LOWER SCHOHARIE CREEK

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2008 Angler Diary Study

The 2008 fishing season was the fifth and final year of a multi-year effort to monitor and assess the walleye fishery in lower Schoharie Creek. Diary data will be used to monitor walleye catch rates and size distribution for five river reaches throughout lower Schoharie Creek (Figure 1). The study will also provide baseline information to evaluate any future changes in the walleye fishery that may occur.

During the 2008 open water season, 14 anglers volunteered to keep diaries but only eight individuals returned diaries with fishing trip information. These eight anglers made 102 trips (includes partners) totaling 235.8 hours which was a 36% decline from the 139 trips totaling 368.9 hours recorded in 2007. The record effort of 493.0 hours was recorded in 2004. In 2008, cooperators caught 177 smallmouth bass and 16 walleye for an overall catch rate of 0.82 fish per hour compared to 0.95, 1.62, 1.27, and 1.01 fish per hour in 2004, 2005, 2006, and 2007, respectively. Unlike prior years, no trout, largemouth bass, or chain pickerel were recorded in 2008. Individual cooperator catch statistics for walleye and smallmouth bass are summarized in Table 1.

Although the 48.4 mile reach of Schoharie Creek downstream of Blenheim-Gilboa Dam (B-G Dam) was divided into five reaches (Figure 1), all fishing effort in 2008 occurred in the upper three reaches which flows through or borders Schoharie County. Fishing effort was highest on the Esperance reach (56 trips - 158.3 hours) and lowest in the Breakabeen reach (23 trips - 33.8 hours). Due to the low cooperator fishing effort recorded during the 2008 diary study, the data from the three Schoharie County reaches was combined into one reach for data analyses. This was also true for the 2004-07 studies.

Shore and boat anglers represented 66% and 34% of the overall hourly effort with the anglers divided into four groups depending upon what fish or combination of fish species they were targeting: anything, bass, bass/walleye, and walleye. Shore anglers targeting bass/walleye represented 43% of the total shore fishing effort (Table 2) followed by walleye anglers (30%), anything anglers (20%), and bass anglers (7%). Boat anglers targeting bass/walleye represented 84% of the total boat fishing effort (Table 2) followed by both bass and walleye anglers (8% each).

Walleye catch rates varied by what anglers were targeting with the highest catch rates recorded by shore anglers targeting walleye who averaged 0.19 walleye per hour (Table 3). Boat anglers targeting bass had the highest catch rate of walleye at 0.15 fish per hour (Table 4). No walleye were caught by shore anglers targeting anything, bass, or bass/walleye. This was also true for boat anglers targeting walleye.

Examination of Tables 3 and 4 walleye catch rates show that the catch has been highly variable over the five year study period. Much of this variability reflects the relatively low angling effort recorded. Boat anglers targeting walleye made only 2 to 14 trips annually between 2004 and 2008 while shore anglers made 14 to 51 trips annually during the same period (Table 2). Except for the 51 shore trips targeting walleye in 2004, targeted walleye effort by both shore and boat anglers was too small to provide meaningful catch data. Experience suggests that a minimum of 50 trips annually is needed to provide meaningful catch statistics. Although targeted catch angling effort provides the standard for evaluating the status of a fishery, non-targeted effort can also provide

insight. Combining all boat and shore effort for the 2004-08 studies yields an annual overall catch rate of 0.11, 0.08, 0.13, 0.11, and 0.07 walleye per hour, respectively. In general, open water non-targeted catch rates of 0.05 to 0.10 walleye per hour is considered fair fishing, 0.10 to 0.25 fish/hour as good to very good and anything over 0.25 fish per hour provides excellent walleye fishing. By these standards, Schoharie Creek provides fair walleye fishing. In contrast, walleye targeted catch rates exceeding 0.20 fish per hour demonstrates above average fishing while rates approaching 0.50 fish per hour are excellent.

The 16 walleye caught by all anglers in the three Schoharie County reaches ranged from 7 to 28 inches (Figure 2) and averaged 15.3 inches. From 2004 through 2007, walleye averaged 18.1, 14.3, 18.8, and 16.9 inches, respectively. The decreased average size for 2005, 2007, and 2008 was due to the increased number of sublegal walleye in the catch which represented 52%, 39%, and 38% of all walleye caught, respectively. In 2004 and 2006, sublegal walleye represented only 12% and 3% of the walleye caught. In 2008, 10 of the 16 walleye caught were legal (≥15 in) size of which 2 were creeled. The catch rate of legal walleye by angler group ranged from 0 to 0.19 fish per hour (Table 5) while the creel rate ranged from 0 to 0.04 fish per hour (Table 6).

Although the focus of this study was on walleye, the smallmouth bass catch information continues to remain of interest. Smallmouth bass catch rates by shore angler ranged from 0.55 to 3.02 fish per hour with the highest catch rate recorded by anglers targeting bass (Table 3). Boat anglers averaged 0.46 to 1.08 smallmouth bass per hour with bass anglers recording the highest catch rates (Table 4). Shore, boat, and all anglers combined averaged 0.72, 0.81, and 0.75 smallmouth bass per hour, respectively. The 177 smallmouth bass caught in the Schoharie County reach of Schoharie Creek ranged from 3 to 20 inches (Figure 3) with 104 fish being 12 inches and larger. Fifty-nine percent of the smallmouth bass caught were 12 inches and larger compared to 55%, 37%, 56%, and 46% from 2004 through 2007, respectively. The catch of 12 inch bass in 2008 by shore, boat, and all anglers averaged 0.37, 0.58, and 0.44 fish/hour, respectively. From 2004 though 2007, the catch of 12 inch and larger smallmouth bass for all anglers combined averaged 0.43, 0.54, 0.60 and 0.40 fish/hour respectively.

The abundance of smallmouth bass 12 inches and larger from 2004 through 2008 in the cooperator catch demonstrates that the premise for the no size limit on bass upstream of Rt 20 in Esperance is no longer valid. When the no size regulation was adopted in 1978, fish collections at the time indicated that 12 inch and larger smallmouth bass were rare. At the time, it was felt that a 10 or 12 inch size regulation would unnecessarily limit the harvest of bass from this reach of lower Schoharie Creek. This is no longer true. Based on the abundance of 12 inch and larger bass in the 2004 through 2008 cooperator catch, implementation of the statewide 12 inch size limit would be appropriate for all of Schoharie Creek downstream of the B-G Dam. This regulation change will not improve the lower Schoharie Creek smallmouth fishery which is already good to excellent. The intent of making this change would be to simplify regulations. Adopting the statewide regulation would eliminate five special regulations for bass in Montgomery, Schenectady, and Schoharie Counties.

Norman D McBride
Biologist II (Aquatic)
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Figure 1: Map of Schoharie Creek showing the five study reaches.

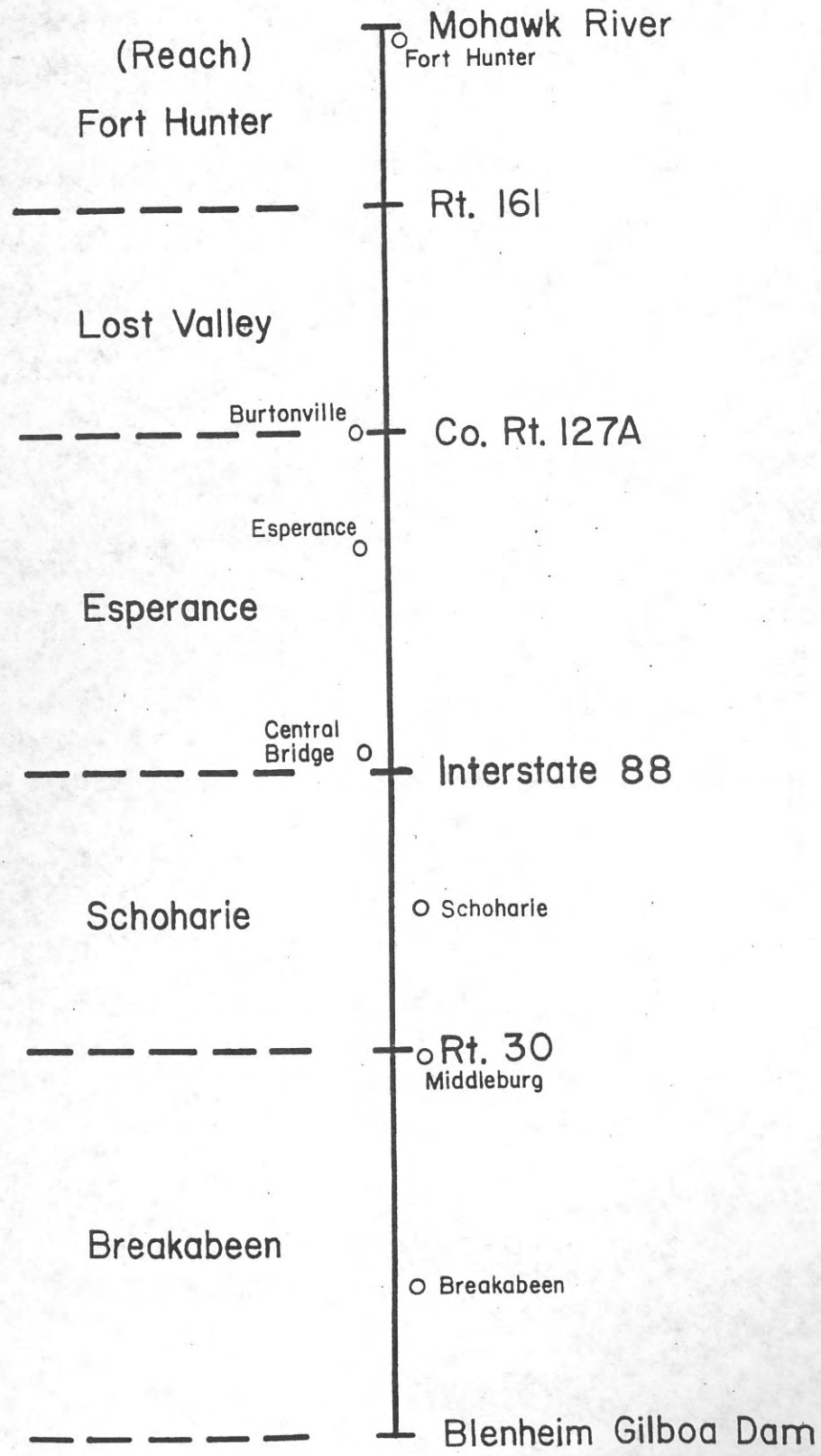

Figure 2: Length frequency of walleye caught by angler cooperators on Schoharie Creek, 2008.

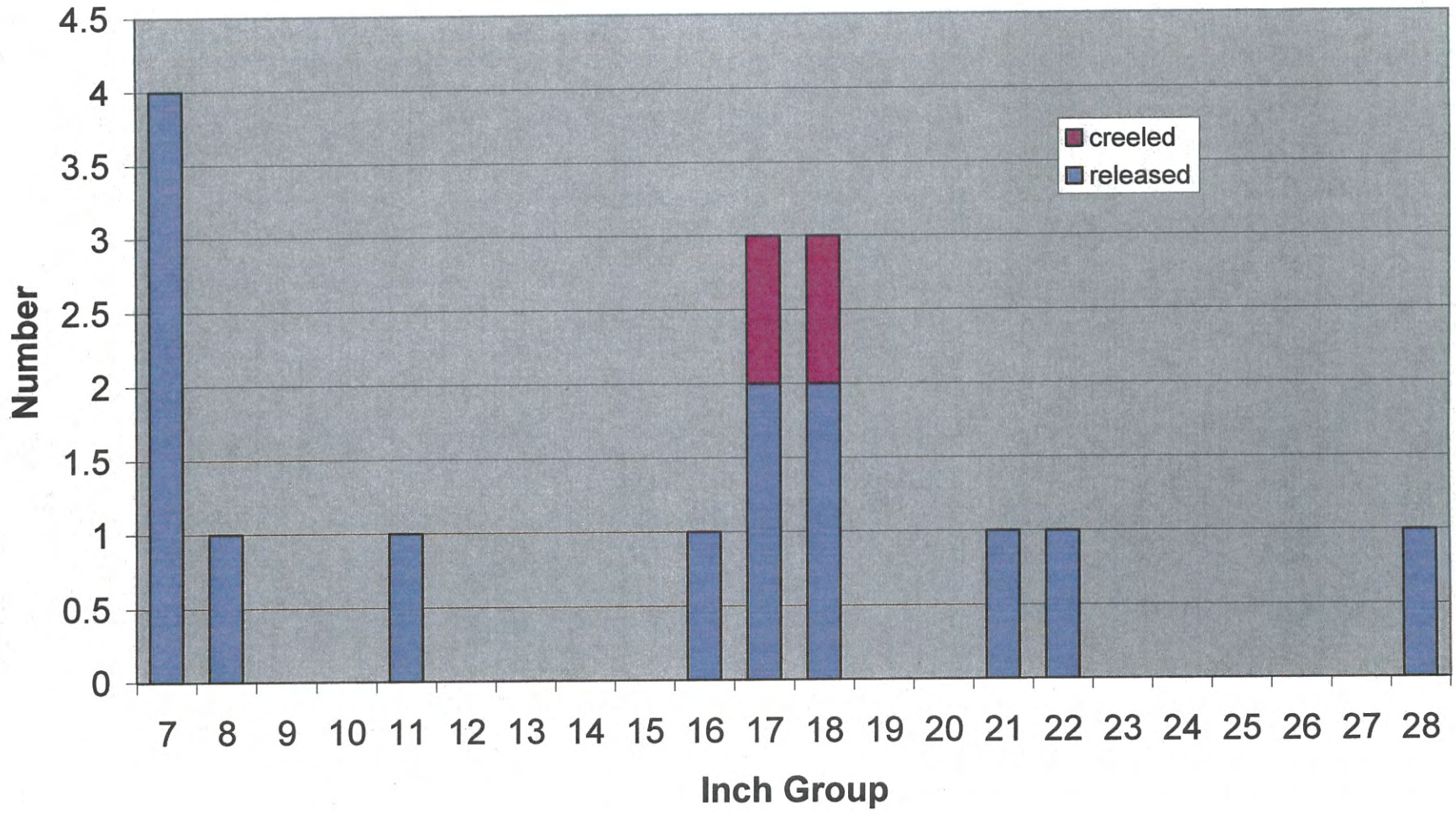

Figure 3: Length frequency distribution of smallmouth bass caught by shore and boat anglers in Schoharie Creek, 2008

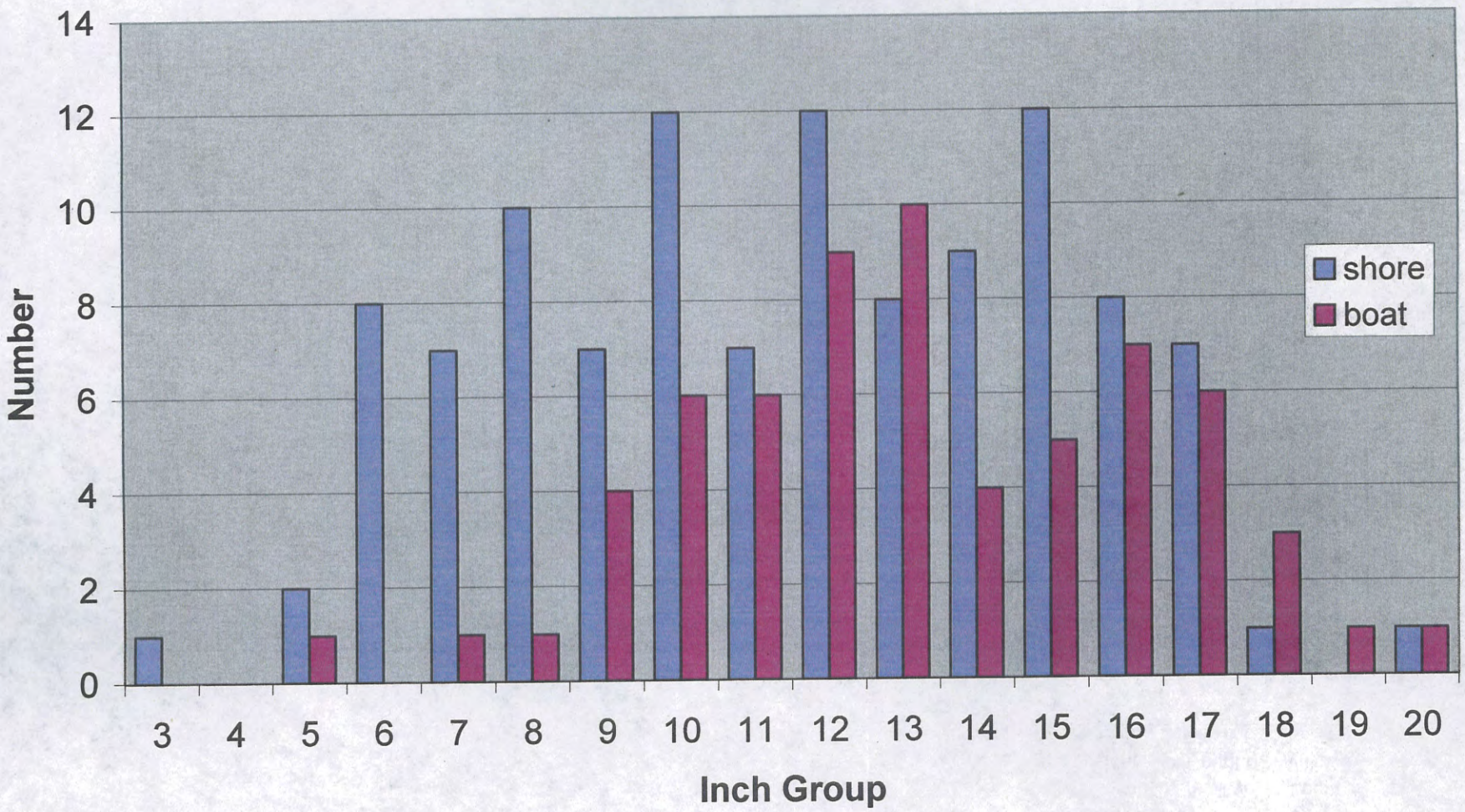

Table 1: Summary of individual and overall catch statistics for walleye and smallmouth bass in Schoharie Creek, 2008.

Angler Number	Number of Trips	Angler Hours	Smallmouth Bass Caught	Walleye Caught	Legal Walleye Caught	Smallmouth Bass Per Hour	Legal Walleye Per Hour	Smallmouth Bass Caught Per Trip	Walleye Caught Per Trip	Legal Walleye Per Trip
102	16	24.5	41	2	2	1.67	0.08	2.56	0.13	0.13
103	10	23.3	10	5	5	0.43	0.22	1.00	0.50	0.50
104	1	2.0	1	0	0	0.50	0.00	1.00	0.00	0.00
105	20	87.5	36	1	0	0.41	0.00	1.80	0.05	0.00
106	29	42.3	35	2	2	0.83	0.05	1.21	0.07	0.07
109	7	24.5	34	6	1	1.39	0.04	4.86	0.86	0.14
112	10	15.3	12	0	0	0.79	0.00	1.20	0.00	0.00
114	9	16.5	8	0	0	0.49	0.00	0.89	0.00	0.00

Overall catch statistics

Total Trips All Anglers	Angler Hours	Smallmouth Bass Caught	Walleye Caught	Legal Walleye Caught	Smallmouth Bass Per Hour	Legal Walleye Per Hour	Smallmouth Bass Caught Per Trip	Walleye Caught Per Trip	Legal Walleye Per Trip
102	235.7	177	16	10	0.75	0.04	1.74	0.16	0.10

Table 2: Summary of targeted angler diary fishing effort (trips and hours) on the Schoharie County reach of Schoharie Creek, 2004-08.

	TRIPS/HOURS				
	2004	**2005**	**2006**	**2007**	**2008**
SHORE ANGLERS					
Anything anglers	24/73.0	56/110.5	40/113.2	46/132.9	17/31.0
Bass anglers	17/45.8	14/38.1	8/12.2	16/39.3	8/10.6
Bass and Walleye anglers	23/73.7	22/56.0	17/32.7	24/63.7	28/67.2
Walleye anglers	51/147.9	21/49.8	14/27.4	22/29.6	27/47.0
Totals	114/340.4	113/254.4	79/185.5	108/265.5	80/155.8
BOAT ANGLERS					
Bass anglers	11/34.6	18/73.5	4/12.2	9/15.7	4/6.5
Bass and Walleye anglers	20/113.5	10/42.5	7/15.5	19/72.8	16/67.0
Walleye anglers	2/4.5	14/20.8	5/8.0	3/14.9	2/6.5
Totals	33/152.6	42/136.8	16/35.7	31/103.4	22/80.0

Table 3: Summary of shore angler diary catch statistics on the Schoharie County reach of Schoharie Creek, 2004-08.

	CATCH PER HOUR				
TARGETED EFFORT	**2004**	**2005**	**2006**	**2007**	**2008**
Anything Anglers					
Chain pickerel	0.14	0.01	0.03	0.01	
Largemouth bass		0.06	0.01		
Smallmouth bass	0.59	0.57	0.71	0.61	0.55
Trout	0.16	0.06		0.03	
Walleye	0.26	0.12	0.14	0.05	
Bass Anglers					
Chain pickerel	0.02	0.01	0.16		
Largemouth bass			0.08		
Smallmouth bass	1.09	3.78	3.11	0.87	3.02
Walleye			0.03		
Bass and Walleye Anglers					
Chain pickerel				0.02	
Largemouth bass			0.06		
Smallmouth bass	0.84	1.25	0.83	0.54	0.55
Walleye	0.09	0.11	0.09	0.13	
Walleye Anglers					
Chain pickerel	0.01	0.02			
Smallmouth bass	0.53	1.18	0.66	0.51	0.55
Trout	0.01				
Walleye	0.14	0.08	0.26	0.61	0.19

Table 5: Summary of angler diary catch statistics for legal and/or desirable size fish on the Schoharie County reach of Schoharie Creek, 2008. Bass has both legal and desirable (legal/desirable) catch rates.

TARGETED EFFORT	CATCH PER HOUR SHORE	CATCH PER HOUR BOAT
Anything Anglers		
Smallmouth bass	0.55/0	
Bass Anglers		
Smallmouth bass	3.02/1.51	1.08/0.46
Walleye		0.15
Bass and Walleye Anglers		
Smallmouth bass	0.55/0.31	0.82/0.60
Walleye		0
Walleye Anglers		
Smallmouth bass	0.55/0.45	0.46/0.46
Walleye	0.19	

Legal Size
Bass: any size
Walleye: 15 inches

Desirable Size
Bass: 12 inches

Table 4: Summary of boat angler diary catch statistics on the Schoharie County reach of Schoharie Creek, 2004-08.

TARGETED EFFORT	CATCH PER HOUR 2004	2005	2006	2007	2008
Bass Anglers					
Chain pickerel	0.06	0.01		0.06	
Smallmouth bass	2.69	1.89	2.21	3.31	1.08
Walleye	0.12	0.01			0.15
Bass and Walleye Anglers					
Largemouth bass			0.32		
Smallmouth bass	0.48	1.11	2.58	1.41	0.82
Walleye	0.01	0.02		0.11	0.09
Walleye Anglers					
Chain pickerel	0.01		0.13		
Smallmouth bass	1.11	2.79	0.88	0.27	0.46
Walleye		0.14	0.38	0.27	

Table 6: Summary of the creel rate by angler cooperators on the Schoharie County reach of Schoharie Creek, 2008.

TARGETED EFFORT	CREELED FISH PER HOUR SHORE	BOAT
Anything Anglers		
Smallmouth bass	0	
Bass Anglers		
Smallmouth bass	0.66	0.31
Walleye		0
Bass and Walleye Anglers		
Smallmouth bass	0	0
Walleye		0
Walleye Anglers		
Smallmouth bass	0	0
Walleye	0.04	