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ILLINOIS NATURAL HISTORY SURVEY

CENTER FOR AQUATIC ECOLOGY

FINAL REPORT

1 March 1999 - 28 February 2002

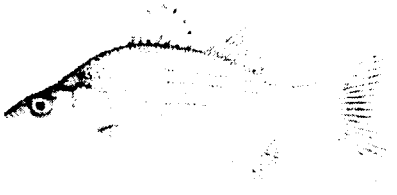
DATABASE MANAGEMENT AND ANALYSIS OF FISHERIES IN ILLINOIS

Jeffrey A. Stein, Robert F. Illyes, Betty Carroll, Lynnette Miller-Ishmael, Julie Claussen, Todd Kassler, John Epifanio, and David P. Philipp

Submitted to
Division of Fisheries
Illinois Department of Natural Resources
Federal Aid Project F-69-R
Segments 13-15

May 2002

Aquatic Ecology Technical Report 02/04



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DATABASE MANAGEMENT AND ANALYSIS OF FISHERIES IN ILLINOIS

F-69-R-15

Annual Report, Segment 15

March 1, 2001 to February 28, 2002

Jeffrey A. Stein, Robert. F. Illyes, Betty Carroll, Lynnette Miller-Ishmael, Julie Claussen, Todd Kassler, John M. Epifanio, and David P. Phillip

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May 2002

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This technical report is the annual report for Segment 15 of Project F-69-R, Database Management and Analysis of Fisheries in Illinois, which was conducted under a memorandum of understanding between the Illinois Department of Natural Resources and the Board of Trustees of the University of Illinois. The actual work was performed by the Illinois Natural History Survey, a division of the Illinois Department of Natural Resources. The project was supported through Federal Aid in Sport Fish Restoration (Dingell-Johnson) by the U.S. Fish and Wildlife Service, the Illinois Department of Natural Resources Division of Fisheries, and the Illinois Natural History Survey. The form, content, and data interpretation are the responsibility of the University of Illinois and the Illinois Natural History Survey, and not that of the Illinois Department of Natural Resources Division of Fisheries.

ACKNOWLEDGEMENTS

The authors would like to thank Steve Sobaski, David Day, and Doug Austen of the IDNR Watershed Management Section for their continued support of FAS and Project F-69-R. The authors also wish to acknowledge Derek Aday, John Hoxmeier, and Dave Wahl of the Illinois Natural History Survey for their collaboration with Projects F-128-R and F-135-R. Finally, a special thank you to Teresa Hall, April Mathews, Alana Houck, Amy Osterman, Darren Benjamin and the many creel clerks for their continued dedication and hard work.

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EXECUTIVE SUMMARY

The goal of Project F-69-R is to provide researchers and managers with the information necessary to manage, sustain, and improve the health of fisheries resources in Illinois lakes and streams. As such, there were three primary objectives identified during Segment 15: (1) conduct annual creel surveys on selected lakes; (2) provide programming support for the Fisheries Analysis System (FAS); (3) incorporate FAS databases to aid in the analysis of ongoing research projects and pertinent management questions.

Creel surveys were conducted on 8 lakes and 2 streams in Illinois during Segment 15, bringing the total to 266 total creel surveys on Illinois lakes since 1987. Segment 15 marked the first time that a stream creel was conducted under F-69-R. All of these lake and stream creels were funded by Project F-69-R with additional financial support from IDNR Division of Fisheries. In compliance with the Illinois Department of Natural Resources Green Initiative, graphical analyses (e.g., length frequency histograms) typically presented in past reports are not presented here. Such analyses are available upon request from the authors.

The conversion of FAS from DOS to Win32 was completed with the exception of the IBI module, for which a full description

will not be available until the summer of 2002. Personal Digital Assistants (PDAs) were evaluated for suitability as data entry devices in the field. FAS software and website support continued.

Creel survey estimates were used to evaluate quality and stunted bluegill populations in Illinois lakes based on a unique size index (PCF.180) developed for use in Project F-128-R. Analysis of creel survey data collected during Segments 13-15 showed that quality bluegill lakes produced a significantly better fishery than stunted lakes in terms of total number caught, total biomass caught, average size caught, and size distribution of caught fish (using PCF.180).

Evaluation of fish stocking programs in Illinois lakes was identified as an important objective of Project F-69-R. These evaluations are generally lake-specific, and little has been done to evaluate stocking on a statewide level. Analyses regarding effects of stocking largemouth bass are still underway using the creel results for the F-135-R study lakes.

This report serves as a final project report covering segments 13-15 for Project F-69-R (1999-2001). Previous reports for segment 13 (1999) and segment 14 (2000) were published as annual reports (Benjamin et al., 2000; Miller-Ishmael et al. 2001) which, combined with this report, comprise a comprehensive

three year reporting of activities and findings for Project F-69-R.

Creel data collected during segments 13-15 (Table 1) are significant additions to existing creel data for Illinois Lakes and provide important information to researchers working on related fisheries projects. In future segments, the cumulative creel data set will be examined and long-term trends will be analyzed to provide fisheries managers with additional perspective for making management decisions. Additionally, creel data will be coupled with other statewide fisheries databases to develop important research topics relevant to fisheries management in Illinois.

JOB 101.1 ANGLER SURVEYS

OBJECTIVE

Conduct annual creel surveys on selected lakes within Illinois (including one of the four large reservoirs each year). Manage (i.e., coordinate and supervise personnel, analyze and report data) the creel surveys conducted on these lakes.

PROCEDURES

Creel surveys were conducted on the following lakes and streams during Segment 15: Coffeen; Channel, Catherine, Marie and Bluff on the Fox Chain of Lakes; Gages Lake; Little Grassy; Washington County Lake (Appendix B). Surveys on Channel and Catherine were analyzed as a single creel; surveys for Marie and Bluff were combined into a single creel survey for analysis as well. Creel surveys were also conducted on the Fox River at the Montgomery and Yorkville dams as well as on the Kankakee River at the Wilmington and Kankakee Dams (Appendix B).

Lakes were chosen to be surveyed based upon (1) needs identified by IDNR-Fisheries biologists, (2) the recognized value of long-term data on select lakes, and (3) study lakes related to projects F-128-R *Quality Management of Bluegill* and F-135-R *Factors Influencing Largemouth Bass Recruitment: Implications for the Illinois Management and Stocking Program.*

FINDINGS

Results for effort, harvest and catch are summarized here and in Appendix B. In compliance with the Illinois Department of Natural Resources Green Initiative, graphical analyses (e.g., length frequency histograms) typically presented in past reports are not presented here. Such analyses are available upon request from the authors.

Angler Effort. Total estimated fishing pressure was highest in Lake Marie and Bluff Lake at a combined 86,036 angler-hours, Lake Marie and Lake Catherine at a combined 81,841 angler-hours, and Coffeen Lake at 63,609 angler-hours. The lowest fishing efforts among the creeled lakes were estimated in Gages Lake at 9,372 angler-hours.

For the streams, total estimated fishing pressure was highest at Montgomery Dam on the Fox River at 32,279 angler-hours and Wilmington Dam on the Kankakee River at 30,526 angler-hours. The lowest fishing efforts among creeled streams was the Kankakee Dam on the Kankakee River at 22,823 angler-hours and the Yorkville Dam on the Fox River at 21,276 angler-hours.

Although Coffeen Lake had one of the highest total fishing pressures among lakes, it had the second lowest fishing pressure per acre at 58 angler-hours/acre. Little Grassy Lake had the lowest fishing pressure per acre at 32 angler-hours/acre. Channel and Catherine Lakes on the Fox Chain had the highest

fishing pressure per acre at a combined 164 angler-hours/acre followed by Marie and Bluff Lakes, also on the Fox Chain, at 127 angler-hours/acre.

The Montgomery and Yorkville Dams on the Fox River had the highest angler pressure per acre at 2181 angler-hours/acre and 2160 angler-hours/acre respectively. The Kankakee and Wilmington Dams on the Kankakee River followed with 1769 angler-hours/acre and 1447 angler-hours/acre, respectively. Results for angler effort and angler effort per acre for both lakes and streams is summarized in Table B1 in Appendix B.

Harvest. The lowest estimated harvest levels among the lakes were seen in Gages Lake (1,253 fish; 1,161 pounds) and Washington County Lake (4,455 fish; 2,435 pounds). The highest harvest levels were out of Marie and Bluff Lakes (52,400 fish; 22,216 pounds) and Channel and Catherine Lakes (51,744 fish; 18,549 pounds). While Coffeen Lake ranked fourth in number of fish harvested (26,849 fish), it ranked first in pounds of fish harvested (22,285 pounds) for an average harvested fish of 0.83 pounds.

Estimated harvest levels for the streams reveal that the Kankakee River had the highest harvest rates at both the Kankakee Dam (5630 fish; 8346 pounds) and the Wilmington Dam (4281 fish; 6798 pounds) when compared to the Fox River at both the Yorkville (3867 fish; 4774 pounds) and Montgomery (2639

fish; 2518 pounds) dams. Results for estimated harvest levels is summarized in Table B2 in Appendix B.

Catch. Estimated catch rates (# caught per angler-hour) for largemouth bass, bluegill, and channel catfish were highly variable across lakes (Table B3, Appendix B). Catch rates for largemouth bass were lowest in Little Grassy Lake (0.088), Marie and Bluff Lakes (0.092), and Coffeen (0.013). The highest catch rates were seen in Washington County Lake (0.197) and Channel and Catherine Lakes (0.153), and Gages Lake (0.137). Bluegill catch rates were the highest in Fox Chain, with 1.303 bluegill caught per angler-hour on Channel and Catherine Lakes and 0.904 bluegill caught per angler-hour on Marie and Bluff Lakes. Channel Lake and Lake Catherine appear to be strong fisheries for both largemouth bass and bluegill, as these lakes had high catch rates for both species. Lowest catch rates for bluegill were found in Washington County Lake (0.174), Coffeen Lake (0.212) and Little Grassy Lake (0.427). Catch rates for channel catfish were varied among lakes ranging from the lowest in Gages Lake (0.016) and Channel and Catherine Lakes (0.042), and highest in Coffeen Lake (0.204) and Washington County Lake (0.114).

For the stream creels, estimated catch rates (catch per angler-hour) were higher in the Kankakee River than the Fox River for smallmouth bass, but were variable between the two

rivers for channel catfish (Table B4, Appendix B). On the Kankakee River, smallmouth bass catch rates were 0.267 fish per angler-hour at the Kankakee Dam and 0.229 fish per angler-hour at the Wilmington Dam. On the Fox River, smallmouth bass catch rates were 0.096 fish per angler-hour at the Montgomery Dam and 0.093 fish per angler-hour at the Yorkville Dam. For channel catfish, the Yorkville Dam (Fox River) had the highest catch rate (0.205 fish per angler-hour), followed by the Wilmington Dam (Kankakee River; 0.117 fish per angler-hour), Kankakee Dam (0.089 fish per angler-hour) and Montgomery Dam (Fox River; 0.052 fish per angler-hour).

RECOMMENDATIONS

The creel information collected is an important tool for assessing the interaction between the angler and the resource, and the continuation of lake creel surveys is essential to evaluate management concerns and needs. Project staff should continue to meet with IDNR Division of Fisheries staff on a regular basis to discuss the needs of creel survey data for lake management objectives.

Further efforts should be made to analyze the historical database in order to answer important research and management questions. Efforts should be made to report lake-specific long-term trends of fishing effort, catch, and catch rates. Multiple

creel surveys have been conducted on many lakes in Illinois. Annual results should be compared to historical estimates in order to identify trends and interpret fishery dynamics.

Lake creel data is highly critical for evaluating the success of experimental bluegill harvest regulations under Project F-128-R, and for evaluation of largemouth bass stocking under Project F-135-R. Efforts are underway to use the creel database on specific lakes to assess how regulations have affected the fishery for bluegill and largemouth bass.

TABLE 1. Creel lakes and streams surveyed during segments 13-15.

Segment 13 (1999)

Lake/Stream	County
Forbes	Marion
Glendale	Pope
Hillsboro Old City	Montgomery
Homer	Champaign
Jacksonville	Morgan
McLeansboro	Hamilton
Mingo	Vermilion
Newton	Jasper
Pana	Christian
Paris East	Edgar
Paris West	Edgar
Pierce	Winnebago
Rend	Franklin, Jefferson
Round	Lake
Spring Lake North	Lake
Walton Park	Montgomery

Segment 14 (2000)

Lake/Stream	County
Apple Canyon	Jo Daviess
Beaver Dam	Macoupin
Carlyle	Clinton, Fayette, Bond
Carlyle Tailwater	Clinton
Clinton Lake	Dewitt
Clinton Tailwater	Dewitt
Crab Orchard	Jackson
LaSalle	LaSalle
Murphysboro	Jackson
Newton	Jasper
Red Hills	Lawrence
Sangchris	Christian
Silver	DuPage
Sterling	Lake
Woods	Moultrie

TABLE 1, continued. Creel lakes and streams surveyed during segments 13-15.

Segment 15 (2001)

Lake/Stream	County
Coffeen	Montgomery
Channel	Lake
Catherine	Lake
Marie	Lake
Bluff	Lake
Gages	Lake
Little Grassy	Jackson, Williamson
Washington County	Washington
Fox River	Kane, Kendall
Kankakee River	Kankakee, Will

JOB 101.2 FISHERIES DATABASE ENHANCEMENT

OBJECTIVE

Support the Creel database and software developed in Paradox and C++. Support the Fisheries Analysis System (FAS), including streams and Lakes databases and their associated applications and documentation. Field test data entry on handheld computers to the extent necessary to specify the choice of computer for the data entry software to be developed in the next segment.

PROCEDURES

The conversion of FAS from DOS to Win32, begun in the prior segment, was completed with the exception of the IBI module and parts no longer in use by Fisheries. A full description of the new IBI has not been made available, but should be by sometime this summer. Requests for new FAS features from Fisheries are being integrated into the FAS draft, which will be released for testing by the personnel who requested the features before general release of the software to Fisheries. Summary database support has been added to Creel FAS. The FAS web server continues to be supported.

Field data logging by handheld computer was evaluated. Personal Digital Assistants (PDAs) running PalmOS were found to be the most cost-effective units suitable for field use, provided units with removable backup storage and waterproof cases were used. Several suitable PDAs, with cases, were purchased and will be used in the development and testing of a first draft of the Creel data entry software.

Job 101.3. Coordination with Ongoing Fisheries Research Projects

OBJECTIVE

Use the existing creel and FAS databases to provide supportive information to help define fish populations in study lakes associated with ongoing bluegill (F-128-R) and largemouth bass (F-135-R) projects. Analyze the impact of two strategies for changing population size structure of fish populations through experimental harvest regulations and predator/habitat manipulations.

PROCEDURES

Project F-128-R. Creel survey estimates were used to evaluate quality and stunted bluegill populations in Illinois lakes based on size indices of adult fish (Claussen et al 1998, Aday et al. 1999 and 2000). Other creel survey data, such as angler effort and harvest data, the percentage of anglers targeting bluegill, and the average size of caught and harvested bluegill were additionally used to assess the characteristics of the study lakes in Project F-128-R. Because of the nature of creel data, a unique size index, Proportion of Quality Creeled Fish (PCF.180) was developed for use in Project F-128-R. This index is calculated as the total number of caught fish greater

than or equal to 180mm divided by the total number of caught fish (Aday et al. 1999 and 2000). Because the FAS Lakes database was not current, its use for populations analyses had to be postponed.

Project F-135-R. Evaluation of fish stocking programs in Illinois lakes was identified as an important objective of Project F-69-R. Currently, stocking evaluations are made by IDNR Division of Fisheries personnel, based in part on results of creel survey data collected from Project F-69-R. These evaluations are generally lake-specific, and little has been done to evaluate stocking on a statewide level. As stocking evaluations are a primary goal of Project F-135-R *Factors Influencing Largemouth Bass Recruitment: Implications for the Illinois Management and Stocking Program*, we expect to contribute the analysis of creel survey data towards largemouth bass stocking evaluations. Unfortunately, the FAS Lakes database was not current, causing the postponement of its use for populations analyses.

FINDINGS

Project F-128-R. Analysis of creel survey data collected during Segment 13-15 showed that quality bluegill lakes produced a significantly better fishery than stunted lakes in terms of total number caught, total biomass caught, average size caught,

and size distribution of caught fish (using PCF.180). No significant differences were found for regional or lake size comparisons for any of the above variables (Aday et al. 1999).

Project F-135-R. Analyses regarding effects of stocking largemouth bass are still underway using the creel results for the F-135-R study lakes.

RECOMMENDATIONS

Creel surveys are an essential component of Projects F-128-R and F-135-R, and should continue to be carried out under Project F-69-R to allow us to assess impact to the creel of the adaptive management programs underway as part of these two studies. Tests of current creel methods should be initiated to assess advances in current scientific literature, especially new insights into catch rate estimation (Pollock et al. 1997). If improvements to the current creel estimation methods are deemed necessary, the historical creel survey data should also be estimated using the new methods to allow future and historical fishery estimates to be comparable (Lockwood et al. 1999).

Most importantly, however, intensive effort is needed to bring the other two FAS databases (FAS Lakes and FAS Streams) on line as usable resources. Once this is accomplished, assessments of bluegill project and largemouth bass project

study lakes should be conducted and compared to creel datasets and project specific sampling results.

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APPENDIX A. INTERPRETIVE GUIDE TO UNDERSTANDING CREEL SURVEY RESULTS

The following guide is intended to be included with every distribution of the creel survey results. It has been updated from an earlier guide published by Steve Sobaski (IDNR - Watershed Management Section, personal communication).

What's Included in the INHS Interim and Final Creel Reports

To help you interpret the Interim and Final Creel Reports from the Illinois Natural History Survey, we've included this guide to explain the contents of various pages. You will also find a copy of the *Statistical Design and Calculation of Each Creel*, Appendix A. of the 1990 Illinois Natural History Survey report 90/10: Creel Survey Manual for the District Fisheries Analysis System (FAS): A Package for Fisheries Management and Research. This appendix describes how the creel data are collected, their subdivision for analysis by five different categories: specifically the Year Period, Lake Section, Day Period (Morning, Midday, Afternoon), Day Type (Weekday vs. Weekend/Holidays), and Fishing Mode (Boat vs. Shore) that the data were collected from (in other words, the stratification scheme applied to the creel

data), and the statistical methodology used to calculate the estimated total hours of fishing, harvest, and catch.

Each creel report is composed of the following information (in this order):

STRATIFICATION SUMMARY

Information presented here is intended to provide some background as to the pre- and post-stratification methods used in analysis. Creel surveys will be either day or night surveys, and this will be indicated first. Reported next will be the range of sampling dates for which estimates are made. No attempt is made to extrapolate estimates out to months in which no data are collected, unless otherwise noted.

SAMPLING RATIO

The SAMPLING RATIO value, listed directly below STRATIFICATION SUMMARY, is the ratio of the number of Day Periods sampled divided by the total number of day periods included in the estimates. In short, the SAMPLING RATIO gives an index of the intensity of the sampling schedule. For example, suppose 128 Day Periods were sampled between 3/15 and 6/15. To calculate the SAMPLING RATIO, the total

number of Day Periods sampled is divided by the total number of possible Day Periods occurring during that span of dates. In this example, there are 93 days within the span of 3/15 to 6/15, thus 3 x 93 or 279 day periods. The Sampling Ratio = (128/279) x 100%, or 45.8%.

NUMBER OF INTERVIEWS

This is the total number of all angler interviews conducted during the season.

PART ONE: EFFORT, HARVEST, AND CATCH ESTIMATES

TABLE 1. TOTAL FISHING EFFORT

This table reports the estimated total angler-hours of fishing by all anglers. Unless otherwise noted, reports will always apply to all pole and line fishing activity on the entire lake.

As described in *The Statistical Design and Calculation of Each Creel*, the effort estimate, i.e. the estimated total angler-hours of fishing, is calculated separately for boat and shore anglers as well as for all anglers for each Day Period sampled. These estimates are based on the instantaneous counts of anglers and are scaled up by the

effective hours available for fishing for that time of day and year, rather than on the hours of fishing reported in angler interviews. An estimated average effort is then calculated for each combination (i.e. stratum) of Year Period, Lake Section, Day Period, Day Type, and Fishing Mode by averaging the total hours of fishing from all days sampled within the stratum. Stratum averages are scaled up over all possible days in the stratum to provide an estimated stratum total effort. Finally, each stratum total effort is added together to give the separate estimates of total hours of fishing for boat and shore anglers for the lake and time period of interest.

A weighted estimate of the total hours of fishing for anglers is calculated using a stratified approach. Rather than combining the boat and shore instantaneous counts for each sample and ignoring any potential difference in the day-to-day variability of boat versus shore fishing, the stratified approach first calculates separate estimates of total effort for boat and for shore anglers for the entire period being reported. These totals and their variances are then combined to give the overall total estimated hours of fishing.

The **FISHING MODE** column will usually include BOAT, SHORE, and BOAT & SHORE. Estimates are made separately for boat and for shore fishing, and these estimates are later combined into an overall total estimate of both boat and shore.

The **DAY TYPE** column shows estimates for WEEKDAY and HOLIDAY. The WEEKDAY estimates only include Monday through Friday fishing, excluding holidays that fall on weekdays. The HOLIDAY estimates include all holidays and all weekend days (Saturdays and Sundays). Days that are considered holidays for the purposes of this creel only include: New Year's Day, Martin Luther King Jr.'s Birthday Observed, Presidents' Day, Memorial Day Observed, Independence Day, Labor Day, Columbus Day, Veterans' Day, Thanksgiving Day, and Christmas Day.

Estimates of the total hours of fishing (the **ANGLER-HOURS** column) by BOAT anglers, SHORE anglers, and BOAT & SHORE anglers are reported in separate blocks in the table. The strata total estimates for each type of angler are further subdivided by Day Type (WEEKDAY versus HOLIDAY).

The **95% CI** columns follow estimated totals, such as ANGLER HOURS in TABLE 1, and in TABLES 3-8. These report the 95% confidence interval for the estimated totals. In other words, 95% of the time we'd expect the true total to fall within that given range. In cases where the lower limit of the confidence interval is a negative number, a value of zero is shown in the table. The percentage listed in ( ) after the confidence interval is another indicator of the precision of the estimate. This percentage is calculated as: (Upper value of the 95% CI - Estimated Total) / Estimated Total. The larger this percentage is, the less accurate the estimate. For example, if the Total Angler Hours Estimate is 30,293, with an upper 95% confidence interval of 34,952, the precision percentage is calculated as (34,952 - 30,293) / 30,293 or 15.38%. The percentage is rounded to the nearest integer for the tabular output.

The **HOURS/ACRE** column gives the Hours of Fishing per acre of lake surface area. This is calculated by dividing the ANGLER HOURS value in each row by the acreage value shown at the top of the page.

The **% EFF INTVD** column, located on the right margin of the effort table, is the percentage of the estimated total

effort actually accounted for by angler interviews. This number is calculated by summing the total hours of fishing reported by anglers from each stratum (i.e. Day Period, Year Period, Day Type, and Fishing Mode combination) and dividing it by the estimated total fishing effort (calculated from the instantaneous counts) for that period. For instance, a total of 120 hours of weekday fishing might be reported by BOAT anglers for Day Period 1 (Sunrise to 10:00 A.M.) between 6/01/94 and 6/15/94. The estimated total BOAT effort, however, based on the average BOAT angler instantaneous counts of Day Period 1 extrapolated by the 11 weekdays within 6/01/94 and 6/15/94, turns out to be 360 hours. The % EFF INTVD value for this stratum would be: (120 angler-hours from interviews) / (360 angler-hours from instantaneous counts) x 100 = 33.33%. Like SAMPLING RATIO, this number gives an indication of the effectiveness of the sampling intensity. A higher % EFF INTVD value indicates a more complete job of obtaining information on all of the angling activity for that type of angler. If you sampled every day within a stratum and interviewed every angler (in other words conducted a census rather than a survey), this percentage would approach or possibly exceed 100%.

TABLE 2. TOTAL FISHING HARVEST AND HARVEST RATES, IN NUMBERS OF FISH

The **# HARVESTED** column is the estimated total number of fish harvested for the season, by species. The top number in this column will always contain the estimated total number of all fish harvested for the season, as indicated by "All species" under the SPECIES column header. For any given species, a "**** NOT RECORDED ****" entry indicates that no harvested fish were recorded from the angler interviews, and therefore no estimate of the total harvest could be made.

The **95% CI** column next to the # HARVESTED column contains the 95% confidence interval estimate of the # HARVESTED value. The lower confidence limit is shown on the left and is separated by a dash from the upper confidence limit shown on the right. In cases where the lower limit of the confidence interval is a negative number, a value of zero is shown in the table. A negative or zero value for the lower 95% confidence interval is usually the result of very few fish of a particular species being sampled in the angler interviews. Next to the upper confidence limit, in

parentheses, is an additional estimate of the precision of the # HARVESTED estimate, and is calculated as:

((Upper 95% CI - # HARVESTED) / # HARVESTED) x 100%

The **#/HOUR** estimate is the population harvest rate, and is defined as the number of fish harvested per angler-hour of fishing. Note that angler-hours are the same units as are reported in TABLE 1. Also, note that this is not an estimate of the average harvest rate per angler. Rate estimates with a value of .000 have a harvest rate that is less than 0.001 but greater than zero. A *zero* rate is not recorded.

The **95% CI** column next to the #/HOUR column is the 95% Confidence Interval estimate of the #/HOUR estimate, and is calculated similarly to the methods described earlier.

The **#/HA** column is the estimated total number of fish harvested per hectare of lake surface area. One hectare is equivalent to 2.4711 acres.

The **#/ACRE** column is the estimated total number of fish harvested per acre of lake surface area. Lake surface area is reported at the top of Page 1.

The **SPECIES** column lists all species recorded in angler interviews. Note that this is different from the original Apple II/e creel analysis reports. These original reports were memory-limited to only 9 species per table. Additional species were either included in an additional table or were listed under "MSC" (Miscellaneous species) in the harvest table. Beginning with the 1999 creel analysis reports, all species recorded in angler interviews will be listed in Table 2 through Table 7. Any species that does not appear in these tables was not recorded in angler interviews, and therefore no estimate could be made of the harvest or catch for that species.

TABLE 3. TOTAL FISHING HARVEST AND HARVEST RATES, IN KILOGRAMS.

Table 3 contains the estimated total fishing harvest and harvest rates in kilograms, and is structurally similar to TABLE 2. See TABLE 2 for a further discussion of the estimates under the 95% CI and SPECIES headers. Unique features of TABLE 3 are discussed below.

The **KG HARVESTED** column contains the estimated total harvest biomass, in kilograms.

The **KG/HOUR** column is the estimated total harvest biomass per angler-hour of fishing effort.

The **KG/HA** column is the estimated total harvest biomass per hectare of lake surface area.

The **AVE KG** column is the estimated average weight per harvested fish, in kilograms. Note that TABLES 3,4,6,and 7 do not contain a per acre estimate of harvest or catch.

TABLE 4. TOTAL FISHING HARVEST AND HARVEST RATES, IN POUNDS.

TABLE 4 is structurally similar to TABLE 3, except that all biomass estimates are reported in pounds rather than in kilograms. For a discussion of the organization of TABLE 4, see the discussion for TABLE 2 and TABLE 3.

TABLES 5-7. TOTAL FISHING CATCH AND CATCH RATES

TABLES 5-7 are structurally similar to TABLES 2-4, respectively, except that all harvest estimates are replaced with catch estimates. Catch estimates contain estimates of both harvested fish and released fish. For a discussion of the organization of TABLES 5-7, see the discussions for TABLES 2-4, respectively.

A NOTE ON BIOMASS ESTIMATES

Rather than measuring fish weights directly during interviews, weights are estimated based on the standard length to weight relationship:

$$Weight = a * TotalLength^{b}$$

These length-weight relationships were developed for each species from IDNR population survey data stored in the Illinois STATE FAS database, or from fisheries literature. Average fish weights reported in the AVG KG and AVG LB are calculated by dividing the estimated total biomass caught (e.g. KG CAUGHT) by the estimated total number caught (e.g. # CAUGHT) for each species.

PART TWO: SUPPLEMETAL INTERVIEW INFORMATION

The pages following the effort, harvest, and catch tables summarize various data collected during angler interviews. Numbers reported here differ from those of the previous tables since these numbers are unweighted averages based solely on interview data rather than estimated totals for an entire year. Rather than stratifying these data as is done for the effort, harvest, and catch estimates, these tables take all interview data, combine it regardless of when it was collected during the survey and report simple averages.

TABLE 8. TRIP LENGTH, DISTANCE TRAVELED, AND SUCCESS RATING

TABLE 8 contains summary statistics for fishing trip length, distance traveled from home to the fishing site, and fishing success rating. Fishing trip length is identified by the header HOURS PER COMPLETED TRIP, and is defined as the number of decimal hours between the start and end of an angler's fishing trip on a given day. MILES TRAVELED is defined as the number of miles that an angler traveled from home to arrive at the fishing site. SUCCESS RATING is an angler's interpretation of his or her fishing

success during the trip for which he or she was interviewed. The angler can provide an answer on a scale from 1 to 10, with 10 being the most successful. While this rating is subjected to each individual angler's interpretation, anglers are asked not to consider social or other factors influencing their fishing experience, and to focus only on their catch.

The **MEAN** is calculated as a simple, unweighted, and unstratified average.

The **95% CI** column is the 95% confidence interval of the MEAN. (For a discussion of the 95% CI, see the discussion of TABLE 1.)

The **MIN** and **MAX** columns represent the range of values reported in the interviews, or the minimum value and maximum value, respectively.

The **#SAMPLES** column contains the sample size, or number of interviews, used in the calculations.

Two footnotes appear at the bottom of TABLE 8. The first footnote indicates the number of split interviews used in

the calculation of HOURS PER COMPLETED TRIP. A split interview is defined as an interview that falls over two or three Day Periods (Morning, Midday, and Afternoon). For example, a fishing trip that began at 7:00am and ended at 12:00pm falls over both the Morning Day Period and the Midday Day Period. The second footnote indicates the percentage of all interviews that were completed trip interviews. All other interviews are considered incomplete, and are defined as interviews of anglers that are still actively fishing at the time of the interview.

ILLEGAL HARVEST

Illegally harvested fish are defined as fish that are in the possession of the angler at the time of the interview that have been harvested in violation of (1) the Illinois Fishing Information regulation booklet, published by the Illinois Department of Natural Resources, or (2) any additional site-specific regulations not outlined in the regulation booklet. Creel clerks witnessing harvest violations do not notify the angler, nor do they notify the authorities. The ILLEGAL HARVEST information reported here is simply a tally of the number of interviews that had illegally harvested fish at the time of the interview.

TABLE 9. FREQUENCY DISTRIBUTION OF ANGLER PARTY SIZE

An angler party is defined as a group of anglers fishing together and combined into a single angler interview. For example, two anglers fishing in the same boat are often interviewed together as an angler party size of 2. TABLE 9 shows the frequency distribution of angler party sizes for boat and shore interviews.

TABLE 10. TARGETED SPECIES

TABLE 10 is a tally of all species that anglers are targeting, along with a percentage of the total in parentheses. During an interview, anglers are asked what species they are trying to catch, or are *targeting*. Anglers can respond by saying they are targeting a specific species (i.e. bluegill), a family of species (i.e. sunfish), or any fish at all.

TABLE 11. CATCH FREQUENCY DISTRIBUTION

TABLE 11 is a frequency distribution of anglers reporting a given number of harvested and released fish, by species,

for completed trip interviews only. It examines each interview for the number of fish of a single species or species group reported as harvested and released. It then calculates the average harvest and catch per angler by dividing the total number harvested and the total released for that species by the number of anglers in the party. The table reports the number of anglers, broken down by their catch rate. An example of this table, for walleye reported as harvested in 500 completed trip interviews might be:

# OF FISH:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Walleye																
HARVEST	651	50	7	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	578	101	26	3	-	-	-	-	-	-	-	-	-	-	-	-

The 500 completed trip interviews actually cover the catch of 708 anglers in this case, since a number of angler parties had more than one angler. Of these 708 anglers, 651 anglers reported no walleye harvested on their trip (or averaged less than 1 walleye per angler per angler party), 50 anglers were in parties that harvested an average of 1 walleye/angler, and 7 anglers were in parties that

harvested an average of 2 walleye/angler. No anglers were in parties that harvested more than 2 walleye/angler. Each zero value is represented by a dash.

APPENDIX B. 2000 CREEL SURVEY RESULTS

The following pages contain the final results from the full 2001 day creel surveys conducted on Illinois lakes and streams, including 8 lakes and 2 streams funded by Project F-69-R-15. Results are presented in the order listed in the table below, by lake/stream name. Following the individual lake/stream results presented in Appendix B are four tables providing comparisons between lakes/streams (Tables B1-4).

LAKE	*ACRES*	*COUNTY*	*REGION*	*DISTRICT*	*BIOLOGIST*
Coffeen	1070.4	Montgomery	4	16	Charlie Marbut
Channel	348.5	Lake	2	7	Frank Jakubicek
Catherine	149.5	Lake	2	7	Frank Jakubicek
Marie	585.0	Lake	2	7	Frank Jakubicek
Bluff	38.5	Lake	2	7	Frank Jakubicek
Gages	127.8	Lake	2	7	Frank Jakubicek
Little Grassy	905.4	Jackson & Williamson	5	21 & 22	Chris Bickers
Washington County	301.2	Washington	4	17	Barry Newman
RIVER	*ACRES*	*COUNTY*	*REGION*	*DISTRICT*	*BIOLOGIST*
Fox River					
Montgomery Dam	14.8	Kane	2	6	Steve Pescitelli
Yorkville Dam	12.0	Kendall	2	9	Steve Pescitelli
Kankakee River					
Kankakee Dam	12.9	Kankakee	2	9	Steve Pescitelli
Wilmington Dam	21.1	Will	2	9	Steve Pescitelli

ILLINOIS NATURAL HISTORY SURVEY
CENTER FOR AQUATIC ECOLOGY
2001 CREEL SURVEY RESULTS

2001 COFFEEN LAKE
1102 ACRES
REGION 4, DISTRICT 20

STRATIFICATION SUMMARY:

Day creel only.
Results cover 03/15/2001 through 10/31/2001
Year periods stratified.
Fishing modes (boat vs. shore) stratified.
Day types (weekday vs. weekend/holiday) stratified.
Day periods (morning, midday, and afternoon) stratified.

SAMPLING RATIO: 410/693 = 59.2%

NUMBER OF INTERVIEWS: 1924

Table 1. Total fishing effort, by fishing mode and day type.

FISHING MODE	DAYTYPE	ANGLER-HOURS	95% CI		HOURS/ACRE	95% CI		% EFF
BOAT	WEEKDAY	27124	22016-32231	(19%)	25	20-29	(19%)	7%
	HOLIDAY	28347	23853-32841	(16%)	26	22-30	(16%)	15%
	TOTAL	55471	48668-62274	(12%)	50	44-57	(12%)	11%
SHORE	WEEKDAY	3718	2246-5191	(40%)	3	2-5	(40%)	7%
	HOLIDAY	4420	3391-5449	(23%)	4	3-5	(23%)	16%
	TOTAL	8138	6422-9855	(21%)	7	6-9	(21%)	12%
BOAT & SHORE	WEEKDAY	30842	25553-36131	(17%)	28	23-33	(17%)	7%
	HOLIDAY	32767	28157-37377	(14%)	30	26-34	(14%)	15%
	TOTAL	63609	56593-70625	(11%)	58	51-64	(11%)	11%

Table 2. Total fishing harvest and harvest rates, in numbers of fish.

# HARVESTED	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
26849	22434-31264	(16%)	.260	.176-.344	(32%)	60.20	24.36	All species
3140	1270-5011	(60%)	.049	.009-.090	(82%)	7.04	2.85	Bluegill
10961	8986-12936	(18%)	.108	.084-.132	(22%)	24.58	9.95	Channel catfish
81	12-149	(85%)	.000	.000-.000	(105%)	0.18	0.07	Flathead catfish
246	0-585	(138%)	.019	.000-.058	(206%)	0.55	0.22	Green sunfish
1813	1339-2286	(26%)	.018	.012-.025	(35%)	4.06	1.64	Largemouth bass
			**** NOT RECORDED ****					Longear sunfish
118	0-277	(134%)	.002	.000-.004	(154%)	0.27	0.11	Redear sunfish
10	0-33	(223%)	.000	.000-.000	(220%)	0.02	0.01	Striped bass
10476	7509-13442	(28%)	.063	.045-.082	(29%)	23.49	9.51	White crappie
4	0-13	(236%)	.000	.000-.000	(245%)	0.01	0.00	Yellow bullhead
			**** NOT RECORDED ****					Yellow bass

Table 3. Total fishing harvest and harvest rates, in kilograms.

KG HARVESTED	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
10108	8490-11726	(16%)	.090	.075-.105	(17%)	22.67	0.376	All species
112	44-180	(61%)	.002	.000-.003	(78%)	0.25	0.036	Bluegill
5012	4102-5921	(18%)	.050	.038-.061	(23%)	11.24	0.457	Channel catfish
503	0-1006	(100%)	.001	.000-.003	(116%)	1.13	6.246	Flathead catfish
15	0-35	(135%)	.001	.000-.003	(205%)	0.03	0.060	Green sunfish
2004	1418-2591	(29%)	.022	.013-.031	(40%)	4.49	1.106	Largemouth bass
			**** NOT RECORDED ****					Longear sunfish
16	0-38	(140%)	.000	.000-.001	(146%)	0.04	0.135	Redear sunfish
12	0-39	(223%)	.000	.000-.000	(223%)	0.03	1.176	Striped bass
2432	1718-3146	(29%)	.014	.010-.018	(30%)	5.45	0.232	White crappie
3	0-10	(245%)	.000	.000-.000	(245%)	0.01	0.708	Yellow bullhead
			**** NOT RECORDED ****					Yellow bass

Table 4. Total fishing harvest and harvest rates, in pounds.

LB HARVESTED	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
22285	18718-25852	(16%)	.199	.166-.232	(17%)	20.22	0.830	All species
247	97-397	(61%)	.004	.001-.007	(78%)	0.22	0.079	Bluegill
11049	9044-13054	(18%)	.109	.085-.134	(23%)	10.03	1.008	Channel catfish
1109	0-2217	(100%)	.003	.000-.007	(116%)	1.01	13.769	Flathead catfish
32	0-76	(135%)	.002	.000-.007	(205%)	0.03	0.132	Green sunfish
4419	3126-5712	(29%)	.049	.029-.068	(40%)	4.01	2.438	Largemouth bass
			**** NOT RECORDED ****					Longear sunfish
35	0-84	(140%)	.000	.000-.001	(146%)	0.03	0.297	Redear sunfish
27	0-85	(220%)	.000	.000-.000	(220%)	0.02	2.592	Striped bass
5361	3787-6935	(29%)	.031	.022-.041	(30%)	4.87	0.512	White crappie
6	0-21	(245%)	.000	.000-.000	(245%)	0.01	1.562	Yellow bullhead
			**** NOT RECORDED ****					Yellow bass

Table 5. Total fishing catch and catch rates, in numbers of fish.
Catch includes both harvested and released fish.

# CAUGHT	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
82381	70382-94379	(15%)	.754	.615-.894	(18%)	184.72	74.76	All species
16926	11561-22290	(32%)	.212	.123-.300	(42%)	37.95	15.36	Bluegill
19592	16464-22721	(16%)	.204	.162-.245	(20%)	43.93	17.78	Channel catfish
91	20-163	(78%)	.000	.000-.001	(92%)	0.21	0.08	Flathead catfish
868	297-1439	(66%)	.023	.000-.062	(168%)	1.95	0.79	Green sunfish
15925	13189-18662	(17%)	.113	.093-.133	(18%)	35.71	14.45	Largemouth bass
6	0-18	(220%)	.001	.000-.004	(223%)	0.01	0.00	Longear sunfish
354	0-744	(110%)	.003	.000-.006	(104%)	0.79	0.32	Redear sunfish
14	0-37	(171%)	.000	.000-.000	(178%)	0.03	0.01	Striped bass
28448	21063-35832	(26%)	.196	.146-.245	(25%)	63.79	25.81	White crappie
152	16-288	(90%)	.002	.000-.004	(126%)	0.34	0.14	Yellow bullhead
5	0-17	(226%)	.000	.000-.000	(226%)	0.01	0.00	Yellow bass

Table 6. Total fishing catch and catch rates, in kilograms.

KG CAUGHT	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
22746	19571-25921	(14%)	.178	.157-.200	(12%)	51.00	0.276	All species
451	310-592	(31%)	.005	.003-.008	(40%)	1.01	0.027	Bluegill
5909	4920-6897	(17%)	.062	.048-.075	(21%)	13.25	0.302	Channel catfish
664	72-1256	(89%)	.002	.000-.004	(99%)	1.49	7.259	Flathead catfish
46	12-81	(75%)	.001	.000-.003	(173%)	0.10	0.054	Green sunfish
11481	9480-13481	(17%)	.082	.066-.098	(19%)	25.74	0.721	Largemouth bass
0	0-0	(220%)	.000	.000-.000	(220%)	0.00	0.023	Longear sunfish
29	1-56	(96%)	.000	.000-.001	(118%)	0.06	0.081	Redear sunfish
17	0-44	(165%)	.000	.000-.000	(177%)	0.04	1.216	Striped bass
4101	2909-5294	(29%)	.025	.018-.031	(26%)	9.20	0.144	White crappie
49	0-108	(122%)	.000	.000-.001	(111%)	0.11	0.322	Yellow bullhead
0	0-1	(226%)	.000	.000-.000	(223%)	0.00	0.046	Yellow bass

Table 7. Total fishing catch and catch rates, in pounds.

LB CAUGHT	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
50147	43148-57146	(14%)	.393	.345-.440	(12%)	45.51	0.609	All species
994	684-1304	(31%)	.012	.007-.017	(40%)	0.90	0.059	Bluegill
13026	10846-15206	(17%)	.136	.107-.165	(21%)	11.82	0.665	Channel catfish
1464	159-2769	(89%)	.005	.000-.009	(99%)	1.33	16.004	Flathead catfish
102	25-179	(75%)	.003	.000-.008	(173%)	0.09	0.118	Green sunfish
25310	20901-29720	(17%)	.181	.147-.215	(19%)	22.97	1.589	Largemouth bass
0	0-1	(220%)	.000	.000-.000	(220%)	0.00	0.052	Longear sunfish
63	3-123	(96%)	.001	.000-.001	(118%)	0.06	0.178	Redear sunfish
37	0-98	(167%)	.000	.000-.000	(177%)	0.03	2.682	Striped bass
9042	6412-11671	(29%)	.055	.041-.069	(26%)	8.20	0.318	White crappie
108	0-239	(122%)	.001	.000-.001	(111%)	0.10	0.709	Yellow bullhead
1	0-2	(223%)	.000	.000-.000	(226%)	0.00	0.100	Yellow bass

Table 8. Hours per completed trip and supplementary questions for all trips.

	MEAN	95% CI		MIN	MAX	#SAMPLES
HOURS PER COMPLETED TRIP*						
BOAT	4.3	4.1-4.5	(5%)	0.9	12.5	446
SHORE	2.5	2.0-3.0	(22%)	0.2	8.0	42
BOAT & SHORE	4.2	3.9-4.4	(5%)	0.2	12.5	488
MILES TRAVELED	46.7	45.5-47.9	(3%)	1	300	1390
SUCCESS RATING (1-10)	4.1	3.9-4.2	(4%)	1	10	1389

*292 samples were from split interviews of completed trips.
30.3% of all 1609 interviews were completed trips.

ILLEGAL HARVEST: Clerk noted 2 out of 1609 interviews with illegal harvests.

Table 9. Frequency distribution of angler party size for all interviews.

PARTY SIZE:	1	2	3	4	5	6	7	8	9	10+
BOAT INTERVIEWS	283	974	71	18	2	3				
SHORE INTERVIEWS	64	119	39	30	1	4		1		

Table 10. Number of interviews (and %) per species sought for all interviews.

181	(11.2%)	ANY	All species
5	(0.3%)	BLG	Bluegill
544	(33.8%)	CAT	Unidentified catfish
2	(0.1%)	CCF	Channel catfish
212	(13.2%)	CRP	Crappie spp.
1	(0.1%)	FCF	Flathead catfish
664	(41.3%)	LMB	Largemouth bass

Table 11. Number of anglers with a given harvest & release for completed trips

# OF FISH:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Bluegill																
HARVEST	885	2	-	-	-	2	2	-	-	-	-	-	-	4	-	-
RELEASE	806	12	23	13	-	11	3	2	5	-	4	-	-	9	-	7
Channel catfish																
HARVEST	719	51	34	40	21	16	6	7	-	-	1	-	-	-	-	-
RELEASE	739	56	32	22	7	22	9	2	-	-	4	-	1	-	1	-
Flathead catfish																
HARVEST	888	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	894	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green sunfish																
HARVEST	895	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	886	7	-	-	2	-	-	-	-	-	-	-	-	-	-	-
Largemouth bass																
HARVEST	813	31	38	13	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	498	151	95	60	35	18	10	10	10	2	3	-	2	-	-	1
Striped bass																
HARVEST	893	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	892	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
White crappie																
HARVEST	792	9	10	15	8	6	14	5	2	4	30	-	-	-	-	-
RELEASE	758	15	13	22	6	22	11	-	4	-	19	3	-	3	-	19
Yellow bullhead																
HARVEST	895	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	887	5	3	-	-	-	-	-	-	-	-	-	-	-	-	-
Yellow bass																
HARVEST	895	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	893	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ILLINOIS NATURAL HISTORY SURVEY
CENTER FOR AQUATIC ECOLOGY
2001 CREEL SURVEY RESULTS

2001 FOX CHAIN
CHANNEL LAKE & CATHERINE LAKE
498 ACRES
REGION 2, DISTRICT 6

STRATIFICATION SUMMARY:

Day creel only.
Results cover 04/01/2001 through 10/15/2001
Year periods stratified.
Fishing modes (boat vs. shore) stratified.
Day types (weekday vs. weekend/holiday) stratified.
Day periods (morning, midday, and afternoon) stratified.

SAMPLING RATIO: 161/594 = 27.1%

NUMBER OF INTERVIEWS: 1503

Table 1. Total fishing effort, by fishing mode and day type.

FISHING MODE	DAYTYPE	ANGLER-HOURS	95% CI		HOURS/ACRE	95% CI		% EFF
BOAT	WEEKDAY	27256	22371-32142	(18%)	55	45-65	(18%)	4%
	HOLIDAY	44843	38253-51433	(15%)	90	77-103	(15%)	7%
	TOTAL	72099	64327-79872	(11%)	145	129-160	(11%)	6%
SHORE	WEEKDAY	4737	3541-5933	(25%)	10	7-12	(25%)	3%
	HOLIDAY	5005	4164-5845	(17%)	10	8-12	(17%)	6%
	TOTAL	9742	8280-11203	(15%)	20	17-22	(15%)	5%
BOAT & SHORE	WEEKDAY	31993	26976-37011	(16%)	64	54-74	(16%)	4%
	HOLIDAY	49848	43214-56481	(13%)	100	87-113	(13%)	7%
	TOTAL	81841	73932-89749	(10%)	164	148-180	(10%)	6%

Table 2. Total fishing harvest and harvest rates, in numbers of fish.

# HARVESTED	95% CI		#/HOUR	95% CI	#/HA	#/ACRE	SPECIES
51744	41681-61807	(19%)	.837	.520-1.155(38%)	256.75	103.90	All species
61	0-137	(123%)	.001	.000-.002 (125%)	0.30	0.12	Black bullhead
11808	8677-14939	(27%)	.150	.098-.202 (34%)	58.59	23.71	Black crappie
34420	25762-43079	(25%)	.605	.295-.915 (51%)	170.79	69.12	Bluegill
			**** NOT RECORDED ****				Bowfin
14	0-37	(158%)	.000	.000-.001 (162%)	0.07	0.03	Carp
1855	1264-2445	(32%)	.031	.017-.046 (46%)	9.20	3.72	Channel catfish
383	19-747	(95%)	.006	.001-.011 (87%)	1.90	0.77	Freshwater drum
117	0-235	(101%)	.002	.000-.004 (136%)	0.58	0.24	Green sunfish
303	143-463	(53%)	.006	.000-.015 (136%)	1.50	0.61	Largemouth bass
42	0-159	(278%)	.000	.000-.000 (278%)	0.21	0.08	Longear sunfish
			**** NOT RECORDED ****				Muskellunge
			**** NOT RECORDED ****				Northern pike
431	162-701	(62%)	.007	.000-.016 (117%)	2.14	0.87	Pumpkinseed
			**** NOT RECORDED ****				Rock bass
			**** NOT RECORDED ****				Smallmouth bass
			**** NOT RECORDED ****				Tiger muskie
366	0-828	(126%)	.002	.000-.003 (104%)	1.82	0.74	Walleye
22	0-91	(318%)	.001	.000-.003 (278%)	0.11	0.04	Warmouth
779	0-2406	(209%)	.008	.000-.028 (230%)	3.86	1.56	White bass
18	0-248	(1271%	.000	.000-.001 (430%)	0.09	0.04	White crappie
			**** NOT RECORDED ****				Yellow bullhead
998	496-1499	(50%)	.017	.005-.029 (71%)	4.95	2.00	Yellow perch
127	0-363	(186%)	.001	.000-.004 (224%)	0.63	0.25	Yellow bass

2001 FOX CHAIN DAY CREEL SECTION 1 04/01/2001 - 10/15/2001
CHANNEL LAKE & CATHERINE LAKE

Table 3. Total fishing harvest and harvest rates, in kilograms.

KG HARVESTED	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
8414	6934-9893	(18%)	.125	.088-.161	(29%)	41.75	0.163	All species
30	0-67	(122%)	.000	.000-.001	(125%)	0.15	0.490	Black bullhead
2338	1736-2940	(26%)	.029	.019-.038	(33%)	11.60	0.198	Black crappie
3826	2839-4812	(26%)	.065	.031-.099	(52%)	18.98	0.111	Bluegill
			**** NOT RECORDED ****					Bowfin
17	0-45	(163%)	.000	.000-.001	(174%)	0.08	1.194	Carp
1028	658-1398	(36%)	.015	.009-.022	(42%)	5.10	0.554	Channel catfish
337	56-617	(83%)	.005	.001-.009	(87%)	1.67	0.878	Freshwater drum
9	0-18	(101%)	.000	.000-.000	(132%)	0.04	0.075	Green sunfish
314	114-513	(64%)	.004	.000-.008	(94%)	1.56	1.036	Largemouth bass
5	0-19	(257%)	.000	.000-.000	(257%)	0.03	0.130	Longear sunfish
			**** NOT RECORDED ****					Muskellunge
			**** NOT RECORDED ****					Northern pike
53	18-88	(67%)	.001	.000-.002	(128%)	0.26	0.123	Pumpkinseed
			**** NOT RECORDED ****					Rock bass
			**** NOT RECORDED ****					Smallmouth bass
			**** NOT RECORDED ****					Tiger muskie
197	0-476	(142%)	.001	.000-.002	(103%)	0.98	0.538	Walleye
4	0-18	(318%)	.000	.000-.001	(278%)	0.02	0.195	Warmouth
118	0-359	(206%)	.001	.000-.004	(228%)	0.58	0.151	White bass
3	0-17	(430%)	.000	.000-.000	(1271%	0.02	0.182	White crappie
			**** NOT RECORDED ****					Yellow bullhead
117	54-180	(54%)	.002	.001-.003	(68%)	0.58	0.117	Yellow perch
18	0-51	(186%)	.000	.000-.001	(224%)	0.09	0.141	Yellow bass

Table 4. Total fishing harvest and harvest rates, in pounds.

LB HARVESTED	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
18549	15287-21810	(18%)	.275	.194-.356	(29%)	37.25	0.358	All species
66	0-147	(122%)	.001	.000-.002	(125%)	0.13	1.081	Black bullhead
5155	3828-6482	(26%)	.064	.043-.085	(33%)	10.35	0.437	Black crappie
8434	6259-10609	(26%)	.144	.068-.219	(52%)	16.94	0.245	Bluegill
			**** NOT RECORDED ****					Bowfin
38	0-99	(163%)	.001	.000-.002	(174%)	0.08	2.633	Carp
2267	1452-3082	(36%)	.034	.020-.048	(42%)	4.55	1.222	Channel catfish
742	125-1360	(83%)	.011	.001-.020	(87%)	1.49	1.936	Freshwater drum
19	0-39	(101%)	.000	.000-.001	(132%)	0.04	0.166	Green sunfish
692	251-1132	(64%)	.009	.001-.018	(94%)	1.39	2.283	Largemouth bass
12	0-43	(257%)	.000	.000-.000	(278%)	0.02	0.286	Longear sunfish
			**** NOT RECORDED ****					Muskellunge
			**** NOT RECORDED ****					Northern pike
117	39-195	(67%)	.002	.000-.004	(128%)	0.24	0.271	Pumpkinseed
			**** NOT RECORDED ****					Rock bass
			**** NOT RECORDED ****					Smallmouth bass
			**** NOT RECORDED ****					Tiger muskie
434	0-1049	(142%)	.002	.000-.004	(103%)	0.87	1.186	Walleye
9	0-35	(278%)	.000	.000-.001	(318%)	0.02	0.431	Warmouth
259	0-792	(206%)	.003	.000-.009	(228%)	0.52	0.333	White bass
7	0-100	(1271%	.000	.000-.000	(430%)	0.01	0.401	White crappie
			**** NOT RECORDED ****					Yellow bullhead
258	119-396	(54%)	.004	.001-.007	(68%)	0.52	0.258	Yellow perch
39	0-113	(186%)	.000	.000-.001	(224%)	0.08	0.312	Yellow bass

2001 FOX CHAIN DAY CREEL SECTION 1 04/01/2001 - 10/15/2001
CHANNEL LAKE & CATHERINE LAKE

Table 5. Total fishing catch and catch rates, in numbers of fish.
Catch includes both harvested and released fish.

# CAUGHT	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
132102	113768-150436	(14%)	1.919	1.472-2.366	(23%)	655.47	265.26	All species
73	0-152	(108%)	.001	.000-.002	(106%)	0.36	0.15	Black bullhead
23196	17934-28459	(23%)	.294	.201-.388	(32%)	115.10	46.58	Black crappie
78306	62742-93871	(20%)	1.303	.877-1.729	(33%)	388.54	157.24	Bluegill
109	0-330	(202%)	.000	.000-.001	(178%)	0.54	0.22	Bowfin
544	136-953	(75%)	.015	.000-.029	(98%)	2.70	1.09	Carp
2823	2155-3490	(24%)	.042	.028-.056	(33%)	14.01	5.67	Channel catfish
1943	1233-2654	(37%)	.038	.011-.066	(72%)	9.64	3.90	Freshwater drum
131	15-248	(89%)	.002	.000-.004	(130%)	0.65	0.26	Green sunfish
17673	14010-21335	(21%)	.153	.125-.180	(18%)	87.69	35.49	Largemouth bass
42	0-159	(278%)	.000	.000-.000	(278%)	0.21	0.08	Longear sunfish
786	502-1069	(36%)	.004	.002-.006	(52%)	3.90	1.58	Muskellunge
346	183-510	(47%)	.003	.001-.004	(72%)	1.72	0.70	Northern pike
447	176-718	(61%)	.007	.000-.016	(114%)	2.22	0.90	Pumpkinseed
80	0-185	(131%)	.001	.000-.003	(282%)	0.40	0.16	Rock bass
27	0-70	(163%)	.000	.000-.000	(183%)	0.13	0.05	Smallmouth bass
35	0-106	(199%)	.000	.000-.002	(326%)	0.18	0.07	Tiger muskie
1446	709-2182	(51%)	.010	.003-.017	(71%)	7.17	2.90	Walleye
22	0-91	(318%)	.001	.000-.003	(278%)	0.11	0.04	Warmouth
1321	0-2974	(125%)	.013	.000-.032	(154%)	6.56	2.65	White bass
18	0-248	(1271%	.000	.000-.001	(430%)	0.09	0.04	White crappie
58	0-156	(169%)	.001	.000-.004	(153%)	0.29	0.12	Yellow bullhead
2547	1500-3595	(41%)	.029	.014-.044	(51%)	12.64	5.12	Yellow perch
127	0-363	(186%)	.001	.000-.004	(224%)	0.63	0.25	Yellow bass

2001 FOX CHAIN DAY CREEL SECTION 1 04/01/2001 - 10/15/2001
CHANNEL LAKE & CATHERINE LAKE

Table 6. Total fishing catch and catch rates, in kilograms.

KG CAUGHT	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
23943	20983-26903	(12%)	.268	.225-.311	(16%)	118.80	0.181	All species
32	0-69	(114%)	.000	.000-.001	(114%)	0.16	0.439	Black bullhead
3566	2693-4439	(24%)	.043	.030-.056	(30%)	17.69	0.154	Black crappie
5450	4257-6643	(22%)	.087	.052-.123	(41%)	27.04	0.070	Bluegill
12	0-33	(166%)	.000	.000-.000	(172%)	0.06	0.114	Bowfin
314	14-615	(96%)	.008	.000-.021	(143%)	1.56	0.577	Carp
1470	1081-1860	(26%)	.020	.013-.027	(34%)	7.29	0.521	Channel catfish
948	582-1314	(39%)	.017	.007-.028	(61%)	4.70	0.488	Freshwater drum
10	1-20	(90%)	.000	.000-.000	(123%)	0.05	0.079	Green sunfish
8999	6957-11040	(23%)	.069	.055-.083	(20%)	44.65	0.509	Largemouth bass
5	0-19	(257%)	.000	.000-.000	(257%)	0.03	0.130	Longear sunfish
1714	965-2464	(44%)	.009	.004-.013	(52%)	8.51	2.182	Muskellunge
434	152-716	(65%)	.005	.000-.011	(138%)	2.15	1.253	Northern pike
54	19-90	(65%)	.001	.000-.002	(125%)	0.27	0.122	Pumpkinseed
7	0-18	(139%)	.000	.000-.000	(202%)	0.04	0.093	Rock bass
16	0-41	(164%)	.000	.000-.000	(205%)	0.08	0.591	Smallmouth bass
49	0-173	(250%)	.000	.000-.001	(196%)	0.25	1.392	Tiger muskie
493	141-846	(71%)	.003	.001-.005	(60%)	2.45	0.341	Walleye
4	0-18	(318%)	.000	.000-.001	(278%)	0.02	0.195	Warmouth
151	0-395	(161%)	.001	.000-.004	(197%)	0.75	0.115	White bass
3	0-17	(430%)	.000	.000-.000	(1271%	0.02	0.182	White crappie
9	0-22	(153%)	.000	.000-.001	(175%)	0.04	0.147	Yellow bullhead
182	109-255	(40%)	.002	.001-.004	(58%)	0.90	0.072	Yellow perch
18	0-51	(186%)	.000	.000-.001	(224%)	0.09	0.141	Yellow bass

2001 FOX CHAIN DAY CREEL SECTION 1 04/01/2001 - 10/15/2001
CHANNEL LAKE & CATHERINE LAKE

Table 7. Total fishing catch and catch rates, in pounds.

LB CAUGHT	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
52786	46260-59311	(12%)	.591	.496-.686	(16%)	106.00	0.400	All species
71	0-152	(114%)	.001	.000-.002	(114%)	0.14	0.967	Black bullhead
7861	5936-9786	(24%)	.095	.066-.124	(30%)	15.78	0.339	Black crappie
12015	9384-14646	(22%)	.192	.114-.271	(41%)	24.13	0.153	Bluegill
27	0-73	(166%)	.000	.000-.000	(172%)	0.06	0.252	Bowfin
693	31-1355	(96%)	.019	.000-.045	(143%)	1.39	1.273	Carp
3241	2382-4100	(26%)	.044	.029-.059	(34%)	6.51	1.148	Channel catfish
2090	1283-2896	(39%)	.039	.015-.062	(61%)	4.20	1.075	Freshwater drum
23	2-43	(90%)	.000	.000-.001	(123%)	0.05	0.173	Green sunfish
19839	15338-24340	(23%)	.153	.122-.183	(20%)	39.84	1.123	Largemouth bass
12	0-43	(257%)	.000	.000-.000	(278%)	0.02	0.286	Longear sunfish
3779	2127-5432	(44%)	.019	.009-.029	(52%)	7.59	4.811	Muskellunge
957	335-1578	(65%)	.010	.000-.024	(138%)	1.92	2.762	Northern pike
120	42-198	(65%)	.002	.000-.004	(125%)	0.24	0.269	Pumpkinseed
16	0-39	(139%)	.000	.000-.001	(202%)	0.03	0.204	Rock bass
35	0-91	(164%)	.000	.000-.000	(205%)	0.07	1.303	Smallmouth bass
109	0-381	(250%)	.001	.000-.003	(196%)	0.22	3.068	Tiger muskie
1088	310-1865	(71%)	.006	.003-.010	(60%)	2.18	0.753	Walleye
9	0-35	(278%)	.000	.000-.001	(318%)	0.02	0.431	Warmouth
334	0-871	(161%)	.003	.000-.010	(197%)	0.67	0.253	White bass
7	0-100	(1271%	.000	.000-.000	(430%)	0.01	0.401	White crappie
19	0-48	(153%)	.001	.000-.001	(175%)	0.04	0.324	Yellow bullhead
402	241-562	(40%)	.005	.002-.008	(58%)	0.81	0.158	Yellow perch
39	0-113	(186%)	.000	.000-.001	(224%)	0.08	0.312	Yellow bass

2001 FOX CHAIN DAY CREEL SECTION 1 04/01/2001 - 10/15/2001
CHANNEL LAKE & CATHERINE LAKE

Table 8. Hours per completed trip and supplementary questions for all trips.

	MEAN	95% CI		MIN	MAX	#SAMPLES
HOURS PER COMPLETED TRIP*						
BOAT	2.9	2.1-3.7	(28%)	0.6	8.0	9
SHORE	1.0	0.0-6.1	(524%)	0.6	1.4	2
BOAT & SHORE	2.5	1.7-3.4	(33%)	0.6	8.0	11
MILES TRAVELED	37.2	33.6-40.8	(10%)	1	1100	1183
SUCCESS RATING (1-10)	3.0	2.9-3.1	(4%)	1	10	1163

*2 samples were from split interviews of completed trips.
0.7% of all 1501 interviews were completed trips.

ILLEGAL HARVEST: Clerk noted 1 out of 1501 interviews with illegal harvests.

Table 9. Frequency distribution of angler party size for all interviews.

PARTY SIZE:	1	2	3	4	5	6	7	8	9	10+
BOAT INTERVIEWS	411	747	122	19	3	1				
SHORE INTERVIEWS	99	89	10							

Table 10. Number of interviews (and %) per species sought for all interviews.

111	(7.4%)	ANY	All species
121	(8.1%)	BLG	Bluegill
1	(0.1%)	CAP	Carp
1	(0.1%)	CAT	Unidentified catfish
52	(3.5%)	CCF	Channel catfish
255	(17.0%)	CRP	Crappie spp.
365	(24.3%)	LMB	Largemouth bass
447	(29.8%)	MUE	Muskellunge
1	(0.1%)	NOP	Northern pike
9	(0.6%)	SUN	Sunfish spp. excluding Crappie and Black Bass
128	(8.5%)	WAE	Walleye
7	(0.5%)	WHB	White bass
3	(0.2%)	YEP	Yellow perch

2001 FOX CHAIN DAY CREEL SECTION 1 04/01/2001 - 10/15/2001
CHANNEL LAKE & CATHERINE LAKE

Table 11. Number of anglers with a given harvest & release for completed trips

# OF FISH:		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Bluegill																	
	HARVEST	19	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
	RELEASE	19	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Channel catfish																	
	HARVEST	19	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	RELEASE	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Largemouth bass																	
	HARVEST	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	RELEASE	14	5	-	-	-	-	-	1	-	-	-	-	-	-	-	-
Muskellunge																	
	HARVEST	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	RELEASE	17	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Walleye																	
	HARVEST	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	RELEASE	19	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yellow perch																	
	HARVEST	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	RELEASE	19	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-

ILLINOIS NATURAL HISTORY SURVEY
CENTER FOR AQUATIC ECOLOGY
2001 CREEL SURVEY RESULTS

2001 FOX CHAIN
Lake Marie & Bluff Lake
677 ACRES
REGION 2, DISTRICT 6

STRATIFICATION SUMMARY:

Day creel only.
Results cover 04/01/2001 through 10/15/2001
Year periods stratified.
Fishing modes (boat vs. shore) stratified.
Day types (weekday vs. weekend/holiday) stratified.
Day periods (morning, midday, and afternoon) stratified.

SAMPLING RATIO: 158/594 = 26.6%

NUMBER OF INTERVIEWS: 1481

Table 1. Total fishing effort, by fishing mode and day type.

FISHING MODE	DAYTYPE	ANGLER-HOURS	95% CI		HOURS/ACRE	95% CI		% EFF
BOAT	WEEKDAY	34480	28829-40132	(16%)	51	43-59	(16%)	4%
	HOLIDAY	42005	35998-48011	(14%)	62	53-71	(14%)	7%
	TOTAL	76485	68486-84484	(10%)	113	101-125	(10%)	6%
SHORE	WEEKDAY	4420	3195-5644	(28%)	7	5-8	(28%)	3%
	HOLIDAY	5131	4456-5807	(13%)	8	7-9	(13%)	7%
	TOTAL	9551	8200-10902	(14%)	14	12-16	(14%)	5%
BOAT & SHORE	WEEKDAY	38900	33129-44671	(15%)	57	49-66	(15%)	4%
	HOLIDAY	47136	41087-53185	(13%)	70	61-79	(13%)	7%
	TOTAL	86036	77924-94148	(9%)	127	115-139	(9%)	6%

2001 FOX CHAIN DAY CREEL SECTION 2 04/01/2001 - 10/15/2001
LAKE MARIE & BLUFF LAKE

Table 2. Total fishing harvest and harvest rates, in numbers of fish.

# HARVESTED	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
52400	43726-61074	(17%)	.634	.480-.788	(24%)	191.14	77.35	All species
36	0-91	(153%)	.000	.000-.001	(155%)	0.13	0.05	Black bullhead
8198	6051-10344	(26%)	.080	.053-.106	(33%)	29.90	12.10	Black crappie
31832	25255-38409	(21%)	.415	.287-.543	(31%)	116.12	46.99	Bluegill
			****	NOT RECORDED	****			Bowfin
56	0-248	(345%)	.000	.000-.001	(378%)	0.20	0.08	Carp
3704	2843-4565	(23%)	.053	.033-.073	(37%)	13.51	5.47	Channel catfish
1069	478-1659	(55%)	.015	.007-.023	(56%)	3.90	1.58	Freshwater drum
250	22-478	(91%)	.004	.000-.009	(124%)	0.91	0.37	Green sunfish
62	2-122	(96%)	.000	.000-.001	(127%)	0.23	0.09	Largemouth bass
36	0-108	(199%)	.000	.000-.000	(199%)	0.13	0.05	Longear sunfish
			****	NOT RECORDED	****			Muskellunge
			****	NOT RECORDED	****			Northern pike
5	0-19	(257%)	.000	.000-.000	(257%)	0.02	0.01	Pumpkinseed x Green
72	0-148	(104%)	.001	.000-.003	(152%)	0.26	0.11	Pumpkinseed
			****	NOT RECORDED	****			Rock bass
3	0-17	(430%)	.000	.000-.000	(430%)	0.01	0.00	Striped bass x Whit
			****	NOT RECORDED	****			Smallmouth bass
883	410-1357	(54%)	.007	.002-.013	(76%)	3.22	1.30	Walleye
40	0-139	(245%)	.000	.000-.000	(245%)	0.15	0.06	Warmouth
3120	1547-4694	(50%)	.016	.008-.023	(48%)	11.38	4.61	White bass
104	0-490	(371%)	.001	.000-.003	(409%)	0.38	0.15	White crappie
65	0-178	(174%)	.000	.000-.001	(173%)	0.24	0.10	Yellow bullhead
2127	1455-2799	(32%)	.036	.012-.060	(67%)	7.76	3.14	Yellow perch
737	374-1100	(49%)	.005	.001-.009	(71%)	2.69	1.09	Yellow bass

2001 FOX CHAIN DAY CREEL SECTION 2 04/01/2001 - 10/15/2001
LAKE MARIE & BLUFF LAKE

Table 3. Total fishing harvest and harvest rates, in kilograms.

KG HARVESTED	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
10077	8521-11633	(15%)	.121	.096-.145	(21%)	36.76	0.192	All species
16	0-40	(154%)	.000	.000-.000	(144%)	0.06	0.436	Black bullhead
1811	1306-2317	(28%)	.017	.011-.022	(32%)	6.61	0.221	Black crappie
3463	2765-4160	(20%)	.045	.032-.058	(28%)	12.63	0.109	Bluegill
			**** NOT RECORDED ****					Bowfin
70	0-231	(228%)	.000	.000-.001	(229%)	0.26	1.263	Carp
2144	1587-2701	(26%)	.030	.019-.041	(36%)	7.82	0.579	Channel catfish
955	551-1359	(42%)	.016	.005-.027	(70%)	3.48	0.894	Freshwater drum
19	2-37	(91%)	.000	.000-.001	(116%)	0.07	0.077	Green sunfish
61	1-121	(98%)	.000	.000-.001	(135%)	0.22	0.980	Largemouth bass
6	0-19	(243%)	.000	.000-.000	(243%)	0.02	0.153	Longear sunfish
			**** NOT RECORDED ****					Muskellunge
			**** NOT RECORDED ****					Northern pike
			**** NOT RECORDED ****					Pumpkinseed x Green
7	0-13	(97%)	.000	.000-.000	(131%)	0.02	0.092	Pumpkinseed
			**** NOT RECORDED ****					Rock bass
14	0-74	(430%)	.000	.000-.004	(1271%	0.05	4.416	Striped bass x Whit
			**** NOT RECORDED ****					Smallmouth bass
642	224-1060	(65%)	.004	.001-.007	(66%)	2.34	0.727	Walleye
7	0-23	(245%)	.000	.000-.000	(245%)	0.02	0.166	Warmouth
496	250-742	(50%)	.003	.001-.004	(48%)	1.81	0.159	White bass
20	0-91	(358%)	.000	.000-.001	(404%)	0.07	0.191	White crappie
12	0-33	(173%)	.000	.000-.000	(175%)	0.04	0.184	Yellow bullhead
227	156-299	(32%)	.004	.001-.007	(78%)	0.83	0.107	Yellow perch
107	55-160	(49%)	.001	.000-.001	(68%)	0.39	0.146	Yellow bass

Table 4. Total fishing harvest and harvest rates, in pounds.

LB HARVESTED	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
22216	18785-25647	(15%)	.266	.211-.320	(21%)	32.80	0.424	All species
34	0-87	(154%)	.000	.000-.001	(144%)	0.05	0.962	Black bullhead
3994	2880-5107	(28%)	.037	.025-.049	(32%)	5.90	0.487	Black crappie
7634	6096-9171	(20%)	.099	.071-.127	(28%)	11.27	0.240	Bluegill
			**** NOT RECORDED ****					Bowfin
155	0-508	(228%)	.001	.000-.002	(229%)	0.23	2.784	Carp
4727	3499-5955	(26%)	.066	.042-.090	(36%)	6.98	1.276	Channel catfish
2106	1216-2996	(42%)	.035	.011-.059	(70%)	3.11	1.970	Freshwater drum
42	4-81	(91%)	.001	.000-.001	(116%)	0.06	0.169	Green sunfish
134	3-266	(98%)	.001	.000-.001	(135%)	0.20	2.161	Largemouth bass
12	0-42	(243%)	.000	.000-.000	(243%)	0.02	0.337	Longear sunfish
			**** NOT RECORDED ****					Muskellunge
			**** NOT RECORDED ****					Northern pike
			**** NOT RECORDED ****					Pumpkinseed x Green
15	0-29	(97%)	.000	.000-.000	(131%)	0.02	0.202	Pumpkinseed
			**** NOT RECORDED ****					Rock bass
31	0-163	(430%)	.001	.000-.009	(1271%	0.05	9.735	Striped bass x Whit
			**** NOT RECORDED ****					Smallmouth bass
1415	493-2337	(65%)	.009	.003-.015	(66%)	2.09	1.602	Walleye
15	0-50	(236%)	.000	.000-.000	(236%)	0.02	0.367	Warmouth
1094	552-1636	(50%)	.006	.003-.008	(48%)	1.61	0.351	White bass
44	0-201	(358%)	.000	.000-.001	(404%)	0.06	0.421	White crappie
26	0-72	(173%)	.000	.000-.000	(175%)	0.04	0.406	Yellow bullhead
501	343-660	(32%)	.009	.002-.016	(78%)	0.74	0.236	Yellow perch
237	122-352	(49%)	.002	.000-.003	(68%)	0.35	0.321	Yellow bass

2001 FOX CHAIN DAY CREEL SECTION 2 04/01/2001 - 10/15/2001
LAKE MARIE & BLUFF LAKE

Table 5. Total fishing catch and catch rates, in numbers of fish.
Catch includes both harvested and released fish.

# CAUGHT	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
132448	115005-149891	(13%)	1.509	1.257-1.760	(17%)	483.14	195.52	All species
56	0-121	(117%)	.001	.000-.001	(119%)	0.20	0.08	Black bullhead
14013	10567-17459	(25%)	.151	.106-.197	(30%)	51.12	20.69	Black crappie
70040	58031-82049	(17%)	.904	.697-1.111	(23%)	255.49	103.40	Bluegill
22	0-60	(167%)	.000	.000-.000	(186%)	0.08	0.03	Bowfin
480	283-677	(41%)	.011	.003-.019	(74%)	1.75	0.71	Carp
6908	5564-8251	(19%)	.080	.060-.101	(26%)	25.20	10.20	Channel catfish
8252	6057-10447	(27%)	.078	.055-.102	(30%)	30.10	12.18	Freshwater drum
250	22-478	(91%)	.004	.000-.009	(124%)	0.91	0.37	Green sunfish
10049	7695-12403	(23%)	.092	.066-.118	(28%)	36.66	14.83	Largemouth bass
36	0-108	(199%)	.000	.000-.000	(199%)	0.13	0.05	Longear sunfish
699	441-958	(37%)	.004	.002-.006	(54%)	2.55	1.03	Muskellunge
137	2-273	(99%)	.001	.000-.003	(149%)	0.50	0.20	Northern pike
5	0-19	(257%)	.000	.000-.000	(257%)	0.02	0.01	Pumpkinseed x Green
161	0-392	(143%)	.002	.000-.004	(117%)	0.59	0.24	Pumpkinseed
13	0-45	(245%)	.000	.000-.001	(245%)	0.05	0.02	Rock bass
3	0-17	(430%)	.000	.000-.000	(430%)	0.01	0.00	Striped bass x Whit
103	0-281	(173%)	.000	.000-.001	(173%)	0.38	0.15	Smallmouth bass
4544	3328-5759	(27%)	.041	.016-.065	(61%)	16.57	6.71	Walleye
40	0-139	(245%)	.000	.000-.000	(245%)	0.15	0.06	Warmouth
10951	7706-14195	(30%)	.070	.047-.094	(33%)	39.95	16.17	White bass
378	0-1898	(402%)	.003	.000-.014	(421%)	1.38	0.56	White crappie
128	0-258	(102%)	.001	.000-.004	(180%)	0.47	0.19	Yellow bullhead
4210	3135-5286	(26%)	.058	.032-.083	(44%)	15.36	6.22	Yellow perch
969	437-1501	(55%)	.006	.002-.010	(63%)	3.54	1.43	Yellow bass

2001 FOX CHAIN DAY CREEL SECTION 2 04/01/2001 - 10/15/2001
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Table 6. Total fishing catch and catch rates, in kilograms.

KG CAUGHT	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
25193	21789-28596	(14%)	.302	.044-.560	(86%)	91.90	0.190	All species
22	0-48	(116%)	.000	.000-.001	(116%)	0.08	0.402	Black bullhead
2404	1791-3016	(26%)	.036	.000-.097	(167%)	8.77	0.172	Black crappie
4665	3818-5513	(18%)	.060	.046-.074	(24%)	17.02	0.067	Bluegill
3	0-10	(222%)	.000	.000-.000	(199%)	0.01	0.142	Bowfin
381	211-551	(45%)	.007	.001-.012	(83%)	1.39	0.793	Carp
3330	2643-4017	(21%)	.040	.029-.052	(28%)	12.15	0.482	Channel catfish
3741	2896-4586	(23%)	.040	.027-.053	(33%)	13.65	0.453	Freshwater drum
19	2-37	(91%)	.000	.000-.001	(116%)	0.07	0.077	Green sunfish
4564	3317-5812	(27%)	.034	.023-.045	(32%)	16.65	0.454	Largemouth bass
6	0-19	(243%)	.000	.000-.000	(243%)	0.02	0.153	Longear sunfish
2218	1201-3234	(46%)	.012	.004-.020	(65%)	8.09	3.171	Muskellunge
220	18-421	(92%)	.001	.000-.003	(152%)	0.80	1.601	Northern pike
			****	NOT RECORDED	****			Pumpkinseed x Green
8	1-15	(85%)	.000	.000-.000	(120%)	0.03	0.051	Pumpkinseed
2	0-7	(245%)	.000	.000-.000	(257%)	0.01	0.166	Rock bass
14	0-74	(430%)	.000	.000-.004	(1271%	0.05	4.416	Striped bass x Whit
59	0-161	(173%)	.000	.000-.001	(173%)	0.21	0.571	Smallmouth bass
2119	1392-2846	(34%)	.058	.000-.247	(328%)	7.73	0.466	Walleye
7	0-23	(245%)	.000	.000-.000	(245%)	0.02	0.166	Warmouth
919	643-1195	(30%)	.005	.004-.007	(31%)	3.35	0.084	White bass
44	0-215	(387%)	.000	.000-.002	(416%)	0.16	0.117	White crappie
19	0-41	(110%)	.000	.000-.001	(156%)	0.07	0.152	Yellow bullhead
301	221-382	(27%)	.005	.001-.008	(68%)	1.10	0.072	Yellow perch
127	67-186	(47%)	.001	.000-.001	(62%)	0.46	0.131	Yellow bass

Table 7. Total fishing catch and catch rates, in pounds.

LB CAUGHT	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
55540	48037-63043	(14%)	.666	.096-1.235	(86%)	81.99	0.419	All species
49	0-107	(116%)	.001	.000-.001	(116%)	0.07	0.885	Black bullhead
5299	3947-6650	(26%)	.080	.000-.214	(167%)	7.82	0.378	Black crappie
10286	8417-12154	(18%)	.132	.101-.164	(24%)	15.18	0.147	Bluegill
7	0-23	(222%)	.000	.000-.000	(199%)	0.01	0.313	Bowfin
840	465-1214	(45%)	.014	.002-.026	(83%)	1.24	1.749	Carp
7342	5828-8856	(21%)	.089	.064-.114	(28%)	10.84	1.063	Channel catfish
8248	6385-10110	(23%)	.088	.059-.117	(33%)	12.18	0.999	Freshwater drum
42	4-81	(91%)	.001	.000-.001	(116%)	0.06	0.169	Green sunfish
10063	7313-12813	(27%)	.076	.052-.100	(32%)	14.85	1.001	Largemouth bass
12	0-42	(243%)	.000	.000-.000	(243%)	0.02	0.337	Longear sunfish
4889	2649-7129	(46%)	.027	.010-.045	(65%)	7.22	6.990	Muskellunge
485	40-929	(92%)	.003	.000-.008	(152%)	0.72	3.530	Northern pike
			**** NOT RECORDED ****					Pumpkinseed x Green
18	3-33	(85%)	.000	.000-.000	(120%)	0.03	0.112	Pumpkinseed
5	0-16	(245%)	.000	.000-.000	(257%)	0.01	0.367	Rock bass
31	0-163	(430%)	.001	.000-.009	(1271%	0.05	9.735	Striped bass x Whit
130	0-354	(173%)	.001	.000-.001	(173%)	0.19	1.259	Smallmouth bass
4672	3070-6275	(34%)	.127	.000-.545	(328%)	6.90	1.028	Walleye
15	0-50	(236%)	.000	.000-.000	(236%)	0.02	0.367	Warmouth
2026	1417-2635	(30%)	.012	.008-.016	(31%)	2.99	0.185	White bass
97	0-473	(387%)	.001	.000-.003	(416%)	0.14	0.257	White crappie
43	0-90	(110%)	.000	.000-.001	(156%)	0.06	0.334	Yellow bullhead
664	486-842	(27%)	.010	.003-.017	(68%)	0.98	0.158	Yellow perch
279	148-410	(47%)	.002	.001-.003	(62%)	0.41	0.288	Yellow bass

Table 8. Hours per completed trip and supplementary questions for all trips.

	MEAN	95% CI		MIN	MAX	#SAMPLES
HOURS PER COMPLETED TRIP*						
BOAT	4.5	3.4-5.6	(24%)	1.5	8.5	17
SHORE	3.5	*** undefined	***	3.5	3.5	1
BOAT & SHORE	4.5	3.5-5.5	(22%)	1.5	8.5	18
MILES TRAVELED	37.6	34.6-40.6	(8%)	1	1000	1168
SUCCESS RATING (1-10)	2.9	2.8-3.1	(4%)	1	10	1150

*11 samples were from split interviews of completed trips.
1.2% of all 1470 interviews were completed trips.

ILLEGAL HARVEST: Clerk noted 1 out of 1470 interviews with illegal harvests.

Table 9. Frequency distribution of angler party size for all interviews.

PARTY SIZE:	1	2	3	4	5	6	7	8	9	10+
BOAT INTERVIEWS	378	675	212	28	1					
SHORE INTERVIEWS	64	101	10	1						

Table 10. Number of interviews (and %) per species sought for all interviews.

123	(8.4%)	ANY	All species
2	(0.1%)	BLC	Black crappie
125	(8.5%)	BLG	Bluegill
1	(0.1%)	CAP	Carp
2	(0.1%)	CAT	Unidentified catfish
82	(5.6%)	CCF	Channel catfish
204	(13.9%)	CRP	Crappie spp.
209	(14.2%)	LMB	Largemouth bass
278	(18.9%)	MUE	Muskellunge
1	(0.1%)	NOP	Northern pike
6	(0.4%)	SUN	Sunfish spp. excluding Crappie and Black Bass
375	(25.5%)	WAE	Walleye
62	(4.2%)	WHB	White bass

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Table 11. Number of anglers with a given harvest & release for completed trips

# OF FISH:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Black crappie																
HARVEST	24	-	-	-	2	-	-	-	-	-	-	-	-	-	-	2
RELEASE	20	4	-	2	-	-	-	-	-	-	-	-	-	-	2	-
Bluegill																
HARVEST	23	-	1	-	-	-	-	-	1	2	-	-	-	-	1	-
RELEASE	18	6	-	-	-	-	3	-	-	-	-	-	-	-	1	-
Carp																
HARVEST	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	26	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Channel catfish																
HARVEST	23	2	-	3	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	24	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Freshwater drum																
HARVEST	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	20	1	-	2	-	3	-	2	-	-	-	-	-	-	-	-
Largemouth bass																
HARVEST	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	27	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Muskellunge																
HARVEST	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	26	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Walleye																
HARVEST	25	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	21	2	3	2	-	-	-	-	-	-	-	-	-	-	-	-
White bass																
HARVEST	27	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	25	-	-	2	-	-	-	-	-	-	-	-	-	-	-	1
Yellow perch																
HARVEST	26	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	24	2	-	-	-	-	-	-	-	-	-	2	-	-	-	-
Yellow bass																
HARVEST	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	26	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-

ILLINOIS NATURAL HISTORY SURVEY
CENTER FOR AQUATIC ECOLOGY
2001 CREEL SURVEY RESULTS

2001 GAGES LAKE
128 ACRES
REGION 2, DISTRICT 7

STRATIFICATION SUMMARY:

Day creel only.
Results cover 04/01/2001 through 10/31/2001
Year periods stratified.
Fishing modes (boat vs. shore) stratified.
Day types (weekday vs. weekend/holiday) stratified.
Day periods (morning, midday, and afternoon) stratified.

SAMPLING RATIO: 284/642 = 44.2%

NUMBER OF INTERVIEWS: 739

Table 1. Total fishing effort, by fishing mode and day type.

FISHING MODE	DAYTYPE	ANGLER-HOURS	95% CI		HOURS/ACRE	95% CI		% EFF
BOAT	WEEKDAY	1414	1134-1694	(20%)	11	9-13	(20%)	15%
	HOLIDAY	1856	1622-2091	(13%)	15	13-16	(13%)	38%
	TOTAL	3270	2905-3636	(11%)	26	23-28	(11%)	28%
SHORE	WEEKDAY	3203	2737-3669	(15%)	25	21-29	(15%)	12%
	HOLIDAY	2898	2453-3344	(15%)	23	19-26	(15%)	23%
	TOTAL	6102	5457-6746	(11%)	48	43-53	(11%)	17%
BOAT & SHORE	WEEKDAY	4617	4073-5161	(12%)	36	32-40	(12%)	13%
	HOLIDAY	4755	4251-5259	(11%)	37	33-41	(11%)	29%
	TOTAL	9372	8631-10113	(8%)	73	68-79	(8%)	21%

Table 2. Total fishing harvest and harvest rates, in numbers of fish.

# HARVESTED	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
1253	885-1621	(29%)	.086	.051-.120	(41%)	24.23	9.81	All species
41	0-95	(130%)	.004	.000-.010	(149%)	0.80	0.32	Black bullhead
22	0-57	(165%)	.001	.000-.002	(152%)	0.42	0.17	Black crappie
470	190-750	(60%)	.034	.013-.055	(62%)	9.09	3.68	Bluegill
			****	NOT RECORDED	****			Brown bullhead
388	202-574	(48%)	.028	.000-.056	(101%)	7.51	3.04	Carp
87	30-144	(65%)	.007	.003-.011	(61%)	1.68	0.68	Channel catfish
5	0-21	(278%)	.000	.000-.001	(257%)	0.11	0.04	Green sunfish
147	72-222	(51%)	.007	.003-.011	(52%)	2.84	1.15	Largemouth bass
32	0-77	(142%)	.002	.000-.007	(279%)	0.62	0.25	Northern pike
7	0-24	(236%)	.000	.000-.001	(231%)	0.14	0.06	Pumpkinseed
			****	NOT RECORDED	****			Smallmouth bass
23	3-43	(89%)	.002	.000-.004	(109%)	0.44	0.18	Walleye
			****	NOT RECORDED	****			Warmouth
			****	NOT RECORDED	****			White crappie
10	0-32	(236%)	.001	.000-.002	(236%)	0.19	0.08	Yellow bullhead
16	0-37	(132%)	.001	.000-.002	(148%)	0.30	0.12	Yellow perch
5	0-16	(220%)	.000	.000-.001	(220%)	0.10	0.04	Yellow bass

Table 3. Total fishing harvest and harvest rates, in kilograms.

KG HARVESTED	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
526	296-757	(44%)	.044	.011-.077	(76%)	10.18	0.420	All species
12	0-28	(133%)	.001	.000-.003	(148%)	0.23	0.293	Black bullhead
3	0-8	(156%)	.000	.000-.000	(143%)	0.06	0.147	Black crappie
21	9-33	(57%)	.002	.001-.003	(69%)	0.41	0.045	Bluegill
			****	NOT RECORDED	****			Brown bullhead
223	70-376	(68%)	.021	.000-.052	(147%)	4.31	0.575	Carp
50	20-81	(60%)	.004	.001-.006	(63%)	0.97	0.580	Channel catfish
0	0-1	(278%)	.000	.000-.000	(278%)	0.01	0.073	Green sunfish
114	38-189	(66%)	.007	.002-.011	(71%)	2.19	0.772	Largemouth bass
75	0-296	(293%)	.007	.000-.030	(313%)	1.46	2.359	Northern pike
0	0-1	(236%)	.000	.000-.000	(231%)	0.00	0.034	Pumpkinseed
			****	NOT RECORDED	****			Smallmouth bass
25	1-48	(95%)	.002	.000-.004	(127%)	0.48	1.088	Walleye
			****	NOT RECORDED	****			Warmouth
			****	NOT RECORDED	****			White crappie
1	0-3	(245%)	.000	.000-.000	(236%)	0.02	0.090	Yellow bullhead
1	0-2	(152%)	.000	.000-.000	(211%)	0.01	0.045	Yellow perch
1	0-2	(220%)	.000	.000-.000	(220%)	0.01	0.102	Yellow bass

Table 4. Total fishing harvest and harvest rates, in pounds.

LB HARVESTED	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
1161	653-1668	(44%)	.097	.023-.171	(76%)	9.08	0.926	All species
27	0-62	(133%)	.003	.000-.007	(148%)	0.21	0.645	Black bullhead
7	0-18	(156%)	.000	.000-.001	(143%)	0.05	0.324	Black crappie
47	20-73	(57%)	.004	.001-.006	(69%)	0.37	0.099	Bluegill
			**** NOT RECORDED ****					Brown bullhead
492	155-829	(68%)	.046	.000-.114	(147%)	3.85	1.267	Carp
111	45-177	(60%)	.009	.003-.014	(63%)	0.87	1.278	Channel catfish
1	0-3	(257%)	.000	.000-.000	(257%)	0.01	0.160	Green sunfish
250	85-416	(66%)	.015	.004-.025	(71%)	1.96	1.702	Largemouth bass
166	0-652	(293%)	.016	.000-.066	(313%)	1.30	5.201	Northern pike
1	0-2	(231%)	.000	.000-.000	(231%)	0.00	0.076	Pumpkinseed
			**** NOT RECORDED ****					Smallmouth bass
55	3-107	(95%)	.004	.000-.010	(127%)	0.43	2.399	Walleye
			**** NOT RECORDED ****					Warmouth
			**** NOT RECORDED ****					White crappie
2	0-7	(245%)	.000	.000-.000	(236%)	0.01	0.198	Yellow bullhead
2	0-4	(152%)	.000	.000-.000	(211%)	0.01	0.100	Yellow perch
1	0-4	(220%)	.000	.000-.000	(220%)	0.01	0.224	Yellow bass

Table 5. Total fishing catch and catch rates, in numbers of fish.
Catch includes both harvested and released fish.

# CAUGHT	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
14064	12565-15564	(11%)	.937	.832-1.042	(11%)	271.93	110.05	All species
257	144-369	(44%)	.020	.007-.032	(63%)	4.96	2.01	Black bullhead
346	213-479	(38%)	.023	.013-.033	(42%)	6.68	2.71	Black crappie
8736	7438-10035	(15%)	.534	.443-.625	(17%)	168.91	68.36	Bluegill
27	0-64	(136%)	.002	.000-.004	(122%)	0.53	0.21	Brown bullhead
524	329-719	(37%)	.040	.011-.068	(72%)	10.13	4.10	Carp
229	137-321	(40%)	.016	.008-.025	(52%)	4.43	1.79	Channel catfish
261	120-402	(54%)	.015	.007-.024	(57%)	5.05	2.04	Green sunfish
1739	1482-1995	(15%)	.137	.114-.160	(17%)	33.62	13.60	Largemouth bass
477	348-606	(27%)	.049	.023-.076	(54%)	9.22	3.73	Northern pike
174	47-302	(73%)	.008	.003-.014	(69%)	3.37	1.36	Pumpkinseed
6	0-31	(430%)	.001	.000-.002	(318%)	0.11	0.05	Smallmouth bass
181	104-258	(42%)	.016	.008-.024	(52%)	3.50	1.42	Walleye
22	2-42	(89%)	.001	.000-.001	(88%)	0.42	0.17	Warmouth
32	5-59	(85%)	.002	.000-.004	(91%)	0.62	0.25	White crappie
40	7-72	(83%)	.002	.000-.004	(82%)	0.77	0.31	Yellow bullhead
1009	734-1284	(27%)	.070	.034-.106	(51%)	19.50	7.89	Yellow perch
5	0-16	(220%)	.000	.000-.001	(220%)	0.10	0.04	Yellow bass

Table 6. Total fishing catch and catch rates, in kilograms.

KG CAUGHT	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
2267	1943-2591	(14%)	.193	.150-.237	(22%)	43.83	0.161	All species
59	34-83	(42%)	.005	.002-.007	(55%)	1.13	0.228	Black bullhead
29	17-40	(40%)	.002	.001-.003	(44%)	0.56	0.084	Black crappie
291	247-336	(15%)	.018	.015-.021	(18%)	5.63	0.033	Bluegill
3	0-7	(138%)	.000	.000-.000	(125%)	0.06	0.114	Brown bullhead
290	135-445	(53%)	.027	.000-.058	(116%)	5.61	0.554	Carp
122	74-170	(39%)	.009	.005-.014	(46%)	2.36	0.533	Channel catfish
12	5-20	(63%)	.001	.000-.001	(61%)	0.24	0.047	Green sunfish
925	761-1088	(18%)	.080	.060-.100	(25%)	17.88	0.532	Largemouth bass
410	164-655	(60%)	.042	.013-.072	(70%)	7.92	0.859	Northern pike
8	2-13	(75%)	.000	.000-.001	(73%)	0.15	0.043	Pumpkinseed
3	0-13	(318%)	.000	.000-.002	(430%)	0.06	0.551	Smallmouth bass
60	29-91	(51%)	.005	.002-.008	(65%)	1.16	0.332	Walleye
3	0-5	(102%)	.000	.000-.000	(111%)	0.05	0.119	Warmouth
3	0-5	(94%)	.000	.000-.000	(86%)	0.05	0.086	White crappie
3	0-6	(88%)	.000	.000-.000	(88%)	0.06	0.084	Yellow bullhead
46	34-57	(25%)	.003	.002-.005	(51%)	0.88	0.045	Yellow perch
1	0-2	(220%)	.000	.000-.000	(220%)	0.01	0.102	Yellow bass

Table 7. Total fishing catch and catch rates, in pounds.

LB CAUGHT	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
4998	4283-5713	(14%)	.426	.330-.522	(22%)	39.11	0.355	All species
129	74-184	(42%)	.010	.004-.015	(55%)	1.01	0.503	Black bullhead
64	38-89	(40%)	.005	.003-.007	(44%)	0.50	0.185	Black crappie
642	545-740	(15%)	.039	.032-.046	(18%)	5.03	0.074	Bluegill
7	0-16	(138%)	.000	.000-.001	(125%)	0.05	0.252	Brown bullhead
640	298-982	(53%)	.059	.000-.128	(116%)	5.00	1.221	Carp
269	163-375	(39%)	.021	.011-.030	(46%)	2.11	1.175	Channel catfish
27	10-45	(63%)	.002	.001-.003	(61%)	0.21	0.105	Green sunfish
2039	1679-2400	(18%)	.177	.132-.221	(25%)	15.96	1.173	Largemouth bass
903	361-1445	(60%)	.093	.028-.159	(70%)	7.07	1.894	Northern pike
17	4-29	(75%)	.001	.000-.001	(73%)	0.13	0.096	Pumpkinseed
7	0-38	(430%)	.001	.000-.004	(430%)	0.06	1.216	Smallmouth bass
133	65-201	(51%)	.011	.004-.018	(65%)	1.04	0.732	Walleye
6	0-12	(102%)	.000	.000-.000	(111%)	0.05	0.262	Warmouth
6	0-12	(94%)	.000	.000-.001	(86%)	0.05	0.190	White crappie
7	1-14	(88%)	.000	.000-.001	(88%)	0.06	0.186	Yellow bullhead
101	75-126	(25%)	.007	.003-.011	(51%)	0.79	0.100	Yellow perch
1	0-4	(220%)	.000	.000-.000	(220%)	0.01	0.224	Yellow bass

Table 8. Hours per completed trip and supplementary questions for all trips.

	MEAN	95% CI		MIN	MAX	#SAMPLES
HOURS PER COMPLETED TRIP*						
BOAT	2.6	2.3-2.9	(12%)	0.8	6.5	69
SHORE	1.4	1.1-1.6	(17%)	0.2	3.5	43
BOAT & SHORE	2.1	1.9-2.4	(11%)	0.2	6.5	112
MILES TRAVELED	1.4	1.2-1.7	(17%)	1	40	649
SUCCESS RATING (1-10)	3.6	3.4-3.8	(5%)	1	10	648

*36 samples were from split interviews of completed trips.
15.9% of all 703 interviews were completed trips.

ILLEGAL HARVEST: Clerk noted 12 out of 703 interviews with illegal harvests.

Table 9. Frequency distribution of angler party size for all interviews.

PARTY SIZE:	1	2	3	4	5	6	7	8	9	10+
BOAT INTERVIEWS	71	165	28	4						
SHORE INTERVIEWS	150	209	56	11	7	2				

Table 10. Number of interviews (and %) per species sought for all interviews.

324	(46.1%)	ANY	All species
14	(2.0%)	BLG	Bluegill
24	(3.4%)	CAP	Carp
13	(1.8%)	CCF	Channel catfish
10	(1.4%)	CRP	Crappie spp.
263	(37.4%)	LMB	Largemouth bass
16	(2.3%)	NOP	Northern pike
39	(5.5%)	WAE	Walleye

2001 GAGES LAKE DAY CREEL 04/01/2001 - 10/31/2001

Table 11. Number of anglers with a given harvest & release for completed trips

# OF FISH:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Black crappie																
HARVEST	210	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	199	6	7	-	-	-	-	-	-	-	-	-	-	-	-	-
Bluegill																
HARVEST	210	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	159	13	17	5	13	-	-	-	2	-	2	-	1	-	-	-
Carp																
HARVEST	200	11	-	-	-	-	-	-	-	-	-	-	-	-	-	1
RELEASE	209	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Channel catfish																
HARVEST	210	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	206	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Green sunfish																
HARVEST	212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	209	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Largemouth bass																
HARVEST	201	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	126	52	20	13	1	-	-	-	-	-	-	-	-	-	-	-
Northern pike																
HARVEST	212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	163	43	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Pumpkinseed																
HARVEST	212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	204	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Walleye																
HARVEST	208	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	199	8	5	-	-	-	-	-	-	-	-	-	-	-	-	-
Warmouth																
HARVEST	212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
White crappie																
HARVEST	212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	208	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 11. (continued) Number of anglers with a given harvest & release for completed trips

# OF FISH:		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Yellow bullhead																	
HARVEST	212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	210	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yellow perch																	
HARVEST	212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	180	30	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1

ILLINOIS NATURAL HISTORY SURVEY
CENTER FOR AQUATIC ECOLOGY
2001 CREEL SURVEY RESULTS

2001 LITTLE GRASSY
905 ACRES
REGION 4, DISTRICT 15

STRATIFICATION SUMMARY:

Day creel only.
Results cover 03/15/2001 through 10/31/2001
Year periods stratified.
Fishing modes (boat vs. shore) stratified.
Day types (weekday vs. weekend/holiday) stratified.
Day periods (morning, midday, and afternoon) stratified.

SAMPLING RATIO: 427/693 = 61.6%

NUMBER OF INTERVIEWS: 1789

Table 1. Total fishing effort, by fishing mode and day type.

FISHING MODE	DAYTYPE	ANGLER-HOURS	95% CI		HOURS/ACRE	95% CI		% EFF
BOAT	WEEKDAY	13294	11756-14832	(12%)	15	13-16	(12%)	16%
	HOLIDAY	11938	10180-13695	(15%)	13	11-15	(15%)	34%
	TOTAL	25232	22896-27567	(9%)	28	25-30	(9%)	25%
SHORE	WEEKDAY	1904	925-2884	(51%)	2	1-3	(51%)	12%
	HOLIDAY	2240	1645-2835	(27%)	2	2-3	(27%)	24%
	TOTAL	4145	3034-5256	(27%)	5	3-6	(27%)	18%
BOAT & SHORE	WEEKDAY	15198	13435-16961	(12%)	17	15-19	(12%)	15%
	HOLIDAY	14178	12323-16034	(13%)	16	14-18	(13%)	33%
	TOTAL	29377	26817-31936	(9%)	32	30-35	(9%)	24%

Table 2. Total fishing harvest and harvest rates, in numbers of fish.

# HARVESTED	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
29948	25728-34167	(14%)	.484	.408-.560	(16%)	81.73	33.07	All species
4799	3801-5797	(21%)	.122	.088-.157	(28%)	13.10	5.30	Black crappie
8052	6052-10051	(25%)	.099	.065-.134	(35%)	21.97	8.89	Bluegill
3	0-11	(257%)	.000	.000-.000	(278%)	0.01	0.00	Brook silverside
			****	NOT RECORDED	****			Carp
1279	936-1622	(27%)	.033	.021-.045	(35%)	3.49	1.41	Channel catfish
586	349-823	(40%)	.011	.000-.021	(97%)	1.60	0.65	Green sunfish
1228	958-1497	(22%)	.024	.013-.034	(44%)	3.35	1.36	Largemouth bass
92	23-160	(74%)	.001	.000-.003	(108%)	0.25	0.10	Longear sunfish
207	81-334	(61%)	.004	.002-.007	(65%)	0.57	0.23	Orangespotted sunfi
263	165-361	(37%)	.003	.002-.004	(48%)	0.72	0.29	Redear sunfish
5	0-15	(210%)	.000	.000-.001	(210%)	0.01	0.01	Unidentified Sunfis
115	60-171	(48%)	.001	.000-.001	(53%)	0.31	0.13	Warmouth
11140	8319-13961	(25%)	.134	.097-.171	(27%)	30.40	12.30	White crappie
6	0-13	(122%)	.000	.000-.000	(205%)	0.02	0.01	Yellow bullhead
2113	1062-3164	(50%)	.050	.017-.083	(66%)	5.77	2.33	Yellow bass

Table 3. Total fishing harvest and harvest rates, in kilograms.

KG HARVESTED	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
5992	5247-6738	(12%)	.110	.091-.129	(17%)	16.35	0.200	All species
891	701-1082	(21%)	.022	.016-.028	(28%)	2.43	0.186	Black crappie
939	691-1187	(26%)	.012	.007-.017	(40%)	2.56	0.117	Bluegill
0	0-0	(278%)	.000	.000-.000	(278%)	0.00	0.002	Brook silverside
			****	NOT RECORDED	****			Carp
911	659-1163	(28%)	.022	.014-.030	(35%)	2.49	0.712	Channel catfish
64	34-94	(46%)	.001	.000-.002	(95%)	0.18	0.110	Green sunfish
842	657-1027	(22%)	.019	.006-.033	(70%)	2.30	0.686	Largemouth bass
16	3-30	(81%)	.000	.000-.001	(119%)	0.04	0.179	Longear sunfish
16	7-24	(54%)	.000	.000-.001	(77%)	0.04	0.076	Orangespotted sunfi
62	39-85	(37%)	.001	.000-.001	(48%)	0.17	0.235	Redear sunfish
			****	NOT RECORDED	****			Unidentified Sunfis
27	13-41	(52%)	.000	.000-.000	(61%)	0.07	0.232	Warmouth
1816	1416-2216	(22%)	.022	.017-.027	(24%)	4.96	0.163	White crappie
3	0-6	(125%)	.000	.000-.000	(203%)	0.01	0.468	Yellow bullhead
406	231-580	(43%)	.010	.003-.016	(64%)	1.11	0.192	Yellow bass

Table 4. Total fishing harvest and harvest rates, in pounds.

LB HARVESTED	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
13211	11567-14855	(12%)	.242	.201-.284	(17%)	14.59	0.441	All species
1965	1545-2385	(21%)	.049	.035-.063	(28%)	2.17	0.409	Black crappie
2070	1523-2618	(26%)	.026	.016-.036	(40%)	2.29	0.257	Bluegill
0	0-0	(278%)	.000	.000-.000	(257%)	0.00	0.003	Brook silverside
			**** NOT RECORDED ****					Carp
2008	1452-2563	(28%)	.049	.032-.067	(35%)	2.22	1.570	Channel catfish
142	76-208	(46%)	.003	.000-.005	(95%)	0.16	0.242	Green sunfish
1856	1448-2264	(22%)	.043	.013-.073	(70%)	2.05	1.511	Largemouth bass
36	7-65	(81%)	.001	.000-.001	(119%)	0.04	0.394	Longear sunfish
35	16-53	(54%)	.001	.000-.001	(77%)	0.04	0.167	Orangespotted sunfi
136	86-187	(37%)	.001	.001-.002	(48%)	0.15	0.519	Redear sunfish
			**** NOT RECORDED ****					Unidentified Sunfis
59	28-90	(52%)	.000	.000-.001	(61%)	0.07	0.511	Warmouth
4004	3123-4885	(22%)	.048	.037-.059	(24%)	4.42	0.359	White crappie
6	0-13	(125%)	.000	.000-.000	(203%)	0.01	1.033	Yellow bullhead
894	510-1278	(43%)	.021	.008-.034	(64%)	0.99	0.423	Yellow bass

Table 5. Total fishing catch and catch rates, in numbers of fish.
Catch includes both harvested and released fish.

# CAUGHT	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
84123	72906-95340	(13%)	1.284	1.116-1.452	(13%)	229.57	92.91	All species
10312	8194-12430	(21%)	.245	.189-.300	(23%)	28.14	11.39	Black crappie
29343	23643-35043	(19%)	.427	.313-.541	(27%)	80.08	32.41	Bluegill
3	0-11	(257%)	.000	.000-.000	(278%)	0.01	0.00	Brook silverside
2	0-5	(236%)	.000	.000-.000	(236%)	0.00	0.00	Carp
1661	1207-2115	(27%)	.043	.029-.058	(34%)	4.53	1.83	Channel catfish
3592	2593-4591	(28%)	.062	.031-.093	(49%)	9.80	3.97	Green sunfish
4992	4247-5738	(15%)	.088	.070-.106	(20%)	13.62	5.51	Largemouth bass
108	12-204	(89%)	.002	.000-.004	(120%)	0.30	0.12	Longear sunfish
2015	1322-2708	(34%)	.031	.016-.045	(48%)	5.50	2.23	Orangespotted sunfi
264	167-362	(37%)	.003	.002-.004	(48%)	0.72	0.29	Redear sunfish
5	0-15	(210%)	.000	.000-.001	(210%)	0.01	0.01	Unidentified Sunfis
457	289-626	(37%)	.006	.002-.011	(62%)	1.25	0.51	Warmouth
27970	21279-34661	(24%)	.304	.243-.365	(20%)	76.33	30.89	White crappie
6	0-13	(122%)	.000	.000-.000	(205%)	0.02	0.01	Yellow bullhead
3246	1963-4528	(40%)	.071	.032-.109	(54%)	8.86	3.58	Yellow bass

Table 6. Total fishing catch and catch rates, in kilograms.

KG CAUGHT	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
10554	9356-11751	(11%)	.180	.158-.202	(12%)	28.80	0.125	All species
1149	921-1376	(20%)	.028	.021-.035	(24%)	3.13	0.111	Black crappie
1662	1297-2027	(22%)	.023	.017-.030	(29%)	4.54	0.057	Bluegill
0	0-0	(278%)	.000	.000-.000	(278%)	0.00	0.002	Brook silverside
1	0-4	(236%)	.000	.000-.000	(245%)	0.00	0.775	Carp
983	717-1249	(27%)	.024	.016-.032	(33%)	2.68	0.592	Channel catfish
210	126-294	(40%)	.003	.002-.005	(47%)	0.57	0.058	Green sunfish
3247	2716-3779	(16%)	.058	.042-.074	(28%)	8.86	0.650	Largemouth bass
18	3-32	(84%)	.000	.000-.001	(119%)	0.05	0.162	Longear sunfish
75	48-102	(36%)	.001	.001-.002	(50%)	0.20	0.037	Orangespotted sunfi
62	39-85	(37%)	.001	.000-.001	(48%)	0.17	0.235	Redear sunfish
			****	NOT RECORDED	****			Unidentified Sunfis
52	31-73	(40%)	.001	.000-.001	(60%)	0.14	0.114	Warmouth
2590	1980-3201	(24%)	.029	.023-.035	(21%)	7.07	0.093	White crappie
3	0-6	(125%)	.000	.000-.000	(203%)	0.01	0.468	Yellow bullhead
502	312-692	(38%)	.011	.005-.018	(56%)	1.37	0.155	Yellow bass

Table 7. Total fishing catch and catch rates, in pounds.

LB CAUGHT	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
23267	20627-25907	(11%)	.398	.349-.446	(12%)	25.70	0.277	All species
2532	2030-3035	(20%)	.062	.047-.077	(24%)	2.80	0.246	Black crappie
3664	2860-4469	(22%)	.051	.036-.067	(29%)	4.05	0.125	Bluegill
0	0-0	(278%)	.000	.000-.000	(257%)	0.00	0.003	Brook silverside
3	0-9	(245%)	.000	.000-.000	(236%)	0.00	1.710	Carp
2167	1581-2754	(27%)	.053	.036-.071	(33%)	2.39	1.305	Channel catfish
463	277-649	(40%)	.007	.004-.010	(47%)	0.51	0.129	Green sunfish
7160	5987-8332	(16%)	.128	.093-.164	(28%)	7.91	1.434	Largemouth bass
39	6-71	(84%)	.001	.000-.001	(119%)	0.04	0.358	Longear sunfish
166	105-226	(36%)	.003	.001-.004	(50%)	0.18	0.082	Orangespotted sunfi
137	86-188	(37%)	.001	.001-.002	(48%)	0.15	0.518	Redear sunfish
			****	NOT RECORDED	****			Unidentified Sunfis
115	69-161	(40%)	.001	.001-.002	(60%)	0.13	0.251	Warmouth
5710	4365-7056	(24%)	.064	.051-.078	(21%)	6.31	0.204	White crappie
6	0-13	(125%)	.000	.000-.000	(203%)	0.01	1.033	Yellow bullhead
1106	687-1525	(38%)	.025	.011-.039	(56%)	1.22	0.341	Yellow bass

Table 8. Hours per completed trip and supplementary questions for all trips.

	MEAN	95% CI		MIN	MAX	#SAMPLES
HOURS PER COMPLETED TRIP*						
BOAT	3.0	2.9-3.1	(4%)	0.2	12.0	1086
SHORE	2.4	2.1-2.6	(12%)	0.2	7.0	116
BOAT & SHORE	3.0	2.8-3.1	(3%)	0.2	12.0	1202
MILES TRAVELED	29.2	26.6-31.8	(9%)	1	400	1330
SUCCESS RATING (1-10)	5.6	5.4-5.8	(4%)	1	10	1326

*403 samples were from split interviews of completed trips.
87.3% of all 1377 interviews were completed trips.

ILLEGAL HARVEST: Clerk noted 6 out of 1377 interviews with illegal harvests.

Table 9. Frequency distribution of angler party size for all interviews.

PARTY SIZE:	1	2	3	4	5	6	7	8	9	10+
BOAT INTERVIEWS	494	647	80	13	4	1	2	1		
SHORE INTERVIEWS	61	38	13	12	5	1	2	2	1	

Table 10. Number of interviews (and %) per species sought for all interviews.

249	(18.1%)	ANY	All species
1	(0.1%)	BLC	Black crappie
95	(6.9%)	BLG	Bluegill
3	(0.2%)	BSS	Black bass spp.
68	(4.9%)	CAT	Unidentified catfish
2	(0.1%)	CCF	Channel catfish
376	(27.3%)	CRP	Crappie spp.
566	(41.1%)	LMB	Largemouth bass
16	(1.2%)	SUN	Sunfish spp. excluding Crappie and Black Bass
1	(0.1%)	WAE	Walleye

2001 LITTLE GRASSY DAY CREEL 03/15/2001 - 10/31/2001

Table 11. Number of anglers with a given harvest & release for completed trips

# OF FISH:		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Black crappie																	
	HARVEST	1803	77	47	35	37	16	7	10	13	5	4	3	6	4	1	5
	RELEASE	1864	37	17	23	24	20	19	13	12	9	4	-	11	-	2	18
Bluegill																	
	HARVEST	1731	89	58	27	29	31	13	14	12	8	2	12	11	2	4	30
	RELEASE	1543	87	70	55	44	33	27	6	20	8	22	9	22	10	5	112
Brook silverside																	
	HARVEST	2071	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	RELEASE	2073	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carp																	
	HARVEST	2073	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	RELEASE	2071	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Channel catfish																	
	HARVEST	1923	98	17	17	2	9	7	-	-	-	-	-	-	-	-	-
	RELEASE	2011	45	12	4	-	-	1	-	-	-	-	-	-	-	-	-
Green sunfish																	
	HARVEST	1999	46	16	4	3	-	2	3	-	-	-	-	-	-	-	-
	RELEASE	1864	81	32	33	12	19	10	1	7	3	4	-	-	3	-	4
Largemouth bass																	
	HARVEST	1872	109	60	21	5	1	5	-	-	-	-	-	-	-	-	-
	RELEASE	1560	312	97	33	34	10	5	10	9	-	2	-	-	-	-	1
Longear sunfish																	
	HARVEST	2059	7	6	1	-	-	-	-	-	-	-	-	-	-	-	-
	RELEASE	2069	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Orangespotted sunfish																	
	HARVEST	2039	28	4	1	1	-	-	-	-	-	-	-	-	-	-	-
	RELEASE	1951	31	23	23	15	8	11	2	2	-	5	-	-	1	-	1
Redear sunfish																	
	HARVEST	2007	50	10	2	4	-	-	-	-	-	-	-	-	-	-	-
	RELEASE	2071	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unidentified Sunfish hybrid																	
	HARVEST	2071	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	RELEASE	2073	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Warmouth																	
	HARVEST	2042	26	1	4	-	-	-	-	-	-	-	-	-	-	-	-
	RELEASE	2013	40	10	8	1	1	-	-	-	-	-	-	-	-	-	-

Table 11.(continued) Number of anglers with a given harvest & release for completed trips

# OF FISH:		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
White crappie																	
HARVEST	1626	114	63	46	40	21	33	18	7	8	13	3	13	3	7	58	
RELEASE	1635	70	41	40	34	29	20	20	19	11	20	5	14	14	6	95	
Yellow bullhead																	
HARVEST	2068	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
RELEASE	2071	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	
Yellow bass																	
HARVEST	1907	98	36	14	7	2	-	4	-	1	-	-	-	-	-	4	
RELEASE	1929	108	12	7	4	5	2	-	3	-	3	-	-	-	-	-	

ILLINOIS NATURAL HISTORY SURVEY
CENTER FOR AQUATIC ECOLOGY
2001 CREEL SURVEY RESULTS

2001 WASHINGTON CO LAKE
245 ACRES
REGION 4, DISTRICT 17

STRATIFICATION SUMMARY:

Day creel only.
Results cover 03/15/2001 through 10/31/2001
Year periods stratified.
Fishing modes (boat vs. shore) stratified.
Day types (weekday vs. weekend/holiday) stratified.
Day periods (morning, midday, and afternoon) stratified.

SAMPLING RATIO: 302/693 = 43.6%

NUMBER OF INTERVIEWS: 2568

Table 1. Total fishing effort, by fishing mode and day type.

FISHING MODE	DAYTYPE	ANGLER-HOURS	95% CI		HOURS/ACRE	95% CI		% EFF
BOAT	WEEKDAY	8816	7734-9897	(12%)	36	32-40	(12%)	25%
	HOLIDAY	12848	11383-14312	(11%)	52	46-58	(11%)	51%
	TOTAL	21664	19843-23484	(8%)	88	81-96	(8%)	41%
SHORE	WEEKDAY	1722	1047-2398	(39%)	7	4-10	(39%)	19%
	HOLIDAY	2317	1882-2753	(19%)	9	8-11	(19%)	40%
	TOTAL	4040	3274-4806	(19%)	16	13-20	(19%)	31%
BOAT & SHORE	WEEKDAY	10538	9286-11790	(12%)	43	38-48	(12%)	24%
	HOLIDAY	15165	13637-16693	(10%)	62	56-68	(10%)	50%
	TOTAL	25703	23728-27678	(8%)	105	97-113	(8%)	39%

Table 2. Total fishing harvest and harvest rates, in numbers of fish.

# HARVESTED	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
4455	3539-5371	(21%)	.126	.088-.164	(30%)	44.93	18.18	All species
			**** NOT RECORDED ****					Black crappie
1576	851-2302	(46%)	.032	.013-.051	(59%)	15.90	6.43	Bluegill
			**** NOT RECORDED ****					Bowfin
2	0-7	(231%)	.000	.000-.000	(236%)	0.02	0.01	Carp
1302	1023-1581	(21%)	.049	.032-.067	(36%)	13.13	5.32	Channel catfish
214	130-299	(39%)	.004	.002-.006	(50%)	2.16	0.88	Largemouth bass
1360	992-1729	(27%)	.040	.008-.073	(80%)	13.72	5.55	White crappie

Table 3. Total fishing harvest and harvest rates, in kilograms.

KG HARVESTED	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
1105	924-1286	(16%)	.034	.024-.043	(28%)	11.14	0.248	All species
			**** NOT RECORDED ****					Black crappie
70	37-102	(46%)	.001	.001-.002	(59%)	0.70	0.044	Bluegill
			**** NOT RECORDED ****					Bowfin
3	0-9	(236%)	.000	.000-.000	(236%)	0.03	1.206	Carp
662	521-803	(21%)	.024	.015-.033	(38%)	6.68	0.508	Channel catfish
245	149-342	(39%)	.005	.002-.007	(56%)	2.47	1.144	Largemouth bass
125	89-160	(28%)	.004	.001-.007	(83%)	1.26	0.092	White crappie

Table 4. Total fishing harvest and harvest rates, in pounds.

LB HARVESTED	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
2435	2036-2835	(16%)	.074	.053-.095	(28%)	9.94	0.547	All species
			**** NOT RECORDED ****					Black crappie
154	82-225	(46%)	.003	.001-.005	(59%)	0.63	0.098	Bluegill
			**** NOT RECORDED ****					Bowfin
6	0-19	(231%)	.000	.000-.000	(236%)	0.02	2.659	Carp
1460	1148-1771	(21%)	.052	.033-.072	(38%)	5.96	1.121	Channel catfish
541	328-753	(39%)	.010	.004-.016	(56%)	2.21	2.521	Largemouth bass
275	197-354	(28%)	.009	.001-.016	(83%)	1.12	0.202	White crappie

Table 5. Total fishing catch and catch rates, in numbers of fish.
Catch includes both harvested and released fish.

# CAUGHT	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
23931	21930-25933	(8%)	.581	.522-.641	(10%)	241.36	97.68	All species
103	0-318	(209%)	.006	.000-.019	(209%)	1.04	0.42	Black crappie
8088	6635-9541	(18%)	.174	.123-.225	(29%)	81.58	33.01	Bluegill
2	0-6	(236%)	.000	.000-.000	(231%)	0.02	0.01	Bowfin
5	0-12	(146%)	.000	.000-.000	(193%)	0.05	0.02	Carp
3105	2670-3540	(14%)	.114	.090-.137	(20%)	31.32	12.67	Channel catfish
8652	7730-9574	(11%)	.197	.174-.219	(11%)	87.26	35.31	Largemouth bass
3976	3359-4594	(16%)	.091	.060-.122	(34%)	40.10	16.23	White crappie

Table 6. Total fishing catch and catch rates, in kilograms.

KG CAUGHT	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
5409	4933-5885	(9%)	.137	.125-.150	(9%)	54.55	0.226	All species
3	0-8	(209%)	.000	.000-.000	(209%)	0.03	0.025	Black crappie
334	274-395	(18%)	.007	.005-.009	(26%)	3.37	0.041	Bluegill
0	0-0	(231%)	.000	.000-.000	(236%)	0.00	0.077	Bowfin
8	0-19	(152%)	.000	.000-.001	(197%)	0.08	1.522	Carp
1145	937-1354	(18%)	.040	.030-.049	(24%)	11.55	0.369	Channel catfish
3574	3155-3994	(12%)	.082	.072-.093	(12%)	36.05	0.413	Largemouth bass
345	287-402	(17%)	.008	.005-.011	(38%)	3.48	0.087	White crappie

Table 7. Total fishing catch and catch rates, in pounds.

LB CAUGHT	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
11925	10876-12974	(9%)	.303	.276-.330	(9%)	48.67	0.498	All species
6	0-17	(209%)	.000	.000-.001	(209%)	0.02	0.055	Black crappie
737	603-870	(18%)	.015	.011-.019	(26%)	3.01	0.091	Bluegill
0	0-1	(236%)	.000	.000-.000	(231%)	0.00	0.170	Bowfin
17	0-42	(152%)	.000	.000-.001	(197%)	0.07	3.356	Carp
2525	2065-2986	(18%)	.087	.066-.108	(24%)	10.31	0.813	Channel catfish
7880	6955-8806	(12%)	.182	.159-.204	(12%)	32.16	0.911	Largemouth bass
760	633-887	(17%)	.018	.011-.025	(38%)	3.10	0.191	White crappie

2001 WASHINGTON CO LAKE DAY CREEL SECTION 1 03/15/2001 - 10/31/2001

Table 8. Hours per completed trip and supplementary questions for all trips.

	MEAN	95% CI		MIN	MAX	#SAMPLES
HOURS PER COMPLETED TRIP*						
BOAT	5.1	4.9-5.3	(4%)	1.0	11.7	509
SHORE	2.7	1.4-3.9	(47%)	0.8	8.8	16
BOAT & SHORE	5.0	4.8-5.2	(4%)	0.8	11.7	525
MILES TRAVELED	35.6	33.5-37.7	(6%)	2	1100	1574
SUCCESS RATING (1-10)	4.8	4.7-5.0	(3%)	1	10	1565

*409 samples were from split interviews of completed trips.
24.5% of all 2140 interviews were completed trips.

ILLEGAL HARVEST: Clerk noted 0 out of 2140 interviews with illegal harvests.

Table 9. Frequency distribution of angler party size for all interviews.

PARTY SIZE:	1	2	3	4	5	6	7	8	9	10+
BOAT INTERVIEWS	576	1041	106	12	3					
SHORE INTERVIEWS	126	197	61	15	3					

Table 10. Number of interviews (and %) per species sought for all interviews.

239	(11.2%)	ANY	All species
1	(0.0%)	BLC	Black crappie
203	(9.5%)	BLG	Bluegill
373	(17.4%)	CCF	Channel catfish
1104	(51.6%)	LMB	Largemouth bass
220	(10.3%)	WHC	White crappie

2001 WASHINGTON CO LAKE DAY CREEL SECTION 1 03/15/2001 - 10/31/2001

Table 11. Number of anglers with a given harvest & release for completed trips

# OF FISH:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Bluegill																
HARVEST	877	-	-	-	-	-	-	-	-	-	-	2	-	-	-	5
RELEASE	825	2	10	7	5	4	5	-	-	-	4	2	-	3	2	15
Carp																
HARVEST	884	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	880	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Channel catfish																
HARVEST	836	11	9	14	6	2	6	-	-	-	-	-	-	-	-	-
RELEASE	800	45	14	10	6	6	1	-	2	-	-	-	-	-	-	-
Largemouth bass																
HARVEST	868	7	6	-	2	1	-	-	-	-	-	-	-	-	-	-
RELEASE	317	149	118	111	85	35	18	22	11	3	8	2	1	1	-	3
White crappie																
HARVEST	857	2	2	-	2	2	-	2	2	-	-	2	-	2	2	9
RELEASE	796	16	20	14	10	8	8	2	4	-	2	-	1	-	-	3

ILLINOIS NATURAL HISTORY SURVEY
CENTER FOR AQUATIC ECOLOGY
2001 CREEL SURVEY RESULTS

2001 FOX RIVER
Montgomery Dam
15 ACRES
REGION 2, DISTRICT 9

STRATIFICATION SUMMARY:

Day creel only.
Results cover 04/01/2001 through 10/31/2001
Year periods stratified.
Day types (weekday vs. weekend/holiday) stratified.
Day periods (morning, midday, and afternoon) stratified.

SAMPLING RATIO: 152/642 = 23.7%

NUMBER OF INTERVIEWS: 1103

Table 1. Total fishing effort, by fishing mode and day type.

FISHING MODE	DAYTYPE	ANGLER-HOURS	95% CI		HOURS/ACRE	95% CI		% EFF
BOAT & SHORE	WEEKDAY	17771	15576-19967	(12%)	1201	1052-1349	(12%)	6%
	HOLIDAY	14508	12415-16600	(14%)	980	839-1122	(14%)	14%
	TOTAL	32279	29310-35249	(9%)	2181	1980-2382	(9%)	10%

Table 2. Total fishing harvest and harvest rates, in numbers of fish.

# HARVESTED	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
2639	1658-3621	(37%)	.098	.050-.147	(49%)	440.67	178.34	All species
9	0-37	(318%)	.000	.000-.001	(318%)	1.47	0.59	Black crappie
1058	127-1990	(88%)	.047	.000-.095	(103%)	176.70	71.51	Bluegill
4	0-16	(318%)	.000	.000-.000	(278%)	0.63	0.25	Bowfin
243	125-360	(49%)	.007	.002-.013	(72%)	40.50	16.39	Carp
753	450-1055	(40%)	.020	.007-.034	(65%)	125.68	50.86	Channel catfish
140	48-232	(66%)	.005	.000-.010	(115%)	23.37	9.46	Flathead catfish
			****	NOT RECORDED	****			Fathead minnow
280	125-436	(56%)	.010	.000-.066	(584%)	46.79	18.94	Freshwater drum
20	0-105	(430%)	.000	.000-.006	(1271%	3.30	1.34	Largemouth bass
			****	NOT RECORDED	****			Muskellunge
			****	NOT RECORDED	****			Northern pike
42	0-99	(136%)	.002	.000-.004	(135%)	7.01	2.84	Shorthead redhorse
59	0-141	(138%)	.001	.000-.006	(275%)	9.89	4.00	Smallmouth bass
4	0-19	(318%)	.000	.000-.001	(430%)	0.75	0.30	Walleye
27	0-316	(1048%	.005	.000-.067	(1257%	4.59	1.86	White bass
			****	NOT RECORDED	****			Yellow bass

Table 3. Total fishing harvest and harvest rates, in kilograms.

KG HARVESTED	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
1142	630-1654	(45%)	.042	.014-.071	(68%)	190.67	0.433	All species
2	0-8	(278%)	.000	.000-.000	(278%)	0.34	0.232	Black crappie
24	0-52	(116%)	.001	.000-.002	(112%)	4.01	0.023	Bluegill
1	0-3	(278%)	.000	.000-.000	(278%)	0.11	0.181	Bowfin
259	113-405	(56%)	.008	.002-.014	(78%)	43.21	1.067	Carp
364	159-569	(56%)	.009	.000-.019	(106%)	60.76	0.483	Channel catfish
287	0-983	(243%)	.014	.000-.052	(276%)	47.86	2.048	Flathead catfish
			****	NOT RECORDED	****			Fathead minnow
96	0-199	(107%)	.005	.000-.051	(843%)	16.02	0.342	Freshwater drum
24	0-128	(430%)	.001	.000-.008	(1271%	4.03	1.220	Largemouth bass
			****	NOT RECORDED	****			Muskellunge
			****	NOT RECORDED	****			Northern pike
41	0-101	(149%)	.002	.000-.004	(138%)	6.77	0.966	Shorthead redhorse
27	0-57	(109%)	.001	.000-.001	(123%)	4.53	0.458	Smallmouth bass
5	0-20	(318%)	.000	.000-.001	(318%)	0.80	1.071	Walleye
13	0-171	(1186%	.003	.000-.038	(1267%	2.23	0.485	White bass
			****	NOT RECORDED	****			Yellow bass

Table 4. Total fishing harvest and harvest rates, in pounds.

LB HARVESTED	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
2518	1389-3647	(45%)	.094	.030-.157	(68%)	170.11	0.954	All species
4	0-19	(318%)	.000	.000-.001	(318%)	0.30	0.511	Black crappie
53	0-114	(116%)	.002	.000-.004	(112%)	3.58	0.050	Bluegill
2	0-6	(278%)	.000	.000-.000	(278%)	0.10	0.398	Bowfin
571	249-892	(56%)	.017	.004-.030	(78%)	38.55	2.352	Carp
802	351-1254	(56%)	.020	.000-.041	(106%)	54.21	1.066	Channel catfish
632	0-2167	(243%)	.030	.000-.114	(276%)	42.70	4.516	Flathead catfish
			**** NOT RECORDED ****					Fathead minnow
212	0-439	(107%)	.012	.000-.113	(843%)	14.29	0.755	Freshwater drum
53	0-729	(1271%	.001	.000-.017	(1271%	3.59	2.690	Largemouth bass
			**** NOT RECORDED ****					Muskellunge
			**** NOT RECORDED ****					Northern pike
89	0-222	(149%)	.003	.000-.008	(138%)	6.04	2.130	Shorthead redhorse
60	0-125	(109%)	.001	.000-.003	(123%)	4.04	1.009	Smallmouth bass
11	0-56	(430%)	.001	.000-.002	(318%)	0.72	2.362	Walleye
29	0-378	(1186%	.006	.000-.083	(1267%	1.99	1.069	White bass
			**** NOT RECORDED ****					Yellow bass

Table 5. Total fishing catch and catch rates, in numbers of fish.
Catch includes both harvested and released fish.

# CAUGHT	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
11065	8927-13204	(19%)	.437	.305-.568	(30%)	1847.48	747.67	All species
126	0-319	(154%)	.005	.000-.013	(146%)	21.03	8.51	Black crappie
3019	1700-4338	(44%)	.145	.058-.232	(60%)	504.11	204.01	Bluegill
4	0-16	(318%)	.000	.000-.000	(278%)	0.63	0.25	Bowfin
1235	729-1742	(41%)	.029	.019-.040	(35%)	206.25	83.47	Carp
1722	1214-2230	(29%)	.052	.031-.073	(40%)	287.53	116.36	Channel catfish
305	132-478	(57%)	.008	.003-.013	(68%)	50.90	20.60	Flathead catfish
5	0-66	(1271%	.000	.000-.002	(1271%	0.81	0.33	Fathead minnow
1876	1459-2294	(22%)	.078	.051-.106	(35%)	313.28	126.78	Freshwater drum
120	0-282	(134%)	.004	.000-.013	(202%)	20.05	8.11	Largemouth bass
7	0-25	(234%)	.000	.000-.001	(228%)	1.25	0.51	Muskellunge
180	0-524	(191%)	.004	.000-.011	(206%)	30.06	12.17	Northern pike
42	0-99	(136%)	.002	.000-.004	(135%)	7.01	2.84	Shorthead redhorse
2272	789-3755	(65%)	.096	.016-.177	(84%)	379.36	153.53	Smallmouth bass
25	0-78	(206%)	.005	.000-.016	(233%)	4.25	1.72	Walleye
84	0-197	(135%)	.006	.000-.070	(990%)	13.98	5.66	White bass
18	0-45	(153%)	.000	.000-.001	(153%)	2.99	1.21	Yellow bass

Table 6. Total fishing catch and catch rates, in kilograms.

KG CAUGHT	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
4063	3180-4946	(22%)	.131	.095-.167	(27%)	678.38	0.367	All species
13	0-30	(137%)	.001	.000-.003	(289%)	2.11	0.100	Black crappie
172	37-308	(79%)	.009	.001-.017	(90%)	28.80	0.057	Bluegill
1	0-3	(278%)	.000	.000-.000	(278%)	0.11	0.181	Bowfin
1129	685-1572	(39%)	.026	.017-.034	(34%)	188.45	0.914	Carp
623	408-838	(35%)	.016	.007-.025	(54%)	104.04	0.362	Channel catfish
349	0-1052	(201%)	.015	.000-.053	(254%)	58.30	1.145	Flathead catfish
0	0-0	(1271%	.000	.000-.000	(430%)	0.00	0.002	Fathead minnow
658	394-923	(40%)	.024	.011-.038	(55%)	109.91	0.351	Freshwater drum
49	0-145	(195%)	.002	.000-.005	(205%)	8.19	0.408	Largemouth bass
17	0-77	(358%)	.001	.000-.002	(232%)	2.81	2.248	Muskellunge
245	0-673	(175%)	.005	.000-.014	(197%)	40.85	1.359	Northern pike
41	0-101	(149%)	.002	.000-.004	(138%)	6.77	0.966	Shorthead redhorse
714	452-976	(37%)	.024	.012-.036	(51%)	119.16	0.314	Smallmouth bass
24	0-74	(202%)	.005	.000-.015	(232%)	4.09	0.962	Walleye
21	0-191	(798%)	.003	.000-.038	(1156%	3.56	0.255	White bass
7	0-23	(204%)	.000	.000-.001	(204%)	1.24	0.417	Yellow bass

Table 7. Total fishing catch and catch rates, in pounds.

LB CAUGHT	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
8958	7011-10904	(22%)	.289	.209-.368	(27%)	605.25	0.810	All species
28	0-66	(137%)	.001	.000-.006	(289%)	1.88	0.221	Black crappie
380	81-679	(79%)	.020	.002-.038	(90%)	25.69	0.126	Bluegill
2	0-6	(278%)	.000	.000-.000	(278%)	0.10	0.398	Bowfin
2488	1510-3467	(39%)	.056	.037-.075	(34%)	168.13	2.014	Carp
1374	899-1849	(35%)	.035	.016-.054	(54%)	92.82	0.798	Channel catfish
770	0-2320	(201%)	.033	.000-.117	(254%)	52.01	2.525	Flathead catfish
0	0-0	(430%)	.000	.000-.000	(430%)	0.00	0.005	Fathead minnow
1451	868-2035	(40%)	.053	.024-.083	(55%)	98.06	0.773	Freshwater drum
108	0-319	(195%)	.004	.000-.011	(205%)	7.31	0.901	Largemouth bass
37	0-170	(358%)	.002	.000-.005	(232%)	2.51	4.957	Muskellunge
539	0-1484	(175%)	.010	.000-.030	(197%)	36.45	2.996	Northern pike
89	0-222	(149%)	.003	.000-.008	(138%)	6.04	2.130	Shorthead redhorse
1573	996-2151	(37%)	.053	.026-.080	(51%)	106.31	0.692	Smallmouth bass
54	0-163	(202%)	.010	.000-.034	(232%)	3.64	2.121	Walleye
47	0-422	(798%)	.007	.000-.084	(1156%	3.17	0.561	White bass
16	0-50	(204%)	.000	.000-.001	(204%)	1.11	0.918	Yellow bass

Table 8. Hours per completed trip and supplementary questions for all trips.

	MEAN	95% CI		MIN	MAX	#SAMPLES
HOURS PER COMPLETED TRIP*						
BOAT	0.0	*** undefined ***		100.0	0.0	0
SHORE	1.8	1.7-1.9	(7%)	0.2	8.9	371
BOAT & SHORE	1.8	1.7-1.9	(7%)	0.2	8.9	371
MILES TRAVELED	11.9	10.9-12.8	(8%)	1	120	946
SUCCESS RATING (1-10)	3.4	3.2-3.5	(5%)	1	10	939

*56 samples were from split interviews of completed trips.
35.5% of all 1046 interviews were completed trips.

ILLEGAL HARVEST: Clerk noted 0 out of 1046 interviews with illegal harvests.

Table 9. Frequency distribution of angler party size for all interviews.

PARTY SIZE:	1	2	3	4	5	6	7	8	9	10+
BOAT INTERVIEWS										
SHORE INTERVIEWS	550	308	116	47	18	4	3			

Table 10. Number of interviews (and %) per species sought for all interviews.

671	(64.1%)	ANY	All species
15	(1.4%)	BLG	Bluegill
7	(0.7%)	BSS	Black bass spp.
55	(5.3%)	CAP	Carp
88	(8.4%)	CAT	Unidentified catfish
41	(3.9%)	CCF	Channel catfish
2	(0.2%)	CRP	Crappie spp.
5	(0.5%)	FCF	Flathead catfish
6	(0.6%)	LMB	Largemouth bass
10	(1.0%)	MUE	Muskellunge
4	(0.4%)	NOP	Northern pike
99	(9.5%)	SMB	Smallmouth bass
43	(4.1%)	WAE	Walleye

2001 FOX RIVER DAY CREEL SECTION 1 04/01/2001 - 10/31/2001
Montgomery Dam

Table 11. Number of anglers with a given harvest & release for completed trips

# OF FISH:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Black crappie																
HARVEST	592	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	590	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bluegill																
HARVEST	585	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-
RELEASE	565	13	5	4	2	-	1	1	-	-	-	-	-	-	-	1
Bowfin																
HARVEST	592	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	592	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carp																
HARVEST	581	9	2	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	570	18	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Channel catfish																
HARVEST	566	21	4	-	1	-	-	-	-	-	-	-	-	-	-	-
RELEASE	573	15	2	1	-	-	-	-	-	-	1	-	-	-	-	-
Flathead catfish																
HARVEST	583	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	586	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fathead minnow																
HARVEST	592	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	592	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freshwater drum																
HARVEST	574	14	4	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	534	51	2	3	-	1	1	-	-	-	-	-	-	-	-	-
Largemouth bass																
HARVEST	592	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	591	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Muskellunge																
HARVEST	592	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	589	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Smallmouth bass																
HARVEST	591	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	549	23	12	4	1	2	1	-	-	-	-	-	-	-	-	-
Walleye																
HARVEST	591	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	591	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 11.(continued) Number of anglers with a given harvest & release for completed trips

# OF FISH:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
White bass																
HARVEST	591	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	592	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Yellow bass																
HARVEST	592	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	589	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ILLINOIS NATURAL HISTORY SURVEY
CENTER FOR AQUATIC ECOLOGY
2001 CREEL SURVEY RESULTS

2001 FOX RIVER
Yorkville Dam
10 ACRES
REGION 2, DISTRICT 9

STRATIFICATION SUMMARY:

Day creel only.
Results cover 04/01/2001 through 10/31/2001
Year periods stratified.
Day types (weekday vs. weekend/holiday) stratified.
Day periods (morning, midday, and afternoon) stratified.

SAMPLING RATIO: 149/642 = 23.2%

NUMBER OF INTERVIEWS: 506

Table 1. Total fishing effort, by fishing mode and day type.

FISHING MODE	DAYTYPE	ANGLER-HOURS	95% CI		HOURS/ACRE	95% CI		% EFF
BOAT & SHORE	WEEKDAY	8245	6547-9943	(21%)	837	665-1009	(21%)	5%
	HOLIDAY	13030	11076-14985	(15%)	1323	1124-1521	(15%)	12%
	TOTAL	21276	18832-23719	(11%)	2160	1912-2408	(11%)	9%

Table 2. Total fishing harvest and harvest rates, in numbers of fish.

# HARVESTED	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
3867	2261-5472	(42%)	.122	.067-.177	(45%)	970.02	392.56	All species
			**** NOT RECORDED ****					Black crappie
22	0-92	(318%)	.001	.000-.008	(430%)	5.52	2.23	Bluegill
190	37-343	(80%)	.003	.001-.005	(71%)	47.73	19.32	Carp
2746	1389-4103	(49%)	.084	.031-.138	(63%)	688.87	278.78	Channel catfish
342	168-517	(51%)	.009	.002-.017	(82%)	85.90	34.76	Flathead catfish
274	38-511	(86%)	.010	.000-.019	(99%)	68.81	27.85	Freshwater drum
			**** NOT RECORDED ****					Largemouth bass
40	0-86	(112%)	.002	.000-.004	(134%)	10.13	4.10	Muskellunge
7	0-28	(318%)	.000	.000-.001	(318%)	1.68	0.68	Northern pike
7	0-23	(257%)	.000	.000-.000	(245%)	1.65	0.67	Shorthead redhorse
180	0-377	(110%)	.008	.000-.023	(201%)	45.07	18.24	Smallmouth bass
58	0-171	(192%)	.005	.000-.024	(389%)	14.66	5.93	Walleye
			**** NOT RECORDED ****					White bass

Table 3. Total fishing harvest and harvest rates, in kilograms.

KG HARVESTED	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
2166	1315-3016	(39%)	.075	.038-.112	(49%)	543.28	0.560	All species
			**** NOT RECORDED ****					Black crappie
5	0-22	(318%)	.000	.000-.001	(318%)	1.30	0.236	Bluegill
147	16-278	(89%)	.002	.000-.004	(81%)	36.88	0.773	Carp
849	447-1251	(47%)	.030	.005-.055	(82%)	212.92	0.309	Channel catfish
626	0-1327	(112%)	.021	.000-.051	(147%)	156.97	1.827	Flathead catfish
112	15-209	(87%)	.004	.000-.008	(102%)	28.07	0.408	Freshwater drum
			**** NOT RECORDED ****					Largemouth bass
165	0-351	(113%)	.007	.000-.020	(183%)	41.36	4.084	Muskellunge
40	0-168	(318%)	.001	.000-.003	(318%)	10.09	6.021	Northern pike
4	0-13	(257%)	.000	.000-.000	(257%)	0.93	0.564	Shorthead redhorse
142	34-250	(76%)	.005	.000-.012	(137%)	35.66	0.791	Smallmouth bass
76	0-174	(129%)	.005	.000-.022	(355%)	19.09	1.302	Walleye
			**** NOT RECORDED ****					White bass

Table 4. Total fishing harvest and harvest rates, in pounds.

LB HARVESTED	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
4774	2900-6649	(39%)	.166	.084-.248	(49%)	484.72	1.235	All species
			**** NOT RECORDED ****					Black crappie
11	0-61	(430%)	.001	.000-.004	(430%)	1.16	0.520	Bluegill
324	36-612	(89%)	.005	.001-.009	(81%)	32.91	1..704	Carp
1871	984-2758	(47%)	.066	.012-.121	(82%)	189.97	0.681	Channel catfish
1379	0-2926	(112%)	.045	.000-.112	(147%)	140.05	4.029	Flathead catfish
247	32-461	(87%)	.009	.000-.018	(102%)	25.04	0.899	Freshwater drum
			**** NOT RECORDED ****					Largemouth bass
363	0-774	(113%)	.016	.000-.045	(183%)	36.90	9.004	Muskellunge
89	0-470	(430%)	.002	.000-.010	(430%)	9.01	13.274	Northern pike
8	0-29	(257%)	.000	.000-.001	(245%)	0.83	1.244	Shorthead redhorse
313	75-552	(76%)	.011	.000-.027	(137%)	31.81	1.744	Smallmouth bass
168	0-384	(129%)	.011	.000-.048	(355%)	17.03	2.870	Walleye
			**** NOT RECORDED ****					White bass

Table 5. Total fishing catch and catch rates, in numbers of fish.
Catch includes both harvested and released fish.

# CAUGHT	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
13308	9595-17022	(28%)	.575	.407-.744	(29%)	3338.60	1351.11	All species
27	0-90	(229%)	.002	.000-.007	(231%)	6.87	2.78	Black crappie
147	0-315	(114%)	.004	.000-.009	(117%)	36.98	14.97	Bluegill
270	113-427	(58%)	.004	.002-.007	(52%)	67.72	27.41	Carp
5094	3453-6735	(32%)	.205	.119-.292	(42%)	1277.84	517.13	Channel catfish
674	357-991	(47%)	.022	.008-.036	(62%)	169.09	68.43	Flathead catfish
1180	175-2185	(85%)	.081	.000-.261	(222%)	295.97	119.78	Freshwater drum
144	0-296	(105%)	.009	.000-.020	(117%)	36.17	14.64	Largemouth bass
121	17-225	(86%)	.005	.000-.011	(114%)	30.24	12.24	Muskellunge
7	0-28	(318%)	.000	.000-.001	(318%)	1.68	0.68	Northern pike
7	0-23	(257%)	.000	.000-.000	(245%)	1.65	0.67	Shorthead redhorse
2199	1272-3125	(42%)	.093	.039-.148	(59%)	551.63	223.24	Smallmouth bass
3217	136-6298	(96%)	.141	.042-.240	(70%)	807.02	326.59	Walleye
222	0-579	(160%)	.007	.000-.018	(143%)	55.75	22.56	White bass

Table 6. Total fishing catch and catch rates, in kilograms.

KG CAUGHT	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
5717	4470-6964	(22%)	.249	.161-.337	(35%)	1434.20	0.430	All species
13	0-39	(198%)	.001	.000-.003	(197%)	3.24	0.472	Black crappie
8	0-26	(210%)	.000	.000-.001	(269%)	2.07	0.056	Bluegill
197	63-331	(68%)	.003	.001-.005	(62%)	49.42	0.730	Carp
1467	961-1974	(35%)	.060	.032-.087	(46%)	368.10	0.288	Channel catfish
871	153-1588	(82%)	.033	.000-.066	(100%)	218.38	1.291	Flathead catfish
510	0-1037	(103%)	.037	.000-.133	(262%)	127.86	0.432	Freshwater drum
25	0-56	(126%)	.002	.000-.007	(235%)	6.16	0.170	Largemouth bass
435	41-828	(90%)	.020	.000-.045	(122%)	109.06	3.607	Muskellunge
40	0-168	(318%)	.001	.000-.003	(318%)	10.09	6.021	Northern pike
4	0-13	(257%)	.000	.000-.000	(257%)	0.93	0.564	Shorthead redhorse
1480	827-2133	(44%)	.064	.028-.101	(57%)	371.25	0.673	Smallmouth bass
650	98-1202	(85%)	.028	.009-.046	(68%)	163.00	0.202	Walleye
18	0-52	(180%)	.000	.000-.001	(131%)	4.62	0.083	White bass

Table 7. Total fishing catch and catch rates, in pounds.

LB CAUGHT	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
12604	9855-15353	(22%)	.549	.355-.743	(35%)	1279.59	0.947	All species
28	0-85	(198%)	.002	.000-.006	(197%)	2.89	1.041	Black crappie
18	0-56	(210%)	.001	.000-.003	(269%)	1.85	0.124	Bluegill
434	140-729	(68%)	.006	.002-.010	(62%)	44.09	1.609	Carp
3235	2119-4351	(35%)	.132	.071-.192	(46%)	328.42	0.635	Channel catfish
1919	338-3500	(82%)	.073	.000-.146	(100%)	194.84	2.847	Flathead catfish
1124	0-2286	(103%)	.081	.000-.294	(262%)	114.07	0.952	Freshwater drum
54	0-123	(126%)	.004	.000-.015	(235%)	5.50	0.376	Largemouth bass
958	91-1825	(90%)	.044	.000-.098	(122%)	97.30	7.951	Muskellunge
89	0-470	(430%)	.002	.000-.010	(430%)	9.01	13.274	Northern pike
8	0-29	(257%)	.000	.000-.001	(245%)	0.83	1.244	Shorthead redhorse
3263	1822-4703	(44%)	.142	.062-.222	(57%)	331.23	1.484	Smallmouth bass
1432	216-2649	(85%)	.061	.020-.102	(68%)	145.43	0.445	Walleye
41	0-114	(180%)	.001	.000-.002	(131%)	4.12	0.183	White bass

Table 8. Hours per completed trip and supplementary questions for all trips.

	MEAN	95% CI		MIN	MAX	#SAMPLES
HOURS PER COMPLETED TRIP*						
BOAT	0.0	*** undefined ***		100.0	0.0	0
SHORE	2.6	2.4-2.8	(9%)	0.3	8.9	266
BOAT & SHORE	2.6	2.4-2.8	(9%)	0.3	8.9	266
MILES TRAVELED	28.2	25.9-30.4	(8%)	1	200	414
SUCCESS RATING (1-10)	4.0	3.7-4.3	(7%)	1	10	413

*62 samples were from split interviews of completed trips.
60.0% of all 443 interviews were completed trips.

ILLEGAL HARVEST: Clerk noted 0 out of 443 interviews with illegal harvests.

Table 9. Frequency distribution of angler party size for all interviews.

PARTY SIZE:	1	2	3	4	5	6	7	8	9	10+
BOAT INTERVIEWS										
SHORE INTERVIEWS	207	159	34	29	9	2	2		1	

Table 10. Number of interviews (and %) per species sought for all interviews.

226	(51.0%)	ANY	All species
1	(0.2%)	BLG	Bluegill
5	(1.1%)	BSS	Black bass spp.
2	(0.5%)	CAP	Carp
79	(17.8%)	CAT	Unidentified catfish
6	(1.4%)	CCF	Channel catfish
3	(0.7%)	FCF	Flathead catfish
12	(2.7%)	MUE	Muskellunge
75	(16.9%)	SMB	Smallmouth bass
34	(7.7%)	WAE	Walleye

2001 FOX RIVER DAY CREEL SECTION 2 04/01/2001 - 10/31/2001
Yorkville Dam

Table 11. Number of anglers with a given harvest & release for completed trips

# OF FISH:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Black crappie																
HARVEST	446	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	445	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Bluegill																
HARVEST	446	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	442	1	2	-	-	-	-	-	1	-	-	-	-	-	-	-
Carp																
HARVEST	437	8	-	-	1	-	-	-	-	-	-	-	-	-	-	-
RELEASE	435	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Channel catfish																
HARVEST	401	17	8	4	2	5	4	-	-	1	-	1	1	-	-	2
RELEASE	366	33	28	9	-	6	-	-	-	1	2	-	1	-	-	-
Flathead catfish																
HARVEST	429	16	-	1	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	427	15	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Freshwater drum																
HARVEST	435	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	432	10	2	1	-	-	-	-	-	1	-	-	-	-	-	-
Largemouth bass																
HARVEST	446	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	438	6	1	-	-	-	1	-	-	-	-	-	-	-	-	-
Muskellunge																
HARVEST	444	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	441	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Smallmouth bass																
HARVEST	439	4	2	-	-	-	1	-	-	-	-	-	-	-	-	-
RELEASE	388	29	13	3	2	3	2	1	2	-	-	-	-	-	-	3
Walleye																
HARVEST	438	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	408	23	4	3	-	1	2	-	1	-	-	-	2	-	-	2
White bass																
HARVEST	446	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	437	5	4	-	-	-	-	-	-	-	-	-	-	-	-	-

ILLINOIS NATURAL HISTORY SURVEY
CENTER FOR AQUATIC ECOLOGY
2001 CREEL SURVEY RESULTS

2001 KANKAKEE RIVER
Kankakee Dam
13 ACRES
REGION 2, DISTRICT 9

STRATIFICATION SUMMARY:

Day creel only.
Results cover 03/15/2001 through 10/31/2001
Year periods stratified.
Day types (weekday vs. weekend/holiday) stratified.
Day periods (morning, midday, and afternoon) stratified.

SAMPLING RATIO: 132/693 = 19.0%

NUMBER OF INTERVIEWS: 492

Table 1. Total fishing effort, by fishing mode and day type.

FISHING MODE	DAYTYPE	ANGLER-HOURS	95% CI		HOURS/ACRE	95% CI		% EFF
BOAT & SHORE	WEEKDAY	14642	12006-17279	(18%)	1135	931-1339	(18%)	3%
	HOLIDAY	8181	6943-9418	(15%)	634	538-730	(15%)	8%
	TOTAL	22823	20000-25646	(12%)	1769	1550-1988	(12%)	4%

Table 2. Total fishing harvest and harvest rates, in numbers of fish.

# HARVESTED	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
5630	3851-7409	(32%)	.259	.180-.338	(31%)	1078.48	436.46	All species
103	0-246	(139%)	.005	.000-.016	(228%)	19.67	7.96	Black crappie
113	0-597	(430%)	.005	.000-.070	(1271%	21.56	8.72	Bluegill
660	65-1255	(90%)	.027	.006-.048	(79%)	126.46	51.18	Carp
1816	1014-2619	(44%)	.073	.034-.113	(54%)	347.94	140.81	Channel catfish
107	0-520	(386%)	.003	.000-.013	(379%)	20.46	8.28	Flathead catfish
34	0-123	(259%)	.001	.000-.005	(251%)	6.57	2.66	Freshwater drum
			****	NOT RECORDED	****			Longnose gar
			****	NOT RECORDED	****			Northern pike
923	319-1528	(65%)	.044	.015-.074	(67%)	176.83	71.56	Rock bass
			****	NOT RECORDED	****			Smallmouth buffalo
1204	392-2016	(67%)	.054	.022-.087	(60%)	230.62	93.33	Smallmouth bass
466	0-2647	(468%)	.033	.000-.194	(490%)	89.23	36.11	Walleye
160	0-604	(278%)	.012	.000-.050	(321%)	30.63	12.40	White crappie
44	0-194	(337%)	.001	.000-.006	(343%)	8.50	3.44	White sucker

Table 3. Total fishing harvest and harvest rates, in kilograms.

KG HARVESTED	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
3786	2124-5447	(44%)	.182	.030-.334	(84%)	725.19	0.672	All species
53	0-147	(176%)	.002	.000-.005	(138%)	10.22	0.520	Black crappie
5	0-27	(430%)	.000	.000-.003	(1271%	0.96	0.044	Bluegill
928	150-1706	(84%)	.038	.007-.070	(82%)	177.77	1.406	Carp
1093	622-1565	(43%)	.048	.025-.071	(48%)	209.40	0.602	Channel catfish
53	0-269	(407%)	.001	.000-.006	(402%)	10.17	0.497	Flathead catfish
15	0-54	(259%)	.001	.000-.002	(251%)	2.85	0.435	Freshwater drum
			****	NOT RECORDED	****			Longnose gar
			****	NOT RECORDED	****			Northern pike
221	81-362	(64%)	.011	.003-.020	(76%)	42.38	0.240	Rock bass
			****	NOT RECORDED	****			Smallmouth buffalo
756	307-1205	(59%)	.035	.017-.053	(52%)	144.83	0.628	Smallmouth bass
588	0-5716	(872%)	.040	.000-.393	(879%)	112.63	1.262	Walleye
40	0-156	(289%)	.003	.000-.013	(322%)	7.69	0.251	White crappie
33	0-158	(383%)	.001	.000-.005	(387%)	6.28	0.738	White sucker

Table 4. Total fishing harvest and harvest rates, in pounds.

LB HARVESTED	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
8346	4683-12010	(44%)	.401	.066-.737	(84%)	647.01	1.482	All species
118	0-324	(176%)	.005	.000-.012	(138%)	9.12	1.146	Black crappie
11	0-59	(430%)	.000	.000-.007	(1271%	0.86	0.098	Bluegill
2046	331-3761	(84%)	.085	.016-.154	(82%)	158.61	3.099	Carp
2410	1371-3449	(43%)	.107	.056-.157	(48%)	186.83	1.327	Channel catfish
117	0-593	(407%)	.003	.000-.014	(402%)	9.07	1.096	Flathead catfish
33	0-118	(259%)	.001	.000-.004	(251%)	2.55	0.958	Freshwater drum
			**** NOT RECORDED ****					Longnose gar
			**** NOT RECORDED ****					Northern pike
488	178-798	(64%)	.025	.006-.044	(76%)	37.81	0.528	Rock bass
			**** NOT RECORDED ****					Smallmouth buffalo
1667	677-2657	(59%)	.077	.037-.117	(52%)	129.22	1.384	Smallmouth bass
1296	0-12603	(872%)	.088	.000-.866	(879%)	100.49	2.783	Walleye
89	0-344	(289%)	.007	.000-.029	(322%)	6.86	0.554	White crappie
72	0-349	(383%)	.002	.000-.011	(387%)	5.60	1.628	White sucker

Table 5. Total fishing catch and catch rates, in numbers of fish.
Catch includes both harvested and released fish.

# CAUGHT	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
14422	11211-17634	(22%)	.635	.487-.784	(23%)	2762.55	1117.99	All species
108	0-242	(125%)	.005	.000-.016	(224%)	20.60	8.34	Black crappie
327	0-711	(117%)	.012	.000-.030	(157%)	62.62	25.34	Bluegill
1040	428-1652	(59%)	.042	.018-.067	(58%)	199.26	80.64	Carp
2183	1292-3075	(41%)	.089	.047-.130	(47%)	418.19	169.24	Channel catfish
107	0-520	(386%)	.003	.000-.013	(379%)	20.46	8.28	Flathead catfish
34	0-123	(259%)	.001	.000-.005	(251%)	6.57	2.66	Freshwater drum
91	0-301	(230%)	.005	.000-.022	(341%)	17.50	7.08	Longnose gar
393	106-681	(73%)	.020	.003-.038	(86%)	75.35	30.49	Northern pike
2319	955-3683	(59%)	.097	.063-.132	(36%)	444.17	179.75	Rock bass
3	0-37	(1271%	.000	.000-.000	(430%)	0.51	0.21	Smallmouth buffalo
6319	4327-8312	(32%)	.267	.175-.360	(35%)	1210.48	489.88	Smallmouth bass
1293	201-2386	(84%)	.080	.000-.165	(106%)	247.70	100.24	Walleye
160	0-604	(278%)	.012	.000-.050	(321%)	30.63	12.40	White crappie
44	0-194	(337%)	.001	.000-.006	(343%)	8.50	3.44	White sucker

Table 6. Total fishing catch and catch rates, in kilograms.

KG CAUGHT	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
8402	5633-11171	(33%)	.411	.260-.561	(37%)	1609.37	0.583	All species
53	0-147	(176%)	.002	.000-.005	(138%)	10.23	0.497	Black crappie
15	0-32	(118%)	.001	.000-.001	(159%)	2.78	0.044	Bluegill
1331	538-2124	(60%)	.055	.021-.088	(61%)	254.91	1.279	Carp
1228	740-1715	(40%)	.053	.030-.076	(44%)	235.17	0.562	Channel catfish
53	0-269	(407%)	.001	.000-.006	(402%)	10.17	0.497	Flathead catfish
15	0-54	(259%)	.001	.000-.002	(251%)	2.85	0.435	Freshwater drum
256	0-833	(225%)	.013	.000-.044	(234%)	49.05	2.803	Longnose gar
561	73-1049	(87%)	.036	.000-.079	(121%)	107.42	1.426	Northern pike
399	234-564	(41%)	.018	.010-.027	(47%)	76.41	0.172	Rock bass
8	0-43	(430%)	.000	.000-.001	(430%)	1.54	3.008	Smallmouth buffalo
3133	1319-4946	(58%)	.146	.044-.247	(69%)	600.09	0.496	Smallmouth bass
1278	0-3542	(177%)	.081	.000-.227	(180%)	244.77	0.988	Walleye
40	0-156	(289%)	.003	.000-.013	(322%)	7.69	0.251	White crappie
33	0-158	(383%)	.001	.000-.005	(387%)	6.28	0.738	White sucker

Table 7. Total fishing catch and catch rates, in pounds.

LB CAUGHT	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
18523	12419-24627	(33%)	.905	.574-1.236	(37%)	1435.88	1.284	All species
118	0-325	(176%)	.005	.000-.012	(138%)	9.13	1.095	Black crappie
32	0-70	(118%)	.001	.000-.003	(159%)	2.48	0.098	Bluegill
2934	1185-4683	(60%)	.121	.047-.194	(61%)	227.43	2,820	Carp
2707	1632-3781	(40%)	.117	.065-.168	(44%)	209.82	1.240	Channel catfish
117	0-593	(407%)	.003	.000-.014	(402%)	9.07	1.096	Flathead catfish
33	0-118	(259%)	.001	.000-.004	(251%)	2.55	0.958	Freshwater drum
565	0-1836	(225%)	.029	.000-.096	(234%)	43.76	6.181	Longnose gar
1236	160-2313	(87%)	.078	.000-.174	(121%)	95.84	3.143	Northern pike
879	516-1243	(41%)	.040	.022-.059	(47%)	68.17	0.379	Rock bass
18	0-94	(430%)	.000	.000-.003	(430%)	1.37	6.631	Smallmouth buffalo
6907	2908-10905	(58%)	.321	.098-.545	(69%)	535.40	1.093	Smallmouth bass
2817	0-7808	(177%)	.178	.000-.500	(180%)	218.38	2.179	Walleye
89	0-344	(289%)	.007	.000-.029	(322%)	6.86	0.554	White crappie
72	0-349	(383%)	.002	.000-.011	(387%)	5.60	1.628	White sucker

2001 KANKAKEE RIVER DAY CREEL SECTION 1 03/15/2001 - 10/31/2001
Kankakee Dam

Table 8. Hours per completed trip and supplementary questions for all trips.

	MEAN	95% CI		MIN	MAX	#SAMPLES
HOURS PER COMPLETED TRIP*						
BOAT	1.2	*** undefined ***		1.2	1.2	1
SHORE	1.7	1.5-1.9	(11%)	0.5	11.0	259
BOAT & SHORE	1.7	1.5-1.9	(11%)	0.5	11.0	260
MILES TRAVELED	7.8	6.6-8.9	(15%)	1	70	437
SUCCESS RATING (1-10)	3.0	2.8-3.3	(8%)	1	10	416

*38 samples were from split interviews of completed trips.
57.3% of all 454 interviews were completed trips.

ILLEGAL HARVEST: Clerk noted 6 out of 454 interviews with illegal harvests.

Table 9. Frequency distribution of angler party size for all interviews.

PARTY SIZE:	1	2	3	4	5	6	7	8	9	10+
BOAT INTERVIEWS		2								
SHORE INTERVIEWS	306	107	22	13	1	2	1			

Table 10. Number of interviews (and %) per species sought for all interviews.

277	(61.0%)	ANY	All species
5	(1.1%)	BSS	Black bass spp.
6	(1.3%)	CAP	Carp
23	(5.1%)	CAT	Unidentified catfish
37	(8.1%)	CCF	Channel catfish
5	(1.1%)	NOP	Northern pike
14	(3.1%)	ROB	Rock bass
59	(13.0%)	SMB	Smallmouth bass
28	(6.2%)	WAE	Walleye

2001 KANKAKEE RIVER DAY CREEL SECTION 1 03/15/2001 - 10/31/2001
Kankakee Dam

Table 11. Number of anglers with a given harvest & release for completed trips

# OF FISH:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Black crappie																
HARVEST	374	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	376	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bluegill																
HARVEST	377	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
RELEASE	374	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Carp																
HARVEST	366	11	-	-	-	-	-	-	-	1	-	-	-	-	-	-
RELEASE	372	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Channel catfish																
HARVEST	348	29	1	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	368	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Largemouth bass																
HARVEST	378	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	376	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
Longnose gar																
HARVEST	378	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	375	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern pike																
HARVEST	378	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	373	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rock bass																
HARVEST	359	9	5	3	1	1	-	-	-	-	-	-	-	-	-	-
RELEASE	346	28	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Smallmouth buffalo																
HARVEST	378	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	376	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Smallmouth bass																
HARVEST	354	17	7	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	302	46	17	9	1	1	1	1	-	-	-	-	-	-	-	-
Walleye																
HARVEST	371	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	369	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
White crappie																
HARVEST	376	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	378	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ILLINOIS NATURAL HISTORY SURVEY
CENTER FOR AQUATIC ECOLOGY
2001 CREEL SURVEY RESULTS

2001 KANKAKEE RIVER
Wilmington Dam
21 ACRES
REGION 2, DISTRICT 9

STRATIFICATION SUMMARY:

Day creel only.
Results cover 03/15/2001 through 10/31/2001
Year periods stratified.
Day types (weekday vs. weekend/holiday) stratified.
Day periods (morning, midday, and afternoon) stratified.
Yearperiod 3 coalesced with yearperiod 4.
Yearperiod 8 coalesced with yearperiod 9.

SAMPLING RATIO: 131/693 = 18.9%

NUMBER OF INTERVIEWS: 420

Table 1. Total fishing effort, by fishing mode and day type.

FISHING MODE	DAYTYPE	ANGLER-HOURS	95% CI		HOURS/ACRE	95% CI		% EFF
BOAT & SHORE	WEEKDAY	15978	13007-18949	(19%)	757	616-898	(19%)	3%
	HOLIDAY	14548	10832-18264	(26%)	689	513-866	(26%)	5%
	TOTAL	30526	25961-35091	(15%)	1447	1230-1663	(15%)	4%

Table 2. Total fishing harvest and harvest rates, in numbers of fish.

# HARVESTED	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
4281	2595-5966	(39%)	.109	.044-.173	(59%)	501.31	202.88	All species
108	0-573	(430%)	.006	.000-.076	(1271%	12.65	5.12	Black bullhead
24	0-99	(318%)	.000	.000-.001	(318%)	2.76	1.12	Bluegill
528	0-1084	(105%)	.007	.000-.016	(124%)	61.79	25.00	Carp
1962	834-3089	(57%)	.052	.003-.101	(94%)	229.72	92.97	Channel catfish
24	0-129	(430%)	.000	.000-.001	(430%)	2.84	1.15	Flathead catfish
1204	452-1955	(62%)	.021	.003-.038	(84%)	140.95	57.04	Freshwater drum
18	0-248	(1271%	.000	.000-.003	(1271%	2.12	0.86	Largemouth bass
			**** NOT RECORDED ****					Longnose gar
			**** NOT RECORDED ****					Northern pike
77	0-290	(278%)	.005	.000-.017	(278%)	8.99	3.64	Rock bass
			**** NOT RECORDED ****					River carpsucker
12	0-49	(318%)	.000	.000-.002	(430%)	1.38	0.56	Striped bass x Whit
186	0-374	(102%)	.008	.000-.017	(123%)	21.76	8.80	Smallmouth bass
140	6-273	(95%)	.010	.000-.021	(114%)	16.34	6.61	Walleye
			**** NOT RECORDED ****					White sucker

Table 3. Total fishing harvest and harvest rates, in kilograms.

KG HARVESTED	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
3084	1958-4209	(37%)	.078	.049-.107	(37%)	361.11	0.720	All species
10	0-52	(430%)	.001	.000-.007	(1271%	1.15	0.091	Black bullhead
2	0-12	(430%)	.000	.000-.000	(318%)	0.26	0.092	Bluegill
554	0-1173	(112%)	.007	.000-.015	(107%)	64.86	1.050	Carp
1192	571-1812	(52%)	.037	.012-.062	(68%)	139.56	0.608	Channel catfish
29	0-401	(1271%	.000	.000-.002	(430%)	3.43	1.205	Flathead catfish
877	134-1621	(85%)	.012	.004-.021	(71%)	102.75	0.729	Freshwater drum
7	0-37	(430%)	.000	.000-.001	(1271%	0.83	0.390	Largemouth bass
			**** NOT RECORDED ****					Longnose gar
			**** NOT RECORDED ****					Northern pike
19	0-78	(318%)	.001	.000-.004	(278%)	2.18	0.242	Rock bass
			**** NOT RECORDED ****					River carpsucker
45	0-240	(430%)	.001	.000-.006	(318%)	5.31	3.838	Striped bass x Whit
189	0-423	(124%)	.008	.000-.021	(149%)	22.18	1.020	Smallmouth bass
159	0-343	(116%)	.010	.000-.021	(107%)	18.60	1.138	Walleye
			**** NOT RECORDED ****					White sucker

2001 KANKAKEE RIVER DAY CREEL SECTION 2 03/15/2001 - 10/31/2001
Wilmington Dam

Table 4. Total fishing harvest and harvest rates, in pounds.

LB HARVESTED	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
6798	4316-9280	(37%)	.173	.109-.237	(37%)	322.18	1.588	All species
22	0-115	(430%)	.001	.000-.015	(1271%	1.03	0.201	Black bullhead
5	0-20	(318%)	.000	.000-.000	(430%)	0.23	0.204	Bluegill
1221	0-2586	(112%)	.016	.000-.033	(107%)	57.87	2.314	Carp
2627	1259-3995	(52%)	.081	.026-.136	(68%)	124.51	1.339	Channel catfish
64	0-342	(430%)	.001	.000-.009	(1271%	3.06	2.657	Flathead catfish
1934	295-3574	(85%)	.027	.008-.047	(71%)	91.67	1.607	Freshwater drum
16	0-83	(430%)	.000	.000-.002	(1271%	0.74	0.860	Largemouth bass
			**** NOT RECORDED ****					Longnose gar
			**** NOT RECORDED ****					Northern pike
41	0-155	(278%)	.002	.000-.009	(278%)	1.94	0.533	Rock bass
			**** NOT RECORDED ****					River carpsucker
100	0-418	(318%)	.003	.000-.013	(318%)	4.73	8.462	Striped bass x Whit
418	0-933	(124%)	.019	.000-.046	(149%)	19.79	2.248	Smallmouth bass
350	0-756	(116%)	.022	.000-.046	(107%)	16.60	2.510	Walleye
			**** NOT RECORDED ****					White sucker

Table 5. Total fishing catch and catch rates, in numbers of fish.
Catch includes both harvested and released fish.

# CAUGHT	95% CI		#/HOUR	95% CI		#/HA	#/ACRE	SPECIES
16044	12362-19727	(23%)	.604	.482-.725	(20%)	1878.93	760.39	All species
157	0-666	(325%)	.006	.000-.030	(396%)	18.33	7.42	Black bullhead
492	15-968	(97%)	.013	.000-.027	(104%)	57.59	23.30	Bluegill
1336	0-2723	(104%)	.027	.005-.050	(83%)	156.46	63.32	Carp
3138	1702-4574	(46%)	.117	.070-.165	(41%)	367.50	148.73	Channel catfish
78	0-223	(185%)	.001	.000-.003	(191%)	9.17	3.71	Flathead catfish
4492	2509-6475	(44%)	.117	.063-.170	(46%)	526.09	212.91	Freshwater drum
154	0-375	(144%)	.003	.000-.008	(164%)	18.00	7.28	Largemouth bass
94	0-271	(190%)	.005	.000-.016	(230%)	10.95	4.43	Longnose gar
46	0-131	(184%)	.004	.000-.013	(207%)	5.41	2.19	Northern pike
485	118-853	(76%)	.027	.008-.046	(71%)	56.81	22.99	Rock bass
17	0-58	(245%)	.001	.000-.003	(245%)	1.98	0.80	River carpsucker
22	0-61	(182%)	.001	.000-.002	(182%)	2.55	1.03	Striped bass x Whit
4731	2490-6972	(47%)	.229	.154-.303	(33%)	554.05	224.22	Smallmouth bass
769	295-1243	(62%)	.051	.021-.080	(59%)	90.10	36.46	Walleye
34	0-141	(318%)	.002	.000-.008	(318%)	3.95	1.60	White sucker

Table 6. Total fishing catch and catch rates, in kilograms.

KG CAUGHT	95% CI		KG/HOUR	95% CI		KG/HA	AVE KG	SPECIES
9382	6707-12057	(29%)	.342	.269-.416	(22%)	1098.71	0.585	All species
15	0-62	(321%)	.001	.000-.003	(394%)	1.72	0.094	Black bullhead
27	0-60	(121%)	.001	.000-.001	(102%)	3.18	0.055	Bluegill
1323	279-2366	(79%)	.029	.011-.047	(63%)	154.92	0.990	Carp
1541	931-2151	(40%)	.054	.031-.077	(43%)	180.44	0.491	Channel catfish
47	0-156	(231%)	.001	.000-.002	(198%)	5.52	0.602	Flathead catfish
2725	1223-4227	(55%)	.067	.032-.101	(51%)	319.11	0.607	Freshwater drum
35	0-83	(138%)	.001	.000-.002	(155%)	4.09	0.227	Largemouth bass
534	0-1849	(246%)	.007	.000-.020	(185%)	62.57	5.713	Longnose gar
185	0-568	(207%)	.015	.000-.043	(184%)	21.69	4.010	Northern pike
107	22-193	(80%)	.006	.002-.010	(72%)	12.58	0.222	Rock bass
24	0-84	(245%)	.001	.000-.004	(236%)	2.85	1.443	River carpsucker
57	0-205	(262%)	.002	.000-.007	(256%)	6.63	2.605	Striped bass x Whit
2323	1498-3148	(36%)	.132	.088-.177	(34%)	272.09	0.491	Smallmouth bass
416	172-659	(59%)	.026	.010-.042	(62%)	48.70	0.541	Walleye
22	0-84	(278%)	.001	.000-.005	(278%)	2.60	0.659	White sucker

Table 7. Total fishing catch and catch rates, in pounds.

LB CAUGHT	95% CI		LB/HOUR	95% CI		LB/ACRE	AVE LB	SPECIES
20684	14787-26581	(29%)	.755	.592-.917	(22%)	980.27	1.289	All species
32	0-137	(321%)	.001	.000-.006	(394%)	1.54	0.207	Black bullhead
60	0-133	(121%)	.001	.000-.002	(102%)	2.84	0.122	Bluegill
2916	616-5217	(79%)	.063	.023-.103	(63%)	138.22	2.183	Carp
3397	2052-4742	(40%)	.118	.067-.169	(43%)	160.98	1.082	Channel catfish
104	0-345	(231%)	.001	.000-.003	(198%)	4.93	1.328	Flathead catfish
6007	2697-9318	(55%)	.147	.071-.222	(51%)	284.71	1.337	Freshwater drum
77	0-183	(138%)	.001	.000-.004	(155%)	3.65	0.501	Largemouth bass
1178	0-4076	(246%)	.016	.000-.045	(185%)	55.83	12.596	Longnose gar
408	0-1253	(207%)	.034	.000-.096	(184%)	19.35	8.840	Northern pike
237	48-426	(80%)	.013	.004-.022	(72%)	11.23	0.488	Rock bass
54	0-181	(236%)	.003	.000-.009	(245%)	2.55	3.181	River carpsucker
125	0-453	(262%)	.004	.000-.015	(256%)	5.92	5.743	Striped bass x Whit
5122	3303-6941	(36%)	.292	.193-.391	(34%)	242.76	1.083	Smallmouth bass
917	380-1454	(59%)	.058	.022-.093	(62%)	43.45	1.192	Walleye
49	0-185	(278%)	.003	.000-.011	(278%)	2.32	1.452	White sucker

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Wilmington Dam

Table 8. Hours per completed trip and supplementary questions for all trips.

	MEAN	95% CI		MIN	MAX	#SAMPLES
HOURS PER COMPLETED TRIP*						
BOAT	0.0	*** undefined ***		100.0	0.0	0
SHORE	1.9	1.7-2.1	(9%)	0.2	7.8	256
BOAT & SHORE	1.9	1.7-2.1	(9%)	0.2	7.8	256
MILES TRAVELED	15.8	13.8-17.7	(12%)	1	150	377
SUCCESS RATING (1-10)	3.1	2.8-3.3	(9%)	1	10	369

*31 samples were from split interviews of completed trips.
65.8% of all 389 interviews were completed trips.

ILLEGAL HARVEST: Clerk noted 2 out of 389 interviews with illegal harvests.

Table 9. Frequency distribution of angler party size for all interviews.

PARTY SIZE:	1	2	3	4	5	6	7	8	9	10+
BOAT INTERVIEWS										
SHORE INTERVIEWS	240	96	32	12	8	1				

Table 10. Number of interviews (and %) per species sought for all interviews.

240	(61.7%)	ANY	All species
17	(4.4%)	CAT	Unidentified catfish
40	(10.3%)	CCF	Channel catfish
9	(2.3%)	ROB	Rock bass
40	(10.3%)	SMB	Smallmouth bass
43	(11.1%)	WAE	Walleye

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Wilmington Dam

Table 11. Number of anglers with a given harvest & release for completed trips

# OF FISH:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Black bullhead																
HARVEST	415	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	411	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bluegill																
HARVEST	411	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	409	5	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Carp																
HARVEST	394	20	1	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	391	22	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Channel catfish																
HARVEST	366	39	5	1	2	2	-	-	-	-	-	-	-	-	-	-
RELEASE	399	12	1	1	-	-	1	-	-	-	1	-	-	-	-	-
Flathead catfish																
HARVEST	414	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	414	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Freshwater drum																
HARVEST	391	16	6	1	-	1	-	-	-	-	-	-	-	-	-	-
RELEASE	363	40	2	1	8	-	-	-	-	-	-	-	-	-	-	1
Largemouth bass																
HARVEST	415	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	413	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Longnose gar																
HARVEST	415	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	411	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern pike																
HARVEST	415	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	414	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Rock bass																
HARVEST	415	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	406	8	1	-	-	-	-	-	-	-	-	-	-	-	-	-
River carpsucker																
HARVEST	415	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	413	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Smallmouth bass																
HARVEST	410	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	341	48	18	5	1	1	-	-	-	-	-	-	1	-	-	-

2001 KANKAKEE RIVER DAY CREEL SECTION 2 03/15/2001 - 10/31/2001
Wilmington Dam

Table 11. Number of anglers with a given harvest & release for completed trips

# OF FISH:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Walleye																
HARVEST	411	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	403	8	2	2	-	-	-	-	-	-	-	-	-	-	-	-

Table B1. Angler Effort and Angler Effort per Acre for all 2001 Lakes and Streams.

Lake/Section	*Angler Hours*	*Angler Hours/Acre*
Marie and Bluff (S2)	86036	127
Channel and Catherine (S1)	81841	164
Coffeen	63609	58
Fox River Montgomery (S1)	32279	2181
Kankakee Wilmington (S2)	30526	1447
Little Grassy	29377	32
Washington County	25703	105
Kankakee Dam (S1)	22823	1769
Fox River Yorkville (S2)	21276	2160
Gages	9372	73

Table B2. Estimated harvest for all species for all 2001 Lakes and Streams.

Lake/Section	*# Fish Harvested*	*Pounds Harvested*
Marie and Bluff (S2)	52400	22216
Channel and Catherine (S1)	51744	18549
Little Grassy	29948	13211
Coffeen	26849	22285
Kankakee Dam (S1)	5630	8346
Washington County	4455	2435
Kankakee Wilmington (S2)	4281	6798
Fox River Yorkville (S2)	3867	4774
Fox River Montgomery (S1)	2639	2518
Gages	1253	1161

Table B3. Catch rates (#fish per angler-hour) for largemouth bass, bluegill, and channel catfish for all 2001 lakes.

Lake/Section	*Largemouth Bass*	*Bluegill*	*Channel Catfish*
Washington County	0.197	0.174	0.114
Channel and Catherine (S1)	0.153	1.303	0.042
Gages	0.137	0.534	0.016
Coffeen	0.113	0.212	0.204
Marie and Bluff (S2)	0.092	0.904	0.080
Little Grassy	0.088	0.427	0.043

Table B4. Catch rates (#fish per angler-hour)for smallmouth bass and channel catfish for all 2001 streams.

Stream/Section	*Smallmouth Bass*	*Channel Catfish*
Kankakee Dam (S1)	0.267	0.089
Kankakee Wilmington (S2)	0.229	0.117
Fox River Montgomery (S1)	0.096	0.052
Fox River Yorkville (S2)	0.093	0.205

APPENDIX C. FISHERIES ANALYSIS SYSTEM (FAS) FOR WINDOWS

INTRODUCTION

The Illinois Fisheries Analysis System (FAS) databases have two different origins. The Lakes and Creel databases, developed by the Illinois Natural History Survey (INHS) under the direction of Peter Bayley, used the General Manager hierarchical databases running under the Apple DOS operating system. The early Streams database, modeled on the Illinois Streams Information System (ISIS) by David Day then with the Illinois Department of Natural Resources (IDNR) Fisheries, used the Microrim R:BASE relational database running under the Microsoft DOS operating system.

In addition to the databases, Lakes and Creel FAS included analysis programs written in Applesoft BASIC and graphics written in Illyes Systems (ISYS) Forth. INHS took over Streams database development under F-120-R, converting Streams to Borland Paradox and adding graphics and more analysis software. All parts of FAS were later converted to run under Microsoft DOS and Paradox.

Streams FAS also includes an Index of Biotic Integrity (IBI) program. The IBI was first proposed by Karr et al. of INHS and later improved by the Biological Stream Characterization (BSC) group cochaired by Robert Hite of the Illinois Environmental Protection Agency (IEPA) and Bill Bertrand of IDNR

Fisheries. The BSC version of the IBI is currently used in FAS. A newer version of the IBI is in preparation by Roy Smogor of IEPA, and will become a part of FAS when the final draft of the IBI is released.

CONVERSION TO FAS WINDOWS

Conversion of FAS to Microsoft Windows has been of low priority for several years. The first part of FAS to be written for Windows was Creel. Creel runs as a Win32 console program using only the lowest-level portions of the Borland Database Engine (BDE). It is written in 32-bit C++, and as a Win32 console program has full access to Win32 memory management, as does the BDE, which is fully 32-bit and is used by Paradox for Windows and by Quattro Pro.

Win32 is the 32-bit kernel present in all versions of Windows since Windows 95. Only Windows programs that use Win32 can be compiled by any C++ compiler, and it was chosen to avoid dependence on a particular brand of C++ compiler. The BDE was used at the lowest possible level for similar reasons- it permitted most of the Creel software to be written in standard C++ and minimized the difficulties of converting to a different database product. The use of the Win32 console mode also minimized the difficulties of converting to an operating system other that Windows.

The heavier use of Windows features requested for Streams and Lakes data entry has several disadvantages. Unlike a console program, it cannot be converted to another operating system without massive rewriting. It is also much harder to write than a console program. In addition to the difficulties presented by Windows, Paradox for DOS forms are not usable by either Paradox for Windows or other Windows database products. In order to minimize these difficulties, a table editor was built that can edit only one table at a time. Each table can then be edited in its own window, with as many windows present as there are tables to be edited, and the umbrella program that invokes these editing windows can be much simpler.

The editing program, called TABLE, can be used alone as well. It will edit either the whole table or a subset specified by a Structured Query Language (SQL) filter. It accepts form descriptions kept in the text file TABLE.FRM that will not need to be changed should Fisheries convert to another database product. Much effort has been made to keep the code for TABLE as simple as possible, since rewriting it would be a substantial part of the cost of conversion to another database product, should that be necessary.

Most parts of FAS for Windows work in a way that will be easily understood by users of FAS for DOS. The move of a DOS text menu to the Windows menu bar should cause no confusion, for

example. Only those parts that are different enough from the DOS version to cause difficulties are documented below.

TIMELINE FOR EVALUATION AND DISTRIBUTION

The current Lakes FAS for Windows and Streams/Boundary Rivers FAS for Windows are beta versions. These versions should not be distributed until beta-testing is complete. Beta-testing will be conducted by INHS using Fisheries personnel who will ultimately be using the software for data entry and analysis. Testing will be by four Fisheries personnel, two for Lakes and two for Streams. Beta-testing is essential to verify that the programs perform correctly, that data loss is made as unlikely as possible, and that there are no confusing or difficult features that will waste the user's time.

After beta-testing for Streams, the software will be corrected as needed and suggested changes will be considered and incorporated where practicable. Version 1.0 will be distributed by email to all fisheries personnel who need the programs. The distribution will include installation instructions. Software support by INHS will be available by email and phone, with meetings scheduled only as necessary. The same process will be followed for beta-testing Lakes FAS software, which will commence with the distribution of Streams version 1.0.

It is expected that most Streams biologists will want to switch to Windows FAS as soon as it is beta-tested because of a number of new features. Windows FAS includes support for forms that closely resemble field sheets, and we are in the process of collecting all of the field data sheets used by Streams so that we can support them in the general distribution. These forms are new work being undertaken as a part of segment 16. David Day, now with Watershed Management, has been adding extensive data entry form support to Streams FAS for some time, and argues strongly for the inclusion of better forms support in FAS. We have agreed to include improved forms, but with the proviso that the needs of Fisheries must be fully considered in their design.

A full description of the new IBI is expected to be available before August 31. Users of Streams Windows FAS may request a beta-test version of FAS that includes the new IBI. We will be releasing a version of FAS that generates the new metrics before that date even if the final scoring graphs are not yet available.

DATA ENTRY FOR STREAMS, BOUNDARY RIVERS AND LAKES FAS

The TABLE program is automatically invoked when data entry is selected from the menu bar of any umbrella program. It may also be invoked directly from the DOS command line or from a

Windows icon. The language used in the icon properties is the same as that used from the command line, as follows:

```
TABLE MTH-STRM
```

will open all of the table MTH-STRM for editing and viewing. If you wish to restrict editing and viewing, you may use SQL, for example

```
TABLE MTH-STRM WHERE ID=99
```

will permit viewing and editing of records with an ID of 99 only and

```
TABLE SPECIES WHERE SPC='CAP'
```

will show only the common carp (CAP) record of the species table. You may have trouble with certain characters in SQL. If you do, you can place quotation marks around the SQL, for example

```
TABLE MTH-STRM "WHERE ID<99"
```

will open all records with an ID of less than 99 for viewing and editing.

If you are familiar only with the Paradox Query by Example (QBE) you will need a little practice if you want to write SQL. On the other hand, if you have used R:BASE or Microsoft Access, you will probably already know enough SQL. SQL was developed at IBM and originally called SEQUEL. QBE was also developed at IBM, and is functionally a subset of SQL. Some people find QBE easier to use, but single table SQL access such as is shown on this page is easy in either SQL or QBE.

The use of SQL generates a Paradox for Windows filter, which makes all records that don't match the filter unavailable for viewing and editing. You may wish to initially position on a particular section of data, but then be free to view and edit the entire table. You can do this by appending an ampersand to your SQL, as follows:

```
TABLE MTH-STRM WHERE ID=99&
```

will position you on the first record that has an ID of 99 and then remove the filter, making the entire table available to you.

The use of the keyboard is similar to that of Paradox and even closer to the usage of FAS Creel:

Insert	Insert a new record below the current record
Delete	Delete the current record and display the prior record
F3	Restore the just-deleted record or duplicate the current record if no record was just deleted
Home	Display the first record
End	Display the last record
PageUp	Move up to the first record that differs in the first 10 bytes
PageDown	Move down to the first record that differs in the first 10 bytes
Up arrow	Move up one field
Down arrow	Move down one field
Left arrow	Move the the next record
Right arrow	Move to the prior record
Enter	Move down one field (the same as down arrow)

PageUp and PageDown may be used to quickly move around in a fish table. This is an ease of use feature that needs some user comment.

To enter data into the current field, just start typing. If you decide to restore the old content of the field, press the Esc key. If you move off of either end of the table using the left or right arrow, a blank record will be shown, and will be stored into the database if you enter one or more fields of data into it.

The TABLE.FRM file, if it exists, controls the format of selected form windows. Each record starts with the name of a table, followed by other parameters. The first entry for the table name gives the window dimensions and label, for example:

```
FSH-*| 26| 60|   Fish Data Entry, Illinois Statewide
Streams Database
```

will make a window 26 characters high by 60 characters wide with the label shown for any table whose file name starts with FSH-.

All further entries for the table give field placements, the simplest of which would be something like:

```
FSH-*| ID| 3| 10
```

which places the content of the ID field starting at row 3 and column 10, with the name of the field placed before it. The general format is:

```
TableName| Row| Column| Type| LeftLabel| RightLabel
```

where one or more right-most fields can be excluded if not used. Commas may be included in the left or right label. If no left label is specified, the name of the field will be used for the left label. To force no left label at all, a label of one blank should therefore be specified.

The type specifications currently available are:

c	Show and accept inch lengths for a centimeter field
m	Show and accept inch lengths for a millmeter field
g	Show and accept pound weights for a gram field
1	Show a numeric field with one digit to the right of the decimal place
2	Show a numeric field with two digits to the right of the decimal place, and so on for larger digits.

Further types can be added as needed.

The most complex example, which uses all of the features, would be the placement of two data entry fields for a single database field, such as is used for total length in fish table data entry:

```
FSH-*| TL| 11| 10|1|Total Length|mm
FSH-*| TL| 11| 30|m| |in
```

which generates the form line 11 (with * showing the data entry and display areas) of

```
Total Length  ********** mm   ********** in
```

The blank in left label in the second line causes no label to be used.

Streams and Boundary Rivers Selection and Analysis

The new STREAMS program includes data entry, support for the new IBI, an enhanced version XSTREAM, and Streams data entry. All share the same selector, which permits analysis and data entry for a restricted set of streams, sites, and/or years.

Full documentation of STREAMS must await the completion of Roy Smogor's new IBI. A description of existing features follows. FISHTAB is no longer used by Fisheries for Streams applications, and won't be included in STREAMS unless requested by Fisheries.

The heart of the new STREAMS is the selector. STREAMS prepares a list of site codes (usually IEPA codes plus sampling site number), years, and stream names from those that exist in the methods table of the Streams database selected at startup. This list may be viewed fully, with or without the sampling site number, as a list of years, or as a list of codes plus stream names without years. From these lists, one or more items can be selected for analysis or data entry.

A number of keyboard and mouse events may be used to move about and select items in the lists:

Home	Go to first item
End	Go to last item
PageUp	Go up a page in items
PageDown	Go down a page in items
Up arrow	Go up one item
Down arrow	Go down one item
Insert	Select all items
Delete	Deselect all items
Space bar	Select the current item and go to the next
Left click	Go to the item under the mouse cursor
Right click	Select the item under the mouse cursor
Alphanumeric	Any alphanumeric sequence may be used to select

Individual item selections are toggled, i.e., selecting the item twice leaves it unselected. All items selected will be shown on

a blue background for easy identification. If nothing is selected from the list, the whole list will be used in analysis.

An alphanumeric sequence may be used to remove non-matching codes from the list. Pressing the B key will reduce the list to only those codes starting with B. If E and then F are pressed, the list is reduced to only those codes starting with BEF, giving the following 3-item list with the current Streams database:

BEF	N. Fk. Embarras River
BEFA	Willow Creek
BEFAB	Maple Creek

If the key A is then pressed, selections are reduced further to those starting with BEFA:

BEFA	Willow Creek
BEFAB	Maple Creek

When selection is done in this manner, all codes that don't match what is typed in are immediately removed from the menu, as in the examples above.

Alphanumeric selection may be combined with selection by mouse or by the space bar in any sequence. The menu bar provides the following selections:

Restore	Restore to all possible selections
Short IEPA codes	Restore all or specified gear in submenu (stream only)
Full IEPA codes	Restore all or specified gear in submenu (stream + site)
Sites	Show IEPA code and stream name menu
Years	Show year menu
Sites+Years	Show IEPA code, year, and stream name menu
Format	This will eventually include IBI options
Blanks for none	Use blanks in empty spreadsheet cells
Zeros for none	Use zeros in empty spreadsheet cells
Export	Create an export spreadsheet
Graph	Enter Forth graphics
Edit	Edit tables below as selected from menus

Clicking on *Sites*, *Years*, or *Sites+Years* will eliminate all items not selected if any are selected. Restore will bring back the full list. Tables that may currently be edited through the Edit menu are *Fish*, *Methods*, *Substratum*, *Stations*, *Sampling*, and *Hydrology*.

The spreadsheet layout is similar to that produced by the old XSTREAM script, but with improved labeling and with improved selection options. The IBI (and other) metrics and scores will continue below the rows containing the species sums, with the exact metrics displayed determined by new items in the Format submenu.

If the text file *streams.spr* exists, the first record will be used as the filename with path to start up QuattroPro or the spreadsheet of the user's choice.

Creel Data Entry and Analysis

The files *creel.exe* and a complete set of database files are required for data entry. For Forth graphics, *graph.exe*, *graph.hlp*, and *species.txt* are also required. The following shows the main menu with Jones Lake, April 25th, selected for data entry:

```
CREEL FAS (FISHERIES ANALYSIS) SYSTEM MAIN MENU

Esc   leave program
F1    help
I     ID      selection:      JONES01
S     section selection:      1
D     date    selection:      04/25/2001 Wednesday W
E     enter new creel data
V     verification printout
P     printer output diverted to file
A     analyze selected data

1     edit creel table                    1 records selected
2     edit stratum design                11 records selected
3     edit instantaneous count data       2 records selected
4     edit interviews                     9 records selected
HI    edit harvested individuals         20 records selected
RI    edit released  individuals          1 records selected
HG    edit harvested groups
RG    edit released  groups

Enter your choice:
```

You may enter your choice in either upper or lower case. The program capitalizes all keyboard entries before using them. If you accidentally press Esc, you may continue by pressing Esc again.

In order to enter or edit data, the ID, section, and date must be specified (only ID need be specified for the CREEL and STRATUM tables). This condition is called being "fully selected" in this document. You will be presented with a list of all IDs or of all sections or dates available before you select which you want. If you make a selection for which no data has been entered, you will be shown no records selected for all tables except for creel and stratum. The ID and section must be selected before the date can be selected. Any errors that you make in the selection process (or at any other point in data entry) will cause an explanation of the error to appear in red text at the bottom of the window and the bell to be rung.

P (printer output diverted to file) requests a file name. The file name will be displayed in blue on the menu. If no file name is selected, output is to the printer. If the file already exists, you will be asked if you want to replace the file. If you answer yes, the file will be immediately emptied of old data. If you answer no, your printer output will be appended to the file. The P command effects both verification and analysis.

Creel Table Editing

You may browse through the records of all tables using any of the edit commands, but you must be fully selected in order to use any keyboard command associated with changing data. If you try, you will get the standard red warning.

If you are fully selected, you may change or delete any selected record (only the highest-numbered interview record can be deleted). You can also create new stratum design or instantaneous count records by pressing the Insert key. ID, section, date, and interview number fields will be automatically filled in for any new record created. None of these fields can be changed by the user.

Edit is usually entered via the main menu for error correcting (new interviews should be entered using the E command). It is important to understand table editing before entering new data because parts of the E command utilize it. You are in table editing mode whenever the window has the word EDIT at the top left.

When fully selected, you may use all of the following single key commands; the first group works even if you are not fully selected:

Esc	Leave table editing mode
F1	Show help text
Home	View the first selected record of the table
PageUp	View the prior selected record of the table
PageDown	View the last selected record of the table
End	View the last selected record of the table
UpArrow	Move the cursor to the field above
LeftArrow	Move the cursor to the prior field
RightArrow	Move the cursor to the next field
Enter	Move the cursor to the next field
Alt-Delete	Delete the current record
Insert	Add a new record

The cursor cannot be moved to fields that are excluded from normal data entry. The current field will be green, while all other fields will be blue. Pressing any numeric or alphabetic key will cause the current field to turn red, indicating field entry mode, and take that key as the first character entered into the field. Backspacing past the left edge of the field or entering data that is wider than field will have no effect other than ringing the bell. In previous versions, entering data past the right edge of the field caused entry to continue in the next field. This feature produced too many errors in the data, and had to be removed.

When you have finished entering a field, press the Enter key. If the input is valid, the field will become blue and the cursor will advance to the next field. Otherwise, the bell will ring and you will stay in field entry mode until you correct the error. Single character fields require no backspace to reenter after an error.

At any point when entering a field, you can move on to the next field and restore the previous field contents by pressing the Esc key.

Entering New Creel Data

When you select E (enter new data), you will be asked to enter instantaneous data if it hasn't already been entered.

Enter as many records as you need, using the Insert key to add new records as necessary. If you later discover an error in the instantaneous count records, you can use selection 3 (edit instantaneous count data) of the main menu to add, delete, and change the records.

When you have entered all of the instantaneous count data, press the Esc key. You will then be shown an interview form. The interview number will be automatically entered and cannot be changed, although you can delete the interview with Alt-Delete if you start to enter an interview and then discover that there is no interview data.

Note that the initials are a "sticky" field. Once you have typed initials into either an interview or an instantaneous count record, the initials will be automatically inserted in any new records. You need only change them when you have new initials. Fill out all fields of the form for which you have data and press the Esc key.

After you have entered the first interview record, press Esc, and you will then see the following menu:

```
ENTER NEW CREEL DATA

Esc       return to main menu
F1        help
Tab       toggle between harvested and released fish
Insert    enter an additional interview
PageUp    select lower  interview number
PageDown  select higher interview number

HI     edit harvested individuals
RI     edit released  individuals
HG     edit harvested groups
RG     edit released  groups

Enter your selection or species code and length data:
```

If you have no harvested or released fish for this interview, proceed to the next interview by pressing the Insert key. When you are finished entering all interviews, press the Esc key.

The menu always starts in harvested mode, since this is first on the data sheet. You may switch back and forth between harvested and released mode by pressing the Tab key. Your selection will appear in blue on the menu. If you make a mistake and put harvested into released or vice-versa, you must use Alt-Delete to remove the mistakes.

Length data is entered in the same form as on the data sheet. All of the following lines of data are valid (the space after the species code is optional):

```
CCF 33-38
BLB 25
LMB 44,42,42,48
LMB 44 42 42 48
```

If the first length after the species code is followed be a minus sign, the data is placed in a grouped table and you will be prompted to enter the number of fish in the group. Otherwise, the lengths are assumed to be individually measured fish, and the program automatically counts and creates records for them. Do not mix grouped and individually measured fish on the same line.

If you type in a valid species code, the common name will appear in blue on the menu. If it is not a valid species code, the bell will ring and you will see a red warning message. You may still use the code to enter data, but should not do so unless you believe that it represents a new species that will need to be added to the species table.

Changes in Creel Data Entry for 2001

An extra field named "inch" has been added to the four fish-length tables. This field is automatically maintained and should not be changed during data entry. It is blank for fish measured in centimeters. If some of the fish were measured in inches, it shows the number of individuals that were measured in inches. It is always either blank or 1 for grouped fish.

Inch-measured fish are entered using a decimal point. For example:

```
BLG 3. 5 7 3.5
LMB 3.-5.
```

enters bluegill of 3 inches, 5 cemtimeters, 7 centimeters, and 3.5 inches and largemouths in a group from 3 inches to 5 inches. Do not mix units with grouped fish: LMB 3-5. would give a group from 3 centimeters to 5 inches, which is not what is meant!

Verification printouts show inch-measured fish to the nearest inch and centimeter-measured fish in centimeters. The database itself always maintains the lengths in centimeters, as you will see if you use a command such as "RI".

The following warning is about a rare problem that you may never see. If it does happen, it will probably be with released fish, so the example will be given for released. If an angler has not released all fish so that some are estimated in inches but others are measured in centimeters, and if this happens for a single species where an estimated fish length happens to convert to the same centimeter length as a measured fish, the verification printout will give this length in inches even though one fish was measured in centimeters. The command "RI" can be used to get the length in centimeters for verification purposes in this case.

Creel Analysis

When you select A (analyze selected data) from the main menu, the following options will be displayed:

Esc return to main menu
C completed trip, etc.
S statcalc
D degroup
G graphics

S (statcalc) and C (completed trip, etc.) are both menu driven and produce the same types of tabular output that the corresponding Apple programs produced. If no section was selected from the main menu, all sections of a multi-section lake will be included in the analysis. With the S command, be sure to always request a yearperiod range that includes all of the data being analyzed even though yearperiod coalescing might suggest a smaller range. At any prompt, you may leave S or C by pressing the Esc key.

The only request you will receive from completed trip statistics is yearperiod range restriction, as in the following screen sample:

NUMBER OF INSTANTANEOUS COUNTS IN EACH YEARPERIOD

YEARPERIOD	ICOUNTS	FIRST DATE	LAST DATE
1	0	01/01/1998	02/15/1998
2	0	02/16/1998	03/14/1998
3	24	03/15/1998	04/08/1998
4	24	04/09/1998	04/30/1998
5	58	05/01/1998	05/31/1998
6	32	06/01/1998	06/15/1998
7	95	06/16/1998	08/31/1998
8	48	09/01/1998	09/30/1998
9	40	10/01/1998	10/31/1998
10	0	11/01/1998	11/15/1998
11	0	11/16/1998	12/31/1998

Do you wish to restrict yearperiod range (Y/N)?

The answer is yes, of course, with the range restricted to 3 through 9.

Statcalc statistics are much more complex and present a number of options regarding coalescing vs. stratification in addition to yearperiod range restriction. They are all self-explanatory except for the yearperiod coalescing option.

Upon entering Statcalc, you will see a screen display such as:

NUMBER OF SAMPLED DAYS IN EACH STRATUM, WITH MAXIMUM AVAILABLE

YEARPERIOD	WEEKDAY				HOLIDAY				FIRST DATE
DAYPERIOD:	1	2	3	N	1	2	3	N	
1	0	0	0	30	0	0	0	16	01/01/1998
2	0	0	0	19	0	0	0	8	02/16/1998
3	3	6	3	18	3	5	3	7	03/15/1998
4	3	6	3	16	3	5	3	6	04/09/1998
5	7	12	8	20	7	10	7	11	05/01/1998
6	4	7	4	11	4	4	4	4	06/01/1998
7	12	21	12	55	12	18	12	22	06/16/1998
8	6	10	6	21	6	9	6	9	09/01/1998
9	5	10	5	21	5	7	5	10	10/01/1998
10	0	0	0	9	0	0	0	6	11/01/1998
11	0	0	0	32	0	0	0	14	11/16/1998

Do you wish to coalesce any yearperiods (Y/N)? Y
Enter number of the yearperiod to be coalesced with the next: 3

The response 3 will cause yearperiod 3 to be coalesced with yearperiod 4. Though coalescing yearperiods, the range should still be from 3 through 9.

In general, strata should not be coalesced. The only common exception to this rule is a sample in which all or virtually all

of the anglers are shore rather than boat, or vice-versa. In this case, boat and shore should always be coalesced. If they are not coalesced, the CPUE can be off by up to a factor of 2, although the number and weight will still be reasonably accurate. In other cases, strata should be combined only when they have similar means. Rather than trying to find out if the means are similar, it is better to do a Statcalc run with the strata coalesced and without. Compare the confidence intervals on the number harvested, and you will almost always find that the stratified run gives a better confidence interval. Stratified analysis of multi section lakes is not included, as we believe and expect to show that such lakes are actually over sampled.

D (degroup) needs to be run only once on a year's database. Further runs will have no effect unless the harvest or release data has been changed. Unlike the Apple, the group data is retained.

G (graphics) is the same Forth graphics used by Streams and Lakes FAS. It can display either harvested or released total frequency histograms and biomass histograms. File output for graphics must be separately requested. It now produces a bitmap file rather than a PostScript file, permitting easy insertion of the graphics into documents.