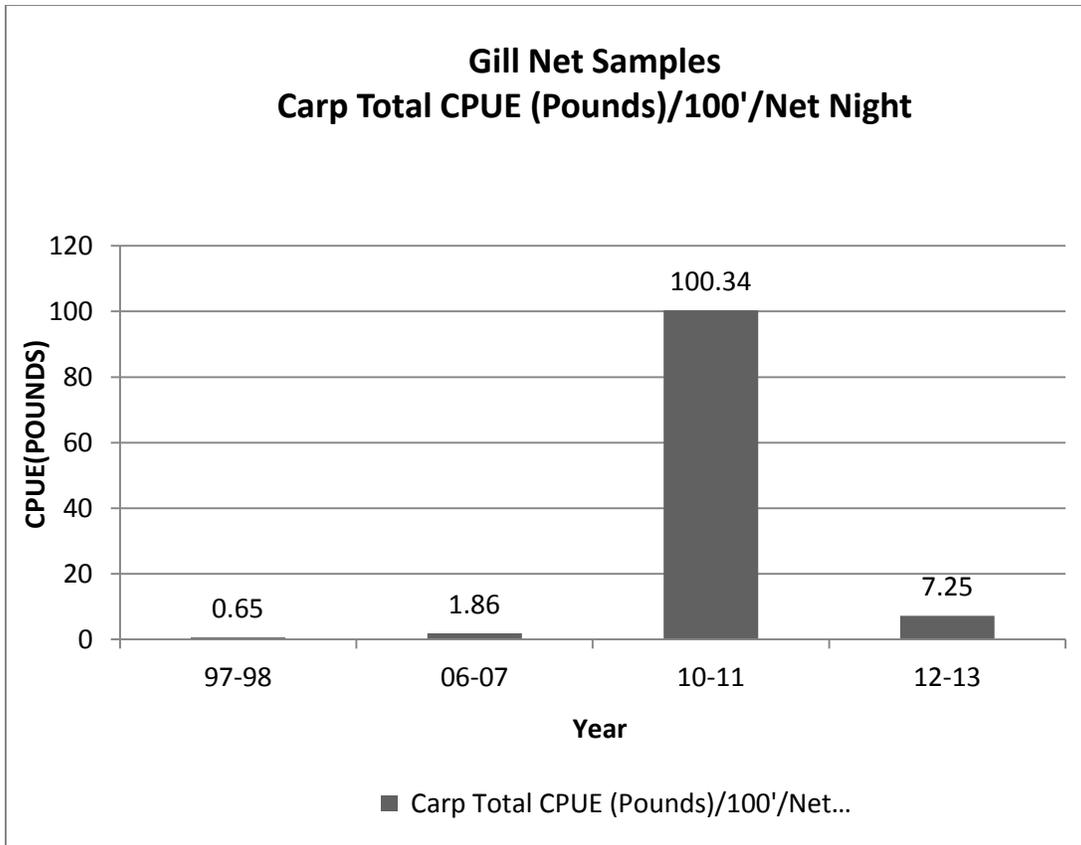


Figure 11. Total CPUE (Pounds/100'/Net Night) of carp taken by gillnet sampling at Grand Bayou Reservoir, LA during sampling periods 1997-1998, 2006 – 2007, 2010 – 2011 and 2012 - 2013.

Catfish

All catfish species are managed to provide a sustainable population. Although the three major catfish species, channel catfish *Ictalurus punctatus*, blue catfish *Ictalurus furcatus*, and flathead catfish *Pylodictis olivaris*, exhibit some fluctuation in annual relative abundance, all are found within the waterbody. Catch data from standardized gillnets was presented in Figures 8 and 9.

Freshwater Drum

Freshwater drum *Aplodinotus grunniens* has not been collected during standardized sampling at this reservoir.

Bowfin

Bowfin *Amia calva* is not a major commercial species in Grand Bayou Reservoir. Bowfins are occasionally collected during standardized sampling. The CPUE for bowfins collected in gillnets is depicted in Figure 12.

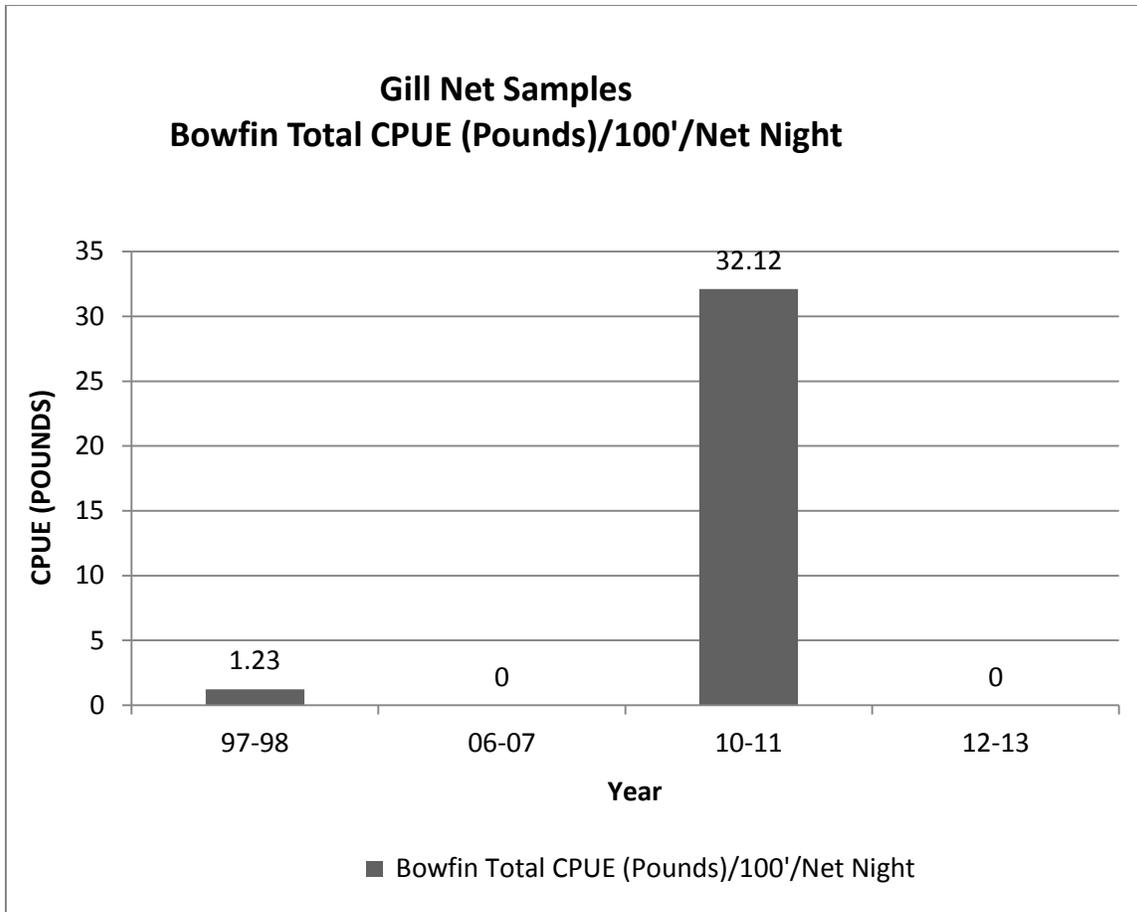


Figure 12. The CPUE of bowfins collected in gillnets from 1997 - 1998, 2006 - 2007, 2010 - 2011 and 2012 - 2013.

Garfish

Spotted gar *Lepisosteus oculatus* are the only species of garfish that occur in this reservoir. The CPUE for spotted gar collected in gillnets is depicted in Figure 13.

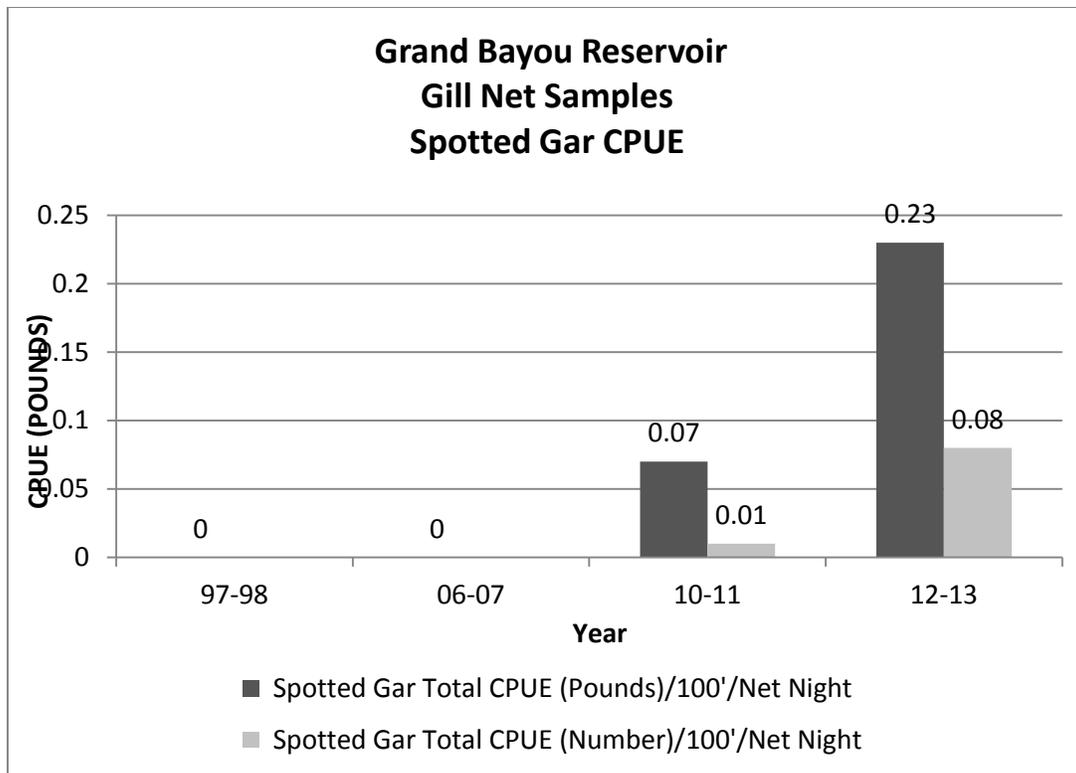


Figure 13. The CPUE of spotted gar collected in gillnets at Grand Bayou Reservoir from 1997- 1998, 2006 – 2007, 2010 – 2011 and 2012 – 2013.

Species of Special Concern

No species of special concern are known to occur in this reservoir.

HABITAT EVALUATION

Aquatic Vegetation

Hydrilla *Hydrilla verticillata* is the dominant submerged aquatic plant in Grand Bayou Reservoir. It is both beneficial as fish habitat and problematic to fishing and navigation. In 2006, a drawdown was needed to control hydrilla. Drought conditions that occurred in 2010 – 2012 provided additional control of submerged aquatic vegetation (SAV). However, in September 2013, 473 acres of hydrilla were observed in the reservoir. The majority of the coverage was found above the LA 784 Bridge.

Other SAV species currently found at Grand Bayou include chara *Chara sp.* and coontail *Ceratophyllum demersum*. These plants are much less abundant than hydrilla and pose little problem to anglers and boaters.

Problematic floating vegetation is comprised of giant salvinia *Salvinia molesta* and water hyacinth *Eichhornia crassipes*. Both of these species remain at low levels and are confined to the backs of coves that are protected from wind and water currents.

In September 2013, LDWF surveyed the reservoir for the presence and spatial coverage of aquatic vegetation. Table 7 depicts the acreages for the major species found during this survey.

Table 7. Total acreage of major plant species found in Grand Bayou Reservoir, LA during a plant survey conducted on September 25, 2013.

Aquatic Plant Species	Acreage Covered
Hydrilla	473 Acres
Giant Salvinia	83 Acres
Chara	34 Acres
Coontail	25 Acres
Lotus	22 Acres
Alligator weed	14 Acres
Giant Cutgrass	14 Acres
Illinois Pondweed	7 Acres
Water Primrose	7 Acres
Spatardock	6 Acres
Water Hyacinth	5 Acres
Maidencane	3 Acres
Total Vegetative Acreage	691 Acres
Percentage Of Lake Covered By Vegetation	27.6%

A vegetative typemap created from information gathered during the September 25, 2013 survey of Grand Bayou Reservoir appears as [Appendix I](#).

Durable Natural Structure

Very little woody structure exists in this reservoir due to extensive clearing of the lakebed prior to impoundment. Much of the durable natural structure such as young standing trees and brush has decayed since impoundment of the reservoir.

Substrate

Information from the Natural Resources Conservation Service shows that soils in the Grand Bayou watershed range from a sandy type at higher elevations to a silt type at moderate elevations to a clay type at lower elevations. Soil pH found at higher elevations ranges from 4.5 to 5.3. Soil pH at slightly lower elevations is found to be 4.2. The soil pH of the lowest elevations is 4.6. All of these soil types are classified as low in fertility.

Artificial Structure

No artificial reef structures have been placed in this reservoir by LDWF. Placement of brush piles is a common practice of local anglers.

CONDITION IMBALANCE / PROBLEM

Giant salvinia is an invasive floating fern that has been present since 2006, but has not developed into a serious problem throughout the reservoir. Giant salvinia does cause navigational problems in areas of the reservoir that are sheltered from wave action or water currents.

Hydrilla is the dominant submerged aquatic vegetation species in Grand Bayou Reservoir. As such, the invasive species is both beneficial as fish habitat and problematic to fishing and navigation. Removal of hydrilla from Grand Bayou Reservoir can be accomplished with biological control measures, specifically the introduction of triploid grass carp (TGC). However, the use of TGC in Grand Bayou Reservoir does involve significant risks. Woody material is sparse and submerged aquatic vegetation (SAV) is the primary form of complex cover. Complex cover is most beneficial for sportfish when present in areal coverage of 15-30%. Sportfish productivity and angler success are reduced when complex cover is significantly above or below 15-30%. Efforts to introduce TGC for control of SAV within a desired range have been largely unsuccessful. Results more often include insufficient SAV control or complete removal of SAV. To ensure that all stakeholder groups are aware of potential benefits and risks, considerable discussion is necessary before the introduction of TGC into Grand Bayou Reservoir will be recommended.

CORRECTIVE ACTION NEEDED

Annual monitoring of aquatic plant species to identify problems related to these plants. Appropriate use of herbicides, water level manipulation and biological agents to control vegetation as needed.

RECOMMENDATIONS

1. Implement an integrated management approach for Grand Bayou Reservoir to control overabundant vegetation. The advantage of integrated management is the ability to achieve a combined benefit from several control methods and not be completely dependent on the success of any one approach. LDWF personnel will continue to perform annual surveys to monitor aquatic vegetation and will update recommendations as necessary.

- a. Giant Salvinia

Continue foliar herbicide applications for control of giant salvinia. Giant salvinia will be treated with a mix of glyphosate (0.75 gal/acre) and diquat (0.25 gal/acre) with Aqua King Plus (0.25 gal/acre) and Thoroughbred surfactants (8 oz. /acre) from April 1 to October 31. Outside of that time period, diquat at a rate of 0.75 gallons per acre will be used with 0.25 gallons per acre of a non-ionic surfactant.

Grand Bayou Reservoir is located within the Louisiana Department of Agriculture & Forestry's 2, 4-D waiver area. Between March 15 and September 15 of each year, water hyacinth will be treated by foliar applications of glyphosate (0.75 gal/acre)/Red River 90 (0.25 gal./acre). Between September 16 and March 14 of each year, water hyacinth will be treated with foliar applications of 2,4-D (0.5 gal./acre) and Red River 90 (1 pint/acre).

- b. Hydrilla

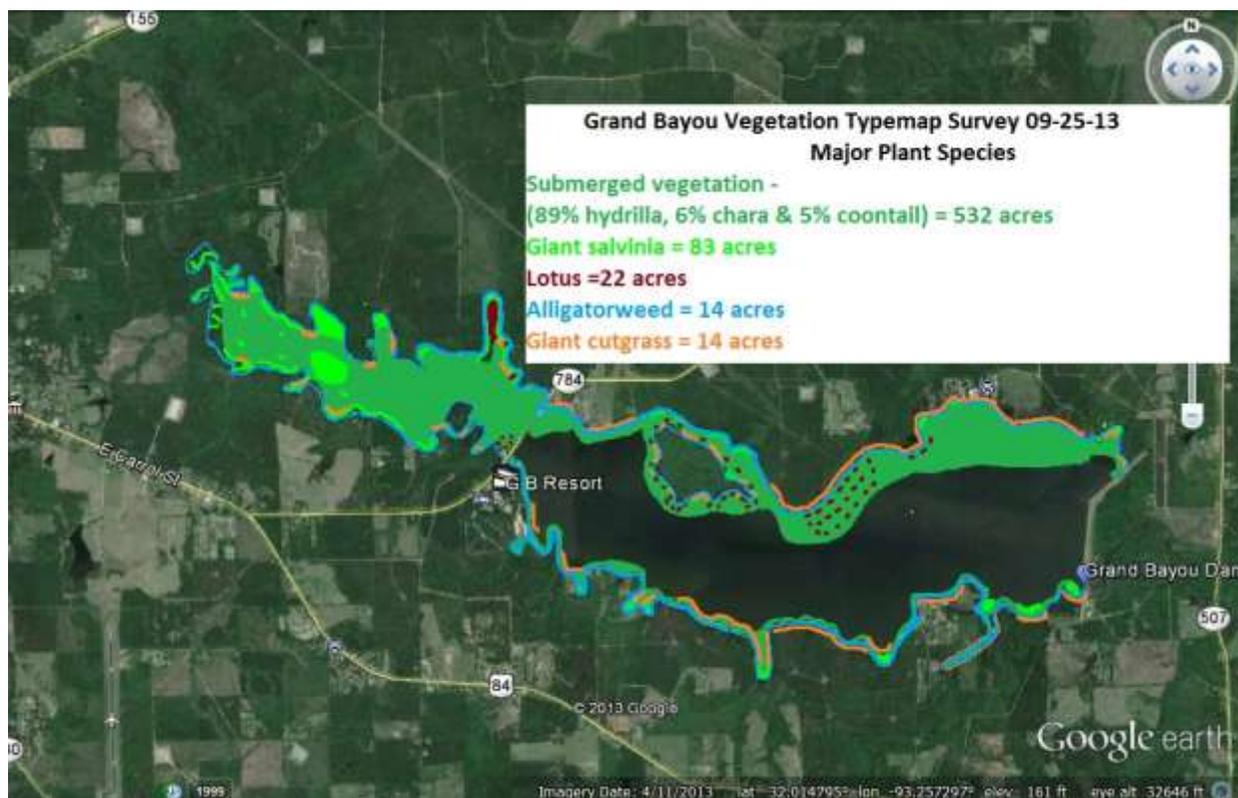
Chemical treatments will be applied to critical areas such as boat ramps and for shoreline angler access. Chemical treatments will be made with 4.0 ppm of Aquathol Super-K. Chemical treatments are not recommended for large-scale or long-term control of submerged aquatic vegetation. The cost for such control is prohibitive and the control of hydrilla is short-lived.

Physical control of hydrilla and other submerged aquatic vegetation (SAV) will be accomplished by means of lake drawdowns. Drawdown measures will be considered when coverage of SAV exceeds 40% (1,000 acres) of total waterbody surface area. The recommended drawdown period is September 1 to January 31 of the following year. The recommended drawdown rate will be 4 inches per day with a target level of 131'MSL. A minimum of two consecutive drawdowns will be necessary to achieve satisfactory reduction of hydrilla.

Triploid grass carp are a potentially effective option for biological control of hydrilla. Triploid grass carp are not recommended for Grand Bayou Reservoir at this time. Complex cover is directly related to sportfish productivity and angler success. Woody material in Grand Bayou Reservoir is limited and complex cover is primarily comprised of submerged aquatic vegetation. Excessive removal of submerged aquatic vegetation is not a desirable management goal for Grand Bayou Reservoir. Efforts to introduce triploid grass carp to manage submerged aquatic vegetation to a desired level of coverage have been largely unsuccessful. Recommendations for the introduction of triploid grass carp into Grand Bayou Reservoir will be reserved until alternative control options have been exhausted and until all stakeholder groups are aware of the potential benefits and risks.

APPENDIX I

([click](#) to return)



Grand Bayou Reservoir was surveyed for vegetation type and coverage on September 25, 2013. Surveyors included Ricky Yeldell, Biologist Manager, Sean Kinney, Biologist Supervisor, Villis Dowden, Biologist III and Jarrett Thaxton, Wildlife & Fisheries Technician IV. The reservoir level was 44.1 MSL. The weather was fair with a light southerly wind.

The submerged aquatic plant community was comprised of 89% hydrilla (*Hydrilla verticillata*), 6% chara (*Chara ssp.*) and 5% coontail (*Ceratophyllum demersum*). The total submerged aquatic plant coverage was 532 acres. The submerged vegetation found in the lake during this survey was mostly above the Hwy 784 Bridge and along the northern shore below the bridge. Submerged aquatic vegetation was found in depths to 6 feet.

Giant salvinia (*Salvinia molesta*) was found mostly above the Hwy 784 Bridge and elsewhere in the backs of coves below the bridge. Total coverage of giant salvinia was 83 acres.

Lotus (*Nelumbo lutea*) was found throughout the lake but limited to areas several areas of three to five acres in size. Total lotus coverage was 22 acres.

Alligator weed coverage totaled 14 acres and was fairly evenly distributed in a narrow band along the entire reservoir shoreline.

Giant cutgrass (*Zizaniopsis miliacea*) was found in scattered patches along the reservoir shoreline and totaled 14 acres in coverage.

Illinois pondweed (*Potamogeton illinoensis*) was found in scattered patches throughout the reservoir and totaled 7 acres in coverage.

Water primrose was found along the banks of the inundated Grand Bayou above the Hwy 784 Bridge. Coverage of this species totaled 7 acres.

Spatterdock was found in both the extreme upper and lower ends of the reservoir in patches totaling 6 acres in coverage.

Water hyacinth (*Eichhornia crassipes*) was limited to the upper end of the reservoir and totaled 5 acres in coverage.

Maidencane (*Panicum hemitomon*) was noted in patches along the eastern shoreline near the dam. Total coverage by this species was 5 acres.

The total vegetative coverage found during the survey was 691 acres resulting in 27.6% coverage of the reservoir.

LITERATURE CITED

Seales, James. 2001. Grand Bayou Bass Regulations Opinion Survey Report. Louisiana Department of Wildlife & Fisheries. Interagency Report.