

LAKE MANAGEMENT STATUS REPORT

Date of Report: 1/23/2023 **Fisheries Manager:** Rob Hilsabeck
District No.: 4 **LAKE NAME:** Argyle Lake **County:** McDonough
Water No.: 0028 **Ownership:** State **Acreage:** 93

1. All Fish - 2 pole and line fishing only.

White, Black, or Hybrid Crappie:

- 25 Fish Daily Harvest Limit with no more than 10 fish greater than or equal to 10 inches.

Large or Smallmouth Bass:

- Protected Slot Length Limit from 14 to 18 inches with 3 fish daily harvest limit.

Muskie:

- 42 inch minimum and 1 fish per day harvest limit.

Bluegill or Redear Sunfish:

- 25 Fish Daily Harvest Limit

Channel Catfish:

- 6 Fish Daily Harvest Limit

Hybrid Walleye (Saugeye):

- 3 Fish Daily Harvest Limit and 14 inch minimum length limit

Recreational Use Restrictions:

-All live bait > 8 inch must be rigged with a quick set rig

Trout:

- Fall Closed Season until annual opening.

2.

IDNR fisheries completed annual spring trapnet survey on 4/26/2022.

IDNR fisheries completed annual fall electrofishing survey on 10/22/2022.

Little Grassy Hatchery stocked 3,300 channel catfish at 7.4 inches on 8/16/2022.

Jake Wolf Hatchery stocked 95 muskie at 12.5 inches on 9/27/2022.

LaSalle Hatchery stocked 12,126 saugeye at 1.7 inches on 5/31/2022.

Crystal Lake Hatchery stocked approximately 4000 pounds of rainbow trout in 10/2022.

IDNR fisheries treated no aquatic vegetation at Argyle Lake State Park in 2022.

Argyle Lake water level was back up to normal in 2022.

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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Largemouth Bass												LMP Objectives
Stock Number	195	86	90	122	139	99	137	218	96	262	198	100
PSD	79	69	82	76	76	70	63	76	76	53	65	40-60
RSD14	41	34	53	56	56	48	52	56	58	39	47	
RSD15	28	27	34	43	42	41	50	51	55	29	41	
RSD16	18	20	14	21	22	27	41	44	45	21	31	
RSD18	6	5	3	3	11	8	15	23	26	13	13	5-10
RSD19	4	1	3	3	5	4	8	12	19	8	10	
Wr > 8"	100	98	94	94	95	93	97	96	96	98	98	90-110
YAR	0.1	0.9	0.3	0.3	0.5	0.8	0.6	0.2	0.8	0.1	0.06	
CPUE Stock	1.6	0.72	0.75	0.72	0.72	0.8	1.1	1.8	0.72	2.2	1.3	1/min
El Effort	120	120	120	170	193	123	123	120	133	120	150	
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Bluegill												LMP OBJ
Stock #	527	309	301	394	300	222	114	179	71	86	880	100
PSD	79	52	15	34	42	49	38	23	45	26	7	20-40
RSD7	10	1	2	4	8	22	3	0	3	2	1	
RSD8	0	1	0	0	0	1	0	0	0	0	0	1-5
Wr > 5"	93	93	90	83	86	86	86	85	86	82	88	90-110
CPUE NN	28.5	7.5	1	1.3	6.7	6.5	7.9	0.7	--	1.2	2.4	
CPUE Min	2.1	2.9	4.8	4.4	2.1	2.5	2.4	8.4	1.2	0.7	5.9	
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Redear												LMP OBJ
Stock#	56	11	7	3	11	6	7	7	7	6	2	
PSD	98	82	100	33	100	100	100	29	86	100	100	
RSD9	32	18	29	33	64	83	100	14	14	0	0	
Wr	102	105	92	95	101	94	96	91	95	91	80	
CPUE NN	3.1	0.3	0.4	0.07	0.4	0.3	0.2	0	--	0.3	0.1	
CPUE Min	0.1	0.04	0	0.01	0.03	0.03	0.1	0.28	0.12	0.05	0	

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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Black Crappie										N/EL	N/EL	LMP OBJ
Stock#	241	70	280	159	154	158	67	82	43	89/92	84/27	
PSD	71	87	93	89	90	94	94	89	79	94/61	95/82	30-50
RSD9	15	27	46	37	39	36	33	28	49	43/44	45/74	
RSD10	5	10	3	5	5	7	3	5	14	7/11	6/7	20-40
RSD11	1	0	1	1	0	5	0	4	2	2/4	4/0	5-10
Wr > 8"	88	93	92	89	83	87	80	85	89	93/101	83/84	90-100
CPUE												
NN	15.6	2.7	15.5	2.1	5.8	9.1	3	1.2	--	4.5	4.2	
CPUE												
Min	0.19	0.18	0.27	0.75	0.31	0.19	0.23	0.48	0.32	.83	.18	
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
White Crappie										N/EL	N/EL	LMP OBJ
Stock #	156	85	668	361	239	117	99	99	49	210/190	51/61	
PSD	92	87	93	98	91	99	94	94	96	99/78	91/82	30-50
RSD9	36	45	37	36	38	35	32	32	51	55/41	61/34	
RSD10	14	29	21	21	21	24	26	26	33	31/26	53/20	20-40
RSD11	4	5	8	6	10	15	16	16	4	16/17	29/15	5-10
Wr	94	95	88	89	84	91	92	94	94	107/92	92/98	90-100
CPUE												
NN	9.4	3.2	40.8	12.7	12.7	5.7	5.1	1.8	--	10.5	2.6	
CPUE												
Min	0.21	0.23	0.13	1	0.19	0.27	0.12	0.89	0.37	1.6	.41	
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Channel Catfish										N/EL	N/EL	LMP OBJ
Stock#	41	96	98	74	101	69	91	79	22	13/104	28/40	
PSD	46	42	48	26	34	36	64	79	82	92/52	96/40	40-60
RSD18	27	20	31	16	19	15	22	48	27	77/37	93/33	10-20
Wr	94	88	92	85	95	111	92	99	96	100/90	99/91	90-110
CPUE												
NN	0.7	4.1	3.1	0.8	0.2	0.8	0.1	0.4	--	.7	1.4	
CPUE												
Min	0.3	0.2	0.4	0.4	0.3	0.5	0.7	0.4	0.17	.9	.3	

*N is trap netting data
*EL is electrofishing data

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Saugeye										N/EL	N/EL	LMP OBJ
Stock#	96	38	49	51	55	27	44	42	11	17/26	20/8	
PSD	35	50	35	35	55	74	52	36	82	100/96	100/63	50-60
RSD18	26	26	27	28	20	48	43	21	55	53/85	100/50	20-40
Wr	84	82	83	81	77	94	90	93	93	94/97	99/89	90-110
CPUE												
NN	1.4	0.83	1.1	1.4	3	1.1	0.89	0.45	--	.85	1.1	1/NN
CPUE												
Min	0.64	0.19	0.37	0.18	0.06	0.1	0.33	0.43	0.08	.25	.07	
Net												
Night								20	0	20	20	
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	
Mue										N/EL	N/EL	LMP OBJ
Stock#	6	4	8	13	11	4	28	29	3	19/1	8/8	
PSD	67	100	100	100	100	50	75	97	100	100/100	100/88	
RSD42	0	0	13	15	9	25	4	14	0	11/0	13/13	
Wr	95	92	100	102	78	106	102	110	112	101/84	103/95	90+
CPUE												
NN	0.4	0.2	0.4	0.7	0.7	0.3	1.4	1.5	--	.95	.4	.3/NN
CPUE												
Min										0.02	0.07	

4. In 2022, a spring trap net survey and a fall D.C. boat electrofishing was used to survey the fish population. The largemouth bass population was evaluated by 198 bass, stock size or larger, from electrofishing.

The largemouth bass population appears to be defined by a high percentage of fish from 4.0 to 21 inches in length with good average Relative weights. In 2017, the bass regulation for Argyle Lake was changed from a 1 fish greater than or equal to 15 inches and/or 5 fish less than 12 inches daily, to a protected slot length limit from 14 to 18 inches with 3 fish daily harvest limit. The goal of the new bass regulation is to increase the density of the bass population from 14 to 18 inches.

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The 6-year averages from 2012 thru 2017 were RSD15 of 36, RSD16 of 20, RSD18 of 6, and a RSD19 of 3. And a 6-year average CPUE of .9 fish per minute over 8 inches with pulse D.C. boat electrofishing.

The 5-year averages from 2018 thru 2022 were RSD15 of 45, RSD16 of 36, RSD18 of 18, and a RSD19 of 11. And a 5-year average CPUE of 1.4 fish per minute over 8 inches with pulse D.C. boat electrofishing.

The 2022 electrofishing survey was very close to this 5-year average with the RSD15 of 41, RSD16 of 31, RSD18 of 13, and RSD19 of 10. The average body condition was at a Wr of 98. These values are extremely good! The new regulation will continue to be evaluated to these indices.

The goal of the protected slot length limit is to create a high density bass population that is composed of fish large enough to be efficient predators upon the panfish and gizzard shad population. The benefit to bass anglers will be more fish surviving past 15 inches to catch, and for the anglers wanting to harvest bass will be the opportunity to still harvest fish under 14 inches.

The online IFISH tournament registration and result system was started in 2015. The tournament results showed these anglers spent 336 hours in 2015, 576 hours in 2016, and 312 hours in 2017 on Argyle Lake. They reported 14 legal fish in 2015 for .04 fish per angler hour. They reported 45 legal fish in 2016 for .08 fish per angler hour. They reported 53 legal fish in 2017 for .17 fish per angler hour. They reported 19 legal fish in 2018 for .11 fish per angler hour. They reported 32 legal fish in 2019 for .25 fish per angler hour. No tournaments were registered in 2020 or 2021. They reported 19 legal fish in 2022 for .34 fish per angler hour.

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The bluegill population was sampled by an extrapolated 880 fish in the fall electrofishing survey. The current bluegill population is rated as below average with the larger fish up to 7.0 inches in length. This population is of moderate density and in average body condition with a Wr average of 88. The competition with the gizzard shad has reduced the bluegill condition and growth rate.

The redear sunfish population was sampled by 2 fish in the spring trap net survey and 0 fish in fall electrofishing survey. The current redear population is rated as average with the larger fish up to 10.0 inches in length. This population is of very low density and in poor body condition with a Wr average of 80.

In 2022, the white and black crappie populations were sampled by spring trap nets and fall D.C. electrofishing. A total of 111 stock size black crappie and 112 stock size white crappie were collected in these surveys. The black crappie populations can be described as average with the majority of the fish under 9.5 inches and in average body condition Wr of 84. The white crappie population is described as good with approximately 36 percent of the fish over 10 inches in length and a good average body condition Wr of 95.

In 2017, the crappie regulation was changed from a 9 inch minimum length limit and 10 fish daily harvest limit, to a 25 fish daily harvest limit with no more than 10 fish greater than or equal to 10 inches. The goal of the new regulation is to allow the harvest of more of the slower growing black crappie, while maintaining and promoting the population structure of crappie over 10 inches in length.

The white and black crappie populations have had an average rating in recent history. The black crappie population has been slow growing and predominately under 9.5 inches in length, while the white crappie population has been predominately under 10 inches in length. The 6-year averages from 2012 to 2017 were an RSD9 of 33, and RSD10 of 6 and RSD11 of 1 for black crappie. The 6-year averages from 2012 to 2017 were and an RSD9 of 38, an RSD10 of 22 and an RSD11 of 8. And the Wr averages were 89 for black crappie and 90 for white crappie.

The 5-year averages from 2018 to 2022 were an RSD9 of 45, and RSD10 of 8 and RSD11 of 2 for black crappie. The 5-year averages from 2018 to 2022 were and an RSD9 of 44, an RSD10 of 31 and an RSD11 of 16 for white crappie. And the Wr averages were 88 for black crappie and 96 for white crappie over these 5-year spans.

The black crappie population size and growth indices do not appear to have improved since the regulation change, while the white crappie population indices have improved. The new regulation will continue to be evaluated to these indices.

In 2022, the channel catfish population was sampled by 28 fish in the spring trap net survey and 40 fish in the fall electrofishing survey. The current channel catfish population is rated as excellent with the larger fish up to 24 inches in length and approximately 50% of the fish over 18 inches in length. This population is of high density and in good body condition with a Wr average of 95.

Little Grassy hatchery stocked 3,300 fish at 7.4 inches in 2022. An annual stocking of non-vulnerable channel catfish had occurred in the past. These stockings had established a high density population, and the stocking has now been adjusted to an every other year stocking starting in 2016. No channel catfish were stocked in 2021.

In 2022, the saugeye population was sampled by 20 fish in the spring trap net survey and 8 fish in the fall electrofishing survey. The current saugeye population is rated as good with the larger fish up to 27 inches in length and approximately 75% of the fish were over 18 inches in length. The CPUE for electrofishing was .07 per minute in 2022, and .25 per minute in 2021. The CPUE for the spring trap nets was 1.1 fish were net night in 2022, and .85 fish per net night in 2021. This population is of moderate density and in good body condition with a Wr average of 94. LaSalle Hatchery stocked 12,126 saugeye at 1.7 inches on 5/31/2022. An annual stocking of 10,000 saugeye at 2 inches is requested each year.

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In 2022, the muskie population was surveyed by 8 fish in the spring trap net survey and 8 fish in the fall electrofishing survey. These fish ranged from 12 to 43 inches long. The body condition of these fish was very good at an average Wr of 99. The CPUE for the spring trap nets was .95 fish per net night in 2022, and .4 fish per net night in 2021. The Argyle Lake Management Plan objective is a CPUE of at least .3 fish per net night.

A low density of quality size muskie are present. Jake Wolf Hatchery stocked 95 muskie at 12.5 inches on 9/27/2022 and 93 muskie at 13 inches in 2021. No muskie were stocked in 2020 due to Covid brood fish collection work restrictions. An annual stocking is now scheduled to maintain a low density of healthy muskie. In 2017, the muskie harvest regulation was changed from the statewide 1 fish daily harvest at a 36 inch minimum size, to a 42 inch minimum and 1 fish per day harvest limit. The goal of the new regulation is to protect the fish for at least 1 more year from angler harvest.

In 2022, Crystal Lake hatchery stocked approximately 4,000 pounds of rainbow trout in October. These fish are annually stocked for the catch able trout program. The fall 2022 electrofishing survey collected 95 of these fish and they averaged 11.6 inches in length.

In 2022, the following fish species and hybrids were also collected in Argyle Lake: Common Carp, Gizzard Shad, Golden Shiner, Green Sunfish, Yellow Bass, Yellow Bullhead, and Hybrid Black x White Crappie. All but the hybrid crappie are considered non desirable to the management of the primary sportfish in Argyle Lake. Most of these species are considered invasive and can become problematic for aquatic habitat management and sport fish management if their populations densities expand rapidly. One of the keys to controlling their population densities is thru the maintenance of water quality, clarity, and high density, predator fish populations.

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Recommended Lake Management Activities with Rationale for Implementation:

Supplemental stocking is required for the following species due to no natural recruitment currently occurring in Argyle Lake.

Saugeye: 10,000/year at 2 inches which is 100/acre.

Muskie: 93/year at 10 inches which is 1.0/acre.

Channel Catfish: 3300 every other year at 8 inches which is 35/acre.

Rainbow Trout: 4000 pounds every fall at about 12 inches which is 70/acre.

Biological Surveys - Conduct annual surveys to measure trends in fishery population dynamics, angling regulations and progress toward management goals. In the fall, utilize D.C. electrofishing to sample a target number of at least 100 stock-size largemouth bass and the other sportfish. In the spring, assess the saugeye, muskie, black and white crappie, bluegill, redear and channel catfish populations by a trap net survey.

Aquatic Vegetation Control - IDNR Fisheries will apply aquatic herbicides as needed to manage exotic or nuisance aquatic plants for fishing access or sportfish management.

Lake Access - Coordinate with the site staff on the development of shoreline fishing areas, the boat dock and the improvements completed on the boat ramp in 2021.

Water Level - coordinate with the site staff on the documentation of the water level utilizing the installed staff gauge.

Site Map - update the site map of the water bodies as needed.

Argyle Lake Fish Tournament Results 2022:

Start Date	ID	Fish Hours	Total Boats	Total Anglers	Species 1	Total Fish	Total Pounds
08-28-2022	<u>20379</u>	7	7	8	LMB	19	15.84

Argyle Lake Fish Stocking Record 2012-2022

Waterbody	Species	Size (in)	Count	Delivery Date	Source
Argyle Lake (00028)	Muskellunge	12.5	95	9/27/2022	#2 Jake Wolf Hatchery (09000)
Argyle Lake (00028)	Channel Catfish	7.4	3300	8/16/2022	#1 Little Grassy Hatchery (09050)
Argyle Lake (00028)	Walleye x Sauger (Saugeye)	1.7	12126	5/31/2022	#3 LaSalle Fish Hatchery (09010)
Argyle Lake (00028)	Muskellunge	13	93	9/9/2021	#2 Jake Wolf Hatchery (09000)
Argyle Lake (00028)	Walleye x Sauger (Saugeye)	1.7	16219	5/25/2021	#3 LaSalle Fish Hatchery (09010)
Argyle Lake (00028)	Channel Catfish	7.7	3300	7/29/2020	#1 Little Grassy Hatchery (09050)
Argyle Lake (00028)	Muskellunge	13.5	96	9/17/2019	#2 Jake Wolf Hatchery (09000)
Argyle Lake (00028)	Walleye x Sauger (Saugeye)	1.4	18181	5/31/2019	#3 LaSalle Fish Hatchery (09010)
Argyle Lake (00028)	Walleye x Sauger (Saugeye)	3.1	2067	10/3/2018	#3 LaSalle Fish Hatchery (09010)
Argyle Lake (00028)	Muskellunge	12.5	93	9/13/2018	#2 Jake Wolf Hatchery (09000)
Argyle Lake (00028)	Channel Catfish	7	3325	8/13/2018	#1 Little Grassy Hatchery (09050)
Argyle Lake (00028)	Walleye x Sauger (Saugeye)	1.7	16140	6/1/2018	#3 LaSalle Fish Hatchery (09010)
Argyle Lake (00028)	Muskellunge	12.5	93	8/31/2017	#2 Jake Wolf Hatchery (09000)
Argyle Lake (00028)	Walleye x Sauger (Saugeye)	2.5	5720	6/8/2017	#3 LaSalle Fish Hatchery (09010)
Argyle Lake (00028)	Muskellunge	10.75	93	8/26/2016	#2 Jake Wolf Hatchery (09000)
Argyle Lake (00028)	Channel Catfish	7	1500	7/21/2016	#2 Jake Wolf Hatchery (09000)
Argyle Lake (00028)	Walleye x Sauger (Saugeye)	2	11935	6/6/2016	#3 LaSalle Fish Hatchery (09010)
Argyle Lake (00028)	Muskellunge	11.9	95	9/2/2015	#2 Jake Wolf Hatchery (09000)
Argyle Lake (00028)	Channel Catfish	8	850	8/26/2015	#1 Little Grassy Hatchery (09050)
Argyle Lake (00028)	Walleye x Sauger (Saugeye)	1.7	11451	5/29/2015	#3 LaSalle Fish Hatchery (09010)
Argyle Lake (00028)	Channel Catfish	8	3300	9/2/2014	#1 Little Grassy Hatchery (09050)
Argyle Lake (00028)	Walleye x Sauger (Saugeye)	2.3	11525	6/18/2014	#3 LaSalle Fish Hatchery (09010)
Argyle Lake (00028)	Walleye x Sauger (Saugeye)	2	10345	6/4/2014	#3 LaSalle Fish Hatchery (09010)
Argyle Lake (00028)	Walleye x Sauger (Saugeye)	2	9154	6/6/2013	#3 LaSalle Fish Hatchery (09010)
Argyle Lake (00028)	Muskellunge	11	93	8/23/2012	#2 Jake Wolf Hatchery (09000)
Argyle Lake (00028)	Walleye x Sauger (Saugeye)	2	5133	6/5/2012	#3 LaSalle Fish Hatchery (09010)