

To all:

As our members know, PRC has worked for many years to address concerns with high river temperatures and low river flows on the Pequannock River resulting from improper management of Newark's reservoir system. The type and amount of water released from these reservoirs into the Pequannock River is the overriding factor in these issues. Too little water in the summer months has been a real problem.

The NJDEP has been negotiating a new permit with conditions designed to address these concerns. PRC, with the help of our members and supporters, have been urging stringent guidelines in the new permit to fully protect the river.

Last week the final version of the permit was released. In summary, the permit addresses most, but not all, of our concerns. More detail is provided below. An important missing piece of this puzzle is an operational plan agreed upon by NJDEP and Newark that will put the permit guidelines and policies into action. The NJDEP has promised that such a plan will be in place before next summer. We will follow this closely and keep you informed on the progress or lack of it.

The best new requirement in the permit is the 5 cubic-foot-per-second flow at Macopin, covering the river downstream of the reservoir system. This section of the river was often reduced to dry rock in summer. In the final permit this has been strengthened. While the draft permit allowed this water to be hot spillover from the surface of the Charlottesburg Reservoir, at our urging the final permit calls for a cold bottom release of this water. Much better!

In addition, at Oak Ridge Reservoir the final permit does provide for situations when the reservoir is overfilled and spilling hot water, requiring that Newark make additional cold bottom releases at these times to meet the temperature requirements. The original draft permit mentioned only a 5 cubic-foot-per-second flow there, with no language addressing periods when this hot water is spilling over the reservoir dam and additional bottom releases are needed.

The temperature limit of 74 at Oak Ridge remains as a "maximum daily average". As we have indicated previously, we do not believe this is sufficiently protective. Keep in mind that the goal of these permit requirements is to maintain the health of the river's wild brown trout. The requirements should provide suitable river temperatures to support these fish throughout the entire river segment from Oak Ridge to Charlottesburg Reservoir. However, water meeting the 74-degree average at Oak Ridge will warm as it moves downstream on hot summer days, reaching dangerous levels.

In their own proposed changes to the Surface Water Quality Standards, DEP has stated that *"Temperatures above 27.2°C are lethal to brown trout. The Department is proposing an acute criterion for FW2-TM streams as a daily maximum temperature not to exceed 25°C [77°F], which is approximately two degrees less than the lethal temperature for brown trout."* We note that this standard is proposed for the lower water quality of TM (trout maintenance) waters as opposed to the Pequannock's higher TP (trout production) classification.

Reviewing our data from 2009, we find that on several occasions when temperatures at Oak Ridge did meet the 74 degree maximum daily average, river temperatures recorded approximately 2 miles downstream in Newfoundland exceeded 77 degrees. This confirms that a 74 degree maximum daily average at Oak Ridge is insufficient.

However, it should be recognized that in most cases these occasions were preceded by a day when the 74 degree maximum daily average at Oak Ridge was exceeded. Therefore, if the bottom release had been adjusted upward to compensate for these temperatures in a timely manner the higher river temperatures at Newfoundland would have been avoided.

As noted, what is needed is an operational plan. This plan must anticipate temperature increases at Oak Ridge and adjust bottom releases to avoid temperature problems. Setting a trigger of 72 degrees would prevent most problems, as long as the reaction time was 12 hours or less. Once a USGS gauging station has been established there, both flow and temperature can be easily checked on the internet. Our recommendation in these circumstances would be to compensate for the spillover rate with a bottom release that is 25% higher than the spillover flow. Even with the high spillover temperatures of 88 degrees we experienced this summer, that hot spillway water combined with a suitable bottom release at 58 degrees would result in an acceptable river temperature.

One item that would simplify operations for the City of Newark would be a remote gauge to show water height at the Oak Ridge Reservoir dam. Since spillover is typically an unusual occurrence there, a gauge that would react to increasing reservoir levels and alert the City to the fact that these levels are approaching a spill-over situation would be very helpful. This could also provide additional lead time for reacting to these circumstances and tell the City when the bottom release can be safely reduced. We recommend that the USGS investigate adding such a gauge at this site.

These operational protocols must form the basis for a "Memorandum of Agreement" between the NJDEP and the City of Newark. We stand ready to assist in such an effort so that this agreement will be in place for the summer of 2010.

For now we are guardedly optimistic. We do wish to thank everyone that has assisted us in this long and difficult process, particularly our members. Special thanks also go to Julia LeMense and Richard Webster at the Eastern Environmental Law Clinic and the staff at the NJDEP Division of Watershed Management.

Please contact us if you need any additional information or would like to discuss this matter in more detail.

Thanks!

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