Impact of land clearing and stream alteration on water flow and stream composition

Todd Winner
Nathan Trachimowicz

Work Plan
Through this study we plan to investigate the effects of human induced activity such as clear cutting and debris clearing, on the natural setting. This will be done by detailed study of a stream in close proximity to residential development.

The stream will be divided into three thirty meter segments. The first segment that will act as the "control" is located in an area farthest upstream where there has been little human disturbance. The second segment, located downstream has had debris removed from the water, and vegetation cleared off the banks. The third section downstream is located in an almost entirely cleared setting. In these three settings we plan to compare water velocity, cross-sectional measurements, pebble size, and stream slope.

Hypothesis
Our hypothesis is that downstream flow would be substantially greater, where there is less interference of stream flow, and more vegetation removal. Subsequently we expect that the down stream location will have a greater depth, width and pebble size than the up stream location due to higher water velocities.

Equipment
1 stadia rod
1 Auto level
1 Tripod
1 Flow meter
1 Ruler and or Caliper (to measure pebble size)