

VIRGINIA

DJ GRANT F-111-R-11, PROJECT 11

SMALL IMPOUNDMENT INVESTIGATIONS: Lakeview Reservoir

2003

KEY FINDINGS

- Sampling collected 140 bluegill and 46 bass
- Bluegill ranged from 3 to 7 inches with most 5 inches or less, catch rate (CPUE) for stock sized bluegill was 115 (above statewide average), the PSD of 9 was well below statewide averages
- Bass ranged from 4 to 20-inches with most sizes represented, catch rate (CPUE) of 28 for stock sized largemouth was below statewide averages but the PSD of 82 was well above statewide averages as was the RSD-P of 29
- Bass relative weights were about average but growth was very slow, as it was for bluegill
- No change in management is planned for the reservoir
- Department personnel will resample Lakeview in 2007

Lakeview Reservoir Fisheries Management Report – 2003

This small reservoir situated in the heart of Colonial Heights, Virginia, provides potable water for the tri-cities of Colonial Heights, Petersburg, and Hopewell. Maintenance drawdowns of the reservoir in the early 1990's created a temporary reduction in the number of sportfish available in the reservoir. Sampling in 1998 indicated that the bass population had recovered and was in excellent shape, but that the bluegill population was not adequate to support a large fishery. Because the reservoir is a water supply, no recommendations were made at that time that might improve the bluegill population.

The recent evaluation of the fishery in the reservoir consisted of boat electrofishing along the entire shoreline on May 29, 2002. This beautiful forty-three (43) acre lake has excellent fish habitat. Weeds (mostly star grass), numerous boat docks, and downed trees provide cover for wildlife, including fish of all shapes and sizes. There were obvious problems evident during the sampling that would effect the fish catch rates and population dynamics. First of all it was late in the season for sampling. It was a sunny day and the water temperature was high (81^{0F}), the carp were spawning in the shallows and the larger bass and bream had dropped into deeper water. All large bass were collected in deeper water at the ends of the boat docks and downed trees. Another problem was the extremely high number of gizzard shad evident in the lake. They tended to interfere with the efficient collection of sportfish, the primary target species. Also, a large population of shad can interfere with sportfish populations by competing for a limited supply of food, particularly for juvenile bass and bream. There were literally thousands of small, 1 to 2-inch bream and gizzard shad in the weed cover throughout the reservoir but few intermediate size (3 to 6-inch) bream. A few larger bream were collected off the weed edge, in deeper water.

The fish that were collected were compared to historical collections made at the reservoir as well as fish populations in small lakes and reservoirs throughout Virginia. Even though the catch of 46 largemouth bass was below that of 1998, the catch rate for fish 12-inches and larger was a little better than that of other statewide reservoirs. The number of bass from 8 to 12-inches in length was low and for even smaller fish was almost nonexistent. Growth rates for largemouth were poor as well as the overall plumpness of the bass, but for sheer number of fish, this reservoir provides a nice bass fishery in the heart of Colonial Heights.

To obtain a good picture of the quality of the bream fishery, bluegill were collected and compared to previous year's collections. Of the 140 bluegill collected, ranging from 3 to 7-inches, most were below 5-inches. The bluegill population has remained below average although catch rates for all sizes had improved slightly. Growth rates and plumpness of bluegill were both below statewide averages - really no changes from previous samples.

Fisheries management goals for Lakeview are to provide a diverse sport fish population and ample numbers of these fish to support a good urban fishery. The largemouth bass population is providing that resource, but the bluegill and other bream are not. With such a large population of competing gizzard shad in the reservoir there is little opportunity for the bream population to improve.

To enjoy the fishery in this urban reservoir it helps to know your way around Colonial Heights. From Route 1 (301) in the heart of the city, take Lake Avenue west for

several blocks until you reach Lakeview Park. There is a boat ramp, a few picnic tables, and there should be ample parking in the small city park.

Department personnel will revisit the reservoir in five years (2007) to recheck the population.

District: 9 Lake: Lakeview

Year: 2003

HISTORICAL ELECTROFISHING POPULATION STATISTICS
(Numbers in parenthesis are statewide 50th percentiles)

		CPUE			Population Indices			
	Year	Effort (hours)	Stock (106)	Quality (32)	Preferred (0)	PSD (30)	RSD-P (0)	RSD-M (0)
Bluegill	2002	1.2	118	11	0	9	0	0
	1998	1.0	33	4	0	12	0	0
	1995	0.9	122	14	0	11	0	0
	1992	0.5	192	14	0	7	0	0
	1989	NA	NA	NA	NA	40	0	0
	Year	Effort (hours)	Stock (49)	Quality (17)	Preferred (7)	PSD (41)	RSD-P (14)	RSD-M (1)
Largemouth Bass	2002	1.2	29	24	8	82	29	0
	1998	1.0	54	42	22	79	40	4
	1995	0.9	58	44	19	76	33	6
	1992	0.5	19	17	6	90	30	10
	1989	NA	NA	NA	NA	16	10	0

District: 9

Lake: Lakeview Reservoir

Year: 2002

Length-Frequency Data for Bluegill and Largemouth Bass

	BLG	LMB		BLG	LMB
Length	Number	Number	Length	Number	Number
7	2		36		2
8	26		37		3
9	12	2	38		1
10	22	2	39		1
11	30		40		1
12	16	2	41		2
13	10		42		1
14	9	1	43		
15	6	2	44		
16	3	2	45		1

17	2	1	46		1
18	2		47		1
19			48		
20			49		
21			50		1
22			51		
23			52		
24			53		
25			54		
26			55		
27		3	56		
28		1	57		
29		2	58		
30		2	59		
31		1	60		
32		1	61		
33		2	62		
34		2	63+		
35		5	Total #:	140	46

District: 9

Lake: Lakeview Reservoir

Year: 2002

CPUE Data for Largemouth Bass and Bluegill

					Deviation from State Percentiles			
		Indice	Effort/ hour	Sample Size	#/hour	25%	50%	75%
Bluegill	Stock	1.2	138	115	48	9	-74	
	Quality	1.2	13	11	-4	-21	-42	
	Preferred	1.2	0	0	0	0	-4	
	Memorable	1.2	0	0	--	--	--	
	Trophy	1.2	0	0	--	--	--	
Largemouth Bass	Stock	1.2	34	28	3	-21	-39	
	Quality	1.2	28	23	13	6	-6	
	Preferred	1.2	10	8	5	1	-3	
	Memorable	1.2	0	0	0	-1	-2	
	Trophy	1.2	0	0	--	--	--	

Population Index Data for Bluegill and Largemouth Bass

				Deviation from State Percentiles		
		Sample Size	Value	25%	50%	75%
Indice						
Bluegill	PSD	138	9	-6	-21	-38
	RSD-P	0	0	0	0	-3
	RSD-M	0	0	--		--
	RSD-T	0	0	--	--	--
Largemouth Bass	PSD	34	82	58	41	23
	RSD-P	10	29	24	15	3
	RSD-M	0	0	0	-1	-4
	RDS-T	0	0	--	--	--

District: 9 Lake: Lakeview Reservoir Year: 2002
Wr Values Data for Bluegill and Largemouth Bass

				Deviation from State Average Percentiles			
		Range	Sample Size	Value	25%	50%	75%
Bluegill		0-7 (cm)	0	0	--	--	--
		8-14 (cm)	30	82	-4	-11	-19
		≥ 15 (cm)	10	86	0	-7	-14
Largemouth Bass		19 (cm)	11	86	1	-3	-10
		20-29 (cm)	7	89	5	1	-4
		≥ 30 (cm)	17	87	0	-5	-11

Age and Growth Data for Bluegill and Largemouth Bass
(Frazier-Lee Method)

		Age	I	II	III	IV	V	VI	VII
Bluegill	Sample Size (N)		37	37	32	32	22	9	1
	Length (mm)		50	81	104	122	140	157	160
	Deviation from State Means		8	-7	-24	-33	-32	-28	-35
Largemouth Bass	Sample Size (N)		34	25	23	23	18		3
	Length (mm)		133	214	274	305	332	350	367
	Deviation from State Means		7	-25	-41	-73	-98	-122	-137