

**STORMWATER TREATMENT PRACTICES
USED TO MEET VERMONT DEC TREATMENT STANDARDS
AND IN MEETING FLOW REDUCTION & PHOSPHORUS REDUCTION
2-18-2016**

Stormwater Treatment Practices (STP) used to meet the DEC Stormwater Treatment Standards in their Stormwater Manual

Must design, construct and maintain STPs per Vermont Stormwater Manual. STPs used to meet Vermont DEC Treatment Standards include:

- a) Water Quality STPs: disconnection, grass channels, dry swale, wet swale, gravel wetlands, infiltration trench/ basin, bioretention, wet ponds
- b) Recharge STPs: disconnection credit, grass swale, infiltration trench/ basin, bioretention
- c) Channel Protection STPs: dry or wet ponds, occasionally infiltration basin
- d) Overbank Flood STPs: dry or wet ponds

NOTES:

VTrans is looking to address Phosphorus (P) reduction by using infiltration trenches/basins, gravel wetlands, bioretention, micropool filters/median retrofits, sand filters, grass channels, etc. We expect that we will also be looking into the possibility of additives (water residuals, etc) and soil amendments to help meet our P reduction targets.

It is hard to quantify how much P will be removed as it really depends on sizing and site specifications (soils/infiltrative capacity especially) but in the current DEC Stormwater Manual the water quality treatment standards objective is to remove 40% of the Total P load so if we are designing to the current DEC Manual then we are presumed to meet that.

Craig "DiGi" DiGiammarino

Environmental Program Manager

"Protecting the Environment by Helping Others to Understand"...

Managing Environmental Regulatory & Compliance Responsibilities for

Vermont Agency of Transportation (VTrans)

Highway Division – Maintenance & Operations Bureau

Dewey Building @ One National Life Drive, Montpelier, VT 05633-5001

cell 802-922-4681 fax 802-828-2848 craig.digiammarino@vermont.gov

<http://www.aot.state.vt.us/ops/technicalservices/environmental.htm>