Lake Thompson Management Report

Federal Aid Project – F111R

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Introduction and History

Lake Thompson is a ten-acre impoundment located in northwestern Fauquier County on the G. Richard Thompson Wildlife Management Area (WMA) owned and operated by the Virginia Department of Game and Inland Fisheries (DGIF). The fishery has gone through several iterations since acquisition by DGIF becoming a category-A put-and-take stocked trout water in 1995. It also has an excellent smallmouth bass population with true trophy potential (one specimen collected during a survey in the mid-2000s was two ounces shy of the 8 pound, 1 ounce state record). Other fish present include bluegill, golden shiner, green sunfish, warmouth, redear sunfish, white sucker, bluntnose minnow, spottail shiner, and pumpkinseed. All species except trout are maintained through natural reproduction; however, reproduction has proven to be a challenge with untimely and unwanted changes to reservoir water level in recent years.

Beginning in 2008, the lake unexpectedly drained due to a faulty emergency drain feature (estimates vary, but this impoundment was constructed as a "farm pond" some 60 to 70 years ago). Subsequent refilling was apparently naturally accomplished after sediments compacted or other material blocked the outlet. This process inexplicably repeated itself twice more over the ensuing 5 years each time draining nearly completely during mid-summer only to be naturally refilled by winter via the perennial stream feeding the upper portion of the lake. Although the corrugated metal outlet tower is leaking from several corroded spots near its base, the lake has been at full pool for over two years. During normal years, this 32 foot deep reservoir maintains suitable habitat for trout; although summer holdovers are thought to be minimal at best.

In addition to the random leaking emergency drain feature and the corroded outlet pipe, the dam is currently not in compliance with state regulation for a high hazard dam (classified as such by Department of Conservation and Recreation). It is likely major renovations to the failing structures listed above in addition to the dam itself will be needed in the near future.

The lake is a popular spot, and many feel it's the keystone to the WMA. Immediately following a typical spring trout stocking, over 100 anglers have been counted during a single creel survey. The only formal survey (conducted in 2004) documented 2165 angler hours during just three months from March through May.

Bank access is available to nearly 100% of the pond's perimeter, and a primitive boat ramp allows the launch of very small trailered jon boats (electric motors only), canoes and kayaks. There is no parking adjacent to the pond (exceptions for disabled constituents), but boaters can drive up to the ramp, off-load watercraft, and then return to the parking area just off Route 688 (Leeds Manor Road). To reach Lake Thompson, take Interstate 66 west of Marshall, VA to exit 18 (Markham), and travel north on Route 688 for about four miles. Along the way, drivers will pass the first parking area for the WMA on the left, but the lake is located at the second parking area on the left. The pond (in context with the balance of the WMA) makes an ideal family destination for combination fishing, hunting, hiking or wildlife watching trips.

Methods

Fish sampling at Lake Thompson by DGIF biologists has occurred sporadically (about every three years) over the past two decades. Biologists use nighttime shoreline electrofishing to obtain estimates of population size structure and relative abundance. Night sampling is required to get accurate, representative samples of fish populations (minimizing avoidance) in Thompsons's clear, deep water. Abundance is usually described as a catch rate in number of fish per hour (CPUE, or Catch per Unit Effort). Also, numerical descriptors of length-frequency data such as Proportional Stock Density (PSD) and Relative Stock Density (RSD) are used when evaluating fish populations. PSD is calculated by dividing the number of fish $\geq$ minimum quality length by the number of fish $\geq$ minimum stock length x 100. Quality length is defined as the minimum size of fish most anglers like to catch (these are national standards – for example, 11" for smallmouth bass). Stock length is the minimum length at which a fish provides recreational value and/or is recruited to the fishery (e.g., 7" for smallmouth bass). RSD is simply the percentage of any designated length group found within a population. RSD is calculated by dividing the number of fish $\geq$ specified length by the number of fish $\geq$ minimum stock length x 100.

Bass

Smallmouth bass catch rate and population size structure have typically been excellent at Lake Thompson, and the 2014 sample was (surprisingly) no exception. Following the self-draining incidents highlighted above, decisions were made not to commit hatchery fish to restock until some assurances (fixes) were made to protect the investment of hatchery production. Apparently, after each draining, enough broodstock found refuge in the feeder stream and were able to repopulate the lake following refilling. Thus, overall CPUE for smallmouth bass was 68 fish/hour including 12 "preferred" (at least 14") fish/hour demonstrating rapid growth rates. The resulting RSD-P (33) was excellent (comparable 2014 indices on the Rappahannock River were 35 fish/hour and RSD-P=14). The largest bass observed was 18", but the lake has a solid track record of producing citation fish. Bass were in robust condition with a high weight relative to length suggesting ample forage and good habitat. Anglers are advised to fish deep with jigs or rainbow trout pattern crankbaits during daylight hours with potential topwater action during low light conditions. Lake Thompson offers the only lake smallmouth fishery in the northern Virginia district.

Trout

As a category 'A" stocked trout water, Lake Thompson receives the greatest frequency of stockings possible under DGIF's put-and-take trout program. The lake is stocked eight times between October 1 and May 30 – usually with a mix of rainbow and brown trout. As a designated stocked trout water, anglers age 16 and above must possess a trout license in addition to a fishing license from October 1 and June 15.

Panfish

Abundance and size structure of the bluegill, redear and pumpkinseed populations have always been below average likely due to limited productivity, shorter growing season (cooler water temperatures) and competition from green sunfish and other species. Anglers seeking quality bluegill or redear sunfish are advised to choose another angling destination; however, these species do add increased options for children fishing with rudimentary tackle.

Management Outlook

A permanent full pool with a repaired dam is the quest for Lake Thompson. This scenario will hopefully reach fruition sometime during the next five years ensuring the long term prospect of this important fishery in the beautiful Virginia foothills just beyond the growing metropolis.

For further information, contact:
Virginia Department of Game and Inland Fisheries
Fisheries Division
1320 Belman Road
Fredericksburg, Virginia 22401
540-899-4169

Compiled by: John Odenkirk, Fisheries Biologist