February 25, 2013

Via email: rcairo@srbc.net

Richard A. Cairo
General Counsel
Susquehanna River Basin Commission
1721 N. Front Street
Harrisburg, PA 17102-2391

RE: Trout Unlimited comments on proposed rulemaking, 18 CFR 806.6

Dear Mr. Cairo:

Trout Unlimited and its New York, Pennsylvania and Mid-Atlantic Councils (collectively "TU") hereby submit the enclosed comments on the proposed rulemaking to amend the project review regulations of the Susquehanna River Basin Commission (Commission), published in the Federal Register (77 F.R. 75915) on December 26, 2012. The Commission proposes to amend 18 CFR 806, to include special requirements for withdrawals from surface water and groundwater sources which, from the point of taking or point of impact respectively, have a drainage area of 10 square miles or less (headwater area); and to modify provisions relating to the issuance of emergency certificates of the Executive Director.

TU supports the Commission's decision to remove the headwater protection component from the Low Flow Protection Policy, adopted in December 2012, and to promulgate a rule that specifically adds special requirements for surface water or groundwater withdrawals proposed in drainage areas of 10 square miles or less. By doing so, the Commission is creating a binding obligation, in regulation, to protect sensitive headwaters from significant adverse impacts. However, TU is concerned that the language proposed in the rule-making leaves the door open for some major water withdrawals that may severely impact headwater streams.

As proposed in 18 CFR 806.6, projects requesting to withdraw water in drainage areas equal to or less than ten square miles shall not be approved unless: (1) in the case of a surface water withdrawal, the use associated with the project would occur on the tract of land that is riparian or littoral to the surface water source from which the water is withdrawn , or would be used as source water to a public water supply; or (2) in the case of a groundwater withdrawal that impacts a surface water source (which from the point of impact is in a headwater area), the use associated with the project would occur on the tract of land that is from which the water is

withdrawn , or would be used as source water to a public water supply. The proposed rule further clarifies that withdrawals by public water supply systems shall be limited for use within the system's service area, and not for bulk sale outside such area.

TU is concerned that the proposed rule language fails to prohibit significant water withdrawals—such as those required for gas drilling activities—from headwater streams if the use of the water is occurring on riparian lands, adjacent to a headwater stream. Water withdrawals for hydraulic fracturing processes used in gas drilling are of particular concern, because of the significant volume of water needed to fracture a well—between two and eight million gallons—over a short time period.

By definition, riparian land is "a parcel of land which includes therein a part of or is bounded by a natural watercourse."[1] Based upon a reading of the Commission's existing and proposed regulations and the common law definition of "riparian", the proposed rule indicates that the Commission will consider water withdrawals for gas drilling purposes from headwater streams, if such use of the water will be on land adjacent the headwater stream. In general, the Commission's rule will minimize the number of water withdrawals associated with hydraulic fracturing and shale gas development by eliminating the opportunity to withdraw water from a headwater stream and transport the water to an off-site well pad. However, because withdrawals will still be allowed where the water withdrawn from the headwater stream will be used on land adjacent to the stream, the proposed rule will not prevent all significant, harmful water withdrawals for gas drilling related-activities.

Based upon a review of the Aquatic Resource Class 1 (headwaters; drainage areas of 10 square miles or less) on the Commission's Water Resources Portal mapping service and tax parcel maps for several counties within the Pennsylvania-portion of the Susquehanna River Basin, it is readily apparent that hundreds of gas well pads have already been sited on riparian parcels and dozens of water withdrawals for gas drilling purposes have been authorized or are currently pending. Further, when adding to the equation the number of wells that have been permitted on riparian parcels that have yet to be drilled, there are hundreds of additional potential significant water withdrawals that could occur from headwater streams.

As the Commission recognized in its rule, headwater areas of ten square miles or less have very limited water available. Because of this, changes in land and water use adjacent to a headwater stream often modify water and habitat quality in that stream, which can result in loss of sensitive species that rely upon coldwater habitat.[2] Aquatic habitat and health in headwater streams, and the downstream systems they support, can be affected by withdrawals during the summer low-flow periods, due to loss of stream connectivity, limited thermal refugia, and

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[1] Black's Law Dictionary 1327 (6th Ed.,1997).

[2] "*Protecting Headwaters: The Scientific Basis for Safeguarding Stream and River Ecosystems*," Stroud Water Research Center, 2008. p. 9

inhibited growth rates from reduced feeding activity in juveniles and adults.[3] Water withdrawals during the higher flow periods in the winter may also impact trout spawning and recruitment activities, by potentially reducing available spawning habitat and affecting baseflows during the egg incubation period.[4]

Presumably, the Commission's regulation, implemented in conjunction with the recently adopted Low Flow Protection Policy, would address many of the issues of concern for protection of sensitive headwater streams and the aquatic life that rely upon consistent flows for various life cycle phases. However, to ensure the greatest level of protection possible, TU urges the Commission to explicitly identify and prohibit, in the rule, water withdrawals proposed for certain types of uses on riparian lands, based upon such factors as the volume of water needed and the duration of the water withdrawal.

Finally, Trout Unlimited has repeatedly called upon the Commission to conduct a cumulative impact study to determine the potential adverse impacts that may be caused when individual withdrawals cumulatively create an aggregate impact on the water resources within a watershed. Given the focus of this rule-making on headwater protection, it is especially imperative that the Commission consider the cumulative impacts of water withdrawals throughout the basin on headwater streams. Because of the small size of headwater streams, the impacts of degradation of a single headwater stream on larger downstream reaches are difficult to quantify.[5] Among the many factors to be considered, the Commission should determine how water withdrawals in each subbasin are adversely impacting the water resources and aquatic life in the entire Susquehanna River basin and evaluate the impact of water withdrawals, under high flow and low flow scenarios, on stream ecology and the various phases of sensitive aquatic life cycles.

In accords with the Susquehanna River Basin Compact, the Commission has a mandate to undertake investigations and studies in regard to the water resources of the basin, whenever it is deemed necessary to do so to carry out its obligations under the Compact.[6] In its 2012 amendment to the Susquehanna River Basin Commission Comprehensive Plan, the Commission has committed to "undertake a cumulative impact analysis of water withdrawals and consumptive uses on the water resources of the Susquehanna River Basin."[7] In its comprehensive cumulative impact study, TU recommends that the Commission consider all existing water withdrawals—under the proposed low flow protection conditions—when determining whether a proposed water withdrawal will have cumulative adverse effects on the subbasin.

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[3] Maya Weltman-Fahs and Jason M. Taylor (2013): Hydraulic Fracturing and Brook Trout Habitat in the Marcellus Shale Region: Potential Impacts and Research Needs, Fisheries Magazine, 38:2, pp. 6-7.
[4] Id. At 7.
[5] "*Protecting Headwaters: The Scientific Basis for Safeguarding Stream and River Ecosystems*," Stroud Water Research Center, 2008. p. 9
[6] Susquehanna River Basin Compact, *Section 3.5.2.* (1972).
[7] Susquehanna River Basin Commission Comprehensive Plan, Appendix III, Water Resource Program, Introduction, pp. 2-3.

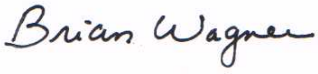
In closing, TU applauds the Commission for recognizing the need to protect headwater streams from harmful water withdrawals and codifying headwater protections in a rule. We are urging the Commission to go one step further and expressly prohibit certain types of water withdrawals from headwater streams for use on riparian lands that may have significant adverse impact on the ecosystem of the headwater stream or downstream systems. Further, TU respectfully requests that the Commission undertake a cumulative impact study to evaluate impacts occurring across the landscape as a result of water withdrawals for shale gas development. Thank you for consideration of these comments, and please do not hesitate to contact Katy Dunlap (kdunlap@tu.org or 607-703-0256) if you have questions or require additional information.

Sincerely,

Katy Dunlap
Eastern Water Project Director

Ron Urban

Ron Urban
Chair, New York Council of Trout Unlimited



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