

Guide to Developing Community Fisheries



The Texas Chapter of the American Fisheries Society

Urban Fishing Committee

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A Publication
of



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of the
American Fisheries Society
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September 1996



Table of Contents

Overview.....	v
Potential Benefits.....	1
Introduction.....	1
Community Benefits.....	2
Citizen Benefits.....	2
Developing a Program in Your Community.....	3
Guiding Principles.....	3
Target Audiences.....	4
Fishing Locations.....	5
Swimming Pool Fisheries.....	6
Comprehensive Community Fisheries Programs.....	7
Aquatic Resource Management.....	7
Fish Populations.....	8
Put-and-Take Fisheries.....	9
Put-Grow-and-Take Fisheries.....	10
Self-Sustaining Fisheries.....	10
Habitat Management Techniques.....	11
Facilities Management.....	13
Aquatic Education Programs.....	14
Recreational Fishing Events.....	17
Conducting a Fishing Clinic.....	18
Preparing for an Event.....	18
Coordinating the Event.....	25
Appendices.....	26
A. Texas Parks and Wildlife Department Field Offices.....	26
B. Stocking and Permitting Policies.....	27
C. Educational Materials.....	28
D. Fishing Conservation and Education Program Contacts.....	32
E. University Contacts.....	33
F. Fisheries Extension Specialists, Texas A&M University.....	34
G. Sources of Rainbow Trout.....	35
H. Sources of Fishing Equipment.....	37
I. Texas River Authorities.....	39



**THE TEXAS CHAPTER
OF THE
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Initial printing funded
by
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The purpose of this guide is to assist communities in providing public fishing opportunities and developing recreational fishing programs which promote ethical, responsible use of aquatic resources. It is written for multiple audiences and is intended to serve as a source document for anyone interested in developing or enhancing community fisheries. While specific recommendations may not apply to every situation, the principles are offered to provide the greatest possible benefits to the greatest number of people. Communities may choose to emphasize selective components of community fisheries and build programs over time as budgets and resources permit.

Different sections of this document may appeal to different readers. *Potential Benefits* promotes the concept of community fisheries and suggests potential benefits to all interested parties. *Developing A Program in Your Community* outlines procedures for initiating community programs and presents informal information which decision makers may use in establishing program objectives. In *Comprehensive Community Fisheries Programs*, various components of community fisheries are discussed in detail. This section presents a number of options from which communities may pick and choose to meet their program objectives. *Comprehensive Community Fisheries Programs* also serves as a starting place for potential cooperators and suggests opportunities for citizen involvement. *Conducting a Fishing Clinic* provides detailed, step-by-step instructions for organizing and conducting fishing clinics. Finally, the *Appendices* provide further information and resources for the reader.





Introduction

This guide is intended to help communities make greater use of their aquatic resources by:

- encouraging citizens to become involved in conducting fishing clinics, improving access, creating habitat, picking up trash, testing water quality, stocking fish, and other related activities;
- encouraging schools and community centers to adopt an Aquatic Education curriculum and coordinate outdoor education and recreational fishing activities;
- assisting community organizations in developing cooperative relationships with aquatic resource professionals and controlling authorities to involve citizens in aquatic resource management in their communities;
- encouraging at least one annual fishing event in every community. Events draw attention to fishery resources, involve local groups, and provide opportunities for children and non-traditional user groups to become involved in recreational fishing.

Fishing is a means by which people can touch each other's lives. Whether it's a parent or grandparent spending time with family members or a group of professional anglers sponsoring a recreational fishing event for underprivileged children, fishing can be the point at which lives come together. Fishing is an activity which cuts across generation gaps, social classes, and all levels of ability to unite people in a common respect for the environment and appreciation of the outdoors.

While many Texans currently enjoy sport fishing, others are not able to fish in the area where they live or as often as they would like. In some areas, fishing opportunities are limited to anglers with the time, financial means, and physical ability to travel relatively large distances to remote fishing locations.

To provide fishing opportunities in urban areas, where the majority of people live, many state and federal fisheries management agencies have developed urban fisheries programs. These agencies, as well as a number of conservation organizations, have demonstrated their commitment to community fisheries through involvement with fisheries management plans, fish stockings, angler education programs, and recreational fishing events. In response to increased public interest and changing demographic patterns, efforts to include local communities in the fisheries management process have increased. Community service organizations have also contributed through their own outreach activities, although the combined efforts still do not meet the demand for fishing opportunities in urban areas.

The term "community fisheries" is defined as providing or enhancing public fishing opportunities so people can fish in the community where they live. While "urban fisheries" has been used in the past, the term "community fisheries" more appropriately conveys the intent of this guide. A community may refer to any group of people in a particular area, regardless of population size or whether the area is urban, suburban, or rural. Fishery resources belong to the members of a community and the success of fishery programs is dependent upon community interest and support.

Potential Benefits

Community Benefits

Citizen Benefits

Community fisheries programs offer a variety of benefits to communities and their citizens.

Potential community benefits include:

- providing wholesome, relatively inexpensive sources of recreation;
- increased public awareness of the need for clean parks and healthy aquatic resources;
- good public relations and the potential to create a positive image for the community;
- recognition for providing meaningful services to constituents;
- potential public support for capital improvement projects;
- cooperative relationships between natural resource management agencies and community service organizations.

For city governments, investing in a community fisheries program demonstrates concern for the environment. We live in an age when citizens want to be involved with natural resource management in their communities.

Unfortunately, when it comes to development versus the environment, the city government is often depicted as the enemy. Developing a community fisheries program can help offset the loss of aquatic habitat and help restore a balanced perspective of the city's role in land management. It might even be possible to involve citizens in habitat restoration efforts and fund community fisheries programs with mitigation funds from community development.

Potential benefits to citizens include:

- opportunities for participation and instruction in sport fishing;
- a wholesome, outdoor recreational activity encouraging family participation;
- an increased awareness of environmental issues;
- opportunities for community involvement;
- economic benefits to local businesses either through sponsorship of activities or as a result of being located in an area where people come to fish;
- a source of fish for personal consumption.

Many of the benefits of recreational fishing are intangible and difficult to measure. How does one quantify the value of spending time outdoors, interacting with nature, or enjoying the company of family and friends? Such positive outdoor experiences can have a significant impact on our quality of life and our outlook on natural resource management. Community fisheries programs help instill environmental consciousness. Children who learn to identify and respect the variety of life in urban waters near their homes will be much less likely to destroy them. Adults who know their children might someday be fishing in the water that runs off their lawns may think twice about indiscriminate use of pesticides and careless disposal of oil.

These and many other benefits are available as a result of community fisheries programs. The next unit, *Developing a Program in Your Community*, presents the starting place for realizing these benefits in your own community.

Guiding Principles

This section is written for community leaders who wish to initiate the development of community fisheries programs. Guidelines are presented for developing public support and establishing program objectives.

Suggestions for selecting community fishery locations are also included.

The primary goal of community fisheries programs is to make greater use of aquatic resources by enhancing recreational fishing opportunities and facilitating conservation education programs. Although programs will vary between communities, a model program:

- provides opportunity for positive fishing experiences for individuals who otherwise might not be exposed to fishing;
- promotes responsible natural resource use and angler ethics;
- provides exposure to selected conservation and aquatic education concepts;
- provides instruction in basic fishing skills and techniques.

When considering developing a fisheries program in your community, begin with a meeting of representatives from the local parks and recreation department and the Texas Parks and Wildlife Department (TPWD) District Fisheries Biologist. Inform local university science departments, private fish farmers, and other natural resource conservation professionals. Invite all interested parties to a planning session and present the program's goals and opportunities for service.

It is important to recognize the cooperative nature of community fisheries programs. No single entity should try to control all the components themselves. It is recommended that the parks and recreation department develop advisory teams and make effective use of community organizations. For example, the parks department may take on facilities management responsibilities, local schools and recreation centers may teach aquatic education, and community and civic groups may organize recreational fishing events. Funding for community fisheries programs may come from a number of sources, including sponsorship by community businesses. Effective programs will share responsibilities between several community organizations.

The following guidelines for developing community fisheries are recommended:

- to be sustainable, day-to-day leadership for programs needs to come from within communities rather than state government;
- a partnership of public and private organizations is needed to develop and enhance community fisheries where each partner plays a complementary role;
- the initial role of the fisheries management agency is to facilitate development of community fisheries programs. To accomplish this, the community needs to initiate discussion of the demand for sport fishing in the local area and constraints to meeting this demand;
- fisheries programs vary between communities depending on current availability of public fishing opportunities and the extent to which effective partnerships can be forged;
- community fisheries programs should contain an educational component that promotes wise use of natural resources and continued participation in sport fishing;
- although programs should be available to all citizens, those with limited opportunities to participate in recreational fishing should be targeted.

Target Audiences

While community fishing resources are used most often by individuals who do not have convenient access to more distant (and costly) fishing opportunities, it is still reasonable to expect a diversity of users within urbanized areas. In addition to lower mobility anglers, target audiences might also include individuals who lack the time necessary to fish elsewhere or those being introduced to fishing by parents, grandparents, or other family members (many with extensive fishing experience).

Before implementing a program, an effort should be made to contact current and potential participants to find out what types of anglers fish in the community and what their needs and preferences are for recreational fishing programs. This can be accomplished with a user survey distributed at current fishing locations or through the use of focus groups in the community. Angler interviews can provide insight into the success of fishing programs and direction for future actions. Basic information from anglers to consider when developing or refocusing a community fisheries program might include:

- social and demographic information, i.e., age, sex, education level, and race or ethnicity;
- social group they fish with most often (family or friends);
- species of fish caught in community waters;
- species anglers would prefer to catch;
- facility, program, and fisheries management preferences;
- user satisfaction with community fishing opportunities.



An individual angler with a channel catfish.



A group of friends with rainbow trout.



A father and son prepare to fish.

Fishing Locations

Community fishery resources include ponds or lakes within public parks, streams or rivers through areas with public access, water fronts along reservoirs or coastal areas, or artificial sites such as swimming pools or hatchery ponds. When considering potential locations for community fisheries, consider the following:

- identify the bodies of water which could potentially support fish populations;
- contact the Health Department or related Environmental Services Agency to verify that there are no known health advisories against eating fish from the waters being considered. If there is reason to suspect the waters are contaminated, have water samples and fish tested or consider using another body of water;
- consider whatever private facilities are available in the area. Fishing piers in coastal communities, fishing barges or floating docks in marinas on public reservoirs, or private fee-fishing ponds provide convenient fishing locations;



An artificial pond with concrete edges.

- assess the facilities surrounding the water for their accessibility to potential anglers, including the travel distance from target audiences;
- determine whether or not the waters are currently being managed and what information about the fishery resource is available.

Many public waters have been sampled in the past by the Texas Parks and Wildlife Department and more are being sampled each year as community fishing becomes an increasing priority. A list of District Fisheries Management Offices is provided in Appendix A. These offices often have information about past stocking, fish populations, and management that might be of value in assessing the current fisheries status.



A slow moving river through a downtown area.

Swimming Pool Fisheries

If suitable waters are not available for recreational fisheries within your community, or if you just want to provide a novel fishing experience, consider hosting a swimming pool fishery. In the off season, a swimming pool can provide an excellent alternative to a pond as a community fishery.

In fact, in several ways swimming pools have advantages over natural ponds:

- The water tends to be clearer, allowing participants to see the fish.
 - Fish are more concentrated, often allowing higher catch rates.
 - Areas around pools are usually accessible to physically challenged participants.
- However, there are some special considerations:
- Fish must always be stocked for any fishing activity.
 - Chemicals normally used to maintain water quality for swimming are lethal to fish. Water must be chemically dechlorinated or allowed to age or turn green. Always test for **chlorine** and **chloramine** *before* stocking fish. Both should be completely eliminated. Dechlorinating chemicals and test kits can be obtained from swimming pool supply stores.
 - While pools offer added accessibility, the deep water and sheer sides add safety concerns.



Communities may find that the life of swimming pool fisheries extends well beyond a single event. In fact, with occasional stocking, a normally dormant pool can provide recreation throughout the fall and winter. The facility manager may charge a nominal fee to finance stockings of legal size channel catfish (August – November) or rainbow trout (December – March).

Aquatic Resource Management

Community fisheries programs may take many forms. While many groups and organizations are involved in various aspects of community fisheries, there are few coordinated efforts to bring the different components together. In order to receive the greatest benefits from community fishery resources, all the elements should be coordinated in a Comprehensive Community Fisheries Program.

The components of a Comprehensive Community Fisheries Program include aquatic resource management, facilities management, organized aquatic education programs, and recreational fishing events. This chapter puts these various components in perspective and presents alternatives for achieving program objectives. Each section presents background information to help clarify how each element would fit into a comprehensive program. Depending on the program objectives and the interests of potential cooperators, a program may include any or all of these elements.

Several federal, state, and local agencies work with community governments and controlling authorities to manage aquatic resources within their jurisdictions. Although this publication emphasizes fishery resources, healthy aquatic resources benefit birds, mammals, reptiles, fish, amphibians, crustaceans, insects, and plants.

The Texas Parks and Wildlife Department is the lead agency with fisheries management responsibility in public waters. In order to manage recreational fisheries, biologists survey existing fish populations, assist with fish stocking, and make recommendations to improve fish habitat and reproductive potential (if necessary). As work schedules permit, biologists produce management plans for each body of water which include results of the assessment and management recommendations. Other organizations, such as university environmental science and biology departments, the Texas Agricultural Extension Service, the Texas Natural Resource Conservation Commission, or private fisheries managers may also provide technical information and assistance.



Texas Parks and Wildlife Department hatchery truck preparing to stock fish in a community fishery.

Fish Populations

Information about the existing fish population is needed in order to manage a community fishery. Information needs include: 1) species of fish present, 2) sizes of fish, and 3) condition of the fish. This information is required in order to make sound decisions on the need for pond renovation (removal of undesirable fish species), stocking, and/or regulations. Some insight can be gained from past stocking history, but in many community lakes this is either unknown or unreliable (often stocking records are incomplete).

Several methods are available for assessing fish populations. The most commonly used are seining, electrofishing, gill netting, and angler catch records. A combination of methods usually is best to obtain reliable, comprehensive data. Seining and angler catch records can be done with little specialized equipment, while electrofishing and gill netting require the assistance of trained fisheries personnel.

Fish stocking can be an important component of aquatic resource management. Stocking is used

to establish fish populations in new or renovated lakes and to supplement natural reproduction in heavily fished waters. A permit is required for any individual or group wishing to release fish into a public body of water. Information about the Texas Parks and Wildlife Department's stocking policies and permitting procedures, and sources of fish, is included in the Appendices.

In general, stocking programs fall into one of three categories: Put-and-take fisheries, Put-grow-and-take fisheries, or Self-sustaining fisheries.



Gill netting is an effective method of surveying catfish populations.



Seining for young-of-year fish.



Management crew conducting an electrofishing survey.

Put-and-Take Fisheries

Put-and-take stocking is the most common management technique for small bodies of water with relatively high fishing pressure. Due to rapid harvest by anglers, this type of fishery requires repeated stocking to provide a consistent opportunity to catch fish. As the name implies, fish of harvestable size (above the minimum length limit) are stocked (*put*) into the water and caught (*taken*) in a relatively short period of time.

Channel catfish and rainbow trout are the species most often stocked for put-and-take fisheries, primarily because they can be raised to legal size more cheaply than most other species. Due to the cost of producing adult fish, however, this type of management is also the most expensive. It can be used periodically, as budgets permit, in addition to other forms of management.

An example of a high quality put-and-take stocking schedule: (based on a 1-to-5 acre body of water)

Month	Species	Number of Fish	Estimated Cost*
December	Rainbow Trout	2,000	\$1,500 - \$3,000
January	Rainbow Trout	2,000	\$1,500 - \$3,000
February	Rainbow Trout	2,000	\$1,500 - \$3,000
March	Channel Catfish	100 - 400 / acre	\$115 - \$500 / acre
June	Channel Catfish	100 - 400 / acre	\$115 - \$500 / acre
September	Channel Catfish	100 - 400 / acre	\$115 - \$500 / acre
October	Supplemental	As indicated in Fisheries Management Plan.	

* Based on 1996 dollars. Rainbow trout for stocking in public waters may be purchased from private sources through TPWD to take advantage of reduced delivery costs and contract prices.

Relying solely on stocking, especially put-and-take stocking, may reduce the effectiveness of aquatic education programs and efforts to make anglers part of the management process. People are less likely to support aquatic resource management if they are led to believe that good fishing simply results from putting fish in the water.

Put-Grow-and-Take Fisheries

Put-grow-and-take stocking is an effective management tool for small to medium size bodies of water (1 - 25 acres) which receive moderate fishing pressure. Channel catfish are commonly used for put-grow-and-take stockings. Under this type of management strategy, fish smaller than the legal length limit are *put* into the water and allowed to *grow* to the legal size before they are *taken* by anglers. This type of fishery depends on angler compliance with size and bag limits to protect the fish until they reach a legal size.

In order to maintain a put-grow-and-take channel catfish population where largemouth bass also are present, annual stockings of catfish at least 8 inches long are required. Fish of this size are more capable of escaping predation by largemouth bass. If bass are not present, however, smaller catfish may be stocked. It may be necessary to feed fish to ensure proper growth and nutrition. Consult a professional fisheries biologist before undertaking a put-grow-and-take management program.

Self-Sustaining Fisheries

Self-sustaining fisheries are those in which a body of water is initially stocked with desirable species and, through natural reproduction and protective regulations, a fishery is developed and maintained without supplemental stocking. This type of management is most effective in larger bodies of water (greater than 25 acres) with light to moderate fishing pressure and where anglers generally comply with regulations. Typically, largemouth bass, bluegill, and channel catfish are stocked in new or renovated reservoirs and provide the primary sport fishing opportunities. Often, additional species are stocked to provide additional angling opportunities.

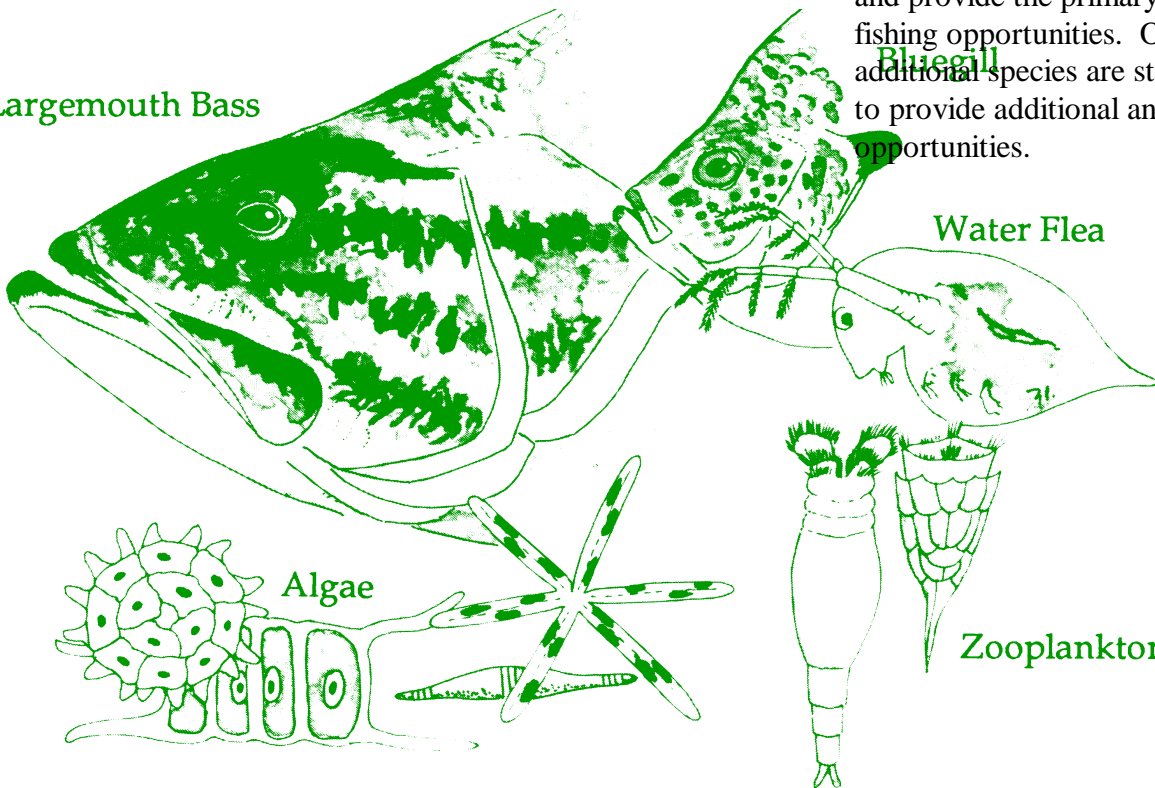
Largemouth Bass

Bluegill

Water Flea

Algae

Zooplankton



Habitat Management Techniques

In both put-grow-and-take fisheries and self-sustaining fisheries, habitat management techniques can be used to enhance the fishery.

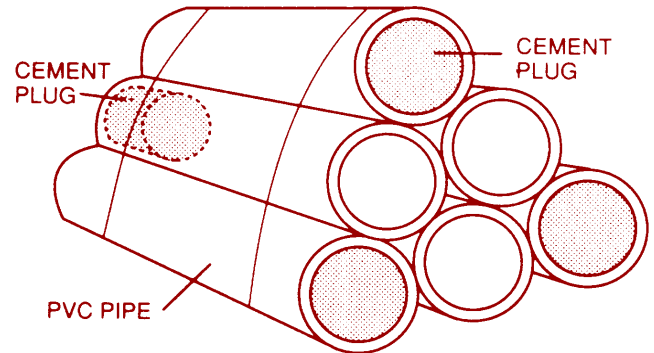
The use of artificial spawning structures and substrates may allow some species to spawn successfully in bodies of water where they otherwise might not reproduce. Largemouth bass and sunfish need firm substrate such as sand or gravel upon which to build their nests. Catfish are even more particular in their spawning needs, requiring some sort of cavity in which to spawn. In large reservoirs, cavities are often provided by fallen logs or holes in the bank excavated by aquatic animals. In small impoundments, cavities are most easily provided by PVC, clay, or concrete pipe blocked at one end.

Fish shelters, such as rock piles, cedar trees, and brush piles, can provide protection for juvenile fish and aid in survival during this critical life stage. Juvenile largemouth bass and sunfish require both tight spaces in which to seek shelter from predation and small insects on which to feed. Two of the best sources for juvenile fish habitat are shallow water vegetation and rip-rap (stone and gravel placed either on a natural slope or on an artificially graded shore).



Stone rip-rap provides shoreline protection and fish habitat.

CONSTRUCTION OF PYRAMID UNIT



PVC pipe, blocked at one end, provides a suitable channel catfish spawning structure.

Shallow water vegetation such as pond weed or water celery provide both hiding places for small fish and a food source for the small insects on which they feed. In much the same way rip-rap, often used for shoreline stabilization, provides spaces between the rocks in which small fish hide. Algae that colonize on the rocks provide food for grazing insects which, in turn, are eaten by juvenile fishes.

In some cases, community fisheries could benefit from the addition of fertilizers or fish feeders to increase growth and survival of fish. Fish nutrition is usually a concern in clear, relatively unproductive ponds. The two main corrective actions are fertilization and supplemental feeding. A liquid fertilizer with a formulation of about 10-34-0 applied at one gallon per acre to maintain a plankton bloom during spring and fall will greatly increase primary productivity. If the pH is too low (water is too acidic) as is frequently the case in East Texas, lime (calcium carbonate), may be added to the water to raise the pH into a more suitable range (closer to neutral) thereby making fertilization more effective. In addition to fertilization, a fish feeder mounted on or near

Comprehensive Community Fisheries Programs

a fishing pier will not only increase fish production and growth, it will also help attract fish to a particular area.

Low dissolved oxygen can be a problem for fish production. Dissolved oxygen levels can be affected by a number of factors including temperature, biological processes such as photosynthesis and decomposition, and chemicals. For example, warm water holds less dissolved oxygen than cool water. For this reason, dissolved oxygen can reach critically low levels during hot Texas summers. The best way to increase dissolved oxygen in community lakes is with an aerator.

These and other management techniques should be discussed with a fisheries professional to determine which techniques are appropriate and

the proper procedures for implementing them.

The Texas Chapter of the American Fisheries Society has published two other publications concerning the management of small impoundments: *Stocking and Management Recommendations for Texas Farm Ponds* and *Assessment and Corrective Management for Fish Populations in Small Impoundments*. These are available on request from most TPWD and Texas A&M University Extension offices. Many universities or colleges with fisheries programs may be willing to assist with local community fisheries programs and the assessment of fish populations. Additionally, private consultants can provide fish sampling and management recommendations as well as supply fish for stocking.



A community fishing lake with a fountain/aerator.

Facilities Management

The controlling authority within the municipal government responsible for maintaining a community lake or river works in partnership with aquatic resource professionals to provide recreational fishing opportunities for the citizens within that community. Whereas the fisheries professional may make fisheries management recommendations, it is the controlling authority's responsibility to manage the fishing facility. Often, however, due to limited funds and manpower, facility improvements take a low priority. This situation presents numerous opportunities for citizen involvement. The assistance of community youth in implementing a proven management program is beneficial to the youth, the controlling authority, and to the resource.

Citizen groups wishing to help controlling authorities enhance their community fisheries may consider the following:

- ensuring adequate water quality which will support healthy fish populations. Community fishery sites are often at risk of being contaminated from industrial or residential runoff containing pesticides, fertilizers, or heavy metals which may make fish unsafe for human consumption.
- ensuring safe, unobstructed access. Grass and brush should be kept clear of designated fishing areas. Parking areas and walkways with universal access to all anglers are desirable features at community fishing sites. Local American Disability Association (ADA) offices or disabled sportsman groups can provide comments on the design of fishing facilities. Fishing piers should accommodate wheelchair access and provide senior citizens with a place to sit while fishing. Also, shade is a very important feature for community fishing sites, especially in urban areas.
- constructing information boards containing fishing information, regulations, upcoming special events, and telephone numbers for information and assistance which will increase angler participation. Additional information, such as how to help a drowning victim, proper care of live fish, and phone numbers to report poaching and other illegal activities, would also be useful.
- enhancing fisheries habitat to promote self-sustaining fisheries. Spawning structures, fish shelters, surface aerators, and fish feeders are all desirable features. State and federal grants may be available to help offset the cost of facility improvements.

Aquatic Education Programs

Entire curriculums have been built around recreational fishing and responsible use of aquatic environments. Several programs are described below. While each program has unique advantages, there are also restrictions which limit their applicability in some situations. Contact the sponsoring organizations listed in Appendix D for additional information about program requirements and availability.

Adopt-A-Beach

Sponsored by the Texas General Land Office, this program is designed to help clean-up Texas beaches and assist in surveying the amount and type of trash collected. Twice each year, in April and September, a coastwide cleanup is organized with check-in points from Beaumont to Brownsville. Information about the trash collected is submitted to the Center for Marine Conservation, and used to help identify and eliminate the source.

Adopt-A-Wetland

The Adopt-A-Wetland program is a spin-off of Aquatic WILD and provides an opportunity for schools and other groups to put their concern into action by monitoring and caring for local wetlands. This program is coordinated by Texas A&M University in Corpus Christi and targeted for schools and youth groups wishing to adopt a local wetland. Students monitor and record water quality, observe wetland use by plants and animals, and use Aquatic WILD activities to learn wetland principles. In order to participate in the program, volunteers are required to complete a two-day training workshop which includes classroom instruction and field training. Upon completion of the initial training, instructors may choose the extent to which they become involved in the program.

Aquatic WILD

Aquatic WILD (Wildlife In Learning Design) curriculum, similar to Project WILD, is designed either to stand alone or be used as a supplement to a science curriculum or any other school subject matter. This nationally recognized curriculum details activities which teach concepts of aquatic conservation and promote responsible human actions. Students enjoy hands-on activities, either in a classroom setting or at the water's edge. Although the curriculum is adaptable to a wide range of audiences, it is particularly well suited for elementary school age children. Teachers or volunteer instructors must receive training through TPWD to receive free materials.

Get Hooked On Fishing - Not On Drugs

This national, award-winning program of the Future Fisherman Foundation promotes fishing as a safe, healthy alternative to drug use and as a means of developing self-esteem and respect for others. This curriculum has been approved by the Texas Education Agency and qualifies for "Drug Free School" funding. The curriculum is designed to work in conjunction with other drug prevention programs and is one of the only non-lecture oriented programs available to schools. The Get Hooked On Fishing - Not On Drugs program requires adoption by the local school district and certification for all teachers involved. Upon completion of instructor training, curriculum guides and course materials are provided free of charge for primary, upper elementary, middle school, and senior high students.

KIDFISH

A program of the Texas Parks and Wildlife Department and the Parks and Wildlife Foundation of Texas through the ShareLunker Foundation, KIDFISH is designed to introduce youngsters to the outdoors and the spirit of fishing. KIDFISH events offer kids and their families a hands-on fishing experience including a brief educational seminar focusing on conservation, aquatic biology, and proper use of fishing equipment. Legal-sized fish are usually stocked prior to KIDFISH events. Fishing tackle and equipment are provided for use during events and awards are given to each participant. KIDFISH events have a fund-raising element requiring corporate sponsorship and volunteer support. Proceeds from fund-raising events are used to cover expenses, including the cost of fish and materials. Any excess monies go into a fund to support additional fish stocking and community fishery facility improvements.

Lake and River Clean-up Program

The goals of the Lake and River Clean-up Program are to help improve the environment, to educate people about the dangers of pollution, and involve citizens in monitoring water quality. Each cleanup project is coordinated by a community based steering committee with the assistance of the Texas Natural Resource Conservation Commission (TNRCC) Lake and River Clean-up Program. The TNRCC can assist in organizing an annual cleanup event, although the cleanup is conducted solely by volunteers from local schools, scout groups, civic organizations, employees from local businesses, and area governmental entities. The Lake and River Clean-up Program can currently provide items such as registration forms, promotional posters, liability waivers, and press releases.

Pathway-to-Fishing

The Pathway-to-Fishing program, designed for use during a fishing event, provides posters and an adaptable script which even a novice instructor can use to present a fun, informative lesson. Pathway events are often held in conjunction with fishing clinics, although they can be held independently. Participants learn and practice the basics of fishing through a series of on-site learning stations in this brief course. Posters, scripts, and hands-on materials guide students through fish identification, knot tying, casting, and fishing techniques. Materials may be purchased from the U.S. Government Printing Office or borrowed from some U.S. Fish and Wildlife Service or TPWD field offices.

Texas Angler Education Program

The nationally recognized Angler Education Program, sponsored by the Texas Parks and Wildlife Department and funded partially from federal sport fish restoration excise taxes, provides instruction in angling techniques, types of fishing equipment, fish identification, angler ethics, and proper care of aquatic habitats. The Angler Education Instructor's guide contains teaching modules that can stand alone or be used as a supplement to a science curriculum. Designed for youth ages 12 – 16, program materials are well-suited for use in schools, summer camps, fishing clubs, scouting organizations, and community education centers. Certification and shoulder patches are awarded upon successful completion of the minimum six-hour course. Volunteer instructors must be certified through the Texas Parks and Wildlife Department in order to receive free materials.

Aquatic Education Programs (cont.)

Texas Watch

Sponsored by the TNRCC, Texas Watch is designed to help concerned citizens assess and monitor water quality. This volunteer program helps produce environmental information that agencies, waste generators, and the public need to make sound decisions. Participants assess environmental indicators such as dissolved oxygen, air and water temperature, secchi disk readings (water clarity), and salinity or conductivity. Additional training is available for those who wish to monitor fecal coliform and related contaminants. Any group wishing to participate must receive training through TNRCC and commit to monitoring once a month for two years.



Young citizens assess and monitor water quality.



Recreational Fishing Events

Organized recreational fishing events are popular means of introducing young people to the fun and challenge of fishing. The types of events are as diverse as their participants, involving people from all walks of life. Although the terms are often used interchangeably, two common types of events are fishing *derbies* and fishing *clinics*. Regardless of the type of event, they all have two things in common: they rely on healthy aquatic resources and a sponsoring organization. When preparing for a fishing event in a natural setting, general precautions should be taken to avoid the introduction of undesirable species, parasites, or pathogens. Consult a professional fisheries biologist for additional information.

Fishing Derbies

A fishing derby is often organized to publicize a community fisheries program, announce a fish stocking, or just promote participation in recreational fishing. A derby can be a competitive event lasting one day or longer, or as the culmination of the school year during national fishing week in June. It may conclude with an awards ceremony or some other form of recognition for the participants and sponsors. Many people enjoy the competition, while others prefer to de-emphasize the role of prizes and simply enjoy the aquatic environment.

Fishing Clinics

Fishing clinics are organized fishing events which introduce participants to recreational angling and provide an opportunity for environmental education. KIDFISH is an example of a highly organized recreational fishing event which could also be called a "clinic". Not all clinics are big events, however. Perhaps some of the most effective clinics involve small groups and informal instruction. Although fishing clinics may use a variety of formats, many include transportation to the site, provision of fishing tackle and bait, and fishing instruction.

The next chapter presents detailed information about conducting fishing clinics.



No two fishing clinics will ever be the same, however, most include an educational component and an angling experience. The educational component will vary depending on the type of program used (such as KIDFISH or Pathway-to-Fishing). The angling experience itself is dependent upon such things as audience, weather, fishing location, type of fish sought, and the personalities of those involved. Although most clinics are designed for a young audience, they can easily be adapted for people of all ages and levels of ability.

While we would not wish to standardize the way fishing clinics are conducted, we would like to offer the following guidelines for coordinating a recreational fishing event. This is not the only way to conduct an event, but it is one way which has proven to be effective.

Preparing for an Event

Select the body of water, get permission from the controlling authority, and set a date as soon as you make the decision to hold a recreational fishing event. Check to make sure there are no other major events going on at the same time or in the same place. Try to plan at least two to three months in advance. In promotional materials, be sure to indicate any costs to participants and encourage people to bring their own tackle and equipment, if possible.

In planning the fishing event, be sure to consider the final disposition of the fish. What will the kids do with the fish once they catch them? If they choose to release their catch, instruct them in the proper techniques for handling and releasing live fish. If the fish are going to be kept, provide stringers, baskets, plastic bags, or some means by which the fish will arrive at their final destination in a fresh, edible condition. If possible, provide fish-cleaning services, zippable plastic bags, and ice. When kids learn that fish are fun to catch AND good to eat, they are much more likely to go fishing again.

Additional site considerations as the time of the event gets closer include checking for fire ants, planning for child safety, and ensuring clearly marked parking areas are available. An area should be designated for first aid. Participants need to have sunscreen, insect repellent, restroom facilities, and plenty of drinking water. Organizers should have additional supplies and contingency plans in the event of an emergency.

The following are the essential roles and the minimum number of people recommended for a fishing clinic with up to 100 participants. In this example, a minimum of 15 - 25 dedicated volunteers are required to conduct the event.

Conducting a Fishing Clinic

Event Coordination

One person needs to be recognized as being IN CHARGE. This person will organize the flow of activities, speak to the group during the event, set the ground rules, and present awards.



Registration (Optional)

If registration is necessary to the success of the event, plan on having up to five people available at the registration table. Although registration is not always necessary, it is essential if participants need to sign a waiver of liability, contribute money, or register to win prizes.

Aquatic Education

During the educational portion of the event, at least two people per station need to lead the discussion. It is important to choose people who can relate to kids and who know something about the subject matter. In the example on page 21, two education teams are indicated.



Casting Instruction

At least two to four people are needed to give casting lessons and assist participants. Not everyone will need casting practice, but some will enjoy casting at a target as much or more than fishing.

Conducting a Fishing Clinic

Tackle Organization

At least two weeks before the event, organizers need to get together for a planning meeting. Take advantage of this opportunity to organize the tackle. Check the rods and reels, tighten screws, untangle lines, replace line (if necessary), and attach terminal tackle (weights and swivels). Don't attach hooks and leaders until you're ready to fish.

As a general rule, plan on having 50% more tackle on hand than you expect to need. In other words, if you expect to have 50 people fishing at one time, be sure to have at least 75 rods and reels available.



Handing Out Rods

At least two people are needed to hand out rods and reels in an orderly manner. A third person should be available to attach hooks and leaders. Be sure to make it clear that the rods need to be returned at a certain time. These three people need to be available again at that time to remove the hooks and put everything away.

Measuring Station (Optional)

If desired, two people should be assigned to measure and/or weigh fish. If prizes are to be awarded based on the size of fish caught, an accurate record keeping system is required. A "scoreboard" should be available which displays the current leaders in each category.



Conducting a Fishing Clinic

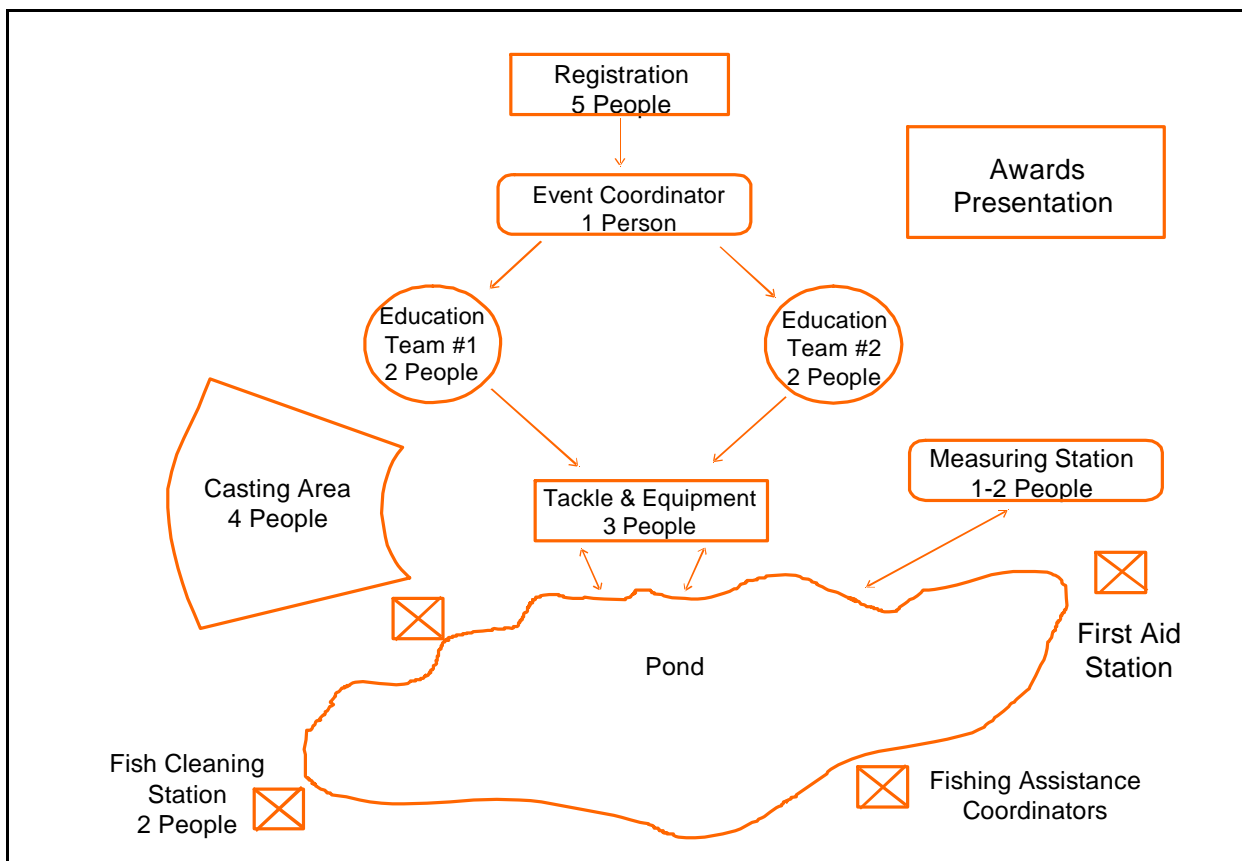
Fishing Assistance

At least one adult (or responsible teen) is needed for every three to five kids fishing. If 100 kids are expected to be fishing at the same time, anywhere from 20 to 35 adults need to be available to bait hooks, untangle lines, and resolve conflicts. Assign four adults to recruit volunteers and coordinate their efforts during the event. Parents and other adults who attend the event should be encouraged to assist whenever possible.

Fish Cleaning (Optional)

At least two people should be available to clean fish, if you decide to include this service in your event. One person needs to remain "clean" enough to put the fish in zippable plastic bags with ice. Designate an area with running water where people can bring their fish and watch them being cleaned from a safe distance. It is recommended that the cleaning area be blocked off to keep participants across the table and away from any sharp instruments. If everyone is expected to show up at the fish cleaning table at the same time, more than two people will be needed.

Sample layout for a fishing clinic with up to 100 participants.





Safety Considerations

- Use needle nose pliers to flatten barbs on hooks or purchase barbless hooks.
- Have throwable personal flotation devices available at all times.
- Have a first aid kit and a licensed EMT on hand in case of emergency.
- Be prepared for weather-related emergencies or inconveniences. If it is very hot or cold, keep the clinic short. Provide drinks and shaded areas during the warmer months. Never continue fishing during an electrical storm.
- Have adequate restroom facilities and trash cans available.

Event Materials Checklist

Fishing Gear

- Rods and reels or cane poles
- Bait
- Terminal Tackle: Hooks, Weights, Swivels, etc.
- Fishing Line

Awards

- Prizes (Each participant should win something or don't give prizes.)
- Trophies
- Ribbons
- T-shirts

Event Set-Up

- Rope
- Tape
- Notepads & Pencils
- Banners & Streamers
- Posters & Markers
- Educational Materials

Event

- Stocked Fish (if necessary)
- Registration Materials
- Permits & Release Forms (if necessary)
- First Aid & Security
- Drinks, Cups, & Ice
- Tables, Chairs, Canopies
- Sound System (Optional)
- Goody Bags
- Food (if the event runs through an eating period)



The Take-Home Message

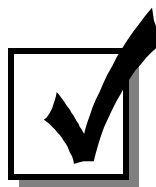
Take full advantage of the opportunity to communicate a conservation message during the event. An effective way of reinforcing that message is with a "goody bag". The goody bag provides an opportunity for participants to "take the message home" with them after the event is over. Bags are available from fishing tackle manufacturers, chambers of commerce, the General Land Office, or any number of potential sponsors.

The following items are suggested for inclusion in goody bags:

- Ribbons or certificates of participation;
- Coupons from sponsors or local merchants;
- Kids Fishing Booklets from tackle manufacturers, the Future Fisherman Foundation, or Natural Resource Conservation Organizations;
- State Fishing Regulations Guide;
- Appropriate Bumper Stickers;
- Stringer;
- Tackle samples;
- Ethical Angler Cards, fish stickers, etc.;
- Sunscreen Sample;
- Tape Measure.

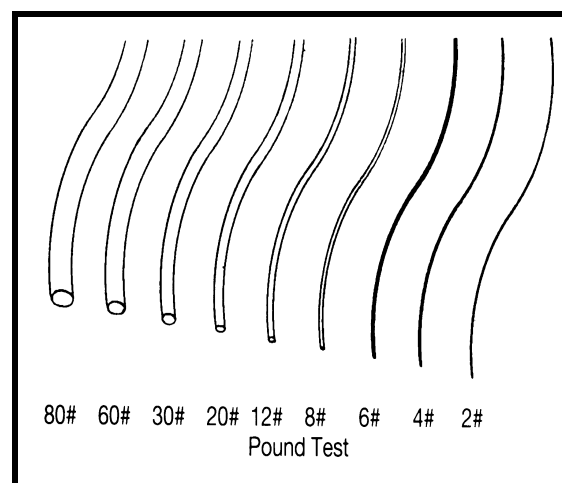
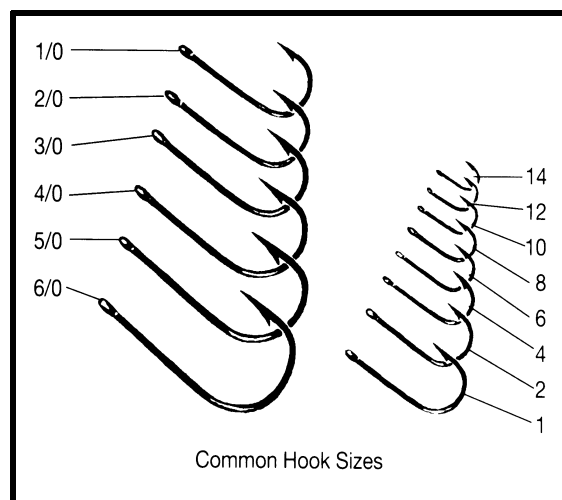
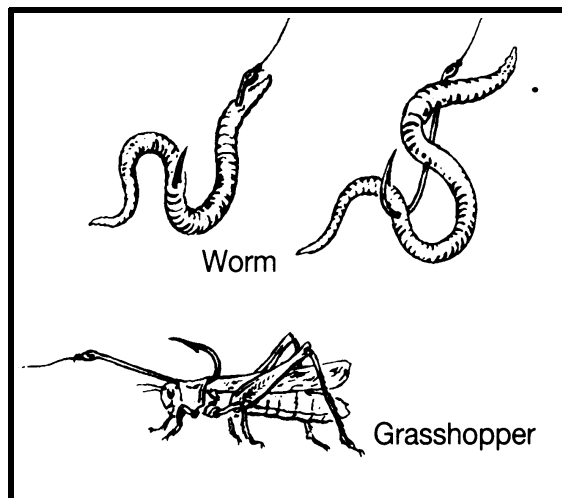


Within reason, allow sponsors and contributors to display their signs and advertisements in promotional materials and during the event.



Additional Considerations

- ❑ Have plenty of bait and tackle appropriate for the fish sought. Nightcrawlers (earthworms), meal worms, and crickets are almost always effective; commercially prepared dough baits also work well for some species. Day-old shrimp, available in some grocery stores, is an inexpensive and effective alternative. Be sure to store bait properly before and during the event.
- ❑ Encourage everyone associated with the event to have a valid fishing license (if required).
- ❑ Invite a Game Warden to be present during the event to explain fishing regulations and promote angling ethics.
- ❑ Match the hook size to the species of fish sought. The larger the number, the smaller the size of the hook. Rainbow trout and sunfish may be caught on long shanked, # 10 to # 6 hooks. For crappie, bass, or catfish, use hook sizes ranging from # 8 to # 1.
- ❑ Similarly, use appropriate test line. Heavy line may be visible to fish, thereby reducing one's chances of being successful. Light line may result in losing larger fish. For trout and sunfish, 4-to-6 pound test line is preferred. If your rod is already rigged with a heavier line, attach a 6-to-18 inch leader with the appropriate test line. For larger bass or catfish, 8, 10, and up to 12 pound test lines are recommended.
- ❑ Inform participants of the type of bait, line, and tackle that will be used. Encourage those who are able to bring their own gear.



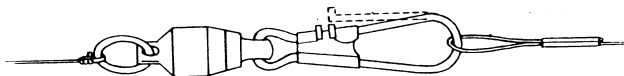
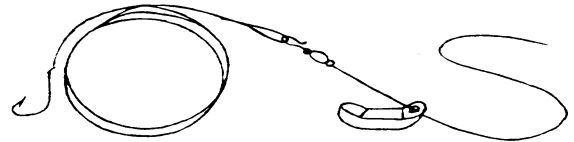


Coordinating the Event

The fishing clinic should be scheduled to last about two to four hours. During this period of time, each participant should have a rod and reel available, equipped with the appropriate bait and tackle, and be instructed in basic fishing techniques. The objectives are simply to involve the participants in fishing and to HAVE FUN. If kids are more interested in turtles and frogs than fish, then allow them to pursue their interests. It is important, however, that those who choose to fish have a realistic opportunity to catch something.

The following is a recommended schedule for conducting a fishing event:

- Check-in / Registration - Develop a schedule of events and try to stick to it. Try to begin on time, but be prepared to deal with late arrivals.
- Divide participants into manageable groups. This can be done in any number of ways. If you have a large crowd, perhaps take the portion who register within a five-minute period.
- Present the educational portion of the event as soon as the groups are organized. If participants arrive at irregular intervals, you may wish to present the educational portion as often as a group is available.
- Avoid delays and provide refreshments, if possible. If participants are in view of the water, attention spans are usually short.
- Allow those who want to practice casting to begin once they've completed the educational portion of the program.
- Begin handing out rods, reels, and tackle to those who are ready to fish. Many participants will have their own equipment, but may need appropriate bait, line, and tackle.
- For speed and convenience during the event, rods should be prepared with weights and snap swivels. When rods are distributed, simply attach prepared hooks with leaders. If snelled hooks are not available, tie hooks and leaders **before** the day of the event.
- Distribute bait among fishing assistants at the water's edge. Fishing assistants should have needle-nose pliers, clippers, hook removers, and additional tackle available as well.
- If fish are to be weighed, measured, or cleaned during the event, direct participants to the appropriate areas as soon as they catch a fish. Try to avoid having everyone crowding around at the same time.
- Distribute goody bags at the end of the event as an incentive to return borrowed equipment, or as a reward during the closing ceremony.
- Encourage participants to assist with clean-up activities.





Texas Parks and Wildlife Department *Field Offices*

Abilene Fisheries Office
5325 N. 3rd St.
Abilene, TX 79603
(915) 692-0921

Bryan Fisheries Office
1004 E. 26th St.
Bryan, TX 77803
(409) 822-5067

Canyon Fisheries Office
P. O. Box 835
Canyon, TX 79015
(806) 655-4341

Denison Fisheries Office
Rt. 4, Box 157
Denison, TX 75020
(903) 786-2389

Dundee Fish Hatchery
Route 1,
Electra, TX 76360
(940) 586-1576

Ft. Worth Fisheries Office
6200 Hatchery Rd.
Ft. Worth, TX 76114
(817) 732-0761

HOH Research Station
HCR-7, Box 62
Ingram, TX 78025
(830) 866-3356

Jasper Aquatic Habitat Station
Rt. 7, Box 11-2
Jasper, TX 75951
(409) 384-9965

Jasper Fish Hatchery
Rt. 2, Box 535
Jasper, TX 75951
(409) 384-2221

Jasper Fisheries Office
Rt. 2, Box 535
Jasper, TX 75951
(409) 384-9572

Marshall Fisheries Office
3802 East End Blvd. S.
Marshall, TX 75670
(903) 938-1007

Mathis Fisheries Office
P. O. Box 116
Mathis, TX 78368
(512) 547-9712

Possum Kingdom Fish Hatchery
HC 51, Box 13,
Graford, TX 76449
(817) 779-2301

San Angelo Fisheries Office
4002 N. Chadbourne
San Angelo, TX 79603
(915) 655-9413

San Angelo Hatchery
3407 S. Chadbourne
San Angelo, TX 76904
(915) 651-4949

San Antonio Fisheries Office
134 Braniff
San Antonio, TX 78216
(210) 348-6355

San Marcos Fisheries Office
505 Staples Road
San Marcos, TX 78666
(512) 353-0072

San Marcos, AE Wood Fish Hatchery
507 Staples Road
San Marcos, TX 78666
(512) 353-0572

Texas Freshwater Fisheries Center
5550 Flat Creek Road,
Athens, TX 75751
(903) 676-2277

Tyler Fisheries Office #1
2122 Old Henderson Rd
Tyler, TX 75701
(903) 593-5077

Tyler Fisheries Office #2
Rt. 10, Box 1043
Tyler, TX 75707
(903) 566-2161

Tyler Fish Hatchery
11045 Spur 164
Tyler, TX 75709
(903) 592-7570

Waco Fisheries Office
8680 #4 LaVillage
Waco, TX 76705
(254) 666-5190

Wichita Falls Fisheries Office
409 Chester
Wichita Falls, TX 76301
(940) 766-2383



Stocking and Permitting Policies *Texas Parks and Wildlife Department*

Fish stocking is an integral part of community fisheries programs. Whether in preparation for a fishing clinic or as part of a pond management plan, fish stocking is often necessary to provide adequate numbers of fish to urban anglers. Unfortunately, publicly funded hatcheries cannot produce enough fish for every fishing clinic and community fishery within the state. However, private fish stockings can provide a valuable supplement to existing fish populations.

Before any organization can stock fish in public water they must apply for and receive a **Permit to Stock Public Water** from the Texas Parks and Wildlife Department. Chapter 66, Section 66.015 of the Texas Parks and Wildlife Code requires any individual or organization to secure a permit from the department before stocking fish, shellfish or aquatic plants into public water. **Public water** is defined as "Bays, estuaries, and water of the Gulf of Mexico under the jurisdiction of the State, and the rivers, streams, creeks, bayous, reservoirs, lakes, and portions of those waters where public access is available without discrimination [Texas Parks and Wildlife Code, 51.001(2)]. Applications for a permit can be obtained from local TPWD field offices or from the Austin headquarters (1-800-792-1112).

The following list outlines some of the rules pertaining to the application and stocking process. Further rules, policies, and definitions can be found in the Texas Parks and Wildlife Department Proclamations.

- To be considered, the application must be received by the department at least thirty days before the proposed stocking.
- A person holding a permit issued under this section shall notify the person designated on the permit at least three days prior to the actual placing of fish, shellfish, or aquatic plants into public waters.
- A person holding a permit shall place authorized fish, shellfish, or aquatic plants in public waters only in the presence of a designated employee of the department in order to assure that terms of the permit are met and to verify and record the introduction.
- A permit issued under this section is valid for sixty days from the date of issuance or until the permitted introduction has been completed, whichever comes first.
- A permit is not required to introduce native nongame fish into public water.



Educational Materials

Educational materials for fishing and aquatic activities are numerous and varied. Numerous public and private organizations provide very good educational materials free or for nominal fees. The following is a brief list of organizations which provide materials and a brief description of the programs and costs. All prices and fees listed are subject to change.

Organization	Materials	Cost
Angler's for Clean Water Inc. P.O. Box 17900 Montgomery, AL 36141-0900 (334) 272-9530 Attn: Bruce Sharp	<i>"Fishing and Our Environment-Fun & Facts"</i> A youth activity booklet emphasizing fishing and environmental awareness.	Free depending on supply.
Bass Pro Shops Public Relations 1935 S. Campbell Springfield, MO 65898 (417) 832-1999 (417) 887-1915	<i>"Free the Fighter"</i> Catch and release decals.	Free.
Center for Marine Conservation Order Dept. 1725 Desales St., NW Suite 600 Washington, D.C. 20036 (202) 429-5609	Publications, audio/visual materials, literature dealing with marine conservation.	Prices vary – some are free.
Educational Development Specialists 5505 E. Carson St. Suite 250 Lakewood, CA 90713-3039 (310) 420-6814	<i>"Major Rivers"</i> The Texas water education program designed to teach 4th grade students about the importance of water in Texas.	\$50.00.
Environmental Concern Inc. P.O. Box P St. Michaels, MD 21663	Field guides, books, curriculum guides, and movies, dealing with wetlands and aquatic education.	Prices vary.
4-H Distribution Center Cooperative Extension Unit 7 Research Park Cornell University, Ithaca, NY 14850 (607) 255-2298	4-H sport fishing and aquatic resources education program materials.	Call for information.

Educational Materials (cont.)

Organization	Materials	Cost
Department of Natural Resources Cornell University 121 Fernow Hall Ithaca, NY 14853 (607) 255-2834 Attn: Karen Eddlestein	Various program materials.	Call for information.
Hooked on Fishing International P.O. Box 691200 Tulsa, OK 74169-1200	Kids and Seniors All-American Fishing Derby Kits.	Shipping and handling only.
In-Fisherman P.O. Box 999 Brainerd, MN 56401-0999 (218) 829-1648 Attn: Dan Sura	<i>“Pathway to Fishing”</i> A one-hour program with materials designed to teach inexperienced children about fishing, ethics, and ecology.	One set free.
J. L. Pachner, Ltd. 13 Via Di Nola Laguna Niguel, CA 92677	<i>“Products to Assist the Disabled Sportsman”</i> A specialty catalog containing products for disabled sportsmen.	Free.
Pathway-to-Fishing U.S. Government Printing Office Superintendent of Documents Washington, D.C. 20402 (202) 783-3238 voice (202) 512-2164 fax	Pathway-to-Fishing Kits Stock #024-010-00697-8 Reference #5W3155/idr.	Approximately \$61.00 each.

Educational Materials (cont.)

Organization	Materials	Cost
Future Fisherman Foundation 1033 N. Fairfax St. Suite 200 Alexandria, VA 22314	<i>“Aquatic Resources Educational Curriculum”</i> A 28-lesson instructor manual.	\$20.00.
To receive their newsletter call (703) 519-9691	<i>“Sport Fishing and Aquatic Resources Handbook”</i> A 14-lesson student manual targeting junior high level students.	\$3.50.
To place orders call (703) 364-1222	<i>“Fishing Fun for Kids”</i> A cartoon booklet which introduces children to fishing.	\$0.35 each.
	<i>“Get Hooked on Fishing Not on Drugs”</i> Program and teacher’s guide. School program materials which qualify as a federal anti-drug program.	Call for price.
	Numerous decals, posters, videos, etc. which deal with youth fishing.	Prices vary.
Missouri Department of Conservation P.O. Box 180 Jefferson City, MO 65102-0180 (573) 751-4115 ext. 295 Attn: Jim H. Wilson	<i>“Missouri Aquatic Resource Education Program”</i> Workbooks, posters, and materials dealing with Missouri’s aquatic resources.	Call for information.

Educational Materials (cont.)

Organization	Materials	Cost
National Wildlife Federation 8925 Leesburg Pike Vienna, VA 22180 (703) 790-4000	Various environmental education materials	Prices vary
National Fishing Week 2944 Patrick Henry Dr. Suite 15 Falls Church, VA 22044	<i>“National Fishing Week Action Manual”</i> A guide to clinics and activities to go along with National Fishing Week. Includes both on and off water activities.	\$3.00
Texas Parks & Wildlife Department 4200 Smith School Rd. Austin, TX 78744 Attn: Katherine Hampton or Chris Lena Katherine Hampton: (800) 792- 1112, press 6, then press 5 Chris Lena: (512) 389-4369	<i>“Project Wild and Aquatic Wild Programs”</i> A nationwide environmental education program for natural resource educators.	Certification classes and workbooks are free.
Texas Water Development Board P.O. Box 13231 Capitol Station Austin, TX 78711-3231	<i>“The Texas Water Education Network Directory”</i> A collection of water education materials for use in public schools.	Free
	Other water conservation literature and reference materials.	Free
Zebco Corp. P.O. Box 270 Tulsa, OK 74101 (918) 836-5581 Attn: Catherine Hendrix	Instructional posters, decals, and brochures	Free

Fishing Conservation and Education Program Contacts

Adopt-A-Beach Program

Texas General Land Office
1700 N. Congress Ave.
Austin, Texas 78701
800-85-BEACH (852-3224)

Adopt-A-Wetland Program

Center for Coastal Studies
Texas A&M University-Corpus Christi
6300 Ocean Drive
Corpus Christi, Texas 78412
(512) 980-3221

Aquatic WILD

(Wildlife In Learning Design)
Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744
(512) 328-6035

Get Hooked On Fishing - Not On Drugs

Texas Coordinator
7551 Callaghan, Suite 275
San Antonio, TX 78229-2861
(210) 340-4100

Hooked-on-Fishing International

Box 249
Disney, Oklahoma 74340
(918) 782-4313

KIDFISH Program

408 East Corsicana, Suite B
Athens, Texas 75751
(903) 677-4721

Lake and River Cleanup Program

Texas Natural Resource Conservation
Commission
P.O. Box 13087, MC 114
Austin, Texas 78711-3087
(512) 239-4744

Pathway to Fishing

U.S. Government Printing Office
Superintendent of Documents
Washington, D.C., 20402
(202) 783-3238

Project WET (Water Education Teams)

Texas Natural Resource Conservation
Commission
P.O. Box 13087
Austin, Texas 78711-3087
(512) 239-0012

Texas Agricultural Extension Service (TAEX)

4-H Sportfishing Programs
County Offices listed under State Government
Texas A&M University contact:
(409) 845-1214

Texas Angler / Boater / Hunter Education

Texas Parks and Wildlife Department
4200 Smith School Road
Austin, Texas 78744
(512) 389-4999

Texas Watch

Texas Natural Resource Conservation
Commission
P.O. Box 13087
Austin, Texas 78711-3087
(512) 239-4741

University Contacts

The following is a list of universities that provide literature and information useful in conducting aquatic education activities.

Southwest Texas State University
Edwards Aquifer Research & Data Center
EARDC Freeman Bldg., Rm 248
San Marcos, TX 78666
(512) 245-2329

The Center offers Aquatic Study Field Days and Summer Camp programs and educational workshops for teachers.

Texas A&M University
Texas Agricultural Extension Service
303 Agricultural Engineering Dept.
College Station, TX 77843
(409) 845-7451 / 7471

The TAES provides technical information on water quality and conservation, fisheries, and other agricultural topics. They also provide 4-H lessons and information for educators.

University of Texas
Marine Science Institute at Port Aransas
Marine Education Services
Port Aransas, TX 78373-1267
(512) 749-6729

The MSI offers a visiting class Marine Education Program for high school students and also teacher workshops dealing with marine and coastal science topics for elementary and secondary teachers.

Be sure to contact local colleges or universities in your area about new or on-going programs.

Fisheries Extension Specialists
Texas A & M University

Brazoria County

Richard E. Tillman
County Extension Agent - Marine
953 Commercial
Aransas Pass, TX 78336

College Station

Dr. James T. Davis
Fisheries Specialist
102 Nagle Hall
Texas A & M University
College Station, TX 77843-2258
(409) 845-7473

Dr. Tom Linton
Fisheries Specialist
210 Nagle Hall
Texas A & M University
College Station, TX 77843-2258
(409) 845-5704

Dr. Sterling K. Johnson
Fish Disease Specialist
102 Nagle Hall
Texas A & M University
College Station, TX 77843-2258
(409) 845-7471

Corpus Christi

Dr. Russell J. Miget
Marine Fisheries
Texas A&M Corpus Christi
6300 Ocean Drive , Seabreeze Hall # 2
Corpus Christi, TX 78412
(512) 994-8426

Galveston

Julie K. Massey
County Extension Agent - Marine
District 9, Galveston County
5115 Highway 3
Dickinson, TX 77539
(281) 534-3413

Gary Graham
Marine Fisheries Specialist
Sea Grant Program
P. O. Box 1675
Galveston, TX 77553-1675
(409) 762-9800

Overton

Dr. Billy J. Higginbotham
Wildlife & Fisheries Specialist
P.O. Box 38
Overton, TX 75684
(903) 834-6191

Matagorda County

William R. Younger
County Extension Agent - Marine
4th Floor, 2200 7th St.
Bay City, TX 77414
(409) 245-4100

Sources of Rainbow Trout

The following list of Rainbow Trout suppliers was provided to the Texas Chapter of AFS by the Texas Aquaculture Association. This is not a complete list of all the fish producers and inclusion here should not be perceived as an endorsement. For additional information on sources of Rainbow Trout, Channel Catfish, or other fish species, contact either:

The
Texas Aquaculture Association
P. O. Box 13285
Capital Station
Austin, TX 78711
(512) 474-4600

OR

Family Fish Farmers
P. O. Box 534
Henderson, TX 75653

Bear Creek Springs Trout
Farm
L.J. DeVito
Rt. 5, Box 327
Harrison, AR 72601
(501) 741-6031

Crystal Lake Fisheries
Dwight Emerson
Rt. 1, Box 248
Ava, MO 65608
(417) 683-2301

Happy Hollow Trout Farm
Gary O'Dell
Rt. 1, Box 140A
Gower, MO 64454
(816)-539-3180

Blue Springs Trout Farm
Rt. 2, Box 105
Yellville, AR 72687
(501) 449-6054

Della Elder
209 6th Ave.
Longmont, CO 80501
(303) 776-8274

Kelly Springs
Jim Gooch
Rt. 2, Box 235
Goodman, MO 64843
(417) 364-8748

Cannibal Canyon Trout Ranch
Dwight Babcock
Box 43
Marvel, CO 81329
(303) 588-2276

Dogpatch Trout Farm
Ernest Raney
P.O. Box 20
Dogpatch, AR 72648
(501) 743-1289

Kraft's Trout Farm
Jack Kraft
RR 2, Box 152
Neosho, MO 64850
(417) 776-2604

Cline Trout Farms
Ken Cline
5555 Valmont Rd.
Boulder, CO 80301
(303) 442-2817

Fisherman's Dude Ranch
John Reding
HC 88, Box 8117
Steelville, MO 65565
(314) 743-6284

Lake Keith Fishery
Barron Collier
326 N. Washington
Fayetteville, AR 72701
(501) 521-1766

Sources of Rainbow Trout (cont.)

McMillan, Miles and Margaret
P.O. Box 394
Hotchkiss, CO 81419
(303) 872-3421

Mountain Springs Trout Park
Joyce Breedlove
Rt. 2, Box 528
Highlandville, MO 65669
(417) 587-3400

Osage Spring Farms, Inc.
Rt. 8, Box 591
Rogers, AR 72756
(501) 663-2301

Ozark Trout Farm
John Kendrick
P.O. Box 480
Johnson, AR 72741
(501) 756-3024

Parker Trout Farm
Johnny Parker
P.O. Box 1261
Piñon, NM 88344
(505) 687-3493

Quality Fisheries Management
and Mt. Massive Lakes
Greg and Peggy Brunisk
P.O. Box 27
Leadville, CO 80461
(719) 486-1075

Queen of the River
Mike Mitchell
13810 N. 115th
Longmont, CO 80501
(800) 422-2514

Rainbow Springs Trout Ranch
Norm and Anne Putnam
1157 Co. Rd. 214
Durango, CO 81301
(303) 247-2939

Rainbow Trout Ranch
Lile Amyx
P. O. Box 100
Rockbridge, MO 65741
(417) 679-3619

Rangeview Trout Ranch
Jerry Wintz
14473 Hwy 285
Saguache, CO 81149
(719) 655-2237

Shady Lakes Hatchery
James Phillips
11033 Hwy 85 N.W.
Albuquerque, NM 87106
(505) 898-2568

Shady Valley Lakes
Gene Lambrich
4536 Highway 21
Imperial, MO 63052
(314) 296-7189

Silver Springs Trout Farm
Bob Corey
13221 Marine Rd.
Montrose, CO 81401
(303) 249-5888

Stroh's Fishing Ranch
Jim and Eileen Stroh
51 Black Canyon Rd.
Crawford, CO 81415
(303) 921-3111

Triple J Ranch
Domingo Baitlon
9220 C.R. 165
Salida, CO 81201
(719) 539-3094

Troutdale Ranch, Inc.
Terry Gates
Box 68
Gravois Mills, MO 65037
(314) 373-6100

Twin Buttes Trout Ranch
Steve and Marge Titus
617 Co. Rd. 207
Durango, CO 81301
(303) 259-0479

Sources of Fishing Equipment

There are more fishing tackle suppliers than can be listed here. However, the following is a list of some that provide equipment and promotional items free or for nominal fees. Groups or organizations that are planning fishing events are encouraged to contact these companies as well as local tackle, sporting goods and hardware vendors for donations and equipment.

ORGANIZATION	MATERIALS	COST
A Du Pont Company Stren Fishing Lines 1007 Market St. Wilmington, DE 19898	Fishing line.	Free depending on supply.
Bass Pro Shops 1935 S. Campbell Springfield, MO 65898 1-800-227-7776 Attn: Public Relations	Tackle samples.	Send letter of explanation.
Berkley, Inc. One Berkley Dr. Spirit Lake, IA 51360 (712) 336-1520 ext. 419 Attn: Barry Day	Tackle samples.	Free depending on supply.
Mepps / Sheldon Dept. 159 626 Center St. Antigo, WI 54409-2496 (715) 623-2382 Attn: Jim Martinsen	Fishing lures, fish species brochures.	\$ 0.50 for lure seconds. Send letter of explanation.

Sources of Fishing Equipment (cont.)

ORGANIZATION	MATERIALS	COST
Shakespeare, K2 Inc. 3801 Westmore Dr. Columbia, SC 29223 (803) 754-7000 Attn: Mark Davis	Tackle.	Contact for information.
Tae Tex Enterprise Co. 10943 Day Rd. Houston, TX 77043 (713) 468-7800 Attn: Anny Lee or Johnny Figueroa	10' unriggered cane poles, jointed or un-jointed.	Call for prices. Usually \$2 - \$3 each.
Zebco Corporation P. O. Box 270 Tulsa, OK 74101 (918) 836-5581 Attn: Catherine Hendrix	Rods and reels.	\$ 2.75 rod / reel rental. \$ 7.75 rod / reel purchase.

For information about developing a Fishing Tackle Loaner Program through local libraries or Parks and Recreation Departments, contact:

Steve Gottshall
Sport Fish Promotion Council
1033 N. Fairfax St., Suite 200
Alexandria, VA 22314
(703) 684-5865

Texas River Authorities

Angelina & Neches River
P.O. Box 387
Lufkin, TX 75902
(409) 632-7795

Brazos River
P.O. Box 7555
Waco, TX 76714
(254) 776-1441

Canadian River Municipal
Water
P.O. Box 99
Sanford, TX 79078
(806) 865-3325

Central Colorado River
P.O. Box 964
Coleman, TX 76834
(915) 636-4373

Colorado River Municipal
Water
P.O. Box 869
Big Spring, TX 79721
(915) 267-6341

Guadalupe-Blanco River
P.O. Box 271
Seguin, TX 78156
(830) 379-5822

Lavaca-Navidad River
P.O. Box 429
Edna, TX 77957
(512) 782-5229

Lower Colorado River
P.O. Box 220
Austin, TX 78767
(512) 473-3200

Lower Neches Valley
P.O. Drawer 3464
Beaumont, TX 77704
(409) 892-4011

North Texas Municipal
Water
P.O. Drawer C
Wylie, TX 75098
(972) 442-5445

Nueces River
P.O. Box 379
Uvalde, TX 78802
(830) 278-6810

Northeast Texas Municipal
Water
P.O. Box 955
Hughes Springs, TX 75656
(972) 639-7538

Palo Duro River
P.O. Box 1046
Spearman, TX 79081
(806) 659-3428

Red Bluff Water Power
Control
111 West 2nd St.
Pecos, TX 79772
(915) 445-2037

Red River
520 Hamilton Building
Wichita Falls, TX 76301
(940) 723-8697

Sabine River
P.O. Box 759
Orange, TX 77630
(409) 746-2192

San Antonio River
P.O. Box 830027
San Antonio, TX 78283
(210) 227-1373

San Jacinto River
P.O. Box 329
Conroe, TX 77305
(409) 588-1111

Springhills Water Mgmt.
P.O. Box 771
Bandera, TX 78003
(830) 796-7260

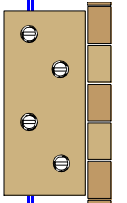
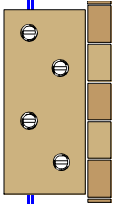
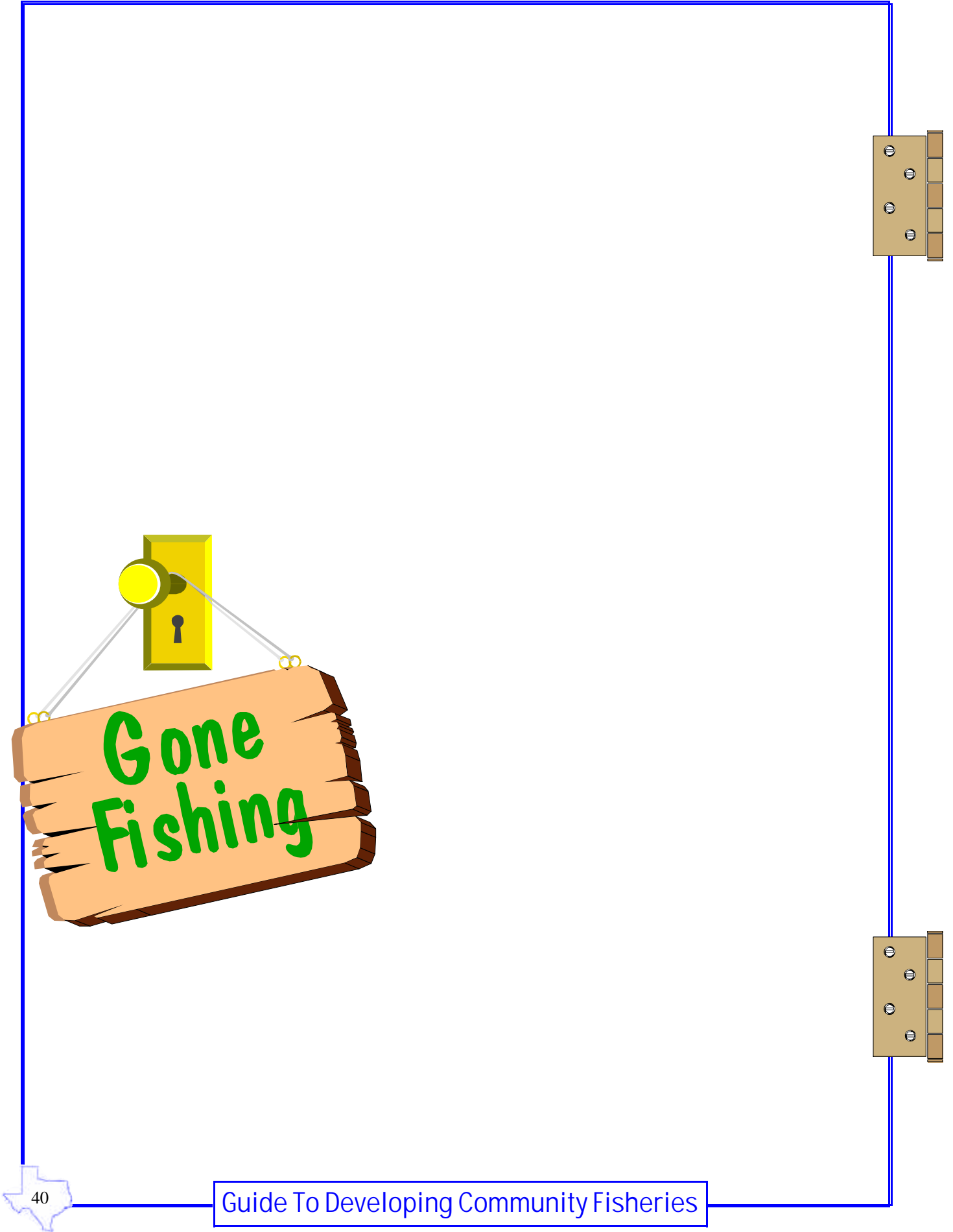
Trinity River
P.O. Box 60
Arlington, TX 76004
(817) 467-4343

Upper Colorado River
P.O. Box 680
Ballinger, TX 76821
(915) 365-2525

Upper Guadalupe River
P.O. Box 1278
Kerrville, TX 78029
(830) 896-5445

Upper Neches River
Municipal Water
P.O. Box 1965
Palestine, TX 75802
(903) 876-2237

West Central Texas
Municipal Water
P.O. Box 2362
Abilene, TX 79604
(915) 673-8254





Initial printing funded
by
TEXAS PARKS & WILDLIFE DEPARTMENT
NONGAME & URBAN PROGRAM
4200 Smith School Rd.
Austin, TX 78744
(800) 792-1112