

Protecting Your Farm Pond

By Cliff Sager, northeast region fisheries biologist

A farm pond can be an asset to any property. They provide recreational activities such as swimming, fishing, and hunting opportunities. However, if not protected properly, farm ponds can provide little or no recreational benefit and be an "eye sore" for landowners. One of the leading causes of farm pond disturbance in Oklahoma is livestock. Livestock can quickly degrade a pond and the surrounding area. So how can the needs of fish and wildlife be balanced with the needs of landowners and livestock? The answer: fencing your farm pond. The following information outlines some of the problems, solutions, and benefits of protecting your farm pond.

The Problems

Due to a constant need for livestock watering holes, many landowners allow livestock unrestricted access to ponds. The primary problem associated with livestock is the trails and paths that erode over time into deep channels in the pond bank. If these ditches are formed in the pond dam, they can greatly reduce the storage capacity of the pond and even compromise the dam during heavy rain events. The runoff from these paths greatly increases the turbidity of the pond, which negatively affects the aquatic life. Microscopic plankton rely on sunlight for photosynthesis to grow. The plankton in turn supply oxygen to the water and are the base of the aquatic food chain. High levels of turbidity prevent light penetration and therefore reduce the oxygen concentration of the water and the overall productivity of the pond.

Livestock can have a huge impact on the shallow water areas of a pond. Wading livestock physically disrupt fish nests and spawning behaviors. Wading livestock also destroy valuable shallow water habi-

tats such as aquatic vegetation and woody debris. These two factors result in greatly reduced reproductive success and survival of young fish.

The Solutions

The best solution is to fence around the pond to limit or prevent livestock access to the pond. For a pond that has been heavily impacted by livestock, the best course of action may be to drain and reconstruct the pond prior to fencing. This allows a landowner to strengthen the dam and deepen the pond by removing deposited sediments. Additionally, shorelines can be reshaped with a proper slope to prevent future bank erosion and reduce large areas of shallow water (less than 3 ft.) that can become choked with aquatic vegetation. Points and islands are also great additions to ponds and provide excellent access to anglers and hunters.

Other structures can be added at this time to allow control of water levels and provide water for livestock. A drainpipe can be a huge advantage in the management of fish and waterfowl. The pond can be drained and cleaned out if fish populations get out of balance or unwanted fish make their way into the pond. Seasonal drawdowns can be beneficial to fish populations and provide opportunities to plant millet for wintering waterfowl. A freeze proof stock watering trough can also be installed to provide water for livestock. These structures, which are built in the back of the dam, have a float valve that keeps a constant water level in the tank. The benefits of these troughs are that they supply cool water in the summer, they are freeze proof in the winter, and they reduce hoof disease by eliminating the

need for livestock to wade in the pond.

Once a pond has been reshaped, it needs to be fenced off to limit or prevent livestock access. Fences should be constructed at least 60 to 100 feet from the shoreline and enclose the entire pond and dam. This will create a buffer zone that can be planted with vegetation that has specific wildlife benefits and may allow natural revegetation. This buffer will trap sediments before reaching the pond and slow runoff water, reducing shoreline erosion. Additionally, this buffer zone will provide food and habitat for local wildlife and migratory waterfowl.

Programs That Help

There are a number of programs designed to cost share and provide technical assistance to landowners. The Oklahoma Department of Wildlife Conservation provides the Wildlife Habitat Improvement Program (WHIP). The U.S. Fish and Wildlife Service sponsors the Partners for Wildlife program. The Natural Resources Conservation Service has the Environmental Quality Incentives Program (EQIP) and the Wildlife Habitat Incentives Program (WHIP).

Contact any of the agencies listed above for more information and applications for these programs. All of these programs are available to landowners in Oklahoma and are instrumental in protecting fish and wildlife resources on private lands.

Livestock trails will erode over time (bottom left) and form deep channels in the pond bank. This will compromise the dam during heavy rain and reduce the storage capacity of the pond. The best solution is to erect fencing around the pond (middle) to prevent livestock access to the pond. A freeze-proof stock watering trough can be installed (bottom right) to provide water for the livestock.

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What Do *You* Want

Your Side of the Fence is published three times a year as a free publication for Oklahoma landowners. It is our mission to provide practical information for managing wildlife on your property and address issues that affect you, the landowner. Nowhere else can you receive helpful, in-depth information from experienced biologists and law enforcement officers who work in all corners of the state. With so much knowledge and insight at our disposal, we strive to provide you with information we think you may need. But, sometimes we do not address the management issues you want to know more about. So this is your opportunity to tell us what you think. What would you like to learn more about? Do you have any questions for any of our ODWC professionals? Are we doing a good job of providing useful, practical information? Please let us know. If you would like, provide any comments below and send in your advice to the editor. Send to:

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Erosion may reduce the storage capacity of a pond and will greatly increase the turbidity of the water.

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