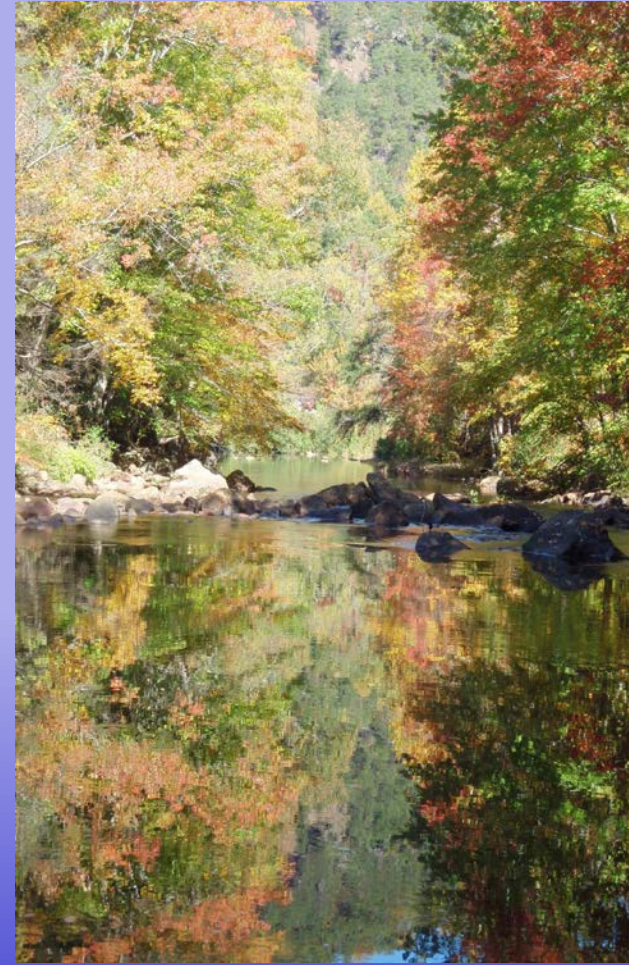


Stormwater Impacts in Urban Areas

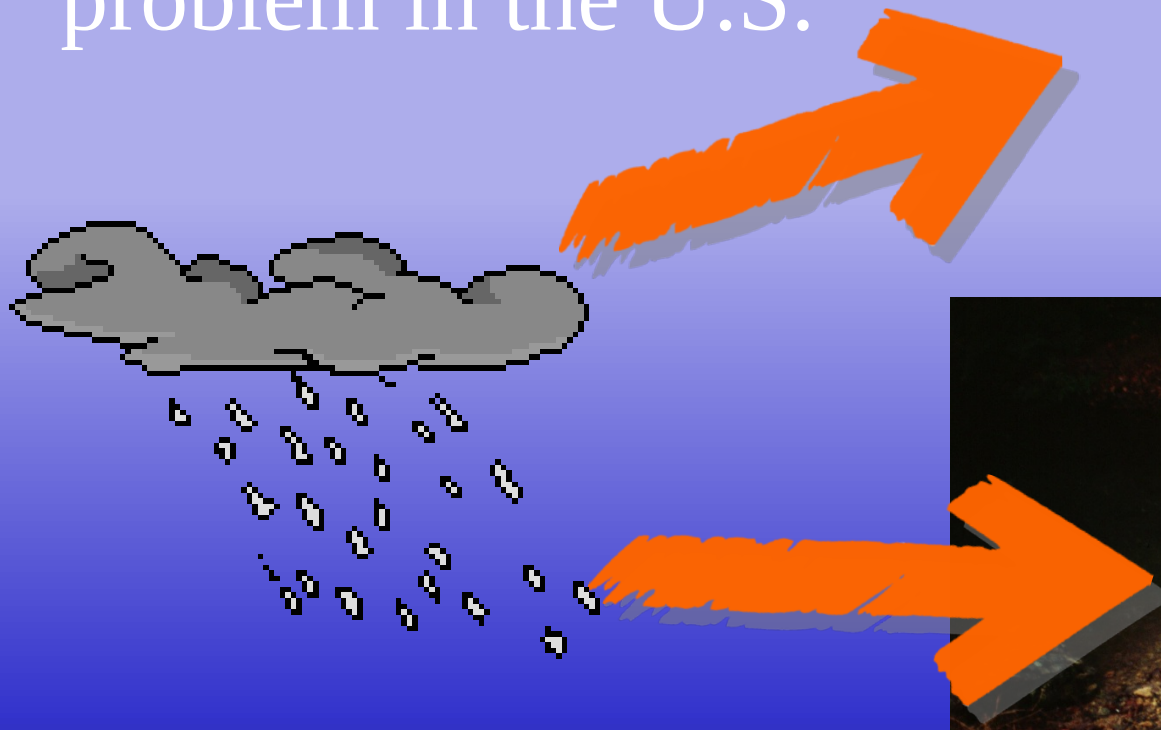
Christine O'Brien

Program Manager - Haywood Waterways



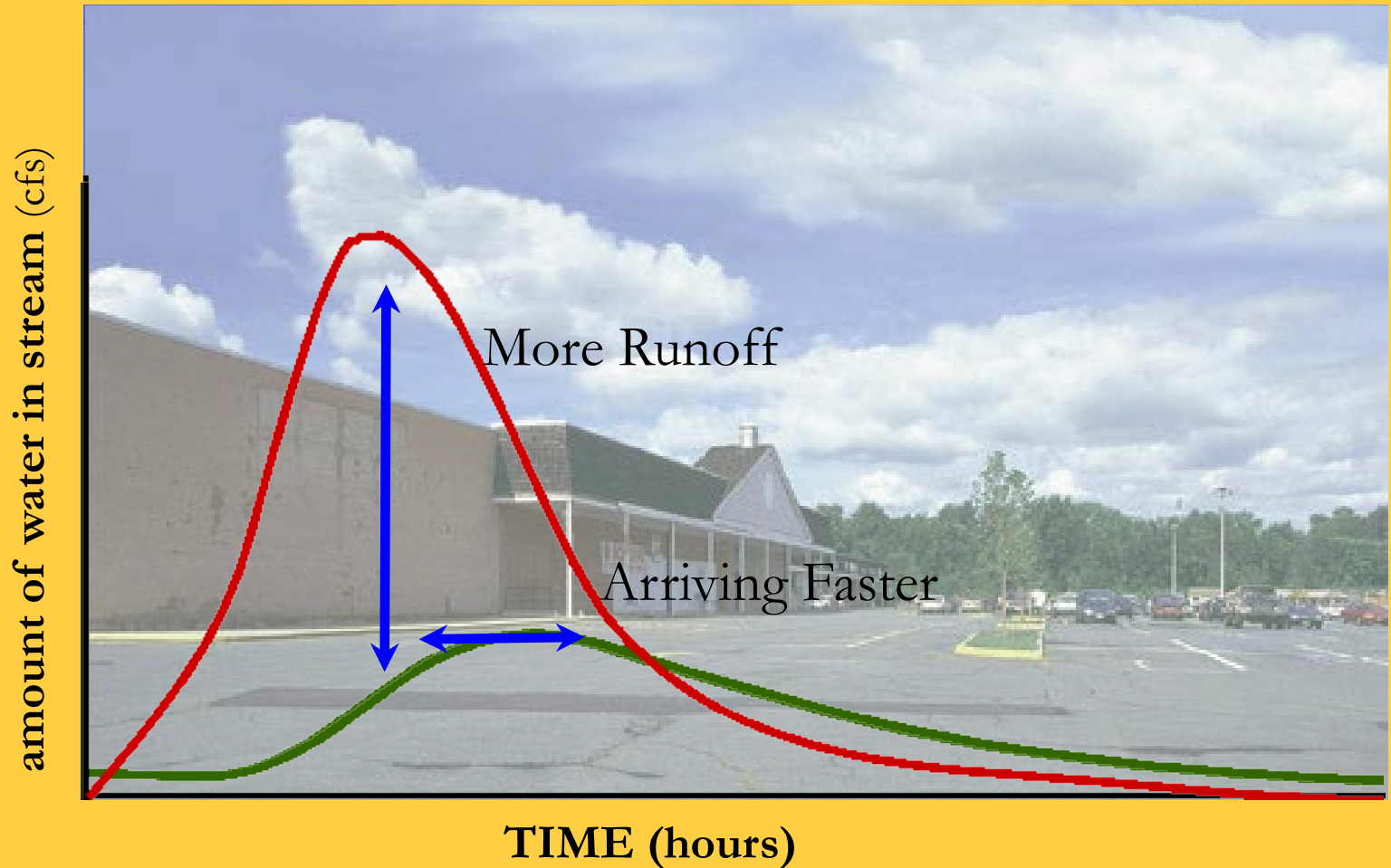
Nonpoint Source Pollution (i.e., Runoff)

The #1 water quality
problem in the U.S.

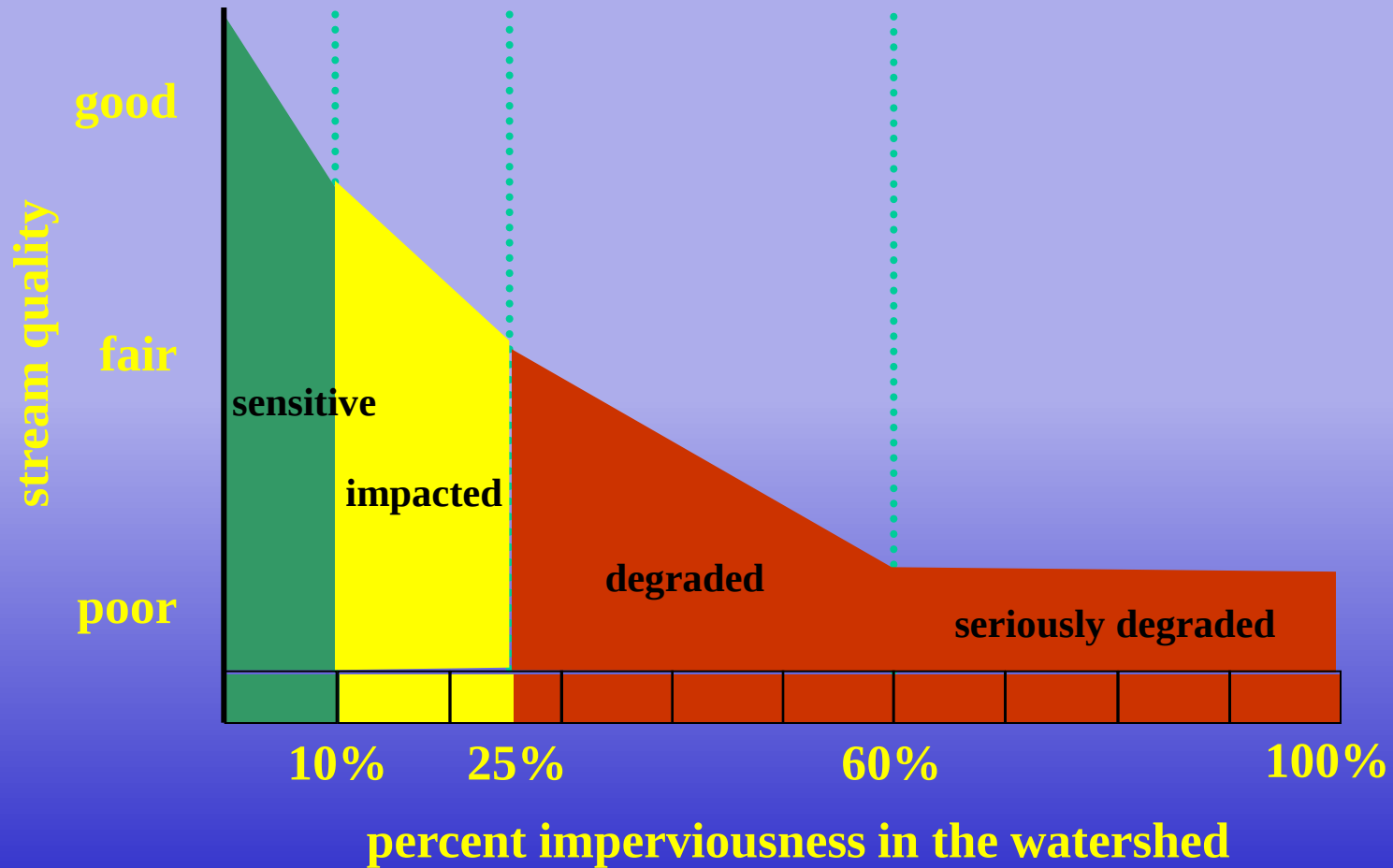




simple stormwater science...

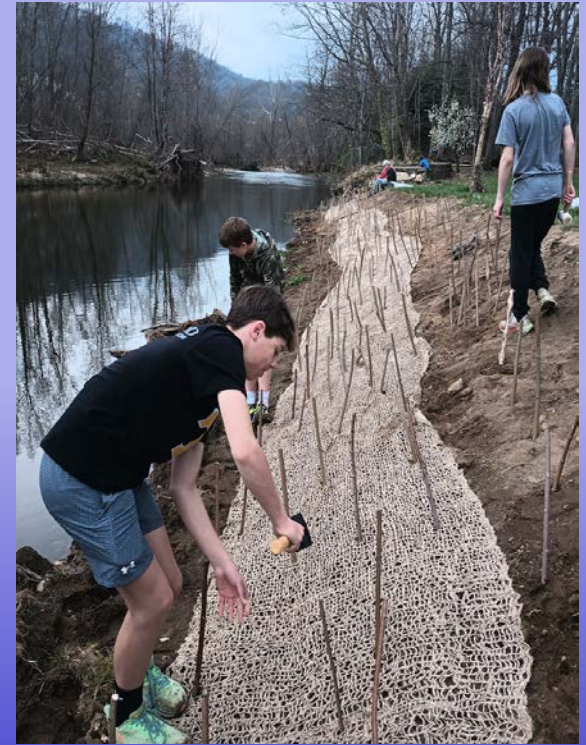
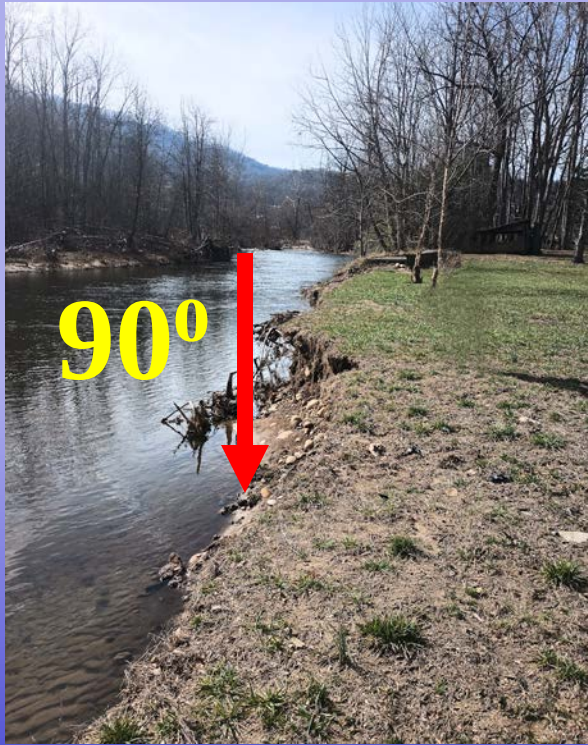


Imperviousness Effects Stream Quality





Restricted streambanks cause erosion

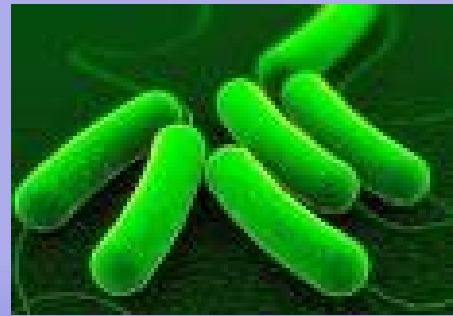


Wait 7 months and you get this!



Typical Runoff Pollutants

- Trash
- Nutrients (phosphorous & nitrates)
- Sediment (muddy water)
- Pathogens (bacteria & viruses)
- Pesticides & heavy metals
- Oil and grease
- Thermal stress



Solutions for reducing the effects of stormwater runoff

1. Leave vegetative strips/buffer along waterways
2. Point downspouts onto the lawn
3. Plant trees and shrubs along streams



4. Install retention ponds/rain gardens



Removes: trash, thermal pollution, chemical pollution, and slows the runoff.

**Good water quality supports
the local economy!!!!**



Thanks for your time!

