



Evaluation of the Bass Fishing Tournament Pilot Program



Bureau of Fisheries Management

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Report to the Wisconsin Legislature
Evaluation of the
Bass Fishing Tournament Pilot Program

Department of Natural Resources

February 2007

Report Highlights ■

Current Wisconsin fishing regulations require that all fish reduced to an angler's possession (e.g. not immediately released) be counted toward that angler's daily bag limit. Anglers may release a fish as long as it is alive but that fish still counts toward the daily bag limit. Once an angler has reduced a bag limit of fish to possession, angling for that fish must cease for that day. The purpose of the rule is to prevent waste of fish due to the increased chance of a previously held fish dying after being released. This means that the practice of sorting or "culling" - to release a fish which has been in a person's possession, and replace that fish with a different fish of the same species - is illegal after a limit is reached. Some bass tournament organizers feel this is unnecessarily restrictive and have asked for a change in this law to allow culling for catch and release bass tournaments. In response, a bass fishing tournament pilot program was established as part of 2003 Wisconsin Act 249. Under the pilot program the DNR would issue permits to bass fishing tournaments authorizing participants to exceed their daily bag limit by culling bass. Act 249 specified that pilot program tournament participants' boats had to be equipped with a live well that met standards set by DNR rule. The legislation required the department to appoint an advisory committee that included fishing tournament sponsors, the conservation congress, sport fishing organizations, and users of lakes and streams in the state. The primary roles of the committee were to advise the DNR in executing the pilot program and in promulgating rules authorized by Act 249. Finally, the legislation required the DNR, in cooperation with the Wisconsin Bass Federation, to conduct research and collect data for the purpose of evaluating the pilot program, and to report its findings to the appropriate standing committees of the legislature on or before December 31, 2006, when the bass fishing tournament pilot program sunsets.

Bass Fishing Tournament Pilot Program Tournament Selection

Tournament organizers interested in participating in the bass fishing tournament pilot program were asked to submit a letter of interest along with their tournament permit application to the DNR. Applications were solicited directly from known bass tournament organizations and openly by department press release. The department received applications for six events in 2005 and eight events in 2006. Applications were reviewed by the fishing tournament advisory committee (FTAC). Criteria for selection included:

- Size of fishing tournament, both in number of participants and popularity. Special consideration was given to national events that previously had not been held in Wisconsin.
- Potential economic impact. Special consideration was given to events that had the greatest potential for positive economic impact to the host community.

- Geographic distribution of events. The desire was to hold events at different locations throughout the state.
- Species of bass targeted. At least one event each year would be permitted to cull both largemouth bass and smallmouth bass. The others would only permit culling largemouth bass.

Three tournaments participated in the pilot program in 2005 and four in 2006 for a total of seven tournaments over two years (Table 1). A fourth tournament selected to participate in 2005 was cancelled by the organizer when its primary sponsor pulled its sponsorship of the tournament series. No replacement tournament was selected due to lack of time. Of the seven events selected, three were events that were new to Wisconsin, those being the ESPN/BASS Bassmaster Elite 50, FLW Everstart Series, and FLW Stren Series. The other four tournaments were events that were traditionally held in Wisconsin (two WI Bass Federation 4-man classic events and the Sturgeon Bay Open) or would have been held in Wisconsin regardless of the culling rules (Bassmaster Series).

Table 1. Seven bass fishing tournaments selected to participate in the bass fishing tournament pilot program in 2005 and 2006.

Event (Abbreviation)	Location	Dates
ESPN/BASS Bassmaster Elite 50 Series	Lake Wissota - Chippewa Falls	June 15-18, 2005
FLW Everstart Series (LC05)	Mississippi River Pools 7-10, LaCrosse	Aug. 3-6, 2005
WI Bass Federation 4-Man Classic (SH05)	Shawano Lake - Shawano	Sept. 24-25, 2005
Sturgeon Bay Open Bass Tournament (SB06)	Sturgeon Bay - Sawyer Park	May 20-21, 2006
FLW Stren Series (LC06)	Mississippi River Pools 8-10, LaCrosse	July 12-15, 2006
Bassmaster Series (WC06)	Wolf River Chain, Winneconne	July 30, 2006
WI Bass Federation 4-Man Classic (MA06)	Madison Chain - Lake Farm	Sept. 23-24, 2006

Key Facts and Findings

DNR evaluated biological, economic, and sociological impacts of culling in selected bass tournaments.

Bass Fishing Tournament Pilot Program Evaluation

The evaluation of the bass fishing tournament pilot program included three major components. The first component was evaluation of the biological impacts of tournament-associated mortality of bass due to culling. The DNR contracted with the Wisconsin Cooperative Fishery Research Unit at the University of Wisconsin-Stevens Point to conduct research to estimate tournament and culling mortality. The second component was evaluation of the economic impacts of bass fishing tournaments in Wisconsin, specifically the local impacts. DNR contracted with the University of Wisconsin Department of Regional and Urban Planning to conduct the data analyses to estimate economic impacts from expenditure data collected from anglers, organizers, and spectators at the selected bass tournaments. The third component was evaluation of attitudes toward tournament fishing and culling in Wisconsin to determine sociological impacts of culling. Wisconsin DNR research staff executed mail surveys of general anglers and boaters, conducted focus group

discussions with tournament anglers, and in-depth interviews with lakeshore property owners.

Final reports authored by the principal investigators for each evaluation component are summarized here. The reports themselves are attached as appendices.

SUMMARY OF THE EVALUATION OF MORTALITY IN WISCONSIN BASS TOURNAMENTS

The first component of the mortality research was to estimate tournament-associated mortality in Wisconsin bass tournaments, and factors that may impact mortality rates, such as the presence of disease (e.g. largemouth bass virus), water temperature, and weigh-in procedures. The second component was to estimate the mortality associated with the practice of culling bass.

Previous studies of bass tournament mortality show improvements in angler handling but no improvements in tournament handling of bass since the 1980s.

Previous studies have identified water temperature as a key factor in tournament mortality.

Tournament-Associated Mortality

Mortality of bass caught, transported, weighed, and released in Wisconsin bass tournaments was estimated at six of the seven pilot program tournaments. The only event where tournament-associated mortality was not measured was the first tournament, the ESPN/BASS Bassmaster Elite 50 Series, because the event was held prior to establishing the UWSP contract. No previous study of bass tournament mortality in Wisconsin has been conducted, although numerous similar studies have been conducted in other parts of the North America. Those studies have shown that tournament-associated mortality of bass brought to weigh-in has declined during the past several decades due to improved handling by anglers and currently averages less than 5%. Studies indicate that mortality of fish after being handled during weigh-in and released has not improved since the 1980s and averages about 25%. Other research indicates that higher water temperature leads to higher tournament-associated mortality.

Tournament-associated mortality rates estimated in this study included initial mortality of weighed fish (proportion of fish that died before or during the weigh-in process), delayed mortality of weighed fish (proportion of fish that died within 5 days after being released as a result of tournament handling), and total mortality of weighed fish (combination of initial and delayed mortality). These rates were compared to mortality of reference bass collected prior to the tournaments and held for the same period of time without having been subjected to the

tournament process. The purpose of reference fish was to provide an estimate of the mortality associated with holding bass in net pens. Delayed and total mortality rates can be adjusted to account for holding effects estimated by reference fish mortality. Initial mortality is the mortality that tournament anglers generally see as the fish are dead in their live well or bag. Delayed mortality generally makes up the bulk of tournament-associated mortality and occurs after tournament anglers and organizers are gone. Research points to delayed mortality being the result of the compounding effects from fish being handled multiple times.

Methods. - Standard accepted methods utilized in several other tournament mortality studies were employed in this study to estimate tournament-associated mortality of bass. The specifics of those methods can be found in the final report titled "Tournament-Associated Mortality and the Effects of Culling in Wisconsin Black Bass (*Micropterus* spp.) Tournaments" (Appendix 1).

Initial mortality rates in six Wisconsin bass tournaments were very low (0 - 3%).

Delayed mortality rates were higher and more variable (0 - 31.5% when adjusted for reference mortality).

Total mortality (adjusted for reference mortality) ranged from 0 - 33.9%.

SMB mortality rates were generally higher than LMB.

Results. - Mortality rates of both largemouth (LMB) and smallmouth (SMB) bass were similar to those observed in other similar studies conducted in North America and were higher when water temperatures were high. Initial mortality rates of largemouth (LMB) and smallmouth bass (SMB) were low in all six bass fishing tournament pilot program tournaments evaluated. Initial mortality ranged from 0 - 1.2% for LMB and from 0 - 3.3% for SMB. Delayed mortality rates were variable, ranging from 0 - 75.0% for LMB and 0 - 52.2% for SMB. Reference mortality ranged from 0 - 86.8% for LMB and 0 - 26.9% for SMB. Total mortality ranged from 0 - 76.2% for LMB and 0 - 55.5% for SMB. Adjusted delayed mortality could only be estimated with confidence at four of the six tournaments and ranged from 0 - 13.2% for LMB and 0 - 31.5% for SMB. Adjusted total mortality was estimated for the same four events and ranged from 0 - 15.6% for LMB and 0 - 33.9% for SMB (Table 2). Detailed results can be found in the final report (Appendix 1).

Table 2. Summary of bass fishing tournaments studied during 2005 and 2006. ¹Initial mortality rate not segregated by species and thus reported as combined LMB and SMB initial mortality. ²Adjusted mortality rates not reliable due to problems with reference fish. ³No fish captured and used.

Tournament	FLW LaCrosse 2005	WSBF Shawano 2005	Sturgeon Bay Open 2006	FLW LaCrosse 2006	BASS Winneconne 2006	WSBF Madison 2006
Avg. Water Temperature (°F)	81.0	61.7	58.3	81.1	82.0	62.1
LMBV	<i>Present</i>	<i>Absent</i>	<i>Absent</i>	<i>Present</i>	<i>Present</i>	<i>Present</i>
LMB Initial Mortality	1.2%	0%	0%	2.4% ¹	0.7%	0.9%
SMB Initial Mortality	2.6%	0%	0.1%	NA ³	3.3%	0%
LMB Delayed Mortality	75.0%	0.6%	0%	27.2%	68.2%	0%
SMB Delayed Mortality	39.7%	0%	0.3%	37.5%	52.2%	0%
LMB Reference Mortality	86.8%	0%	NA ³	14.0%	25.0%	0%
SMB Reference Mortality	26.9%	NA ³	0%	6.0%	NA ³	NA ³
LMB Adj Delayed Mortality	NA ²	0.6%	0%	13.2%	NA ²	0%
SMB Adj Delayed Mortality	NA ²	0%	0.3%	31.5%	NA ²	0%
LMB Adj Total Mortality	NA ²	0.6%	0%	15.6%	NA ²	0%
SMB Adjusted Total Mortality	NA ²	0%	0.4%	33.9%	NA ²	0%

Mortality in bass tournaments was related to water temperature.

Tournament-associated mortality of bass at low water temperatures was less than 1%.

Tournament-associated mortality of bass at high water temperatures was 15.6% for LMB and 33.9% for SMB.

Discussion. – In this study initial mortality rates were low and delayed mortality rates were quite variable. Mortality appeared to be related to water temperature. In three tournaments held when water temperatures were low, ranging from 58 – 62 °F, initial, delayed, and reference mortalities were very low resulting in estimated total mortality of less than 1%. In three tournaments held when water temperatures were high, all above 80 °F, initial, delayed, and reference mortalities were substantially higher. Due to high reference mortality in two of the three warm water tournaments (LaCrosse 2005 and Winneconne 2006), it was not possible to reliably estimate tournament-associated delayed mortality. LaCrosse 2006 provided the only reliable estimate of tournament-associated delayed mortality (13.2% for LMB; 31.5% for SMB), resulting in estimated adjusted total mortality of 15.6% for LMB and 33.9% for SMB.

Culling Mortality

Mortality associated with the culling of bass was estimated by simulating the conditions experienced by bass during a tournament day. This was accomplished using controlled angling and culling activities by volunteer anglers simulating culling that occurs during a real tournament. Actual tournaments were not used in this experiment so as to not interfere with the tournament proper. In addition we wanted

to ensure that live well holding time and number of fish in the live well were controlled. Three simulated tournaments were held during 2006 (Table 3).

Table 3. Summary statistics for three simulated tournaments bass tournaments in Wisconsin during 2006. ¹Data compromised due to escape of reference and treatment fish.

Simulated Tournament	Balsam Lake	Madison Chain	Minocqua Chain
Date	6/17/2006	8/25/2006	9/8/2006
LMBV Presence/Absence	Absent	Present	Absent
Mean Surface Water Temp (°F)	73.6	75.6	68.0
Delayed Mortality Rate	43%	NA ¹	0%
Reference Mortality Rate	30%	NA ¹	0%
Adjusted LMB Mortality Rate	16%	NA ¹	0%

Methods. – Detailed description of the methods can be found in the final report (Appendix 1).

Culling mortality data are limited, but mortality of culled bass also appears related to water temperature.

Results. – Balsam Lake had the highest mortality rates with delayed mortality of 43%, reference mortality of 30%, and adjusted mortality rate of 16%, while Minocqua had a 0% mortality of reference and treatment bass. LMBV was absent at Balsam and Minocqua. The data from Madison was compromised because muskrats chewed holes in the holding pens which resulted in escape of most of the fish. Balsam Lake was the only tournament at which we were able to evaluate mortality by hour. There was no distinct pattern of increased mortality with increased live well holding time at Balsam.

Discussion. – Mortality associated with culling has largely been ignored in the scientific literature, as most research has focused on the mortality associated with the entire tournament process. This study was an attempt to look specifically at culled bass, which do not experience the weigh-in portion of the tournament. Given the small sample size (i.e. number of simulated tournaments) it is difficult to make many solid conclusions regarding culling mortality. However, results from the two successful events, water temperature again appeared to be a factor. In the only simulation that resulted in mortality, we failed to detect increased mortality with increased live well holding time, an expected pattern if length of live well confinement caused bass mortality. This could be because live well confinement does not cause mortality or simply due to our single estimate.

When water temperatures are cool, mortality of bass in tournaments appears to be of little concern.

The presence of diseases like LMBV can have an impact on tournament-associated mortality.

LMBV appears to cause mortality only when temperatures are high, but there were no studies of warmwater tournaments where LMBV was not present.

Changes in tournament procedures for bass tournaments when water temperatures are high

Conclusions

A comprehensive review of 130 bass tournaments conducted across North America during three decades documented reduction in initial mortality from an average of nearly 20% in the 1970s to 6.5% in the 1990s. Results from this study indicate initial mortality rates are even lower in Wisconsin bass tournaments, the highest measured initial mortality rate being 3.3% for SMB at Winneconne in 2006. The same review documented that average delayed mortality during the same time period remained stable at 21-23%. Cool water tournaments in Wisconsin had delayed mortality rates much lower than this average. In fact of the three cool water tournaments only one had any mortality at all and it was less than 1%. Warm water tournaments had higher mortality. In two of the three warm water tournaments, delayed and reference mortality were high making estimates of tournament-associated delayed mortality unreliable. The delayed mortality rates estimated for SMB (31%) and LMB (13%) at the La Crosse FLW tournament in 2006 were consistent with national averages.

The presence of LMBV also contributes to the mortality of bass in tournaments when water temperatures are warm. LMBV is a recently discovered fish disease that can suppress largemouth bass immune systems and cause death under stressful conditions. The virus was present in all three warm water tournaments and one of the cool water tournaments. Mortality was low at the cool water tournament, indicating that temperature is more important than presence of the disease.

Based on these results and results from previous studies indicate that changes in bass fishing tournament procedures when surface water temperature is warm appears warranted. However, further studies may be needed to determine the specific threshold for water temperatures. Further investigation into the present and future distribution of LMBV in Wisconsin may also be warranted. Given the limited data, culling appeared to have a lesser impact on bass tournament mortality compared to the impacts of water temperature and LMBV.

SUMMARY OF THE EVALUATION OF LOCAL ECONOMIC IMPACTS OF WISCONSIN BASS TOURNAMENTS

The objectives of this research were first, to estimate the characteristics of tournament angling participant spending for seven bass fishing tournament pilot program events held during 2005-2006 (Table 1), and second, apply these expenditure characteristics to regional input-output models to estimate the local economic impact of these events.

The ESPN/BASS Bassmaster Elite 50 tournament was the most popular event to participate in the pilot program.

Bassmaster Elite 50

The largest event in terms of national stature to participate in the bass fishing tournament pilot program was the ESPN/BASS Bassmaster Elite 50 event held June 15-18, 2005 on Lake Wissota near Chippewa Falls. For this event, the Department of Tourism, the Chippewa Valley Convention and Visitors Bureau, DNR, and the University of Wisconsin's Department of Urban and Regional Planning partnered to gather marketing and economic impact information. Information on spectator demographics, trip characteristics, and expenditures was collected at the ESPN/BASS Bassmaster Elite 50 event. Expenditure data collected from non-local spectators, participants, ESPN/BASS crew, and vendors were used to estimate local (Chippewa and Eau Claire Counties) economic impact.

Methods. – Methods used to collect and analyze economic impact data are detailed in the final report titled “Profile of The Bassmaster Elite 50 Series; Fishing Tournament: Economic and Demographic Assessment of Those Involved in the June 15-18 Event” (Appendix 2).

Non-local spectators spent \$1.32 million and professionals spent \$135,000 for a total of \$1.45 million in direct economic impact.

This estimated spending resulted in a total economic impact of \$2.1 million.

Results. – A total of 181 completed spectator surveys were obtained, of which 57 were non-local spectators. An estimated 14,000 spectators attended the event, of which approximately 4,500 were non-local. Five angler expenditure surveys were returned from a total of 50 anglers. Eight vendor expenditure surveys were returned from a total of 68 vendors. Six crew expenditure surveys were returned from a total of 22 ESPN/BASS crew. Only non-local spending is considered when estimating economic impacts as it is assumed that spending by locals would have taken place in the community regardless of the tournament. Average expenditures by non-locals of over \$290 per trip, the majority of which was spent on lodging, food and travel, resulted in an estimated direct economic impact of nearly \$1.32 million. Average professional (anglers, vendors, and crew) spending in the Chippewa Valley

ranging from \$720 to \$1,057 per trip, the majority of which was spent on lodging food and travel, added an estimated additional \$135,000 in direct expenditures. This estimated \$1.45 million in spending as a result of the tournament generated an estimated total direct, indirect and induced output impact of just over \$2.1 million (\$2,116,000). Overall, this reflects an output multiplier of roughly 1.46.

Discussion. - Spectators generated the greatest economic impact associated with the 2005 Bassmaster Elite 50 tournament held on Lake Wissota due to the high attendance. However, the professionals spent far more per trip than spectators. Unmeasured in the evaluation were the local costs associated with conducting the event, such as law enforcement and emergency personnel costs, and complimentary goods and services. The local community also spent \$60,000 as a bid to bring the event to the area.

Other Bass Fishing Tournament Pilot Program Events

Six other events ranging from state level to regional bass tournaments were evaluated for their local economic impacts (Table 1).

Methods. - Methods used to collect and analyze economic impact data are detailed in the attached final report "Tournament angling in Wisconsin: estimating economic impacts for host communities" (Appendix 3).

Results. - General results of the economic impact assessment are provided in Table 4 below. These represent the local expenditures and local impacts of non-local visitors. Only non-local spending is considered when estimating economic impacts as it is assumed that spending by locals would have taken place in the community regardless of the tournament. At the FLW Everstart tournament held in La Crosse in 2005, a small number of spectator interviews were conducted. In addition the number of spectators was estimated by hand counting. Spectators interviewed fell into one of two categories. They were either with one of the anglers and thus included in the travel party expenses provided by anglers, or they were local. The spectator counts that included those people never exceeded 75 - 100. Therefore, spectators that attended these events were either captured in the angler travel party expenditures or not considered due to being locals

Discussion. - The economic impact of the other six pilot program tournaments was linked to the size of the

Non-local expenditures ranged from \$42,819 to \$328,244 at six pilot program tournaments.

These expenditures resulted in an estimated \$65,368 to \$459,143 in economic impact on the host communities.

tournament, with respect to the number of participants. The regional draw of anglers to the three larger events likely also contributed to the higher economic impact. The absence of the economic impact of spectators is very apparent, as all six other pilot program tournaments combined did not equal the impact of the Lake Wissota event.

Table 4. Average and total non-local expenditures in local area, total economic impact on the local area, and multiplier for six bass fishing tournament pilot program events held during 2005 - 2006.

Tournament	FLW LaCrosse 2005	WSBF Shawano 2005	Sturgeon Bay Open 2006	FLW LaCrosse 2006	BASS Winneconne 2006	WSBF Madison 2006
Average Boater Expenditures	\$965	\$490	\$983	\$967	\$576	\$425
Average Co-Angler Expenditures	\$612	\$310	\$824	\$627	\$285	\$338
Average Staff/Sponsor Expenditures	\$1,869	\$875	na	ns*	ns avg	ns
Total Expenditures	\$296,098	\$74,333	\$328,244	\$308,873	\$48,057	\$42,819
Total Economic Impact	\$452,465	\$105,555	\$440,718	\$459,143	\$66,672	\$65,368
Multiplier	1.49	1.39	1.35	1.49	1.53	1.55

na - not applicable, all staff were local

ns - not sampled

ns avg - no surveys but assumed to be average of staff/sponsor surveys

*average staff/sponsor spending in La Crosse in 2005 was utilized to estimate total expenditures in 2006.

Conclusions

Bass fishing tournaments provide positive local economic impacts when and where they are held. In this evaluation, the largest contributor to economic impacts was non-local spectators, as reflected by the results of the ESPN/BASS Bassmaster Elite 50 tournament. It was the only event that drew large numbers of spectators. Without drawing non-local spectators, the economic impact of bass tournaments was far less. A larger number of tournament participants from a larger geographical area can make up some of the potential gain not realized due to lack of spectator draw.

All of the pilot program events provided positive local economic impacts on the host communities.

Non-local spectators provided the greatest overall impact.

Three of the seven pilot program tournaments were "new" to Wisconsin.

One of the primary goals of the pilot program and of allowing culling for bass tournaments was to draw large tournaments from outside Wisconsin that would not come otherwise, bringing with them their positive economic impact. Three of the seven tournaments (Elite 50 and 2 FLW events) conducted as part of the bass fishing tournament pilot program were regional or national events that perhaps would not come to

The Sturgeon Bay Open, a bass tournament with a long history of operation in Wisconsin had as much an impact as the FLW events that only came to Wisconsin because the anglers could cull.

Angling in Wisconsin is a \$2.3 billion (2001 dollars) industry, resulting in \$1.2 billion in trip-related expenditures.

The new tournaments that came to Wisconsin only because of culling added one-tenth of one percent in fishing trip expenditures to the state of Wisconsin.

Wisconsin without participants being allowed to cull. The other four events were events that have either been traditionally held under current rules or would likely be held under current rules. The Sturgeon Bay Open has been conducted for 16 years in Wisconsin and 2006 was the first time culling was allowed. The expenditures and economic impact was very similar to the two FLW events held in La Crosse in 2005 and 2006.

Angling in Wisconsin is a \$2.3 billion industry that supports more than 26,000 jobs in Wisconsin and generates \$100 million in state tax revenue (2001 dollars). Overall there are over 22 million days of fishing in Wisconsin. Anglers spend approximately \$1.2 billion in trip-related expenditures in Wisconsin (USFWS 2001). The additional expenditures of non-locals during the three new tournaments that came to Wisconsin because participants were allowed to cull were approximately \$2.55 million over the two year pilot program. That equates to an annual increase of \$1.27 million in tournament trip expenditures from new tournaments coming to Wisconsin if allowed to cull. That results in approximately one-tenth of one percent of fishing trip related expenditures in Wisconsin.

SUMMARY OF THE EVALUATION OF ATTITUDES TOWARD FISHING TOURNAMENTS IN WISCONSIN

The goals of this study were to provide information on the public's awareness and acceptance of culling, their beliefs about tournament-related fish mortality, the impact tournaments have on the fishery resource as well as on water recreation, and the possible benefits (e.g. economic impacts) derived from fishing tournaments.

The results of this study generated from two quantitative and two qualitative surveys. The first quantitative study was a random sample of 1,000 Wisconsin anglers. Each angler received a 12-page questionnaire in the mail and after a maximum of three contacts, 63 percent returned usable questionnaires. The second quantitative study was a random sample of 1,000 Wisconsin registered boaters that received a 4-page questionnaire in the mail. After a maximum of three contacts, 67 percent returned usable questionnaires. The qualitative components included three focus groups with bass tournament participants and in-depth interviews with 14

waterfront property owners and/or members of a lake association.

Tournament participation in Wisconsin

A larger than expected percentage of Wisconsin anglers participates in fishing tournaments (17%). That equates to approximately 250,000 anglers. Roughly 150,000 anglers (10%) fish in ice fishing tournaments and 190,000 (13%) fish in open water tournaments. Walleye tournaments were most popular for open water tournaments and panfish were most popular for ice fishing tournaments.

Public acceptance of culling

A majority of Wisconsin anglers are opposed to culling for bass tournament participants. However the opposition depends greatly on whether participants would have to be required to use boats with live wells that meet minimum standards. The opposition to culling is near unanimous if participants do not need to follow live well standards (85% opposed). Opposition to culling drops drastically (51%) if participants were required to have live wells that meet minimum standards. Seventeen percent of anglers were unsure whether culling in bass tournaments should be allowed if live well standards were required and 32% felt culling should be allowed. These results indicate that the opposition to culling is not necessarily as strong as initially thought based on previous concerns raised to DNR. This may be attributable to the polarization of the issue among two relatively small groups, and the majority of anglers having relatively neutral opinions on the issue.

Opposition to culling in bass tournaments was not overwhelming if live well standards were required for tournament participants to cull.

Bass tournament anglers feel strongly that culling should be allowed for their sport.

Lake shore property owners were not opposed to culling if it did not harm the fishery.

Biological impacts appear most important to angler attitudes.

Results from focus groups with tournament participants support this assertion. Tournament anglers believe culling is a necessity for tournament expansion. Further, they believe that culling results in less harm to the fishery resource than does catch-and-keep fishing practiced by some other anglers.

In-depth interviews with lake shore property owners revealed that their attitudes regarding culling were driven by potential harm to the fishery. If culling did not harm the fishery and was done by an angler with knowledge and experience in fish handling (e.g. a tournament angler) then it was acceptable.

Tournament impacts on fishery resources

Biological impacts on fishery resources appear most important to anglers and attitudes about tournament issues are tied to beliefs about the impact of tournaments on fisheries. Most

Few anglers believe that tournaments are harmful to fisheries.

anglers felt that tournaments did little or no harm to fisheries. Only about one angler in five (22%) believes that tournaments do “moderate” to “a great deal of harm” to the future fishery of a waterbody. Fifty-three percent believe that tournaments do “no” to “little” harm to the fishery.

Despite the relatively small proportion of people that felt tournaments were harmful to fisheries, analyses reveal that beliefs about the potential harm to fishery resources due to tournament fishing is a likely influence on their beliefs about culling and other tournament aspects. Those who believe that tournaments “moderately” or “greatly” harm the fishery resource are more likely to oppose culling even with live-well standards than those who believe the resource has had “no” or a “little” harm. Further, they are less likely to speculate that a high percentage (75% to 100%) of tournament caught and released fish will survive than those who believe the resource will experience “no” or a “little” harm.

The importance of biological impacts on attitudes toward tournaments was evident during in-depth interviews with lake shore property owners as well. The primary concern was for the health of the fishery. Interviews revealed that catch and release tournament fishing was preferred to catch and harvest angling.

Tournament impacts on water recreation

Anglers notice tournaments while fishing.

Fishing tournaments do not go unnoticed by other anglers. Approximately one-half of all anglers said that being on the water as a non-participant during a tournament affected the quality of their fishing experience (52%); a nearly equal proportion said the tournament made it difficult to obtain access to the water (48%). In addition, just over one-half of water recreation users reported that tournament boats and trailers caused overcrowding in the parking lots (56%) and that tournament boats congested the boat ramps (54%); about one-third of the respondents (34%) said they felt crowded on the water because of the tournament.

Tournaments generally do not interfere with water recreation.

Looking at the bigger picture of water recreation indicates that a majority of all water recreation users said the tournament did not interfere with their recreational pursuits and more than one-half reported that the tournament did not cause them to leave the water – one respondent in five (20%), however, was displaced from the water because of the tournament, that is, the tournament caused them to leave the water.

Tournament fishing boats were no more of a problem for water users than other fishing boats. Tournament boats were not at all a problem for about eight respondents in ten (79%), results nearly equal to those for pontoons and houseboats (83% no problem). Just under one respondent in ten (8%) reported that tournament boats as well as other fishing boats were a “moderate” or “serious” problem. Less than 10 percent (9%) said these boats were the biggest problem on Wisconsin waters.

Personal watercraft, speed boating, and water skiing were more of a problem for boaters.

A majority of water users reported that personal watercrafts (76%), speed boating (72%) and water skiing (72%) should be restricted by time and/or location. This is substantially more than the minority (although almost one-half) of water users that believe tournament fishing should be restricted by time and/or location (48%).

Benefits of tournament fishing

Neither economic gain nor drawing attention to Wisconsin as a fishing destination were seen as benefits derived from fishing tournaments. Only about one-third of anglers agree that tournaments are good for the state because of their economic contributions. About an equal proportion of anglers felt that tournaments are good because they draw attention to Wisconsin as a fishing destination.

CONCLUSIONS

- Tournament - associated mortality is of minimal concern at low water temperatures.
- When water temperatures are high, tournament-associated mortality can be a concern.
- Bass tournaments can provide positive local economic impacts to host communities.
- The additional economic impact to the state as a whole due to allowing culling was small.
- Opposition to culling in bass tournaments by Wisconsin anglers was not overwhelming but was driven by perceived biological impacts of culling.