

Subject: : Conservation

Topic: : Little Lehigh/Jordan creek dam removals

Re: Little Lehigh/Jordan creek dam removals

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URL:

I welcome the changes, but with some trepidation. The current in-stream structures are horrible and do more damage than good IMHO and I'm glad to see some changes. I've seen good and bad stream work and I hope the LL gets the good kind. I hope low bidder isn't the only criteria. The projects I've seen done by Joe Urbani where the point bars and natural curves of the stream are duplicated (when done the stream basically looks like a wild stream) are outstanding - and they hold a lot more bugs and fish.

The work should try to get a velocity distribution so that the fines get transported through and the bottom looks like the cobble of the original stream. The sediment that builds up behind a dam tends to be on the fine side and chokes out most bugs, except the burrowers. Eventually the stream can cut down to the original bed, but if it cuts too steeply that can cause problems. The reconnect the flood plain usually means that high water can spread out and lower the maximum stream velocity in the stream bed ore like a natural stream. Impediments to that, like dikes or section of stream incised into sediment, are altered to allow the flood plain to act more naturally. Most urban streams are constrained which allows high velocity/high erosion in constrained sections and then just dumping the sediments when the constriction ends creating a braided, featureless section. A stream's job is to carry away all the projects of the Earth eroding away. Hopefully, that sediment transport can occur in a way more similar to a natural stream where the bugs evolved and are most successful.

There is significant engineering in stream work and techniques are improving. I hope we don't get an old school style of work. There is a lot of salesmanship in stream restoration and not enough long term monitoring to judge effectiveness in my view. That is slowly changing, but getting the contract award is first priority and long term monitoring is about 12th priority on all too many jobs.