

FISHPOND MANAGEMENT TECHNIQUES – WINTER DRAWDOWN WITH WATER LEVEL CONTROL PIPES

One of the most useful and most inexpensive pond management practices is called a "winter drawdown." This practice is the reduction of water levels in a pond to some predetermined level, and generally is designed to expose 35 to 50 percent of the pond-bottom area. Winter drawdowns can be useful in controlling aquatic weeds, and can be invaluable in manipulating fish populations and facilitating pond repairs, redesign, and liming. The primary disadvantage is that the pond must have a drain pipe that will allow the water levels to be lowered and kept down throughout the winter. Ponds without a drain pipe can be retro-fitted, and detailed information on how this is accomplished is available through your county Natural Resources Conservation Service office.

Aquatic weed problems are common in farm ponds, and usually represent a challenge to overcome. Of the three basic weed control methods (mechanical, biological, and chemical), mechanical control can be the least expensive and most convenient, if it consists of a winter drawdown. Winter drawdown exposes weeds to air-drying and freezing temperatures. This can be an effective weed control technique, especially if done in successive years, and it has other advantages related to fish population management.

For effective weed control, drop the water level of the pond to expose aquatic weeds in the more shallow portions of the pond. Usually, water levels are reduced enough to expose 35 to 50 percent of the pond bottom, but this percentage may vary greatly, depending upon topography and design of the pond. **Maximum drawdown should be accomplished by mid- to late November, and the water level should remain low through February.** Spring rains will fill the pond.

After reflooding, if weeds persist and begin to sprout, apply an appropriate herbicide. The combination of a winter drawdown and effective early spring herbicide application usually does a good job of eliminating or greatly reducing aquatic weed infestations. For additional information on aquatic weed management and control, request from your county Extension agent, Information Sheet 1036, [Methods of Aquatic Weed Control](#).

Winter drawdown is also a good **fish population management** technique in bass/bluegill ponds. By reducing the water level and pond area, forage fish, such as bluegills, are driven out of shallow water refuges and concentrated in open water, making them more vulnerable to bass predation. This is a good technique to use in ponds classed as "crowded bluegill," but still have viable bass populations in them. The increased predation by bass reduces bluegill numbers and provides additional food for the struggling bass population. In some cases, routine annual drawdowns have helped the pond manager maintain a balanced bass/bluegill fishery.

Winter drawdown also provides a good **opportunity to do minor dam repairs and shoreline renovation.** Fish attractors, such as brush tops and gravel beds, can be easily put in place while the water is down, and this is a good time to deepen edges to the recommended minimum depth of 18 to 24 inches.

While the pond is down, take soil samples and analyze for the **pond lime requirement**. Refer to NRCS jobsheet MS-ECS-399-01(JS) for instructions on how to sample pond soils and information on liming farm ponds. Apply lime in the fall. A drawdown provides opportunity to spread the lime on the exposed soils, which is ideal. Keep in mind that liming is intended to increase the pH of the **soil**, and application of the lime directly to the soil is the most efficient method of liming a pond. Although it is **best** to apply lime to the soil, this often is not practical, and application can be made directly to the water.

In most farm ponds, lowering the water level 2 to 3 feet exposes the proper percentage of the pond bottom; however, this is only a rule of thumb. You must consider the topography of the pond, amount of shallow water, and pond shape and design. As recommended for weed control, reach the maximum depth of drawdown by late November, and the water must remain down through February for the technique to be effective. In south Mississippi, the stand pipe can be raised a little earlier, perhaps mid-February, to allow the pond to refill and not hamper bass spawning activities that begin earlier in that part of the state.

Winter drawdown can be a useful tool, if executed properly. It poses no threat to the fish population, and costs nothing if the pond is equipped with a water level control pipe. Drawdowns should only be done in the winter, however; never during summer! The extreme temperatures during Mississippi summers, coupled with the increased metabolism of fish and reduced oxygen levels in warm water, would prove disastrous in most farm pond situations.

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By Dr. Martin Brunson, Extension Leader and Fisheries Specialist, Department of Wildlife and Fisheries, and Dr. Chuck Weirich, former Area Extension Fisheries Specialist, Delta Research and Extension Center, Stoneville Extension Service of Mississippi State University, cooperating with U.S. Department of Agriculture. Published in furtherance of Acts of Congress, May 8 and June 30, 1914.

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