What's New with Forested Buffers

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Old "News":
Forested vs. Grass Buffers

Proc. of Nat'l Acad of Science, Sept 2004

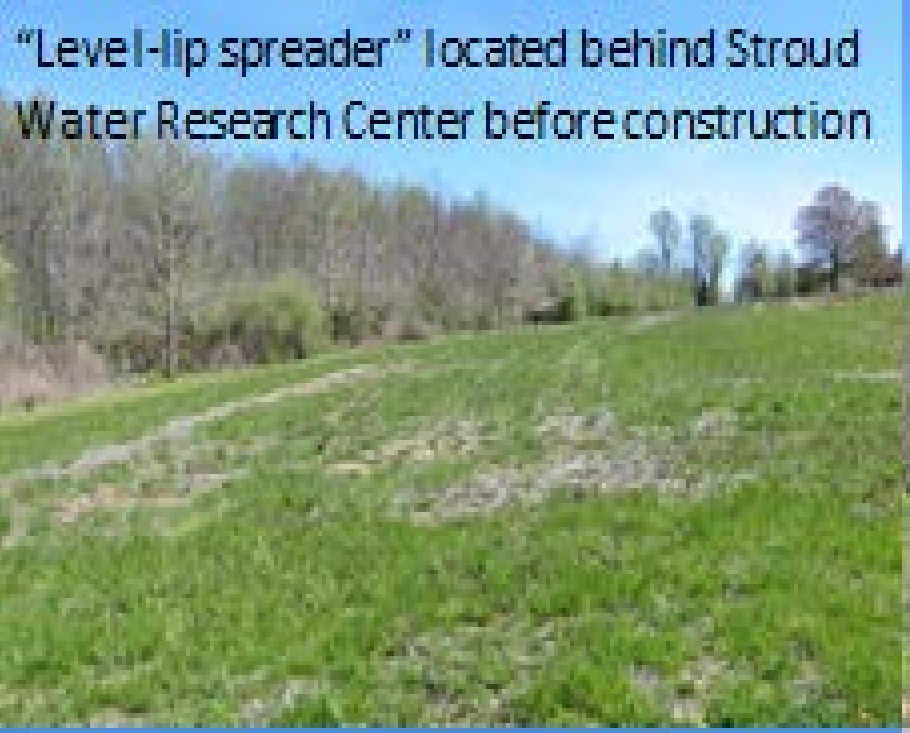
- 16 stream segments in SE PA
- Flowing in and out of woodlots, pastures
- Findings for forested vs. grass buffers:
  - 2 to 9x nitrogen uptake in forested reaches
  - 3-5x more total biological activitiy
  - 2-3x wetted channel width

Literature review on buffer width:

- Reviewed all literature on buffer width
- Conclusion: science supports a 100’ width as a defensible goal
- Width’s impact varies with parameter
  - Temp. effects gotten with narrower buffers
  - Sediment:
    - first 10m stops majority by weight (sand)
    - next 20m stops smaller portion (silt/clay)

Hurricane Sandy Project:

- Headwaters catchment ~4 sq mi
- Majority of landowners doing:
  - level lip spreaders
  - forested buffers 100’ per side
- A few doing:
  - woody debris, created wetlands
- All overlaid with science


"Level-lip spreader" located behind Stroud
Water Research Center before construction


Level-lip spreader during construction


Level-lip spreader during construction


Level lip spreader after construction


Vole guard: goes inside shelter
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Stone mulch (vs. voles), Tube tests

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“Center Hole” method

vs. tasseled method

Pre-emergence herbicide:

- Bird’s deposit seeds of invasive spp.
- Snapshot ™ being tested INSIDE tubes

Battling reed canary grass:

- Prep mowing before planting
- Routine herbicide spots (2x/yr)
- Routine follow-up mowing
- So far, success

Battling multiflora rose + mile-a-minute:

- Prep mowing before planting ($2k/ac)
- Planted as usual with shelters
- Broadcast herbicide for MFR, MAM
- Reseeded with pasture mix
- Weeded INSIDE tubes
- Now into routine maintenance (mowing + herbicide spots)


RC-50
POSI-TRACK
R-SERIES

Stay tuned for findings on:

- herbicide spot size
- initial plant size: 3x3x9” vs. 2 gallon etc.
- tube tests: Plantra ™, Shelterguard ™
- fiberboard mat w/cherry extract
- 4’ welded wire fence to protect shrub clusters

(biodegrad. version: wooden stakes + twine)

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