

# **Recommendations for the Management of Competitive Fishing in Alberta**

Submitted by:

**Competitive Fishing Events Review Committee**

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## Working Paper for the Competitive Fishing Events Review Committee (September 2000)

### 1.0 INTRODUCTION

The fish resources of Alberta are limited in abundance by the small amount of suitable habitat. Surveys conducted throughout Alberta have shown that only about 1030 have game fish producing capabilities. The other lakes are too shallow to support game fish and freeze to the bottom during winter or are too warm for fish during summer. By comparison, Saskatchewan has an estimated 94 000, Manitoba has 110 000 and Ontario has 250 000 fish-bearing lakes. Fish populations in Alberta have declined from overharvest because of the high demand placed on the fish resources of the province.

The disparity of fishing pressure and available resource has prompted concerns regarding the impacts of competitive fishing events on fish resources and traditional sportfishing. These events tend to attract more anglers to the water bodies where they are held than might otherwise visit and a large portion of the total annual harvest of some species can be taken in just a few days. Although many events adopted a catch and release format to address the issue of increased fishing pressure, studies conducted in Alberta have shown that fish survival can be very low, and few competitive fishing events have total fish mortalities below 10%. Increased survival rates of released fish can be achieved by regulating where, when and how events are run, by instituting best management practices and by educating anglers on proper fish handling techniques.

A workshop to investigate concerns about competitive fishing, involving a wide range of public interest groups, was held in 1995. Participants of the workshop supported a license to regulate competitive fishing events, although consideration was given to exempt very small events from the license requirement. Alberta Environment subsequently released the *Fisheries Management Division Action Plan Respecting the Workshop on Competitive Fishing Recommendations* in October of the same year. This document identified the specific action items required to complete a final Competitive Fishing Management Strategy for Alberta and laid the foundation for the tasks of the Competitive Fishing Events Review Committee.

Neither the *Fisheries Act* (Canada) nor the *Fisheries (Alberta) Act* has provision for the regulation of Competitive Fishing Events. At present, Alberta Environment neither supports nor opposes competitive fishing and no controls are in place to restrict tournaments beyond the existing sportfishing regulations.

Public support for licensing competitive fishing was investigated further in 1996 when Alberta resident anglers were contacted, as part the Survey on Recreational Fishing in Canada, and asked several questions pertaining to derbies and tournaments. About 8.2% said they had participated in a derby in Alberta in 1995 and only 2.2% said they had participated in a tournament. Less than 20% of the anglers said derbies and tournaments should be banned; however, nearly 95% of the anglers felt derbies and tournaments should be regulated. A mandatory license system administrated by Alberta Environment was favored over other possible forms of control. Over 50% of the anglers felt that fishing clubs, charitable organizations, social groups and local communities could be allowed to hold derbies and tournaments; however, only about 20% believed that commercial promoters should be allowed to hold these events.

Since 1996, individuals, groups and organizations holding a derby or tournament have been requested to submit a voluntary registration form to the Fisheries and Wildlife Management Division. Events promoted as "social/fun-days" make up the majority (~70%) of the Competitive Fishing Events registered. Events of this type tend to promote the sport of fishing and family involvement. The remainder of the Competitive Fishing Events held in Alberta would be considered fund-raisers and tournaments. Tournaments are of economic importance to the local community and sometimes the event organizers. On a lake specific basis, one or two large events or the cumulative affects of numerous small social fun events can result in large increases in fishing effort and fish resource impacts.

In preparation for a future licensing system, the Competitive Fishing Events Review Committee has been involved with the development of regulation needs and best management practices for the holding of competitive fishing events. The Competitive Fishing Events Review Committee consists of representatives from Western Walleye Council, Alberta Fish Game Association, Trout Unlimited Canada, Walleye Unlimited Foundation of Alberta, AFGA Edmonton Old-timers and The Fishin' Hole Ltd.

The committee acts in an advisory and monitoring role to Alberta Environment. In this function the committee provides advice and information. In the future, the committee membership will monitor tournament licensing record return forms and Competitive Fishing Events to provide updates of the Best Management Practices and information and education material. The initial recommendations of the committee are outlined in this document.

## **2.0 Definitions for Competitive Fishing**

"Competitive Fishing" - means an organized activity where participants use their experience and skill as anglers in competition with one another for trophies, monies, and/or merchandise as prizes awarded on the basis of species, size, weight and/or number of fish caught.

"Competitive Fishing Event" - means an event held by a person, group, organization or company, which attracts participants for the purpose of competitive fishing.

## **3.0 Goal for the Management of Competitive Fishing**

The Alberta Environment document, *A Fish Conservation Strategy for Alberta (2000-2005)*, identifies the need to regulate the activity of competitive fishing to:

Minimize impacts of competitive fishing events (tournaments and derbies) on fish populations and recreational sportfishing through the development of policy, standards and controls regarding competitive fishing.

The Competitive Fishing Events Review Committee recommends the following Goal:

Manage and regulate competitive fishing in a manner that:

- a) Assists in the conservation and allocation of fish resources,
- b) Encourages involvement in the sport of fishing, and
- c) Reduces impacts to recreational sportfishing.

## **4.0 Objectives for the Management of Competitive Fishing**

The Competitive Fishing Events Review Committee recommends the following objectives to achieve the goal for the management of competitive fishing in particular and of fisheries resources in general.

- a) Design and implement a regulatory framework for licensing Competitive Fishing Events that includes compulsory information return forms.
- b) Develop and maintain up-to-date guidelines of Best Management Practices for holding Competitive Fishing Events.
- c) Educate organizers of, and participants in, Competitive Fishing Events on resource conservation issues associated with Competitive Fishing Events.

### **4.1 Objective 1: Regulatory Framework**

*Design and implement a regulatory framework for licensing Competitive Fishing Events by the year 2001 that includes compulsory information return forms.*

Sustaining the quality of recreational sportfishing is not possible without the ability to monitor the impacts of competitive fishing. Conserving Alberta's fish resources is not possible without the ability to manage and control all forms of fish use. Compulsory information return forms are required to facilitate the management of competitive fishing by tracking changes in fishing pressure and by monitoring impacts on fish populations. The committee considers competitive fishing to be related to sportfishing, but a separate activity that must be managed on its own merits. Recreational sportfishing needs must have priority over competitive fishing activities.

#### **4.1.1 Regulation Requirements for Managing Competitive Fishing**

The Competitive Fishing Events Review Committee recommends the implementation of the following regulations pertaining to competitive fishing.

- 1. Any competitive Fishing Event held at site-specific water bodies for 25 or more participants must obtain a Competitive Fishing Event License that authorizes the organizer and registrants to participate in competitive fishing.**

The license identifies the organizer of the event, contact person, category of event, name of water body, location on water body, dates of the event, species fished for, and conditions of license. For events that register by fishing teams, each member of a fishing team is considered a participant.

Competitive Fishing Events, which may include pre-event practice fishing, tend to attract more anglers than might otherwise visit to the water bodies where they are held. A large portion of the total annual harvest of some species can be taken in just a few days during Competitive Fishing Events. Therefore, it is essential that events scheduled at site-specific water bodies be regulated and monitored. Contests that operate for non-profit over a lengthy period of time on a broad regional basis rather than at specific water bodies are of less concern because they do not encourage concentration of angling effort. The license exemption for events of less than 25 participants recognize the probability of less impact on fish resources from very small "family and friends" events.

- 2. Organizers must comply with sportfishing regulations and conditions of license, and disqualify participants who do not comply with sportfishing regulations, conditions of license and event rules.**

Alberta sportfishing regulations must apply to Competitive Fishing Events and participants and these regulations must not be waived. Conditions of license will place restrictions on the event and participants in addition to Alberta Sportfishing Regulations. Failure to comply with all regulations and conditions of license should result in prosecution and/or loss of licensing privileges. Event organizers should establish a system of self-regulation as part of their event, for the judging of the event and to ensure that participants comply with regulations and conditions of license. Participants who violate regulations or conditions of license should be disqualified from competition. Upon receiving a complaint, Alberta Environment should enforce regulations and the conditions of the Competitive Fishing Event License. Conservation officers should also conduct periodic checks of participants and event organizers.

**3. No person may participate in a Competitive Fishing Event unless registered as a participant of the event prior to the commencement of the event or before actively fishing. Each registered participant must comply with conditions of license in the Competitive Fishing Event License.**

Alberta Sportfishing Regulations should apply to each participant as well as to the organizers of Competitive Fishing Events and these regulations must not be waived. Failure of an organizer to register all participants of the event should result in prosecution and/or loss of future licensing privileges. Failure of a participant to register prior to fishing or the commencement of the event which may include pre-event practice fishing should result in prosecution and/or disqualification. All anglers participating in a Competitive Fishing Event must have a valid Alberta Sportfishing License except those who, under the General Fisheries (Alberta) Regulations, are exempt.

**4. A registered participant of a licensed Competitive Fishing Event shall be bound by the conditions stated in the event license.**

Participants must be held accountable for their actions and must be made to comply with conditions of license. Conditions of license place restrictions on the event and participants in addition to Alberta Sportfishing Regulations. Failure of a participant to comply with conditions of the license should result in prosecution and/or disqualification from the event. Each registered participant, as a person other than the license holder (organizer), must be provided with a written document indicating that the participant is authorized by or under the license to conduct the activities of the license. Participants must identify themselves as participants by showing the written document when checked by a Conservation Officer. The development of some form of special regulation will be required. The above is a possible example.

**5. The Competitive Fishing Event License Fee.**

The committee recommends that a user-pay philosophy should apply to licenses for competitive fishing and that larger events should pay more (\$25 to \$100.00). The committee also recommends that licensing schemes be investigated to establish a resource levy (10% of the revenue generated by event registration fees) to be transferred to the Alberta Conservation Association for funding projects in Fisheries Management (particularly related to competitive fishing).

Obstacles may exist to the establishment of a resource levy. Currently, neither the government nor ACA can, and may never be empowered to, establish the levy. The government can apply a fee to the basic license. The ACA can apply a levy to sportfishing licenses, but possibly not other forms of licenses. The ACA can not currently set a levy on the participant's entry fee charged by the event organizer. Also, the government would not be able to collect a 'fee' on behalf of the ACA. It is unknown whether or not a system is possible to have ISM sell Competitive Fishing Event Licenses and collect a government fee and ACA levy, as well as its own transaction charge. Changes to laws (Acts/Regulations) may not be possible in these areas and a resource levy might have to be applied on a volunteer basis as a Best Management Practice.

**6. Event organizers must obtain a license prior to publicly advertising a Competitive Fishing Event.**

Some applications for license may be rejected; therefore, the applicant requesting a license should not publicly advertise an intention to hold an event prior to receiving a license. In order to inform the public an event is authorized, all event advertisements must include the license number issued for the event. Advertising an event to the public prior to receiving a license should result in prosecution.

**7. Applications for Competitive Fishing Event Licenses must be submitted to the nearest Alberta Environment office at least six weeks prior to the proposed dates of the event.**

The application should identify the organizer of the event, contact person, name of water body, location on water body, species fished for, dates of the event, purpose of the event, proposed format and rules, anticipated number of participants, cost of entry fee, and total value of prizes (trophies, cash and merchandise).

Event organizers will be provided with best management guidelines and policies governing competitive fishing when they pick-up and application. These will assist applicants in planning an event that will adhere to standards used in the approval process. The application must be submitted to Natural Resources Service where the application will be reviewed by the Area Fisheries Biologist responsible for management at the water body named in the application. If approved, a license would be issued with appropriate license conditions depending upon the location, timing, species fished for, and category of event. A list of all licensed events in the province should be maintained (by Fisheries and Wildlife Management Division, Headquarters), and up-to-date copies of the list should be available to users upon request.

**8. Organizers must complete and return the Competitive Fishing Event Return Form within one month of the conclusion of the event.**

Up-to-date information relative to competitive fishing regarding the actual number of participants, the number of fish caught and the number of fish harvested (or on-site fish mortality) is required to track changes in fishing pressure and monitor impacts on fish populations. The Competitive Fishing Event Return Form should be a mandatory part of the license and failure to comply should result in prosecution and/or loss of future licensing privileges.

**9. The number and/or size of Competitive Fishing Events allowed on a given lake and/or during a given time period should be regulated.**

Competitive fishing must be controlled to avoid impacts to the resource and to recreational sportfishing. Some water bodies can not support the fishing pressure from competitive fishing, or can only support a limited number of events, in addition to the fishing pressure from traditional non-competitive sportfishing.

**10. Competitive Fishing Events organized for Private Enterprise, by individuals, companies or groups, on a "for-profit" basis should not be allowed.**

Competitive fishing is an activity where participants use their experience and skill as anglers to qualify for reward. Although many events have commercialized the sport of fishing, these events are not part of the commercial fishing industry and should not be licensed as a "for-profit" use of the fish resource. Some events are held by non-profit organizations, primarily as social events, and any revenues generated are used to support the group or for charitable purposes. Anglers responding to a 1995 survey

were in agreement that sportfishing clubs, charitable organizations, local communities and social groups should be allowed to hold derbies and tournaments; however, more than 70% were opposed to allowing commercial promoters to profit from competitive fishing events. This issue may require further debate and the development of criteria pertaining to the exclusion of "for-profit" events.

#### **4.1.2 Conditions of License**

Conditions of License are rules, applied to the license in addition to sportfishing regulations, of how an event must be operated. Organizers of Competitive Fishing Events must review the conditions and operate their event to comply with each condition. Participants must also comply with each condition. Failure to comply with the conditions of license is a serious offence. The General Fisheries (Alberta) Regulations authorizes the inclusion of a variety of terms and conditions in a license, as outlined below:

- (a) the species of fish and the quantities, sizes or weights of fish that are permitted;
- (b) when, where and how fishing is permitted to be carried out;
- (c) who may conduct activities pursuant to the license;
- (d) the type and quantity of fishing gear and equipment that may be used and how they may be used;
- (e) how a licensee may be required to report activities and how scientific and catch data are to be reported; and
- (f) the dates of the license, which may include pre-event practice fishing.

Additional license conditions specific to competitive fishing will be required to minimize impacts to fish resources and recreational sportfishing. Additional conditions of license would be guided by policy and the Best Management Practices that may deal with areas such as fish handling facilities, live-wells, stressed fish, disposal of dead fish, bad weather situations, alternate species, "fizzing", requirement for a mortality study and use of bait.

The selection of appropriate conditions of license at a specific water body will be administered by the Area Fisheries Biologist depending on the category of individual Competitive Fishing Events, the status of fish resource, timing of the event, format and fishing pressure at the water body.

#### **4.1.3 Categories of Competitive Fishing Events**

For the purpose of reviewing applications and assigning conditions of license, the following general categories of competitive fishing events will be recognized.

##### **1) Youth Derbies (Kids-fun-days)**

A Competitive Fishing Event may be classed as a Youth Derby when:

- a) all participants are under the age of 16, and
- b) the event is not part of any other derby or tournament.

Youth Derbies (Kids-fun-days) are informal, social or fun activities for kids that are relatively small in size and offer small prizes. The numbers of youth involved in fishing has been declining over the past decade and various clubs and organizations should be encouraged to promote youth participation in the sport of fishing. These events can be catch-and-keep but opportunities to introduce catch-and-release or reduced limits should be considered.

## **2) Social/fun-day Derbies (Family/Group fun-days)**

A Competitive Fishing Event may be classed as a Social/fun-day Derby when:

- a) the event is organized for members only (family and friends/club/company) and not advertised to the general public and,
- b) the event is not part of any other event,
- c) and *less than 50 participants will be registered.*

Social/fun-day Derbies are informal, social or fun activities for family and friends that are relatively small in size and offer small prizes (e.g., family/company/club/social group-fun-days). The numbers of anglers have been declining over the past decade and various clubs; organizations and companies should be encouraged to promote participation in the sport of fishing. Initially, these events can be catch-and-keep although opportunities to introduce reduced limits or catch and release should be considered. The more organized and experienced groups should adopt a catch-and-release format compatible with guidelines provided in *Best Management Practices for Holding Competitive Fishing Events*. In this regard, the larger established derbies (>50 participants) capable of significant resource impacts should be classed in the tournament category.

## **3) "Fund Raiser" Derbies**

A Competitive Fishing Event should be classed as a "Fund Raiser" Derby when:

- a) the event is organized for, and advertised to, the general public as an open competition or,
- b) the intent is to raise minor funding in addition to social fun, for the group or charitable cause or ,
- c) *the entry fee is less than \$50.00, per team or boat, and*
- d) *less than 75 participants will be registered.*

"Fund Raiser" Derbies are usually advertised to the general public with an intent to raise funds in addition to providing a social or fun function. They can be informal, relatively small in size and offer small prizes. At the other end of the range are the relatively large promotional competitions with major prizes organized for non-profit groups intended to obtain funds for charitable causes. In the past, these events have operated as catch-and-keep rather than catch-and-release events. However, over time the more organized and experienced groups must be encouraged to adopt a catch-and-release format compatible with guidelines provided in *Best Management Practices for Holding Competitive Fishing Events*. In the interim, reduced limits are required to reduce impacts from these events. However, the larger fund-raiser derbies (>75 participants) capable of significant resource impacts border on commercial enterprise and should be classed in the tournament category. Competitive Fishing Events organized for Private Enterprise, by individuals, companies or groups, on a "for-profit" basis should not be allowed.

## **4) Tournaments**

A Competitive Fishing Event should be classed as a Tournament when:

- a) the event is organized for, and advertised to, the general public for open competition or,
- b) *the entry fee is \$50.00 or more per team or boat or,*
- c) *prizes exceed a value of \$1,000.00.*

Although each tournament must be licensed on a lake-by-lake basis, some organizers may offer a series of tournaments at different times at the same lake or different lakes. Tournaments are usually large in size and highly structured attracting well equipped, experienced "professional" anglers. Tournaments usually offer moderate to large prizes and personal 'reward' recognition. These events must follow appropriate fish conservation guidelines and should operate as catch-and release events.



## **5) Contests**

Contests operated on a broad regional to province-wide basis for non-profit should be exempt from the need to have a license.

### **4.1.4 Administration of the Competitive Fishing Events License**

The Competitive Fishing Events License should be administered by Alberta Environment. Participation of department staff should involve the provision of advice and educational material on organizing a Competitive Fishing Event, assisting with educational seminars, or providing assistance for the event where that assistance does not reflect upon the results of the competition. Department staff should not assist with, or be involved with, the weighing or measuring of fish or in determining if fish are eligible for entry. Conservation Officers should conduct periodic checks of participants and event organizers, and should investigate complaints.

#### **4.1.4.1 Issuance of Licenses**

Individuals, groups, organizations and companies wanting to organize and hold a Competitive Fishing Event should submit an application for a license to the nearest Alberta Environment office at least six weeks prior to the proposed dates of the competition. Large events must be encouraged to apply earlier because one month is insufficient lead-time for large events to organize and advertise. Licenses may have to overlap fiscal years for large events. The application would identify the organizer of the event, contact person, name of water body, location on water body, species fished for, dates of the event, purpose of the event, format of the event, anticipated number of participants, cost of entry fee, and total value of prizes (trophies, cash and merchandise).

The application should be reviewed by the Area Fisheries Biologist responsible for management at the water body named in the application. If approved, a license will be issued with appropriate license conditions. The area Fisheries Biologist may contact the organizer to discuss the application, concerns and required conditions, or to recommend alternative locations for holding an event, prior to issuance of a license.

Approval, modification or rejection of a license, including conditions of license, should be based on factors such as the population status for various species at the water body (target and non-target species), the mortality risk associated with the proposed format of the event (adherence to the Best Management Practices), current fishing pressure from traditional non-competitive sportfishing, and impacts of previously licensed events (past and present). A new license should not be issued to an organizer who fails to submit a completed event form for a previous event. An organizer who has a poor compliance record on a previous event should not be licensed in the future. If the applicant for a Competitive Fishing Event License does not demonstrate a level of competence for organizing the event in a conservation-minded manner, a license should not be issued. Review of applications and conditions of license should be guided by policy set by Alberta Environment and *Best Management Practices for Holding Competitive Fishing Events*.

## **4.2 Objective 2: Best Management Practices**

*Develop by the year 2001, and maintain on an ongoing basis, up-to-date guidelines of Best Management Practices for holding Competitive Fishing Events.*

Best Management Practices should be incorporated into competitive fishing events. The following should be used by organizers planning events and by department staff reviewing applications and assigning conditions of license.

### **4.2.1 Locations of Events**

**Competitive Fishing Events will only be approved for lakes where the target species is classified as a "stable" population (care must also be taken to ensure that incidental catches of sensitive non-target species do not occur). The number and/or size of Competitive Fishing Events allowed on a given lake and/or during a given time period should also be regulated.**

Each water body has a finite capacity to produce fish. Fish harvest (fish kept by anglers plus the death of released fish called hooking mortality) must not exceed the water body's capacity to produce fish. Most populations of fish in Alberta have been impacted by over harvest and competitive fishing must be controlled to avoid further impacts to the resource and to traditional non-competitive sportfishing. Some water bodies can not support the fishing pressure from competitive fishing, or can only support a limited number of events, in addition to the fishing pressure from traditional non-competitive sportfishing. Because populations categorized as vulnerable or collapsed are being managed for recovery, the added fishing pressure generated by Competitive Fishing Events does not support the recovery strategy.

There are concerns regarding the number of events that can be held at water body. As the number of Competitive Fishing Events increases, resource impacts become more concerning and the number of events per water body will have to be limited. A process to allocate event opportunities must be developed through consultation with Competitive Fishing Events organizers. Events with a history of being well run should be given priority in these situations. A list of eligible (stable) water bodies should be prepared and made available to the public.

Some applications for license may be rejected because the water body can not support fishing pressure from competitive fishing, or can only support a limited number of events, in addition to the fishing pressure from traditional non-competitive sportfishing. In other cases, conditions of license may be applied that were not anticipated by the applicant. Therefore, the applicant requesting a license should not advertise to the public an intention to hold an event prior to receiving a license.

### **4.2.2 Timing of Events**

**Competitive Fishing Events will not be licensed at any water body during a closed season. This is particularly important for the spring closure period. Some categories Competitive Fishing Events and some formats (see section 4.2.4) should not be licensed during July and August at water bodies where increased temperature and/or deep water hooking mortalities are a concern. Licences for Competitive Fishing Events for lake trout should not be issued from September 15 to October 15 to avoid added fishing pressure during the fall spawning period.**

Mortality of fish increases as temperature increases during the open water season. Studies have shown that holding fish in live-wells and weigh-in tanks during periods of high temperatures increases fish mortality. Moreover, as water temperatures increase many species seek deeper, cooler water and fish taken from depths greater than 7.5 meters may suffer from the fish equivalent of the "bends". Mortality of these fish can be very high. Some categories of Competitive Fishing Events and some formats should not be licensed during July and August. Special conditions may be necessary to avoid high mortality.

#### **4.2.3 Catch and Release**

**Catch-and-release events must strive to achieve a total mortality of less than 5%. Formats that strive for processing each fish as it is caught, thereby minimizing holding times, are preferred. All fish entered in a catch-and-release competition must be released.**

Some competitive fishing event organizers have adopted catch-and-release formats and implemented a variety of rules and practices to aid survival of released fish. Despite these efforts, high hooking mortalities can occur at some events. Competitive Fishing Events can generate a lot of fishing pressure. Fishing pressure is a major factor impacting the conservation of fish stocks. A catch-and-release format is deemed the Best Management Practice (BMP). However, average anglers may not be experienced with or equipped for catch-and-release fishing. Also, the organizers of smaller, social/fun events may not be familiar with the requirements of holding successful catch-and-release events. Therefore, initially, catch-and-release fishing is only recommended for the larger events and reduced limits are recommended for smaller events. Setting the minimum size limit for the target species above the legal size limit at the water body is an option to reduce the number of fish taken during a Competitive Fishing Event.

Participants fishing in large Competitive Fishing Events such as tournaments should not be allowed to keep any fish, and all fish should be released even if that species is not part of the competition. In many tournaments, participants may engage in fishing for a few days prior to the competition to locate good fishing spots and develop preferred fishing techniques. To prevent excessive harvest during pre-tournament fishing, event organizers should promote catch and release during this phase of the event.

#### **4.2.4 Fish Holding Facilities**

**In catch-and-release events the time between removal of a fish from a boat live well and the release of the fish back to the lake should not exceed one minute. An uncontaminated, shaded and temperature controlled water supply for fish-holding facilities is essential. Event organizers should designate staff to the care and release of fish and provide facilities to care for stressed fish.**

Fish holding facilities for weighing or measuring live fish before release should be designed and located in a manner that allows participants and organizers to meet a one-minute standard for non-stressed fish. Facility locations must be selected to allow the release of fish directly back into the lake of origin. Fish must not be released in tributaries to the lake. **Centralized holding facilities that involve holding fish and transporting for release or formats involving holding of fish in boat livewells for several hours will not be permitted during July or August due to high mortality rates associated with this format.** On large bodies of water, the number of "weigh-in stations" required and their location should be discussed with the Area Fisheries Biologist to avoid transporting fish long distances. Lengthy holding times and longer distances of transport lead to higher mortality especial during rough water and warm water conditions.

Water supply is also critical. Water used by holding facilities should be taken from a location away from boat traffic and boat landing areas to avoid the intake of water contaminated with gas, oil and motor exhaust. This type of precaution should also be taken if in-water-holding pens are in use. The difference in the water temperature of the holding facilities and the water body should not be allowed to differ by more than  $2^{\circ}\text{C}$  (+/-). Depending on the number of fish held, combinations of water circulation, water replacement and aeration will be required to maintain adequate oxygen concentrations and water quality for fish. Oxygen and temperature should be monitored regularly.

#### **4.2.5 Fish Handling**

Competitive Fishing Events with formats that promote handling fish in the shortest amount of time, encourage the immediate release of most fish and minimize the holding of fish have the lowest mortality rates. Fish mortality is a result of cumulative stresses from several factors. Research conducted in the United States and Canada regarding survival rates of fish caught and released clearly show that trout mortality rates are lower when artificial lures are used. However, similar studies for pike and walleye are inconclusive. At this time, it is not recommended to regulate the types of bait used in Competitive Fishing Events other than what is in the sportfishing regulations, but it is recommended that artificial bait be selected first followed by natural bait as a Best Management Practice. Should mortality rates cause concern in high volume tournaments, consideration will be given to regulating bait selection through a condition of licence. The use of only one line in winter is recommended.

All events must incorporate strategies to promote good fish handling practices.

The following are good fish handling practices:

- Retrieve fish quickly (Don't play fish to exhaustion).
- Keep fish in water as much as possible.
- Wet hands completely or wear soft wet cotton gloves to aid handling fish.
- Avoid squeezing the fish.
- Keep fingers out of the gills and eyes.
- Leave hooks in deep hooked fish when necessary because most hooks will dissolve.
- Release fish immediately that do not qualify for registration.

#### **4.2.6 Live-wells**

**All participants in a catch-and-release event must be equipped with an adequate "Live-well" (fish holding container). "Live-wells" must be equipped to aerate and exchange or re-circulate water. At no time may any chemical harmful to fish be used as stimulants in live-wells. No more than three fish may be retained in a "live-well" at any time. "Live-wells" must have a minimum volume of 13.5 liters per fish.**

Studies have shown that the length of time, number of fish held in "live-wells", and the practice of culling have a direct impact on increasing fish mortality. Allowing anglers to hold their daily entry limit may cause some fish to be held most of the day, which increases stress and injury to those fish. Reducing the number of fish in a "live-well" and the amount of time that fish are held before weigh-in decreases fish mortality. The maximum number of fish allowed in a "live-well" at any time should be less than the daily entry limit of the event to encourage competitors to return to the "weigh-in station" more than once per day. A definition of harmful chemicals or a list of approved chemicals for use in livewells will be required.

#### **4.2.7 Stressed Fish**

**Criteria for determining stressed fish will be based on the fish's ability to hold itself upright in water and the absence of obvious external damage from "live-wells" or handling. Another fish may not replace a fish lost to ineligibility due to stress. Fish judged as "stressed" are deemed ineligible and the penalty to the competitor is the loss of one fish that can be entered in the event.** Stressed fish are defined as those fish that show visible signs that they may not survive. The criteria used should be known and understood by all competitors, applied in a similar manner by all judges in the event and rigorously enforced. Stressed fish must be turned-over to the event organizer and recorded as mortalities on the event return form. All dead fish must be cared for as food, and stored in a clean, sterile container with ice. The disposal of the fish will be part of the conditions of license. Event organizers should plan for the disposal of dead fish.

#### **4.2.8 "Fizzing"**

**The practice of "fizzing" will not be allowed at any Competitive Fishing Event (condition of licence). Fish that have been "fizzed" or show signs of having been "fizzed" must be disqualified from the competition.**

As temperatures increase during the summer, many species of fish seek refuge in deeper, cooler waters. Some species of fish such as walleye and northern pike are unable to rapidly adjust air pressure in their swim bladders when they are quickly retrieved from deep water. Because the air in the bladder can not be released, the air bladder rapidly expands causing internal injury to the fish. The expanded air does not allow the fish to maintain its balance or to descend back to deeper water. Studies in Alberta recorded 20% fish mortality due to deep water angling in warm water.

Recognizing the stress on fish caught from deep water, some anglers have used hollow needles inserted through the fish's belly to pierce the swim bladder and relieve air pressure. This practice is now known as "fizzing." Studies in Alberta show that "fizzing" does not reduce mortality of deep water caught fish. Although fish appear to swim away normally, post event research has shown that there is a high mortality rate when fish are "fizzed" by anglers using improper techniques and/or inappropriate equipment. Fish showing symptoms of "the bends" and fish that have been "fizzed" or show signs of having been "fizzed" should be ruled ineligible for the Competitive Fishing Events. Participants will have to avoid capturing fish from deep water.

#### **4.2.9 Bad Weather Conditions**

**For specific water bodies where bad weather conditions are common, organizers of Competitive Fishing Events will be required to have a "bad weather contingency plan" developed prior to the event.**

Rough water conditions created by high winds have been identified as a major stress factor on fish held and transported in live-wells. Reducing the travel distance to "weigh-in stations" and the time fish are held and transported in "live-wells" will greatly increase the fish's chance of survival. Should these conditions occur, it is recommended that "weigh-in stations" be moved closer to the more popular fishing areas or that competitors be restricted to fishing areas closer to the "weigh-in stations".

#### **4.2.10 Alternate Species**

Organizers of Social/fun Derbies and Youth Derbies are encouraged to select alternate species rather than walleye for their competition.

The most sought after fish in Alberta is walleye and it is also the most popular with organizers of Competitive Fishing Events and participants. It is for this reason that the release of all walleye is encouraged in Competitive Fishing Events regardless of the category.

### **4.3 Objective 3: Information and Education**

*Educate organizers of, and participants in, Competitive Fishing Events on resource conservation issues associated with Competitive Fishing Events.*

An education component must be included in every application. Education is required to inform participants about regulations, licence conditions, best management practices, proper fish handling techniques and resource conservation. The development and distribution of information and education materials, once regulatory requirements and Best Management Practices are established, and on an ongoing basis, will be essential to achieve the goal for the management of competitive fishing.