

Emerging Pollutants of Concern

Going Beyond TSS

- Temperature
- Chlorides
- Hydrocarbons
- Bacteria



Temperature



Thermal impacts are well documented for many traditional BMPs

- 60% of VT streams are coldwater fisheries
 - Trout
 - Macroinvertebrates
- Runoff warms receiving water temperatures
- LID/GSI reduce runoff
- Infiltration practices best
- Special outlet designs for other practices

Chlorides



Salt/Sand stockpile- brine “leachate” flowing to receiving waters

- Chlorides widely applied across VT
 - Groundwater impacts
 - Surface water
 - Not addressed in 2002 VSMM
- Alternatives to NaCl
- Some concerns with infiltration practices (groundwater contamination)
- BMP sizing modifications?

Hydrocarbons



Automotive repair/refueling - a common source of hydrocarbon loading

- Many sources
 - Gas stations/auto repair
 - Asphalt, material loading
 - Coal-tar sealants particularly bad
- BMP enhancements
 - Vegetative practices good
 - Bioretention
 - Multi-cell treatment trains

Bacteria



Waterfowl are just one of many possible bacteria sources

- Sources include:
 - Pet waste, waterfowl, wildlife
 - Agriculture and livestock
 - Failing septic systems
 - CSOs, SSOs
- Very challenging to meet contact recreational uses during wet weather (95-99% removal)
- Infiltration practices best control option
- Source controls critical