Subject: : Paflyfish General Forum
Topic: : Spot Burning...Gim me a break
Re: Spot Burning...Gim me a break
Author: : pcray1231
Date: : 2010/6/23 18:45:22
URL:

sight-nymph,

All that water thats taken out of wells for use doesn't just vanish. It goes back into the system. Most cities just discharge it to the stream. I believe, but am not sure, that in State College its used for spray irrigation, at a rate that allows it to absorb into the ground instead of run off. So its taken from wells, used, treated, and then put back into the groundwater system. It all ends up in Spring Creek regardless.

You're not going to see effect the "average" flow rates unless the gauge is between where its taken and where it finds its way back to the stream. Houserville gauge, maybe. But I'm pretty sure the Axeman gauge would include the springs carrying what once was the sewage, so as much is being added as taken away in the long run. It will change the timing. Water use is higher at some times of day than others, but I would assume it gets back to the stream at a relatively constant rate. You do in fact see daily "blips" in the flow rate on Spring Creek on the Axeman gauge, which is likely related to water use in the borough as well as university.

http://waterdata.usgs.gov/nwis/uv?01546500

You can even go as far as seeing morning and evening peaks, and daytime lulls (when people are at work). And on weekends, the morning peak isn't as strong.

Where you'll see the biggest difference is in run-off rates. A heavy rain will result in some runoff regardless of whether its forest or city. But more definitely soaks in in the forest. In city areas, very little soaks in to become part of the water table, most of it flows directly into storm drains. i.e. the stream will be a lot higher in high water periods, and lower in low water periods. Thats not good for a stream. The median may change but the average will stay the same. The only thing that effects the average is the amount of rainfall, since every drop flows downstream sometime.

As far as Paradise, I'm talking right at the Paradise, not other areas. But yeah, its pretty artificial, the stream channel itself has been altered numerous times throughout history. I'm not talking just about the obvious wing dams. Looking at some old pictures of the place, there's much you wouldn't recognize.