1. Good corn/wet corn
2. Presumption of negligible contribution has been proven to be invalid in many settings
3. Oft repeated contention: if the water did not drain to the drain tile, it would run off the surface, so which is worse? While not valid all the time, I think this question is not too far off the mark. It is a useful question to frame our investigations.
4. I can think of several scenarios where tile drain impacts certainly have the potential to be “worse” than surface runoff contributions:
   1. Interception of by tile drains of soluble compounds with low affinity for soil (nitrate, herbicides) that would otherwise leach further into the soil profile and not be transported to surface waters
   2. Interception of liquid manure by tile drains or direct entry of manure into surface inlets to tile drains
   3. Where implementation of conservation practices effectively reduces surface runoff losses of nutrients, while the presence of subsurface drainage results in loss of nutrients that bypass the conservation practices.
5. Like most questions having to do with phosphorus, characterizing the net result of agricultural tile drains on rates of P export is not clear cut. Tile drains have a major effect on field hydrology and the net effect on nutrient losses may be positive or negative, depending on field conditions. Investigators in Ohio and XXX have found that as much as half the P exported from small, agricultural watersheds can be attributed to tile drainage water.
6. One reason for our poor understanding of tile drain contributions of P is that we have very little monitoring data. We have decades of surface runoff data, though I would argue still not enough, and not often in the right settings and times. But before Stone started the Jewett Brook tile drain monitoring study, we had only a small handful of P concentration data from individual grab samples to consider. Collected by AAFM and NRCS.
7. The recently emerging dataset on P concentrations in tile drainage water has led to a recognition that conservation practices are needed to reduce P export from tile drains. There has been strong interest recently in development of treatment systems to reduce P export from tile drains.
8. I will present some results from a completed P treatment system project and then some preliminary data from our ongoing tile drain assessment project in the Jewett brook watershed in St. Albans and Swanton.