

COMMONWEALTH OF PENNSYLVANIA
Fish and Boat Commission

DATE: October 28, 2004

SUBJECT: Water Allocation Applications No. WA56-1003
Cambria Somerset Authority
Somerset County

TO: Christine M. Marincic
Water Supply Management
DEP, Southwest Regional Office

FROM: Leroy M. Young, Chief
Aquatic Resources Section
Division of Environmental Services

The Pennsylvania Fish and Boat Commission (PFBC) has reviewed the subject permit application for the withdrawal of 71 million gallons per day (mgd) from Quemahoning Reservoir, 10 mgd from Hinkston Run Reservoir, 10 mgd from Wilmore Reservoir, 26 mgd from South Fork Dam, and 27 mgd from Border Dam, with a combined allocation of 71 mgd. We have the following comments.

Quemahoning Reservoir

As the result of a water allocation permit application by Manufacturer s Water Company in 1989 we had recommended that a wetted perimeter instream flow study be conducted on the 1.2 mile section of Quemahoning Creek from the dam to the mouth of the stream to assess the impacts of flow reductions on aquatic habitat. As a result of that study we initially recommended a conservation release of 22.5 cfs (14.5 mgd). The applicant requested a conservation release of only 5 mgd. In the draft permit, DEP included a permit condition of 10.8 mgd. We ultimately agreed to this recommendation and it has been included in a dam permit that was issued to the Manufacturer s Water Company in 2001. This release is to begin by December 31, 2004. We believe that the conservation release conditions should be consistent between the two permits. We believe that the release will help protect the fishery in the lower Quemahoning Creek as well as improve water quality in Stony Creek, to which Quemahoning Creek discharges. Our position on this matter has been well documented in previous correspondence to DEP. We anticipate the development of a front fishery in Quemahoning Creek. This is consistent with its designation as a Cold Water Fishery in 25 PA Code Chapter 93. The release should be designed to be made from the hypolimnion so that the cold water conditions necessary to protect a trout fishery will be possible. In addition, we recommend that the frequency of spill be limited as much as possible by releasing as much water as possible through the release structure. This will benefit water temperatures, since during the warmer months, the temperature of water spilled from the dam will be significantly elevated and detrimental to development of a cold water fishery.

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We would note that Cambria Somerset Authority (CSA) has been in discussions with the whitewater boating community and the Pennsylvania Department of Conservation and Natural Resources regarding the periodic provision of up to 500 cfs as a release from the Quemahoning Dam for whitewater boating events on Stony Creek. We note that a release of 500 cfs for 4 hours on 2 days per week, as has been discussed in correspondence related to this matter, is equal to 23.8 cfs over a 7-day period. We are interested in the possibility of balancing the use of water for white water releases with an increase in the conservation release, at least periodically, provided that this would not jeopardize either recreational use or environmental protection in the reservoir, or the water supply demands. Tying a higher release to some level of reservoir drawdown would be one way of accomplishing this. In other words, whenever the reservoir level was above a set elevation, a higher release would be provided, but when the reservoir elevation dropped to this set point, the releases could be reduced to 16.7 cfs. This would help assure the successful establishment of a healthy tailwater trout fishery.

A copy of our October 27, 2003 letter to CSA in which we provided comments on the draft Whitewater Release Feasibility Study is enclosed for your information regarding this matter,

Hinkston Run Reservoir

Hinkston Run is designated for protection as a Cold Water Fishery in 25 PA Code Chapter.93. Currently, there is no conservation release requirement for Hinkston Run Reservoir. The requested allocation of 10 mgd significantly exceeds the estimated safe yield of this source of 6.9 mgd, even without a release. PFBC sampling just upstream of the dam in 1998 documented 13 species of fish. Twelve species were documented just upstream of the dam in a 2000 PFBC survey. This compares to only six species in 1981 survey. A neutral pH of 7.0 and alkalinity of 13 mg/l were documented in 1998. These data demonstrate a significant reduction in historical acid mine drainage (AMD) impacts on this stream. The section is stocked with brook trout by the PFBC.

Hinkston Run was sampled at two sites downstream of the dam in 2000 by the PFBC. The first site was located at an unnamed tributary, which is located about 1300 ft downstream of the dam. At this 100 m site we collected five species of fish comprised of 503 blacknose dace, one bluntnose minnow, 22 white sucker, four rainbow trout, and two mottled sculpin. We did not measure pH, but the alkalinity measured 8.2 mg/l. The second site was located about 1.9 miles further downstream. Suspended iron floc was apparent at this site. Only three fish species were collected here: nine creek chubs, 68 blacknose dace, and one bluntnose minnow. The alkalinity measured just 1.1 mg/l at this site. Slag deposits dominate the riparian zone of the stream for much of the area downstream of dam.

It is our recommendation that a conservation release be included as a condition for the withdrawal from Hinkston Run. The water quality upstream of the dam is better than that

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downstream, as is the fishery. Run off from the slag piles are the primary contributors to these findings, but a lack of a conservation release is another obvious concern. Releases of the relatively good quality water from the reservoir may enhance the water quality and fishery of Hinkston Run but will also benefit the Conemaugh River to which Hinkston Run is a tributary. Based on our 1992 position paper on review of water allocation permits, our recommended conservation release for this source is 15% of the average daily flow of the stream or inflow to the reservoir, whichever is less.

Wilmore Reservoir

Wilmore Reservoir is located on the North Branch Little Conemaugh River, which is classified for protection as a Cold Water Fishery in 25 PA Code Chapter 93. The proposed withdrawal of 10 mgd for this source exceeds the estimated safe yield of 8.8 mgd, even though there is currently no conservation release requirement for Wilmore Reservoir. The stream is stocked with trout downstream of the dam, which is located at river mile (RM) 3.0. PFBC stream surveys conducted in 1976 and 1989 at RM 1.8 documented the presence of 15 and 10 species of fish, respectively, comprised primarily of various minnows, darters, and suckers, Rock bass, largemouth bass, pumpkinseed, bluegill, brown bullhead, and brown trout have also been collected in the PFBC samples. The pH in the 1989 sample measured 8.2 and the alkalinity was 39 mg/l.

It is our recommendation, based on our 1992 position paper, that a conservation release equal to 20% of the average daily flow of the stream be required as a condition of the permit for Wilmore Reservoir to adequately protect the fishery of North Branch Little Conemaugh River. This release should be made from the hypolimnion, if possible, to protect and enhance the coldwater fishery, consistent with the stream's Chapter 93 designation. Another benefit of a conservation release from this source would be amelioration of the relatively poor water quality in the Little Conemaugh River that results from various AMD sources both upstream and downstream of the confluence of the North Branch.

South Fork Dam Intake

The South Fork Dam intake is located on the Little Conemaugh River approximately 3100 feet downstream of the mouth of the South Fork Little Conemaugh River. This section of the Little Conemaugh River is classified as a Warm Water Fishery in 25 PA Code Chapter 93. The requested withdrawal of 26 mgd is over five times greater than the estimated safe yield, which was calculated without consideration of a passby flow. There is currently no passby flow condition in any permit for this dam.

The South Fork Little Conemaugh River is seriously impacted by AMD. U.S. Army Corps of Engineers sampling in 1993 documented a pH of only 3.5, alkalinity of 0 mg/l and high levels of sulfate, total iron, manganese, and aluminum. Various other AMD discharges to the Little Conemaugh and its tributaries are discussed in the March 2000 PFBC report that was submitted with the application. That report documents the results of PFBC sampling on the Little Conemaugh River in 1999, which included sites downstream of South Fork Dam. This section of the stream was characterized by iron precipitate covering the substrate. The area was obviously impacted by AMD, but some fish were present, although in low numbers and diversity. The Little Conemaugh River in this section would benefit from releases from Wilmore Dam, which discharges to the North Branch Little Conemaugh River, which in turn enters the Little Conemaugh River upstream of the South Fork Dam.

Based on our 1992 position paper, it is our recommendation that a passby flow equal to 15% of the average daily flow of the stream be made a condition of the permit for use of the South Fork Dam Intake.

Border Dam Intake

Border Dam Intake is located on Stony Creek about 6.6 miles downstream of the Quemahoning Creek confluence. The stream is classified as a Warm Water Fishery downstream of the confluence of Quemahoning Creek in 25 PA Code Chapter 93. The proposed withdrawal of 27 mgd is over three times greater than the safe yield, even though there is currently no passby requirement for this dam.

Stony Creek is degraded by AMID upstream of Border Dam. The largest AMD influence upstream of the dam is Shade Creek, which is located about 2.8 miles upstream of the dam. The most significant AMD source downstream of Border Dam is Paint Creek, which enters Stony Creek about 1.6 miles downstream of the dam. A 1998 PFBC survey on Stony Creek documented the impacts of these sources on both the water quality and biology of Stony Creek. Water quality and the fishery between the Quemahoning Creek and Shade Creek confluences were better than that both upstream and downstream of these sites. This highlights the need for a conservation release from Quemahoning Reservoir, since it is the water from this source that already serves to significantly dilute AMD loads in this section of the stream. Releases from the Quemahoning Reservoir would likewise benefit water quality downstream of Shade Creek. From a water quality and biological standpoint, the biota of both the Quemahoning Creek and Stony Creek would benefit greatly by operating the system so that a significant portion of the water supply needs from the Quemahoning Reservoir could be met by releasing this water into the tailrace to be withdrawn at the Border Dam intake. We recommend that this possibility be

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carefully evaluated in the permit review. We furthermore recommend that a passby flow equivalent to 15% of the average daily flow of Stony Creek be made a condition of the permit for the Border Dam Intake. This is based on the PFBC 1992 position paper.

We recognize that the recommendations that we have made, if implemented, would constitute significant changes in the operation of this water supply system. We would appreciate the opportunity to discuss this matter with you and CSA in more detail as you review the application. We also request the opportunity to review the draft permit application upon its completion. Please feel free to contact mc if you wish to discuss any of the above comments.

Enclosure

cc: J. Arway
R.Snyder
R.Lorson
E.Svetahor