

## Evaluation of the Relative Growth and Survival of Wild Rose and Sturgeon River Brown Trout Stocked into Michigan Lakes and Reservoir Tailwaters

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### *Background*

Michigan has a long history of stocking trout into waters where spawning is limited and doesn't produce enough fish naturally to support sustainable fishing opportunities. Recently, some of these efforts have been less successful than hoped, leading Fisheries Division to believe that the overall fitness of hatchery-raised or domesticated brown trout was poor. As a potential solution to this problem we began to look for a wild source of brown trout from Michigan's own waters that could replace the domestic type of brown trout used to produce eggs for the state hatchery system. After successfully introducing a wild brown trout used for stocking streams (Gilchrist Creek strain) into Fisheries Division's hatchery system, we began an effort to find wild browns that would survive and grow well in Michigan's lakes and reservoir tailwaters.



Fisheries managers selected wild brown trout from the Sturgeon River, a tributary to the northern Lower Peninsula's Burt Lake, as a candidate strain. The purpose of this project is to determine how well the wild Sturgeon River brown trout perform compared to domestic "Wild Rose" brown trout, which are named after the Wisconsin hatchery where they were first raised and have been used to produce eggs in Michigan's hatcheries for over two decades.

### *What do the results show?*

The results differ depending on the types of water bodies that were stocked (lakes or reservoir tailwaters) in northern Lower Michigan. Across five small inland lakes, the abundance of Wild Rose brown trout was higher than Sturgeon River fish, while in two reservoir tailwaters the abundance of Sturgeon River brown trout was higher than Wild Rose fish. Unexpectedly in both tailwaters, we found that brown trout produced from natural spawning outnumbered either type of stocked brown trout. Wild Rose brown trout grew to larger sizes in inland lakes; the opposite was true in reservoir tailwaters where Sturgeon River brown trout survived better and grew larger. In Lake Michigan, where the most fish were stocked, very few brown trout of either type were reported to creel clerks.

### *What do the results mean for fisheries managers and anglers?*

Fisheries managers can successfully and economically use stocking as a tool to meet management objectives (and increase angler success!) by first determining existing levels of natural spawning before choosing what type of brown trout to stock. Although neither type of brown trout did well in the Great Lakes, Wild Rose fish appear to be the best strain for stocking inland lakes with limited or no natural reproduction. Sturgeon River browns are better suited for reservoir tailwaters, especially those where higher size limits require fish to survive for at least a year so that they can grow to reach the minimum size necessary for legal harvest.

Additional detailed information on this study can be found at  
[http://www.michigan.gov/dnr/0,4570,7-153-10364\\_52259\\_19056-333302--,00.html](http://www.michigan.gov/dnr/0,4570,7-153-10364_52259_19056-333302--,00.html).