

Subject: : Conservation

Topic: : Breeches Dam Removal

Re: Breeches Dam Removal

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One huge problem associated with dam removals is that it is often difficult or impossible to get riparian vegetation to grow once erosion begins. The reason for this is very logical. Most "floodplains" are actually terraces of sediment that was stored behind the dam. The top of these terraces can be anywhere from 2 to 20 feet above the stream bed once the stream cuts down. While the stream water will eventually reach groundwater and thus result in lower temperatures, vegetation planted during restoration and for silt control often dies because it does not contact the ground water source. The reason the stream will widen is because the banks are much lower prior to dam removal than they will be a few years afterwards. Once the stream cuts down, the water velocity will be greatly increased during storm events. Beforehand the water was able to spread out on top of the sediment terrace hence lowering the velocity; however, the bulk of the flow will be restricted within the high-banked channels. The system will naturally fix itself by widening over time; however, gravels and bedrock may be eroded in the process. I do agree that removal of valley bottom sediment is not practical in all situations; however it should also be noted that while most of the regional streams were actually wetlands and branching-channel systems, they sustained great populations of salmon, trout, perch, shad, etc. We know this from historical records and research is beginning to show that the functioning systems were nothing like they are today. Keep in mind that our research has been primarily in the Piedmont; however, streams in the Ridge and Valley and the Plateau experienced similar phenomena. I want to emphasize that I am not trained in geology/engineering. Instead, I am trained in neuroscience and currently applying to medical school. The research I previously discussed is both new and very important. I have done this research solely because of my passion for trout fishing and conservation. If you don't believe my hypothesis about the Breeches dam removal that is fine; however, please remember this post 5-10 years after the dam is removed. You may then find answers to some of your questions. Lastly, thank you to those who have sent me messages regarding interest in the research being done. It is much appreciated and also rewarding to know that some are beginning to understand this new approach to restoration.