

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
HUDSON RIVER ESTUARY PROGRAM**

NEW PALTZ, NEW YORK

**2004 HUDSON RIVER ESTUARY BLACK BASS TOURNAMENT
MONITORING STUDY**

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1.0 INTRODUCTION

The Hudson River estuary is one of New York's outstanding natural resources providing crucial nursery and spawning grounds for a wide variety of fish species including freshwater, estuarine migrants and diadromous species. Two important Hudson River species which support an important recreational fishery, including local and regional fishing tournaments, are the largemouth bass (*Micropterus salmoides*) and smallmouth bass (*M. dolomieu*), collectively referred to as black bass. The freshwater, tidal portion of the Hudson River has been a popular location for local, regional and national level bass tournaments since the Bass Anglers Sportsmans Society (B.A.S.S.) held a successful National Invitational Tournament in Catskill, New York in 1984.

A voluntary tournament reporting program to monitor results of Hudson River black bass fishing tournaments was initiated by the New York State Department of Environmental Conservation (NYSDEC) in 1986 (Festa 1987). This program solicits black bass tournament data (e.g., angler weigh-in, no. of anglers, species composition etc.) from black bass tournaments held on the tidal freshwater portion of the Hudson River. Periodic on-site monitoring since 1986 and a series of special studies during 1989-1991 (Green et al. 1993) and 1999-2001 (LMS 2004) has allowed NYSDEC to obtain additional information not easily obtained through voluntary reporting (e.g., scale samples, tag and fin clip information and individual fish weights). On-site monitoring of the 1984 B.A.S.S. National Invitational and the 1985 Redman, New Jersey B.A.S.S. and New York B.A.S.S. tournament events provided tournament weigh-in data prior to 1986 (Linhart 1998). Information provided through these special studies and voluntary reporting has been used to monitor trends in the Hudson River black bass fishery and evaluate fishery management objectives. This continuous data set (1984-2004) has been used to calculate several black bass tournament-related fishery statistics and will continue to be used to assess NYSDEC black bass fishery objectives in the future.

Black bass fishery management objectives for the Hudson River Estuary were originally set in 1986, and have been only slightly modified since then. The current objectives listed below were established by the NYS DEC Bureau of Fisheries Hudson River Black Bass Management Work Group (NYSDEC 1992).

Size: Maintain largemouth bass RSD_{15} of 40 or greater in spring electrofishing collections and/or 45% of tournament entered largemouth bass greater than or equal to 15 inches. Where length frequency data are not available, maintain average black bass weight of greater than or equal to 1.9 lbs/bass in tournament catches.

Abundance: Maintain largemouth bass electrofishing catch rates for fish greater than 12 inches at 20 or more/hour in at least three out of four samples during March-April in wintering areas and/or maintain tournament *entry* rates over 1.4 black bass/trip for a sample of 500 or more trips spread over several tournaments based between Hudson and Kingston.

Relative Stock Density (RSD) is the proportion of fish of any designated size group in a stock. In the case of largemouth bass, stock size fish are 8 inches or larger in size. Therefore a RSD_{15} of 40 would indicate that 40 percent of the fish larger than 8 inches exceeded 15 inches in length. Index values range from 0 to 100.

The objective of the 2004 Black Bass Tournament Monitoring Study was to continue the voluntary tournament reporting program initiated in 1984 and provide periodic on-site monitoring to obtain individual fish length, weight and age (scale samples) data not easily obtained through voluntary reporting. This report provides largemouth and smallmouth bass length and weight data collected in 2004 from voluntary tournament reporting and on site tournament monitoring. The Hudson River Estuary Action Plan goal for the black bass fishery is to “Restore the black bass fishery by 2010 to the nationally-renowned levels of the mid-1980's.” The continuation of the black bass tournament data set will assist in determining progress towards this goal.

2.0 METHODS

The 2004 Black Bass Tournament Monitoring Study obtained black bass tournament weigh-in and size information through 1) tournament reporting and 2) periodic on-site tournament monitoring. Details of these two programs are described below.

2.1 Tournament Reporting

Tournament fishing weigh-in information for the 2004 black bass tournament fishing season was obtained through voluntary reporting by tournament sponsors through a questionnaire and downloaded from tournament-sponsor websites when available. The 2003 Hudson River black bass tournament sponsor list (NYSDEC 2004) was updated and revised through an online review of local bass fishing clubs and other possible tournament sponsors in New York, New Jersey, Connecticut and Pennsylvania and through contacts with state and local B.A.S.S. chapters. Potential tournament sponsors were contacted via mail with a letter and questionnaire during October 2004 to request contestant and tournament entry data for the 2004 black bass tournament fishing seasons (Appendices A2 and A3). A summary of the 2002-2003 Black Bass Tournament Monitoring Study was included with the letter and questionnaire.

In December 2004, telephone calls were made to potential Hudson River tournament sponsors who did not respond to the initial questionnaire and from whom catch data were not received. A follow-up letter and questionnaire was also sent via mail in December 2004.

Weigh-in statistics were calculated by tournament and annually (sum and annual average) for information reported for the 2004 season. Number of angler trips was considered equal to the number of individual contestants for each tournament (i.e., partner or team tournaments considered each individual angler as one trip). The average number of bass per angler trip was calculated for each tournament by dividing the number of bass entered

(i.e. weighed-in) by the number of anglers for that tournament¹. The annual average number of bass per angler trip was calculated by dividing the total number of bass reported at all tournaments by the total number of anglers at all tournaments. The tournament average and annual average number of largemouth bass and smallmouth bass per angler trip were calculated similarly.

The tournament average weight per bass was calculated by dividing the total weight of all bass entered at a tournament by the total number of bass entered at that tournament. The annual average weight per bass was calculated by dividing the sum of all tournament total-weights by the total number of bass reported at all tournaments.

2.2 *On-site Tournament Monitoring*

On-site tournament monitoring was conducted at two Hudson River black bass tournaments on 13 August 2004 and 07 November 2004 in Catskill, New York to obtain black bass species composition information, length frequency data, fish weight and scale samples. Other basic contestant and tournament entry data were also collected. The 13 August tournament was part of a three-day tournament sponsored by ESPN and B.A.S.S. The 07 November tournament was a one day tournament sponsored by Orange County Bassmasters.

Black bass were collected from tournament organizers following weigh-in. Condition (alive or dead), length (mm TL) and the presence of fin clips and tags were recorded for largemouth and smallmouth bass. Weight (to the nearest 0.01 lb.) was recorded and scale samples were taken from a subsample of five fish of each species per centimeter group. Scale samples were provided to NYSDEC for age analysis.

Tournament weigh-in statistics were calculated for on-site tournament monitoring similar to that described above for voluntary tournament reporting. For the largemouth bass length vs. weight regression analysis, an ordinary least squares linear regression method

¹ This number represents the average number of bass weighed in per tournament angler.

was used. Differences between the number of fish entered at a tournament and number of fish weighed and measured are noted in the summary tables.

3.0 RESULTS

3.1 Overall Voluntary Tournament Reporting and Monitoring

Black bass tournament data from the 2004 fishing season were obtained for 20 tournaments from 13 bass fishing clubs via tournament monitoring (see Section 3.2 On-site Tournament Monitoring), internet download from tournament-sponsor websites or mailed questionnaire responses (Table 3-1). Tournament dates ranged from 23 June 2004 through 7 November 2004 and were distributed as follows: five tournaments in June, five tournaments in July, two tournaments in August, three tournaments in September, four tournaments in October and one tournament in November. Tournament location was not provided for five tournaments. One tournament was located at Roundout Creek, Hudson River, New York, seven at Dutchman's Landing in Catskill, New York, six at Charles Ryder Park in Kingston, New York and one at Whites Marina in Wappingers Falls, New York.

A total of 142 questionnaires were mailed to potential tournament sponsors for the voluntary tournament monitoring program. The response rate to questionnaires sent via mail, along with follow-up phone calls and questionnaires was low, about seven percent.

Tournament monitoring, returned questionnaires and internet downloads accounted for 2,780 black bass caught by 1,421 anglers (Table 3-1). From these data, the total weight of 2,703² black bass actually weighed was 4,603 lbs. Largemouth bass and smallmouth bass were not distinguished from the total number of black bass entered for nine tournaments (Table 3-2).

² The individual weights of 77 black bass were not included in this calculation because individual weight data was not available.

During 2004, the overall average number of black bass weighed in per tournament angler (i.e., average number of bass per trip) was 1.96 (Table 3-3) and ranged from 1.0 fish per trip on 26 June 2004 to 4.2 fish per trip on 18 July 2004 (Table 3-2). Largemouth bass weigh-in data were obtained from 12 of the 20 tournaments. The largest largemouth bass reported weighed 6.13 lbs. The total number of largemouth bass weighed-in at 12 tournaments, including fish collected during on-site tournament monitoring, was 621, or 50% of all bass weighed-in during 2004 tournaments at which largemouth and smallmouth bass were distinguished (Table 3-2). The overall average number of largemouth bass weighed-in at Hudson River tournaments was 0.89 per trip (Table 3-3).

The total number of smallmouth bass at the 12 tournaments, including fish collected during on-site tournament monitoring, was 621 or 50% of all bass weighed-in during 2004 tournaments. The largest smallmouth bass reported was 3.88 lbs. The overall average number of smallmouth bass weighed-in at Hudson River tournaments was 0.89 per trip.

For the 12 tournaments in 2004 where fish condition was provided (N = 714) ten dead fish were reported, representing about 1.4% of all bass weighed-in.

The percent limit catch (i.e., Number of trips which weigh-in the tournament catch limit of fish) for 2004 black bass tournaments was 11.2 (Table 3-3). The percent limit catch can be useful when estimating the degree of culling which may be occurring during tournament fishing.

Tournament fishing boundaries (i.e., river boundaries), hours fished per day, tournament catch limits (i.e., weigh-in limits), number of limit catches and tagged fish information were obtained from five tournaments (23 and 26 June 2004, 31 July 2004, 12 August 2004 and 7 November 2004) (Table 3-4). Tournament fishing boundaries were all inclusive for these tournaments (i.e., tournament fishing was not artificially limited by a predetermined river boundary) and all tournaments were eight hours in duration. The New York State daily creel limit is five bass per angler. Tournament catch limits were

three per angler for the tournament held on 26 June 2004 which was lower than the NYS limit and five bass per angler for tournaments held on 23 June 2004, 31 July 2004, 12 August 2004 and 7 November 2004. Tournament sponsors indicated that all applicable New York State (NYS) fishing regulations were followed during each of the five tournaments. No additional tournament-specific rules were reported, except for the above mentioned tournament catch limits. One previously tagged fish was caught during the 7 November 2004 tournament and three tagged fish were caught during the 12 August 2004 tournament, both tournaments took place at Catskill, NY (Table 3-6).

3.2 *On-site Tournament Monitoring*

On-site tournament monitoring was conducted at two Hudson River black bass tournaments; one on 13 August 2004 and one on 07 November 2004, both in Catskill, New York. During the 13 August 2004 tournament, the total number of black bass examined following tournament weigh-in was 542; 539³ black bass were individually weighed (Table 3-5). The total weight of all black bass measured was 805 lbs. (n=539) and the average weight per black bass was 1.49 lbs.

The total weight of largemouth bass examined was 372 lbs and the total weight of smallmouth bass collected was 433 lbs. The largest largemouth bass weighed 4.12 lbs.; the average largemouth bass weight was 1.84lbs (n=202). The largest smallmouth bass weighed 3.81 lbs. and the average weight per smallmouth bass was 1.28 lbs. (n=337).

A total of 172 black bass were caught during the 7 November 2004 tournament; 171⁴ black bass were weighed (Table 3-5). The total weight of all black bass measured was 328 lbs. (n=171) and the average weight per black bass was 1.91 lbs. Of the 171 fish weighed, there were 87 largemouth bass with a total weight of 176 lbs., averaging 2.03 lbs. per fish. The 84 smallmouth bass weighed during the tournament totaled 151 lbs., averaging 1.79 lbs. per fish.

³ Two LMB and 1 SMB were not individually weighed

⁴ One SMB was not individually weighed

Information on black bass examined with jaw tags (recaptured fish tagged during the 1999-2001 Hudson River Estuary Black Bass Study) are summarized in Table 3-6. Three black bass with jaw tags were collected during the 13 August 2004 tournament and one black bass with a jaw tag was collected during the 7 November 2004 tournament. Tag and release information for these fish is provided in Table 3-6. No dorsal fin clips (which would indicate a suspected recaptured tagged fish from the 1999-2001 Hudson River Estuary Black Bass Study) were observed.

Length data for black bass examined during on-site tournament monitoring are summarized in Table 3-7. The average length of largemouth bass examined during the 13 August 2004 tournament was 379 mm (14.9 inches) and ranged from 300 mm (11.8 inches) to 507 mm (19.9 inches) (n=204). Smallmouth bass average length was 362 mm (14.2 inches) and ranged from 288 mm (11.3 inches) to 500 mm (19.6 inches) (n=338).

During the 7 November 2004 tournament, the average length of largemouth bass examined was 386 mm (15.2 inches) (n=87) and ranged from 320 mm (12.5 inches) to 535 mm (21.0 inches); the average length of smallmouth bass was 395 mm (15.5 inches) (n=85) and ranged from 300mm (11.8 inches) to 504 mm (19.8 inches).

A total of 289⁵ largemouth bass were identified and measured for length and weight during the two on-site tournament monitoring events. The total weight of largemouth bass weighed –in at both tournaments was 548 lbs. A total of 422⁶ smallmouth bass were identified and measured for length and weight, totaling 584 lbs. Black bass length and weight data from on-site tournament monitoring are attached in Appendices B-1 and B-2. Regression statistics for largemouth bass are attached in Appendix B-3.

⁵ Two LMB were not individually weighed

⁶ One SMB was not individually weighed

4.0 DISCUSSION

The number of black bass per trip is an indicator of angler success in Hudson River bass tournaments. The NYSDEC fisheries management objective for this statistic is to remain at or above 1.4 bass per trip. The average number of bass per trip for 2004 tournaments (1.9 bass per trip) was well above the NYSDEC fisheries management objective and was equal to the average number of bass per trip in 1989 (Table 3-3); the third highest recorded during the past sixteen years of tournament monitoring (Figure 4-1).

The average number of largemouth and smallmouth bass caught per trip reflects the number of fish weighed-in by anglers during a tournament. However, this statistic can be affected by:

- Culling prior to weigh-in (i.e., continued fishing and removal/replacement of smaller fish)
- No reporting (i.e., when an angler participates in the tournament but does not weigh-in fish that were caught)
- The number of anglers who weigh-in the catch limit for each tournament (Percent limit catch)

These factors can lower the catch rate estimate from the true catch rate.

Between 1987 and 2001 the average number of largemouth bass entered per trip at Hudson River tournaments varied, but generally ranged between 1.0 and 1.5 bass per trip, with only two exceptions (0.88 in 1990 and 0.70 in 1995)(Table 3-3). However, the average number of largemouth bass entered per trip has been consistently lower for the past three years. The percent contribution of largemouth bass to the overall number of black bass entered during 2004 tournaments was 50% (Table 3-3). This was a slight increase from 2003 when largemouth bass made up 47.9% of the black bass entered in tournaments. Prior to 1995, largemouth bass percent contribution was greater than 68% during each year, and largemouth bass consistently comprised 70-80% of the number of fish entered at tournaments. This proportionality changed in 1995 when percent

contribution of largemouth at Hudson River tournaments fell to 42.8%. Between 1996 and 2003 the percent composition of largemouth bass varied considerably, ranging from a low of 47.9% in 2003 to a high of 88% in 1997, the highest percent contribution of largemouth bass since the voluntary tournament reporting program began.

The recent variation in percent contribution of largemouth bass at tournament weigh-in is primarily due to an increase in smallmouth bass. Prior to 1995, the average number of smallmouth bass entered in tournaments was consistently below 0.5 bass per trip each year, ranging between 0.27 and 0.46 bass per trip. However, in 1995 the number of smallmouth bass per angler trip rose to 0.94 bass per trip, exceeding the number of largemouth bass entered per angler trip for the first time since inception of the voluntary tournament reporting program. Following 1995, the number of smallmouth bass per trip at Hudson River tournaments has fluctuated substantially, but has generally increased as compared to previous years, with only two years less than 0.45 bass per trip (1997 and 2002 with lows of 0.20 and 0.30 bass per trip, respectively). It is unclear why smallmouth bass weigh-in rates have fluctuated since 1995, as compared to previous years. This change may be due to a variety of factors, including changes in black bass population size, black bass distribution and/or angler effort (i.e., a change in anglers targeting largemouth bass or smallmouth bass more frequently).

The average weight per bass during 2004 (1.70 lbs.) is similar to the past two years of tournament monitoring (Table 3-3), and below the NYSDEC fishery management objective of 1.9 lbs per bass (Figure 4-1). Prior to 1993, weight per bass exceeded the NYSDEC fishery management objective; averaging 2.1 lbs per bass for the seven year period. Since 1993, this objective has been exceeded only once (1.99 lbs in 1994). Bass weights were not collected from 1999 through 2001, and 2002 data is likely underrepresented because of the small number of trips sampled. Largemouth bass are typically larger than smallmouth bass. The relatively low average weight per bass during 2004 is likely due to the higher number of smallmouth bass entered in tournaments.

The Hudson River black bass fishery management objectives are:

1. Greater than 45% of largemouth bass to be greater than 381 mm (15 inches) total length (RSD₁₅ of 45),
2. Maintain an average weight per bass greater than 1.9 lbs. (when length data are not available), and
3. Maintain a tournament entry rate of 1.4 black bass per trip.

During 2004, the overall average total length of largemouth bass examined during on-site tournament monitoring events was 379 mm (14.92 inches). Forty-nine percent of the largemouth bass were equal to or greater than 381 mm (15 inches) (Figure 4-2). This meets the NYSDEC fishery management objective for an RSD₁₅ of 45 or better. The overall average weight per black bass for 2004 Hudson River tournaments was 1.70 lbs and does not meet the fishery management objective of 1.9 lbs per bass. The average number of black bass entered per trip during 2004 was 1.9, exceeding the fishery management objective of 1.4 black bass per trip.

5.0 RECOMMENDATIONS

The primary intent of the voluntary tournament reporting program for Hudson River black bass tournaments is to provide tournament weigh-in and angler success information for a large number of tournament angler trips with a minimum amount of effort or expenditure. This continuous data set (1984-2003) has been used to compare black bass tournament-related fishery statistics to NYSDEC black bass fishery objectives established in the Hudson River Estuary Management Plan. Periodic on-site monitoring of one or two large tournaments has been conducted to obtain species, individual fish length, weight and age (scale samples) data not easily obtained through voluntary reporting.

Results of the 2004 tournament monitoring study confirmed that the voluntary tournament reporting program can successfully capture tournament weigh-in and angler success information for Hudson River black bass tournaments with a minimum of effort, while providing valuable information needed to assess fishery management objectives. Even though angler response to the questionnaire and follow up phone calls was low in 2004, it is recommended that the voluntary tournament reporting program and periodic on-site monitoring of one or two large tournaments be continued in the future. Several recommendations are provided below to help improve questionnaire and tournament reporting rate.

Contacting tournament sponsors prior to or soon after Hudson River black bass tournaments is critical in obtaining a meaningful sample size and measure of angler success through the voluntary reporting program. During prior years, the voluntary reporting program contacted local, regional and state tournament sponsors through mailed questionnaires at the beginning of the bass fishing season, during late-spring or early summer, and again at the end of the season to encourage questionnaire return (Linhart 1998). Tournament sponsors receiving information on the voluntary reporting program in spring may be more likely to respond to additional questionnaires for

tournament information received in the fall. We recommend early communication with tournament sponsors beginning in the spring and continuing into the late fall and that a similar schedule to that of previous surveys (Linhart 1998) is maintained for future voluntary reporting efforts.

Maintaining ongoing education of tournament sponsors to Hudson River black bass fishery management objectives would increase awareness among anglers and may prompt increased participation in the voluntary reporting program.

Many of the tournament sponsors and anglers contacted through the 2004 voluntary reporting program had access to email and the internet. Tournament club sponsors coordinate tournament schedules, post results and club information on their websites. This suggests that tournament sponsors and anglers may be inclined to complete the questionnaire or provide tournament weigh in information online, potentially increasing questionnaire response. We recommend that a link for the Hudson River black bass tournament monitoring study be added at the state level to tournament sponsor websites. Anglers and local club sponsors who access this website would then have the option to fill out the questionnaire online.

Prior to 1999, the voluntary tournament monitoring study request for information letter and questionnaire were transmitted on NYSDEC letterhead. Earlier voluntary tournament monitoring surveys of the Hudson River received higher angler and tournament sponsor response rates than recent years (2002-2004). Anglers and tournament sponsors may be more willing to complete the questionnaire if requested by a state agency. We recommend that for future voluntary tournament monitoring efforts the cover letter and questionnaire be sent on NYSDEC letterhead.

6.0 ACKNOWLEDGEMENTS

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Table 3-1. Location, date, angler and weigh-in data for 2004 Hudson River black bass tournaments.

Organization Reference Code*	Tournament Date	Location	Number of Anglers	Number of Bass	Total Weight (lbs.)	Average Weight (lbs.)
1	6/23	Catskill	26	60	117.84	1.9
2	6/26	Wappingers Falls	49	49	68.87	1.4
3	6/26	Unidentified	29	39	63.72	1.6
4	6/26	Catskill	17	27	41.54	1.5
5	6/27	Kingston	28	46	80.75	1.7
1	7/03	Catskill	28	62	110.25	1.7
6	7/11	Catskill	101	260	413.54	1.6
7	7/17	Kingston	11	20	40.56	2.0
8 ¹	7/18	Catskill	17	73	NA ¹	NA
9	7/31	Unidentified	10	34	68.56	2.0
10 ^{2 & 3}	8/12-14	Catskill	786	1,480	2,389	1.6
11	8/22	Unidentified	72	152	268.72	1.7
1	9/04	Kingston	22	56	104.50	1.8
12	9/18	Unidentified	21	54	116.13	2.1
4	9/25	Kingston	15	38	73.52	1.9
1	10/20	Kingston	22	55	119.59	2.1
4	10/23	Kingston	16	39	70.56	1.8
9	10/23	Unidentified	9	31	72.06	2.3
13	10/31	Roundout Creek	12	34	55.35	1.6
4	11/07	Catskill	130	171	328.5	1.9
Total 2004			1,421	2,780	4603	

* 1. Hudson Valley Bassmasters, 2. Atlantic Bassmasters, 3. Westchester Rod and Reel Bassmasters, 4. Orange County Bassmasters, 5. Black Rock Bassbusters, 6. New York BASS Federation, 7. Northeast BASS Federation, 8. Garden State Bassmasters, 9. Rip Van Winkle Bassmasters, 10. ESPN and B.A.S.S., 11. New Jersey BASS Federation, 12. Bergen Bassmasters and 13. First Bassmasters of Sullivan County, NY

¹ Weight for this tournament was not reported. For this tournament the weight of the largest LMB was 4.56 lbs. and the weight of the largest SMB was 2.43 lbs.

² Three day tournament (8/12-14/04).

³ 2004 On-site tournament monitoring event. For ESPN tournament on site tournament monitoring event took place on day 2 (8/13/04). During the 8/13 tournament 2 LMB and 1 SMB were not weighed and at the 11/7 tournament 1 SMB was not weighed.

Table 3-2. Entry rates and weight data in 2004 Hudson River black bass tournaments.

Tournament Date	Location	Number of Trips	Number of Bass	Weight in Limit	Number of Bass per Trip	Number of LMB	Number of LMB per Trip	Largest LMB (lbs.)	Number of SMB	Number of SMB per Trip	Largest SMB (lbs.)	Lunker Weight (lbs.)
6/23/04	Catskill	26	60	5	2.31	24	0.9	-	36	1.3	-	-
6/26/04	Wappingers Falls	49	49	3	1.00	-	-	2.75	-	-	2.63	-
6/26/04	Unidentified	29	39	-	1.34	-	-	-	-	-	-	-
6/26/04	Catskill	17	27	-	1.59	6	0.3	-	21	1.2	-	3.11
6/27/04	Kingston	28	46	-	1.64	25	0.8	-	21	0.7	-	-
7/3/04	Catskill	28	62	-	2.21	42	0.6	-	20	0.3	-	-
7/11/04	Catskill	101	260	-	2.57	-	-	-	-	-	-	-
7/17/04	Kingston	11	20	-	1.82	17	0.8	-	3	0.2	-	-
7/18/04	Catskill	17	73	-	4.29	60	0.8	4.56	13	0.2	2.43	-
7/31/04	Unidentified	10	34	5	3.40	-	-	-	-	-	-	-
8/12/04 ^{1,2}	Catskill	348	718	5	2.06	-	-	-	-	-	-	-
8/13/04 ^{1,4}	Catskill	338	542	5	1.60	204	0.4	6.13	338	0.6	3.81	-
8/14/04 ^{1,2}	Catskill	100	220	5	2.20	-	-	-	-	-	-	-
8/22/04	Unidentified	72	152	-	2.11	-	-	-	-	-	-	-
9/4/04	Kingston	22	56	5	2.55	24	0.4	5.1	33	0.5	-	5.5
9/18/04	Unidentified	21	54	-	2.57	34	0.6	-	20	0.3	-	-
9/25/04	Kingston	15	38	-	2.53	29	0.7	-	9	0.2	-	-
10/20/04	Kingston	22	55	-	2.50	44	0.8	-	11	0.2	-	4.15
10/23/04	Kingston	16	39	-	2.44	25 ³	0.6	-	12 ³	0.3	-	-
10/23/04	Unidentified	9	31	-	3.44	-	-	-	-	-	-	-
10/31/04	Roundout Creek	12	34	-	2.83	-	-	-	-	-	-	3.05
11/7/04 ⁴	Catskill	130	171	5	1.32	87	0.5	4.31	84	0.5	3.88	-
	SUM	1,421	2,780		1.96	621			621			

Note: LMB = Largemouth bass; SMB = Smallmouth bass

¹ Three day tournament.

² The tournament sponsor did not have species specific information for two of the three days of the tournament.

³ Total number of bass provided by tournament sponsors do not equal the number of LMB and SMB weighed. Two fish were not counted in the individual species totals.

⁴ On-site tournament monitoring.

Table 3-3. Comparison of 1986-2004 Hudson River black bass tournament weigh-in statistics.

Year	Number Trips Sampled	% Limit Catches¹	Largest Bass (lbs.)	Average Number Bass per Trip	Average Number LMB per Trip	Average Number SMB per Trip	Range of Bass per Trip	Average Percent LMB	Average Weight per Bass (lbs.)
1986	1,946	16	6.8	2.1	1.84	0.27	1.25-3.17	87.4	2.06
1987	1,443	6.7	6.8	1.4	1.00	0.43	0.50-3.22	69.9	2.19
1988	1,129	15.1	5.1	1.6	1.26	0.32	0.38-3.01	79.7	2.16
1989	1,607	11.9	6.7	1.9	1.45	0.42	0.74-4.13	77.6	2.14
1990	1,725	4.2	6.3	1.3	0.88	0.40	0.74-2.38	68.8	2.00
1991	1,132	6.9	6.5	1.4	1.06	0.33	0.94-2.55	76.1	2.06
1992	679	17.5	6.0	1.8	1.44	0.39	0.42-4.17	78.5	2.29
1993	1,298	8.9	6.3	1.5	1.14	0.38	0.38-3.23	74.8	1.79
1994	769	8.3	6.8	1.7	1.23	0.46	0.38-3.45	72.8	1.99
1995	1,589	10.2	6.4	1.6	0.70	0.94	0.74-4.00	42.8	1.86
1996	1,103	8.4	6.1	1.8	1.08	0.72	1.11-4.00	60.2	1.85
1997	904	14.4	6.5	1.6	1.48	0.20	1.02-3.00	88.0	1.79
1998	909	7.6	6.1	1.7	1.15	0.48	1.22-2.60	70.8	1.89
1999	681	--	--	1.5	1.02	0.49	0.82-2.73	67.4	--
2000	1,228	--	--	2.0	1.39	0.65	0.74-3.68	68.1	--
2001	1,418	--	--	1.5	1.00	0.52	1.05-2.32	65.8	--
2002 ²	113	--	--	1.3	0.89	0.30	1.00-1.37	75.0	1.70
2003 ³	617	23.6	5.6	1.8	0.78	0.85	0.80-3.00	47.9	1.69
2004 ³	1,421	11.2	6.1	1.9	0.89	0.89	1.00-4.20	50	1.70

Note: LMB = Largemouth bass; SMB = Smallmouth bass

¹ Percent limit catch during 2003 and 2004 includes tournaments where limits were lower than the legal harvest limit. Previous tournament summaries may have excluded these lower than the legal harvest limit tournaments from this calculation.

² Number of trips sampled is below the NYSDEC sample size objective of 500 trips for determining tournament-catch statistics (NYSDEC 1996).

³ Average number of largemouth bass and smallmouth bass per trip, and average percent largemouth bass were calculated using tournament catch data from those tournaments with species-specific catch data only.

Table 3-4. River boundaries, tournament duration and weigh-in limits from five 2004 Hudson River black bass tournaments.

Organization Name	Tournament Date	Location	River Boundaries	Duration (Hours)	Tournament Specific Weigh-in Limit	Tournament Rules
Hudson Valley Bassmasters	6/23/04	Catskill	No limits	8	5	NYS Regulations
		Wappingers				NYS Regulations
Atlantic Bassmasters	6/26/04	Falls	No limits	8	3	
Rip Van Winkle Bassmasters	7/31/04	Unidentified	No limits	8	5	NYS Regulations
ESPN and B.A.S.S.	8/12/04	Catskill	No limits	8	5	NYS Regulations
Orange County Bassmasters	11/7/04	Catskill	No Limits	8	5	NYS Regulations

Table 3-5. On-site black bass tournament monitoring sample information (numbers of fish examined and weighed) during 2004.

Tournament Date	Organization	Number of Trips	Number of Bass Examined	Number of LMB	Number of SMB	Number of LMB Weighed	Average Weight (lbs.) of LMB	Number of SMB Weighed	Average Weight (lbs.) of SMB	Average Weight (lbs.) of Black Bass
8/13/04	ESPN Orange County	338	542	204	338	202 ¹	1.84	337 ¹	1.28	1.49
11/7/04	Bassmasters	130	172	87	85	87	2.03	84 ²	1.79	1.91

Note: LMB = Largemouth bass; SMB = Smallmouth bass

¹2 LMB and 1 SMB were not weighed due to fish condition i.e. jaw injury or caudal fin rot.

²1 SMB was not weighed due to fish condition i.e. jaw injury or caudal fin rot.

Table 3-6. Recapture information collected during on-site tournament monitoring during 2004.

Tournament Date	Species	Length (mm)	Weight (lbs.)	Release / Recapture¹	Recap Tag #	Clip Code	Release Date	Release Location	Release Length (mm)	Comment
8/13/04	LMB	476	2.93	2	8343	DS-3	3/16/01	Rondout Creek	437	-
8/13/04	LMB	398	2.06	2	1889	DS-3	4/01/99	Rondout Creek	359	--
8/13/04	LMB	389	1.75	2	3142	DS-4	10/03/99	Charles Ryder Park	364	--
11/7/04	LMB	460	3.43	2	4350	DS-3	3/14/00	Esopus Creek	421	--

Note: LMB = Largemouth bass; SMB = Smallmouth bass

¹ Tag Codes used during 1999-2001 Hudson River Estuary Black Bass Study: 2= Recapture; 3= Suspected recapture

Table 3-7. Average length (mm) of black bass measured during on-site tournament monitoring in 2004.

Tournament Date	Average Length (mm) of LMB	Range of LMB Length (mm)	Average Length (mm) of SMB	Range of SMB Length (mm)
08/13/04	379	300-507	362	288-500
11/07/04	386	320-535	395	300-504

Note: LMB = Largemouth bass; SMB = Smallmouth bass

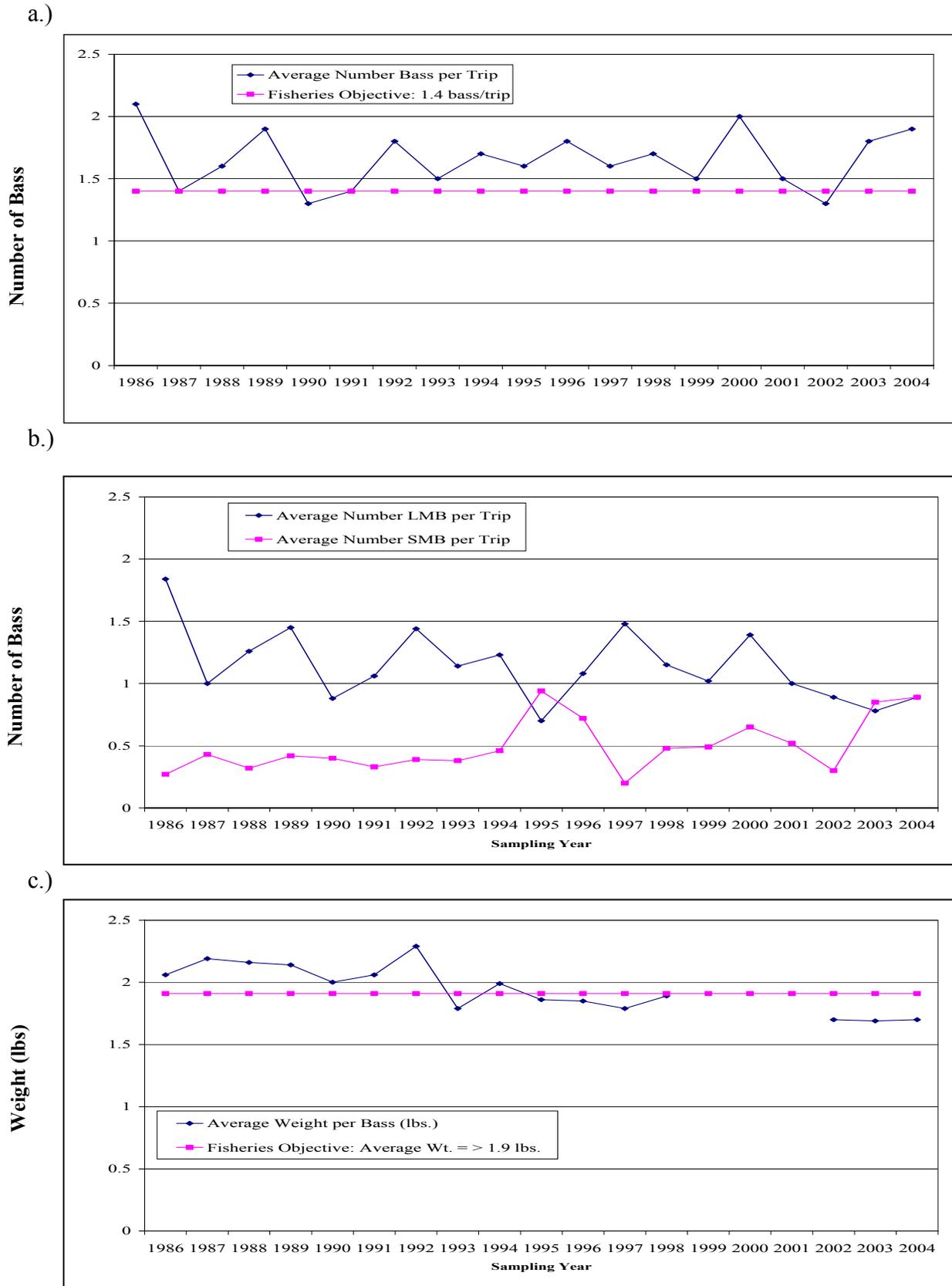
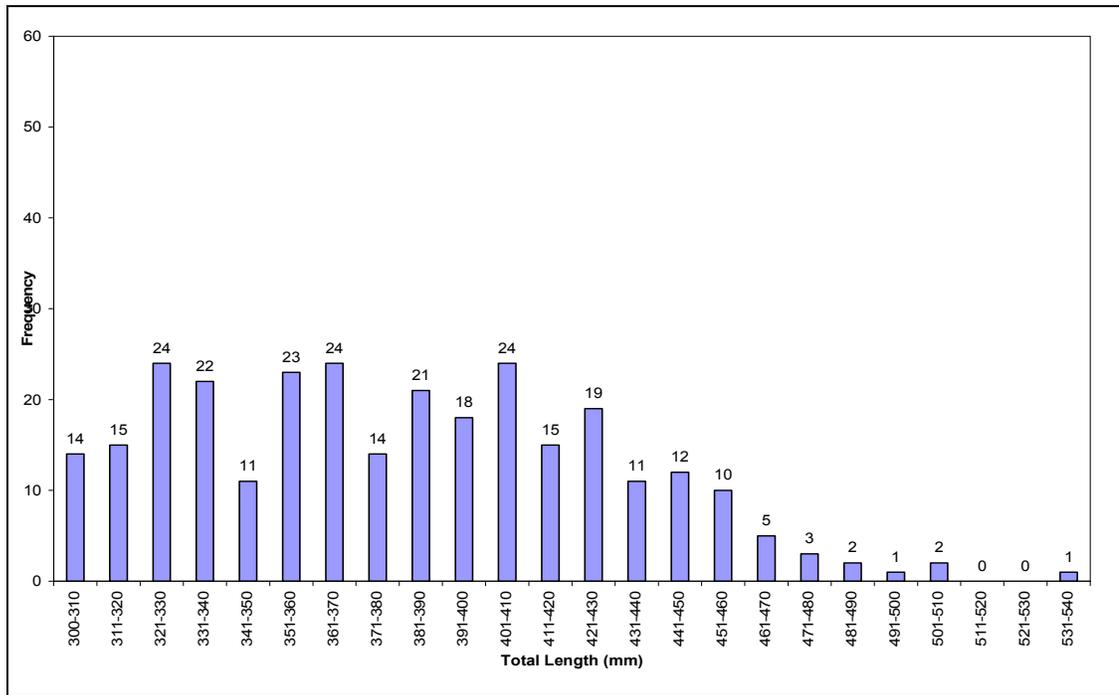


Figure 4-1. Number of largemouth bass (LMB) and smallmouth bass (SMB) per trip (a), number of black bass per trip (b), and average weight per black bass (c) during Hudson River black bass tournaments from 1986-2004. Note: Number of trips sampled in 2002 was below NYSDEC sample size objective of 500 trips for determining tournament-catch statistics (NYSDEC 1996).

a)



b)

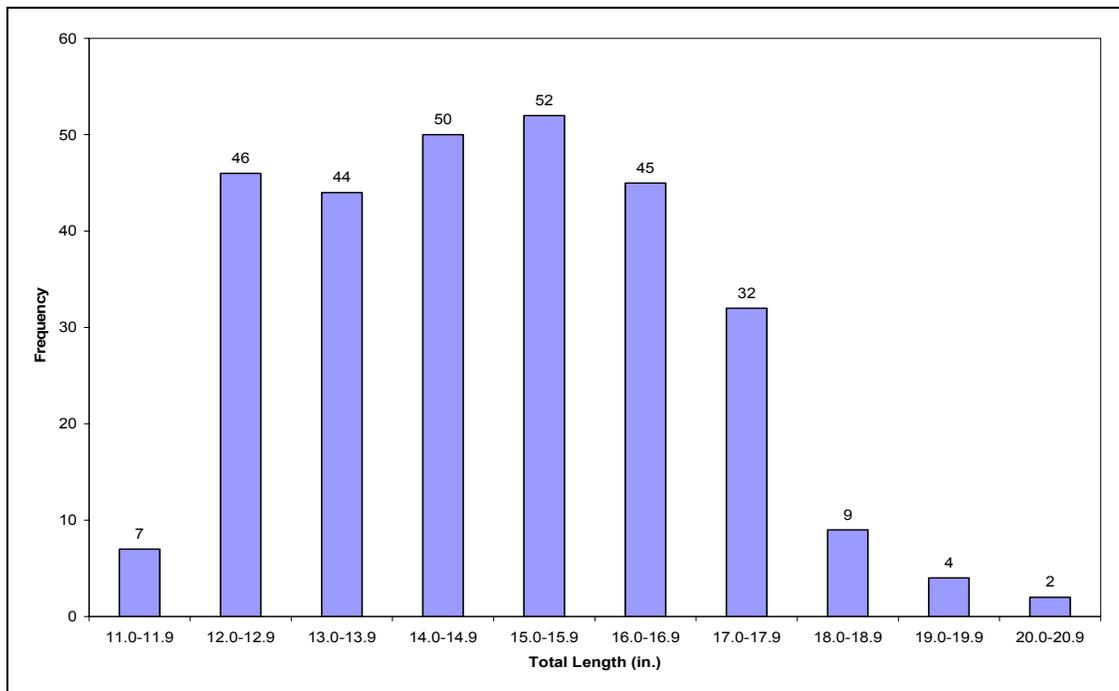


Figure 4-2. Length frequency in millimeters (a) and inches (b) of largemouth bass measured during 13 August and 7 November 2004 on-site tournament monitoring.

Appendix A

29 October 2004
File No. 1052-002

««AddressBlock»»

**Re: New York State Department of Environmental Conservation (NYSDEC)
Hudson River Estuary Black Bass Study**

««GreetingLine»»

Lawler, Matusky & Skelly Engineers LLP (LMS) and NYSDEC are presently conducting a study of largemouth and smallmouth bass (i.e., black bass) in the Hudson River Estuary as part of the NYSDEC's management of this fishery. Information provided on the attached Hudson River Black Bass Tournament Questionnaire will be extremely valuable in assessing progress towards NYSDEC's management objective. A summary of the 2002-2003 Hudson River Black Bass Tournament Survey is also enclosed.

Please take a minute to complete the enclosed questionnaire for the 2004 black bass season. If your club sponsors more than one Hudson River Estuary tournament (tournaments located downstream of the Troy Dam), then please make a copy of the questionnaire or contact me for additional copies. Your cooperation is greatly appreciated.

Sincerely,

Rebecca Magron
Environmental Scientist

Enclosures

2004 Hudson River Estuary Black Bass Tournament Questionnaire

Form completed by: _____

Address: _____

Phone: _____

1. Organization Name : _____

2. Weigh-in Location: _____

3. Upriver/Downriver boundaries for this tournament: _____

4. Date of tournament: _____ 5. Hours fished per day: _____

6. Number of contestants: _____ 7. Number limit catches: _____

8. Total Number of black bass weighed in: _____

Number of Largemouth weighed: _____

Number of Smallmouth weighed: _____

9. Number of black bass released alive: _____

10. Total Pounds of black bass weighed in: _____

Pounds of largemouth bass weighed in: _____

Pounds of smallmouth bass weighed in: _____

11. Weight of largest largemouth: _____

12. Weight of largest smallmouth: _____

13. Numbers from tagged bass, if any: _____

14. Number of other Hudson River black bass tournaments you held this year: _____

15. Please state specific tournament rules (for example, combined 2 day tournaments, statewide regulations, 3-fish limit, 14-inch size limit, etc): _____

Please return completed questionnaires to:

Rebecca Magron

Lawler, Matusky & Skelly Engineers LLP

1 Blue Hill Plaza, Floor 12

Pearl River, NY 10965

(845) 735-8300 ext. 299

Appendix B

Appendix B-1. Length (mm) and weight (lbs.) of black bass measured during the 13 August and 7 November 2004 on site tournament monitoring events.

Tournament Date	Species¹	Length (TLmm)	Length (TL in.)	Weight (lbs.)	Weight (g)
8/13/2004	LMB	300	11.81	0.94	425.24
8/13/2004	LMB	300	11.81	0.88	396.89
8/13/2004	LMB	303	11.93	0.69	311.84
8/13/2004	LMB	303	11.93	0.88	396.89
8/13/2004	LMB	303	11.93	1.00	453.59
8/13/2004	LMB	304	11.97	0.88	396.89
8/13/2004	LMB	304	11.97	0.88	396.89
8/13/2004	LMB	305	12.00	0.56	255.14
8/13/2004	LMB	305	12.00	1.00	453.59
8/13/2004	LMB	305	12.00	0.88	396.89
8/13/2004	LMB	305	12.00	0.75	340.19
8/13/2004	LMB	305	12.00	1.00	453.59
8/13/2004	LMB	306	12.04	1.06	481.94
8/13/2004	LMB	307	12.08	1.38	623.69
8/13/2004	LMB	314	12.36	0.75	340.19
8/13/2004	LMB	314	12.36	0.94	425.24
8/13/2004	LMB	315	12.40	0.63	283.49
8/13/2004	LMB	315	12.40	0.56	255.14
8/13/2004	LMB	315	12.40	1.06	481.94
8/13/2004	LMB	315	12.40	1.13	510.29
8/13/2004	LMB	316	12.44	1.19	538.64
8/13/2004	LMB	316	12.44	1.19	538.64
8/13/2004	LMB	317	12.48	1.19	538.64
8/13/2004	LMB	318	12.52	1.06	481.94
8/13/2004	LMB	320	12.60	1.00	453.59
8/13/2004	LMB	320	12.60	0.94	425.24
8/13/2004	LMB	321	12.63	1.13	510.29
8/13/2004	LMB	323	12.71	1.25	566.99
8/13/2004	LMB	323	12.71	1.19	538.64
8/13/2004	LMB	324	12.75	1.13	510.29
8/13/2004	LMB	324	12.75	1.13	510.29
8/13/2004	LMB	325	12.79	1.31	595.34
8/13/2004	LMB	326	12.83	1.31	595.34
8/13/2004	LMB	326	12.83	1.25	566.99
8/13/2004	LMB	326	12.83	1.19	538.64
8/13/2004	LMB	327	12.87	1.19	538.64
8/13/2004	LMB	327	12.87	1.25	566.99
8/13/2004	LMB	327	12.87	1.06	481.94
8/13/2004	LMB	328	12.91	1.13	510.29
8/13/2004	LMB	329	12.95	1.06	481.94
8/13/2004	LMB	329	12.95	1.38	623.69
8/13/2004	LMB	330	12.99	0.88	396.89
8/13/2004	LMB	330	12.99	1.38	623.69
8/13/2004	LMB	330	12.99	1.00	453.59
8/13/2004	LMB	330	12.99	1.06	481.94
8/13/2004	LMB	331	13.03	1.44	652.04
8/13/2004	LMB	332	13.07	1.25	566.99
8/13/2004	LMB	332	13.07	1.25	566.99
8/13/2004	LMB	333	13.11	1.19	538.64
8/13/2004	LMB	334	13.15	0.81	368.54
8/13/2004	LMB	334	13.15	1.19	538.64

¹ LMB = Largemouth Bass; SMB = Smallmouth Bass.

Appendix B-1. Length (mm) and weight (lbs.) of black bass measured during the 13 August and 7 November 2004 on site tournament monitoring events.

Tournament Date	Species¹	Length (TLmm)	Length (TL in.)	Weight (lbs.)	Weight (g)
8/13/2004	LMB	334	13.15	1.00	453.59
8/13/2004	LMB	335	13.19	1.25	566.99
8/13/2004	LMB	335	13.19	1.25	566.99
8/13/2004	LMB	336	13.22	1.06	481.94
8/13/2004	LMB	337	13.26	1.38	623.69
8/13/2004	LMB	338	13.30	0.00	0.00
8/13/2004	LMB	338	13.30	1.50	680.39
8/13/2004	LMB	338	13.30	1.44	652.04
8/13/2004	LMB	338	13.30	1.19	538.64
8/13/2004	LMB	338	13.30	0.00	0.00
8/13/2004	LMB	340	13.38	1.31	595.34
8/13/2004	LMB	340	13.38	1.06	481.94
8/13/2004	LMB	344	13.54	1.06	481.94
8/13/2004	LMB	345	13.58	1.63	737.08
8/13/2004	LMB	347	13.66	1.31	595.34
8/13/2004	LMB	348	13.70	1.56	708.73
8/13/2004	LMB	349	13.74	1.38	623.69
8/13/2004	LMB	351	13.82	1.44	652.04
8/13/2004	LMB	352	13.85	1.06	481.94
8/13/2004	LMB	352	13.85	1.44	652.04
8/13/2004	LMB	353	13.89	1.69	765.43
8/13/2004	LMB	354	13.93	1.50	680.39
8/13/2004	LMB	355	13.97	1.56	708.73
8/13/2004	LMB	356	14.01	1.06	481.94
8/13/2004	LMB	356	14.01	1.50	680.39
8/13/2004	LMB	357	14.05	1.81	822.13
8/13/2004	LMB	360	14.17	1.50	680.39
8/13/2004	LMB	360	14.17	1.50	680.39
8/13/2004	LMB	360	14.17	1.75	793.78
8/13/2004	LMB	360	14.17	1.63	737.08
8/13/2004	LMB	360	14.17	1.56	708.73
8/13/2004	LMB	362	14.25	1.25	566.99
8/13/2004	LMB	362	14.25	1.13	510.29
8/13/2004	LMB	362	14.25	1.38	623.69
8/13/2004	LMB	362	14.25	1.50	680.39
8/13/2004	LMB	363	14.29	1.06	481.94
8/13/2004	LMB	363	14.29	1.69	765.43
8/13/2004	LMB	364	14.33	1.75	793.78
8/13/2004	LMB	364	14.33	1.50	680.39
8/13/2004	LMB	365	14.37	1.56	708.73
8/13/2004	LMB	365	14.37	1.63	737.08
8/13/2004	LMB	367	14.45	1.38	623.69
8/13/2004	LMB	368	14.48	1.63	737.08
8/13/2004	LMB	370	14.56	1.19	538.64
8/13/2004	LMB	374	14.72	1.00	453.59
8/13/2004	LMB	375	14.76	1.56	708.73
8/13/2004	LMB	376	14.80	1.56	708.73
8/13/2004	LMB	377	14.84	1.63	737.08
8/13/2004	LMB	379	14.92	1.31	595.34
8/13/2004	LMB	382	15.04	1.88	850.48
8/13/2004	LMB	382	15.04	2.06	935.53

¹ LMB = Largemouth Bass; SMB = Smallmouth Bass.

Appendix B-1. Length (mm) and weight (lbs.) of black bass measured during the 13 August and 7 November 2004 on site tournament monitoring events.

Tournament Date	Species¹	Length (TLmm)	Length (TL in.)	Weight (lbs.)	Weight (g)
8/13/2004	LMB	383	15.07	2.31	1048.93
8/13/2004	LMB	384	15.11	1.56	708.73
8/13/2004	LMB	384	15.11	1.81	822.13
8/13/2004	LMB	385	15.15	1.75	793.78
8/13/2004	LMB	386	15.19	1.38	623.69
8/13/2004	LMB	386	15.19	1.94	878.83
8/13/2004	LMB	389	15.31	1.75	793.78
8/13/2004	LMB	390	15.35	1.81	822.13
8/13/2004	LMB	390	15.35	1.94	878.83
8/13/2004	LMB	390	15.35	2.13	963.88
8/13/2004	LMB	390	15.35	2.06	935.53
8/13/2004	LMB	392	15.43	1.81	822.13
8/13/2004	LMB	393	15.47	1.81	822.13
8/13/2004	LMB	394	15.51	2.19	992.23
8/13/2004	LMB	395	15.55	2.00	907.18
8/13/2004	LMB	395	15.55	1.94	878.83
8/13/2004	LMB	395	15.55	2.06	935.53
8/13/2004	LMB	395	15.55	1.94	878.83
8/13/2004	LMB	395	15.55	1.75	793.78
8/13/2004	LMB	395	15.55	2.06	935.53
8/13/2004	LMB	397	15.63	2.13	963.88
8/13/2004	LMB	398	15.67	2.06	935.53
8/13/2004	LMB	399	15.70	2.00	907.18
8/13/2004	LMB	400	15.74	2.19	992.23
8/13/2004	LMB	400	15.74	2.00	907.18
8/13/2004	LMB	400	15.74	2.00	907.18
8/13/2004	LMB	402	15.82	1.94	878.83
8/13/2004	LMB	402	15.82	2.19	992.23
8/13/2004	LMB	403	15.86	1.81	822.13
8/13/2004	LMB	404	15.90	2.00	907.18
8/13/2004	LMB	405	15.94	2.13	963.88
8/13/2004	LMB	405	15.94	2.00	907.18
8/13/2004	LMB	406	15.98	1.63	737.08
8/13/2004	LMB	406	15.98	2.38	1077.28
8/13/2004	LMB	407	16.02	2.25	1020.58
8/13/2004	LMB	408	16.06	2.63	1190.67
8/13/2004	LMB	409	16.10	2.06	935.53
8/13/2004	LMB	409	16.10	2.44	1105.63
8/13/2004	LMB	410	16.14	2.06	935.53
8/13/2004	LMB	410	16.14	2.19	992.23
8/13/2004	LMB	410	16.14	2.88	1304.07
8/13/2004	LMB	410	16.14	2.50	1133.98
8/13/2004	LMB	410	16.14	2.38	1077.28
8/13/2004	LMB	411	16.18	2.38	1077.28
8/13/2004	LMB	411	16.18	2.13	963.88
8/13/2004	LMB	411	16.18	3.00	1360.77
8/13/2004	LMB	412	16.22	2.50	1133.98
8/13/2004	LMB	413	16.26	1.75	793.78
8/13/2004	LMB	414	16.30	1.63	737.08
8/13/2004	LMB	414	16.30	2.13	963.88
8/13/2004	LMB	415	16.33	2.56	1162.32

¹ LMB = Largemouth Bass; SMB = Smallmouth Bass.

Appendix B-1. Length (mm) and weight (lbs.) of black bass measured during the 13 August and 7 November 2004 on site tournament monitoring events.

Tournament Date	Species¹	Length (TLmm)	Length (TL in.)	Weight (lbs.)	Weight (g)
8/13/2004	LMB	417	16.41	2.56	1162.32
8/13/2004	LMB	417	16.41	2.63	1190.67
8/13/2004	LMB	418	16.45	2.00	907.18
8/13/2004	LMB	419	16.49	2.56	1162.32
8/13/2004	LMB	421	16.57	2.25	1020.58
8/13/2004	LMB	422	16.61	2.56	1162.32
8/13/2004	LMB	424	16.69	2.31	1048.93
8/13/2004	LMB	425	16.73	2.63	1190.67
8/13/2004	LMB	425	16.73	2.69	1219.02
8/13/2004	LMB	425	16.73	2.75	1247.37
8/13/2004	LMB	426	16.77	2.13	963.88
8/13/2004	LMB	426	16.77	2.19	992.23
8/13/2004	LMB	428	16.85	2.38	1077.28
8/13/2004	LMB	428	16.85	2.56	1162.32
8/13/2004	LMB	429	16.89	3.00	1360.77
8/13/2004	LMB	429	16.89	1.75	793.78
8/13/2004	LMB	430	16.92	2.31	1048.93
8/13/2004	LMB	433	17.04	2.88	1304.07
8/13/2004	LMB	433	17.04	3.56	1615.91
8/13/2004	LMB	433	17.04	1.81	822.13
8/13/2004	LMB	435	17.12	2.50	1133.98
8/13/2004	LMB	436	17.16	2.75	1247.37
8/13/2004	LMB	438	17.24	2.69	1219.02
8/13/2004	LMB	438	17.24	2.44	1105.63
8/13/2004	LMB	438	17.24	3.06	1389.12
8/13/2004	LMB	440	17.32	2.56	1162.32
8/13/2004	LMB	440	17.32	3.38	1530.87
8/13/2004	LMB	441	17.36	2.31	1048.93
8/13/2004	LMB	441	17.36	3.19	1445.82
8/13/2004	LMB	442	17.40	2.25	1020.58
8/13/2004	LMB	444	17.48	2.88	1304.07
8/13/2004	LMB	444	17.48	2.56	1162.32
8/13/2004	LMB	445	17.52	2.88	1304.07
8/13/2004	LMB	445	17.52	3.19	1445.82
8/13/2004	LMB	448	17.63	3.50	1587.57
8/13/2004	LMB	450	17.71	3.31	1502.52
8/13/2004	LMB	450	17.71	2.94	1332.42
8/13/2004	LMB	451	17.75	2.44	1105.63
8/13/2004	LMB	452	17.79	2.63	1190.67
8/13/2004	LMB	455	17.91	2.31	1048.93
8/13/2004	LMB	455	17.91	2.81	1275.72
8/13/2004	LMB	455	17.91	4.13	1871.06
8/13/2004	LMB	457	17.99	3.38	1530.87
8/13/2004	LMB	461	18.14	2.94	1332.42
8/13/2004	LMB	470	18.50	3.25	1474.17
8/13/2004	LMB	472	18.58	2.38	1077.28
8/13/2004	LMB	476	18.74	2.94	1332.42
8/13/2004	LMB	483	19.01	3.88	1757.66
8/13/2004	LMB	483	19.01	3.81	1729.31
8/13/2004	LMB	493	19.40	4.13	1871.06
8/13/2004	LMB	507	19.96	3.50	1587.57

¹ LMB = Largemouth Bass; SMB = Smallmouth Bass.

Appendix B-1. Length (mm) and weight (lbs.) of black bass measured during the 13 August and 7 November 2004 on site tournament monitoring events.

Tournament Date	Species¹	Length (TLmm)	Length (TL in.)	Weight (lbs.)	Weight (g)
8/13/2004	SMB	288	11.34	0.31	141.75
8/13/2004	SMB	289	11.38	1.00	453.59
8/13/2004	SMB	289	11.38	0.81	368.54
8/13/2004	SMB	292	11.49	0.63	283.49
8/13/2004	SMB	294	11.57	0.88	396.89
8/13/2004	SMB	296	11.65	0.75	340.19
8/13/2004	SMB	298	11.73	0.75	340.19
8/13/2004	SMB	298	11.73	0.94	425.24
8/13/2004	SMB	300	11.81	0.69	311.84
8/13/2004	SMB	300	11.81	0.94	425.24
8/13/2004	SMB	302	11.89	0.88	396.89
8/13/2004	SMB	302	11.89	0.69	311.84
8/13/2004	SMB	302	11.89	0.63	283.49
8/13/2004	SMB	302	11.89	0.50	226.80
8/13/2004	SMB	303	11.93	0.56	255.14
8/13/2004	SMB	304	11.97	0.50	226.80
8/13/2004	SMB	305	12.00	0.81	368.54
8/13/2004	SMB	305	12.00	0.75	340.19
8/13/2004	SMB	305	12.00	0.69	311.84
8/13/2004	SMB	305	12.00	0.69	311.84
8/13/2004	SMB	305	12.00	0.69	311.84
8/13/2004	SMB	305	12.00	0.69	311.84
8/13/2004	SMB	306	12.04	0.88	396.89
8/13/2004	SMB	306	12.04	0.56	255.14
8/13/2004	SMB	306	12.04	0.75	340.19
8/13/2004	SMB	306	12.04	0.50	226.80
8/13/2004	SMB	307	12.08	0.44	198.45
8/13/2004	SMB	307	12.08	0.75	340.19
8/13/2004	SMB	308	12.12	0.56	255.14
8/13/2004	SMB	308	12.12	1.00	453.59
8/13/2004	SMB	309	12.16	0.94	425.24
8/13/2004	SMB	309	12.16	0.81	368.54
8/13/2004	SMB	309	12.16	0.75	340.19
8/13/2004	SMB	310	12.20	0.56	255.14
8/13/2004	SMB	310	12.20	0.94	425.24
8/13/2004	SMB	310	12.20	0.75	340.19
8/13/2004	SMB	310	12.20	0.75	340.19
8/13/2004	SMB	310	12.20	0.75	340.19
8/13/2004	SMB	310	12.20	1.06	481.94
8/13/2004	SMB	311	12.24	0.69	311.84
8/13/2004	SMB	311	12.24	0.69	311.84
8/13/2004	SMB	312	12.28	0.94	425.24
8/13/2004	SMB	312	12.28	0.69	311.84
8/13/2004	SMB	313	12.32	0.94	425.24
8/13/2004	SMB	313	12.32	0.88	396.89
8/13/2004	SMB	313	12.32	0.63	283.49
8/13/2004	SMB	313	12.32	0.75	340.19
8/13/2004	SMB	314	12.36	0.44	198.45
8/13/2004	SMB	314	12.36	0.94	425.24
8/13/2004	SMB	315	12.40	0.88	396.89
8/13/2004	SMB	315	12.40	0.75	340.19
8/13/2004	SMB	315	12.40	0.94	425.24

¹ LMB = Largemouth Bass; SMB = Smallmouth Bass.

Appendix B-1. Length (mm) and weight (lbs.) of black bass measured during the 13 August and 7 November 2004 on site tournament monitoring events.

Tournament Date	Species¹	Length (TLmm)	Length (TL in.)	Weight (lbs.)	Weight (g)
8/13/2004	SMB	315	12.40	1.19	538.64
8/13/2004	SMB	315	12.40	0.81	368.54
8/13/2004	SMB	315	12.40	0.81	368.54
8/13/2004	SMB	315	12.40	0.81	368.54
8/13/2004	SMB	315	12.40	1.06	481.94
8/13/2004	SMB	316	12.44	0.44	198.45
8/13/2004	SMB	316	12.44	0.81	368.54
8/13/2004	SMB	317	12.48	0.50	226.80
8/13/2004	SMB	317	12.48	0.88	396.89
8/13/2004	SMB	317	12.48	0.75	340.19
8/13/2004	SMB	318	12.52	0.38	170.10
8/13/2004	SMB	318	12.52	0.88	396.89
8/13/2004	SMB	318	12.52	0.81	368.54
8/13/2004	SMB	318	12.52	0.81	368.54
8/13/2004	SMB	318	12.52	1.19	538.64
8/13/2004	SMB	319	12.56	0.81	368.54
8/13/2004	SMB	319	12.56	0.69	311.84
8/13/2004	SMB	319	12.56	0.88	396.89
8/13/2004	SMB	319	12.56	0.69	311.84
8/13/2004	SMB	320	12.60	0.31	141.75
8/13/2004	SMB	320	12.60	0.81	368.54
8/13/2004	SMB	320	12.60	1.63	737.08
8/13/2004	SMB	320	12.60	0.75	340.19
8/13/2004	SMB	320	12.60	0.88	396.89
8/13/2004	SMB	320	12.60	0.88	396.89
8/13/2004	SMB	321	12.63	1.06	481.94
8/13/2004	SMB	321	12.63	0.81	368.54
8/13/2004	SMB	321	12.63	0.94	425.24
8/13/2004	SMB	322	12.67	0.88	396.89
8/13/2004	SMB	322	12.67	0.94	425.24
8/13/2004	SMB	323	12.71	0.63	283.49
8/13/2004	SMB	324	12.75	0.50	226.80
8/13/2004	SMB	324	12.75	0.69	311.84
8/13/2004	SMB	324	12.75	1.06	481.94
8/13/2004	SMB	324	12.75	1.19	538.64
8/13/2004	SMB	324	12.75	0.81	368.54
8/13/2004	SMB	325	12.79	1.25	566.99
8/13/2004	SMB	325	12.79	1.25	566.99
8/13/2004	SMB	326	12.83	0.56	255.14
8/13/2004	SMB	326	12.83	0.56	255.14
8/13/2004	SMB	327	12.87	1.25	566.99
8/13/2004	SMB	328	12.91	1.00	453.59
8/13/2004	SMB	328	12.91	1.25	566.99
8/13/2004	SMB	328	12.91	1.13	510.29
8/13/2004	SMB	329	12.95	0.75	340.19
8/13/2004	SMB	330	12.99	0.63	283.49
8/13/2004	SMB	330	12.99	0.94	425.24
8/13/2004	SMB	331	13.03	0.44	198.45
8/13/2004	SMB	331	13.03	0.63	283.49
8/13/2004	SMB	331	13.03	0.88	396.89
8/13/2004	SMB	331	13.03	1.06	481.94

¹ LMB = Largemouth Bass; SMB = Smallmouth Bass.

Appendix B-1. Length (mm) and weight (lbs.) of black bass measured during the 13 August and 7 November 2004 on site tournament monitoring events.

Tournament Date	Species¹	Length (TLmm)	Length (TL in.)	Weight (lbs.)	Weight (g)
8/13/2004	SMB	331	13.03	0.94	425.24
8/13/2004	SMB	331	13.03	1.31	595.34
8/13/2004	SMB	332	13.07	0.63	283.49
8/13/2004	SMB	332	13.07	0.44	198.45
8/13/2004	SMB	332	13.07	0.69	311.84
8/13/2004	SMB	332	13.07	0.94	425.24
8/13/2004	SMB	332	13.07	0.81	368.54
8/13/2004	SMB	333	13.11	1.13	510.29
8/13/2004	SMB	333	13.11	0.88	396.89
8/13/2004	SMB	333	13.11	0.94	425.24
8/13/2004	SMB	333	13.11	0.75	340.19
8/13/2004	SMB	334	13.15	0.88	396.89
8/13/2004	SMB	334	13.15	1.00	453.59
8/13/2004	SMB	334	13.15	1.06	481.94
8/13/2004	SMB	335	13.19	0.63	283.49
8/13/2004	SMB	335	13.19	1.00	453.59
8/13/2004	SMB	335	13.19	2.06	935.53
8/13/2004	SMB	335	13.19	0.88	396.89
8/13/2004	SMB	335	13.19	0.94	425.24
8/13/2004	SMB	335	13.19	1.19	538.64
8/13/2004	SMB	335	13.19	0.88	396.89
8/13/2004	SMB	335	13.19	0.81	368.54
8/13/2004	SMB	335	13.19	0.56	255.14
8/13/2004	SMB	337	13.26	0.63	283.49
8/13/2004	SMB	337	13.26	0.69	311.84
8/13/2004	SMB	337	13.26	1.00	453.59
8/13/2004	SMB	337	13.26	1.06	481.94
8/13/2004	SMB	338	13.30	0.69	311.84
8/13/2004	SMB	338	13.30	1.06	481.94
8/13/2004	SMB	340	13.38	0.75	340.19
8/13/2004	SMB	340	13.38	0.88	396.89
8/13/2004	SMB	340	13.38	0.69	311.84
8/13/2004	SMB	341	13.42	1.31	595.34
8/13/2004	SMB	341	13.42	1.25	566.99
8/13/2004	SMB	341	13.42	1.06	481.94
8/13/2004	SMB	342	13.46	1.06	481.94
8/13/2004	SMB	342	13.46	0.88	396.89
8/13/2004	SMB	342	13.46	1.00	453.59
8/13/2004	SMB	342	13.46	0.94	425.24
8/13/2004	SMB	344	13.54	0.81	368.54
8/13/2004	SMB	344	13.54	1.06	481.94
8/13/2004	SMB	345	13.58	1.06	481.94
8/13/2004	SMB	345	13.58	1.13	510.29
8/13/2004	SMB	345	13.58	1.31	595.34
8/13/2004	SMB	345	13.58	0.94	425.24
8/13/2004	SMB	345	13.58	0.81	368.54
8/13/2004	SMB	345	13.58	0.94	425.24
8/13/2004	SMB	346	13.62	1.25	566.99
8/13/2004	SMB	346	13.62	1.06	481.94
8/13/2004	SMB	346	13.62	1.13	510.29
8/13/2004	SMB	346	13.62	0.81	368.54

¹ LMB = Largemouth Bass; SMB = Smallmouth Bass.

Appendix B-1. Length (mm) and weight (lbs.) of black bass measured during the 13 August and 7 November 2004 on site tournament monitoring events.

Tournament Date	Species¹	Length (TLmm)	Length (TL in.)	Weight (lbs.)	Weight (g)
8/13/2004	SMB	347	13.66	1.31	595.34
8/13/2004	SMB	347	13.66	1.25	566.99
8/13/2004	SMB	347	13.66	1.13	510.29
8/13/2004	SMB	347	13.66	1.06	481.94
8/13/2004	SMB	348	13.70	0.81	368.54
8/13/2004	SMB	348	13.70	1.13	510.29
8/13/2004	SMB	348	13.70	1.25	566.99
8/13/2004	SMB	348	13.70	0.88	396.89
8/13/2004	SMB	349	13.74	0.50	226.80
8/13/2004	SMB	350	13.78	1.19	538.64
8/13/2004	SMB	350	13.78	0.88	396.89
8/13/2004	SMB	350	13.78	1.06	481.94
8/13/2004	SMB	350	13.78	0.94	425.24
8/13/2004	SMB	351	13.82	1.13	510.29
8/13/2004	SMB	352	13.85	1.25	566.99
8/13/2004	SMB	353	13.89	1.38	623.69
8/13/2004	SMB	353	13.89	1.25	566.99
8/13/2004	SMB	353	13.89	1.25	566.99
8/13/2004	SMB	353	13.89	1.06	481.94
8/13/2004	SMB	354	13.93	1.19	538.64
8/13/2004	SMB	354	13.93	1.13	510.29
8/13/2004	SMB	354	13.93	1.19	538.64
8/13/2004	SMB	355	13.97	1.00	453.59
8/13/2004	SMB	355	13.97	1.19	538.64
8/13/2004	SMB	356	14.01	1.38	623.69
8/13/2004	SMB	357	14.05	1.19	538.64
8/13/2004	SMB	357	14.05	0.94	425.24
8/13/2004	SMB	357	14.05	1.06	481.94
8/13/2004	SMB	358	14.09	1.19	538.64
8/13/2004	SMB	358	14.09	1.25	566.99
8/13/2004	SMB	359	14.13	0.88	396.89
8/13/2004	SMB	359	14.13	1.06	481.94
8/13/2004	SMB	359	14.13	1.31	595.34
8/13/2004	SMB	360	14.17	0.81	368.54
8/13/2004	SMB	360	14.17	1.13	510.29
8/13/2004	SMB	361	14.21	0.81	368.54
8/13/2004	SMB	361	14.21	0.88	396.89
8/13/2004	SMB	362	14.25	0.81	368.54
8/13/2004	SMB	363	14.29	1.13	510.29
8/13/2004	SMB	364	14.33	0.69	311.84
8/13/2004	SMB	364	14.33	0.94	425.24
8/13/2004	SMB	364	14.33	1.00	453.59
8/13/2004	SMB	364	14.33	1.13	510.29
8/13/2004	SMB	364	14.33	1.25	566.99
8/13/2004	SMB	365	14.37	0.56	255.14
8/13/2004	SMB	365	14.37	1.19	538.64
8/13/2004	SMB	365	14.37	1.25	566.99
8/13/2004	SMB	365	14.37	1.06	481.94
8/13/2004	SMB	365	14.37	1.13	510.29
8/13/2004	SMB	365	14.37	1.25	566.99
8/13/2004	SMB	366	14.41	0.94	425.24

¹ LMB = Largemouth Bass; SMB = Smallmouth Bass.

Appendix B-1. Length (mm) and weight (lbs.) of black bass measured during the 13 August and 7 November 2004 on site tournament monitoring events.

Tournament Date	Species¹	Length (TLmm)	Length (TL in.)	Weight (lbs.)	Weight (g)
8/13/2004	SMB	367	14.45	1.38	623.69
8/13/2004	SMB	367	14.45	1.44	652.04
8/13/2004	SMB	367	14.45	1.19	538.64
8/13/2004	SMB	368	14.48	1.44	652.04
8/13/2004	SMB	368	14.48	1.50	680.39
8/13/2004	SMB	368	14.48	1.31	595.34
8/13/2004	SMB	370	14.56	1.13	510.29
8/13/2004	SMB	370	14.56	1.19	538.64
8/13/2004	SMB	371	14.60	1.06	481.94
8/13/2004	SMB	371	14.60	1.63	737.08
8/13/2004	SMB	372	14.64	0.88	396.89
8/13/2004	SMB	372	14.64	1.50	680.39
8/13/2004	SMB	373	14.68	1.06	481.94
8/13/2004	SMB	374	14.72	1.19	538.64
8/13/2004	SMB	374	14.72	1.19	538.64
8/13/2004	SMB	374	14.72	1.06	481.94
8/13/2004	SMB	374	14.72	0.94	425.24
8/13/2004	SMB	374	14.72	1.13	510.29
8/13/2004	SMB	375	14.76	1.38	623.69
8/13/2004	SMB	375	14.76	1.31	595.34
8/13/2004	SMB	375	14.76	1.19	538.64
8/13/2004	SMB	375	14.76	1.38	623.69
8/13/2004	SMB	376	14.80	1.31	595.34
8/13/2004	SMB	377	14.84	1.56	708.73
8/13/2004	SMB	378	14.88	0.94	425.24
8/13/2004	SMB	378	14.88	1.75	793.78
8/13/2004	SMB	378	14.88	0.81	368.54
8/13/2004	SMB	378	14.88	2.06	935.53
8/13/2004	SMB	379	14.92	1.31	595.34
8/13/2004	SMB	380	14.96	1.38	623.69
8/13/2004	SMB	380	14.96	1.50	680.39
8/13/2004	SMB	380	14.96	1.56	708.73
8/13/2004	SMB	380	14.96	1.56	708.73
8/13/2004	SMB	380	14.96	1.38	623.69
8/13/2004	SMB	381	15.00	0.94	425.24
8/13/2004	SMB	381	15.00	1.69	765.43
8/13/2004	SMB	382	15.04	1.00	453.59
8/13/2004	SMB	382	15.04	1.44	652.04
8/13/2004	SMB	382	15.04	1.50	680.39
8/13/2004	SMB	382	15.04	1.56	708.73
8/13/2004	SMB	383	15.07	1.63	737.08
8/13/2004	SMB	384	15.11	1.38	623.69
8/13/2004	SMB	385	15.15	1.56	708.73
8/13/2004	SMB	385	15.15	1.25	566.99
8/13/2004	SMB	385	15.15	0.00	0.00
8/13/2004	SMB	386	15.19	1.25	566.99
8/13/2004	SMB	386	15.19	1.75	793.78
8/13/2004	SMB	386	15.19	1.63	737.08
8/13/2004	SMB	389	15.31	1.75	793.78
8/13/2004	SMB	389	15.31	1.31	595.34
8/13/2004	SMB	390	15.35	1.56	708.73

¹ LMB = Largemouth Bass; SMB = Smallmouth Bass.

Appendix B-1. Length (mm) and weight (lbs.) of black bass measured during the 13 August and 7 November 2004 on site tournament monitoring events.

Tournament Date	Species¹	Length (TLmm)	Length (TL in.)	Weight (lbs.)	Weight (g)
8/13/2004	SMB	390	15.35	1.31	595.34
8/13/2004	SMB	392	15.43	1.81	822.13
8/13/2004	SMB	392	15.43	1.63	737.08
8/13/2004	SMB	392	15.43	1.75	793.78
8/13/2004	SMB	393	15.47	2.06	935.53
8/13/2004	SMB	394	15.51	1.56	708.73
8/13/2004	SMB	394	15.51	1.50	680.39
8/13/2004	SMB	394	15.51	1.63	737.08
8/13/2004	SMB	395	15.55	1.25	566.99
8/13/2004	SMB	395	15.55	1.88	850.48
8/13/2004	SMB	396	15.59	1.56	708.73
8/13/2004	SMB	396	15.59	1.75	793.78
8/13/2004	SMB	397	15.63	1.25	566.99
8/13/2004	SMB	397	15.63	1.38	623.69
8/13/2004	SMB	397	15.63	1.56	708.73
8/13/2004	SMB	398	15.67	1.38	623.69
8/13/2004	SMB	399	15.70	1.69	765.43
8/13/2004	SMB	401	15.78	1.31	595.34
8/13/2004	SMB	401	15.78	1.69	765.43
8/13/2004	SMB	402	15.82	1.69	765.43
8/13/2004	SMB	402	15.82	1.75	793.78
8/13/2004	SMB	402	15.82	1.63	737.08
8/13/2004	SMB	402	15.82	1.75	793.78
8/13/2004	SMB	404	15.90	1.81	822.13
8/13/2004	SMB	405	15.94	2.19	992.23
8/13/2004	SMB	407	16.02	1.81	822.13
8/13/2004	SMB	410	16.14	2.06	935.53
8/13/2004	SMB	412	16.22	2.06	935.53
8/13/2004	SMB	413	16.26	1.94	878.83
8/13/2004	SMB	413	16.26	2.25	1020.58
8/13/2004	SMB	414	16.30	2.00	907.18
8/13/2004	SMB	416	16.37	2.25	1020.58
8/13/2004	SMB	417	16.41	2.13	963.88
8/13/2004	SMB	417	16.41	2.19	992.23
8/13/2004	SMB	421	16.57	3.06	1389.12
8/13/2004	SMB	422	16.61	1.69	765.43
8/13/2004	SMB	423	16.65	2.19	992.23
8/13/2004	SMB	425	16.73	1.06	481.94
8/13/2004	SMB	425	16.73	2.00	907.18
8/13/2004	SMB	426	16.77	1.63	737.08
8/13/2004	SMB	426	16.77	1.94	878.83
8/13/2004	SMB	427	16.81	1.75	793.78
8/13/2004	SMB	428	16.85	2.63	1190.67
8/13/2004	SMB	428	16.85	1.81	822.13
8/13/2004	SMB	428	16.85	2.50	1133.98
8/13/2004	SMB	429	16.89	2.19	992.23
8/13/2004	SMB	430	16.92	2.56	1162.32
8/13/2004	SMB	432	17.00	2.31	1048.93
8/13/2004	SMB	432	17.00	1.88	850.48
8/13/2004	SMB	432	17.00	2.50	1133.98
8/13/2004	SMB	435	17.12	2.13	963.88

¹ LMB = Largemouth Bass; SMB = Smallmouth Bass.

Appendix B-1. Length (mm) and weight (lbs.) of black bass measured during the 13 August and 7 November 2004 on site tournament monitoring events.

Tournament Date	Species¹	Length (TLmm)	Length (TL in.)	Weight (lbs.)	Weight (g)
8/13/2004	SMB	435	17.12	2.38	1077.28
8/13/2004	SMB	438	17.24	2.13	963.88
8/13/2004	SMB	438	17.24	1.75	793.78
8/13/2004	SMB	439	17.28	2.56	1162.32
8/13/2004	SMB	440	17.32	3.38	1530.87
8/13/2004	SMB	440	17.32	2.19	992.23
8/13/2004	SMB	440	17.32	2.50	1133.98
8/13/2004	SMB	445	17.52	2.44	1105.63
8/13/2004	SMB	447	17.59	2.69	1219.02
8/13/2004	SMB	448	17.63	3.13	1417.47
8/13/2004	SMB	448	17.63	2.38	1077.28
8/13/2004	SMB	450	17.71	1.88	850.48
8/13/2004	SMB	450	17.71	2.25	1020.58
8/13/2004	SMB	450	17.71	2.75	1247.37
8/13/2004	SMB	451	17.75	2.06	935.53
8/13/2004	SMB	453	17.83	2.63	1190.67
8/13/2004	SMB	454	17.87	2.63	1190.67
8/13/2004	SMB	455	17.91	2.75	1247.37
8/13/2004	SMB	460	18.11	2.13	963.88
8/13/2004	SMB	461	18.14	3.50	1587.57
8/13/2004	SMB	462	18.18	3.13	1417.47
8/13/2004	SMB	466	18.34	2.50	1133.98
8/13/2004	SMB	468	18.42	2.88	1304.07
8/13/2004	SMB	470	18.50	3.00	1360.77
8/13/2004	SMB	474	18.66	2.00	907.18
8/13/2004	SMB	474	18.66	3.44	1559.22
8/13/2004	SMB	486	19.13	3.81	1729.31
8/13/2004	SMB	487	19.17	3.25	1474.17
8/13/2004	SMB	493	19.40	3.56	1615.91
8/13/2004	SMB	496	19.52	3.75	1700.96
8/13/2004	SMB	500	19.68	3.06	1389.12
8/13/2004	SMB		0.00	1.25	566.99
11/7/2004	LMB	320	12.60	0.81	368.54
11/7/2004	LMB	320	12.60	1.00	453.59
11/7/2004	LMB	320	12.60	0.94	425.24
11/7/2004	LMB	326	12.83	0.81	368.54
11/7/2004	LMB	326	12.83	0.81	368.54
11/7/2004	LMB	328	12.91	1.06	481.94
11/7/2004	LMB	330	12.99	1.25	566.99
11/7/2004	LMB	330	12.99	1.19	538.64
11/7/2004	LMB	335	13.19	1.06	481.94
11/7/2004	LMB	335	13.19	1.13	510.29
11/7/2004	LMB	336	13.22	0.94	425.24
11/7/2004	LMB	338	13.30	1.00	453.59
11/7/2004	LMB	341	13.42	1.31	595.34
11/7/2004	LMB	342	13.46	1.25	566.99
11/7/2004	LMB	344	13.54	1.38	623.69
11/7/2004	LMB	345	13.58	1.06	481.94
11/7/2004	LMB	345	13.58	1.25	566.99
11/7/2004	LMB	349	13.74	1.50	680.39
11/7/2004	LMB	351	13.82	1.50	680.39

¹ LMB = Largemouth Bass; SMB = Smallmouth Bass.

Appendix B-1. Length (mm) and weight (lbs.) of black bass measured during the 13 August and 7 November 2004 on site tournament monitoring events.

Tournament Date	Species¹	Length (TLmm)	Length (TL in.)	Weight (lbs.)	Weight (g)
11/7/2004	LMB	351	13.82	1.06	481.94
11/7/2004	LMB	355	13.97	1.44	652.04
11/7/2004	LMB	355	13.97	1.19	538.64
11/7/2004	LMB	355	13.97	1.31	595.34
11/7/2004	LMB	356	14.01	1.44	652.04
11/7/2004	LMB	358	14.09	1.63	737.08
11/7/2004	LMB	360	14.17	1.56	708.73
11/7/2004	LMB	360	14.17	1.56	708.73
11/7/2004	LMB	361	14.21	1.63	737.08
11/7/2004	LMB	363	14.29	1.19	538.64
11/7/2004	LMB	363	14.29	1.19	538.64
11/7/2004	LMB	364	14.33	1.69	765.43
11/7/2004	LMB	365	14.37	1.81	822.13
11/7/2004	LMB	366	14.41	1.69	765.43
11/7/2004	LMB	368	14.48	1.69	765.43
11/7/2004	LMB	370	14.56	1.56	708.73
11/7/2004	LMB	370	14.56	1.69	765.43
11/7/2004	LMB	370	14.56	1.63	737.08
11/7/2004	LMB	370	14.56	1.50	680.39
11/7/2004	LMB	371	14.60	1.94	878.83
11/7/2004	LMB	372	14.64	1.44	652.04
11/7/2004	LMB	373	14.68	2.06	935.53
11/7/2004	LMB	375	14.76	2.00	907.18
11/7/2004	LMB	375	14.76	1.56	708.73
11/7/2004	LMB	380	14.96	2.06	935.53
11/7/2004	LMB	380	14.96	1.69	765.43
11/7/2004	LMB	380	14.96	1.94	878.83
11/7/2004	LMB	380	14.96	1.63	737.08
11/7/2004	LMB	382	15.04	2.06	935.53
11/7/2004	LMB	382	15.04	1.75	793.78
11/7/2004	LMB	384	15.11	1.75	793.78
11/7/2004	LMB	384	15.11	1.81	822.13
11/7/2004	LMB	385	15.15	2.06	935.53
11/7/2004	LMB	388	15.27	2.00	907.18
11/7/2004	LMB	388	15.27	1.94	878.83
11/7/2004	LMB	390	15.35	1.63	737.08
11/7/2004	LMB	391	15.39	2.00	907.18
11/7/2004	LMB	399	15.70	4.25	1927.76
11/7/2004	LMB	400	15.74	2.50	1133.98
11/7/2004	LMB	401	15.78	2.13	963.88
11/7/2004	LMB	403	15.86	2.25	1020.58
11/7/2004	LMB	404	15.90	2.25	1020.58
11/7/2004	LMB	405	15.94	2.00	907.18
11/7/2004	LMB	406	15.98	1.75	793.78
11/7/2004	LMB	409	16.10	2.44	1105.63
11/7/2004	LMB	410	16.14	2.56	1162.32
11/7/2004	LMB	415	16.33	3.00	1360.77
11/7/2004	LMB	415	16.33	2.31	1048.93
11/7/2004	LMB	420	16.53	2.56	1162.32
11/7/2004	LMB	422	16.61	2.94	1332.42
11/7/2004	LMB	424	16.69	2.69	1219.02

¹ LMB = Largemouth Bass; SMB = Smallmouth Bass.

Appendix B-1. Length (mm) and weight (lbs.) of black bass measured during the 13 August and 7 November 2004 on site tournament monitoring events.

Tournament Date	Species¹	Length (TLmm)	Length (TL in.)	Weight (lbs.)	Weight (g)
11/7/2004	LMB	425	16.73	2.75	1247.37
11/7/2004	LMB	426	16.77	2.94	1332.42
11/7/2004	LMB	428	16.85	2.94	1332.42
11/7/2004	LMB	429	16.89	2.38	1077.28
11/7/2004	LMB	440	17.32	3.06	1389.12
11/7/2004	LMB	445	17.52	2.50	1133.98
11/7/2004	LMB	450	17.71	3.00	1360.77
11/7/2004	LMB	455	17.91	3.50	1587.57
11/7/2004	LMB	455	17.91	3.38	1530.87
11/7/2004	LMB	455	17.91	3.25	1474.17
11/7/2004	LMB	460	18.11	3.44	1559.22
11/7/2004	LMB	462	18.18	3.00	1360.77
11/7/2004	LMB	465	18.30	3.13	1417.47
11/7/2004	LMB	470	18.50	4.00	1814.36
11/7/2004	LMB	475	18.70	4.63	2097.85
11/7/2004	LMB	510	20.07	6.13	2778.24
11/7/2004	LMB	535	21.06	4.31	1956.11
11/7/2004	SMB	300	11.81	0.94	425.24
11/7/2004	SMB	300	11.81	0.63	283.49
11/7/2004	SMB	311	12.24	0.63	283.49
11/7/2004	SMB	323	12.71	0.88	396.89
11/7/2004	SMB	324	12.75	0.69	311.84
11/7/2004	SMB	325	12.79	0.50	226.80
11/7/2004	SMB	329	12.95	0.88	396.89
11/7/2004	SMB	330	12.99	1.06	481.94
11/7/2004	SMB	334	13.15	1.81	822.13
11/7/2004	SMB	336	13.22	1.06	481.94
11/7/2004	SMB	340	13.38	1.19	538.64
11/7/2004	SMB	342	13.46	0.94	425.24
11/7/2004	SMB	343	13.50	0.94	425.24
11/7/2004	SMB	349	13.74	1.06	481.94
11/7/2004	SMB	350	13.78	1.19	538.64
11/7/2004	SMB	351	13.82	1.13	510.29
11/7/2004	SMB	353	13.89	0.81	368.54
11/7/2004	SMB	353	13.89	1.06	481.94
11/7/2004	SMB	355	13.97	1.06	481.94
11/7/2004	SMB	355	13.97	0.75	340.19
11/7/2004	SMB	356	14.01	1.13	510.29
11/7/2004	SMB	359	14.13	1.06	481.94
11/7/2004	SMB	360	14.17	1.44	652.04
11/7/2004	SMB	360	14.17	1.13	510.29
11/7/2004	SMB	360	14.17	0.00	0.00
11/7/2004	SMB	361	14.21	1.44	652.04
11/7/2004	SMB	363	14.29	1.25	566.99
11/7/2004	SMB	364	14.33	1.06	481.94
11/7/2004	SMB	366	14.41	0.88	396.89
11/7/2004	SMB	368	14.48	1.19	538.64
11/7/2004	SMB	368	14.48	1.44	652.04
11/7/2004	SMB	371	14.60	1.50	680.39
11/7/2004	SMB	374	14.72	1.34	608.54
11/7/2004	SMB	377	14.84	1.56	708.73

¹ LMB = Largemouth Bass; SMB = Smallmouth Bass.

Appendix B-1. Length (mm) and weight (lbs.) of black bass measured during the 13 August and 7 November 2004 on site tournament monitoring events.

Tournament Date	Species¹	Length (TLmm)	Length (TL in.)	Weight (lbs.)	Weight (g)
11/7/2004	SMB	380	14.96	1.44	652.04
11/7/2004	SMB	380	14.96	1.50	680.39
11/7/2004	SMB	383	15.07	1.44	652.04
11/7/2004	SMB	385	15.15	1.50	680.39
11/7/2004	SMB	385	15.15	2.13	963.88
11/7/2004	SMB	386	15.19	1.94	878.83
11/7/2004	SMB	388	15.27	1.63	737.08
11/7/2004	SMB	390	15.35	1.56	708.73
11/7/2004	SMB	392	15.43	1.88	850.48
11/7/2004	SMB	395	15.55	1.56	708.73
11/7/2004	SMB	396	15.59	1.63	737.08
11/7/2004	SMB	397	15.63	1.94	878.83
11/7/2004	SMB	400	15.74	1.81	822.13
11/7/2004	SMB	400	15.74	1.94	878.83
11/7/2004	SMB	401	15.78	1.69	765.43
11/7/2004	SMB	402	15.82	2.00	907.18
11/7/2004	SMB	405	15.94	2.00	907.18
11/7/2004	SMB	405	15.94	1.44	652.04
11/7/2004	SMB	410	16.14	2.06	935.53
11/7/2004	SMB	411	16.18	2.06	935.53
11/7/2004	SMB	414	16.30	2.50	1133.98
11/7/2004	SMB	414	16.30	2.06	935.53
11/7/2004	SMB	415	16.33	1.81	822.13
11/7/2004	SMB	417	16.41	1.88	850.48
11/7/2004	SMB	420	16.53	2.19	992.23
11/7/2004	SMB	423	16.65	2.81	1275.72
11/7/2004	SMB	428	16.85	2.88	1304.07
11/7/2004	SMB	430	16.92	2.38	1077.28
11/7/2004	SMB	430	16.92	2.44	1105.63
11/7/2004	SMB	432	17.00	2.06	935.53
11/7/2004	SMB	433	17.04	2.31	1048.93
11/7/2004	SMB	436	17.16	1.81	822.13
11/7/2004	SMB	440	17.32	2.19	992.23
11/7/2004	SMB	442	17.40	2.81	1275.72
11/7/2004	SMB	445	17.52	2.31	1048.93
11/7/2004	SMB	454	17.87	0.88	396.89
11/7/2004	SMB	454	17.87	2.31	1048.93
11/7/2004	SMB	455	17.91	3.13	1417.47
11/7/2004	SMB	456	17.95	2.69	1219.02
11/7/2004	SMB	456	17.95	2.94	1332.42
11/7/2004	SMB	461	18.14	3.50	1587.57
11/7/2004	SMB	464	18.26	3.06	1389.12
11/7/2004	SMB	464	18.26	2.88	1304.07
11/7/2004	SMB	471	18.54	3.19	1445.82
11/7/2004	SMB	475	18.70	2.94	1332.42
11/7/2004	SMB	476	18.74	3.06	1389.12
11/7/2004	SMB	477	18.77	3.25	1474.17
11/7/2004	SMB	480	18.89	2.88	1304.07
11/7/2004	SMB	484	19.05	3.19	1445.82
11/7/2004	SMB	495	19.48	3.06	1389.12
11/7/2004	SMB	504	19.84	3.88	1757.66

¹ LMB = Largemouth Bass; SMB = Smallmouth Bass.

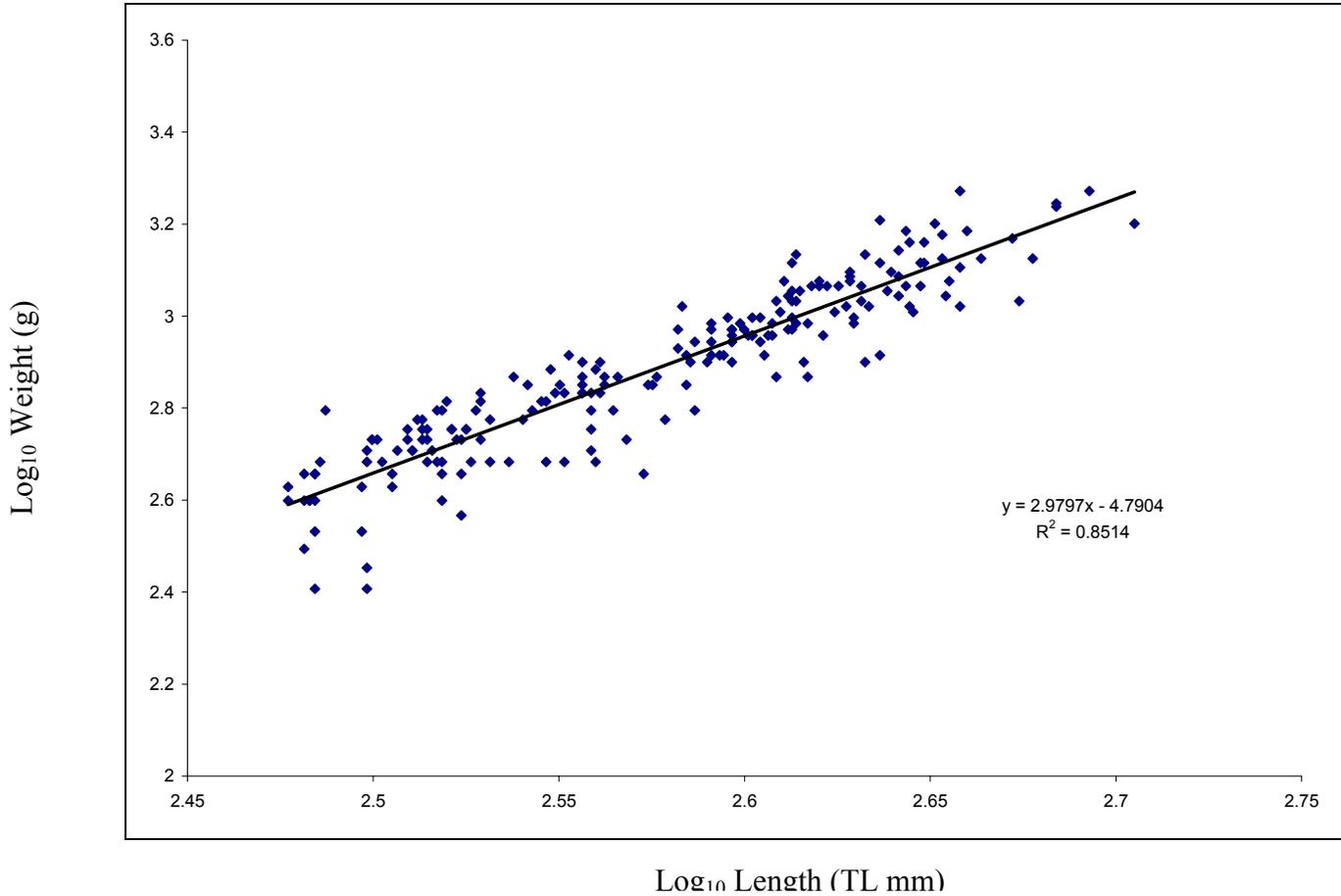
Appendix B-2. Length (in.) and weight (lbs.) of largemouth bass based on 13 August and 7 November 2004 on site tournament monitoring. (See Appendix B-3 for length -weight regressions)

Length (in)	Weight (lbs.)	Length (in)	Weight (lbs.)	Length (in)	Weight (lbs.)
11.81	0.94	12.99	1.25	14.17	1.50
11.81	0.88	12.99	1.19	14.17	1.50
11.93	0.69	13.03	1.44	14.17	1.75
11.93	0.88	13.07	1.25	14.17	1.63
11.93	1.00	13.07	1.25	14.17	1.56
11.97	0.88	13.11	1.19	14.17	1.56
11.97	0.88	13.15	0.81	14.17	1.56
12.00	0.56	13.15	1.19	14.21	1.63
12.00	1.00	13.15	1.00	14.25	1.25
12.00	0.88	13.19	1.25	14.25	1.13
12.00	0.75	13.19	1.25	14.25	1.38
12.00	1.00	13.19	1.06	14.25	1.50
12.04	1.06	13.19	1.13	14.29	1.06
12.08	1.38	13.22	1.06	14.29	1.69
12.36	0.75	13.22	0.94	14.29	1.19
12.36	0.94	13.26	1.38	14.29	1.19
12.40	0.63	13.30	-	14.33	1.75
12.40	0.56	13.30	1.50	14.33	1.50
12.40	1.06	13.30	1.44	14.33	1.69
12.40	1.13	13.30	1.19	14.37	1.56
12.44	1.19	13.30	-	14.37	1.63
12.44	1.19	13.30	1.00	14.37	1.81
12.48	1.19	13.38	1.31	14.41	1.69
12.52	1.06	13.38	1.06	14.45	1.38
12.60	1.00	13.42	1.31	14.48	1.63
12.60	0.94	13.46	1.25	14.48	1.69
12.60	0.81	13.54	1.06	14.56	1.19
12.60	1.00	13.54	1.38	14.56	1.56
12.60	0.94	13.58	1.63	14.56	1.69
12.63	1.13	13.58	1.06	14.56	1.63
12.71	1.25	13.58	1.25	14.56	1.50
12.71	1.19	13.66	1.31	14.60	1.94
12.75	1.13	13.70	1.56	14.64	1.44
12.75	1.13	13.74	1.38	14.68	2.06
12.79	1.31	13.74	1.50	14.72	1.00
12.83	1.31	13.82	1.44	14.76	1.56
12.83	1.25	13.82	1.50	14.76	2.00
12.83	1.19	13.82	1.06	14.76	1.56
12.83	0.81	13.85	1.06	14.80	1.56
12.83	0.81	13.85	1.44	14.84	1.63
12.87	1.19	13.89	1.69	14.92	1.31
12.87	1.25	13.93	1.50	14.96	2.06
12.87	1.06	13.97	1.56	14.96	1.69
12.91	1.13	13.97	1.44	14.96	1.94
12.91	1.06	13.97	1.19	14.96	1.63
12.95	1.06	13.97	1.31	15.04	1.88
12.95	1.38	14.01	1.06	15.04	2.06
12.99	0.88	14.01	1.50	15.04	2.06
12.99	1.38	14.01	1.44	15.04	1.75
12.99	1.00	14.05	1.81	15.07	2.31
12.99	1.06	14.09	1.63	15.11	1.56

Appendix B-2. Length (in.) and weight (lbs.) of largemouth bass based on 13 August and 7 November 2004 on site tournament monitoring. (See Appendix B-3 for length -weight regressions)

Length (in)	Weight (lbs.)	Length (in)	Weight (lbs.)	Length (in)	Weight (lbs.)
15.11	1.81	16.14	2.06	17.36	2.31
15.11	1.75	16.14	2.19	17.36	3.19
15.11	1.81	16.14	2.88	17.40	2.25
15.15	1.75	16.14	2.50	17.48	2.88
15.15	2.06	16.14	2.38	17.48	2.56
15.19	1.38	16.14	2.56	17.52	2.88
15.19	1.94	16.18	2.38	17.52	3.19
15.27	2.00	16.18	2.13	17.52	2.50
15.27	1.94	16.18	3.00	17.63	3.50
15.31	1.75	16.22	2.50	17.71	3.31
15.35	1.81	16.26	1.75	17.71	2.94
15.35	1.94	16.30	1.63	17.71	3.00
15.35	2.13	16.30	2.13	17.75	2.44
15.35	2.06	16.33	2.56	17.79	2.63
15.35	1.63	16.33	3.00	17.91	2.31
15.39	2.00	16.33	2.31	17.91	2.81
15.43	1.81	16.41	2.56	17.91	4.13
15.47	1.81	16.41	2.63	17.91	3.50
15.51	2.19	16.45	2.00	17.91	3.38
15.55	2.00	16.49	2.56	17.91	3.25
15.55	1.94	16.53	2.56	17.99	3.38
15.55	2.06	16.57	2.25	18.11	3.44
15.55	1.94	16.61	2.56	18.14	2.94
15.55	1.75	16.61	2.94	18.18	3.00
15.55	2.06	16.69	2.31	18.30	3.13
15.63	2.13	16.69	2.69	18.50	3.25
15.67	2.06	16.73	2.63	18.50	4.00
15.70	2.00	16.73	2.69	18.58	2.38
15.70	4.25	16.73	2.75	18.70	4.63
15.74	2.19	16.73	2.75	18.74	2.94
15.74	2.00	16.77	2.13	19.01	3.88
15.74	2.00	16.77	2.19	19.01	3.81
15.74	2.50	16.77	2.94	19.40	4.13
15.78	2.13	16.85	2.38	19.96	3.50
15.82	1.94	16.85	2.56	20.07	6.13
15.82	2.19	16.85	2.94	21.06	4.31
15.86	2.25	16.89	3.00		
15.86	1.81	16.89	1.75		
15.90	2.00	16.89	2.38		
15.90	2.25	16.92	2.31		
15.94	2.13	17.04	2.88		
15.94	2.00	17.04	3.56		
15.94	2.00	17.04	1.81		
15.98	1.63	17.12	2.50		
15.98	2.38	17.16	2.75		
15.98	1.75	17.24	2.69		
16.02	2.25	17.24	2.44		
16.06	2.63	17.24	3.06		
16.10	2.06	17.32	2.56		
16.10	2.44	17.32	3.38		
16.10	2.44	17.32	3.06		

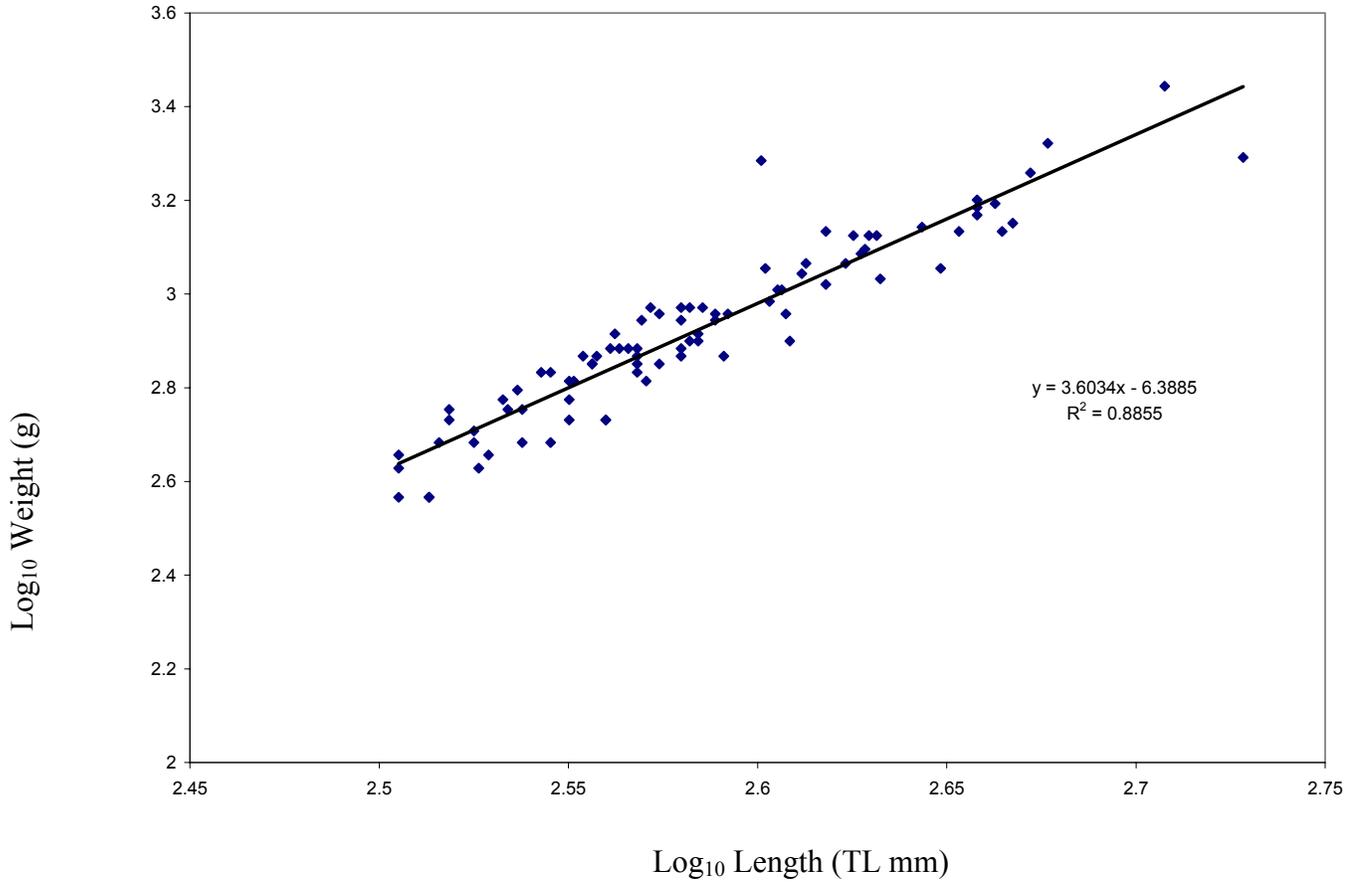
Appendix B-3a. Regression statistics for largemouth bass collected during the 13 August 2004 on-site tournament monitoring.



Regression Statistics		ANOVA	df	SS	MS	F	Significance F
Multiple R	0.922	Regression	1	5.616	5.616	1145.736	<0.001
R square	0.851	Residual	200	0.980	0.004		
Adjusted R square	0.850	Total	201	6.596			
Standard Error	0.070						
Observations	202						

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-4.790	0.226	-21.119	8.07E-53	-5.237	-5.237
X Variable 1	2.979	0.088	33.848	9.83E-85	2.806	3.153

Appendix B-3b. Regression statistics for largemouth bass collected during the 7 November 2004 on-site tournament monitoring.



Regression Statistics		ANOVA	df	SS	MS	F	Significance F
Multiple R	0.941	Regression	1	2.672	2.672	657.269	<0.001
R square	0.885	Residual	85	0.345	0.004		
Adjusted R square	0.884	Total	86	3.018			
Standard Error	0.063						
Observations	87						

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-6.388	0.363	-17.585	4.65E-30	-7.110	-5.666
X Variable 1	3.603	0.140	25.637	9.19E-42	3.323	3.882