

Report on Savage River Dam Issues—MAC TU mtg 5/17/08

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Background: One of the four control gates in the bottom of the dam was found to be defective in December. Efforts to repair the gate were unsuccessful. Those repair efforts went until early May 2008. Until then the reservoir was kept at a low pool elevation of 1400–1410'. The spillway is at 1468.5', and the bottom control structure is at 1320' elevation. A “patch” to temporarily allow refilling of the reservoir was accomplished Friday evening, May 9. At the same time as the patch was completed, the watershed started to receive a very large volume of cold rain and even a little snow at the higher elevations. As of today (5/17/08), the reservoir is within 5' of the crest of the spillway, having stored approximately 12,000–13,500 ac-ft (~75% total storage) of water since May 9. The release is currently set at about 20 cfs and is relatively clear (~4' visibility).

Savage River Reservoir has a rated capacity to store 20,000 acre-feet of water at the crest of the spillway @1468.5'. At 1400' elevation the pool contains less than 4,000 ac-ft. One cubic foot per second release for 24 hours is about 2 ac-ft of water; 50 cfs is about 100 ac-ft/day. During hot summer days the water temperature may increase more than 5° F for the afternoon hours from the dam down to the mouth of the river. Consequently, a release of about 65° F is about the maximum temperature that will sustain trout down to the North Branch.

On May 13, the first temperature profiles of the reservoir were taken. The surface temperature was approximately 56° and the deeper water >20' below the surface ranged from 49–52°, mostly 51–52°. There is almost no likelihood of any colder water being captured by the reservoir or for the reservoir bottom to cool the stored water below the current temperatures. In other words, what we have now is the coldest water we are going to see for the rest of the summer. Past years' recorded temperature profiles have shown an increase of about 14–15°F from May's coldest waters (usually 47–48°) over the summer. If that pattern were to hold for 2008, then the deepest and coldest water by early September might be 66°F. (51°+15°)

I am of the opinion that we must really hoard this 50–52° water until we really need to tap into it. I have voiced the idea to the powers that be (dam control agencies) that we allow the reservoir to spill for the time being until the surface water starts reaching the mid 60s. This may mean some unfishable flows (i.e., > 150 cfs) for periods of time over the next couple of weeks and perhaps some low releases (<55 cfs) for much of the summer, but I see the stronger need to have cold water (<65°) available into September.

Future: Sometime this summer we hope to learn of the plans to permanently repair the dam. We suspect that the reservoir may need to be fully drained so that they can reach the damaged gate. If that is the case, we will urge that the draining occur after the end of October and all repairs completed by late winter in order to capture the spring melt and rains in 2009. This will likely mean that the trout eggs laid in the lower river this coming fall will be largely smothered by the silt that will undoubtedly be stirred up in this work. It would seem a choice between having a wild trout fishery or losing one year's spawning effort.