

Glen Elder District Fisheries

Volume 10, Issue 1 Kansas Department of Wildlife, Parks & Tourism Spring 2019

Walleye Telemetry at Glen Elder

A 3-year study investigating walleye life history and behavior at Glen Elder Reservoir will give anglers and biologists a much better understanding of what makes walleye tick in this impoundment. Scott Waters, district fisheries biologist for Kansas Department of Wildlife, Parks, & Tourism, will be conducting a telemetry study to evaluate mortality patterns, movement, home range, and habitat selection of adult walleye.

Twenty-seven walleye were recently implanted with ultrasonic transmitters with another 33 planned in April during the walleye spawn for a total of 60 tagged fish. An equal number of males and females will be targeted, but not all tagged fish will be greater than the 18-inch minimum length limit.

The fish are collected using trap nets and gill nets and brought to shore for surgery. Each fish is placed in an anesthetic bath for several minutes until it loses equilibrium and then placed on a surgery table. A 1.5-inch incision is made in the abdominal wall, and after the sex is determined, a 22-gram ultrasonic transmitter is placed in the abdominal cavity. Three sutures and glue are used to close the incision and each fish is administered antibiotic to protect from infection. Once fish regain equilibrium and resume normal behavior they are released.

Each fish is also tagged with a 3-inch long pink Floy tag in the dorsal fin for anglers to identify it as a tagged fish. The tag contains the individual fish number, the KDWPT office number to contact, and a message indicating a \$100 reward will be given for return of the transmitter.

Manual tracking will be conducted at least two times per month with more frequent tracking during critical periods of the year. Once each fish is located, water depth, GPS location, water temperature, and the fish identification number will be recorded. Angling mortality will be determined by tag returns, natural mortality by the lack of movement of a transmitter over time, and fish emigration will be detected using a stationary receiver. Daily movement patterns will also be studied by following a subsample of fish around over a 24-hour period.

All anglers are encouraged to keep an eye out for tagged walleye while fishing at Glen Elder over the next 3 years. Not all tagged fish are of legal size, thus short fish should be returned to the water and the tag left intact. Anglers are encouraged to carefully measure the fish and report the length and location of catch to the park office, however. If an angler harvests a legal fish, please call or stop by the office to return the internal transmitter for the \$100 reward. The angler may keep the fish and external Floy tag (see pictures on the last page of this newsletter).

This is a unique study for the state of Kansas and will provide many answers pertaining to Glen Elder walleye life history that will help biologists better manage this important sportfish. Anglers will also benefit from learning daily and annual movement patterns and habitat selection. The Department will provide updates throughout the study to help educate the public.



Glen Elder Reservoir

2019 Fishing Forecast

Scott Waters—District Fisheries Biologist

scott.waters@ks.gov /785-545-3345

General Information: The reservoir is approximately 1 foot low as of February 2019. All boat ramps and facilities will be open and usable again this year.

Reminder: There is a new 10 inch minimum length limit on CRAPPIE!!!

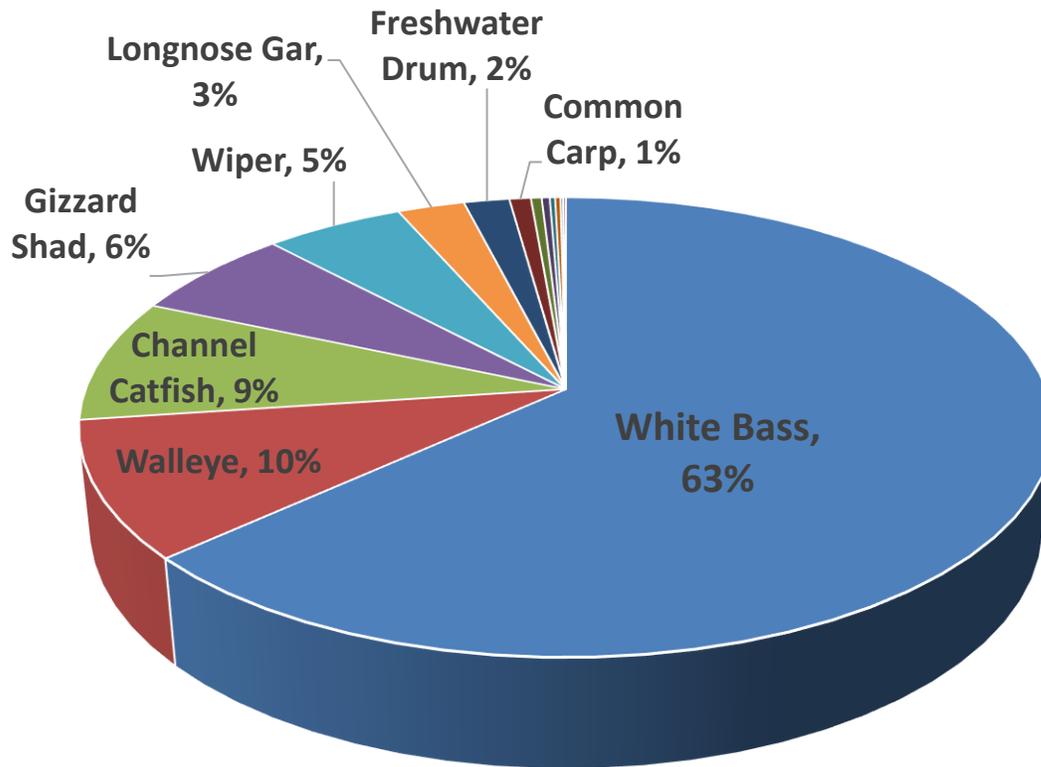


Special Regulations:

- Smallmouth Bass—21 inch minimum length limit
- Crappie—10 inch minimum length limit, daily creel limit of 20 fish
- Walleye—18 inch minimum length limit
- Largemouth Bass—18 inch minimum length limit
- Blue Catfish—35 inch minimum length limit

GLEN ELDER RESERVOIR

FALL SAMPLING DATA (2018)



	# Caught	Length (in)		Weight (lb)	
		Average	(Range)	Average	(Range)
Blue Catfish*	114	16.2	13.2-34.4	1.8	0.9-20.5
Channel Catfish	83	18.6	10.0-32.9	2.8	0.3-18.1
Crappie	408	9.4	3.0-12.8	0.5	0.1-1.3
Flathead Catfish*	169	17.2	4.9-44.3	4.3	0.1-39.4
Gizzard Shad	62	12.1	5.3-19.1	N/A	N/A
Largemouth Bass**	241	14.3	3.3-20.7	1.8	0.1-5.2
Smallmouth Bass**	212	12.9	5.3-18.3	1.4	0.1-3.6
Walleye	92	16.2	7.7-24.6	1.9	0.1-5.8
White Bass	606	11.8	0.1-17.1	1.0	0.1-2.7
Wiper	52	22.2	20.3-24.6	5.4	4.0-8.3

*Collected during summer electrofishing and setlines for blue catfish

**Collected during spring electrofishing

GLEN ELDER RESERVOIR

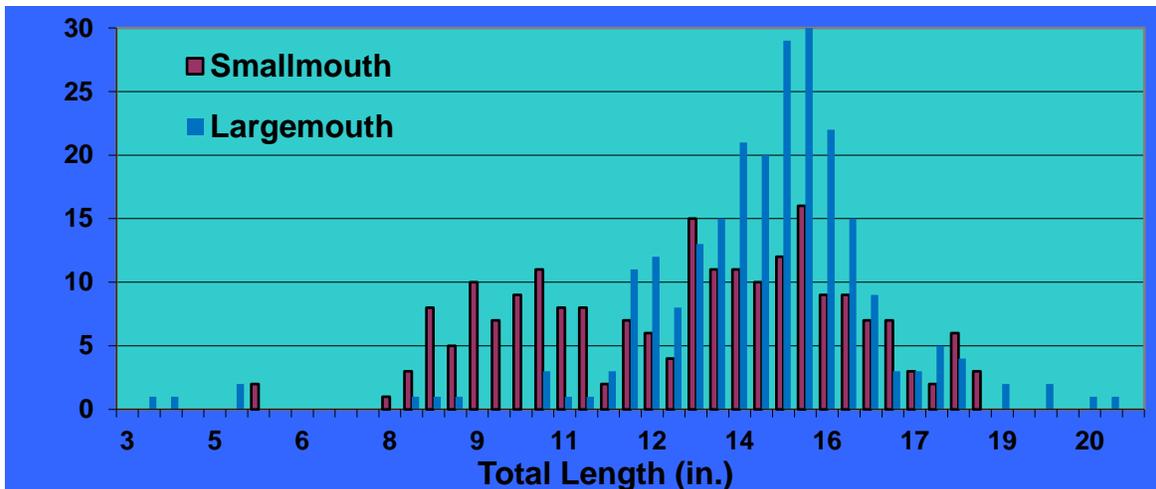
FALL SAMPLING DATA (2018) AND 2019 FISHING FORECAST

BLACK BASS--GOOD

For the first time in 20 years, the largemouth bass catch rate exceeded smallmouth bass as largemouth continue a strong rebound. The largemouth bass density rating increased from 10.4 to 27.1 with the preferred rating improving from 2.4 to 11.6. This places Glen Elder 4th among the state's reservoirs for density of fish greater than 12 inches and 3rd for fish over 15 inches. Three percent of the fish were between 3 and 8 inches, 16% were 9 to 12 inches, 74% were 13 to 16 inches, and 7% were 17 to 20 inches. The biggest fish sampled weighed 5.2 pounds. This is quite a change from 2014 when no largemouth bass were collected. The smallmouth bass catch rate exhibited a slight decline with the density rating dropping from 21.9 to 17.8, the preferred rating from 12.7 to 11.4, but the lunker rating improved from 1.6 to 1.7. Glen Elder again ranks second



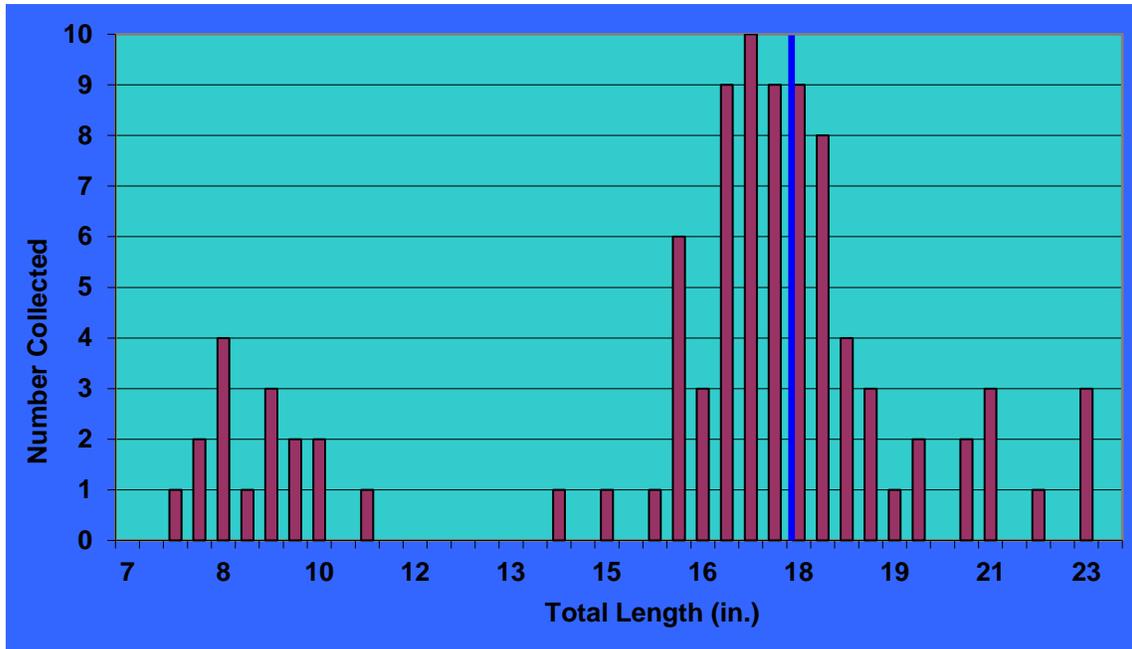
in each of these categories among the state's reservoirs. The biggest fish collected weighed 3.6 pounds and all sizes of fish were in excellent shape. Ten percent of the fish were between 5 and 8 inches, 32% were 9 to 12 inches, 51% were 13 to 16 inches, and 7% were over 17 inches. Fish recruitment was down this year, however, as the number of 3 to 6 inch fish dropped from 9.8 per hour to only 0.3 per hour. Anglers should continue to notice the improved largemouth numbers to complement the strong smallmouth population at Glen Elder. **NOTE: The smallmouth bass length limit is 21 inches!**



GLEN ELDER RESERVOIR

FALL SAMPLING DATA (2018) AND 2019 FISHING FORECAST

WALLEYE--GOOD



The 2018 fall walleye sample was very good, but down from the record high catch in 2017. The density rating (15") dropped from 6.0 to 3.1 and is above the 2.4 average from 2013 to 2016. This places Glen Elder third in terms of walleye density among the state's reservoirs. The preferred rating also declined from 1.0 to 0.4 which ranks 5th in the state. Steady recruitment between 2011 and 2015 maintained a fair population, but a new alternate year stocking strategy which began in 2016 has been working well to increase recruitment. Walleye fry and fingerlings were stocked in 2016 and these 2-year old fish represent approximately 30% of the sample. A small year class was produced in 2017 despite no stocking with these fish averaging 15 inches. Fry and fingerling walleye were again stocked in 2018

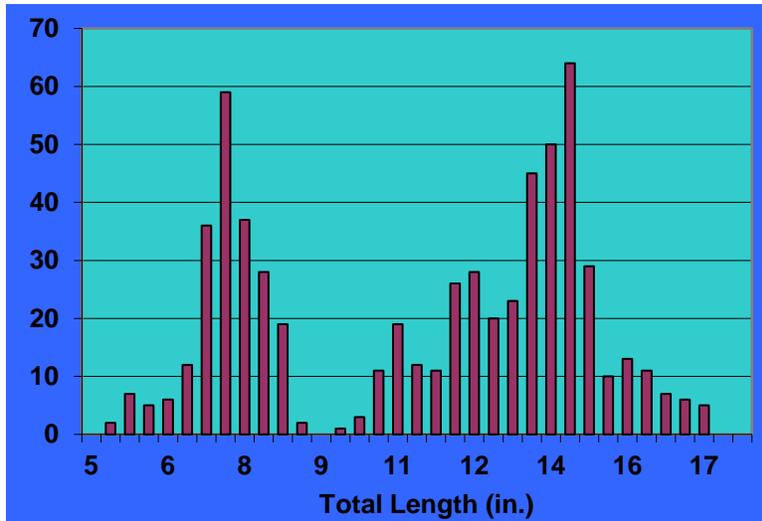


and it appears that a strong year class has been produced. Fish between 14 and 17 inches made up 53% of the sample with 18 to 23 inch fish comprising 29%, and fish between 8 and 11 inches accounting for 18% of the fall sample. Anglers can expect an increased amount of catch and release due to the many young fish coming into the population. **Anglers are reminded to keep an eye out for tagged fish that are a part of the telemetry study. Please call or stop by the office if you harvest a tagged fish over 18 inches.**

GLEN ELDER RESERVOIR

FALL SAMPLING DATA (2018) AND 2019 FISHING FORECAST

WHITE BASS--EXCELLENT



White bass numbers declined slightly but remain very good. Multiple years of good recruitment have produced improved numbers of young white bass that have greatly increased the catch rate since 2016. Following a drastic decline in numbers which yielded a density rating of only 3.6 in 2015, the population has rebounded to a current density rating of 16.4 which ranks first in the state. In addition, 3 to 4 year old fish continue to grow and improved the preferred rating to 14.0, also first in the state. The lunker rating dropped slightly to 2.1 which ranks second among the



state's reservoirs. Another nice year class of fish will move into the quality size this year which will help improve numbers even more. Fish between 13 and 15 inches accounted for 41% of the catch, fish 5 to 9 inches represented 34%, fish between 10 and 12 inches comprised 22%, and 3% of fish were 16 to 17 inches. Hot summer days will find whites schooling in open water and chasing shad on the surface while night anglers do very well using floating lights. Fall is often a great time to pull out the slabs and fish along rocky points and other inshore areas, while winter ice fishing may be the best time to catch these guys when they stack up along the river channel on the west end.

GLEN ELDER RESERVOIR

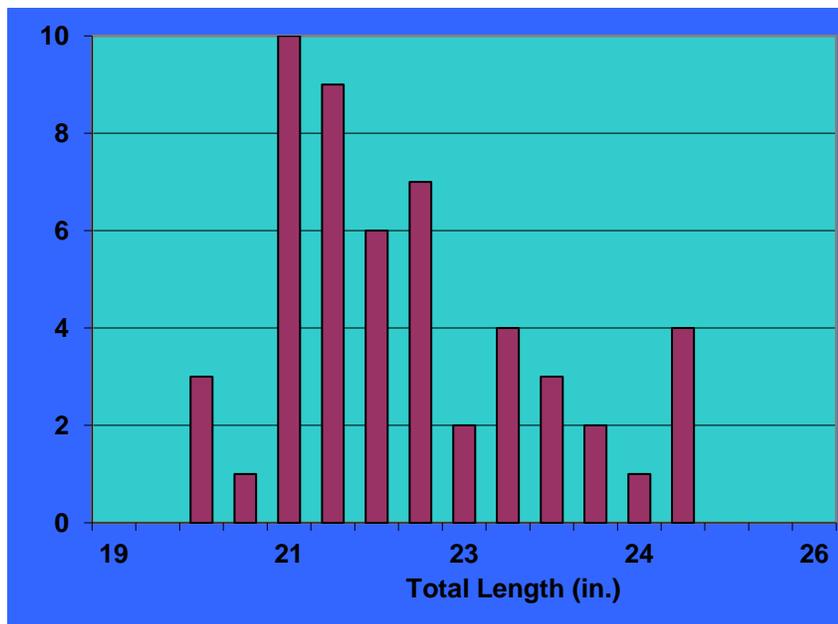
FALL SAMPLING DATA (2018) AND 2019 FISHING FORECAST

WIPER--GOOD



Wipers have been stocked only four times in Glen Elder (2006, 2008, 2012, and 2013) to keep a moderate number of fish in the reservoir as a biological control for gizzard shad as well as an additional sportfish. Because wipers have not been stocked since 2013 the smallest fish are 20 inches or 4 pounds with the biggest in the fall sample reaching 25 inches and 8 pounds. The 2018 catch rate declined only 10% and size structure is excellent. Body condition was also excellent for all sizes. Glen Elder wipers rank 8th for density (>16"), 3rd for preferred (>20"), and 1st for lunker (>24") among the state's reservoirs. A few large stripers (9-20 pounds) can also be found with ice anglers catching most of them. Stripers were stocked in 2014

and a handful of 24 to 26 inch fish were sampled last fall. Anglers can find wipers mixed in with white bass throughout the year, but wipers tend to occupy the lower end of the reservoir near the dam and hang out in Walnut Creek much of the year. Slabbing over humps, trolling crankbaits, or casting bucktail jigs off windy points are some of the better methods for catching wipers.



GLEN ELDER RESERVOIR

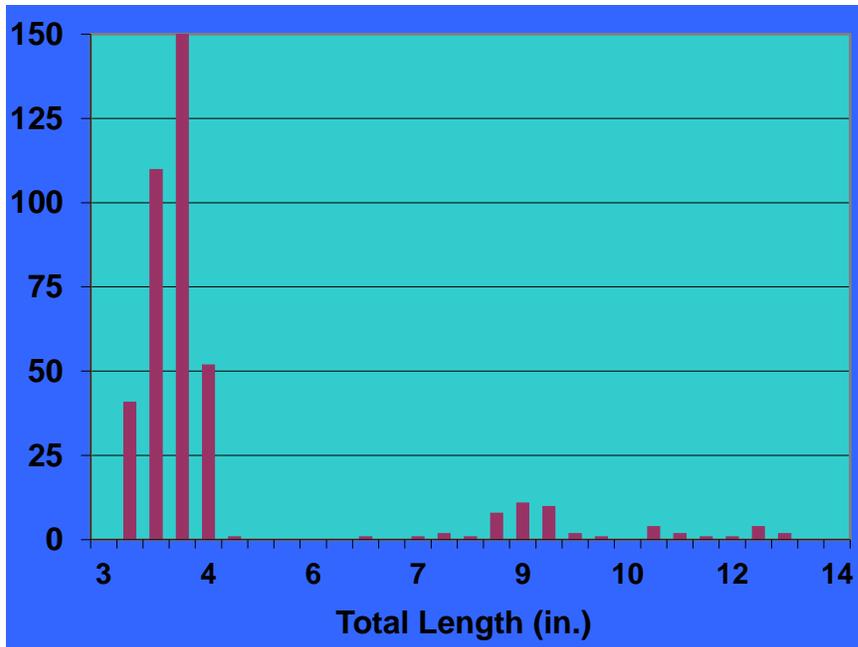
FALL SAMPLING DATA (2018) AND 2019 FISHING FORECAST

CRAPPIE--FAIR

The crappie population at Glen Elder held steady between the 2017 and 2018 fall samples despite high numbers of young fish that were expected to contribute in 2018. Catch rate of fish 6 inches and larger was virtually unchanged as was the density rating of 2.1. Preferred rating improved slightly from 0.5 to 0.6, but overall numbers were very similar. Water levels have been favorable recently and allowed for some crappie



production as evidenced by the catch rate of fish between 3 and 5 inches, but they have not been recruiting into the population as hoped. Anglers should expect 2019 angling success to closely mirror the 2018 season as fishing will still be challenging, but there are enough fish out there to provide quality outings as well. The new 10 inch minimum length limit should also take pressure off these young fish and allow them to grow more before being harvested. Fishing the spawn in late April and May will still be your best bet to harvest fair to good numbers of crappie.



Don't forget there is a 10 inch length limit and 20 per day creel limit at Glen Elder!

GLEN ELDER RESERVOIR

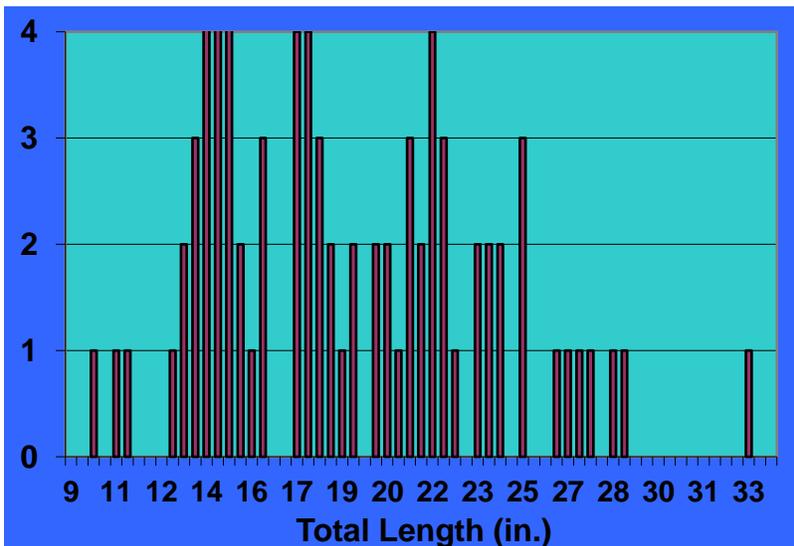
FALL SAMPLING DATA (2018) AND 2019 FISHING FORECAST

CHANNEL CATFISH—GOOD



Channel catfish catch rate exhibited a very nice increase from 2.2 to 3.5 fish per gill net and is the highest catch rate since 2011. Improved recruitment of young fish was evident in the fall sample with good representation of fish less than 15 inches. Angler harvest of channel catfish continues to be high during the summer months with chumming activity dominating the catch, but steady recruitment of young fish can counteract this high harvest.

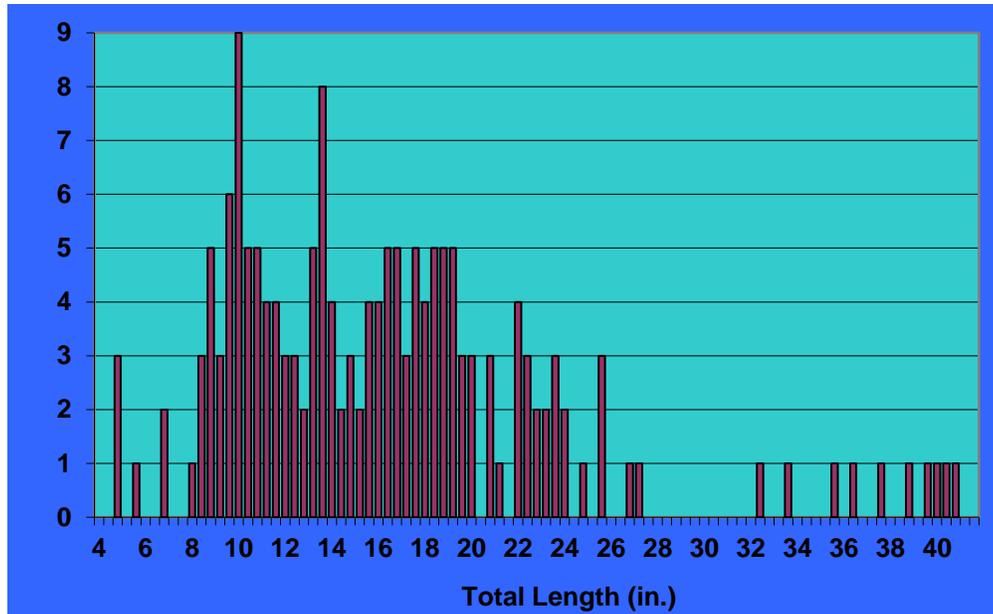
Size structure will be smaller than last year with the best numbers of fish between 10 and 16 inches as this size group accounted for 40% of the catch. Fish between 17 and 20 inches comprised 24% of the sample, fish 21-25 inches were 28%, and fish 26 to 33 inches represented 8%. Biggest fish in the sample weighed 18 pounds. Glen Elder moved up to 10th in terms of density, 8th for preferred, and 6th for lunker size fish.



GLEN ELDER RESERVOIR

FALL SAMPLING DATA (2018) AND 2019 FISHING FORECAST

FLATHEAD CATFISH--GOOD



Flathead catfish are sampled each summer using low frequency electrofishing as the best method for sampling all sizes of flatheads. This year's sample collected 169 flathead catfish ranging from 5 to 44 inches with the biggest fish weighing 39 pounds. Only 6 percent of the fish were over 10 pounds while most of the catch was much smaller with fish between 10 and 25 inches accounting for 79% of the catch. Flatheads can be caught along the rocky banks during the spawn in June and July and are often found in the brush piles throughout the year. Set line anglers annually have success for both channel catfish and flatheads fishing up west, around Mill Creek, and Walnut Creek.

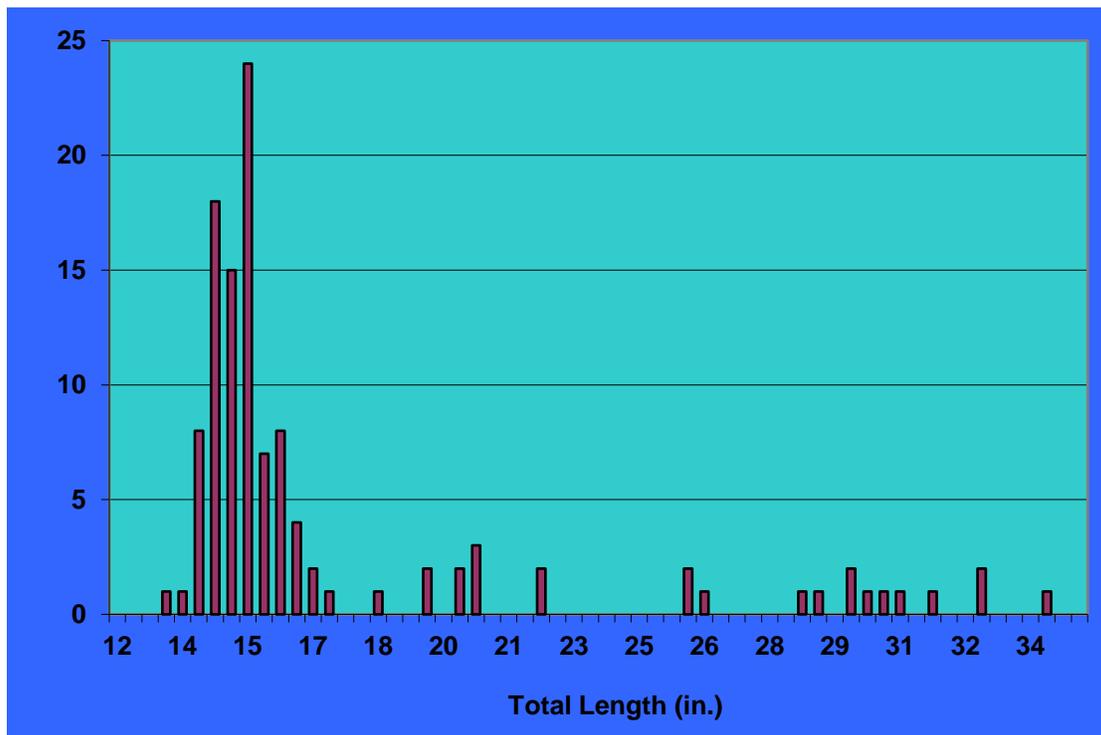


GLEN ELDER RESERVOIR

FALL SAMPLING DATA (2018) AND 2019 FISHING FORECAST

BLUE CATFISH--FAIR

Blue catfish were stocked annually in Glen Elder from 2010-2016 with 100,000 fish stocked. The blue catfish catch rate was much improved with fish from 13 to 34 inches collected, and the biggest fish weighed 21 pounds. This young population is slowly becoming established and should be reproducing naturally very soon. **Reminder, anglers are required to release all blue catfish less than 35 inches!**





Lovewell Reservoir

2019 Fishing Forecast

Scott Waters—District Fisheries Biologist

scott.waters@ks.gov /785-545-3345

General Information: The reservoir is 3 feet low as of February 2019.

Anglers need to be aware of the new crappie regulations

Crappie length limit is 10 inches and creel limit is 20 per day!!!

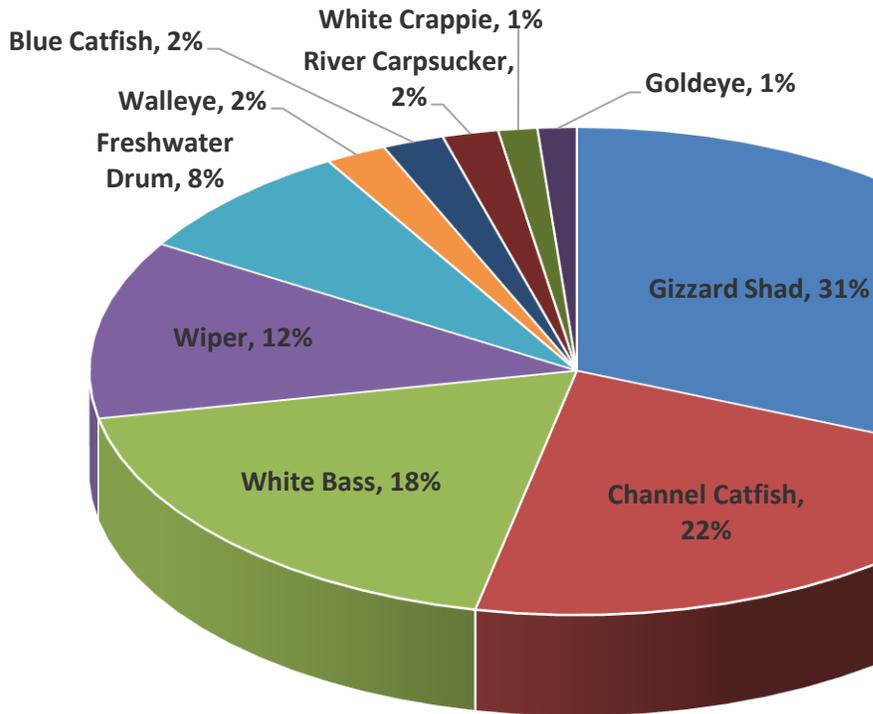


Special Regulations:

- Crappie—10 inch minimum length limit, 20 per day creel limit
- Walleye—18 inch minimum length limit
- Blue Catfish—35 inch minimum length limit

LOVEWELL RESERVOIR

FALL SAMPLING DATA (2018)



	# Caught	Length (in)		Weight (lb)	
		Average	(Range)	Average	(Range)
Blue Catfish*	90	27.1	14.8-35.2	10.2	1.0-21.8
Bluegill	55	6.5	1.4-7.3	0.2	0.1-0.6
Channel Catfish	119	17.1	6.9-32.1	2.2	0.1-13.6
Crappie	487	9.2	2.6-14.0	0.4	0.1-1.5
Flathead Catfish	83	28.8	6.9-44.3	16.8	0.1-50.0
Gizzard Shad	169	9.6	6.9-14.4	N/A	N/A
Walleye	41	18.2	10.0-27.0	2.6	0.3-7.4
White Bass	100	11.0	5.3-14.0	0.7	0.1-1.4
Wiper	64	14.5	11.8-22.2	1.5	0.8-4.9

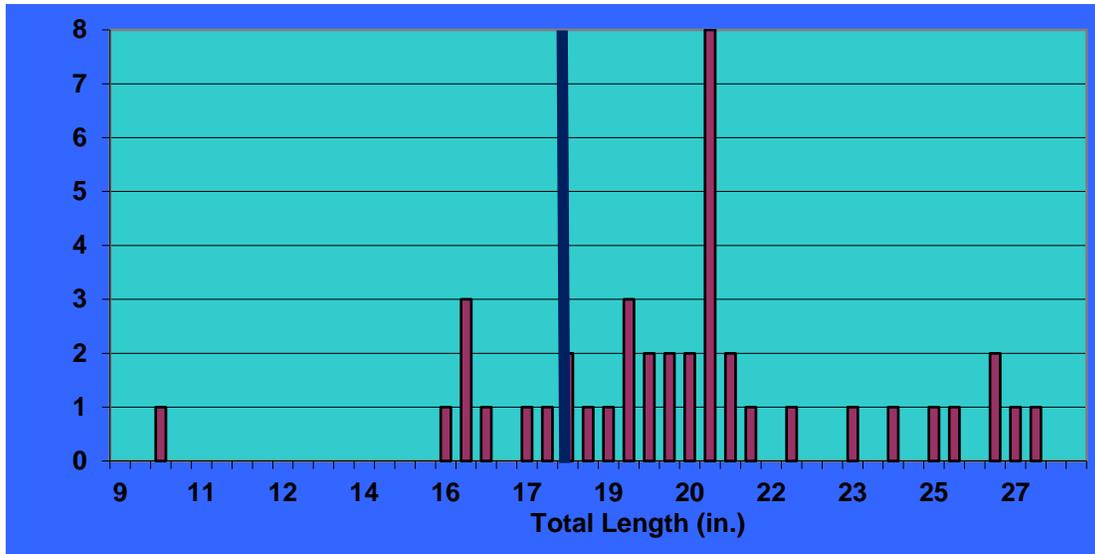
*Collected during summer electrofishing

**Collected during fall electrofishing

LOVEWELL RESERVOIR

FALL SAMPLING DATA (2018) AND 2019 FISHING FORECAST

WALLEYE--FAIR

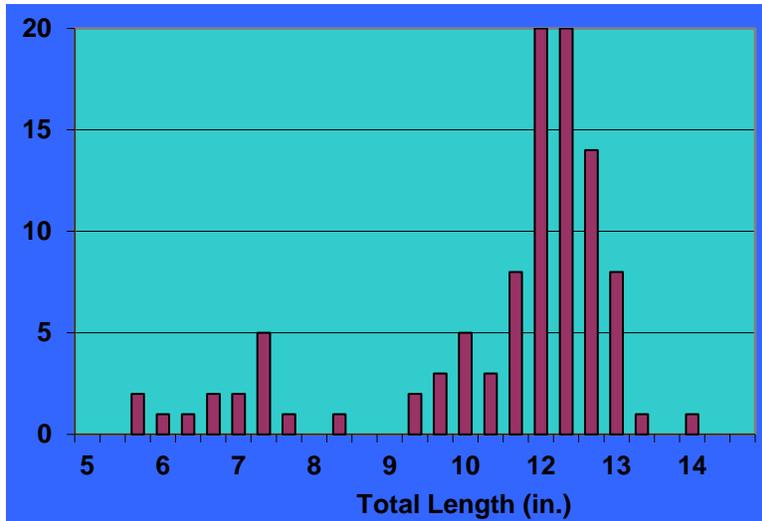


Lovewell Reservoir will again offer a walleye population of quality over quantity in 2019 as overall sampling numbers are low, but size structure was excellent. Poor recruitment in recent years combined with a summer fish kill that resulted in extensive walleye mortality, has continued to keep total numbers lower than desired. The density rating declined from 1.6 to 0.5 in the gill nets while the preferred rating dropped from 0.5 to 0.2, and the lunker rating from 0.1 to 0. The walleye density ranks 10th among the state's reservoirs while the preferred rating will rank 9th. Despite no lunker size fish collected in the gill nets, the trap nets averaged two legal walleye per net with an average length of 21 inches. Fish in the trap nets ranged from 16 to 27 inches with the biggest fish weighing 7.5 pounds. This continues a trend of lower catch rates since the 2012 sample, but good size is available. Limited recruitment since 2016 has decreased the number of young fish in the population. Seventy-six percent of the fish in the sample were greater than 18 inches. Overall, 37% were 20 to 23 inches, 22% were 18 and 19 inches, 22% were 15-17 inches, 17% were 24 to 27 inches, and 2% were 10 inches. Fish condition was excellent again this year. Fry and fingerling stockings were conducted each of the past three years and young fish were produced, but the numbers were well below the management objective. A combination of fry, fingerlings, and intermediates (8 inch fish) will be requested for stocking in 2019. Anglers are encouraged to carefully measure any questionable fish and handle sublegal fish with care. **18 inch minimum length limit in effect.**

LOVEWELL RESERVOIR

FALL SAMPLING DATA (2018) AND 2019 FISHING FORECAST

WHITE BASS--GOOD



White bass catch rate and density rating dropped slightly compared with the fall 2017 sample, but the population remains in good shape and anglers should realize a successful year of white bass angling in 2019. The density rating (9") was lowest in 2015 at 2.1, improved slightly to 2.5 in 2016, nearly doubled to 4.6 in 2017, improved to 4.9 in 2018, and dropped slightly to 4.3 this year which ranks 8th in this year's Fishing Forecast. Anglers will likely notice success rates similar to 2018 as a result. The preferred rating (12") improved for the fourth consecutive year from 2.0 to 2.2 and ranks 10th among the state's reservoirs. No lunker fish were collected in the latest sample with the biggest fish measuring 14 inches and weighing 1.4 pounds. Overall, 15% of the sample was between 5 and 9



inches, 83% were 10-12 inches, and 2% were 13 to 14 inches. As in the past, the best time to fish for Lovewell whites will be in the summer, during peak irrigation releases. The inlet and outlet areas historically produce the vast majority of whites harvested while summer topwater activity can also be productive. Night fishing using floating lights can be fair to good and drifting or slabbing over submerged roadbeds and humps throughout the year is also an effective method for hooking into a nice stringer of whites.

LOVEWELL RESERVOIR

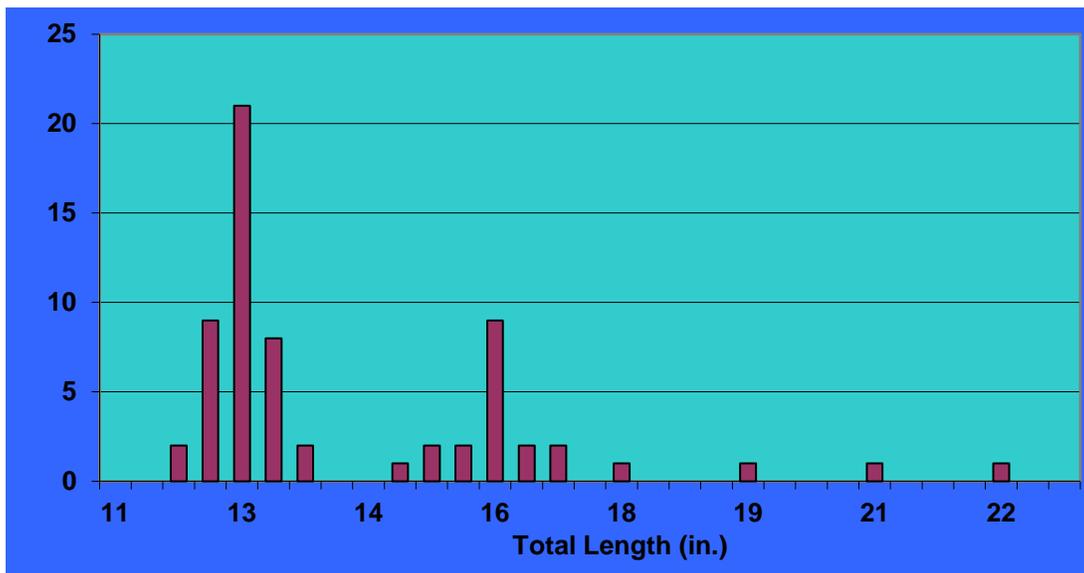
FALL SAMPLING DATA (2018) AND 2019 FISHING FORECAST

WIPER--FAIR



The catch rate of wipers rebounded in 2018 from the lowest recorded at Lovewell as it improved from 0.6 to 3.2 fish per net while the density rating only improved slightly from 0.05 to 0.4. This is still the second lowest density rating recorded at Lovewell for wipers, but strong year classes from 2016 and 2017 stockings have laid the foundation for a rebounding wiper population. The 2016 fish range from 15 to 17 inches and account for 28% of the sample. The 2017 fish vary from 12 to 14 inches and represent 66% of the sample. Older fish between 19 and 22 inches only comprised 5% of the catch. Bigger fish were collected in the trap nets with fish ranging from 23 to 25 inches and up to 7 pounds collected. Wiper fry and fingerlings were stocked in 2017 and produced a nice year class. This combination will be stocked again in 2019 to help maintain

improved recruitment. Similar to white bass, decent numbers of wipers can be caught during the irrigation season as the fish migrate to the inlet and outlet areas. Other anglers report good success for bigger wipers trolling crankbaits and deep-diving rapalas along the north shore and the dam. **Be sure to identify your catch carefully as those young wipers look very similar to white bass. The daily creel limit on wipers is 2 fish!**

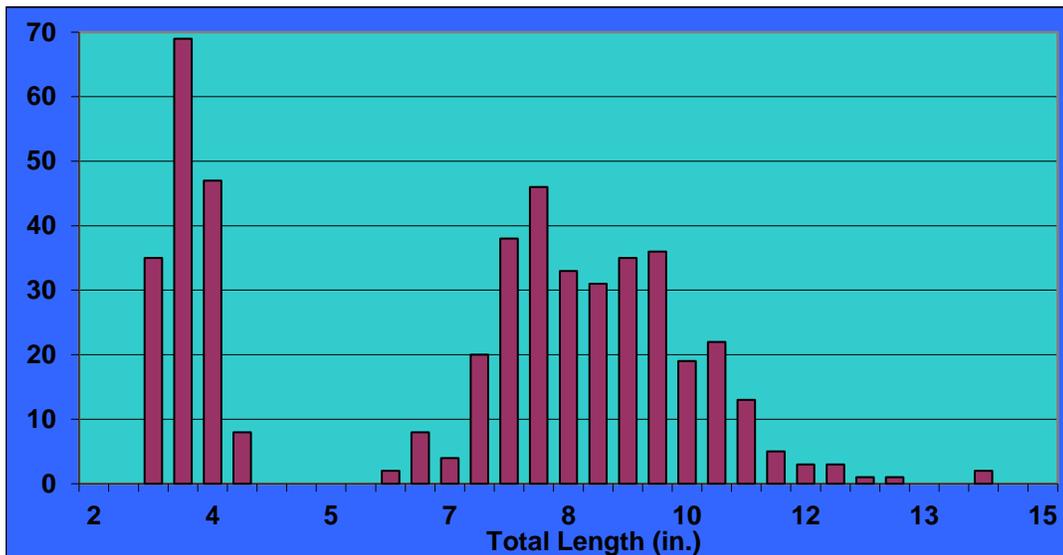


LOVEWELL RESERVOIR

FALL SAMPLING DATA (2018) AND 2019 FISHING FORECAST

CRAPPIE--GOOD

The crappie population remains strong in Lovewell even though the catch rates dropped from the 2017 sample. Lovewell ranks 7th among the state's reservoirs in terms of crappie density (8") and 7th for preferred size fish (10"). Density rating was 2.7 in 2014, 9.6 in 2015, 4.4 in 2016, 19.9 in 2017, and 13.0 in 2018. In addition, the preferred rating (4.3) is still higher than the average of 3.5 the previous 4 years. Fifty-two percent of crappie were between 6 and 9 inches, 33% were 3 to 4 inches, 14% were 10 to 12 inches, and 1% were 13 to 14 inches. Higher water levels in recent years allowed for excellent crappie production with the 2015 and 2016 year classes dominating the population as age-2 and age-3 fish, and these two year classes should produce good fishing in the next few years. Approximately 20% of the crappie catch consisted of black crappie with age-2 fish between 7 and 9 inches dominating the catch. These fish should reach 10 inches in late 2019 or early in 2020. Biggest white crappie weighed 1.5 pounds and biggest black crappie weighed 0.6 pounds. These fish all appear to be very healthy with excellent body condition. Several brush piles are maintained to help concentrate fish for anglers, and decent success can be found fishing around the flooded vegetation in Montana Creek and other coves during late April and May when the fish are spawning. We will likely add several hundred more trees to the existing brush piles this year as well as 90 Georgia Cubes.

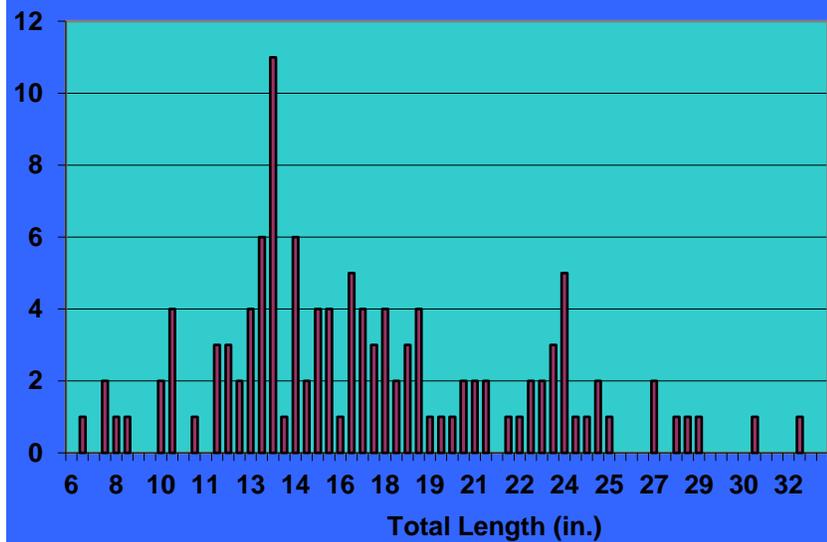


LOVEWELL RESERVOIR

FALL SAMPLING DATA (2018) AND 2019 FISHING FORECAST

CHANNEL/FLATHEAD CATFISH--GOOD

The catfish population will be very good again in 2019 with all sizes of channel cats and flatheads available to anglers. Lovewell ranks 7th in terms of channel catfish density (16"), 5th for preferred size fish (24"), and 3rd for lunker (28"). The fall 2018 channel catfish catch rate was similar for all sizes compared with the 2017 sample, but the number of fish over 27 inches was much improved with the biggest fish weighing 13.6 pounds. Forty-four percent of the fish were between 12 and 16 inches, 22% were 17-21 inches, 21% were between 22 and 32 inches, and 13% were 7-11 inches. Flathead catfish were sampled this year with 83 fish collected ranging from 7 to 44 inches with the biggest fish weighing 50 pounds. Fish between 25 and 35 inches comprise the biggest portion of the catch, but all sizes are available to anglers. Channels and flatheads will be vulnerable in all arms of the reservoir, including Montana, Windmill, and Prairie Dog Creek, as well as up White Rock Creek near the Highway 14 bridge. During peak irrigation releases, catfish can be readily caught close to the inlet and outlet structures and are susceptible along the dam and other rocky areas during the spawn.

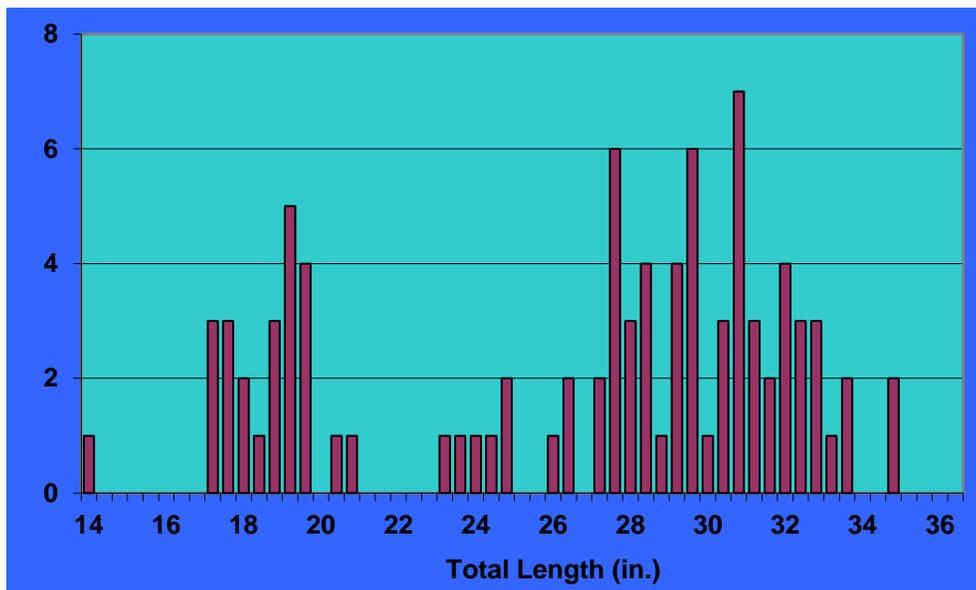


LOVEWELL RESERVOIR

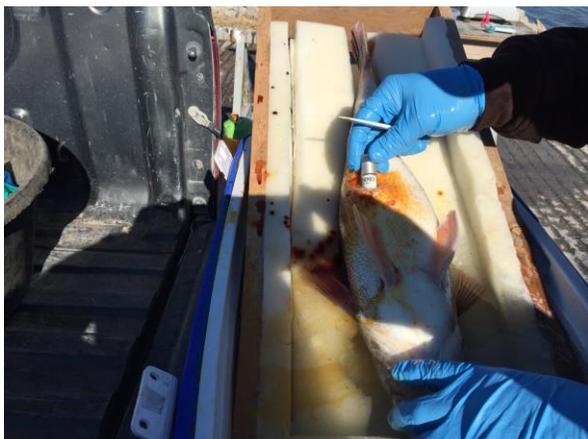
FALL SAMPLING DATA (2018) AND 2019 FISHING FORECAST

BLUE CATFISH--FAIR

We collected over 100 blue catfish in 2018 using electrofishing and fall gill nets. There are now nearly 700 tagged blue cats in the reservoir as we continue to study their movements and growth rates. Fish collected this year ranged from 15-35 inches and weighed up to 22 pounds. Natural reproduction of blue catfish has been documented in Lovewell Reservoir, but it is still limited. **There is still a 35 inch minimum length limit on blue catfish at Lovewell. All blue catfish less than 35 inches must be released!**



Walleye Telemetry Pictures



Local Events in 2019

Glen Elder

TBD	WLA Multi-Species Tournament
June 1	15 th Annual Youth Fishing Tour.
June 22-23	KWA Governor's Cup Walleye
TBD	WLA Catfish Tournament
TBD	Youth & Women Pheasant Hunt

Lovewell

May 18	Kids to Parks Day
June 9	Kids Fishing Clinic
August 3	Sand Castle Contest
August 3	Lovewell Fun Day

**Free Fishing Weekend
is June 1st and 2nd
statewide!**

This is the latest edition of the Glen Elder district newsletter. I will continue to provide information for Glen Elder and Lovewell Reservoirs, Jewell State Fishing Lake, Ottawa State Fishing Lake, Rocky Pond in Belleville, and Jewell City Lake. Don't forget to check out the many FISH properties in the area as well. They can offer some great fishing for those without a boat.

If you know someone who would like to subscribe to the newsletter, they can do so [HERE](#). If you would like to unsubscribe, please send your info to [Contact Us](#) with "unsubscribe to Glen Elder District Fisheries newsletter" and we'll get you taken off of the list. If you have any questions or comments feel free to send them in.

Scott Waters

District Fisheries Biologist
Kansas Department of Wildlife, Parks &
Tourism
2131 180 Road
Glen Elder, KS 67746
785-545-3345
scott.waters@ks.gov