

## Arkansas Pond Bulletin

June 2023

### Quick Hit: When Pond Renovation is the Best Option

Everything wears out eventually. Ponds are natural sediment and nutrient traps that eventually fill in, making them progressively more weedy and shallow until they are no more than a soggy depression in the field. Some ponds may only remain effective for a few years, others may go centuries depending on numerous variables. Sometimes the fishery in a pond gets so hopelessly out of balance, either from years of poor management or from a fish kill, that renovation is the only course of action certain to succeed in a reasonable time frame. Regardless of age, there are some situations when renovation (fully draining, excavating accumulated sediment, rebuilding worn shorelines, dams and drainage structures before refilling and restocking) becomes the best option to return the pond back to a functional state.

***Significant leaks or failing dams*** are obvious situations where renovation is needed. Permeable soils, poorly compacted basins or dams, broken or worn out drain pipes, storm, animal, or flood damage to the dams are all potential culprits that cripple the viability of a pond.

***Average depths less than 3 to 4 feet*** can lead to endless aquatic weed issues that require significant annual expense and time investment to keep under control. Shallower ponds also tend to get hotter, which is more stressful on fish, encourages harmful blue-green algae species to dominate the plankton community during summer, and may actually reduce livestock fitness from lower consumption of lower quality water during summer when they need it most.

***Shoreline slopes degrade to less than 1:4*** (1 foot deep for every 4 feet from shore) encourages wide bands of aquatic weeds to grow along the edges of the pond. This can make fishing from shore near impossible and increases annual expense and time investment to keep the shoreline clear of weeds.

***When the fish community is dominated by common carp, buffalo, gar, bullhead catfish, green sunfish, and/or gizzard shad*** it is often far faster and more likely to succeed to drain the pond and restock from scratch. Reproducing non-desirable species such as these are excessively difficult to eradicate from a system where they have become established without draining it. Even if eradication without draining is achieved, it may take several years of corrective stocking and harvest to reshape the fishery back into something desirable.

***When the fishery has not improved after controlling weeds, corrective stocking, and corrective harvest***, full renovation is likely the only remaining practical option. Some poor-fishing ponds can be fixed with a few years of stocking an

underrepresented species, or group of species, and harvesting overrepresented species, or group of species. It is difficult to predict how long these projects will take to succeed, but it is usually discussed in terms of several years especially in larger ponds, if it ever succeeds at all. Full renovation, while unsightly and sometimes difficult emotionally, will result in good fishing within 3-4 years so long as the renovation and restocking process is done properly.

### **What to Watch Out for in June:**

Aquatic weeds are reaching mature stages and some species will become more resistant to herbicides as the summer develops. The MP556, SRAC0360, and MP44 contain information on selecting herbicides. The easiest plant ID tool available now is Texas A&M's Aquaplant "Identify a Plant" directory <https://aquaplant.tamu.edu/>. The MP556 and MP360 contain photos of many of the common problematic weeds in Arkansas. You can also text or email me photos of the plant you're dealing with and I can advise. IMPORTANT: If you encounter an aquatic weed you suspect to be non-native, such as hydrilla, giant salvinia, or water hyacinth, for example, (same for non-native fish like any of the bighead carps or snakehead) please report it to me or the Arkansas Game and Fish Commission Aquatic Nuisance Species Program Coordinator, Matt Horton [Matthew.Horton@agfc.ar.gov](mailto:Matthew.Horton@agfc.ar.gov) 877-470-3309 ext. 1206. You are a valuable resource in the field that can help fight the spread of harmful invasives. If we confirm an invasive on a land-owner's property, we can work together to develop a plan to contain and hopefully eliminate that invasive from their property without disrupting normal operation.

Potentially harmful (toxic) blue-green algae blooms will start to emerge in mid to late June and throughout the rest of summer. Ponds most susceptible to blue-green algae blooms are shallow, stagnant, and highly fertile (which describes almost all livestock watering ponds). Species capable and dense enough to cause harm typically create a bright green (though other colors are possible) "spilled paint" appearance on the surface that will coat a stick if dipped into the water and removed. Blue-green species will also form a floating layer inside a mason jar of pond water left in a refrigerator overnight. If a harmful bloom emerges on a drinking water pond, prevent livestock access and use an alternative watering source until the bloom is treated or fades naturally, if possible. Refer to FSA9540 (<https://www.uaex.uada.edu/publications/PDF/FSA9540.pdf>) and FS-2018-02 (<https://www.adeq.state.ar.us/water/planning/hab/pdfs/algal-blooms-in-arkansas-streams-ponds-and-lakes.pdf>) for more information. The Arkansas Water Resources Center (<https://awrc.uada.edu/>) can test and confirm the presence and concentration of cyanotoxins (toxins produced by blue-green algae, aka cyanobacteria).

## **Pond Management Tasks for June:**

Pond renovations can begin around June as rainfall frequency drops to summer patterns. Fertilization and feeding programs should be underway. Aquatic dye for weed/algae control will last longer now due to lower flushing rates from lack of rainfall. Continue herbicide applications for troublesome weeds. Fish stocking is still acceptable, but survival from transportation and stocking stress decreases with increasing temperature. Encourage clients to harvest largemouth bass (10-15 lbs/acre/yr for normal ponds, 25-35 lbs/acre/yr for bass-crowded or highly productive ponds). Harvest bluegill less than about 7 inches in length up to about 25 lbs/acre/yr. Aggressive harvest of all crappie caught, especially from ponds smaller than about 25 acres is encouraged. Continue mowing grass on dams and levees to keep brush and saplings from developing. Keep drains and spillways clear of debris and clogs so that they are working efficiently during the rainy season. Continue daily operation of aerators. For diffused aeration systems that have not yet been activated, follow the startup schedule of: Day 1, run 30 minutes then turn it off the rest of the day. Day 2, run 1 hour. Day 3, run 2 hours. Day 4, run 4 hours. Continue doubling the run time each day until you are running 24 hrs/day and keep it on for the rest of the summer.

Message me with any questions or workshop planning ideas.

Take care,

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