

AFS Policy Statement #28:
Special Fishing Regulations for Managing Freshwater Sport Fisheries
(Full Text)

A. Issue Definition

Special fishing regulations are those that differ considerably from province-wide or statewide regulations. They are designed for site-specific application and are useful, effective tools for fishery management when applied on the basis of sound fisheries science.

Special regulations should be considered when angling harvest or other factors prevent the attainment of specific management goals. These goals are part of a broader management plan and may be based on biological properties or socioeconomic needs (Brousseau and Armstrong 1987; Novinger 1984). Valid uses of special regulations include maintaining or protecting a unique fishery, managing a fishery with unique potential, reserving certain fisheries for specific angler activities (e.g., fly-fishing only, children's fishing areas), allowing liberal exploitation of highly productive or winter-kill prone waters, improving or maintaining fishing quality, and protecting threatened or endangered species. In every situation, the purpose of special fishing regulations should be clearly defined to avoid confusion and possible misapplication (Barber and Taylor 1990).

Special regulations have been used extensively in recent years (Quinn 1993), but not all special regulations have been proposed, deliberated, adopted, and evaluated in a consistent and objective manner (Graff 1977). As a result, substantial confusion regarding the efficacy of regulations exists among managers and anglers (Dean and Wright 1992). Many perceive special regulations as a panacea for all existing fisheries problems. Others have promoted use of special regulations that have never been proven effective. Unfortunately, improper use of an otherwise effective tool can result in negative angler perceptions, continued decline of fishing quality, loss of agency and professional credibility, and unrealistic angler expectations (Behnke 1987).

Members of the American Fisheries Society (AFS) are obligated to promote the scientific design, application, and evaluation of special fishing regulations to meet specific fishery management objectives related to the optimum use and enjoyment of aquatic resources by the public (American Fisheries Society, North American Fisheries Policy).

B. Technical Background

Special fishing regulations, as defined above, are not new. Conservation departments began experimenting with regulations soon after these agencies were formed (e.g., Massachusetts 1856, Vermont 1865, Michigan 1873, Minnesota 1874). Most early regulations were short-lived, often politically influenced, and generally ineffective. However, these regulations did set the tone of fisheries management for years to come. Early efforts had two basic intentions: (1) to allow sufficient spawning opportunities for

fish to maintain self-sustaining populations and (2) to protect small fish that have high growth potential, to be harvested at a larger size (Redmond 1986).

Fisheries science began to make contributions to management in the 1940s and 1950s. In 1954, R. W. Eschmeyer published the classic, *Fish Conservation Fundamentals*, recognizing the importance of recruitment, growth, and mortality. Eschmeyer also laid much of the ground work for understanding how these parameters influence appropriate selection of regulations (Brousseau and Armstrong 1987; Willis 1989). Nevertheless, a trend toward the liberalization of fishing regulations continued until approximately 1960 (Redmond 1986).

Since 1960, changes in fishing, fisheries, and fisheries science have progressed at a rapid pace, while management application of the science has been much slower. Increased angler efficiency due to more effective equipment, angler education, and more leisure time spent fishing has resulted in an overall decline in fishing quality (Coble 1988; Olson and Cunningham 1989).

Fisheries have changed because of the combined effects of angler exploitation, habitat alterations, nonnative species introductions, and a host of other accidental and deliberate activities. Fisheries science has generated increasing quantities of information about fisheries and the effects of exploitation, although mechanisms for effective application of these data are still lagging (Loftus 1987). As a result, managers are often confronted by intelligent, highly educated, and demanding user groups that have observed the declining quality of their fisheries. Many anglers view special fishing regulations as a panacea for restoring angling quality. In many cases, special fishing regulations have not yet been developed as effective management tools to meet the demands of the modern angler. Although site-specific special regulations have benefited some fisheries, the social and economic consequences of such management are not well understood and are unpredictable at best.

Ill-conceived special fishing regulations have been implemented in some locations in an effort to appease the demands of anglers or as a result of political pressures (Wright 1992). Without the appropriate biological basis, such management actions can undermine professional and agency credibility, while fishery quality continues to decline. The AFS advocates sound science as the basis for fisheries management involving special fishing regulations for freshwater sport fisheries.

C. Needed Actions

The AFS policy for special fishing regulations for freshwater sport fisheries encourages

(1) Development of realistic and attainable goals and measurable objectives for a fishery (Barber and Taylor 1990). The fisheries manager should ensure that the goals of a special regulation are compatible with broader, ecological management objectives. The goals of the regulation should be clearly defined and well-stated so they are easily understood by

anglers. The regulation should include quantitative objectives that can be measured within a specified time frame, allowing for proper assessment of the regulation.

(2) Involvement of the angling public in all phases of planning, development, and implementation of a special regulation to help ensure public acceptance, support, compliance, and effective enforcement once the regulation is in place. The rationale for the regulation should be communicated to peers, associates, enforcement officials, and the public. Effective communication among all user groups minimizes conflict arising as a result of different expectations. Social conflicts stemming from different definitions of angling quality may be minimized if well-defined goals are developed and agreed on early in the process.

(3) Assessment that includes recognizing fiscal and temporal constraints. Evaluation techniques should be peer-reviewed to anticipate and minimize possible shortcomings, which reduce the credibility of the resource agency and its fisheries managers. Natural fluctuations often influence population parameters for a short time, and consequently, short-term studies could indicate that a regulation was a success or failure when observed changes were actually a result of natural fluctuations (Buynak et al. 1991). Replicates or use of reference waters may prove invaluable in accounting for natural fluctuations during an evaluation period (Stewart-Oaten et al. 1992). Additionally, lack of angler compliance could result in regulation failure even if biological considerations were correct (Gigliotti and Taylor 1990).

(4) Recognition of unforeseen problems that arise during implementation and evaluation of special regulations to further the understanding of site-specific special regulations. For instance, special regulations may concentrate fishing pressure on particular waters or on certain segments of a fish population, or the value of catch-and-release regulation may be negated by high hooking or handling mortality. Compensatory responses such as reduced growth rates or increased natural mortality may produce unanticipated results. Angler behavior may change and also confound the evaluation process. For example, the increasing popularity of voluntary catch-and-release on a reference water could confound evaluation of a nearby special regulation (Clark 1983). Angler use may initially decrease when a special, more restrictive regulation is applied. Several years of increasing use may then follow as anglers become accustomed to the new regulation.

(5) Communication of evaluation results to the public and to the professional community through news media, agency reports, peer-reviewed publications, and appropriate public and professional presentations. Successes and failures of a particular special regulation or modifications of the proposed special regulation must be reported because they can provide valuable guidance to other fishery managers. Agencies should strive to make the best use of special regulations as a fishery management tool. Well-developed goals and objectives, public participation in the process, adequate evaluation, and on-going communication will contribute to successful use of special fishing regulations in fisheries management. To meet the challenge of appropriate use of special regulations, fisheries professionals must make a deliberate, planned effort to create long-term changes for the benefit of fisheries resources and user groups. (References are on page 34.)

Acknowledgments

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