Sweat Equity's Role in Trophy Fisheries Management

By Dave Beasley

Imagine stepping out your back door and strolling down to your pristine, sparkling fishing hole, where you spend time in a boat catching trophy caliber fish. Sound enticing? Fisheries management techniques have improved to the point where it's feasible to develop a high-end private fishery in your backyard, but it comes with a price—payable by either writing large checks or making a big investment in sweat equity—or a combination of both.

To help combat potentially overwhelming budget numbers, many people invest large amounts of their time and energy. As a general rule, the less money spent, the more sweat equity is required. If you have time, this work can be lots of fun.

Sweat equity can mean regular habitat improvement, such as adding brush piles in a lake.

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Outside of these tasks, lake and pond owners can oftentimes carry out many remaining management tasks and be successful. Because these potential expenses add up quickly, especially on larger water bodies, many people settle for a quality fishery that requires less financial resources than the typical amount it takes to establish a trophy fishery.

Developing a trophy fishery is hard, but definitely possible if you're willing to sweat. Sure, it requires diligence to carry out all required items properly and within the appropriate timeframe. Many people who fail to reach their goal of developing a trophy fishery do so because they didn't carry out all of the sweat equity items within the correct time frame.

So, what are these sweat equity tasks?

Sometimes sweat equity means intense physical labor such as adding fish cover, spawning gravel, and limestone. Other times it requires following a plan and developing crucial habits such as harvesting fish, record keeping, feeding, fertilizing, water quality monitoring, and trapping nuisance wildlife.

These sweat equity items don't cost much, but each task plays a key role for the success of the fishery, and must be done correctly and persistently. For example, when harvesting fish is required, many people fail to harvest enough. Failing to harvest the proper amount of fish can cause the entire project to fail. This is where diligence and knowledge combine to keep a fishery advancing. Harvesting by fishing is not difficult, but if it's not taken seriously enough, the fishery maintains too many predator fish to allow the fishery to achieve that goal of trophy fish.

If your productive pond is producing 400 pounds of forage fish per acre annually, and you want bass to grow an average of two pounds each year, theoretically you can only have 20 bass per

These folks understand the value of work. Here, they are installing artificial fish attractors in a practical way.

acre. It takes 10 pounds of baitfish to grow one pound of predator fish. This means, if you have a five acre pond, then you can only have 100 larger, growing bass in the entire pond. The issue many people face is that largemouth bass spawn annually, resulting in tens of thousands of young bass entering the ecosystem each year. Staying ahead of the bass population and maintaining a low enough number of adults, while producing a younger class of fast growing bass takes significant effort. As a result, harvesting small and intermediate size bass is a constant battle. If harvesting slacks even slightly, the ripple effect is typically enough to quickly lose a year's worth of bass growth.

Another big contributor to the success or failure of a trophy fishery is record keeping. Even though keeping good records is the least exciting and most overlooked sweat equity item in a well-designed plan, it's important. It's not enough to rely on electrofishing a couple times a year and ignore creel data records.

Electrofishing is biased towards certain species and sizes of fish. For example, electrofishing does a poor job of catching channel catfish, but does a good job catching largemouth bass. When sampling largemouth bass, electrofishing is often biased towards smaller bass, based on shallow water habitat that electrofishing targets. Although electrofishing is a great tool that should be used on every waterbody trying to grow trophy fish, it does not provide a full picture of the fishery. To get the best view of the fish population it is critical to also track creel data over the years, along with dated records of fish you catch, fish you stock, and tasks you accomplish.

This enterprising do-it-yourselfer lashed two kayaks with plywood to carry pea gravel to create and enhance spawning beds.

The importance of creel data played out last spring on a trophy fishery we have been electrofishing for four years. Over those years we had been tracking various size classes of largemouth bass, and comparing actual growth to anticipated growth. Last spring we found an entire year class of bass that should have been 15-16 inches was missing from the new spring electrofishing data. With such a void in the bass population we were afraid the size class of fish was no longer present, causing concern about the management approach and the future of the fishery. Fortunately, the owner kept creel data and we were able to quickly determine the apparently missing size class of fish was actually still present, even though our sampling efforts did not indicate their presence. Those size classes of fish were somewhere else on the day we electrofished. Without this data collected by the client, we would have wasted time and energy trying to solve a problem we didn't have.

Of all the sweat equity items, water quality monitoring is the toughest task for most people. Monitoring water quality multiple times weekly requires a big commitment from the owner or on-site personnel. The frequency of water quality monitoring varies, depending on the waterbody as well as the management strategies. For trophy fisheries, it is typical to record secchi readings and bloom color, as well as dissolved oxygen and temperature, several times per week during the hot summer months. This is especially true for those who are increasing their productivity using fertilizer.

Unfortunately, most people fail to take this task seriously due to the amount of time and diligence it requires, and as result, they are rolling the dice and subjecting the fishery to unnecessary risk. If water quality deteriorates for a few days in a row, fish are stressed, and the population focus switches from thriving to surviving. That's not good if you want trophy fish.

This summer, I witnessed a fishery on the verge of an oxygen crash. Fortunately, the landowner had a water quality monitoring program in place. Although the on-site staff didn't grasp the importance of the data they were collecting, they followed the management plan and collected the data multiple times per week throughout the growing season. They caught an oxygen crash in its early stages that was initiated by three weeks of cloudy weather in July. This allowed the management to implement surface aeration measures and improve the dissolved oxygen levels, likely saving their fishery.

A different fishery without a monitoring program in place, fell victim to prolonged cloudy

summertime weather two summers ago, and an unanticipated oxygen crash resulted in a 100 percent kill of all fish greater than 4 inches. The owner was unaware of the stress the fishery was enduring, and the fishery collapsed. Following their fish kill they implemented a monitoring program.

Other ongoing management items such as feeding, fertilizing, trapping nuisance wildlife, installing beneficial vegetation, treating nuisance vegetation and algae, adding fish cover, spawning substrate, and limestone all require the same attention to detail as harvesting, record keeping, and water quality monitoring. Necessary tasks must be taken seriously for a fishery to reach its full potential. The loftier the goal, the more sweat equity is required. The harder a pond is pushed to be a trophy fishery, the greater risk of different items becoming a limiting factor. Doing the right things at the right time, along with a bit of sweat equity, and you'll soon enjoy the fruits of your labor. Just remember that dream—enjoying your lake that's teeming with big, Trophy fish.

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Gravel, ready to be installed into spawning beds.

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